

Management's Discussion and Analysis

Management's Discussion and Analysis (MD&A) is provided to enable a reader to assess our results of operations and financial condition for the three and nine month periods ended or as at July 31, 2018, compared to the corresponding periods in the prior fiscal year and the three month period ended April 30, 2018. This MD&A should be read in conjunction with our unaudited Interim Condensed Consolidated Financial Statements for the quarter ended July 31, 2018 (Condensed Financial Statements) and related notes and our 2017 Annual Report. This MD&A is dated August 21, 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 Q3 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, and the risk environment including our liquidity and funding risk, and includes our President and Chief Executive Officer's statements. The forward-looking information contained in this document is presented for the purpose of assisting the holders of our securities and financial analysts in understanding our financial position and results of operations as at and for the periods ended on the dates presented, as well as our financial performance objectives, vision and strategic goals, and may not be appropriate for other purposes. Forward-looking statements are typically identified by words such as "believe", "expect", "foresee", "forecast", "anticipate", "intend", "estimate", "goal", "plan" and "project" and similar expressions of future or conditional verbs such as "will", "may", "should", "could" or "would".

By their very nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties, which give rise to the possibility that our predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that our assumptions may not be correct and that our financial performance objectives, vision and strategic goals will not be achieved. We caution readers not to place undue reliance on these statements as a number of risk factors could cause our actual results to differ materially from the expectations expressed in such forward-looking statements. These factors – many of which are beyond our control and the effects of which can be difficult to predict – include: credit, market, liquidity and funding, insurance, operational, regulatory compliance, strategic, reputation, legal and regulatory environment, competitive and systemic risks and other risks discussed in the risk sections of our 2017 Annual Report and the Risk management section of this Q3 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 Q3 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 Q3 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 Q3 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 84,000+ employees who bring our vision, values and strategy to life so we can help our clients thrive and communities prosper. As Canada's biggest bank, and one of the largest in the world based on market capitalization, we have a diversified business model with a focus on innovation and providing exceptional experiences to our 16 million clients in Canada, the U.S. and 34 other countries. Learn more at rbc.com.

Selected financial and other highlights

	As at or for the three months ended			As at or for the nine months ended	
	July 31 2018	April 30 2018	July 31 2017	July 31 2018	July 31 2017
(Millions of Canadian dollars, except per share, number of and percentage amounts) (1)					
Total revenue (2)	\$ 11,025	\$ 10,054	\$ 10,088	\$ 31,907	\$ 30,146
Provision for credit losses (PCL) (3)	346	274	320	954	916
Insurance policyholder benefits, claims and acquisition expense (PBCAE)	925	421	643	2,182	1,916
Non-interest expense (2)	5,858	5,482	5,537	16,951	16,183
Income before income taxes	3,896	3,877	3,588	11,820	11,131
Net income	\$ 3,109	\$ 3,060	\$ 2,796	\$ 9,181	\$ 8,632
Segments – net income					
Personal & Commercial Banking	\$ 1,510	\$ 1,459	\$ 1,399	\$ 4,490	\$ 4,351
Wealth Management	578	537	486	1,712	1,347
Insurance	158	172	161	457	461
Investor & Treasury Services	155	212	178	586	585
Capital Markets	698	665	611	2,111	1,941
Corporate Support	10	15	(39)	(175)	(53)
Net income	\$ 3,109	\$ 3,060	\$ 2,796	\$ 9,181	\$ 8,632
Selected information					
Earnings per share (EPS) – basic	\$ 2.10	\$ 2.06	\$ 1.86	\$ 6.19	\$ 5.69
– diluted	2.10	2.06	1.85	6.16	5.67
Return on common equity (ROE) (4), (5)	17.3%	18.1%	16.3%	17.6%	17.2%
Average common equity (4)	\$ 69,650	\$ 67,450	\$ 65,750	\$ 68,000	\$ 65,050
Net interest margin (NIM) – on average earning assets, net (4)	1.66%	1.68%	1.69%	1.66%	1.72%
PCL as a % of average net loans and acceptances (6)	0.23%	0.20%	0.23%	0.23%	0.23%
PCL on impaired loans as a % of average net loans and acceptances (6)	0.17%	0.22%	0.23%	0.21%	0.23%
Gross impaired loans (GIL) as a % of loans and acceptances (7), (8)	0.40%	0.47%	0.53%	0.40%	0.53%
Liquidity coverage ratio (LCR) (9)	120%	122%	121%	120%	121%
Capital ratios and Leverage ratio (10)					
Common Equity Tier 1 (CET1) ratio	11.1%	10.9%	10.9%	11.1%	10.9%
Tier 1 capital ratio	12.3%	12.3%	12.4%	12.3%	12.4%
Total capital ratio	14.1%	14.1%	14.4%	14.1%	14.4%
Leverage ratio	4.3%	4.3%	4.4%	4.3%	4.4%
Selected balance sheet and other information (11)					
Total assets	\$ 1,292,374	\$ 1,274,778	\$ 1,201,047	\$ 1,292,374	\$ 1,201,047
Securities, net of applicable allowance	217,132	220,841	214,170	217,132	214,170
Loans, net of allowance for loan losses	563,097	551,393	534,034	563,097	534,034
Derivative related assets	88,503	94,175	105,833	88,503	105,833
Deposits	832,261	822,048	778,618	832,261	778,618
Common equity	71,475	69,122	65,561	71,475	65,561
Total capital risk-weighted assets	498,896	489,172	458,136	498,896	458,136
Assets under management (AUM)	686,600	660,900	601,200	686,600	601,200
Assets under administration (AUA) (12)	5,486,200	5,666,400	5,390,000	5,486,200	5,390,000
Common share information					
Shares outstanding (000s) – average basic	1,440,477	1,443,084	1,457,854	1,445,136	1,470,066
– average diluted	1,446,956	1,449,737	1,465,035	1,451,823	1,477,615
– end of period	1,441,166	1,442,009	1,457,934	1,441,166	1,457,934
Dividends declared per common share	\$ 0.94	\$ 0.94	\$ 0.87	\$ 2.79	\$ 2.57
Dividend yield (13)	3.8%	3.7%	3.7%	3.6%	3.8%
Common share price (RY on TSX) (14)	\$ 101.55	\$ 97.64	\$ 93.01	\$ 101.55	\$ 93.01
Market capitalization (TSX) (14)	146,350	140,798	135,602	146,350	135,602
Business information (number of)					
Employees (full-time equivalent) (FTE)	82,236	79,308	79,134	82,236	79,134
Bank branches	1,338	1,355	1,388	1,338	1,388
Automated teller machines (ATMs)	4,792	4,875	4,758	4,792	4,758
Period average US\$ equivalent of C\$1.00 (15)	\$ 0.767	\$ 0.778	\$ 0.770	\$ 0.780	\$ 0.756
Period-end US\$ equivalent of C\$1.00	\$ 0.769	\$ 0.779	\$ 0.802	\$ 0.769	\$ 0.802

- (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 Q3 2018 Report to Shareholders. For further details on the impacts of the adoption of IFRS 9 including the description of accounting policies selected, refer to Note 2 of our Condensed Financial Statements.
- (2) Effective Q4 2017, service fees and other costs incurred in association with certain commissions and fees earned are presented on a gross basis in non-interest expense. Comparative amounts have been reclassified to conform with this presentation.
- (3) Under IFRS 9, PCL relates primarily to loans, acceptances, and commitments, and also applies to all financial assets except for those classified or designated as fair value through profit or loss (FVTPL) and equity securities designated as fair value through other comprehensive income (FVOCI). Prior to the adoption of IFRS 9, PCL related only to loans, acceptances, and commitments. PCL on loans, acceptances, and commitments is comprised of PCL on impaired loans (Stage 3 PCL under IFRS 9 and PCL on impaired loans under IAS 39) and PCL on performing loans (Stage 1 and Stage 2 PCL under IFRS 9 and PCL on loans not yet identified as impaired under IAS 39). Refer to the Credit risk section and Note 2 of our Condensed Financial Statements for further details.
- (4) Average amounts are calculated using methods intended to approximate the average of the daily balances for the period. This includes Average common equity used in the calculation of ROE. For further details, refer to the Key performance and non-GAAP measures section.
- (5) These measures may not have a standardized meaning under generally accepted accounting principles (GAAP) and may not be comparable to similar measures disclosed by other financial institutions. For further details, refer to the Key performance and non-GAAP measures section.
- (6) PCL represents PCL on loans, acceptances and commitments. PCL on impaired loans represents Stage 3 PCL under IFRS 9 and PCL on impaired loans under IAS 39. Stage 3 PCL under IFRS 9 is comprised of lifetime credit losses of credit-impaired loans, acceptances and commitments.
- (7) Effective November 1, 2017, GIL excludes \$229 million of acquired credit-impaired (ACI) loans related to our acquisition of City National Bank (City National) that have returned to performing status. As at July 31, 2018, \$20 million (April 30, 2018 – \$21 million) of ACI loans that remain impaired are included in GIL. As at July 31, 2017, GIL includes \$268 million related to the ACI loans portfolio from our acquisition of City National. ACI loans included in GIL added 5 bps to our July 31, 2017 GIL ratio. For further details, refer to Note 5 of our Condensed Financial Statements.
- (8) Effective November 1, 2017, the definition of gross impaired loans has been shortened for certain products to align with a definition of default of 90 days past due under IFRS 9, resulting in an increase in GIL of \$134 million.
- (9) LCR is calculated using the Basel III Liquidity Adequacy Requirements (LAR) guideline. For further details, refer to the Liquidity and funding risk section.
- (10) Capital and Leverage ratios presented above are on an “all-in” basis. The Leverage ratio is a regulatory measure under the Basel III framework. For further details, refer to the Capital management section.
- (11) Represents period-end spot balances.
- (12) AUA includes \$16.8 billion and \$9.8 billion (April 30, 2018 – \$17.8 billion and \$9.1 billion; July 31, 2017 – \$18.4 billion and \$8.2 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 August 21, 2018

