Royal Bank of Canada | First Quarter 2018

Royal Bank of Canada first 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 in accordance with IAS 39 *Financial Instruments: Recognition and Measurement*.

Net Income	Diluted EPS	ROE	CET1 Ratio
$3.0 Billion	$2.01	17.4%	11.0%
Includes charge related to U.S. Tax Reform(1) of $178 million	*Includes charge related to U.S. Tax Reform(1) of $0.12*	*Balanced capital deployment*	*$920+ million of share repurchases in Q1 2018*

TORONTO, February 23, 2018 – Royal Bank of Canada (RY on TSX and NYSE) today reported net income of $3,012 million for the first quarter ended January 31, 2018, which includes the impact of the U.S. Tax Reform[(1)] of $178 million, or $0.12 per share, primarily related to the write-down of net deferred tax assets. Net income was down $15 million from a year ago and diluted EPS[(2)] of $2.01 was up 2%. Excluding last year's specified item related to the gain on sale of the U.S. operations of Moneris[(3)], net income was up 7% and EPS was up 10% from a year ago.

Results in the quarter were driven by strong earnings in Personal & Commercial Banking, Capital Markets, Wealth Management and Investor & Treasury Services. This quarter's strong performance also reflects stable credit quality, with a provision for credit losses (PCL) on impaired loans ratio of 23 basis points (bps) compared to 22 bps a year ago, and a total PCL ratio of 24 bps, this quarter.

Compared to last quarter, net income was up $175 million or 6%, mainly reflecting higher earnings in Capital Markets, Personal & Commercial Banking, Wealth Management and Investor & Treasury Services, partially offset by lower earnings in Insurance and the write-down associated with the U.S. Tax Reform[(1)].

"Strong client activity and volume growth across most businesses drove our first quarter earnings of $3 billion while we absorbed the write-down related to the U.S. Tax Reform. We invested in our businesses to support clients, and repurchased over $920 million of common shares. In addition, I am pleased to announce a 3% increase to our quarterly dividend," said Dave McKay, RBC President and Chief Executive Officer. "Our strategy for sustainable growth is built on prudently managing risks and effectively deploying capital for strong returns through the cycle. We will continue to invest smartly and work hard to earn the trust of our clients, employees and communities."

			Excluding specified item(3):	
Q1 2018 compared to Q1 2017	• Net income of $3,012 million	→ 0%	• Net income of $3,012 million	↑ 7%
	• Diluted EPS of $2.01	↑ 2%	• Diluted EPS of $2.01	↑ 10%
	• ROE(4) of 17.4%	↓ 60 bps	• ROE of 17.4%	↑ 70 bps
	• CET1(5) ratio of 11.0%	→ 0%		
Q1 2018 compared to Q4 2017	• Net income of $3,012 million	↑ 6%		
	• Diluted EPS of $2.01	↑ 7%		
	• ROE of 17.4%	↑ 80 bps		
	• CET1 ratio of 11.0%	↑ 10 bps		

(1) In December 2017, the U.S. H.R. 1 (U.S. Tax Reform) was passed into law.
(2) Earnings per share (EPS).
(3) 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 Q1 2018 Report to Shareholders.
(4) Return on Equity (ROE). This measure does not have a standardized meaning under GAAP. For further information, refer to the Key performance and non-GAAP measures section of this Q1 2018 Report to Shareholders.
(5) Common Equity Tier 1 (CET1) ratio.

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Management's Discussion and Analysis

Management's Discussion and Analysis (MD&A) is provided to enable a reader to assess our results of operations and financial condition for the three month period ended or as at January 31, 2018, compared to the corresponding period in the prior fiscal year and the three month period ended October 31, 2017. This MD&A should be read in conjunction with our unaudited Interim Condensed Consolidated Financial Statements for the quarter ended January 31, 2018 (Condensed Financial Statements) and related notes and our 2017 Annual Report. This MD&A is dated February 22, 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 Q1 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 Q1 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 Q1 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 Q1 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 Q1 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

(Millions of Canadian dollars, except per share, number of and percentage amounts) (1)	As at or for the three months ended January 31 2018	October 31 2017	January 31 2017	Change January 31, 2018 vs. October 31 2017	January 31 2017
Total revenue (2)	$ 10,828	$ 10,523	$ 9,646	$ 305	$ 1,182
Provision for credit losses (PCL) (3)	334	234	294	100	40
Insurance policyholder benefits, claims and acquisition expense (PBCAE)	836	1,137	183	(301)	653
Non-interest expense (2)	5,611	5,611	5,315	–	296
Income before income taxes	4,047	3,541	3,854	506	193
Net income	$ 3,012	$ 2,837	$ 3,027	$ 175	$ (15)
Segments – net income					
Personal & Commercial Banking	$ 1,521	$ 1,404	$ 1,592	$ 117	$ (71)
Wealth Management	597	491	430	106	167
Insurance	127	265	134	(138)	(7)
Investor & Treasury Services	219	156	214	63	5
Capital Markets	748	584	662	164	86
Corporate Support	(200)	(63)	(5)	(137)	(195)
Net income	$ 3,012	$ 2,837	$ 3,027	$ 175	$ (15)
Selected information					
Earnings per share (EPS) – basic	$ 2.02	$ 1.89	$ 1.98	$ 0.13	$ 0.04
– diluted	2.01	1.88	1.97	0.13	0.04
Return on common equity (ROE) (4), (5)	17.4%	16.6%	18.0%	80 bps	(60) bps
Average common equity (4)	$ 66,850	$ 65,900	$ 64,650	$ 950	$ 2,200
Net interest margin (NIM) – on average earning assets (4)	1.65%	1.72%	1.73%	(7) bps	(8) bps
PCL as a % of average net loans and acceptances (6)	0.24%	0.17%	0.22%	7 bps	2 bps
PCL on impaired loans as a % of average net loans and acceptances (6)	0.23%	0.17%	0.22%	6 bps	1 bps
Gross impaired loans (GIL) as a % of loans and acceptances (7), (8)	0.45%	0.46%	0.66%	(1) bps	(21) bps
Liquidity coverage ratio (LCR) (9)	122%	122%	123%	– bps	(100) bps
Capital ratios and Leverage ratio (10)					
Common Equity Tier 1 (CET1) ratio	11.0%	10.9%	11.0%	10 bps	– bps
Tier 1 capital ratio	12.4%	12.3%	12.6%	10 bps	(20) bps
Total capital ratio	14.4%	14.2%	14.7%	20 bps	(30) bps
Leverage ratio	4.2%	4.4%	4.4%	(20) bps	(20) bps
Selected balance sheet and other information (11)					
Total assets	$ 1,276,275	$ 1,212,853	$ 1,161,766	$ 63,422	$ 114,509
Securities, net of applicable allowance	222,262	218,379	224,827	3,883	(2,565)
Loans, net of allowance for loan losses	538,044	542,617	522,010	(4,573)	16,034
Derivative related assets	105,512	95,023	97,419	10,489	8,093
Deposits	800,020	789,635	757,512	10,385	42,508
Common equity	66,430	67,416	64,853	(986)	1,577
Total capital risk-weighted assets	466,758	474,478	443,940	(7,720)	22,818
Assets under management (AUM)	656,700	639,900	584,100	16,800	72,600
Assets under administration (AUA) (12)	5,653,500	5,473,300	4,934,600	180,200	718,900
Common share information					
Shares outstanding (000s) – average basic	1,451,781	1,457,855	1,484,262	(6,074)	(32,481)
– average diluted	1,458,714	1,464,916	1,492,350	(6,202)	(33,636)
– end of period	1,444,065	1,452,898	1,475,540	(8,833)	(31,475)
Dividends declared per common share	$ 0.91	$ 0.91	$ 0.83	$ –	$ 0.08
Dividend yield (13)	3.5%	3.6%	3.8%	(10) bps	(30) bps
Common share price (RY on TSX) (14)	$ 105.32	$ 100.87	$ 93.56	$ 4.45	$ 11.76
Market capitalization (TSX) (14)	152,089	146,554	138,052	5,535	14,037
Business information (number of)					
Employees (full-time equivalent) (FTE)	78,648	78,210	77,814	438	834
Bank branches	1,368	1,376	1,415	(8)	(47)
Automated teller machines (ATMs)	4,660	4,630	4,902	30	(242)
Period average US$ equivalent of C$1.00 (15)	$ 0.794	$ 0.792	$ 0.752	$ 0.002	$ 0.042
Period-end US$ equivalent of C$1.00	$ 0.813	$ 0.775	$ 0.769	$ 0.038	$ 0.044

(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 Q1 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 ACI loans related to our acquisition of City National Bank (City National) that have returned to performing status. As at January 31, 2018, $24 million of ACI loans that remain impaired are included in GIL. As at October 31, 2017 and January 31, 2017, GIL includes $256 million and $348 million related to the ACI loans portfolio from our acquisition of City National. ACI loans included in GIL added 0 bps, 5 bps and 6 bps to our January 31, 2018, October 31, 2017, and January 31, 2017 GIL ratios, respectively. 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 $18.2 billion and $9.1 billion (October 31, 2017 – $18.4 billion and $8.4 billion; January 31, 2017 – $18.7 billion and $8.4 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 February 22, 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 estimated to have grown by 1.9%[1] during the last calendar quarter of 2017, which is slightly above the prior quarter, primarily as a result of increased consumer spending and business investment. The unemployment rate in January was 5.9%, up slightly from December's rate of 5.8%, which matched the lowest rate since 1976. After strong existing home sales at the end of calendar 2017, January 2018 resales declined reflecting a recent regulatory change to mortgage qualifications that took effect at the beginning of the calendar year. Businesses have continued to increase investment spending despite concerns surrounding renegotiation of the North American Free Trade Agreement (NAFTA). After January's interest rate hike of 25 basis points to 1.25%, we expect the Bank of Canada (BoC) to continue to raise rates. Despite higher interest rates and tight labour markets conditions, we expect the Canadian economy to continue to grow in calendar 2018.

U.S.

Overall growth in the U.S. economy slowed to 2.6%[1] in the fourth calendar quarter of 2017, following growth of 3.2%[1] in the previous calendar quarter. Consumer spending remained strong amid low unemployment and positive wealth effects from rising equity markets and home prices. We expect the U.S. economy to continue to expand as the recent tax reforms are expected to encourage business investment and consumer spending. With the economy operating at full capacity, we expect the Federal Reserve (Fed) will continue with gradual rate hikes.

Europe

The Euro area grew at a rate of 0.6% in the last calendar quarter of 2017, marking a fifth consecutive quarter of growth. This positive momentum is expected to continue throughout 2018, as business sentiment improves. We expect the European Central Bank to hold off on raising rates in the near term. Despite uncertainty surrounding Brexit, the Bank of England has indicated a tightening bias. As such, we are forecasting higher interest rates in the U.K.

Financial markets

Financial conditions were strong in early calendar 2018. Global equity markets rallied based on an optimistic growth outlook, with a number of indices posting record highs in mid-January. Bond yields rose further over the second half of the fiscal quarter as markets anticipate less accommodative central bank policies in a number of economies. To counteract inflationary pressures, central banks have moderated their accommodative policies, including recent interest rate hikes announced in January 2018 and December 2017 by the BoC and the Fed, respectively.

More recently, the low equity market volatility experienced globally throughout calendar 2017 ended abruptly. Among other things, the economic impact of rising interest rates and inflationary concerns has triggered equity markets to fall from their earlier peaks.

Regulatory environment

We continue to monitor and prepare for regulatory developments and changes in a manner that seeks to ensure compliance with new requirements while mitigating any adverse business or financial impacts. Such impacts could result from new or amended laws or regulations and the expectations of those who enforce them. The following provides a high-level summary of some of the key regulatory changes that have 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.

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 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. The reduction in the corporate tax rate resulted in a write-down of our net deferred tax assets and reductions to our ongoing current tax expense. Predicting the impact of the U.S. Tax Reform is uncertain because elements of the U.S. Tax Reform are subject to guidance to be provided by the U.S. Treasury Department.

Canadian Housing Market and Consumer Debt

OSFI's revised B-20 Guideline came into effect on January 1, 2018, which further tightens lending standards in an attempt to maintain a sustainable level of Canadian household debt. Changes to the guideline include a higher minimum qualifying rate (or "stress test") for mortgage borrowers with a down payment of more than 20%, and a broader loan-to-value (LTV) and lending limit framework differentiated by various ratio limits and risk factors. The government continues to explore other initiatives, such as an assessment by the Department of Finance regarding a lender risk-sharing model.

(1) Annualized rate

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. In its current state, 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, regulatory agencies have undertaken reviews of sales practices at Canadian banks and of provincial consumer protection rules. The Financial Consumer Agency of Canada is expected to release a full report on sales practices by March 2018.

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 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 (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 revised directive and regulation on Markets in Financial Instruments (MiFID II/MiFIR) became effective January 2018, which impacts certain businesses operating in the European Union. The reforms introduced changes to pre- and post-trade transparency, market structure, trade and transaction reporting, algorithmic trading, and conduct of business. 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.

Other regulatory developments include the General Data Protection Regulation which introduces significant obligations on data handling globally, as well as the European Benchmarks Regulation that impacts users of, contributors to, and administrators of benchmarks. These regulations are effective May 2018 and January 2018, respectively.

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 Q1 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 Q1 2018 Report to Shareholders.

Financial performance

Overview

Q1 2018 vs. Q1 2017
Net income of $3,012 million was down $15 million from a year ago, mainly due to our share of the gain related to the sale of the U.S. operations of Moneris in the prior year. Diluted earnings per share (EPS) of $2.01 was up $0.04 or 2% and return on common equity (ROE) of 17.4% was down 60 bps from 18.0% last year. Our Common Equity Tier 1 (CET1) ratio of 11.0%, remained unchanged from a year ago.

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 period and is described further below, net income of $3,012 million was up $197 million or 7% from last year, diluted EPS of $2.01 was up $0.18, and ROE of 17.4% increased 70 bps. Our results reflected strong 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 and lower earnings in Insurance.

Wealth Management earnings increased 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. These factors were partially offset by higher variable compensation on improved results, increased costs in support of business growth, and the impact of foreign exchange translation.

Personal & Commercial Banking earnings were lower as the prior year included our share of the gain noted above. Excluding this specified item, Personal & Commercial Banking earnings increased mainly due to average volume growth of 6%, higher spreads and higher fee-based revenue in Canadian Banking. These factors were partially offset by higher PCL and higher costs in support of business growth in Canadian Banking.

Capital Markets results were up largely driven by a lower effective tax rate including the benefits from the U.S. Tax Reform and higher results in Corporate and Investment Banking and Global Markets. These factors were partially offset by increased costs due to higher variable compensation on improved results, litigation recoveries in the prior year, higher regulatory spend and the impact of foreign exchange translation.

Investor & Treasury Services results increased primarily due to growth in client deposits, increased revenue from our asset services business, the impact of foreign exchange translation, as well as higher funding and liquidity earnings. These factors were largely offset by higher investment in technology initiatives.

Insurance results decreased primarily reflecting updates in the prior year related to premium and mortality experience, and higher claims volumes in International Insurance. These factors were partially offset by higher investment-related gains and the impact of a new longevity reinsurance contract.

Corporate Support net loss was $200 million in the current quarter, 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.

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

Q1 2018 vs. Q4 2017

Net income of $3,012 million was up $175 million or 6% from the prior quarter. Diluted EPS of $2.01 was up $0.13 and ROE of 17.4% was up 80 bps. Our CET1 ratio of 11.0%, was up 10 bps.

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

Capital Markets earnings were up largely driven by higher results in Global Markets and a lower effective tax rate reflecting the benefits from the U.S. Tax Reform. These factors were partially offset by higher PCL and lower municipal banking activity.

Personal & Commercial Banking earnings increased largely due to higher fee-based revenue, a gain related to the reorganization of Interac this quarter, average volume growth of 1% and higher spreads. Lower marketing costs also contributed to the increase. These factors were partially offset by higher PCL.

Wealth Management earnings were up primarily reflecting higher average fee-based assets, a lower effective tax rate reflecting benefits from the U.S. Tax Reform, and increased transaction volumes. A favourable accounting adjustment related to City National and higher net interest income also contributed to the increase. These factors were partially offset by increased costs in support of business growth and higher variable compensation on improved results.

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

Insurance earnings decreased due to favourable annual actuarial assumption updates in the prior quarter, and higher claims volumes.

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	
(Millions of Canadian dollars, except per share amounts)	**Q1 2018 vs. Q1 2017** (1)	**Q1 2018 vs. Q4 2017** (1)
Increase (decrease):		
Total revenue	$ (114)	$ 20
PCL	–	1
PBCAE	–	–
Non-interest expense	(78)	12
Income taxes	(15)	2
Net income	(22)	5
Impact on EPS		
Basic	$ (0.02)	$ –
Diluted	(0.02)	–

(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		
(Average foreign currency equivalent of C$1.00) (1)	**January 31 2018**	October 31 2017	January 31 2017
U.S. dollar	**0.794**	0.792	0.752
British pound	**0.578**	0.600	0.603
Euro	**0.656**	0.672	0.707

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

Total revenue

(Millions of Canadian dollars)	For the three months ended January 31 2018	October 31 2017	January 31 2017
Interest income	$ 7,540	$ 7,146	$ 6,459
Interest expense	3,095	2,785	2,135
Net interest income	$ 4,445	$ 4,361	$ 4,324
NIM	1.65%	1.72%	1.73%
Insurance premiums, investment and fee income	$ 1,144	$ 1,612	$ 497
Trading revenue	318	146	263
Investment management and custodial fees	1,325	1,228	1,159
Mutual fund revenue	885	848	814
Securities brokerage commissions	355	327	399
Service charges	440	445	438
Underwriting and other advisory fees	541	498	468
Foreign exchange revenue, other than trading	281	230	227
Card service revenue	257	211	236
Credit fees	328	364	356
Net gains on investment securities (1)	39	47	27
Share of profit in joint ventures and associates	25	10	251
Other	445	196	187
Non-interest income (2)	$ 6,383	$ 6,162	$ 5,322
Total revenue (2)	$ 10,828	$ 10,523	$ 9,646
Additional information			
Total trading revenue			
Net interest income	$ 550	$ 526	$ 669
Non-interest income	318	146	263
Total trading revenue	$ 868	$ 672	$ 932

(1) Under IFRS 9, the Net gain (loss) on investment securities represents realized gains (losses) on debt securities at FVOCI and debt securities at amortized cost. Under IAS 39, the Net gain (loss) 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.

Q1 2018 vs. Q1 2017

Total revenue increased $1,182 million or 12% from last year mainly due to higher insurance revenue, higher investment management and custodial fees, increased net interest income and higher other revenue. These factors were partially offset by lower share of profit in joint ventures and associates, as the prior year included our share of the gain from the sale of the U.S. operations of Moneris of $212 million, and the impact of foreign exchange translation which decreased our total revenue by $114 million. Excluding our share of the gain in the prior year, total revenue increased $1,394 million or 15%.

Net interest income increased $121 million or 3%, largely due to volume growth in Canadian Banking and Wealth Management. The rising interest rate environment resulted in improved spreads in Canadian Banking and U.S. Wealth Management (including City National).

NIM was down 8 bps compared to last year due to volume growth in average earning assets primarily in reverse repos, partially offset by higher interest rates in Canada and the U.S.

Insurance premiums, investment and fee income (insurance revenue) increased $647 million, mainly reflecting the change in the fair value of investments backing our policyholder liabilities, group annuity sales growth and the impact of restructured international life contracts, all of which were largely offset in PBCAE.

Investment management and custodial fees increased $166 million or 14%, mainly due to higher average fee-based assets under management, reflecting capital appreciation and net sales.

Share of profit in joint ventures and associates decreased $226 million or 90%, as the prior year included our share of the gain of Moneris as noted above.

Other revenue increased $258 million from last year mainly due to net gains in our other non-trading investment portfolios, a favourable accounting adjustment related to City National, a gain related to the reorganization of Interac, and the change in the fair value of our U.S. share-based compensation plan, which was largely offset in Non-interest expense.

Q1 2018 vs. Q4 2017

Total revenue increased $305 million or 3% from the prior quarter, primarily due to higher fixed income trading revenue in North America and Europe, increased equity trading revenue across all regions, and net gains in our other non-trading investment portfolios. Higher average fee-based assets reflecting capital appreciation and net sales in Wealth Management, volume growth and the impact of higher interest rates in Canadian Banking and Wealth Management also contributed to the increase. Revenue was also favourably impacted by an accounting adjustment related to City National, a gain related to the reorganization of Interac, the change in the fair value of our U.S. share-based compensation plan, which is largely offset in Non-interest expense, and higher transaction volumes in Wealth Management. These factors were partially offset by lower insurance revenues 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.

Provision for credit losses (PCL)

Q1 2018 vs. Q1 2017

Total PCL in Q1 2018 is $334 million with a PCL ratio of 24 bps.

PCL on loans of $334 million increased $40 million, or 14% from the prior year, mainly due to higher provisions in Personal & Commercial Banking which were partially offset by lower provisions in Capital Markets and Wealth Management. PCL on loans also reflects the adoption of IFRS 9 on November 1, 2017.

Q1 2018 vs. Q4 2017

Total PCL of $334 million increased $100 million.

PCL on loans of $334 million increased $100 million, or 43% from the prior year, mainly due to higher provisions in Capital Markets and Personal & Commercial Banking. PCL on loans also reflects the adoption of IFRS 9, as noted above.

Insurance policyholder benefits, claims and acquisition expense (PBCAE)

Q1 2018 vs. Q1 2017

PBCAE increased $653 million from a year ago, reflecting the change in fair value of investments backing our policyholder liabilities, group annuity sales growth, and the impact of restructured international life contracts, all of which were largely offset in revenue. Updates in the prior year related to premium and mortality experience, and higher claims volumes in International Insurance, also contributed to the increase. These factors were partially offset by investment-related gains and the impact of a new longevity reinsurance contract.

Q1 2018 vs. Q4 2017

PBCAE decreased $301 million or 26% 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 were largely offset in revenue. These factors were partially offset by favourable impacts from annual actuarial assumption updates in the prior quarter, largely reflecting changes in credit and discount rates and favourable mortality experience, mainly in the U.K., and higher claims volumes in both Canadian Insurance and International Insurance.

Non-interest expense

	For the three months ended		
(Millions of Canadian dollars, except percentage amounts) (1)	January 31 2018	October 31 2017	January 31 2017
Salaries	$ 1,466	$ 1,487	$ 1,441
Variable compensation	1,384	1,323	1,261
Benefits and retention compensation	480	415	468
Share-based compensation	172	74	139
Human resources	$ 3,502	$ 3,299	$ 3,309
Equipment	372	373	356
Occupancy	379	402	399
Communications	224	299	221
Professional fees	281	368	255
Amortization of other intangibles	261	257	252
Other	592	613	523
Non-interest expense	$ 5,611	$ 5,611	$ 5,315
Efficiency ratio (2)	51.8%	53.3%	55.1%
Efficiency ratio adjusted (3)	51.9%	54.8%	53.6%

(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.

Q1 2018 vs. Q1 2017

Non-interest expense increased $296 million or 6%, largely due to increased staff-related costs including higher variable compensation on improved results and higher costs in support of business growth. The change in the fair value of our U.S. share-based compensation plan, which was largely offset in revenue, and higher regulatory spend also contributed to the increase. These factors were partially offset by the impact of foreign exchange translation and continued benefits from our efficiency management activities.

Our efficiency ratio of 51.8% decreased 330 bps from 55.1% last year. 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 51.9% decreased 170 bps from 53.6% last year mainly driven by solid revenue growth across all businesses, the impact of foreign exchange translation and continued benefits from our efficiency management activities. These factors were partially offset by increased staff-related costs and higher costs in support of business growth as noted above.

Q1 2018 vs. Q4 2017

Non-interest expense remained flat, as higher variable compensation on improved results, the change in the fair value of our U.S. share-based compensation plan, which was largely offset in revenue, and increased costs in support of business growth were offset by seasonally lower marketing costs and lower annual capital taxes.

Our efficiency ratio of 51.8% decreased 150 bps from 53.3% last quarter. Excluding the change in fair value of investments backing our policyholder liabilities, our efficiency ratio of 51.9% decreased 290 bps from last quarter, due to solid revenue growth across most businesses combined with prudent expense management activities.

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		
(Millions of Canadian dollars, except percentage amounts)	January 31 2018	October 31 2017	January 31 2017
Income taxes	**$ 1,035**	$ 704	$ 827
Income before income taxes	**$ 4,047**	$ 3,541	$ 3,854
Canadian statutory income tax rate (1)	**26.5%**	26.5%	26.5%
Lower average tax rate applicable to subsidiaries (2)	**(3.2)%**	(5.5)%	(3.5)%
Tax-exempt income from securities	**(1.6)%**	(1.9)%	(2.1)%
Tax rate change (3)	**3.6%**	–%	(0.2)%
Other	**0.3%**	0.8%	0.8%
Effective income tax rate	**25.6%**	19.9%	21.5%

(1) Blended Federal and Provincial statutory income tax rate.
(2) As the reduced tax rates from the U.S. Tax Reform are effective on January 1, 2018, the Lower average tax rate applicable to subsidiaries includes the fiscal 2018 blended rate for U.S. subsidiaries.
(3) In Q1 2018, the tax rate change is primarily related to the impact of the U.S. Tax Reform.

Q1 2018 vs. Q1 2017

Income tax expense increased $208 million or 25% from last year, due to 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, and higher income before income taxes.

The effective income tax rate of 25.6% increased 410 bps, primarily due to the impact of U.S. Tax Reform. The impact of 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 also contributed to the increase. Excluding our share of the gain, the effective income tax rate increased 290 bps largely due to 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.

Q1 2018 vs. Q4 2017

Income tax expense increased $331 million or 47% from last quarter, due to 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, and higher income before income taxes.

The effective income tax rate of 25.6% increased 570 bps from 19.9% in the last quarter, mainly due to the impact of the U.S. Tax Reform which resulted in the write-down of net deferred tax assets, and favourable tax adjustments in the prior quarter. These factors were partially offset by the lower corporate tax rate on U.S. earnings resulting from the U.S. Tax Reform.

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.

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								
	January 31 2018							October 31 2017	January 31 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	$ 1,497	$ 583	$ 125	$ 216	$ 727	$ (219)	$ 2,929	$ 2,757	$ 2,940
Total average common equity (1), (2)	20,750	13,400	1,750	3,150	19,650	8,150	66,850	65,900	64,650
ROE (3)	28.6%	17.3%	28.2%	26.9%	14.7%	n.m.	17.4%	16.6%	18.0%

(1) Total average common equity represents rounded figures.
(2) The amounts for the segments are referred to as attributed capital.
(3) ROE is based on actual balances of average common equity before rounding.
n.m. not meaningful

Non-GAAP measures

We believe that certain non-GAAP measures described below are more reflective of our ongoing operating results and provide readers with a better understanding of management's perspective on our performance. These measures enhance the comparability of our financial performance for the three months ended January 31, 2018 with the corresponding period in the prior year and the three months ended October 31, 2017 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								
	January 31 2018							October 31 2017	January 31 2017
(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total	Total
Net income	$ 1,521	$ 597	$ 127	$ 219	$ 748	$ (200)	$ 3,012	$ 2,837	$ 3,027
add: Non-controlling interests	(2)	–	–	–	–	(9)	(11)	(8)	(12)
After-tax effect of amortization of other intangibles	3	46	–	3	–	2	54	49	56
Adjusted net income (loss)	$ 1,522	$ 643	$ 127	$ 222	$ 748	$ (207)	$ 3,055	$ 2,878	$ 3,071
less: Capital charge	467	301	40	71	442	184	1,505	1,485	1,460
Economic profit (loss)	$ 1,055	$ 342	$ 87	$ 151	$ 306	$ (391)	$ 1,550	$ 1,393	$ 1,611

Results excluding specified item

Our results were impacted by the following specified item:

- For the three months ended January 31, 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 for the three months ended January 31, 2017:

Consolidated results

	For the three months ended (1)		
	January 31 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	$ 9,646	$ (212)	$ 9,434
PCL	294	–	294
PBCAE	183	–	183
Non-interest expense	5,315	–	5,315
Net income before income taxes	$ 3,854	$ (212)	$ 3,642
Income taxes	827	–	827
Net income	$ 3,027	$ (212)	$ 2,815
Net income available to common shareholders	$ 2,940	$ (212)	$ 2,728
Average number of common shares (thousands)	1,484,262		1,484,262
Basic earnings per share (in dollars)	$ 1.98	$ (0.14)	$ 1.84
Average number of diluted common shares (thousands)	1,492,350		1,492,350
Diluted earnings per share (in dollars)	$ 1.97	$ (0.14)	$ 1.83
Average common equity (4)	$ 64,650		$ 64,650
ROE (5)	18.0%		16.7%
Efficiency ratio	55.1%		56.3%
Effective tax rate	21.5%		22.7%

(1) There were no specified items for the three months ended January 31, 2018 and October 31, 2017.
(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 three months ended (1)		
	January 31 2017		
		Item excluded	
(Millions of Canadian dollars, except percentage amounts) (2)	As reported	Gain related to the sale by Moneris (3)	Adjusted
Total revenue	$ 4,076	$ (212)	$ 3,864
PCL	249	—	249
Non-interest expense	1,769	—	1,769
Net income before income taxes	$ 2,058	$ (212)	$ 1,846
Net income	$ 1,592	$ (212)	$ 1,380
Other information			
Non-interest expense	$ 1,769	$ —	$ 1,769
Total revenue	4,076	(212)	3,864
Efficiency ratio	43.4%		45.8%
Revenue growth rate	9.4%		3.7%
Non-interest expense growth rate	3.0%		3.0%
Operating leverage	6.4%		0.7%

(1) There were no specified items for the three months ended January 31, 2018 and October 31, 2017.
(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

	For the three months ended (1)		
	January 31 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	$ 3,824	$ (212)	$ 3,612
PCL	250	–	250
Non-interest expense	1,560	–	1,560
Net income before income taxes	$ 2,014	$ (212)	$ 1,802
Net income	$ 1,546	$ (212)	$ 1,334
Selected balances and other information			
Non-interest expense	$ 1,560	$ –	$ 1,560
Total revenue	3,824	(212)	3,612
Efficiency ratio	40.8%		43.2%
Revenue growth rate	10.4%		4.3%
Non-interest expense growth rate	1.5%		1.5%
Operating leverage	8.9%		2.8%

(1) There were no specified items for the three months ended January 31, 2018 and October 31, 2017.
(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 three months ended January 31, 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:

	For the three months ended									
	January 31 2018			October 31 2017			January 31 2017			
		Item excluded			Item excluded			Items excluded		
(Millions of Canadian dollars, except percentage amounts) (1)	As reported	Change in fair value of investments backing policyholder liabilities	Adjusted	As reported	Change in fair value of investments backing policyholder liabilities	Adjusted	As reported	Change in fair value of investments backing policyholder liabilities	Gain related to the sale of Moneris (2)	Adjusted
Continuing operations										
Total revenue	$ 10,828	$ (26)	$ 10,802	$ 10,523	$ (279)	$ 10,244	$ 9,646	$ 481	$(212)	$9,915
Non-interest expense	5,611	–	5,611	5,611	–	5,611	5,315	–	–	5,315
Efficiency ratio	51.8%		51.9%	53.3%		54.8%	55.1%			53.6%

(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		
	January 31 2018	October 31 2017	January 31 2017
Net interest income	$ 2,856	$ 2,820	$ 2,649
Non-interest income	1,309	1,199	1,427
Total revenue	4,165	4,019	4,076
PCL	317	270	249
Non-interest expense	1,801	1,872	1,769
Income before income taxes	2,047	1,877	2,058
Net income	$ 1,521	$ 1,404	$ 1,592
Revenue by business			
Canadian Banking	$ 3,927	$ 3,766	$ 3,824
Caribbean & U.S. Banking	238	253	252
Selected balance sheet and other information			
ROE	28.6%	26.7%	32.1%
NIM	2.73%	2.71%	2.66%
Efficiency ratio	43.2%	46.6%	43.4%
Operating leverage	0.4%	2.4%	6.4%
Effective income tax rate	25.7%	25.2%	22.6%
Average earning assets, net	$ 415,600	$ 412,200	$ 395,500
Average loans and acceptances, net	416,000	412,000	394,600
Average deposits	357,000	352,100	336,700
AUA (2)	270,800	264,800	245,000
PCL on impaired loans as a % of average net loans and acceptances (3)	0.26%	0.26%	0.25%
Other selected information – Canadian Banking			
Net income	$ 1,480	$ 1,360	$ 1,546
NIM	2.68%	2.65%	2.61%
Efficiency ratio	41.5%	44.7%	40.8%
Operating leverage	(1.7)%	1.5%	8.9%
Operating leverage adjusted (4)	4.3%	n.a.	2.8%
Effective income tax rate	25.9%	25.7%	23.2%

(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 January 31, 2018 of $18.2 billion and $9.1 billion, respectively (October 31, 2017 – $18.4 billion and $8.4 billion; January 31, 2017 – $18.7 billion and $8.4 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. Q1 2018 operating leverage of (1.7)% in Canadian Banking was 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 our Q1 2017 adjusted operating leverage, including a reconciliation, refer to the Key performance and non-GAAP measures section. Q1 2018 revenue and expense growth rates in Canadian Banking were 2.7% and 4.4%, respectively. Excluding our share of the gain as noted above, Q1 2018 adjusted revenue growth rate was 8.7%.
n.a. not applicable

Effective Q1 2018, 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
Q1 2018 vs. Q1 2017

Net income decreased $71 million or 4% 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 $141 million or 10%, mainly due to average volume growth of 6%, higher spreads and higher fee-based revenue in Canadian Banking. 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 and higher costs in support of business growth in Canadian Banking.

Total revenue increased $89 million or 2% as the prior year included our share of the gain related to the sale of Moneris as noted above. Excluding our share of the gain related to the sale of Moneris, total revenue increased $301 million or 8%.

Canadian Banking revenue increased $103 million or 3% as the prior year included our share of the gain related to the sale of Moneris as noted above. Excluding our share of the gain, revenue increased $315 million or 9% compared to last year, largely reflecting average volume growth of 6% in loans and deposits, and improved spreads. Higher balances driving higher mutual fund distribution fees, a gain related to the reorganization of Interac this quarter, and higher purchase volumes resulting in higher card service revenue also contributed to the increase.

Caribbean & U.S. Banking revenue decreased $14 million or 6% compared to last year, mainly due to the impact of foreign exchange translation.

Net interest margin was up 7 bps, mainly due to improved spreads on deposits in Canadian Banking, reflecting the rising interest rate environment.

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 $32 million or 2%, primarily attributable to increased costs in support of business growth, reflecting ongoing investments in technology, including digital initiatives, and higher marketing costs. Higher staff-related costs also contributed to the increase. These factors were partially offset by continued benefits from our efficiency management activities. The prior year also included an impairment related to properties held for sale in Caribbean Banking.

Q1 2018 vs. Q4 2017

Net income increased $117 million or 8% from last quarter, largely reflecting higher fee-based revenue, a gain related to the reorganization of Interac this quarter, average volume growth of 1% and higher spreads. Lower marketing costs also contributed to the increase. 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.

Total revenue increased $146 million or 4% from last quarter, mainly driven by higher fee-based revenue primarily attributable to higher purchase volumes resulting in higher card service revenue. A gain related to the reorganization of Interac this quarter, average volume growth of 1% in loans and deposits and higher spreads also contributed to the increase.

Net interest margin increased 2 bps largely due to improved deposit spreads in Canadian Banking, reflecting the rising interest rate environment.

PCL on impaired loans ratio remained flat. For further details, refer to Credit quality performance in the Credit Risk section.

Non-interest expense decreased $71 million or 4%, largely reflecting seasonally lower marketing costs and lower annual capital taxes. These factors were partially offset by higher staff-related costs.

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		
(Millions of Canadian dollars, except number of and percentage amounts and as otherwise noted) (1)	January 31 2018	October 31 2017	January 31 2017
Net interest income	$ 612	$ 583	$ 541
Non-interest income			
Fee-based revenue	1,589	1,485	1,405
Transaction and other revenue	582	494	539
Total revenue	2,783	2,562	2,485
PCL	(2)	–	13
Non-interest expense	2,011	1,901	1,909
Income before income taxes	774	661	563
Net income	$ 597	$ 491	$ 430
Revenue by business			
Canadian Wealth Management	$ 749	$ 717	$ 713
U.S. Wealth Management (including City National)	1,384	1,252	1,183
U.S. Wealth Management (including City National) (US$ millions)	1,100	992	890
Global Asset Management	556	508	493
International Wealth Management	94	85	96
Selected balance sheet and other information			
ROE	17.3%	14.2%	12.2%
NIM	3.27%	3.13%	2.82%
Pre-tax margin (2)	27.8%	25.8%	22.7%
Number of advisors (3)	4,901	4,884	4,797
Average earning assets, net	$ 74,300	$ 73,900	$ 76,200
Average loans and acceptances, net	52,500	51,600	50,800
Average deposits	92,600	90,900	95,100
AUA (4)	938,800	929,200	879,000
– U.S. Wealth Management (including City National) (4)	453,000	442,700	395,000
– U.S. Wealth Management (including City National) (US$ millions) (4)	368,100	343,200	303,500
AUM (4)	651,000	634,100	578,600
Average AUA	938,600	900,300	884,900
Average AUM	656,100	617,400	580,100
PCL on impaired loans as a % of average net loans and acceptances (5)	0.04%	–%	0.10%

Estimated impact of U.S. dollar, British pound and Euro translation on key income statement items (Millions of Canadian dollars, except percentage amounts and as otherwise noted)	For the three months ended Q1 2018 vs. Q1 2017	Q1 2018 vs. Q4 2017
Increase (decrease):		
Total revenue (1)	$ (68)	$ 2
PCL	–	–
Non-interest expense (1)	(52)	2
Net income	(13)	(1)
Percentage change in average US$ equivalent of C$1.00	6%	–%
Percentage change in average British pound equivalent of C$1.00	(4)%	(4)%
Percentage change in average Euro equivalent of C$1.00	(7)%	(2)%

(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
Q1 2018 vs. Q1 2017
Net income increased $167 million or 39% 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. These factors were partially offset by higher variable compensation on improved results, increased costs in support of business growth, and the impact of foreign exchange translation.

Total revenue increased $298 million or 12%.

Canadian Wealth Management revenue increased $36 million or 5%, mainly due to higher average fee-based assets reflecting capital appreciation and net sales, partially offset by lower transaction revenue.

U.S. Wealth Management (including City National) revenue increased $201 million or 17%. In U.S. dollars, revenue increased $210 million or 24%, mainly due to higher average fee-based assets reflecting capital appreciation and net sales, an increase in net interest income reflecting the impact from volume growth and higher U.S. interest rates, and increased transaction revenue. A favourable accounting adjustment related to City National, and the change in the fair value of our U.S. share-based compensation plan, which was largely offset in non-interest expense, also contributed to the increase.

Global Asset Management revenue increased $63 million or 13%, mainly due to higher average fee-based assets under management, reflecting capital appreciation and net sales.

PCL on impaired loans ratio improved 6 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 $102 million or 5%, largely due to higher variable compensation on improved results, increased costs in support of business growth mainly reflecting higher staff costs in the U.S., and the change in the fair value of our U.S. share-based compensation plan, which was largely offset in revenue. These factors were partially offset by the impact of foreign exchange translation.

Q1 2018 vs. Q4 2017
Net income increased $106 million or 22%, primarily reflecting higher average fee-based assets, a lower effective tax rate reflecting benefits from the U.S. Tax Reform, and increased transaction volumes. A favourable accounting adjustment related to City National and higher net interest income also contributed to the increase. These factors were partially offset by increased costs in support of business growth and higher variable compensation on improved results.

Total revenue increased $221 million or 9%, mainly due to higher average fee-based assets reflecting capital appreciation and net sales, improved transaction volumes, and a favourable accounting adjustment related to City National. The change in the fair value of our U.S. share-based compensation plan, which was largely offset in non-interest expense, and an increase in net interest income reflecting volume growth and higher interest rates, also contributed to the increase.

PCL on impaired loans ratio increased 4 bps due to higher 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 $110 million or 6%, reflecting increased costs in support of business growth mainly reflecting higher staff-related costs in the U.S., higher variable compensation on improved results, 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		
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	January 31 2018	October 31 2017	January 31 2017
Non-interest income			
Net earned premiums	$ 939	$ 1,166	$ 749
Investment income (1)	166	399	(353)
Fee income	39	47	101
Total revenue	1,144	1,612	497
Insurance policyholder benefits and claims (1)	768	1,063	130
Insurance policyholder acquisition expense	68	74	53
Non-interest expense	142	157	140
Income before income taxes	166	318	174
Net income	$ 127	$ 265	$ 134
Revenue by business			
Canadian Insurance	$ 621	$ 1,098	$ 20
International Insurance	523	514	477
Selected balances and other information			
ROE	28.2%	52.3%	33.7%
Premiums and deposits (2)	$ 1,095	$ 1,302	$ 1,003
Fair value changes on investments backing policyholder liabilities (1)	26	279	(481)

(1) Investment income can experience volatility arising from fluctuation of fair value through profit or loss (FVTPL) assets. The investments which support actuarial liabilities are predominantly fixed income assets designated as at FVTPL. Consequently, changes in the fair values of these assets are recorded in investment income in the Consolidated Statement 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 and claims.

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

Financial performance

Q1 2018 vs. Q1 2017

Net income decreased $7 million or 5% from a year ago, primarily reflecting favourable updates in the prior year related to premium and mortality experience, and higher claims volumes in International Insurance. These factors were partially offset by higher investment-related gains and the impact of a new longevity reinsurance contract.

Total revenue increased $647 million as compared to the prior year.

Canadian Insurance revenue increased $601 million, mainly due to the change in fair value of investments backing our policyholder liabilities and group annuity sales growth, both of which were largely offset in PBCAE.

International Insurance revenue increased $46 million or 10%, mainly due to the impact of restructured international life contracts, partially offset by the change in fair value of investments backing our policyholder liabilities, both of which were largely offset in PBCAE.

PBCAE increased $653 million, reflecting the change in fair value of investments backing our policyholder liabilities, group annuity sales growth, and the impact of restructured international life contracts, all of which were largely offset in revenue. Favourable updates in the prior year related to premium and mortality experience, and higher claims volumes in International Insurance, also contributed to the increase. These factors were partially offset by higher investment-related gains and the impact of a new longevity reinsurance contract.

Non-interest expense remained relatively unchanged from the prior year.

Q1 2018 vs. Q4 2017

Net income decreased $138 million or 52% driven by favourable annual actuarial assumption updates in the prior quarter, and higher claims volumes.

Total revenue decreased $468 million or 29%, mainly reflecting the change in fair value of investments backing our policyholder liabilities and lower group annuity sales, both of which were largely offset in PBCAE.

PBCAE decreased $301 million or 26%, mainly due to the change in fair value of investments backing our policyholder liabilities and lower group annuity sales, both of which were largely offset in revenue. These factors were partially offset by favourable impacts from annual actuarial assumption updates in the prior quarter, largely reflecting changes in credit and discount rates and favourable mortality experience, mainly in the U.K., and higher claims volumes in both Canadian Insurance and International Insurance.

Non-interest expense decreased $15 million or 10%, reflecting lower staff costs and lower spend on marketing initiatives.