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

Economic and market review and outlook

Canada

The Canadian economy is expected to have grown by an estimated rate of 3.0%¹ during the second calendar quarter of 2018, which is up from a 1.3% annualized increase in the previous calendar quarter. July's unemployment rate remained steady at 5.8%, consistent with April's rate of 5.8%, reflecting the lowest rate since 1974. Consumer spending has picked up after a slow start to the year and housing markets are beginning to stabilize after a slowdown earlier this year when new mortgage regulations took effect. Exports picked up strongly in the second quarter, rebounding from temporary shutdowns in the retail, manufacturing and oil & gas sectors. The Bank of Canada (BoC) raised its overnight rate by 25 basis points to 1.50%, as the Canadian economy is operating close to full capacity and inflation is on target. Given the recent pace of economic activity and on-target inflation we expect another rate hike in the fall. For the remainder of calendar 2018, we expect a slightly slower pace of growth as the economy adapts to headwinds from rising interest rates, tariffs, and trade uncertainty.

U.S.

Based on advanced estimates, the U.S. economy grew by 4.1%¹ in the second calendar quarter of 2018, which is among the strongest quarters in the last decade. A rebound in consumer spending and a continued increase in business investment contributed to the growth in the U.S. economy. Exports also rose nearly 10% in the second calendar quarter, however, this rate is unlikely to be sustained amid growing trade tensions. With a strong labour market and inflation close to or above the Federal Reserve's (Fed) 2% objective, we expect the Fed to continue to raise interest rates in the remainder of calendar 2018.

Europe

The Euro area grew at a rate of 0.3% in the second calendar quarter of 2018, which is slightly lower than the previous quarter of 0.4%. Tightening labour market conditions indicate inflation will pick up gradually in the coming quarters. As economic data reflected strong, broad-based growth, the European Central Bank announced plans to end net asset purchases at the end of this year, with rate hikes likely in the second half of 2019.

Financial markets

Global equities experienced a volatile quarter amid geopolitical tensions. Strong economic data and corporate earnings have helped the TSX and S&P 500 indices post modest gains in the second calendar quarter. However, markets outside of North America have not fared as well due to concerns over potential trade wars with the U.S. Short-term bond yields have increased reflecting rising interest rates, causing the yield curve to flatten. As long as the global economy continues its current growth trajectory, we expect central banks in Canada, the U.S. and the U.K. to boost interest rates in the near-term. However, a number of headwinds, including implications from global trade tensions, may hinder progress.

Regulatory environment

We continue to monitor and prepare for regulatory developments and changes in a manner that seeks to ensure compliance with new requirements, while mitigating adverse business or financial impacts to the extent practicable. Such impacts could result from new or amended laws or regulations and the expectations of those who enforce them. The following provides a high-level summary of some of the key regulatory changes that have the potential to increase our operational, compliance, and technology costs and to impact our profitability, as well as to potentially increase the costs and complexity of our operations.

Global Trade Agreements

Negotiations on the changes to the North American Free Trade Agreement (NAFTA) were put on hold ahead of Mexico's July 1, 2018 election; however, bilateral discussions between U.S. and Mexican representatives have continued. 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, however, the outcome remains unclear. The possible imposition of new tariffs on certain industries, such as the automotive sector, could have detrimental economic consequences to both Canada and the U.S. given the extent of cross-border integrated manufacturing. In response, Canada is working with the European Union (EU), Japan, South Korea and Mexico to form a strategy to address the potential impacts of these new automotive industry tariffs should they be imposed. When Canada's exemption from U.S. steel and aluminum tariffs was lifted in June 2018, Canada responded with counter-tariffs on U.S. imports, including steel, aluminum and certain consumer products. The steel, aluminum and other companies affected by recently imposed and future tariffs may, directly or indirectly, impact certain of our businesses.

The longer-term implications of changing global trade relationships also remain unclear. The introduction of U.S. tariffs on certain Chinese imports, and the reciprocal tariffs by the Chinese on U.S. goods, is potentially disruptive to global trade relationships. The trade implications pertaining to Brexit also remain uncertain. We are actively monitoring the financial, legal, credit and market implications arising from the global protectionist sentiments being articulated, as well as our exposures to recent actions taken by the respective governments in a shifting trade environment.

United States Tax Reform

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

¹ Annualized rate

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

United States Regulatory Initiatives

Policymakers are considering reforms to various U.S. regulations, certain of which may, if implemented, result in reduced complexity of the U.S. regulatory framework and lower compliance costs. These include possible reforms to the Volcker Rule; the SEC's proposed standards of conduct for brokers and advisors (i.e. Regulation Best Interest); the regulation of over-the-counter (OTC) derivatives; and key aspects of the capital, leverage, liquidity, and oversight framework in the U.S. (e.g. enhanced prudential standards applicable to foreign bank organizations; the Federal Reserve Bank of New York's Comprehensive Capital Analysis and Review 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 two-year negotiation period triggered by the U.K.'s formal notice of intention to withdraw from the EU ends on March 29, 2019 (the Exit Date). Political agreement has been reached on a transition period, which would extend until December 31, 2020, providing additional time in which to ensure readiness; however, the U.K.-EU Withdrawal Agreement must be ratified by both parties. The U.K. will remain an EU Member State subject to all EU legislation until the Exit Date. If a transition period is agreed upon, EU legislation will continue to apply throughout the transition period.

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 our Q1 2018, Q2 2018, and of this Q3 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 Q3 2018 Report to Shareholders.

Financial performance

Overview

Q3 2018 vs. Q3 2017

Net income of \$3,109 million was up \$313 million or 11% from a year ago. Diluted earnings per share (EPS) of \$2.10 was up \$0.25 or 14% and return on common equity (ROE) of 17.3% was up 100 bps from 16.3% last year. Our Common Equity Tier 1 (CET1) ratio of 11.1% was up 20 bps from a year ago.

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

Personal & Commercial Banking earnings were up mainly reflecting improved spreads and average volume growth of 5%. These factors were partially offset by higher PCL, an increase in staff-related costs in Canadian Banking and technology and related costs, including digital initiatives.

Wealth Management earnings increased largely reflecting higher average fee-based assets, an increase in net interest income reflecting volume growth and higher interest rates, 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 related to business growth and technology initiatives, and higher regulatory costs.

Capital Markets earnings increased primarily due to higher revenue in Corporate and Investment Banking and Global Markets, a lower effective tax rate reflecting changes in earnings mix and benefits from the U.S. Tax Reform, and lower PCL. These increases were partially offset by litigation recoveries in the prior year.

Investor & Treasury Services results were down primarily due to lower funding and liquidity revenue, and higher costs in support of business growth and increased technology investments. These factors were partially offset by improved client deposit margins.

Insurance earnings decreased reflecting increased costs supporting sales growth and client service activities, offset by improved International claims experience.

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

Q3 2018 vs. Q2 2018

Net income of \$3,109 million was up \$49 million or 2% from the prior quarter. Diluted EPS of \$2.10 was up \$0.04 or 2% and ROE of 17.3% was down 80 bps. Our CET1 ratio of 11.1% was up 20 bps.

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

Personal & Commercial Banking earnings were up reflecting three more days in the quarter and volume growth. These factors were partially offset by higher PCL and marketing costs, higher staff-related costs in Canadian Banking and an increase in technology and related costs, including digital initiatives.

Wealth Management earnings increased primarily attributable to higher average fee-based assets reflecting capital appreciation and net sales, and an increase in net interest income reflecting volume growth and higher interest rates. These factors were partially offset by higher PCL due to a release of provisions in the prior quarter, and an increase in variable compensation on improved results.

Capital Markets earnings increased primarily due to higher equity and debt origination and increased loan syndication across all regions. Higher equity trading revenue mainly in the U.S. also contributed to the increase. These factors were partially offset by higher

compensation on improved results and in support of business growth, lower gains from the disposition of certain securities and gains in our legacy U.S. portfolios in the prior quarter.

Investor & Treasury Services earnings decreased primarily due to lower funding and liquidity revenue and decreased revenue from our asset services business driven by lower client activity and market volatility.

Insurance earnings were down largely reflecting lower favourable investment-related experience as compared to the prior quarter. This was partially offset by business growth in Canadian Insurance, a life retrocession contract recapture, and improved International claims experience.

Q3 2018 vs. Q3 2017 (Nine months ended)

Net income of \$9,181 million increased \$549 million or 6% from a year ago. Nine month diluted EPS of \$6.16 was up \$0.49 or 9% and ROE of 17.6% was up 40 bps.

Excluding our share of the gain related to the sale of the U.S. operations of Moneris of \$212 million (before- and after-tax), which was a specified item in the prior year, net income increased \$761 million or 9% from the prior year, diluted EPS was up \$0.63 or 11%, and ROE of 17.6% increased 80 bps. Our results reflected solid earnings growth in Wealth Management, Personal & Commercial Banking, and Capital Markets.

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, and increased costs related to business growth and technology initiatives.

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

Capital Markets results were up driven by a lower effective tax rate reflecting changes in earnings mix and benefits from the U.S. Tax Reform, and lower PCL. Higher revenue in Corporate and Investment Banking and gains in our legacy U.S. portfolios also contributed to the increase. These factors were partially offset by higher regulatory costs, increased compensation on improved results, and litigation recoveries in the prior year.

Investor & Treasury Services results were up as an increase in deposit revenue and higher revenue from our asset services business were mostly offset by lower funding and liquidity revenue, higher costs in support of business growth and increased technology investments.

Insurance earnings decreased due to favourable updates in the prior year related to premium and mortality experience, and higher disability and life retrocession claims volumes. These factors were offset by the impact of favourable investment-related experience.

Corporate Support net loss was \$175 million, largely due to the impact of the U.S. Tax Reform of \$178 million, partially offset by asset/liability management activities. Net loss was \$53 million in the prior year, as asset/liability management activities were more than offset by higher severance and legal costs.

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:

(Millions of Canadian dollars, except per share amounts)	For the three months ended		For the nine months ended
	Q3 2018 vs. Q3 2017 ⁽¹⁾	Q3 2018 vs. Q2 2018	Q3 2018 vs. Q3 2017 ⁽¹⁾
<i>Increase (decrease):</i>			
Total revenue	\$ 25	\$ 17	\$ (157)
PCL	–	1	4
PBCAE	–	–	–
Non-interest expense	22	7	(101)
Income taxes	(1)	–	(17)
Net income	5	8	(42)
<i>Impact on EPS</i>			
Basic	\$ –	\$ 0.01	\$ (0.03)
Diluted	–	0.01	(0.03)

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

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

(Average foreign currency equivalent of C\$1.00) ⁽¹⁾	For the three months ended			For the nine months ended	
	July 31 2018	April 30 2018	July 31 2017	July 31 2018	July 31 2017
U.S. dollar	0.767	0.778	0.770	0.780	0.756
British pound	0.581	0.562	0.591	0.573	0.595
Euro	0.656	0.638	0.670	0.650	0.691

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

Total revenue

(Millions of Canadian dollars)	For the three months ended			For the nine months ended	
	July 31 2018	April 30 2018	July 31 2017	July 31 2018	July 31 2017
Interest and dividend income	\$ 8,626	\$ 7,865	\$ 6,808	\$ 24,031	\$ 19,758
Interest expense	4,030	3,444	2,551	10,569	6,979
Net interest income	\$ 4,596	\$ 4,421	\$ 4,257	\$ 13,462	\$ 12,779
NIM	1.66%	1.68%	1.69%	1.66%	1.72%
Insurance premiums, investment and fee income	\$ 1,290	\$ 806	\$ 1,009	\$ 3,240	\$ 2,954
Trading revenue	234	236	216	788	660
Investment management and custodial fees	1,347	1,318	1,227	3,990	3,575
Mutual fund revenue	908	862	857	2,655	2,491
Securities brokerage commissions	334	334	330	1,023	1,089
Service charges	458	443	450	1,341	1,325
Underwriting and other advisory fees	541	457	537	1,539	1,595
Foreign exchange revenue, other than trading	273	277	281	831	744
Card service revenue	266	267	245	790	722
Credit fees	378	317	355	1,023	1,069
Net gains on investment securities (1)	26	49	44	114	125
Share of profit (loss) in joint ventures and associates	(26)	14	33	13	325
Other	400	253	247	1,098	693
Non-interest income (2)	\$ 6,429	\$ 5,633	\$ 5,831	\$ 18,445	\$ 17,367
Total revenue (2)	\$ 11,025	\$ 10,054	\$ 10,088	\$ 31,907	\$ 30,146
Additional information					
Total trading revenue					
Net interest income	\$ 577	\$ 524	\$ 544	\$ 1,651	\$ 1,844
Non-interest income	234	236	216	788	660
Total trading revenue	\$ 811	\$ 760	\$ 760	\$ 2,439	\$ 2,504

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

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

Q3 2018 vs. Q3 2017

Total revenue increased \$937 million or 9% from last year mainly due to higher net interest income and increased insurance premiums, investment and fee income (insurance revenue). Higher other revenue and higher investment management and custodial fees also contributed to the increase.

Net interest income increased \$339 million or 8%, largely due to volume growth and the impact from higher interest rates in Canadian Banking and Wealth Management. Higher lending revenue and higher equity trading also contributed to the increase. These factors were partially offset by lower funding and liquidity revenue.

NIM was down 3 bps compared to last year due to changes in average earning asset mix with volume growth primarily in reverse repos. These factors were partially offset by improved spreads on deposits in Canadian Banking and Wealth Management, reflecting the rising interest rate environment.

Insurance revenue increased \$281 million or 28%, mainly reflecting the change in fair value of investments backing our policyholder liabilities, partially offset by lower group annuity sales, both of which are largely offset in PBCAE.

Investment management and custodial fees increased \$120 million or 10%, mainly due to higher average fee-based assets reflecting capital appreciation and net sales.

Other revenue increased \$153 million or 62%, primarily due to gains on non-trading derivatives in our funding and liquidity business, which are more than offset in net interest income, a gain related to the sale of a mutual fund product and transfer of its associated team, and asset/liability management activities.

Q3 2018 vs. Q2 2018

Total revenue increased \$971 million or 10% from the prior quarter, primarily due to the change in fair value of investments backing our policyholder liabilities and higher group annuity sales, both of which are largely offset in PBCAE, three more days in the quarter and volume growth in Canadian Banking and Wealth Management. The change in the fair value of the hedge related to our U.S. share-based compensation plan, which is largely offset in Non-interest expense, and a gain related to the sale of a mutual fund product and transfer of its associated team also contributed to the increase. These factors were partially offset by net gains in our non-trading investment portfolios in the prior quarter.

Q3 2018 vs. Q3 2017 (Nine months ended)

Total revenue increased \$1,761 million or 6%. Excluding our share of the gain related to the sale of the U.S. operations of Moneris of \$212 million, total revenue increased \$1,973 million or 7%, primarily reflecting increased net interest income, investment management and custodial fees and other revenue. Higher insurance revenue, mutual fund revenue and trading revenue also contributed to the increase. These factors were partially offset by foreign exchange translation which decreased total revenue by \$157 million.

Net interest income increased \$683 million or 5%, largely due to the impact of higher interest rates and volume growth in Canadian Banking and Wealth Management. Higher equity trading revenue largely in Europe and higher lending revenue in Europe

also contributed to the increase. These factors were partially offset by lower fixed income trading revenue largely in the U.S., and decreased funding and liquidity revenue.

Insurance revenue increased \$286 million or 10%, mainly reflecting the change in fair value of investments backing our policyholder liabilities and the impact of restructured international life contracts, both of which are largely offset in PBCAE, and business growth. These factors were partially offset by lower group annuity sales, which are largely offset in PBCAE.

Trading revenue increased \$128 million or 19%, mainly due to higher fixed income trading revenue largely in the U.S., and increased equity trading revenue in Canada.

Investment management and custodial fees increased \$415 million or 12%, mainly due to higher average fee-based assets reflecting capital appreciation and net sales.

Mutual fund revenue increased \$164 million or 7%, primarily due to higher average fee-based assets due to capital appreciation and net sales, and increased balances driving higher mutual fund distribution fees in Canadian Banking.