Investor & Treasury Services

	As at or for the three months ended		
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	January 31 2018	October 31 2017	January 31 2017
Net interest income	$ 128	$ 128	$ 237
Non-interest income	548	474	394
Total revenue	676	602	631
Non-interest expense	389	397	350
Net income before income taxes	287	205	281
Net income	$ 219	$ 156	$ 214
Selected balance sheet and other information			
ROE	26.9%	19.2%	25.1%
Average deposits	$ 155,300	$ 142,600	$ 128,500
Client deposits	56,900	56,600	52,500
Wholesale funding deposits	98,400	86,000	76,000
AUA (1)	4,431,800	4,266,600	3,797,000
Average AUA	4,439,300	4,196,400	3,774,100

Estimated impact of U.S. dollar, British pound and Euro translation on key income statement items (Millions of Canadian dollars, except percentage amounts)	For the three months ended Q1 2018 vs. Q1 2017	Q1 2018 vs. Q4 2017
Increase (decrease):		
Total revenue	$ 18	$ 9
Non-interest expense	14	6
Net income	4	2
Percentage change in average US$ equivalent of C$1.00	6%	–%
Percentage change in average British pound equivalent of C$1.00	(4)%	(4)%
Percentage change in average Euro equivalent of C$1.00	(7)%	(2)%

(1) Represents period-end spot balances.

Q1 2018 vs. Q1 2017

Net income increased $5 million or 2%, primarily due to growth in client deposits, increased revenue from our asset services business, the impact of foreign exchange translation as well as higher funding and liquidity earnings. These factors were largely offset by higher investment in technology initiatives.

Total revenue increased $45 million or 7%, mainly due to the impact of foreign exchange translation, growth in client deposits, increased revenue from our asset services business driven by higher client activity, and higher funding and liquidity revenue driven by gains from the disposition of certain securities.

Non-interest expense increased $39 million or 11%, largely reflecting 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.

Q1 2018 vs. Q4 2017

Net income increased $63 million or 40%, primarily due to higher funding and liquidity earnings and increased revenue from our asset services business.

Total revenue increased $74 million or 12%, mainly due to higher funding and liquidity revenue, increased revenue from our asset services business due to higher client activity, the impact of foreign exchange translation, and gains from the disposition of certain securities.

Non-interest expense decreased $8 million or 2%, as the prior quarter included annual regulatory costs.

Capital Markets

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	As at or for the three months ended January 31 2018	October 31 2017	January 31 2017
Net interest income (1)	$ 866	$ 851	$ 947
Non-interest income (1)	1,309	1,103	1,124
Total revenue (1)	2,175	1,954	2,071
PCL	20	(38)	32
Non-interest expense	1,214	1,222	1,125
Net income before income taxes	941	770	914
Net income	$ 748	$ 584	$ 662
Revenue by business			
Corporate and Investment Banking	$ 994	$ 1,049	$ 936
Global Markets	1,221	976	1,194
Other	(40)	(71)	(59)
Selected balance sheet and other information			
ROE	14.7%	12.4%	13.3%
Average total assets	$ 570,200	$ 490,600	$ 493,600
Average trading securities	100,800	86,500	98,900
Average loans and acceptances, net	81,400	83,000	83,800
Average deposits	64,900	62,800	58,700
PCL on impaired loans as a % of average net loans and acceptances (2)	0.22%	(0.18)%	0.15%

Estimated impact of U.S. dollar, British pound and Euro translation on key income statement items (Millions of Canadian dollars, except percentage amounts and as otherwise noted)	For the three months ended Q1 2018 vs. Q1 2017	Q1 2018 vs. Q4 2017
Increase (decrease):		
Total revenue	$ (53)	$ 10
Non-interest expense	(30)	5
Net income	(21)	2
Percentage change in average US$ equivalent of C$1.00	6%	–%
Percentage change in average British pound equivalent of C$1.00	(4)%	(4)%
Percentage change in average Euro equivalent of C$1.00	(7)%	(2)%

(1) The taxable equivalent basis (teb) adjustment for the three months ended January 31, 2018 was $92 million (October 31, 2017 – $225 million, January 31, 2017 – $119 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.

Q1 2018 vs. Q1 2017

Net income increased $86 million or 13%, primarily due to a lower effective tax rate including the benefits from the U.S. Tax Reform and higher results in Corporate and Investment Banking and Global Markets. These factors were partially offset by increased costs due to higher variable compensation on improved results, litigation recoveries in the prior year, higher regulatory spend and the impact of foreign exchange translation.

Total revenue increased $104 million or 5%.

Corporate and Investment Banking revenue increased $58 million or 6%, mainly due to higher lending revenue across all regions, and increased debt and equity origination activity in the U.S. An overall improvement in European Investment Banking revenue also contributed to the increase. These factors were partially offset by the impact of foreign exchange translation, lower loan syndication activity mainly in the U.S., decreased M&A activity in North America and lower equity origination activity in Canada.

Global Markets revenue increased $27 million or 2%, primarily driven by higher equity trading revenue across most regions and increased debt origination activity across all regions. Higher equity origination activity largely in the U.S. and gains from the disposition of certain securities also contributed to the increase. These factors were partially offset by lower fixed income trading revenue in Europe.

Other revenue increased $19 million largely reflecting gains in our legacy U.S. auction rate securities portfolios.

PCL on impaired loans ratio increased 7 bps mainly due to fewer recoveries and lower provisions on impaired loans. For further details, refer to Credit quality performance in the Credit Risk section.

Non-interest expense increased $89 million or 8%, mainly due to higher costs related to changes in the timing of deferred compensation, higher variable compensation on improved results, and litigation recoveries in the prior quarter. Higher regulatory spend also contributed to the increase. These factors were partially offset by the impact of foreign exchange translation.

Q1 2018 vs. Q4 2017

Net income increased $164 million or 28%, primarily due to higher results in Global Markets and a lower effective tax rate reflecting the benefits from the U.S. Tax Reform. These factors were partially offset by higher PCL and lower municipal banking activity.

Total revenue increased $221 million or 11%, mainly due to higher fixed income trading revenue in North America and Europe and increased equity trading revenue across all regions. Higher equity origination activity in North America and gains from the disposition of certain securities also contributed to the increase. These factors were partially offset by lower municipal banking activity, lower debt origination activity mainly in North America and decreased loan syndication revenue in the U.S.

PCL on impaired loans ratio increased 40 bps mainly due to higher recoveries in the oil & gas and real estate & related sectors in the prior quarter and higher provisions primarily on a few accounts this quarter, including one in the consumer goods sector. For further details, refer to Credit quality performance in the Credit Risk section.

Non-interest expense decreased $8 million or 1%, mainly due to lower annual capital taxes, largely offset by higher variable compensation on improved results.

Corporate Support

	For the three months ended		
(Millions of Canadian dollars, except as otherwise noted)	January 31 2018	October 31 2017	January 31 2017
Net interest income (loss) (1)	$ (17)	$ (21)	$ (50)
Non-interest income (loss) (1)	(98)	(205)	(64)
Total revenue (1)	(115)	(226)	(114)
PCL	(1)	2	–
Non-interest expense	54	62	22
Net income (loss) before income taxes (1)	(168)	(290)	(136)
Income taxes (recoveries) (1)	32	(227)	(131)
Net income (loss) (2)	$ (200)	$ (63)	$ (5)

(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 January 31, 2018 was $9 million (October 31, 2017 – $9 million; January 31, 2017 – $9 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 January 31, 2018 was $92 million as compared to $225 million in the prior quarter and $119 million last year.

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

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.

Q4 2017

Net loss was $63 million, largely reflecting net unfavourable tax adjustments, severance and related charges, and charges associated with our real estate portfolio.

Q1 2017

Net loss was $5 million, largely reflecting 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)

	2018	2017				2016		
(Millions of Canadian dollars, except per share and percentage amounts)	Q1	Q4	Q3	Q2	Q1	Q4	Q3	Q2
Net interest income	$ 4,445	$ 4,361	$ 4,257	$ 4,198	$ 4,324	$ 4,187	$ 4,123	$ 4,025
Non-interest income (2)	6,383	6,162	5,831	6,214	5,322	5,177	6,229	5,597
Total revenue (2)	$ 10,828	$ 10,523	$ 10,088	$ 10,412	$ 9,646	$ 9,364	$ 10,352	$ 9,622
PCL	334	234	320	302	294	358	318	460
PBCAE	836	1,137	643	1,090	183	397	1,210	988
Non-interest expense (2)	5,611	5,611	5,537	5,331	5,315	5,297	5,188	4,983
Net income before income taxes	$ 4,047	$ 3,541	$ 3,588	$ 3,689	$ 3,854	$ 3,312	$ 3,636	$ 3,191
Income taxes	1,035	704	792	880	827	769	741	618
Net income	$ 3,012	$ 2,837	$ 2,796	$ 2,809	$ 3,027	$ 2,543	$ 2,895	$ 2,573
EPS – basic	$ 2.02	$ 1.89	$ 1.86	$ 1.86	$ 1.98	$ 1.66	$ 1.88	$ 1.67
– diluted	2.01	1.88	1.85	1.85	1.97	1.65	1.88	1.66
Segments – net income (loss)								
Personal & Commercial Banking	$ 1,521	$ 1,404	$ 1,399	$ 1,360	$ 1,592	$ 1,275	$ 1,322	$ 1,297
Wealth Management	597	491	486	431	430	396	388	386
Insurance	127	265	161	166	134	228	364	177
Investor & Treasury Services	219	156	178	193	214	174	157	139
Capital Markets	748	584	611	668	662	482	635	583
Corporate Support	(200)	(63)	(39)	(9)	(5)	(12)	29	(9)
Net income	$ 3,012	$ 2,837	$ 2,796	$ 2,809	$ 3,027	$ 2,543	$ 2,895	$ 2,573
Effective income tax rate	25.6%	19.9%	22.1%	23.9%	21.5%	23.2%	20.4%	19.4%
Period average US$ equivalent of C$1.00	$ 0.794	$ 0.792	$ 0.770	$ 0.746	$ 0.752	$ 0.757	$ 0.768	$ 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.

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 of $287 million ($235 million after-tax) related to the sale of RBC General Insurance Company to Aviva.

Trend analysis

The Canadian economy has generally improved over the period, expanding since the second calendar quarter of 2016 as the manufacturing and mining sectors have been boosted by improving oil prices and positive results from the energy sector, after the impact of the Alberta wildfires in May 2016. In particular, strong growth throughout 2017 reflected robust gains in consumer spending amid strong employment growth, low interest rates, and wealth effects from rising home prices. With strong 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 December 2017, the Fed raised its funds target range for the fourth time over the period. Global markets were given a boost since the beginning of 2017 as equity markets continued to rebound from the setbacks seen in 2016, coupled with an optimistic outlook. However, recent volatility has 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, partially offset by lower spreads until 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 client assets, mainly due to strong capital appreciation and net sales, volume growth, and the impact from higher interest rates since the first half of fiscal 2017. Capital Markets results have trended upwards over the period, driven by higher results in Corporate and Investment Banking and Global Markets driven by increased client activity and generally improved market conditions. 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. 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. Investor & Treasury Services results have generally trended higher over the period due to higher funding and liquidity earnings since the beginning of 2016, reflecting tightening credit spreads, higher foreign exchange market execution, as well as favourable interest and foreign exchange rates movements. The first quarter of 2018 was negatively impacted by 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.

Revenue has generally increased over the period, reflecting solid volume and fee-based revenue growth in our Personal & Commercial Banking businesses. The first quarter of 2017 benefitted from 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 client 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 early 2016, resulting in higher fixed income trading over the period except in the latter half of fiscal 2017, which was impacted by reduced market volatility. Fixed income trading revenue has seen some rebound in Q1 2018. The favourable impact of foreign exchange translation due to a generally weaker Canadian dollar over the period was partially offset by the strengthening Canadian dollar during the past three quarters. Insurance revenue was primarily impacted by changes in the fair value of investments backing our policyholder liabilities, which is 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, and the annual favourable actuarial adjustments in the fourth quarter.

The credit quality of our portfolios has generally improved over the period. In early 2016, higher PCL was related to our Capital Markets and Canadian Banking businesses, mainly reflecting the impact of the sustained low oil price environment and general economic uncertainty. PCL trended lower in 2017 due to lower provisions and recoveries in our Capital Markets and Canadian Banking portfolios, and remained relatively stable in the first quarter of 2018.

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

While we continue to focus on efficiency management activities, non-interest expense has generally trended upwards over the period, mostly 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 reflecting ongoing investments in technology, including digital initiatives. 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 period was partially offset by the strengthening Canadian dollar during the past three 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 quarter of 2018 was adversely impacted by 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.

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

Financial condition

Condensed balance sheets

The following table shows our condensed balance sheets:

	As at	
(Millions of Canadian dollars)	January 31 2018	October 31 2017
Assets (1)		
Cash and due from banks	$ 34,488	$ 28,407
Interest-bearing deposits with banks	37,269	32,662
Securities, net of applicable allowance (2)	222,262	218,379
Assets purchased under reverse repurchase agreements and securities borrowed	259,765	220,977
Loans		
Retail	386,235	385,170
Wholesale	154,585	159,606
Allowance for loan losses	(2,776)	(2,159)
Other – Derivatives	105,512	95,023
– Other (3)	78,935	74,788
Total assets	$ 1,276,275	$ 1,212,853
Liabilities (1)		
Deposits	$ 800,020	$ 789,635
Other – Derivatives	104,219	92,127
– Other (3)	289,751	247,398
Subordinated debentures	8,961	9,265
Total liabilities	1,202,951	1,138,425
Equity attributable to shareholders	72,736	73,829
Non-controlling interests	588	599
Total equity	73,324	74,428
Total liabilities and equity	$ 1,276,275	$ 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.

Q1 2018 vs. Q4 2017

Total assets increased $63 billion or 5% from last quarter. Foreign exchange translation decreased total assets by $33 billion.

Cash and due from banks was up $6 billion, mainly due to higher deposits with central banks reflecting our cash management and liquidity requirements.

Interest-bearing deposits with banks increased $5 billion or 14%, largely reflecting higher deposits with central banks.

Securities, net of applicable allowance, were up $4 billion or 2%, largely driven by higher equity trading positions reflecting market conditions and increased government debt securities as higher liquidity management activities were more than offset by the reclassification of certain securities in loans and receivables to investment securities as a result of adopting IFRS 9. These factors were partially offset by the impact of foreign exchange translation.

Assets purchased under reverse repurchase agreements (reverse repos) and securities borrowed increased $39 billion or 18%, mainly attributable to increased client activities, partially offset by higher financial netting and the impact of foreign exchange translation.

Loans were down $4 billion or 1%, largely due to the impact of foreign exchange translation and the reclassification of certain securities in loans and receivables to investment securities as mentioned above. These factors were partially offset by volume growth which led to higher wholesale loans and residential mortgages in Canada reflecting increased client activities.

Derivative assets were up $10 billion or 11%, mainly attributable to higher fair values on cross currency interest rate swaps and foreign exchange forward contracts, partially offset by the impact of foreign exchange translation.

Other assets were up $4 billion or 6%, largely reflecting higher cash collateral requirements.

Total liabilities increased $65 billion or 6%. Foreign exchange translation decreased total liabilities by $33 billion.

Deposits increased $10 billion or 1%, mainly as a result of higher business and retail deposits due to increased client demand, and higher issuances of fixed-term notes, partially offset by the impact of foreign exchange translation.

Derivative liabilities were up $12 billion or 13%, mainly attributable to higher fair values on cross currency interest rate swaps and foreign exchange forward contracts, partially offset by the impact of foreign exchange translation.

Other liabilities increased $42 billion or 17%, mainly attributable to higher obligations related to repurchase agreements reflecting increased client demand partially offset by higher financial netting, and higher cash collateral requirements. These factors were partially offset by the impact of foreign exchange translation.

Total equity decreased $1 billion or 1% reflecting foreign exchange translation and our adoption of IFRS 9 which resulted in a decrease in equity of $637 million. These factors were partially offset by earnings, net of dividends and share repurchases. 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 loans. 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						
	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)
By portfolio							
Residential mortgages	$ 272,192	$ 550	$ 277	$ –	$ –	$ 273,019	$ 271,435
Personal	91,469	89,644	184	–	–	181,297	180,590
Credit cards	18,049	20,371	–	–	–	38,420	39,861
Small business (6)	4,525	6,987	6	–	–	11,518	11,387
Retail	$ 386,235	$ 117,552	$ 467	$ –	$ –	$ 504,254	$ 503,273
Business (6)							
Agriculture	$ 7,683	$ 1,375	$ 75	$ –	$ 36	$ 9,169	$ 8,859
Automotive	8,663	5,969	355	–	520	15,507	15,067
Consumer goods	10,738	9,756	649	–	602	21,745	21,389
Energy							
Oil & Gas	6,559	10,204	2,151	–	969	19,883	19,835
Utilities	5,305	13,661	3,849	–	1,563	24,378	25,554
Financing products	5,891	1,956	407	696	669	9,619	10,401
Forest products	950	623	91	–	11	1,675	1,647
Health services	6,759	5,074	3,172	–	708	15,713	13,923
Holding and investments	8,605	640	551	2	88	9,886	10,501
Industrial products	6,176	9,941	457	–	884	17,458	14,253
Mining & metals	1,149	3,619	1,029	–	66	5,863	6,057
Non-bank financial services	10,820	14,800	18,890	383,456	36,950	464,916	408,295
Other services	14,913	7,235	3,447	1,295	708	27,598	27,914
Real estate & related	46,284	11,347	2,836	3	428	60,898	59,513
Technology & media	11,055	14,047	924	819	2,932	29,777	26,413
Transportation & environment	5,715	5,258	2,836	-	523	14,332	15,803
Other sectors	3,935	11	5,019	68	1,018	10,051	12,862
Sovereign (6)	5,951	12,190	126,222	45,341	14,516	204,220	182,933
Bank (6)	3,813	1,409	135,287	112,579	26,563	279,651	268,409
Wholesale	$ 170,964	$ 129,115	$ 308,247	$ 544,259	$ 89,754	$ 1,242,339	$ 1,149,628
Total exposure	$ 557,199	$ 246,667	$ 308,714	$ 544,259	$ 89,754	$ 1,746,593	$ 1,652,901
By geography (7)							
Canada	$ 458,525	$ 156,293	$ 112,505	$ 69,509	$ 23,072	$ 819,904	$ 808,249
U.S.	72,026	62,700	75,468	285,669	15,738	511,601	490,574
Europe	12,569	22,279	95,217	114,813	43,654	288,532	242,702
Other International	14,079	5,395	25,524	74,268	7,290	126,556	111,376
Total exposure	$ 557,199	$ 246,667	$ 308,714	$ 544,259	$ 89,754	$ 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.

Q1 2018 vs. Q4 2017

Total gross credit risk exposure increased $94 billion or 6% from last quarter, primarily due to growth in wholesale exposure largely related to repo-style transactions, cash and due from banks, interest-bearing deposits with banks, guarantees, as well as derivatives exposures.

Retail exposure increased $1 billion, driven by volume growth in our Canadian residential mortgages and personal lending portfolios, largely offset by a decrease in credit cards related to undrawn commitments.

Wholesale exposure increased $92 billion or 8%, primarily attributable to growth in repo-style transactions, cash and due from banks, interest-bearing deposits with banks reflecting higher deposits with central banks, guarantees, as well as derivatives exposures. These increases were partially offset by the impact of foreign exchange translation and a decrease in loans. The decrease in loans was due to the reclassification of certain securities in loans and receivables to investment securities as a result of the adoption of IFRS 9, partially offset by volume growth driven by increased client activities.

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%, 29%, 17% and 7%, respectively (October 31, 2017 – 49%, 30%, 15% and 6%, respectively). Growth in the U.S. and Europe was largely driven by business growth in repo-style transactions and increased deposits with central banks, partially offset by the impact of foreign exchange translation.

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

	As at								
	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
U.K.	$ 7,928	$ 15,456	$ 1,342	$ 1,602	$ 9,599	$ 9,625	$ 7,104	$ 26,328	$ 20,503
Germany	1,945	9,493	12	270	4,928	3,809	2,983	11,720	14,195
France	431	11,218	1	533	1,769	9,950	464	12,183	10,720
Total U.K., Germany, France	$ 10,304	$ 36,167	$ 1,355	$ 2,405	$ 16,296	$ 23,384	$ 10,551	$ 50,231	$ 45,418
Ireland	$ 362	$ 43	$ 200	$ 202	$ 355	$ 8	$ 444	$ 807	$ 586
Italy	43	118	-	10	77	13	81	171	226
Portugal	-	9	-	-	3	-	6	9	17
Spain	191	186	-	12	166	5	218	389	777
Total Peripheral (4)	$ 596	$ 356	$ 200	$ 224	$ 601	$ 26	$ 749	$ 1,376	$ 1,606
Luxembourg (5)	$ 814	$ 11,343	$ 27	$ 166	$ 384	$ 11,071	$ 895	$ 12,350	$ 6,567
Netherlands (5)	492	2,232	13	95	2,349	1	482	2,832	3,471
Norway	214	3,808	-	3	3,447	312	266	4,025	4,413
Sweden	110	4,392	11	16	2,798	1,603	128	4,529	4,726
Switzerland	353	3,474	128	52	710	3,146	151	4,007	3,533
Other	1,388	1,920	65	143	790	1,323	1,403	3,516	3,510
Total Other Europe	$ 3,371	$ 27,169	$ 244	$ 475	$ 10,478	$ 17,456	$ 3,325	$ 31,259	$ 26,220
Net exposure to Europe (6)	$ 14,271	$ 63,692	$ 1,799	$ 3,104	$ 27,375	$ 40,866	$ 14,625	$ 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 $105 billion against repo-style transactions (October 31, 2017 – $77.7 billion) and $13.5 billion against derivatives (October 31, 2017 – $12.6 billion).
(3) Securities include $17.1 billion of trading securities (October 31, 2017 – $20 billion), $34 billion of deposits (October 31, 2017 – $19.7 billion), and $12.6 billion of securities carried at FVOCI, (October 31, 2017 – $14.8 billion).
(4) Gross credit risk exposure to peripheral Europe is comprised of Ireland $26.4 billion (October 31, 2017 – $19.3 billion), Italy $0.3 billion (October 31, 2017 – $0.4 billion), Portugal $nil (October 31, 2017 – $nil), and Spain $1.5 billion (October 31, 2017 – $1.0 billion).
(5) Excludes $2.8 billion (October 31, 2017 – $2.7 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 (October 31, 2017 – $1.4 billion).