Other revenue increased \$405 million or 58%, largely due to net gains in our non-trading investment portfolios, and gains on non-trading derivatives in our funding and liquidity business, which are more than offset in net interest income. A gain related to the sale of a mutual fund product and transfer of its associated team, and an accounting adjustment related to City National also contributed to the increase. These factors were partially offset by the change in the fair value of the hedge related to our U.S. share-based compensation plan, which is largely offset in Non-interest expense.

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

Provision for credit losses (PCL)

Q3 2018 vs. Q3 2017

Total PCL in Q3 2018 was \$346 million.

PCL on loans of \$338 million increased \$18 million, or 6% from the prior year, mainly due to higher provisions in Personal & Commercial Banking, largely offset by lower provisions in Capital Markets. PCL ratio on loans of 23 bps remained flat.

Q3 2018 vs. Q2 2018

Total PCL increased \$72 million from the prior quarter.

PCL on loans of \$338 million increased \$60 million, or 22% from the prior quarter, mainly due to higher provisions in Personal & Commercial Banking and Wealth Management. PCL ratio on loans increased 3 bps.

Q3 2018 vs. Q3 2017 (Nine months ended)

Total PCL increased \$38 million from the prior year.

PCL on loans increased \$34 million, or 4% from the prior year, mainly due to higher provisions in Personal & Commercial Banking, partially offset by lower provisions in Capital Markets and Wealth Management. PCL ratio on loans remained flat.

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

Insurance policyholder benefits, claims and acquisition expense (PBCAE)

Q3 2018 vs. Q3 2017

PBCAE increased \$282 million or 44% from a year ago, primarily due to the change in fair value of investments backing our policyholder liabilities, partially offset by lower group annuity sales, both of which are largely offset in revenue.

Q3 2018 vs. Q2 2018

PBCAE increased \$504 million from the prior quarter, mainly due to the change in fair value of investments backing our policyholder liabilities and higher group annuity sales, both of which are largely offset in revenue.

Q3 2018 vs. Q3 2017 (Nine months ended)

PBCAE increased \$266 million or 14% from the prior year, mainly due to the change in fair value of investments backing our policyholder liabilities and the impact of restructured international life contracts, both of which are largely offset in revenue. Business growth, higher disability and life retrocession claims volumes, and favourable updates in the prior year related to premium and mortality experience also contributed to the increase. These factors were partially offset by lower group annuity sales, which are largely offset in revenue, and higher favourable investment-related experience.

Non-interest expense

(Millions of Canadian dollars, except percentage amounts) (1)	For the three months ended			For the nine months ended	
	July 31 2018	April 30 2018	July 31 2017	July 31 2018	July 31 2017
Salaries	\$ 1,554	\$ 1,482	\$ 1,559	\$ 4,502	\$ 4,449
Variable compensation	1,442	1,338	1,342	4,164	3,880
Benefits and retention compensation	432	465	444	1,377	1,377
Share-based compensation	93	39	88	304	325
Human resources	\$ 3,521	\$ 3,324	\$ 3,433	\$ 10,347	\$ 10,031
Equipment	416	386	361	1,174	1,061
Occupancy	393	386	383	1,158	1,186
Communications	260	249	250	733	712
Professional fees	359	321	326	961	846
Amortization of other intangibles	271	266	255	798	758
Other	638	550	529	1,780	1,589
Non-interest expense	\$ 5,858	\$ 5,482	\$ 5,537	\$ 16,951	\$ 16,183
Efficiency ratio (2)	53.1%	54.5%	54.9%	53.1%	53.7%
Efficiency ratio adjusted (3)	53.4%	53.6%	53.7%	53.0%	53.5%

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

(2) 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.

Q3 2018 vs. Q3 2017

Non-interest expense increased \$321 million or 6%, mainly due to higher staff-related costs, including variable compensation on improved results, increased costs in support of business growth, and an increase in technology and related costs, including digital initiatives. Litigation recoveries in the prior year, higher regulatory costs, and the impact of foreign exchange translation also contributed to the increase. These factors were partially offset by higher severance in the prior year.

Our efficiency ratio of 53.1% decreased 180 bps from 54.9% last year. Excluding the change in fair value of investments backing our policyholder liabilities, our efficiency ratio of 53.4% decreased 30 bps from last year, primarily due to higher revenue across all business segments, partially offset by generally higher expenses as noted by the drivers above.

Q3 2018 vs. Q2 2018

Non-interest expense increased \$376 million or 7%, primarily due to higher staff-related costs, including variable compensation on improved results and the impact of three more days in the quarter, and the change in the fair value of our U.S. share-based compensation plan, which was largely offset in revenue. Higher marketing costs and an increase in technology and related costs, including digital initiatives, also contributed to the increase.

Our efficiency ratio of 53.1% decreased 140 bps from 54.5% last quarter. Excluding the change in fair value of investments backing our policyholder liabilities, our efficiency ratio of 53.4% decreased 20 bps from last quarter, primarily due to higher revenue across most business segments, partially offset by higher staff-related costs, increased marketing costs and an increase in technology and related costs.

Q3 2018 vs. Q3 2017 (Nine months ended)

Non-interest expense increased \$768 million or 5%, largely due to an increase in staff-related costs, including variable compensation on improved results, increased costs related to business growth, and higher regulatory costs. Higher technology and related costs, including digital initiatives, and litigation recoveries in the prior year also contributed to the increase. These factors were partially offset by the impact of foreign exchange translation of \$101 million, higher severance in the prior year, and the change in the fair value of our U.S. share-based compensation plan, which was largely offset in revenue.

Our efficiency ratio of 53.1% decreased 60 bps from 53.7%. Excluding the change in fair value of investments backing our policyholder liabilities and our share of the gain in the prior year related to the sale of the U.S. operations of Moneris, our efficiency ratio of 53.0% decreased 50 bps from last year, primarily due to revenue growth across all business segments, partially offset by higher staff-related costs, increased costs in support of business growth, higher regulatory costs, and increased technology and related costs.

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

(Millions of Canadian dollars, except percentage amounts)	For the three months ended			For the nine months ended	
	July 31 2018	April 30 2018	July 31 2017	July 31 2018	July 31 2017
Income taxes	\$ 787	\$ 817	\$ 792	\$ 2,639	\$ 2,499
Income before income taxes	\$ 3,896	\$ 3,877	\$ 3,588	\$ 11,820	\$ 11,131
Canadian statutory income tax rate (1)	26.5%	26.5%	26.5%	26.5%	26.5%
Lower average tax rate applicable to subsidiaries (2)	(5.4)%	(4.3)%	(3.3)%	(4.3)%	(2.9)%
Tax-exempt income from securities	(1.8)%	(1.8)%	(1.9)%	(1.8)%	(2.0)%
Tax rate change	–%	–%	–%	1.2%	(0.1)%
Other	0.9%	0.7%	0.8%	0.7%	1.0%
Effective income tax rate	20.2%	21.1%	22.1%	22.3%	22.5%

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

(2) As the reduced tax rates from the U.S. Tax Reform were effective on January 1, 2018, the Lower average tax rate applicable to subsidiaries includes the fiscal 2018 blended rate for U.S. subsidiaries.

Q3 2018 vs. Q3 2017

Income tax expense decreased \$5 million or 1% from last year, primarily due to the impact of the U.S. Tax Reform which resulted in a lower corporate tax rate on U.S. earnings, and higher favourable tax adjustments, largely offset by higher income before taxes.

The effective income tax rate of 20.2% decreased 190 bps, primarily due to the impact of the U.S. Tax Reform which resulted in a lower corporate tax rate on U.S. earnings, and higher favourable tax adjustments.

Q3 2018 vs. Q2 2018

Income tax expense decreased \$30 million or 4% from last quarter, and the effective income tax rate of 20.2% decreased 90 bps, largely due to higher favourable tax adjustments.

Q3 2018 vs. Q3 2017 (Nine months ended)

Income tax expense increased \$140 million or 6% from last year, due to higher income before income taxes. These factors were partially offset by higher favourable tax adjustments. The write-down of net deferred tax assets, from the impact of the U.S. Tax Reform, was offset by the lower corporate tax rate on U.S. earnings.

The effective income tax rate of 22.3% decreased 20 bps, due to higher favourable tax adjustments in the current year, partially offset by the impact of our share of the gain related to the sale of the U.S. operations of Moneris of \$212 million (before- and after-tax) in the prior year.

Business segment results

How we measure and report our business segments

The key methodologies and assumptions used in our management reporting framework are periodically reviewed by management to ensure they remain valid. They remain unchanged from October 31, 2017, except as noted below.

Provision 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:

(Millions of Canadian dollars, except percentage amounts)	For the three months ended							April 30 2018	July 31 2017
	July 31 2018								
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total	Total
Net income available to common shareholders	\$ 1,487	\$ 564	\$ 156	\$ 152	\$ 676	\$ (4)	\$ 3,031	\$ 2,979	\$ 2,707
Total average common equity (1), (2)	21,700	13,600	1,950	3,050	21,700	7,650	69,650	67,450	65,750
ROE (3)	27.2%	16.4%	32.1%	19.8%	12.3%	n.m.	17.3%	18.1%	16.3%

(Millions of Canadian dollars, except percentage amounts)	For the nine months ended							July 31 2017
	July 31 2018							
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total
Net income available to common shareholders	\$ 4,419	\$ 1,669	\$ 451	\$ 576	\$ 2,047	\$ (223)	\$ 8,939	\$ 8,371
Total average common equity (1), (2)	21,200	13,500	1,850	3,100	20,350	8,000	68,000	65,050
ROE (3)	27.9%	16.5%	32.3%	24.9%	13.4%	n.m.	17.6%	17.2%

(1) Total average common equity represents rounded figures.

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

(3) ROE is based on actual balances of average common equity before rounding.

n.m. not meaningful

Non-GAAP measures

We believe that certain non-GAAP measures described below are more reflective of our ongoing operating results and provide readers with a better understanding of management's perspective on our performance. These measures enhance the comparability of our financial performance for the three and nine months ended July 31, 2018 with the corresponding periods in the prior year and the three months ended April 30, 2018, as well as, in the case of economic profit, measure relative contribution to shareholder value. Non-GAAP measures do not have a standardized meaning under GAAP and may not be comparable to similar measures disclosed by other financial institutions.

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

Economic profit

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

The following table provides a summary of our Economic profit:

(Millions of Canadian dollars)	For the three months ended							April 30 2018	July 31 2017
	July 31 2018								
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total	Total
Net income	\$ 1,510	\$ 578	\$ 158	\$ 155	\$ 698	\$ 10	\$ 3,109	\$ 3,060	\$ 2,796
add: Non-controlling interests	(1)	-	-	-	-	(7)	(8)	(9)	(13)
After-tax effect of amortization of other intangibles	2	48	-	2	-	3	55	55	50
Adjusted net income (loss)	\$ 1,511	\$ 626	\$ 158	\$ 157	\$ 698	\$ 6	\$ 3,156	\$ 3,106	\$ 2,833
less: Capital charge	487	305	43	68	487	174	1,564	1,468	1,484
Economic profit (loss)	\$ 1,024	\$ 321	\$ 115	\$ 89	\$ 211	\$ (168)	\$ 1,592	\$ 1,638	\$ 1,349

(Millions of Canadian dollars)	For the nine months ended							July 31 2017
	July 31 2018							
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total
Net income	\$ 4,490	\$ 1,712	\$ 457	\$ 586	\$ 2,111	\$ (175)	\$ 9,181	\$ 8,632
add: Non-controlling interests	(4)	-	-	(1)	-	(23)	(28)	(33)
After-tax effect of amortization of other intangibles	8	144	-	10	-	2	164	157
Adjusted net income (loss)	\$ 4,494	\$ 1,856	\$ 457	\$ 595	\$ 2,111	\$ (196)	\$ 9,317	\$ 8,756
less: Capital charge	1,415	902	124	206	1,358	532	4,537	4,364
Economic profit (loss)	\$ 3,079	\$ 954	\$ 333	\$ 389	\$ 753	\$ (728)	\$ 4,780	\$ 4,392

Results excluding specified item

Our results were impacted by the following specified item:

- For the nine months ended July 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:

Consolidated results

	For the nine months ended (1)		
	July 31 2017		
	As reported	Item excluded Gain related to the sale by Moneris (3)	Adjusted
(Millions of Canadian dollars, except per share and percentage amounts) (2)			
Continuing operations			
Total revenue	\$ 30,146	\$ (212)	\$ 29,934
PCL	916	–	916
PBCAE	1,916	–	1,916
Non-interest expense	16,183	–	16,183
Net income before income taxes	\$ 11,131	\$ (212)	\$ 10,919
Income taxes	2,499	–	2,499
Net income	\$ 8,632	\$ (212)	\$ 8,420
Net income available to common shareholders	\$ 8,371	\$ (212)	\$ 8,159
Average number of common shares (thousands)	1,470,066		1,470,066
Basic earnings per share (in dollars)	\$ 5.69	\$ (0.14)	\$ 5.55
Average number of diluted common shares (thousands)	1,477,615		1,477,615
Diluted earnings per share (in dollars)	\$ 5.67	\$ (0.14)	\$ 5.53
Average common equity (4)	\$ 65,050		\$ 65,050
ROE (5)	17.2%		16.8%
Effective tax rate	22.5%		22.9%

(1) There were no specified items for the three months ended July 31, 2018 and July 31, 2017, or for the nine months ended July 31, 2018.

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

(3) Includes foreign currency translation.

(4) Average common equity represents rounded figures.

(5) ROE is based on actual balances of average common equity before rounding.

Personal & Commercial Banking

	For the nine months ended (1)		
	July 31 2017		
	As reported	Item excluded Gain related to the sale by Moneris (3)	Adjusted
(Millions of Canadian dollars, except per share and percentage amounts) (2)			
Total revenue	\$ 11,844	\$ (212)	\$ 11,632
PCL	784	–	784
Non-interest expense	5,304	–	5,304
Net income before income taxes	\$ 5,756	\$ (212)	\$ 5,544
Net income	\$ 4,351	\$ (212)	\$ 4,139
Selected balances and other information			
Non-interest expense	\$ 5,304	\$ –	\$ 5,304
Total revenue	11,844	(212)	11,632
Efficiency ratio	44.8%		45.6%
Revenue growth rate	5.9%		4.0%
Non-interest expense growth rate	3.8%		3.8%
Operating leverage	2.1%		0.2%

(1) There were no specified items for the three months ended July 31, 2018 and July 31, 2017, or for the nine months ended July 31, 2018.

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

(3) Includes foreign currency translation.

Canadian Banking

	For the nine months ended (1)			
	July 31 2017			
	As reported	Item excluded		Adjusted
Gain related to the sale by Moneris (3)				
(Millions of Canadian dollars, except per share and percentage amounts) (2)				
Total revenue	\$ 11,111	\$ (212)	\$	10,899
PCL	765	–		765
Non-interest expense	4,738	–		4,738
Net income before income taxes	\$ 5,608	\$ (212)	\$	5,396
Net income	\$ 4,211	\$ (212)	\$	3,999
Selected balances and other information				
Non-interest expense	\$ 4,738	\$ –	\$	4,738
Total revenue	11,111	(212)		10,899
Efficiency ratio	42.6%			43.5%
Revenue growth rate	6.5%			4.5%
Non-interest expense growth rate	3.8%			3.8%
Operating leverage	2.7%			0.7%

(1) There were no specified items for the three months ended July 31, 2018 and July 31, 2017, or for the nine months ended July 31, 2018.

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

(3) Includes foreign currency translation.

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

Our efficiency ratio is impacted by the change in fair value of investments backing our policyholder liabilities, which is reported in revenue and largely offset in PBCAE. In addition, revenue for the nine months ended July 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								
	July 31 2018			April 30 2018			July 31 2017		
	As reported	Item excluded		As reported	Item excluded		As reported	Item excluded	
Change in fair value of investments backing policyholder liabilities		Change in fair value of investments backing policyholder liabilities			Change in fair value of investments backing policyholder liabilities				
(Millions of Canadian dollars, except percentage amounts) (1)									
Continuing operations									
Total revenue	\$ 11,025	\$ (55)	\$ 10,970	\$ 10,054	\$ 174	\$ 10,228	\$ 10,088	\$ 225	\$ 10,313
Non-interest expense	5,858	–	5,858	5,482	–	5,482	5,537	–	5,537
Efficiency ratio	53.1%		53.4%	54.5%		53.6%	54.9%		53.7%

	For the nine months ended							
	July 31 2018				July 31 2017			
	As reported	Item excluded			As reported	Items excluded		
Change in fair value of investments backing policyholder liabilities			Change in fair value of investments backing policyholder liabilities			Gain related to the sale of Moneris (2)		
(Millions of Canadian dollars, except per share and percentage amounts) (1)								
Continuing operations								
Total revenue	\$ 31,907	\$ 93	\$ 32,000	\$ 30,146	\$ 337	\$ (212)	\$	30,271
Non-interest expense	16,951	–	16,951	16,183	–	–		16,183
Efficiency ratio	53.1%		53.0%	53.7%				53.5%

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

(2) Includes foreign currency translation.