Q1 2018 vs. Q4 2017

Net credit risk exposure to Europe increased $9.6 billion from last quarter, largely driven by increased exposure in the U.K. and Luxembourg, partially offset by decreased exposure in Germany. Our net exposure to peripheral Europe, which includes Ireland, Italy, Portugal and Spain remained minimal, with total outstanding exposure decreasing $0.2 billion during the quarter to $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 $16 million. The gross impaired loans ratio of this loan book was 170 bps, up from 100 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 January 31, 2018						
	Residential mortgages						Home equity lines of credit (1)
(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

	As at October 31, 2017						
	Residential mortgages (5)						Home equity lines of credit (1)
(Millions of Canadian dollars, except percentage amounts)	Insured (2)		Uninsured		Total		Total
Region (3)							
Canada							
Atlantic provinces	$ 7,670	57%	$ 5,848	43%	$ 13,518		$ 1,986
Quebec	15,089	48	16,557	52	31,646		3,964
Ontario	42,610	39	66,549	61	109,159		16,823
Alberta	21,820	58	15,702	42	37,522		6,950
Saskatchewan and Manitoba	9,305	54	7,932	46	17,237		2,627
B.C. and territories	17,169	37	29,521	63	46,690		8,620
Total Canada (4)	$ 113,663	44%	$ 142,109	56%	$ 255,772		$ 40,970
U.S.	1	–	11,448	100	11,449		1,557
Other International	9	–	3,091	100	3,100		1,992
Total International	$ 10	–%	$ 14,539	100%	$ 14,549		$ 3,549
Total	$ 113,673	42%	$ 156,648	58%	$ 270,321		$ 44,519

(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 (October 31, 2017 – $256 billion) is largely comprised of $233 billion (October 31, 2017 – $231 billion) of residential mortgages and $7 billion (October 31, 2017 – $6 billion) of mortgages with commercial clients, of which $4 billion (October 31, 2017 – $4 billion) are insured mortgages, both in Canadian Banking, and $18 billion (October 31, 2017 – $19 billion) of residential mortgages in Capital Markets held for securitization purposes.
(5) The residential mortgages amounts exclude our third-party mortgage-backed securities (MBS) of $27 million as at October 31, 2017.

Home equity lines of credit are uninsured and reported within the personal loan category. As at January 31, 2018, home equity lines of credit in Canadian Banking were $40 billion (October 31, 2017 – $41 billion). Approximately 98% of these home equity lines of credit (October 31, 2017 – 98%) are secured by a first lien on real estate, and only 7% (October 31, 2017 – 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					
	January 31 2018			October 31 2017		
	Canada	U.S. and Other International	Total	Canada	U.S. and Other International	Total
Amortization period						
≤ 25 years	**72%**	**43%**	**70%**	73%	43%	71%
> 25 years ≤ 30 years	**24**	**57**	**26**	24	57	26
> 30 years ≤ 35 years	**4**	**–**	**4**	3	–	3
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			
	January 31 2018		October 31 2017	
	Uninsured		Uninsured	
	Residential mortgages (1)	Homeline products (2)	Residential mortgages (1)	Homeline products (2)
Region (3)				
Atlantic provinces	**74%**	**74%**	74%	74%
Quebec	**72**	**73**	72	73
Ontario	**70**	**67**	70	67
Alberta	**74**	**71**	73	72
Saskatchewan and Manitoba	**74**	**74**	74	75
B.C. and territories	**68**	**64**	69	65
U.S.	**69**	**n.m.**	74	n.m.
Other International	**59**	**n.m.**	60	n.m.
Average of newly originated and acquired for the period (4), (5)	**70%**	**68%**	70%	68%
Total Canadian Banking residential mortgages portfolio (6)	**55%**	**50%**	53%	49%

(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.

Provision for (recovery of) credit loss

	IFRS 9	IAS 39	
	For the three months ended		
(Millions of Canadian dollars, except percentage amounts)	January 31 2018	October 31 2017	January 31 2017
Personal & Commercial Banking	$ 312	$ 270	$ 249
Wealth Management	(2)	–	13
Capital Markets	25	(38)	32
Corporate Support and Other (1)	(1)	2	–
PCL – Loans	$ 334	$ 234	$ 294
PCL – Other financial assets	–		
Total PCL	$ 334	$ 234	$ 294
Retail	$ 20		
Wholesale	(11)		
PCL on performing loans (2)	$ 9	$ –	$ –
Retail	$ 245	$ 239	$ 232
Wholesale	80	(5)	62
PCL on impaired loans (3)	$ 325	$ 234	$ 294
PCL – Loans	$ 334	$ 234	$ 294
PCL ratio – Loans (4)	0.24%	0.17%	0.22%
PCL on impaired loans ratio (5)	0.23%	0.17%	0.22%
Additional information by geography			
Canada (6)			
Residential mortgages	$ 10	$ 11	$ 6
Personal	113	103	109
Credit cards	107	102	108
Small business	7	10	7
Retail	237	226	230
Wholesale	34	19	11
PCL on impaired loans (3)	$ 271	$ 245	$ 241
U.S. (6), (7)			
Retail	$ 1	$ 2	$ –
Wholesale	22	(34)	42
PCL on impaired loans (3)	$ 23	$ (32)	$ 42
Other International (6), (7)			
Retail	$ 7	$ 11	$ 2
Wholesale	24	10	9
PCL on impaired loans (3)	$ 31	$ 21	$ 11
PCL on impaired loans (3)	$ 325	$ 234	$ 294

(1) Prior period amounts 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.

Q1 2018 vs. Q1 2017

Total PCL is $334 million. PCL on loans of $334 million increased $40 million, or 14% from the prior year, mainly due to higher provisions in Personal & Commercial Banking which were partially offset by lower provisions in Wealth Management and Capital Markets. PCL on loans also reflects the adoption of IFRS 9 on November 1, 2017. The PCL ratio on loans of 24 bps increased 2 bps.

PCL on performing loans of $9 million since the adoption of IFRS 9 was due to an increase in provisions in the Canadian Personal Banking portfolios, largely offset by a decrease in provisions in Capital Markets and Wealth Management during the quarter.

PCL on impaired loans of $325 million is $31 million higher than the prior year, mainly due to higher provisions in Personal & Commercial Banking and fewer recoveries and lower provisions in Capital Markets, partially offset by lower provisions in Wealth Management.

PCL on loans in Personal & Commercial Banking increased $63 million, or 25%, mainly due to the adoption of IFRS 9, which led to new provisions on performing loans in the Canadian Personal Banking portfolios largely driven by volume growth. There were also higher provisions on impaired loans in the Canadian Personal Banking and Caribbean Banking portfolios.

PCL on loans in Wealth Management decreased $15 million, due to lower provisions on impaired loans in U.S. Wealth Management (including City National) and a decrease in provisions on performing loans from improvements in economic conditions since the adoption of IFRS 9.

PCL on loans in Capital Markets decreased $7 million, or 22%, due to a decrease in provisions on performing loans from improvements in economic conditions since the adoption of IFRS 9, and lower provisions on impaired loans, largely offset by fewer recoveries.

Q1 2018 vs. Q4 2017

PCL on loans of $334 million increased $100 million, or 43% from the prior quarter, mainly due to higher provisions in Capital Markets and Personal & Commercial Banking. PCL on loans also reflects the adoption of IFRS 9, as noted above. PCL ratio on loans increased 7 bps.

PCL on performing loans of $9 million since the adoption of IFRS 9 was due to an increase in provisions in the Canadian Personal Banking portfolios, mainly offset by a decrease in provisions in Capital Markets and Wealth Management during the quarter.

PCL on impaired loans of $325 million increased $91 million from the prior quarter, mainly due to fewer recoveries and higher provisions in Capital Markets.

PCL on loans in Personal & Commercial Banking increased $42 million, or 16%, mainly due to the adoption of IFRS 9, which led to new provisions on performing loans in the Canadian Personal Banking portfolios largely driven by volume growth.

PCL on loans in Wealth Management decreased $2 million due to a decrease in provisions on performing loans as a result of improvements in economic conditions since the adoption of IFRS 9. This was largely offset by higher provisions on impaired loans in U.S. Wealth Management (including City National).

PCL on loans in Capital Markets increased $63 million, driven by higher PCL on impaired loans mainly due to fewer recoveries and higher provisions, partially offset by a decrease in provisions on performing loans from improvements in economic conditions since the adoption of IFRS 9.

Gross impaired loans (GIL)

	IFRS 9	IAS 39	
	As at		
(Millions of Canadian dollars, except percentage amounts)	January 31 2018	October 31 2017	January 31 2017
Personal & Commercial Banking	$ 1,713	$ 1,500	$ 1,537
Wealth Management (1)	273	549	610
Capital Markets	541	527	1,396
Investor & Treasury Services	–	–	–
Corporate Support and Other	–	–	16
Total GIL (2)	$ 2,527	$ 2,576	$ 3,559
Canada (3)			
Retail	$ 715	$ 559	$ 639
Wholesale	518	426	427
GIL	1,233	985	1,066
U.S. (1), (3)			
Retail	$ 39	$ 59	$ 50
Wholesale	386	736	1,653
GIL	425	795	1,703
Other International (3)			
Retail	$ 327	$ 345	$ 355
Wholesale	542	451	435
GIL	869	796	790
Total GIL (2)	$ 2,527	$ 2,576	$ 3,559
Impaired loans, beginning balance	$ 2,576	$ 2,896	$ 3,903
Classified as impaired during the period (new impaired) (4)	694	525	649
Net repayments (4)	(126)	(313)	(434)
Amounts written off	(321)	(384)	(336)
Other (1), (2), (4), (5)	(296)	(148)	(223)
Impaired loans, balance at end of period	$ 2,527	$ 2,576	$ 3,559
GIL ratio (6)			
Total GIL ratio	0.45%	0.46%	0.66%
Personal & Commercial Banking	0.41%	0.36%	0.39%
Canadian Banking	0.29%	0.24%	0.26%
Caribbean Banking	6.44%	6.33%	6.70%
Wealth Management	0.52%	1.04%	1.20%
Capital Markets	0.67%	0.63%	1.66%

(1) Effective November 1, 2017, GIL excludes $229 million of ACI loans related to our acquisition of City National that have returned to performing status. As at January 31, 2018, $24 million of ACI loans that remain impaired are included in GIL. As at October 31, 2017 and January 31, 2017, GIL includes $256 million and $348 million related to the ACI loans portfolio from our acquisition of City National. ACI loans included in GIL added 0 bps, 5 bps and 6 bps to our January 31, 2018, October 31, 2017 and January 31, 2017 GIL ratios, respectively. 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.

Q1 2018 vs. Q1 2017

Total GIL decreased $1,032 million or 29% from the prior year, and the total GIL ratio of 45 bps improved 21 bps, largely reflecting lower impaired loans in Capital Markets and Wealth Management, partially offset by higher impaired loans in Personal & Commercial Banking.

GIL in Personal & Commercial Banking increased $176 million or 11%, with $134 million of the increase due to a change in the definition of impaired under IFRS 9 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 $337 million or 55%. 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.

GIL in Capital Markets decreased $855 million or 61%, mainly due to lower impaired loans compared to prior year.

Q1 2018 vs. Q4 2017

Total GIL decreased $49 million or 2% from the prior quarter, and the total GIL ratio of 45 bps improved 1 bp.

GIL in Personal & Commercial Banking increased $213 million or 14% from the prior quarter, mainly due to higher impaired loans in our Canadian Personal Banking portfolios due to the adoption of IFRS 9 as noted above, and higher impaired loans in our Canadian Business Banking portfolios.

GIL in Wealth Management decreased $276 million or 50%, mainly reflecting fewer impaired loans in U.S. Wealth Management (including City National) due to the exclusion of ACI loans and a change in the definition of impaired for certain products.

GIL in Capital Markets increased $14 million or 3%, mainly due to higher impaired loans on a couple of accounts, partially offset by loans returning to performing status and recoveries.

Allowance for credit losses (ACL)

	IFRS 9	IAS 39	
		As at	
(Millions of Canadian dollars)	January 31 2018	October 31 2017	January 31 2017
Personal & Commercial Banking	$ 2,426	$ 497	$ 496
Wealth Management	218	80	75
Capital Markets	350	160	243
Investor & Treasury Services	1	–	–
Corporate Support & Other (1)	–	1,513	1,516
ACL on loans	$ 2,995	$ 2,250	$ 2,330
ACL on other financial assets	103		
Total ACL	$ 3,098	$ 2,250	$ 2,330
ACL on loans is comprised of:			
ACL on performing loans (2)	$ 2,242	$ 1,513	$ 1,515
ACL on impaired loans (3)	753	737	815
ACL on loans			
Retail	$ 1,643		
Wholesale	599		
ACL on performing loans (2)	$ 2,242	$ 1,513	$ 1,515
Canada (4)			
Retail	$ 153	$ 141	$ 156
Wholesale	140	124	119
ACL on impaired loans (3)	$ 293	$ 265	$ 275
U.S. (4)			
Retail	$ 1	$ 1	$ 1
Wholesale	135	150	195
ACL on impaired loans (3)	$ 136	$ 151	$ 196
Other International (4)			
Retail	$ 157	$ 168	$ 169
Wholesale	167	153	175
ACL on impaired loans (3)	$ 324	$ 321	$ 344
ACL on impaired loans (3)	$ 753	$ 737	$ 815

(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.

Q1 2018 vs. Q1 2017

Total ACL of $3,098 million increased $768 million or 33% from the prior year, which resulted in an increase of $665 million in ACL on loans and the inclusion of $103 million in ACL on other financial assets primarily due to the adoption of IFRS 9.

ACL on performing loans of $2,242 million is $727 million higher than the Allowance for loans not yet identified as impaired of $1,515 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 $753 million decreased $62 million from prior year, mainly due to lower ACL on loans in Capital Markets.

Q1 2018 vs. Q4 2017

Total ACL of $3,098 million increased $848 million or 38% from the prior quarter, reflecting an increase of $745 million in ACL on loans and the inclusion of $103 million in ACL on other financial assets primarily due to the adoption of IFRS 9, as noted above.

ACL on performing loans is $729 million higher than the Allowance for loans not yet identified as impaired of $1,513 million in the prior quarter. 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 $753 million increased $16 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.

	January 31, 2018				October 31, 2017		January 31, 2017	
		For the three months ended				For the three months ended		For the three months ended
(Millions of Canadian dollars)	As at Jan. 31	Average	High	Low	As at Oct. 31	Average	As at Jan. 31	Average
Equity	$ 15	$ 16	$ 21	$ 11	$ 10	$ 9	$ 14	$ 13
Foreign exchange	3	3	4	2	3	4	4	5
Commodities	1	2	3	1	3	3	3	3
Interest rate (1)	12	17	23	12	16	15	15	15
Credit specific (2)	5	5	5	4	4	4	5	4
Diversification (3)	(14)	(18)	n.m.	n.m.	(18)	(17)	(19)	(17)
Market risk VaR	$ 22	$ 25	$ 29	$ 17	$ 18	$ 18	$ 22	$ 23
Market risk Stressed VaR	$ 84	$ 81	$ 118	$ 40	$ 43	$ 46	$ 52	$ 55

(1) General credit spread risk and funding spread risk associated with uncollateralized derivatives are included under interest rate VaR.
(2) Credit specific risk captures issuer-specific credit spread volatility.
(3) Market risk VaR is less than the sum of the individual risk factor VaR results due to portfolio diversification.
n.m. not meaningful

Q1 2018 vs. Q1 2017

Average market risk VaR of $25 million increased $2 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. This was partially offset by the impact of foreign exchange translation.

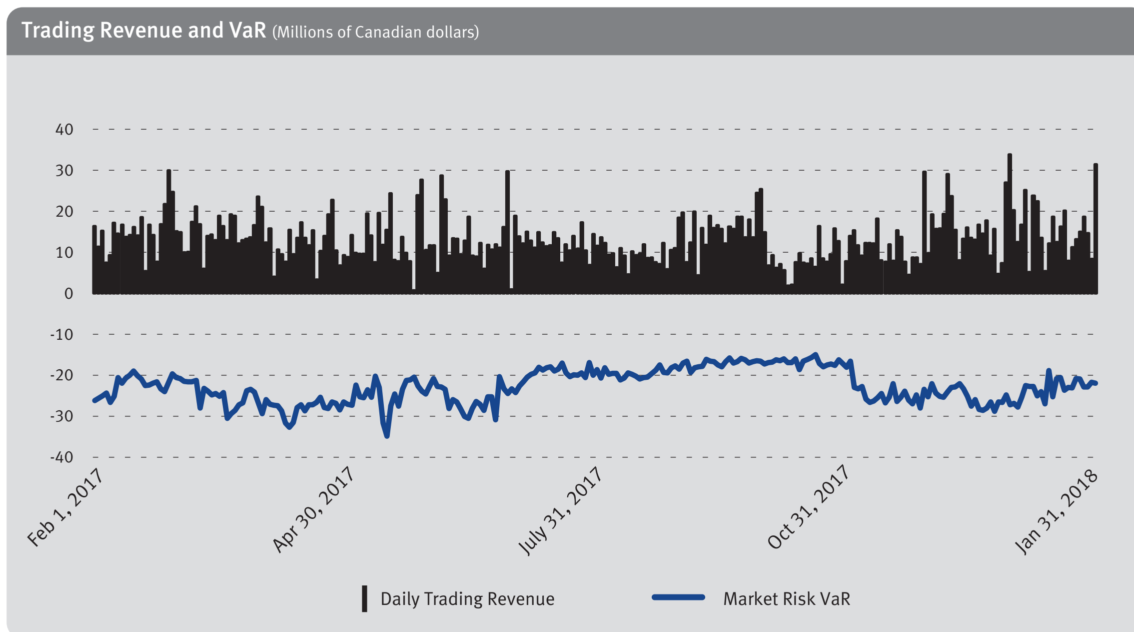
Average SVaR of $81 million increased $26 million from the prior year, largely driven by the adoption of IFRS 9 as mentioned above. Additionally, larger inventories in certain fixed income portfolios were seen in December 2017 due to market pressure arising from tax changes in the U.S. and demands for USD funding. Client-driven activity in our equity derivative trading business also contributed to the increase.

Q1 2018 vs. Q4 2017

Average market risk VaR of $25 million increased $7 million from the prior quarter, largely driven by the adoption of IFRS 9 as mentioned above. In addition, equity exposures were higher on average in the current quarter due to increased client-driven activity in volatile equity derivative markets, as compared to reduced activity in the prior quarter due to subdued market volatility.

Average SVaR of $81 million increased $35 million from the prior quarter, due to the adoption of IFRS 9, client-driven activity in equity derivative markets and higher fixed income inventories as noted above.

The following chart displays a bar graph of our daily trading profit and loss and a line graph of our daily market risk VaR. We incurred no net trading losses in the three months ended January 31, 2018 and October 31, 2017.



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 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 and claims. As at January 31, 2018, we had liabilities with respect to insurance obligations of $10.0 billion, up from $9.7 billion in the prior quarter, and trading securities of $7.9 billion in support of the liabilities, up from $7.7 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.

	January 31 2018						October 31 2017		January 31 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	$ (1,165)	$ (59)	$ (1,224)	$ 281	$ 177	$ 458	$ (1,215)	$ 451	$ (1,304)	$ 414
100bps decrease in rates	1,090	(281)	809	(374)	(204)	(578)	638	(604)	860	(553)

(1) Represents the 12-month NII exposure to an instantaneous and sustained shift in interest rates.
(2) Represents the impact on the SIRR portfolios held in our City National and U.S. banking operations.

As at January 31, 2018, an immediate and sustained -100 bps shock would have had a negative impact to our NII of $578 million, down from $604 million last quarter. An immediate and sustained +100 bps shock at the end of January 31, 2018 would have had a negative impact to the Bank's EVE of $1,224 million, largely consistent with $1,215 million reported last quarter. The quarter-over-quarter decrease in NII risk was mainly attributed to hedging of balance sheet growth. During the first 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 $47.5 billion of investment securities carried at FVOCI as at January 31, 2018. At October 31, 2017, we held $75.9 billion of available-for-sale securities (AFS). The quarter-over-quarter decrease was largely driven by the change in classification of certain portfolios as a result of adopting IFRS 9. We hold debt securities carried at FVOCI primarily as investments, as well as to manage liquidity risk and hedge interest rate risk in our non-trading banking balance sheet. As at January 31, 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 $8.1 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 $20.2 million, as measured by the change in value for a one basis point widening of credit spreads. The value of the investment securities carried at FVOCI included in our SIRR measure as at January 31, 2018 was $9.7 billion. Our investment securities carried at FVOCI also include equity exposures of $0.4 billion as at January 31, 2018. At October 31, 2017, our AFS securities included equity exposures of $1.2 billion.

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 $3.7 billion as at January 31, 2018 were up from $3.2 billion last quarter, and derivative liabilities of $3.3 billion as at January 31, 2018 were up from $3.2 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 $1.6 billion as at January 31, 2018, up from $1.3 billion as at October 31, 2017, and derivative liabilities of $1.5 billion as at January 31, 2018, unchanged 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 $6.5 million as of January 31, 2018 compared to $7.7 million as of October 31, 2017.