Personal & Commercial Banking

	As at or for the three months ended			As at or for the nine months ended	
	July 31 2018	April 30 2018	July 31 2017	July 31 2018	July 31 2017
(Millions of Canadian dollars, except percentage amounts and as otherwise noted) (1)					
Net interest income	\$ 3,001	\$ 2,852	\$ 2,721	\$ 8,709	\$ 7,967
Non-interest income	1,283	1,251	1,249	3,843	3,877
Total revenue	4,284	4,103	3,970	12,552	11,844
PCL on performing assets (2)	31	18		90	
PCL on impaired assets (3)	308	282	273	866	784
Total PCL	339	300	273	956	784
Non-interest expense	1,910	1,828	1,826	5,539	5,304
Income before income taxes	2,035	1,975	1,871	6,057	5,756
Net income	\$ 1,510	\$ 1,459	\$ 1,399	\$ 4,490	\$ 4,351
Revenue by business					
Canadian Banking	\$ 4,040	\$ 3,871	\$ 3,729	\$ 11,838	\$ 11,111
Caribbean & U.S. Banking	244	232	241	714	733
Selected balance sheet and other information					
ROE	27.2%	27.8%	26.6%	27.9%	28.9%
NIM	2.80%	2.79%	2.66%	2.77%	2.66%
Efficiency ratio	44.6%	44.6%	46.0%	44.1%	44.8%
Operating leverage	3.3%	1.0%	(0.4)%	1.6%	2.1%
Effective income tax rate	25.8%	26.1%	25.2%	25.9%	24.4%
Average earning assets, net	\$ 425,900	\$ 419,200	\$ 405,700	\$ 420,300	\$ 400,000
Average loans and acceptances, net	426,500	419,900	405,200	420,800	399,400
Average deposits	363,100	357,900	346,400	359,400	341,900
AUA (4)	276,700	269,100	252,500	276,700	252,500
PCL on impaired loans as a % of average net loans and acceptances (3)	0.25%	0.28%	0.27%	0.26%	0.26%
Other selected information – Canadian Banking					
Net income	\$ 1,491	\$ 1,426	\$ 1,349	\$ 4,397	\$ 4,211
NIM	2.74%	2.74%	2.61%	2.72%	2.61%
Efficiency ratio	42.2%	42.6%	44.3%	42.1%	42.6%
Operating leverage	5.0%	0.7%	(1.5)%	1.3%	2.7%
Operating leverage adjusted (5)	n.a.	n.a.	n.a.	3.4%	0.7%
Effective income tax rate	26.1%	26.1%	25.8%	26.0%	24.9%

(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) PCL on performing assets represents Stage 1 and 2 PCL on all performing assets under IFRS 9, except those classified or designated as FVTPL and equity securities designated as FVOCI. Prior to the adoption of IFRS 9, PCL on performing assets represents PCL for loans not yet identified as impaired and was included in Corporate Support.

(3) PCL on impaired assets includes PCL on credit-impaired loans, acceptances, and commitments (PCL on impaired loans) and PCL on other credit-impaired financial assets. PCL on impaired assets 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 all credit-impaired financial assets, except those classified or designated as FVTPL and equity securities designated as FVOCI.

(4) AUA represents period-end spot balances and includes securitized residential mortgages and credit card loans as at July 31, 2018 of \$16.8 billion and \$9.8 billion, respectively (April 30, 2018 – \$17.8 billion and \$9.1 billion; July 31, 2017 – \$18.4 billion and \$8.2 billion).

(5) These are non-GAAP measures. The nine months ended July 31, 2018 operating leverage ratio in Canadian Banking of 1.3% was impacted by our share of the gain related to the sale of the U.S. operations of Moneris of \$212 million (before- and after-tax) in the nine months ended July 31, 2017, which was a specified item. For further details, including a reconciliation, refer to the Key performance and non-GAAP measures section. The nine months ended July 31, 2018 revenue and expense growth rates in Canadian Banking were 6.5% and 5.2%, respectively. Excluding our share of the gain related to the sale of Moneris, as noted above, the nine months ended July 31, 2018 adjusted revenue growth rate was 8.6%.

n.a. not applicable

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

Financial performance

Q3 2018 vs. Q3 2017

Net income increased \$111 million or 8% from last year, mainly reflecting improved spreads and average volume growth of 5%. These factors were partially offset by higher PCL, an increase in staff-related costs in Canadian Banking and technology and related costs, including digital initiatives.

Total revenue increased \$314 million or 8% from the prior year.

Canadian Banking revenue increased \$311 million or 8% compared to last year, largely reflecting improved spreads and average volume growth of 6% in loans and 5% in deposits. Higher balances driving higher mutual fund distribution fees, and higher purchase volumes driving card service revenue also contributed to the increase.

Caribbean & U.S. Banking revenue increased \$3 million or 1% compared to last year.

Net interest margin was up 14 bps, mainly due to improved spreads on deposits in Canadian Banking, reflecting the rising interest rate environment, partially offset by the impact of competitive pricing pressures.

PCL on impaired loans ratio improved 2 bps, reflecting overall stable credit quality trends. PCL on impaired assets increased \$35 million primarily due to the migration of one portfolio from performing status to impaired status. For further details on performing and impaired PCL, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$84 million or 5%, primarily attributable to higher staff-related costs in Canadian Banking, an increase in technology and related costs, including digital initiatives, and marketing costs. These factors were partially offset by higher severance in the prior year.

Q3 2018 vs. Q2 2018

Net income increased \$51 million or 3% from last quarter, reflecting three more days in the quarter and volume growth. These factors were partially offset by higher PCL and marketing costs, higher staff-related costs in Canadian Banking and an increase in technology and related costs, including digital initiatives.

Net interest margin was up 1 bp.

Q3 2018 vs. Q3 2017 (Nine months ended)

Net income increased \$139 million or 3% 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 \$351 million or 8%, mainly due to higher spreads and volume growth, mutual fund distribution fees and card service revenue. These factors were partially offset by higher PCL, higher staff-related costs and technology and related costs, including digital initiatives.

Total revenue increased \$708 million or 6%. Excluding our share of the gain related to the sale of Moneris, total revenue increased \$920 million or 8%, reflecting improved spreads and average volume growth of 6% in loans and 5% in deposits in Canadian Banking. Higher balances driving higher mutual fund distribution fees and higher purchase volumes driving card service revenue also contributed to the increase.

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

Non-interest expense increased \$235 million or 4%, primarily attributable to higher staff-related costs, an increase in technology and related costs, including digital initiatives, and higher marketing costs. These factors were partially offset by higher severance in the prior year.

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

Wealth Management

	As at or for the three months ended			As at or for the nine months ended	
	July 31 2018	April 30 2018	July 31 2017	July 31 2018	July 31 2017
(Millions of Canadian dollars, except number of and percentage amounts and as otherwise noted) (1)					
Net interest income	\$ 679	\$ 632	\$ 578	\$ 1,923	\$ 1,665
Non-interest income					
Fee-based revenue	1,626	1,570	1,484	4,785	4,314
Transaction and other revenue	493	403	485	1,478	1,534
Total revenue	2,798	2,605	2,547	8,186	7,513
PCL on performing assets (2)	12	(21)		(16)	
PCL on impaired assets (3)	(9)	1	6	(3)	34
Total PCL	3	(20)	6	(19)	34
Non-interest expense	2,059	1,939	1,909	6,009	5,710
Income before income taxes	736	686	632	2,196	1,769
Net income	\$ 578	\$ 537	\$ 486	\$ 1,712	\$ 1,347
Revenue by business					
Canadian Wealth Management	\$ 761	\$ 742	\$ 693	\$ 2,252	\$ 2,098
U.S. Wealth Management (including City National)	1,435	1,255	1,251	4,074	3,639
U.S. Wealth Management (including City National) (US\$ millions)	1,101	977	963	3,178	2,752
Global Asset Management	507	516	507	1,579	1,486
International Wealth Management	95	92	96	281	290
Selected balance sheet and other information					
ROE	16.4%	15.8%	13.9%	16.5%	12.9%
NIM	3.56%	3.47%	3.14%	3.43%	2.98%
Pre-tax margin (4)	26.3%	26.3%	24.8%	26.8%	23.5%
Number of advisors (5)	4,970	4,912	4,860	4,970	4,860
Average earning assets, net	\$ 75,700	\$ 74,800	\$ 73,100	\$ 74,900	\$ 74,700
Average loans and acceptances, net	57,000	54,800	51,500	54,800	51,400
Average deposits	91,700	93,000	91,800	92,500	93,900
AUA (6)	985,800	944,600	873,900	985,800	873,900
– U.S. Wealth Management (including City National) (6)	487,900	458,500	412,300	487,900	412,300
– U.S. Wealth Management (including City National) (US\$ millions) (6)	375,200	357,300	330,500	375,200	330,500
AUM (6)	680,500	655,000	595,700	680,500	595,700
Average AUA	975,600	947,000	892,900	953,800	897,800
Average AUM	654,200	661,400	604,400	657,200	594,600
PCL on impaired loans as a % of average net loans and acceptances (3)	(0.06)%	0.01%	0.04%	(0.01)%	0.09%