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 $2.1 billion as at January 31, 2018 were up from $1.9 billion as at October 31, 2017, and derivative liabilities of $1.8 billion as at January 31, 2018 were up from $1.7 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 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.

(Millions of Canadian dollars)	As at October 31, 2017			
		Market risk measure		
	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)	$ 28,407	$ –	$ 28,407	Interest rate
Interest-bearing deposits with banks (4)	32,662	20,792	11,870	Interest rate
Securities				
Trading (5)	127,657	119,815	7,842	Interest rate, credit spread
Investment, net of applicable allowance (6)	90,722	–	90,722	Interest rate, credit spread, equity
Assets purchased under reverse repurchase agreements and securities borrowed (7)	220,977	141,532	79,445	Interest rate
Loans				
Retail (8)	385,170	7,638	377,532	Interest rate
Wholesale (9)	159,606	4,217	155,389	Interest rate
Allowance for loan losses	(2,159)	–	(2,159)	Interest rate
Segregated fund net assets (10)	1,216	–	1,216	Interest rate
Derivatives	95,023	91,791	3,232	Interest rate, foreign exchange
Other assets (11)	68,545	2,006	66,539	Interest rate
Assets not subject to market risk (12)	5,027			
Total assets	$ 1,212,853	$ 387,791	$ 820,035	
Liabilities subject to market risk				
Deposits (13)	$ 789,635	$ 78,194	$ 711,441	Interest rate
Segregated fund liabilities (14)	1,216	–	1,216	Interest rate
Other				
Obligations related to securities sold short	30,008	30,008	–	
Obligations related to assets sold under repurchase agreements and securities loaned (15)	143,084	136,371	6,713	Interest rate
Derivatives	92,127	88,919	3,208	Interest rate, foreign exchange
Other liabilities (16)	65,565	4,275	61,290	Interest rate
Subordinated debentures	9,265	–	9,265	Interest rate
Preferred share liabilities	–	–	–	
Liabilities not subject to market risk (17)	7,525			
Total liabilities	$ 1,138,425	$ 337,767	$ 793,133	
Total equity	$ 74,428			
Total liabilities and equity	$ 1,212,853			

(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 $15,895 million included in SIRR. An additional $12,512 million is included in other risk controls.
(4) Interest-bearing deposits with banks of $11,870 million are included in SIRR.
(5) Trading securities include $7,706 million in securities for asset/liability management of RBC Insurance. An additional $136 million is included in other risk controls.
(6) Includes AFS securities of $75,877 million and held-to-maturity securities of $14,845 million. $51,269 million of the total securities are included in SIRR. An additional $1,946 million are held by RBC Insurance. The remaining $37,507 million are captured in other internal non-trading market risk reporting.
(7) Assets purchased under reverse repurchase agreements include $32,541 million reflected in SIRR. An additional $46,904 million is included in other risk controls.
(8) Retail loans include $366,928 million reflected in SIRR and $241 million is used for asset/liability management of RBC Insurance. An additional $10,363 million is included in other risk controls.
(9) Wholesale loans include $153,829 million reflected in SIRR. An additional $1,560 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 $37,999 million reflected in SIRR and $2,428 million is used for asset/liability management of RBC Insurance. An additional $26,112 million is included in other risk controls.
(12) Assets not subject to market risk include $5,027 million of physical and other assets.
(13) Deposits include $650,841 million reflected in SIRR. The remaining $60,600 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 $6,713 million included in other risk controls.
(16) Other liabilities include $36,019 million reflected in SIRR and $10,318 million of RBC Insurance liabilities. An additional $14,953 million is included in other risk controls.
(17) Liabilities not subject to market risk include $7,525 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 January 31, 2018				
(Millions of Canadian dollars)	Bank-owned liquid assets (1)	Securities received as collateral from securities financing and derivative transactions	Total liquid assets	Encumbered liquid assets	Unencumbered liquid assets
Cash and holding at central banks	$ 51,082	$ –	$ 51,082	$ 1,982	$ 49,100
Deposits in other banks available overnight	3,342	–	3,342	589	2,753
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks (2)	337,749	32,755	370,504	239,467	131,037
Other securities	146,100	46,149	192,249	72,845	119,404
Liquidity assets eligible at central banks (not included above) (3)	311	–	311	–	311
Undrawn credit lines granted by central banks (4)	10,830	–	10,830	–	10,830
Other assets eligible as collateral for discount (5)	94,479	–	94,479	–	94,479
Other liquid assets (6)	21,633	–	21,633	21,633	–
Total liquid assets	$ 665,526	$ 78,904	$ 744,430	$ 336,516	$ 407,914

	As at October 31, 2017				
(Millions of Canadian dollars)	Bank-owned liquid assets (1)	Securities received as collateral from securities financing and derivative transactions	Total liquid assets	Encumbered liquid assets	Unencumbered liquid assets
Cash and holding at central banks	$ 46,581	$ –	$ 46,581	$ 2,045	$ 44,536
Deposits in other banks available overnight	4,004	–	4,004	203	3,801
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks (2)	303,003	27,534	330,537	187,465	143,072
Other securities	142,272	44,487	186,759	77,696	109,063
Liquidity assets eligible at central banks (not included above) (3)	436	–	436	–	436
Undrawn credit lines granted by central banks (4)	12,007	–	12,007	–	12,007
Other assets eligible as collateral for discount (5)	94,207	–	94,207	–	94,207
Other liquid assets (6)	19,520	–	19,520	19,520	–
Total liquid assets	$ 622,030	$ 72,021	$ 694,051	$ 286,929	$ 407,122

	As at	
(Millions of Canadian dollars)	January 31 2018	October 31 2017
Royal Bank of Canada	$ 223,165	$ 204,999
Foreign branches	60,127	63,283
Subsidiaries	124,622	138,840
Total unencumbered liquid assets	$ 407,914	$ 407,122

(1) The Bank-owned liquid assets amount includes securities owned outright as well as collateral received through reverse repurchase transactions.
(2) 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).
(3) Includes Auction Rate Securities.
(4) 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.
(5) Represents our unencumbered Canadian dollar non-mortgage loan book (at face value) that could, subject to satisfying conditions precedent to borrowing and application of prescribed collateral margin requirements, be pledged to the Bank of Canada for advances under its Emergency Lending Assistance (ELA) program. ELA and other central bank facilities 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 central bank collateral to meet requirements and mitigate further market liquidity disruption.
(6) Represents pledges related to OTC and exchange-traded derivative transactions.

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

Q1 2018 vs. Q4 2017

Total liquid assets increased $50 billion or 7%, primarily due to increases in collateral received under reverse repurchase agreements and securities financing and derivative transactions.

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 January 31, 2018, our Unencumbered assets available as collateral comprised 32% of our total assets (October 31, 2017 – 33%).

Asset encumbrance

	As at									
	January 31 2018					October 31 2017				
	Encumbered		Unencumbered			Encumbered		Unencumbered		
(Millions of Canadian dollars)	Pledged as collateral	Other (1)	Available as collateral (2)	Other (3)	Total	Pledged as collateral	Other (1)	Available as collateral (2)	Other (3)	Total
Cash and due from banks	$ 6	$ 1,976	$ 32,506	$ –	$ 34,488	$ 6	$ 2,039	$ 26,362	$ –	$ 28,407
Interest-bearing deposits with banks	–	588	36,681	–	37,269	–	204	32,458	–	32,662
Securities										
Trading	55,683	–	71,190	2,488	129,361	51,344	–	74,922	1,391	127,657
Investment, net of applicable allowance	5,345	–	86,702	854	92,901	3,184	–	86,442	1,096	90,722
Assets purchased under reverse repurchase agreements and securities borrowed (4)	268,132	23,355	69,551	–	361,038	222,128	23,131	74,950	–	320,209
Loans										
Retail										
Mortgage securities	35,189	–	35,490	–	70,679	35,861	–	32,589	–	68,450
Mortgage loans	39,665	–	14,722	147,126	201,513	38,504	–	14,737	148,657	201,898
Non-mortgage loans	9,828	–	63,703	40,512	114,043	8,776	–	65,449	40,597	114,822
Wholesale	–	–	26,884	127,701	154,585	3,713	–	27,637	128,256	159,606
Allowance for loan losses	–	–	–	(2,776)	(2,776)	–	–	–	(2,159)	(2,159)
Segregated fund net assets	–	–	–	1,270	1,270	–	–	–	1,216	1,216
Other – Derivatives	–	–	–	105,512	105,512	–	–	–	95,023	95,023
– Others (5)	21,633	–	–	56,032	77,665	19,520	–	–	54,052	73,572
Total assets	$ 435,481	$ 25,919	$ 437,429	$ 478,719	$ 1,377,548	$ 383,036	$ 25,374	$ 435,546	$ 468,129	$ 1,312,085

(1) Includes assets restricted from use to generate secured funding due to legal or other constraints.
(2) Includes loans that could be used to collateralize central bank advances. Our unencumbered Canadian dollar non-mortgage loan book (at face value) could, subject to satisfying conditions for borrowing and application of prescribed collateral margin requirements, be pledged to the Bank of Canada for advances under its ELA program. 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 and other central bank facilities are not considered sources of available liquidity in our normal liquidity risk profile. However, banks could monetize assets meeting central bank collateral criteria during periods of extraordinary and severe disruption to market-wide liquidity.
(3) Other unencumbered assets are not subject to any restrictions on their use to secure funding or as collateral but would not be considered readily available since they may not be acceptable at central banks or for other lending programs.
(4) Includes bank-owned liquid assets and securities received as collateral from off-balance sheet securities financing, derivative transactions, and margin lending. Includes $23.8 billion (October 31, 2017: $21.7 billion) of collateral received through reverse repurchase transactions that cannot be rehypothecated in its current legal form.
(5) The Pledged as collateral amounts relate to OTC and exchange-traded derivative transactions.

Funding

Funding strategy

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

Deposit and funding profile

As at January 31, 2018, relationship-based deposits, which are the primary source of funding for retail loans and mortgages, were $522 billion or 51% of our total funding (October 31, 2017 – $525 billion or 54%). 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

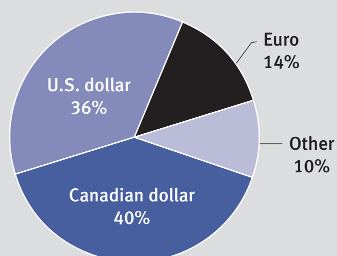
Our wholesale funding activities are well-diversified by geography, investor segment, instrument, currency, structure and maturity. We maintain an ongoing presence in different funding markets, which allows us to continuously monitor market developments and trends, identify opportunities and risks, and 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

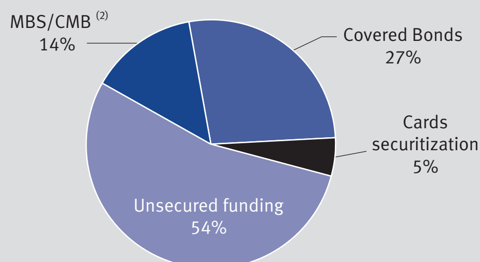
We also raise long-term funding using Canadian Deposit Notes, Canadian National Housing Act MBS, Canada Mortgage Bonds, credit card receivable-backed securities, Kangaroo Bonds (issued in the Australian domestic market by foreign firms) and Yankee Certificates of Deposit (issued in the U.S. domestic 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
($137 billion as at January 31, 2018)



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

Long-term debt[(1)] – funding mix by product
($137 billion as at January 31, 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 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

(Millions of Canadian dollars)	As at October 31, 2017 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)	$ 5,054	$ 39	$ 47	$ 13	$ 5,153	$ –	$ –	$ 5,153
Certificates of deposit and commercial paper	1,092	8,801	14,194	13,501	37,588	1,549	39	39,176
Asset-backed commercial paper (3)	997	1,385	4,300	5,555	12,237	–	–	12,237
Senior unsecured medium-term notes (4)	–	2,625	3,402	16,691	22,718	17,311	38,695	78,724
Senior unsecured structured notes (5)	188	192	980	1,545	2,905	1,332	6,270	10,507
Mortgage securitization	–	571	1,310	1,549	3,430	4,094	12,650	20,174
Covered bonds/asset-backed securities (6)	–	2,685	1,777	6,179	10,641	10,017	23,925	44,583
Subordinated liabilities	–	–	–	–	–	1,106	8,256	9,362
Other (7)	4,669	2,005	173	1,488	8,335	5	5,344	13,684
Total	$ 12,000	$ 18,303	$ 26,183	$ 46,521	$ 103,007	$ 35,414	$ 95,179	$ 233,600
Of which:								
– Secured	$ 5,265	$ 5,541	$ 7,388	$ 13,283	$ 31,477	$ 14,111	$ 36,575	$ 82,163
– Unsecured	6,735	12,762	18,795	33,238	71,530	21,303	58,604	151,437

(1) Excludes bankers' acceptances and repos.
(2) Only includes deposits raised by treasury. Excludes deposits associated with services we provide to these 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, auto and mortgage loans.
(7) Includes tender option bonds (secured) of $6,085 million (October 31, 2017 – $5,168 million), bearer deposit notes (unsecured) of $4,115 million (October 31, 2017 – $3,342 million) and other long-term structured deposits (unsecured) of $4,900 million (October 31, 2017 – $5,176 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 February 22, 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 July 31, 2017, DBRS revised our outlook to stable from negative.

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					
	January 31 2018			October 31 2017		
(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	$ 55	$ 126	$ 433	$ 61	$ 102	$ 307
Other contractual funding or margin requirements (1)	208	102	–	231	100	–

(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 OSFI regulatory minimum coverage level for LCR is currently 100%.

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

Liquidity coverage ratio common disclosure template (1)

	For the three-months ended			
	January 31 2018		October 31 2017	
(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)		214,923		211,735
Cash outflows				
Retail deposits and deposits from small business customers, of which:	249,202	18,876	243,794	19,118
Stable deposits (3)	86,357	2,591	75,160	2,255
Less stable deposits	162,845	16,285	168,634	16,863
Unsecured wholesale funding, of which:	265,804	119,121	260,993	117,451
Operational deposits (all counterparties) and deposits in networks of cooperative banks (4)	120,507	28,792	106,980	25,775
Non-operational deposits	127,323	72,355	137,475	75,138
Unsecured debt	17,974	17,974	16,538	16,538
Secured wholesale funding		23,457		18,735
Additional requirements, of which:	231,561	75,102	229,048	74,047
Outflows related to derivative exposures and other collateral requirements	62,181	43,568	61,901	41,364
Outflows related to loss of funding on debt products	5,574	5,574	7,108	7,108
Credit and liquidity facilities	163,806	25,960	160,039	25,575
Other contractual funding obligations (5)	40,587	40,587	26,252	26,252
Other contingent funding obligations (6)	440,710	7,226	429,706	6,902
Total cash outflows		284,369		262,505
Cash inflows				
Secured lending (e.g., reverse repos)	162,748	34,331	138,867	28,062
Inflows from fully performing exposures	13,290	9,453	11,626	8,310
Other cash inflows	64,298	64,298	51,878	51,878
Total cash inflows		108,082		88,250
		Total adjusted value		Total adjusted value
Total HQLA		214,923		211,735
Total net cash outflows		176,287		174,255
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 January 31, 2018 is calculated as an average of 62 daily positions.
(2) With the exception of other contingent funding obligations, unweighted inflow and outflow amounts are items maturing or callable in 30 days or less. Other contingent funding obligations also include debt securities with remaining maturity greater than 30 days.
(3) As defined by the BCBS, stable deposits from retail and small business customers are deposits that are insured and are either held in transactional accounts or the bank has an established relationship with the client making the withdrawal unlikely.
(4) Operational deposits from customers other than retail and small and medium-sized enterprises (SMEs), are deposits which clients need to keep with the bank in order to facilitate their access and ability to use payment and settlement systems primarily for clearing, custody and cash management activities.
(5) Other contractual funding obligations primarily include outflows from unsettled securities trades and outflows from obligations related to securities sold short.
(6) Other contingent funding obligations include outflows related to other off-balance sheet facilities that carry low LCR runoff factors (0% – 5%).

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.

Q1 2018 vs. Q4 2017

The average LCR for the quarter ended January 31, 2018 was 122%. This translates into a surplus of approximately $39 billion. As at January 31, 2018, our LCR position was consistent with the position in 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 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	1,248	685	201	919	1,611	720	1,287	9,848	7,605	24,124
Equity	–	–	–	–	–	–	–	–	73,324	73,324
Total liabilities and equity	$ 277,069	$ 88,456	$ 57,853	$ 44,094	$ 40,370	$ 58,494	$ 121,985	$ 73,373	$ 514,581	$ 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 fair value through profit or loss have been included in the less than 1 month category as there is no expectation to hold these assets to their contractual maturity.

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

	As at October 31, 2017									
(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	$ 58,675	$ 27	$ 22	$ 4	$ –	$ –	$ –	$ –	$ 2,341	$ 61,069
Securities										
Trading (1)	88,083	9	72	3	12	91	61	6,374	32,952	127,657
Investment, net of applicable allowance	1,748	4,690	4,145	2,552	1,545	9,608	24,445	40,772	1,217	90,722
Assets purchased under reverse repurchase agreements and securities borrowed	106,342	47,726	26,207	13,696	14,327	6,624	–	–	6,055	220,977
Loans, net of applicable allowance	15,228	16,024	23,572	27,220	24,086	104,059	206,201	40,028	86,199	542,617
Other										
Customers' liability under acceptances	10,825	5,541	77	–	–	11	5	–	–	16,459
Derivatives	5,619	10,004	4,530	3,290	2,849	9,351	19,459	39,919	2	95,023
Other financial assets	24,577	767	523	90	88	183	184	1,697	1,243	29,352
Total financial assets	$ 311,097	$ 84,788	$ 59,148	$ 46,855	$ 42,907	$ 129,927	$ 250,355	$ 128,790	$ 130,009	$ 1,183,876
Other non-financial assets	1,820	1,204	92	337	229	745	1,814	986	21,750	28,977
Total assets	$ 312,917	$ 85,992	$ 59,240	$ 47,192	$ 43,136	$ 130,672	$ 252,169	$ 129,776	$ 151,759	$ 1,212,853
Liabilities and equity										
Deposits (2)										
Unsecured borrowing	$ 40,373	$ 24,425	$ 33,825	$ 35,891	$ 30,641	$ 34,737	$ 48,980	$ 14,709	$ 429,152	$ 692,733
Secured borrowing	1,156	3,989	6,289	5,799	4,064	10,178	20,495	7,659	–	59,629
Covered bonds	–	1,898	1,107	1,331	4,862	7,118	19,732	1,225	–	37,273
Other										
Acceptances	10,825	5,541	77	–	–	11	5	–	–	16,459
Obligations related to securities sold short	30,008	–	–	–	–	–	–	–	–	30,008
Obligations related to assets sold under repurchase agreements and securities loaned	98,409	32,026	4,374	–	93	–	12	–	8,170	143,084
Derivatives	5,765	9,436	4,787	3,388	3,038	9,410	16,924	39,378	1	92,127
Other financial liabilities	25,137	1,118	466	222	296	138	366	3,532	574	31,849
Subordinated debentures	–	–	–	–	–	106	207	8,952	–	9,265
Total financial liabilities	$ 211,673	$ 78,433	$ 50,925	$ 46,631	$ 42,994	$ 61,698	$ 106,721	$ 75,455	$ 437,897	$ 1,112,427
Other non-financial liabilities	835	3,910	312	135	180	2,747	920	9,170	7,789	25,998
Equity	–	–	–	–	–	–	–	–	74,428	74,428
Total liabilities and equity	$ 212,508	$ 82,343	$ 51,237	$ 46,766	$ 43,174	$ 64,445	$ 107,641	$ 84,625	$ 520,114	$ 1,212,853
Off-balance sheet items										
Financial guarantees (3)	$ 511	$ 2,064	$ 1,428	$ 2,031	$ 1,043	$ 1,274	$ 4,029	$ 75	$ 46	$ 12,501
Lease commitments	63	125	182	181	181	720	1,471	2,859	–	5,782
Commitments to extend credit (3)	4,532	4,906	7,735	11,447	9,434	26,162	141,832	16,145	7,176	229,369
Other credit-related commitments	526	801	1,185	1,521	1,274	412	749	246	101,863	108,577
Other commitments	38	–	–	–	–	–	–	–	442	480
Total off-balance sheet items	$ 5,670	$ 7,896	$ 10,530	$ 15,180	$ 11,932	$ 28,568	$ 148,081	$ 19,325	$ 109,527	$ 356,709

(1) Trading debt securities classified as fair value through profit or loss 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 Q1 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 risk-weighted assets) 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). We provide our G-SIB assessment indicators below.

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 January 31, 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%	11.0%	√
Tier 1 capital	› 6.0%	2.5%	› 8.5%	1.0%	› 9.5%	12.4%	√
Total capital	› 8.0%	2.5%	› 10.5%	1.0%	› 11.5%	14.4%	√
Leverage ratio	› 3.0%	n.a.	› 3.0%	n.a.	› 3.0%	4.2%	√

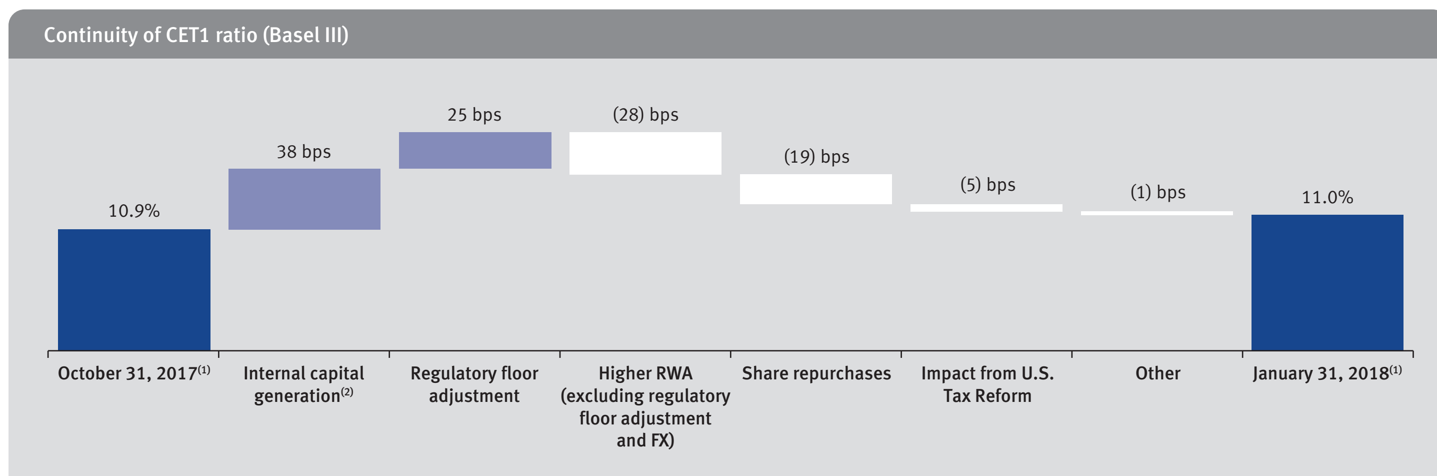
(1) The capital buffers include the capital conservation buffer and the countercyclical capital buffer as prescribed by OSFI.
(2) Effective January 1, 2018, a capital surcharge, equal to the higher of our D-SIB surcharge and the BCBS's G-SIB surcharge, is applicable to risk-weighted capital.
n.a. not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

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	As at January 31 2018	October 31 2017	January 31 2017
Capital (1)			
CET1 capital	$ 51,145	$ 51,572	$ 48,880
Tier 1 capital	57,925	58,361	55,959
Total capital	66,984	67,556	65,377
Risk-weighted Assets (RWA) used in calculation of capital ratios (1), (2)			
CET1 capital RWA	$ 466,758	$ 474,478	$ 442,508
Tier 1 capital RWA	466,758	474,478	443,304
Total capital RWA	466,758	474,478	443,940
Total capital RWA consisting of: (1)			
Credit risk	$ 375,260	$ 376,519	$ 362,051
Market risk	30,100	27,618	25,095
Operational risk	60,119	59,203	56,794
Regulatory floor adjustment (3)	1,279	11,138	–
Total capital RWA	$ 466,758	$ 474,478	$ 443,940
Capital ratios and Leverage ratio (1)			
CET1 ratio	11.0%	10.9%	11.0%
Tier 1 capital ratio	12.4%	12.3%	12.6%
Total capital ratio	14.4%	14.2%	14.7%
Leverage ratio	4.2%	4.4%	4.4%
Leverage ratio exposure (billions)	$ 1,363.9	$ 1,315.5	$ 1,260.0

(1) Capital, RWA, and capital ratios are calculated using OSFI Capital Adequacy Requirements 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 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 is 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 is less than 90% of the capital requirements as calculated under the Basel I standards, the difference is added to the RWAs.

Q1 2018 vs. Q4 2017



(1) Represents rounded figures.
(2) Internal capital generation of $1.8 billion which represents Net income available to shareholders, less common and preferred shares dividends.

Our CET1 ratio was 11.0%, up 10 bps from last quarter, mainly reflecting internal capital generation and a lower regulatory floor adjustment, partially offset by higher RWA due to business growth and share repurchases.

CET1 capital RWA decreased $8 billion, mainly due to a lower regulatory floor adjustment and the impact of foreign exchange translation, partially offset by business growth mostly in trading portfolios, residential mortgages, and underwriting activities.

Our Tier 1 capital ratio of 12.4% was up 10 bps, reflecting the factors noted above under the CET1 ratio.

Our Total capital ratio of 14.4% was up 20 bps, reflecting the factors noted above under the CET1 ratio.

Our Leverage ratio of 4.2% was down 20 bps from last quarter, primarily due to growth in leverage ratio exposures, mainly in repo-style transactions, cash & deposits, and securities. Share repurchases also contributed to the decrease. These factors were partially offset by internal capital generation.

Selected capital management activity

The following table provides our selected capital management activity:

	For the three months ended January 31, 2018		
(Millions of Canadian dollars, except number of shares)	Issuance or redemption date	Number of shares (000s)	Amount
Tier 1 capital			
Common shares activity			
Issued in connection with share-based compensation plans (1)		464	$ 30
Purchased for cancellation		(9,297)	(113)
Redemption of preferred shares, Series C-1	November 13, 2017	(82)	(107)

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

On March 9, 2017, we announced a normal course issuer bid (NCIB) to purchase up to 30 million of our common shares, which commenced on March 14, 2017 and 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 has been and will be the prevailing market price at the time of acquisition. Purchases may also be made through other means permitted by the TSX and applicable securities laws, including under specific share repurchase programs pursuant to issuer bid exemption orders issued by applicable securities regulatory authorities. Any purchases made under an exemption order will generally be at a discount to the prevailing market price.

For the three-months ended January 31, 2018, the total number of common shares repurchased under our NCIB program was approximately 9 million. The total cost of the shares repurchased was $923 million, comprised of a book value of $113 million and an additional premium paid on repurchase of $810 million. As at January 31, 2018, all of the 30 million common shares were repurchased.

Selected share data

	As at January 31, 2018		
(Millions of Canadian dollars, except number of shares and as otherwise noted)	Number of shares (000s)	Amount	Dividends declared per share
Common shares outstanding (1)	1,444,065	$ 17,647	$ 0.91
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	0.18
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	(7)	–	
Treasury shares held – common	(150)	(7)	
Stock options			
Outstanding	9,557		
Exercisable	4,589		
Dividends			
Common		1,319	
Preferred		72	

(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 February 16, 2018, the number of outstanding common shares and stock options and awards was 1,444,074,005 and 9,546,604, respectively, and the number of Treasury shares – preferred and Treasury shares – common was (9,792) and (49,590), 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 2,711 million RBC common shares, in aggregate, which would represent a dilution impact of 65.25% based on the number of RBC common shares outstanding as at January 31, 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)	**January 31 2018**	October 31 2017	January 31 2017
Credit risk	**$ 21,650**	$ 21,500	$ 21,050
Market risk (trading and non-trading)	**3,850**	3,750	3,150
Operational risk	**5,550**	5,150	5,100
Business and fixed asset risk	**3,350**	3,250	3,150
Insurance risk	**650**	700	600
Goodwill and other intangibles	**15,300**	15,250	15,700
Regulatory capital allocation	**11,450**	10,450	11,050
Attributed capital	**$ 61,800**	$ 60,050	$ 59,800
Unattributed capital	**5,050**	5,850	4,850
Average common equity	**$ 66,850**	$ 65,900	$ 64,650

Q1 2018 vs. Q4 2017

Attributed capital increased $1.8 billion from the prior quarter, primarily due to business growth mostly in trading portfolios, residential mortgages, and underwriting activities.

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

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

The BCBS and FSB use 12 indicators in the assessment methodology for determining the systemic importance of large global banks. As noted previously, on November 21, 2017, the FSB issued the list of G-SIBs and we were identified as a G-SIB. The following table provides the 12 indicators used in the G-SIB assessment:

	As at	
(Millions of Canadian dollars)	October 31 2017	October 31 2016
Cross-jurisdictional activity (2)		
Cross-jurisdictional claims	$ 507,554	$ 473,111
Cross-jurisdictional liabilities (3)	337,153	304,849
Size (4)		
Total exposures as defined for use in the Basel III leverage ratio	1,331,641	1,266,442
Interconnectedness (5)		
Intra-financial system assets (3)	144,688	127,084
Intra-financial system liabilities	130,724	125,955
Securities outstanding	351,781	324,601
Substitutability/financial institution infrastructure (6)		
Payment activity	37,964,746	40,663,480
Assets under custody	4,061,111	3,798,828
Underwritten transactions in debt and equity markets (3)	235,431	196,627
Complexity (7)		
Notional amount of over-the-counter derivatives	12,937,404	11,731,898
Trading and available-for-sale securities	38,918	50,280
Level 3 assets	3,574	4,270

(1) The G-SIBs indicators are prepared based on the methodology prescribed in BCBS guidelines published in July 2013 and instructions provided by BCBS in January 2018. The indicators are based on regulatory scope of consolidation, which excludes RBC Insurance subsidiaries. For our 2017 standalone G-SIB disclosure, please refer to our Regulatory Capital Disclosures at rbc.com/investorrelations.
(2) Represents a bank's level of interaction outside its domestic jurisdiction.
(3) Amounts have been revised from those previously presented.
(4) Represents the total on- and off- balance sheet exposures of the bank determined as per the Basel III leverage ratio rules before regulatory adjustments.
(5) Represents transactions with other financial institutions.
(6) Represents the extent to which the bank's services could be substituted by other institutions.
(7) Includes the level of complexity and volume of a bank's trading activities represented through derivatives, trading securities, available-for-sale securities and level 3 assets.

Q4 2017 vs. Q4 2016

During 2017, notional amounts for over-the-counter derivatives increased mainly due to increased trading activity on interest rate swaps and forward rate agreements. Trading and available-for-sale securities decreased due to lower equity trading positions, a decrease in government debt securities reflecting our management of liquidity and funding risk, and the impact of foreign exchange translation. Other movements from the prior year primarily reflect normal changes in business activity and the impact of foreign currency translation.

Capital, liquidity, and other regulatory developments

Capital treatment proposed or issued in connection with accounting changes

On March 29, 2017, the BCBS issued a standard with details on the interim regulatory treatment of accounting provisions under the Basel III regulatory capital framework. The standard addresses the impact of new expected credit loss accounting requirements under IFRS 9. The standard retains the current Basel lll regulatory treatment of accounting provisions under the standardized and the internal ratings-based approaches until a longer-term solution is developed. It also sets out transitional arrangements which allow for a phase-in of the impact of the new expected credit loss accounting standard on regulatory capital for up to five years, should individual jurisdictions choose to provide capital relief.

On November 29, 2017, OSFI released the finalized Capital Adequacy Requirements (CAR) Guidelines required to be implemented in the first quarter of 2018. The updated 2018 CAR Guideline retains the current regulatory treatment of accounting provisions consistent with the BCBS standard. However, OSFI has elected not to adopt a phase-in approach relating to the regulatory impact of IFRS 9. Instead, the full transition impact of IFRS 9 is required to be absorbed by Canadian banks in their Q1 2018 capital ratios. As well, the updated CAR guidelines include revisions addressing the treatment of ACL on performing financial assets (Stage 1 and Stage 2) under IFRS 9 as general allowances for regulatory capital purposes. Similarly, ACL on impaired financial assets (Stage 3) under IFRS 9 are required to be treated as specific allowances for regulatory capital purposes.

As at our transition date, our shortfall of accounting allowances under IAS 39 to Basel expected losses was $1.2 billion. The impact of the impairment requirements of IFRS 9 reduced but did not eliminate the shortfall of accounting allowances to Basel expected losses. Going forward, the regulatory capital impact of further increases in our accounting allowances under IFRS 9 will be mitigated by way of the reduction of our shortfall allowance deduction from CET1 capital.

Basel III reforms

On December 7, 2017, the BCBS finalized the Basel III reforms, with an effective date of January 2022. The reforms are mainly intended to reduce the variability in bank capital levels and to address a number of weaknesses in the existing capital framework by revisiting the way capital requirements for credit, market and operational risks are determined. This includes revisions to the standardized approach for credit risk, constraints on the use of internal ratings-based approaches, an overhaul of the operational risk framework, calibration of standardized output floors, revisions to the CVA framework, and changes to the leverage ratio framework. We continue to review the finalized frameworks and await OSFI's adoption guidance, including required implementation timelines for Canadian banks.

Regulatory capital floor
On January 12, 2018, OSFI prescribed revisions to the current Basel I regulatory capital floor, effective February 1, 2018, requiring a transition to a new regulatory capital floor of 75% of risk-weighted assets 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.

Net Stable Funding Ratio (NSFR) implementation timeline
With respect to liquidity measurement, in October 2014, the BCBS released its final Net Stable Funding Ratio (NSFR) standard, which requires banks to fund their activities with sufficiently stable sources of funding. The NSFR is intended to reduce structural funding risk by requiring banks to have sufficient stable funding to support their business with less reliance on funding maturing in one year. On February 6, 2018, OSFI announced that it would extend the implementation timeline for Canadian banks to comply with the NSFR requirements from January 1, 2019 to January 1, 2020.

For a discussion on risk factors resulting from these and other regulatory developments which may affect our business and financial results, refer to the Risk management – Top and emerging risks and Legal and regulatory environment risk sections of our 2017 Annual Report and the Economic, market and regulatory review and outlook section of this Q1 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 Q1 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 Q1 2018 Condensed Financial Statements.

Changes in accounting policies and disclosures

Changes in accounting policies
During the current quarter, 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 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 current period. 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.

Controls and procedures

Disclosure controls and procedures
As of January 31, 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 January 31, 2018.

Internal control over financial reporting
No changes were made in our internal control over financial reporting during the quarter ended January 31, 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, Q1 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:

			Location of disclosure		
Type of Risk	Recommendation	Disclosure	RTS page	Annual Report page	SFI page
General	1	Table of contents for EDTF risk disclosure	47	116	1
	2	Define risk terminology and measures		52, 54-57 206-207	–
	3	Top and emerging risks		53	–
	4	New regulatory ratios	41-42	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	42	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	35-36	75-77, 81-82	–
Funding	19	Encumbered and unencumbered assets by balance sheet category, and contractual obligations for rating downgrades	36, 38	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	40-41	82-83	–
	21	Sources of funding and funding strategy	36-38	77-79	–
Market risk	22	Relationship between the market risk measures for trading and non-trading portfolios and the balance sheet	33-34	73-74	–
	23	Decomposition of market risk factors	30-32	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 Quantitative summary of aggregate credit risk exposures that reconciles to the balance sheet	22-30 70-74	58-68, 154-156 111-115	32-46 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)

	As at	
(Millions of Canadian dollars)	January 31 2018	October 31 2017
Assets		
Cash and due from banks	$ 34,488	$ 28,407
Interest-bearing deposits with banks	37,269	32,662
Securities (Note 2)		
Trading	129,361	127,657
Investment, net of applicable allowance (Notes 2 and 4)	92,901	90,722
	222,262	218,379
Assets purchased under reverse repurchase agreements and securities borrowed	259,765	220,977
Loans (Notes 2 and 5)		
Retail	386,235	385,170
Wholesale	154,585	159,606
	540,820	544,776
Allowance for loan losses (Notes 2 and 5)	(2,776)	(2,159)
	538,044	542,617
Segregated fund net assets	1,270	1,216
Other		
Customers' liability under acceptances	16,363	16,459
Derivatives	105,512	95,023
Premises and equipment	2,648	2,670
Goodwill	10,736	10,977
Other intangibles	4,420	4,507
Other assets	43,498	38,959
	183,177	168,595
Total assets	$ 1,276,275	$ 1,212,853
Liabilities and equity		
Deposits (Note 6)		
Personal	$ 261,312	$ 260,213
Business and government	517,428	505,665
Bank	21,280	23,757
	800,020	789,635
Segregated fund net liabilities	1,270	1,216
Other		
Acceptances	16,379	16,459
Obligations related to securities sold short	30,404	30,008
Obligations related to assets sold under repurchase agreements and securities loaned	183,319	143,084
Derivatives	104,219	92,127
Insurance claims and policy benefit liabilities	9,977	9,676
Other liabilities (Note 2)	48,402	46,955
	392,700	338,309
Subordinated debentures	8,961	9,265
Total liabilities	1,202,951	1,138,425
Equity attributable to shareholders		
Preferred shares (Note 9)	6,306	6,413
Common shares (shares issued – 1,443,914,323 and 1,452,534,303) (Note 9)	17,640	17,703
Retained earnings	45,764	45,359
Other components of equity	3,026	4,354
	72,736	73,829
Non-controlling interests	588	599
Total equity	73,324	74,428
Total liabilities and equity	$ 1,276,275	$ 1,212,853

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

Interim Condensed Consolidated Statements of Income (unaudited)

(Millions of Canadian dollars, except per share amounts)	For the three months ended January 31 2018	January 31 2017
Interest income		
Loans	$ 4,973	$ 4,581
Securities	1,354	1,221
Assets purchased under reverse repurchase agreements and securities borrowed	1,108	603
Deposits and other	105	54
	7,540	6,459
Interest expense		
Deposits and other	1,987	1,504
Other liabilities	1,034	565
Subordinated debentures	74	66
	3,095	2,135
Net interest income	4,445	4,324
Non-interest income		
Insurance premiums, investment and fee income	1,144	497
Trading revenue	318	263
Investment management and custodial fees	1,325	1,159
Mutual fund revenue	885	814
Securities brokerage commissions	355	399
Service charges	440	438
Underwriting and other advisory fees	541	468
Foreign exchange revenue, other than trading	281	227
Card service revenue	257	236
Credit fees	328	356
Net gains on investment securities (Notes 2 and 4)	39	27
Share of profit in joint ventures and associates	25	251
Other	445	187
	6,383	5,322
Total revenue	10,828	9,646
Provision for credit losses (Notes 2, 4 and 5)	334	294
Insurance policyholder benefits, claims and acquisition expense	836	183
Non-interest expense		
Human resources (Note 7)	3,502	3,309
Equipment	372	356
Occupancy	379	399
Communications	224	221
Professional fees	281	255
Amortization of other intangibles	261	252
Other	592	523
	5,611	5,315
Income before income taxes	4,047	3,854
Income taxes	1,035	827
Net income	$ 3,012	$ 3,027
Net income attributable to:		
Shareholders	$ 3,001	$ 3,015
Non-controlling interests	11	12
	$ 3,012	$ 3,027
Basic earnings per share (in dollars) (Note 10)	$ 2.02	$ 1.98
Diluted earnings per share (in dollars) (Note 10)	2.01	1.97
Dividends per common share (in dollars)	0.91	0.83

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

Interim Condensed Consolidated Statements of Comprehensive Income (unaudited)

(Millions of Canadian dollars)	For the three months ended January 31 2018	For the three months ended January 31 2017
Net income	$ 3,012	$ 3,027
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		(129)
Reclassification of net losses (gains) on available-for-sale securities to income		(12)
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	(24)	
Provision for credit losses recognized in income	15	
Reclassification of net losses (gains) on debt securities and loans at fair value through other comprehensive income to income	(28)	
	(37)	(141)
Foreign currency translation adjustments		
Unrealized foreign currency translation gains (losses)	(2,006)	(1,462)
Net foreign currency translation gains (losses) from hedging activities	658	543
Reclassification of losses (gains) on foreign currency translation to income	–	(10)
	(1,348)	(929)
Net change in cash flow hedges		
Net gains (losses) on derivatives designated as cash flow hedges	424	96
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	(153)	37
	271	133
Items that will not be reclassified subsequently to income:		
Remeasurements of employee benefit plans (Note 7)	49	597
Net fair value change due to credit risk on financial liabilities designated as at fair value through profit or loss	(18)	(33)
Net gains (losses) on equity securities designated at fair value through other comprehensive income	(2)	
	29	564
Total other comprehensive income (loss), net of taxes	(1,085)	(373)
Total comprehensive income (loss)	$ 1,927	$ 2,654
Total comprehensive income attributable to:		
Shareholders	$ 1,919	$ 2,645
Non-controlling interests	8	9
	$ 1,927	$ 2,654

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

(Millions of Canadian dollars)	For the three months ended January 31 2018	For the three months ended January 31 2017
Income taxes on other comprehensive income		
Net unrealized gains (losses) on available-for-sale securities		$ (68)
Reclassification of net losses (gains) on available-for-sale securities to income		(4)
Net unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income	$ 42	
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)	
Unrealized foreign currency translation gains (losses)	(5)	(2)
Net foreign currency translation gains (losses) from hedging activities	219	183
Net gains (losses) on derivatives designated as cash flow hedges	183	36
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	(86)	13
Remeasurements of employee benefit plans	20	206
Net fair value change due to credit risk on financial liabilities designated as at fair value through profit or loss	(7)	(13)
Net gains (losses) on equity securities designated at fair value through other comprehensive income	(1)	
Total income tax expenses (recoveries)	$ 346	$ 351

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 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	–	96	–	–	–	–		–	–	–	96	–	96
Common shares purchased for cancellation	–	(137)	–	–	(814)	–		–	–	–	(951)	–	(951)
Redemption of preferred shares	–	–	–	–	–	–		–	–	–	–	–	–
Sales of treasury shares	–	–	21	1,191	–	–		–	–	–	1,212	–	1,212
Purchases of treasury shares	–	–	(21)	(1,144)	–	–		–	–	–	(1,165)	–	(1,165)
Share-based compensation awards	–	–	–	–	(12)	–		–	–	–	(12)	–	(12)
Dividends on common shares	–	–	–	–	(1,232)	–		–	–	–	(1,232)	–	(1,232)
Dividends on preferred shares and other	–	–	–	–	(75)	–		–	–	–	(75)	(17)	(92)
Other	–	–	–	–	31	–		–	–	–	31	(2)	29
Net income	–	–	–	–	3,015	–		–	–	–	3,015	12	3,027
Total other comprehensive income (loss), net of taxes	–	–	–	–	564	(141)		(926)	133	(934)	(370)	(3)	(373)
Balance at January 31, 2017	$ 6,713	$ 17,898	$ –	$ (33)	$ 42,996	$ 199		$ 3,759	$ 34	$ 3,992	$ 71,566	$ 585	$ 72,151
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	–	30	–	–	–		–	–	–	–	30	–	30
Common shares purchased for cancellation	–	(113)	–	–	(810)		–	–	–	–	(923)	–	(923)
Redemption of preferred shares	(107)	–	–	–	2		–	–	–	–	(105)	–	(105)
Sales of treasury shares	–	–	69	1,425	–		–	–	–	–	1,494	–	1,494
Purchases of treasury shares	–	–	(69)	(1,405)	–		–	–	–	–	(1,474)	–	(1,474)
Share-based compensation awards	–	–	–	–	(3)		–	–	–	–	(3)	–	(3)
Dividends on common shares	–	–	–	–	(1,319)		–	–	–	–	(1,319)	–	(1,319)
Dividends on preferred shares and other	–	–	–	–	(72)		–	–	–	–	(72)	(18)	(90)
Other	–	–	–	–	135		(138)	–	–	(138)	(3)	(1)	(4)
Net income	–	–	–	–	3,001		–	–	–	–	3,001	11	3,012
Total other comprehensive income (loss), net of taxes	–	–	–	–	29		(37)	(1,345)	271	(1,111)	(1,082)	(3)	(1,085)
Balance at January 31, 2018	$ 6,306	$ 17,647	$ –	$ (7)	$ 45,764		$ 124	$ 2,200	$ 702	$ 3,026	$ 72,736	$ 588	$ 73,324