Estimated impact of U.S. dollar, British pound and Euro translation on key income statement items (Millions of Canadian dollars, except percentage amounts and as otherwise noted)	For the three months ended		For the nine months ended
	Q3 2018 vs. Q3 2017	Q3 2018 vs. Q2 2018	Q3 2018 vs. Q3 2017
Increase (decrease):			
Total revenue (1)	\$ 10	\$ 15	\$ (103)
Non-interest expense (1)	7	11	(80)
Net income	2	4	(20)
Percentage change in average US\$ equivalent of C\$1.00	–%	(1)%	3%
Percentage change in average British pound equivalent of C\$1.00	(2)%	3%	(4)%
Percentage change in average Euro equivalent of C\$1.00	(2)%	3%	(6)%

- 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.
- PCL on performing assets represents Stage 1 and 2 PCL on all performing assets under IFRS 9, except those classified or designated as FVTPL and equity securities designated as FVOCI. Prior to the adoption of IFRS 9, PCL on performing assets represents PCL for loans not yet identified as impaired and was included in Corporate Support.
- PCL on impaired assets includes PCL on credit-impaired loans, acceptances, and commitments (PCL on impaired loans) and PCL on other credit-impaired financial assets. PCL on impaired assets 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 all credit-impaired financial assets, except those classified or designated as FVTPL and equity securities designated as FVOCI.
- Pre-tax margin is defined as Income before income taxes divided by Total revenue.
- Represents client-facing advisors across all our Wealth Management businesses.
- Represents period-end spot balances.

Financial performance

Q3 2018 vs. Q3 2017

Net income increased \$92 million or 19% from a year ago, largely reflecting higher average fee-based assets, an increase in net interest income reflecting volume growth and higher interest rates, 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 related to business growth and technology initiatives, and higher regulatory costs.

Total revenue increased \$251 million or 10%.

Canadian Wealth Management revenue increased \$68 million or 10%, mainly due to higher average fee-based assets reflecting capital appreciation and net sales, and higher net interest income reflecting the impact from higher interest rates.

U.S. Wealth Management (including City National) revenue increased \$184 million or 15%. In U.S. dollars, revenue increased \$138 million or 14%, largely reflecting higher net interest income driven by volume growth and higher interest rates, and higher average fee-based assets reflecting capital appreciation and net sales. The current period also included a gain related to the sale of a mutual fund product and transfer of its associated team.

Global Asset Management revenue remained flat compared to the prior year, as higher average fee-based assets under management reflecting net sales and capital appreciation was largely offset by a loss on an investment in an international asset management joint venture.

PCL on impaired loans ratio improved 10 bps, mainly due to lower provisions on impaired loans related to U.S. Wealth Management (including City National). For further details on performing and impaired PCL, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$150 million or 8%, largely due to higher variable compensation on improved results, increased costs related to business growth and technology initiatives, and higher regulatory costs.

Q3 2018 vs. Q2 2018

Net income increased \$41 million or 8%, primarily attributable to higher average fee-based assets reflecting capital appreciation and net sales, and an increase in net interest income reflecting volume growth and higher interest rates. These factors were partially offset by higher PCL due to a release of provisions in the prior quarter, and an increase in variable compensation on improved results.

Q3 2018 vs. Q3 2017 (Nine months ended)

Net income increased \$365 million or 27% from a year ago, mainly due to higher average fee-based assets, an increase in net interest income, and a lower effective tax rate reflecting benefits from the U.S. Tax Reform. These factors were partially offset by higher variable compensation on improved results, and increased costs related to business growth and technology initiatives.

Total revenue increased \$673 million or 9%, largely reflecting higher average fee-based assets due to capital appreciation and net sales, and an increase in net interest income reflecting volume growth and higher interest rates. These factors were partially offset by the impact of foreign exchange translation, and the change in the fair value of the hedge related to our U.S. share-based compensation plan, which was largely offset in non-interest expense.

PCL on impaired loans ratio improved 10 bps, mainly due to lower provisions on impaired loans related to U.S. Wealth Management (including City National). For further details on performing and impaired PCL, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$299 million or 5%, largely due to higher variable compensation on improved results, increased costs related to business growth and technology initiatives, and higher regulatory costs. These factors were partially offset by the impact of foreign exchange translation, and the change in the fair value of our U.S. share-based compensation plan, which was largely offset in revenue.

Insurance

	As at or for the three months ended			As at or for the nine months ended	
	July 31 2018	April 30 2018	July 31 2017	July 31 2018	July 31 2017
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)					
Non-interest income					
Net earned premiums	\$ 1,047	\$ 824	\$ 1,081	\$ 2,810	\$ 2,709
Investment income	181	(87)	(120)	260	54
Fee income	62	69	48	170	191
Total revenue	1,290	806	1,009	3,240	2,954
Insurance policyholder benefits and claims	856	351	573	1,975	1,724
Insurance policyholder acquisition expense	69	70	70	207	192
Non-interest expense	153	148	147	443	427
Income before income taxes	212	237	219	615	611
Net income	\$ 158	\$ 172	\$ 161	\$ 457	\$ 461
Revenue by business					
Canadian Insurance	\$ 746	\$ 310	\$ 473	\$ 1,677	\$ 1,471
International Insurance	544	496	536	1,563	1,483
Selected balances and other information					
ROE	32.1%	36.3%	37.0%	32.3%	37.4%
Premiums and deposits (1)	\$ 1,197	\$ 981	\$ 1,233	\$ 3,273	\$ 3,244
Fair value changes on investments backing policyholder liabilities	55	(174)	(225)	(93)	(337)

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

Financial performance

Q3 2018 vs. Q3 2017

Net income decreased \$3 million or 2% from a year ago, reflecting increased costs supporting sales growth and client service activities, offset by improved International claims experience.

Total revenue increased \$281 million or 28% compared to the prior year.

Canadian Insurance revenue increased \$273 million or 58%, mainly due to the change in fair value of investments backing our policyholder liabilities, partially offset by lower group annuity sales, both of which are largely offset in PBCAE.

International Insurance revenue increased \$8 million or 1%.

PBCAE increased \$282 million or 44%, primarily due to the change in fair value of investments backing our policyholder liabilities, partially offset by lower group annuity sales, both of which are largely offset in revenue.

Non-interest expense increased \$6 million or 4%, mainly due to increased costs supporting sales growth and client service activities.

Q3 2018 vs. Q2 2018

Net income decreased \$14 million or 8%, largely reflecting lower favourable investment-related experience as compared to the prior quarter. This was partially offset by business growth in Canadian Insurance, a life retrocession contract recapture, and improved International claims experience.

Q3 2018 vs. Q3 2017 (Nine months ended)

Net income decreased \$4 million or 1% from a year ago, due to favourable updates in the prior year related to premium and mortality experience, and higher disability and life retrocession claims volumes. These factors were offset by the impact of favourable investment-related experience.

Total revenue increased \$286 million or 10% compared to the prior year, primarily due to the change in fair value of investments backing our policyholder liabilities and the impact of restructured international life contracts, both of which are largely offset in PBCAE, and business growth. These factors were partially offset by lower group annuity sales, which are largely offset in PBCAE.

PBCAE increased \$266 million or 14%, mainly due to the change in fair value of investments backing our policyholder liabilities and the impact of restructured international life contracts, both of which are largely offset in revenue. Business growth, higher disability and life retrocession claims volumes and favourable updates in the prior year related to premium and mortality experience also contributed to the increase. These factors were partially offset by lower group annuity sales, which are largely offset in revenue, and higher favourable investment-related experience.

Non-interest expense increased \$16 million or 4%, mainly due to an increase in costs to support sales growth and client service activities and strategic initiatives.

Investor & Treasury Services

	As at or for the three months ended			As at or for the nine months ended	
	July 31 2018	April 30 2018	July 31 2017	July 31 2018	July 31 2017
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)					
Net interest income	\$ 32	\$ 118	\$ 141	\$ 278	\$ 551
Non-interest income	588	553	453	1,689	1,282
Total revenue	620	671	594	1,967	1,833
Non-interest expense	417	391	364	1,197	1,069
Net income before income taxes	203	280	230	770	764
Net income	\$ 155	\$ 212	\$ 178	\$ 586	\$ 585
Selected balance sheet and other information					
ROE	19.8%	28.1%	21.9%	24.9%	23.9%
Average deposits	\$ 162,500	\$ 163,600	\$ 132,000	\$ 160,400	\$ 129,500
Client deposits	60,200	58,200	55,600	58,400	53,700
Wholesale funding deposits	102,300	105,400	76,400	102,000	75,800
AUA (1)	4,210,600	4,439,800	4,251,300	4,210,600	4,251,300
Average AUA	4,276,100	4,502,800	4,228,400	4,405,000	3,993,700

Estimated impact of U.S. dollar, British pound and Euro translation on key income statement items (Millions of Canadian dollars, except percentage amounts)	For the three months ended		For the nine months ended
	Q3 2018 vs. Q3 2017	Q3 2018 vs. Q2 2018	Q3 2018 vs. Q3 2017
<i>Increase (decrease):</i>			
Total revenue	\$ 6	\$ (8)	\$ 45
Non-interest expense	5	7	36
Net income	1	(1)	9
Percentage change in average US\$ equivalent of C\$1.00	–%	(1)%	3%
Percentage change in average British pound equivalent of C\$1.00	(2)%	3%	(4)%
Percentage change in average Euro equivalent of C\$1.00	(2)%	3%	(6)%

(1) Represents period-end spot balances.