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

Interim Condensed Consolidated Statements of Cash Flows (unaudited)

(Millions of Canadian dollars)	For the three months ended January 31 2018	January 31 2017
Cash flows from operating activities		
Net income	$ 3,012	$ 3,027
Adjustments for non-cash items and others		
Provision for credit losses	334	294
Depreciation	135	162
Deferred income taxes	271	304
Amortization and impairment of other intangibles	261	252
Net changes in investments in joint ventures and associates	(22)	(250)
Losses (Gains) on investment securities (Note 2)	(43)	(46)
Impairment of available-for-sale securities		17
Adjustments for net changes in operating assets and liabilities		
Insurance claims and policy benefit liabilities	195	(379)
Net change in accrued interest receivable and payable	(132)	(186)
Current income taxes	(1,970)	(1,115)
Derivative assets	(10,489)	21,525
Derivative liabilities	12,092	(20,904)
Trading securities	1,194	9,073
Loans, net of securitizations	(3,579)	(415)
Assets purchased under reverse repurchase agreements and securities borrowed	(38,789)	(10,983)
Deposits, net of securitizations	10,414	(77)
Obligations related to assets sold under repurchase agreements and securities loaned	40,235	20,033
Obligations related to securities sold short	396	(12,400)
Brokers and dealers receivable and payable	(166)	5
Other	1,225	(561)
Net cash from (used in) operating activities	14,574	7,376
Cash flows from investing activities		
Change in interest-bearing deposits with banks	(4,607)	5,471
Proceeds from sale of investment securities (Note 2)	5,217	2,234
Proceeds from maturity of investment securities (Note 2)	7,132	11,318
Purchases of investment securities (Note 2)	(13,342)	(14,326)
Net acquisitions of premises and equipment and other intangibles	(357)	(257)
Net cash from (used in) investing activities	(5,957)	4,440
Cash flows from financing activities		
Issue of common shares	23	96
Common shares purchased for cancellation	(923)	(102)
Redemption of preferred shares	(105)	–
Sales of treasury shares	1,494	1,212
Purchases of treasury shares	(1,474)	(1,165)
Dividends paid	(1,396)	(1,309)
Dividends/distributions paid to non-controlling interests	(18)	(17)
Change in short-term borrowings of subsidiaries	(1)	(5)
Net cash from (used in) financing activities	(2,400)	(1,290)
Effect of exchange rate changes on cash and due from banks	(136)	(92)
Net change in cash and due from banks	6,081	10,434
Cash and due from banks at beginning of period (1)	28,407	14,929
Cash and due from banks at end of period (1)	$ 34,488	$ 25,363
Cash flows from operating activities include:		
Amount of interest paid	$ 3,001	$ 2,074
Amount of interest received	7,255	6,043
Amount of dividend received	410	592
Amount of income taxes paid	3,118	2,002

(1) We are required to maintain balances with central banks and other regulatory authorities. The total balances were $2.5 billion as at January 31, 2018 (October 31, 2017 – $2.3 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 February 22, 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. Our significant accounting policies and future changes in accounting policies and disclosures that are not yet effective for us are described in Note 2 of our audited 2017 Annual Consolidated Financial Statements.

Changes in accounting policies

During the current 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 current period. 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 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 as described in the Risk Management section of Management's Discussion and Analysis, and the activities undertaken to manage those risks;
- 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 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 and 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 holding the financial liability. Upon initial recognition, if we determine that presenting the effects of 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

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

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.

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 modeled on a collective basis using portfolio segmentation that allows for appropriate incorporation of forward looking information.

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 consider 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 their 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 payments 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).

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

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 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 allowance for credit losses 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.

If a modification of terms results in derecognition of the original financial asset and recognition of the 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 January 31, 2018, the fair value of these securities was $20,759 million. For the period ended January 31, 2018, $150 million of losses would have been recognized in OCI if the securities had not been reclassified.

(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.

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

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.

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
Customers' 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 January 31, 2018							
	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	$ –	$ 18,837	$ –	$ –	$ 18,432	$ 18,432	$ 37,269	$ 37,269
Securities								
Trading	122,607	6,754	–	–	–	–	129,361	129,361
Investment, net of applicable allowance (1)	–	–	47,137	406	45,358	44,964	92,901	92,507
	122,607	6,754	47,137	406	45,358	44,964	222,262	221,868
Assets purchased under reverse repurchase agreements and securities borrowed	185,186	–	–	–	74,579	74,577	259,765	259,763
Loans, net of applicable allowance								
Retail	71	188	77	–	384,072	381,221	384,408	381,557
Wholesale	8,106	1,289	452	–	143,789	142,481	153,636	152,328
	8,177	1,477	529	–	527,861	523,702	538,044	533,885
Other								
Derivatives	105,512	–	–	–	–	–	105,512	105,512
Other assets (2)	1,300	–	–	–	47,608	47,657	48,908	48,957
Financial liabilities								
Deposits								
Personal	$ 191	$ 13,710			$ 247,411	$ 247,319	$ 261,312	$ 261,220
Business and government (3)	1	99,174			418,253	419,230	517,428	518,405
Bank (4)	–	2,285			18,995	19,056	21,280	21,341
	192	115,169			684,659	685,605	800,020	800,966
Other								
Obligations related to securities sold short	30,404	–			–	–	30,404	30,404
Obligations related to assets sold under repurchase agreements and securities loaned	–	177,527			5,792	5,793	183,319	183,320
Derivatives	104,219	–			–	–	104,219	104,219
Other liabilities (5)	(1,058)	17			52,945	52,925	51,904	51,884
Subordinated debentures	–	–			8,961	9,284	8,961	9,284

	As at October 31, 2017						
	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

	As at											
	January 31, 2018						October 31, 2017					
	Fair value measurements using			Total gross fair value	Netting adjustments	Assets/ liabilities at fair value	Fair value measurements using			Total gross fair value	Netting adjustments	Assets/ liabilities at fair value
(Millions of Canadian dollars)	Level 1	Level 2	Level 3				Level 1	Level 2	Level 3			
Financial assets												
Interest-bearing deposits with banks	$ –	$ 18,837	$ –	$ 18,837	$	$ 18,837	$ –	$ 20,752	$ –	$ 20,752	$	$ 20,752
Securities												
Trading												
Canadian government debt (1)												
Federal	7,920	7,222	–	15,142		15,142	9,374	7,929	–	17,303		17,303
Provincial and municipal	–	11,870	–	11,870		11,870	–	11,422	–	11,422		11,422
U.S. state, municipal and agencies debt (1)	1,006	26,658	187	27,851		27,851	1,226	29,634	–	30,860		30,860
Other OECD government debt (2)	1,440	9,213	–	10,653		10,653	934	10,420	–	11,354		11,354
Mortgage-backed securities (1)	–	1,228	–	1,228		1,228	–	1,298	–	1,298		1,298
Asset-backed securities												
Non-CDO securities (3)	–	2,270	196	2,466		2,466	–	732	–	732		732
Corporate debt and other debt	20	21,339	29	21,388		21,388	52	21,655	29	21,736		21,736
Equities	34,948	2,840	975	38,763		38,763	29,674	2,853	425	32,952		32,952
	45,334	82,640	1,387	129,361		129,361	41,260	85,943	454	127,657		127,657
Investment (4)												
Canadian government debt (1)												
Federal	–	592	–	592		592	477	1,124	–	1,601		1,601
Provincial and municipal	–	750	–	750		750	–	2,503	–	2,503		2,503
U.S. state, municipal and agencies debt (1)	–	19,828	–	19,828		19,828	8	28,999	508	29,515		29,515
Other OECD government debt	–	2,987	–	2,987		2,987	479	8,673	–	9,152		9,152
Mortgage-backed securities (1)	–	997	–	997		997	–	934	–	934		934
Asset-backed securities												
CDO	–	4,307	–	4,307		4,307	–	3,623	–	3,623		3,623
Non-CDO securities	–	845	–	845		845	–	2,671	203	2,874		2,874
Corporate debt and other debt	–	16,803	28	16,831		16,831	–	23,662	797	24,459		24,459
Equities	39	94	246	379		379	339	38	711	1,088		1,088
Loan substitute securities	–	24	3	27		27	–	24	4	28		28
	39	47,227	277	47,543		47,543	1,303	72,251	2,223	75,777		75,777
Assets purchased under reverse repurchase agreements and securities borrowed	–	185,186	–	185,186		185,186	–	138,979	–	138,979		138,979
Loans	–	9,662	521	10,183		10,183	–	4,056	179	4,235		4,235
Other												
Derivatives												
Interest rate contracts	1	105,651	271	105,923		105,923	–	106,145	380	106,525		106,525
Foreign exchange contracts	–	55,123	67	55,190		55,190	–	42,871	63	42,934		42,934
Credit derivatives	–	109	–	109		109	–	157	–	157		157
Other contracts	3,910	10,537	150	14,597		14,597	3,510	10,141	307	13,958		13,958
Valuation adjustments	–	(624)	(3)	(627)		(627)	–	(722)	(3)	(725)		(725)
Total gross derivatives	3,911	170,796	485	175,192		175,192	3,510	158,592	747	162,849		162,849
Netting adjustments					(69,680)	(69,680)					(67,826)	(67,826)
Total derivatives						105,512						95,023
Other assets	1,097	203	–	1,300		1,300	966	247	–	1,213		1,213
	$50,381	$514,551	$2,670	$567,602	$ (69,680)	$497,922	$47,039	$480,820	$3,603	$ 531,462	$(67,826)	$ 463,636
Financial Liabilities												
Deposits												
Personal	$ –	$ 13,347	$ 554	$ 13,901	$	$ 13,901	$ –	$ 13,513	$ 465	$ 13,978	$	$ 13,978
Business and government	–	99,175	–	99,175		99,175	–	94,509	–	94,509		94,509
Bank	–	2,285	–	2,285		2,285	–	2,072	–	2,072		2,072
Other												
Obligations related to securities sold short	15,303	15,101	–	30,404		30,404	12,407	17,601	–	30,008		30,008
Obligations related to assets sold under repurchase agreements and securities loaned	–	177,527	–	177,527		177,527	–	133,947	–	133,947		133,947
Derivatives												
Interest rate contracts	–	100,215	783	100,998		100,998	–	100,765	835	101,600		101,600
Foreign exchange contracts	–	54,172	34	54,206		54,206	–	40,497	42	40,539		40,539
Credit derivatives	–	215	–	215		215	–	258	–	258		258
Other contracts	3,610	14,031	307	17,948		17,948	3,417	13,461	488	17,366		17,366
Valuation adjustments	–	52	8	60		60	–	55	13	68		68
Total gross derivatives	3,610	168,685	1,132	173,427		173,427	3,417	155,036	1,378	159,831		159,831
Netting adjustments					(69,208)	(69,208)					(67,704)	(67,704)
Total derivatives						104,219						92,127
Other liabilities	184	(1,253)	28	(1,041)		(1,041)	130	(1,286)	24	(1,132)		(1,132)
Subordinated debentures	–	–	–	–		–	–	–	–	–		–
	$19,097	$474,867	$1,714	$495,678	$ (69,208)	$426,470	$15,954	$415,392	$1,867	$ 433,213	$(67,704)	$ 365,509

(1) As at January 31, 2018, residential and commercial mortgage-backed securities (MBS) included in all fair value levels of trading securities were $17,500 million and $nil (October 31, 2017 – $17,977 million and $nil), respectively, and in all fair value levels of Investment securities were $4,686 million and $856 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 January 31, 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 January 31, 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.

	For the three months ended January 31, 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									
Canadian government debt									
Provincial and municipal	$ –	$ –	$ –	$ –	$ –	$ –	$ –	$ –	$ –
U.S. state, municipal and agencies debt	508	4	(13)	–	(312)	–	–	187	(5)
Mortgage-backed securities	–	–	–	–	–	–	–	–	–
Asset-backed securities									
CDO	–	–	–	–	–	–	–	–	–
Non-CDO securities	196	12	(6)	–	(6)	–	–	196	10
Corporate debt and other debt	30	(1)	–	–	–	–	–	29	(1)
Equities	923	(68)	(21)	179	(40)	4	(2)	975	(43)
	1,657	(53)	(40)	179	(358)	4	(2)	1,387	(39)
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)	4	–	–	–	–	28	n.a.
Equities	217	–	26	–	3	–	–	246	n.a.
Loan substitute securities	3	–	–	–	–	–	–	3	n.a.
	249	(5)	30	–	3	–	–	277	n.a.
Loans	477	(1)	(1)	50	(4)	–	–	521	(1)
Other									
Net derivative balances (4)									
Interest rate contracts	(455)	45	–	27	1	–	(130)	(512)	46
Foreign exchange contracts	21	6	1	–	4	1	–	33	4
Credit derivatives	–	–	–	–	–	–	–	–	–
Other contracts	(181)	53	6	(30)	(2)	(34)	31	(157)	24
Valuation adjustments	(16)	–	–	–	5	–	–	(11)	–
Other assets	–	–	–	–	–	–	–	–	–
	$1,752	$ 45	$ (4)	$ 226	$(351)	$(29)	$(101)	$1,538	$ 34
Liabilities									
Deposits									
Personal	$ (465)	$(31)	$ 4	$(149)	$ 22	$(52)	$ 117	$ (554)	$(24)
Business and government	–	–	–	–	–	–	–	–	–
Other									
Obligations related to securities sold short	–	–	–	–	–	–	–	–	–
Other liabilities	(24)	(1)	1	(5)	1	–	–	(28)	–
	$ (489)	$(32)	$ 5	$(154)	$ 23	$(52)	$ 117	$ (582)	$(24)

Note 3 Fair value of financial instruments (continued)

	For the three months ended January 31, 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									
Canadian government debt									
Provincial and municipal	$ –	$ –	$ –	$ –	$ –	$ –	$ –	$ –	$ –
U.S. state, municipal and agencies debt	1	–	–	–	–	–	–	1	–
Mortgage-backed securities	–	–	–	–	–	–	–	–	–
Asset-backed securities									
CDO	–	–	–	–	–	–	–	–	–
Non-CDO securities	4	–	–	–	–	–	–	4	–
Corporate debt and other debt	62	(1)	–	19	(19)	20	(10)	71	–
Equities	376	(18)	(11)	38	(35)	12	(1)	361	(19)
	443	(19)	(11)	57	(54)	32	(11)	437	(19)
Investment									
U.S. state, municipal and agencies debt	747	(3)	(10)	–	(15)	–	–	719	n.a.
Asset-backed securities									
Non-CDO securities	217	–	6	–	(21)	–	–	202	n.a.
Corporate debt and other debt	956	–	(29)	3	(30)	–	(6)	894	n.a.
Equities	756	12	(12)	9	(49)	–	–	716	n.a.
Loan substitute securities	–	–	–	–	–	–	–	–	n.a.
	2,676	9	(45)	12	(115)	–	(6)	2,531	n.a.
Loans	329	(1)	(4)	119	(1)	–	–	442	(1)
Other									
Net derivative balances (4)									
Interest rate contracts	(448)	9	–	26	–	3	3	(407)	13
Foreign exchange contracts	(15)	31	–	–	(1)	2	(1)	16	31
Credit derivatives	–	–	–	–	–	–	–	–	–
Other contracts	(122)	(4)	4	(18)	8	(22)	(86)	(240)	(10)
Valuation adjustments	(10)	–	–	–	(1)	–	–	(11)	–
Other assets	–	–	–	–	–	–	–	–	–
	$ 2,853	$ 25	$ (56)	$ 196	$ (164)	$ 15	$ (101)	$ 2,768	$ 14
Liabilities									
Deposits									
Personal	$ (425)	$ (13)	$ 7	$ (61)	$ 29	$ (68)	$ 167	$ (364)	$ (6)
Business and government	(2)	–	–	–	–	–	–	(2)	–
Other									
Obligations related to securities sold short	(1)	–	–	–	1	–	–	–	–
Other liabilities	(88)	(1)	3	–	–	–	–	(86)	–
	$ (516)	$ (14)	$ 10	$ (61)	$ 30	$ (68)	$ 167	$ (452)	$ (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 gains on Investment securities recognized in OCI were $32 million for the three months ended January 31, 2018 (January 31, 2017 – gains of $21 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 January 31, 2018 included derivative assets of $485 million (January 31, 2017 – $564 million) and derivative liabilities of $1,132 million (January 31, 2017 – $1,206 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 January 31, 2018, transfers out of Level 1 to Level 2 included Trading U.S. state, municipal and agencies debt and Obligations related to securities sold short of $13 million and $47 million, respectively.

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.

For the three months ended January 31, 2018, transfers of over-the-counter (OTC) equity options in Other contracts were due to changes in the market observability of inputs, and transfers relating to Interest rate contracts and Personal deposits were due to changes in the significance of unobservable inputs to their fair values.

During the three months ended January 31, 2018, significant transfers out of Level 3 to Level 2 primarily included $130 million (net liabilities) of interest rate contracts, comprised of $143 million of derivative-related assets and $13 million of derivative-related liabilities. During the three months ended January 31, 2018, significant transfers out of Level 3 to Level 2 in Other contracts included

$27 million (net liabilities) of OTC equity options comprised of $342 million of assets and $369 million of liabilities. In addition, significant transfers out of Level 3 to Level 2 included $117 million of Personal deposits.

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.

	As at					
	January 31, 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	$ 187	$ 3	$ (7)	$ –	$ –	$ –
Asset-backed securities	196	13	(19)	–	–	–
Corporate debt and other debt	29	–	–	29	–	–
Equities	975	4	(3)	425	–	–
Investment						
U.S. state, municipal and agencies debt	–	–	–	508	8	(20)
Asset-backed securities	–	–	–	203	15	(21)
Corporate debt and other debt	28	1	(1)	797	6	(6)
Equities	246	23	(23)	711	40	(24)
Loan substitute securities	3	2	–	4	2	–
Loans	521	3	(3)	179	2	(3)
Derivatives	485	14	(12)	747	34	(30)
	$ 2,670	$ 63	$ (68)	$ 3,603	$ 107	$ (104)
Deposits	$ (554)	$ 9	$ (9)	$ (465)	$ 11	$ (11)
Derivatives	(1,132)	42	(54)	(1,378)	37	(48)
Other						
Securities sold short and other liabilities	(28)	–	–	(24)	–	–
	$ (1,714)	$ 51	$ (63)	$ (1,867)	$ 48	$ (59)

Note 4 Securities

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

	As at			
	January 31, 2018			
(Millions of Canadian dollars)	Cost/ Amortized cost	Gross unrealized gains (3)	Gross unrealized losses (3)	Fair value
Canadian government debt				
Federal	$ 596	$ –	$ (4)	$ 592
Provincial and municipal	763	2	(15)	750
U.S. state, municipal and agencies debt (4)	19,637	283	(92)	19,828
Other OECD government debt	2,983	5	(1)	2,987
Mortgage-backed securities	997	1	(1)	997
Asset-backed securities				
CDO	4,298	10	(1)	4,307
Non-CDO securities	837	10	(2)	845
Corporate debt and other debt	16,780	72	(21)	16,831
Equities	191	189	(1)	379
Loan substitute securities	28	–	(1)	27
	$ 47,110	$ 572	$ (139)	$ 47,543

Note 4 Securities (continued)

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 $856 million, $1 million, $1 million and $856 million, respectively as at January 31, 2018 (October 31, 2017 – $727 million, $1 million, $1 million and $727 million).

(2) Excludes $45,358 million of held-to-collect securities as at January 31, 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 $42 million of allowance for credit losses on debt securities at fair value through other comprehensive income, recognized in income and retained earnings, as at January 31, 2018.

(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 months ended January 31, 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 January 31, 2018			
	Performing		Impaired	
(Millions of Canadian dollars)	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	$ 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	1	–	–	1
Derecognitions and maturities	(1)	(9)	–	(10)
Remeasurements	(1)	(2)	–	(3)
Exchange rate and other	–	(3)	–	(3)
Balance at end of period	$ 4	$ 35	$ –	$39

Allowance for credit losses – securities at FVOCI (1)

	IFRS 9			
	For the three months ended January 31, 2018			
	Performing		Impaired	
(Millions of Canadian dollars)	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	$ 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	34	–	–	34
Derecognitions and maturities	–	(17)	–	(17)
Remeasurements	–	2	–	2
Exchange rate and other	–	(2)	–	(2)
Balance at end of period	$ 37	$ 5	$ –	$42

(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 January 31, 2018			
	Performing		Impaired	
(Millions of Canadian dollars)	Stage 1	Stage 2	Stage 3	Total
Investment securities				
Securities at amortized cost				
Investment grade	$44,454	$ 84	$ –	$44,538
Non-investment grade	143	723	–	866
	44,597	807	–	45,404
Allowance for credit losses	4	35	–	39
Amortized cost	44,593	772	–	45,365
Securities at FVOCI				
Investment grade	46,268	31	–	46,299
Non-investment grade	730	108	–	838
	46,998	139	–	47,137
Items not subject to impairment (1)				406
				47,543

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

Impairment of AFS 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 January 31, 2017, our gross unrealized losses on AFS securities were $386 million. There was no objective evidence of impairment on our AFS securities that were in an unrealized loss position as at January 31, 2017.

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

	For the three months ended
(Millions of Canadian dollars)	January 31 2017
Realized gains	$ 48
Realized losses	(4)
Impairment losses	(17)
	$ 27

(1) Realized gains of $2 million 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 for the three months ended January 31, 2017. There were no realized losses or impairment losses related to our insurance operations for the three months ended January 31, 2017.

Note 4 Securities (continued)

During the three months ended January 31, 2017, $27 million of net gains were recognized in Non-interest income. The period reflects net realized gains of $44 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 $17 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 January 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 January 31, 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
Retail					
Residential mortgages	$ 378	$ 13	$ (13)	$ (15)	$ 363
Personal	826	145	(102)	(8)	861
Credit Cards	693	98	(110)	(1)	680
Small business	49	9	(7)	(1)	50
Wholesale					
Business, sovereign and bank	1,010	72	(18)	(39)	1,025
Customers' liability under acceptances	20	(3)	–	(1)	16
	$ 2,976	$ 334	$ (250)	$ (65)	$ 2,995
Presented as:					
Allowance for loan losses	$ 2,749				$ 2,776
Other liabilities – Provisions	207				202
Customers' liability under acceptances	20				16
Other components of equity	–				1

(1) Includes interest income on impaired loans of $17 million for the three months ended January 31, 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 three months ended January 31, 2018, there were no significant changes to the models used to estimate expected credit losses.

Allowance for credit losses – Residential mortgages

	IFRS 9			
	For the three months ended January 31, 2018			
	Performing		Impaired	
(Millions of Canadian dollars)	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	$ 140	$ 65	$ 173	$ 378
Provision for credit losses				
Transfers in (out) to Stage 1	22	(22)	–	–
Transfers in (out) to Stage 2	(5)	5	–	–
Transfers in (out) to Stage 3	–	(3)	3	–
Purchases and originations	16	–	–	16
Derecognitions and maturities	(3)	(3)	–	(6)
Remeasurements	(36)	27	12	3
Write-offs	–	–	(14)	(14)
Recoveries	–	–	1	1
Exchange rate and other	(4)	(2)	(9)	(15)
Balance at end of period	$ 130	$ 67	$ 166	$ 363

Allowance for credit losses – Personal

(Millions of Canadian dollars)	IFRS 9 For the three months ended January 31, 2018 Performing Stage 1	Performing Stage 2	Impaired Stage 3	Total
Balance at beginning of period	$ 278	$ 427	$ 121	$ 826
Provision for credit losses				
Transfers in (out) to Stage 1	204	(204)	–	–
Transfers in (out) to Stage 2	(42)	42	–	–
Transfers in (out) to Stage 3	–	(43)	43	–
Purchases and originations	26	2	–	28
Derecognitions and maturities	(9)	(35)	–	(44)
Remeasurements	(180)	271	70	161
Write-offs	–	–	(129)	(129)
Recoveries	–	–	27	27
Exchange rate and other	(2)	(1)	(5)	(8)
Balance at end of period	$ 275	$ 459	$ 127	$ 861

Allowance for credit losses – Credit cards

(Millions of Canadian dollars)	IFRS 9 For the three months ended January 31, 2018 Performing Stage 1	Performing Stage 2	Impaired Stage 3	Total
Balance at beginning of period	$ 251	$ 442	$ –	$ 693
Provision for credit losses				
Transfers in (out) to Stage 1	228	(228)	–	–
Transfers in (out) to Stage 2	(40)	40	–	–
Transfers in (out) to Stage 3	–	(37)	37	–
Purchases and originations	3	1	–	4
Derecognitions and maturities	(4)	(30)	–	(34)
Remeasurements	(224)	279	73	128
Write-offs	–	–	(142)	(142)
Recoveries	–	–	32	32
Exchange rate and other	(2)	1	–	(1)
Balance at end of period	$ 212	$ 468	$ –	$ 680

Allowance for credit losses – Small business

(Millions of Canadian dollars)	IFRS 9 For the three months ended January 31, 2018 Performing Stage 1	Performing Stage 2	Impaired Stage 3	Total
Balance at beginning of period	$ 15	$ 15	$ 19	$ 49
Provision for credit losses				
Transfers in (out) to Stage 1	8	(8)	–	–
Transfers in (out) to Stage 2	(2)	2	–	–
Transfers in (out) to Stage 3	–	(3)	3	–
Purchases and originations	3	–	–	3
Derecognitions and maturities	(1)	(2)	–	(3)
Remeasurements	(7)	12	4	9
Write-offs	–	–	(9)	(9)
Recoveries	–	–	2	2
Exchange rate and other	1	(1)	(1)	(1)
Balance at end of period	$ 17	$ 15	$ 18	$ 50

Note 5 Loans (continued)

Allowance for credit losses – Business, sovereign and bank

(Millions of Canadian dollars)	IFRS 9 For the three months ended January 31, 2018 Performing Stage 1	Stage 2	Impaired Stage 3	Total
Balance at beginning of period	$ 251	$ 352	$ 407	$ 1,010
Provision for credit losses				
Transfers in (out) to Stage 1	58	(58)	–	–
Transfers in (out) to Stage 2	(35)	35	–	–
Transfers in (out) to Stage 3	–	(6)	6	–
Purchases and originations	52	8	–	60
Derecognitions and maturities	(41)	(52)	–	(93)
Remeasurements	(32)	63	74	105
Write-offs	–	–	(27)	(27)
Recoveries	–	–	9	9
Exchange rate and other	(4)	(8)	(27)	(39)
Balance at end of period	$ 249	$ 334	$ 442	$ 1,025

Allowance for credit losses

(Millions of Canadian dollars)	IAS 39 For the three months ended January 31, 2017 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	$ 6	$ (13)	$ 2	$ (5)	$ (5)	$ 258
Personal	529	109	(138)	29	(3)	–	526
Credit cards	386	110	(141)	32	–	–	387
Small business	65	7	(9)	3	(1)	–	65
	1,253	232	(301)	66	(9)	(5)	1,236
Wholesale							
Business	979	62	(35)	32	(21)	(16)	1,001
Acquired credit-impaired loans	3	–	–	–	–	(1)	2
Total allowance for loan losses	2,235	294	(336)	98	(30)	(22)	2,239
Allowance for off-balance sheet and other items (1)	91	–	–	–	–	–	91
Total allowance for credit losses	$ 2,326	$ 294	$ (336)	$ 98	$ (30)	$ (22)	$ 2,330
Individually assessed	$ 365	$ 26	$ (10)	$ 26	$ (17)	$ (13)	$ 377
Collectively assessed	1,961	268	(326)	72	(13)	(9)	1,953
Total allowance for credit losses	$ 2,326	$ 294	$ (336)	$ 98	$ (30)	$ (22)	$ 2,330

(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 January 31, 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 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 policy for assessing for significant increase 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.

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 January 31, 2018			
(Millions of Canadian dollars)	Stage 1	Stage 2	Stage 3 (1)	Total
Retail				
Loans outstanding – Residential mortgages				
Low risk	$ 214,115	$ 548	$ –	$ 214,663
Medium risk	13,105	1,326	–	14,431
High risk	3,049	2,370	–	5,419
Not rated	36,058	612	–	36,670
Impaired	–	–	750	750
	266,327	4,856	750	271,933
Items not subject to impairment (2)				259
Total				272,192
Loans outstanding – Personal				
Low risk	$ 71,435	$ 1,255	$ –	$ 72,690
Medium risk	6,141	2,307	–	8,448
High risk	1,048	1,763	–	2,811
Not rated	7,009	223	–	7,232
Impaired	–	–	288	288
	85,633	5,548	288	91,469
Total				91,469
Loans outstanding – Credit cards				
Low risk	$ 12,316	$ 164	$ –	$ 12,480
Medium risk	2,755	754	–	3,509
High risk	498	836	–	1,334
Not rated	694	32	–	726
	16,263	1,786	–	18,049
Total				18,049
Loans outstanding – Small business				
Low risk	$ 1,840	$ 18	$ –	$ 1,858
Medium risk	2,092	114	–	2,206
High risk	69	182	–	251
Not rated	166	1	–	167
Impaired	–	–	43	43
	4,167	315	43	4,525
Total				4,525
Undrawn loan commitments – Retail				
Low risk	$ 188,796	$ 352	$ –	$ 189,148
Medium risk	10,373	383	–	10,756
High risk	3,589	165	–	3,754
Not rated	2,185	197	–	2,382
Total	204,943	1,097	–	206,040

Note 5 Loans (continued)

(Millions of Canadian dollars)	IFRS 9 As at January 31, 2018 Stage 1	Stage 2	Stage 3 (1)	Total
Wholesale				
Loans outstanding – Business, Sovereign and Bank				
Investment grade	$ 36,990	$ 79	$ –	$ 37,069
Non-investment grade	91,790	9,057	–	100,847
Not rated	5,335	493	–	5,828
Impaired	–	–	1,446	1,446
	134,115	9,629	1,446	145,190
Items not subject to impairment (2)				9,395
Total				154,585
Undrawn loan commitments – Wholesale				
Investment grade	$ 170,048	$ 19	$ –	$ 170,067
Non-investment grade	84,230	10,607	–	94,837
Not rated	4,404	–	–	4,404
Total	258,682	10,626	–	269,308

(1) Stage 3 includes acquired credit-impaired (ACI) loans. As at January 31, 2018, acquired credit-impaired loans for Retail – Residential Mortgages was $1 million, Retail – Personal was $1 million and Wholesale – Business, Sovereign and Bank was $22 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 acquired credit-impaired loans.

Loans past due but not impaired (1)

	IFRS 9				IAS 39			
	As at							
	January 31, 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	$ 3,022	$ 1,430	$ 191	$ 4,643	$ 3,097	$ 1,337	$ 307	$ 4,741
Wholesale	1,082	511	–	1,593	1,251	424	–	1,675
	$ 4,104	$ 1,941	$ 191	$ 6,236	$ 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)	January 31 2018	October 31 2017
City National		
Unpaid principal balance (1)	$ 211	$ 245
Credit-related fair value adjustments	(5)	(5)
Interest rate and other related premium/(discount)	15	16
Carrying value	221	256
Individually assessed allowance	(3)	(3)
Carrying value net of related allowance	$ 218	$ 253

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

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 January 31, 2018, the balance of FDIC covered loans recorded in Loans on the Consolidated Balance Sheet was $6 million (October 31, 2017 – $6 million). As at January 31, 2018, the balances for indemnification assets and clawback liabilities were $nil and $25 million (October 31, 2017 – $nil and $26 million), respectively.

Note 6 Deposits

The following table details our deposit liabilities.

	As at							
	January 31, 2018				October 31, 2017			
(Millions of Canadian dollars)	Demand (1)	Notice (2)	Term (3)	Total	Demand (1)	Notice (2)	Term (3)	Total
Personal	$ 133,219	$ 48,320	$ 79,773	$ 261,312	$ 134,184	$ 47,366	$ 78,663	$ 260,213
Business and government	229,440	7,799	280,189	517,428	229,337	9,520	266,808	505,665
Bank	6,388	209	14,683	21,280	8,587	158	15,012	23,757
	$ 369,047	$ 56,328	$ 374,645	$ 800,020	$ 372,108	$ 57,044	$ 360,483	$ 789,635
Non-interest-bearing (4)								
Canada	$ 84,734	$ 4,986	$ –	$ 89,720	$ 84,498	$ 4,871	$ –	$ 89,369
United States	31,806	111	–	31,917	34,441	90	–	34,531
Europe (5)	817	–	–	817	616	–	–	616
Other International	5,508	5	–	5,513	6,059	5	–	6,064
Interest-bearing (4)								
Canada	206,311	15,162	283,292	504,765	212,456	14,990	274,934	502,380
United States	1,106	31,573	60,830	93,509	847	32,263	55,840	88,950
Europe (5)	35,286	1,523	20,900	57,709	30,148	1,585	19,613	51,346
Other International	3,479	2,968	9,623	16,070	3,043	3,240	10,096	16,379
	$ 369,047	$ 56,328	$ 374,645	$ 800,020	$ 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 January 31, 2018, deposits denominated in U.S. dollars, British pounds, Euro and other foreign currencies were $291 billion, $18 billion, $39 billion and $27 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)	January 31 2018	October 31 2017
Within 1 year:		
less than 3 months	$ 94,569	$ 71,841
3 to 6 months	48,003	41,221
6 to 12 months	71,899	82,588
1 to 2 years	46,648	52,033
2 to 3 years	44,963	40,400
3 to 4 years	24,917	30,062
4 to 5 years	23,050	18,745
Over 5 years	20,596	23,593
	$ 374,645	$ 360,483
Aggregate amount of term deposits in denominations of one hundred thousand dollars or more	$ 315,000	$ 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)	January 31 2018	January 31 2017	January 31 2018	January 31 2017
Current service costs	$ 89	$ 95	$ 10	$ 10
Past service costs	–	(2)	–	–
Net interest expense (income)	2	11	16	17
Remeasurements of other long term benefits	–	–	–	(4)
Administrative expense	4	3	–	–
Defined benefit pension expense	$ 95	$ 107	$ 26	$ 23
Defined contribution pension expense	52	47	–	–
	$ 147	$ 154	$ 26	$ 23

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)	January 31 2018	January 31 2017	January 31 2018	January 31 2017
Actuarial (gains) losses:				
Changes in financial assumptions	$ 18	$ (765)	$ –	$ (92)
Experience adjustments	–	–	(2)	(2)
Return on plan assets (excluding interest based on discount rate)	(85)	56	–	–
	$ (67)	$ (709)	$ (2)	$ (94)

(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), 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.

Tax examinations and assessments

During the previous year, we received proposal letters (the Proposals) from the Canada Revenue Agency (CRA), in respect of the 2012 taxation year, which suggest that Royal Bank of Canada owes additional income taxes of approximately $250 million, excluding interest, as the tax deductibility of certain dividends was denied on the basis that they were part of a "dividend rental arrangement". This Proposal is consistent with reassessments also received during the previous year for approximately $209 million of additional income tax and interest for taxation year 2011 and approximately $225 million of tax and interest reassessments received in 2016 for taxation years 2010 and 2009 in respect of the same matter.

The dividends to which the Proposals and reassessments relate were received in transactions similar to those addressed in the 2015 Canadian Federal Budget, which disallowed deduction of these dividends from similar arrangements with prospective application effective May 1, 2017. It is possible that the CRA will reassess us for significant additional income tax for subsequent years on the same basis. We are confident that our tax filing position was appropriate and intend to defend ourselves vigorously.

Note 9 Significant capital and funding transactions

Preferred shares

On November 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			
	January 31, 2018		January 31, 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)	464	$ 30	1,479	$ 96
Purchased for cancellation (3)	(9,297)	(113)	(11,333)	(137)
	(8,833)	$ (83)	(9,854)	$ (41)

(1) The requirements of our dividend reinvestment plan (DRIP) are satisfied through either open market share purchases or shares issued from treasury. During the three months ended January 31, 2018 and January 31, 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 January 31, 2018, we purchased for cancellation common shares at a total fair value of $923 million (average cost of $99.29 per share), with a book value of $113 million (book value of $12.22 per share). During the three months ended January 31, 2017, we purchased for cancellation common shares at a total fair value of $102 million (average cost of $90.21 per share), with a book value of $13 million (book value of $12.09 per share). During the three months ended January 31, 2017, we also reduced our common shares outstanding by 10.2 million shares to reflect the expected number of common shares we were obligated to repurchase.

Note 10 Earnings per share

	For the three months ended		
(Millions of Canadian dollars, except share and per share amounts)	January 31 2018	October 31 2017	January 31 2017
Basic earnings per share			
Net Income	$ 3,012	$ 2,837	$ 3,027
Preferred share dividends	(72)	(72)	(75)
Net income attributable to non-controlling interest	(11)	(8)	(12)
Net income available to common shareholders	2,929	2,757	2,940
Weighted average number of common shares (in thousands)	1,451,781	1,457,855	1,484,262
Basic earnings per share (in dollars)	$ 2.02	$ 1.89	$ 1.98
Diluted earnings per share			
Net income available to common shareholders	$ 2,929	$ 2,757	$ 2,940
Dilutive impact of exchangeable shares	4	4	4
Net income available to common shareholders including dilutive impact of exchangeable shares	2,933	2,761	2,944
Weighted average number of common shares (in thousands)	1,451,781	1,457,855	1,484,262
Stock options (1)	3,069	2,936	3,778
Issuable under other share-based compensation plans	751	749	739
Exchangeable shares (2)	3,113	3,376	3,571
Average number of diluted common shares (in thousands)	1,458,714	1,464,916	1,492,350
Diluted earnings per share (in dollars)	$ 2.01	$ 1.88	$ 1.97

(1) The dilutive effect of stock options was calculated using the treasury stock method. When the exercise price of options outstanding is greater than the average market price of our common shares, the options are excluded from the calculation of diluted earnings per share. For the three months ended January 31, 2018, no outstanding options were excluded from the calculation of diluted earnings per share. For the three months ended October 31, 2017, no outstanding options were excluded from the calculation of diluted earnings per share. For the three months ended January 31, 2017, an average of 191,171 outstanding options with an average exercise price of $90.23 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:

Interchange fees litigation

The Supreme Court of Canada declined the B.C. class action plaintiffs' request 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.

Note 12 Results by business segment

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

(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
	For the three months ended January 31, 2018						
Net interest income (2) (3)	$ 2,856	$ 612	$ –	$ 128	$ 866	$ (17)	$ 4,445
Non-interest income (2)	1,309	2,171	1,144	548	1,309	(98)	6,383
Total revenue	4,165	2,783	1,144	676	2,175	(115)	10,828
Provision for credit losses (4)	317	(2)	–	–	20	(1)	334
Insurance policyholder benefits, claims and acquisition expense	–	–	836	–	–	–	836
Non-interest expense	1,801	2,011	142	389	1,214	54	5,611
Net income (loss) before income taxes	2,047	774	166	287	941	(168)	4,047
Income taxes (recoveries)	526	177	39	68	193	32	1,035
Net income	$ 1,521	$ 597	$ 127	$ 219	$ 748	$ (200)	$ 3,012
Non-interest expense includes:							
Depreciation and amortization	$ 140	$ 130	$ 9	$ 30	$ 87	$ –	$ 396

(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
	For the three months ended January 31, 2017						
Net interest income (2) (3)	$ 2,649	$ 541	$ –	$ 237	$ 947	$ (50)	$ 4,324
Non-interest income (2) (5)	1,427	1,944	497	394	1,124	(64)	5,322
Total revenue (5)	4,076	2,485	497	631	2,071	(114)	9,646
Provision for credit losses (4)	249	13	–	–	32	–	294
Insurance policyholder benefits, claims and acquisition expense	–	–	183	–	–	–	183
Non-interest expense (5)	1,769	1,909	140	350	1,125	22	5,315
Net income (loss) before income taxes	2,058	563	174	281	914	(136)	3,854
Income taxes (recoveries)	466	133	40	67	252	(131)	827
Net income	$ 1,592	$ 430	$ 134	$ 214	$ 662	$ (5)	$ 3,027
Non-interest expense includes:							
Depreciation and amortization (6)	$ 157	$ 138	$ 8	$ 26	$ 85	$ –	$ 414

(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 January 31, 2018						
Total assets	$ 435,463	$ 86,757	$ 15,526	$ 134,420	$ 564,852	$ 39,257	$ 1,276,275
Total liabilities	$ 435,433	$ 86,853	$ 15,595	$ 134,310	$ 564,630	$ (33,870)	$ 1,202,951

(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 first quarter of 2018, we complied with all capital and leverage requirements imposed by OSFI.

(Millions of Canadian dollars, except Capital ratios and leverage ratios)	As at January 31 2018	As at October 31 2017
Capital (1)		
Common Equity Tier 1 capital	$ 51,145	$ 51,572
Tier 1 capital	57,925	58,361
Total capital	66,984	67,556
Risk-weighted assets used in calculation of capital ratios (1) (2)		
Common Equity Tier 1 capital ratio	466,758	474,478
Tier 1 capital ratio	466,758	474,478
Total capital ratio	466,758	474,478
Total capital risk-weighted assets (1)		
Credit risk	375,260	376,519
Market risk	30,100	27,618
Operational risk	60,119	59,203
Regulatory floor adjustment (3)	1,279	11,138
	$ 466,758	$ 474,478
Capital ratios and leverage ratios (1)		
Common Equity Tier 1 capital ratio	11.0%	10.9%
Tier 1 capital ratio	12.4%	12.3%
Total capital ratio	14.4%	14.2%
Leverage ratio	4.2%	4.4%
Leverage ratio exposure (billions)	$ 1,363.9	$ 1,315.5

(1) Capital, RWA, and capital ratios are calculated using OSFI Capital Adequacy Requirements 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 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 is 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 is less than 90% of the capital requirements as calculated under the Basel I standards, the difference is added to the RWAs.

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website: rbc.com

Transfer Agent and Registrar
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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.):
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Co-Transfer Agent (U.K.):
Computershare Investor Services PLC
Securities Services – Registrars
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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)
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For financial information inquiries, please contact: Investor Relations
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155 Wellington Street West
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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.

2018 Quarterly earnings release dates

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

2018 Annual Meeting
The Annual Meeting of Common Shareholders will be held on Friday, April 6, 2018, at 9:30 a.m. (Eastern Time), at the Metro Toronto Convention Centre, 255 Front Street West, Toronto, Ontario, Canada

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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