Q3 2018 vs. Q3 2017

Net income decreased \$23 million or 13%, primarily due to lower funding and liquidity revenue, higher costs in support of business growth and increased technology investments. These factors were partially offset by improved client deposit margins.

Total revenue increased \$26 million or 4%, mainly due to improved margins and growth in client deposits. Higher revenue from our asset services business driven by higher client activity, and the impact of foreign exchange translation also contributed to the increase. These factors were partially offset by lower funding and liquidity revenue.

Non-interest expense increased \$53 million or 15%, largely reflecting higher costs in support of business growth, increased investment in technology to drive efficiency, and the impact of foreign exchange translation.

Q3 2018 vs. Q2 2018

Net income decreased \$57 million or 27%, primarily due to lower funding and liquidity revenue and decreased revenue from our asset services business driven by lower client activity and market volatility.

Q3 2018 vs. Q3 2017 (Nine months ended)

Net income increased \$1 million, as an increase in deposit revenue and higher revenue from our asset services business were mostly offset by lower funding and liquidity revenue, higher costs in support of business growth and increased technology investments.

Total revenue increased \$134 million or 7%, mainly due to improved margins and growth in client deposits, and increased revenue from our asset services business driven by higher client activity and market volatility. The impact of foreign exchange translation also contributed to the increase. These factors were partially offset by lower funding and liquidity revenue.

Non-interest expense increased \$128 million or 12% due to the impact of foreign exchange translation, higher costs in support of business growth mainly reflecting increased staff-related costs, and increased investment in technology to drive efficiency.

Capital Markets

	As at or for the three months ended			As at or for the nine months ended	
	July 31 2018	April 30 2018	July 31 2017	July 31 2018	July 31 2017
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)					
Net interest income (1)	\$ 913	\$ 841	\$ 845	\$ 2,620	\$ 2,714
Non-interest income (1)	1,244	1,169	1,195	3,722	3,514
Total revenue (1)	2,157	2,010	2,040	6,342	6,228
PCL on performing assets (2)	16	(21)		(30)	
PCL on impaired assets (3)	(13)	14	44	46	100
Total PCL	3	(7)	44	16	100
Non-interest expense	1,312	1,190	1,199	3,716	3,497
Net income before income taxes	842	827	797	2,610	2,631
Net income	\$ 698	\$ 665	\$ 611	\$ 2,111	\$ 1,941
Revenue by business					
Corporate and Investment Banking	\$ 1,065	\$ 967	\$ 995	\$ 3,026	\$ 2,951
Global Markets	1,148	1,092	1,134	3,461	3,490
Other	(56)	(49)	(89)	(145)	(213)
Selected balance sheet and other information					
ROE	12.3%	13.4%	11.9%	13.4%	13.1%
Average total assets	\$ 579,400	\$ 563,700	\$ 494,000	\$ 571,200	\$ 495,700
Average trading securities	95,600	98,900	86,800	98,500	93,500
Average loans and acceptances, net	85,000	82,800	83,100	83,100	83,500
Average deposits	73,000	71,000	59,500	69,600	59,400
PCL on impaired loans as a % of average net loans and acceptances (3)	(0.06)%	0.07%	0.21%	0.07%	0.16%

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

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

	For the three months ended		For the nine months ended
	Q3 2018 vs. Q3 2017	Q3 2018 vs. Q2 2018	Q3 2018 vs. Q3 2017
Increase (decrease):			
Total revenue	\$ 8	\$ 5	\$ (79)
Non-interest expense	7	1	(41)
Net income	2	2	(34)
Percentage change in average US\$ equivalent of C\$1.00	–%	(1)%	3%
Percentage change in average British pound equivalent of C\$1.00	(2)%	3%	(4)%
Percentage change in average Euro equivalent of C\$1.00	(2)%	3%	(6)%

- (1) The taxable equivalent basis (teb) adjustment for the three months ended July 31, 2018 was \$157 million (April 30, 2018 – \$151 million; July 31, 2017 – \$107 million) and for the nine months ended July 31, 2018 was \$400 million (July 31, 2017 – \$323 million). For further discussion, refer to the How we measure and report our business segments section of our 2017 Annual Report.
- (2) PCL on performing assets represents Stage 1 and 2 PCL on all performing assets under IFRS 9, except those classified or designated as FVTPL and equity securities designated as FVOCI. Prior to the adoption of IFRS 9, PCL on performing assets represents PCL for loans not yet identified as impaired and was included in Corporate Support.
- (3) PCL on impaired assets includes PCL on credit-impaired loans, acceptances, and commitments (PCL on impaired loans) and PCL on other credit-impaired financial assets. PCL on impaired assets 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 all credit-impaired financial assets, except those classified or designated as FVTPL and equity securities designated as FVOCI.

Q3 2018 vs. Q3 2017

Net income increased \$87 million or 14%, primarily due to higher revenue in Corporate and Investment Banking and Global Markets, a lower effective tax rate reflecting changes in earnings mix and benefits from the U.S. Tax Reform, and lower PCL. These increases were partially offset by litigation recoveries in the prior year.

Total revenue increased \$117 million or 6%.

Corporate and Investment Banking revenue increased \$70 million or 7%, mainly due to higher loan syndication largely in the U.S. and Europe, and higher equity origination in North America. Higher lending revenue largely in North America and higher municipal banking activity also contributed to the increase.

Global Markets revenue increased \$14 million or 1%, primarily driven by higher equity trading revenue in the U.S., partially offset by lower fixed income trading revenue in the U.S. and Europe.

Other revenue increased \$33 million, partially due to the impact of foreign exchange.

PCL on impaired loans ratio improved 27 bps, mainly due to provisions in the real estate & related sector in the prior year and higher recoveries in the oil & gas sector in the current year, partially offset by a provision taken on one account in the transportation sector in the current year. For further details on performing and impaired PCL, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$113 million or 9%, mainly due to litigation recoveries in the prior year and higher compensation on improved results. Higher costs in support of business growth and higher regulatory costs also contributed to the increase.

Q3 2018 vs. Q2 2018

Net income increased \$33 million or 5%, primarily due to higher equity and debt origination and increased loan syndication across all regions. Higher equity trading revenue mainly in the U.S. also contributed to the increase. These factors were partially offset by higher compensation on improved results and in support of business growth, lower gains from the disposition of certain securities and gains in our legacy U.S. portfolios in the prior quarter.

Q3 2018 vs. Q3 2017 (Nine months ended)

Net income increased \$170 million or 9%, driven by a lower effective tax rate reflecting changes in earnings mix and benefits from the U.S. Tax Reform, and lower PCL. Higher revenue in Corporate and Investment Banking and gains in our legacy U.S. portfolios also contributed to the increase. These factors were partially offset by higher regulatory costs, increased compensation on improved results, and litigation recoveries in the prior year.

Total revenue increased \$114 million or 2%, largely due to higher equity trading revenue and increased lending revenue largely in Canada and Europe. Higher municipal banking activity and gains in our legacy U.S. portfolios also contributed to the increase. These factors were partially offset by lower fixed income trading revenue largely in Europe, and the impact of foreign exchange translation.

PCL on impaired loans ratio improved 9 bps largely due to provisions in the real estate & related sector in the prior year partially offset by a provision taken on one account in the consumer goods sector. For further details on performing and impaired PCL, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$219 million or 6%, largely due to higher regulatory costs and increased compensation on improved results. Litigation recoveries in the prior year and increased costs related to changes in the timing of deferred compensation also contributed to the increase. These factors were partially offset by the impact of foreign exchange translation.

Corporate Support

	For the three months ended			For the nine months ended	
	July 31 2018	April 30 2018	July 31 2017	July 31 2018	July 31 2017
(Millions of Canadian dollars, except as otherwise noted)					
Net interest income (loss) ⁽¹⁾	\$ (29)	\$ (22)	\$ (28)	\$ (68)	\$ (118)
Non-interest income (loss) ⁽¹⁾	(95)	(119)	(44)	(312)	(108)
Total revenue ⁽¹⁾	(124)	(141)	(72)	(380)	(226)
PCL	–	1	(3)	–	(2)
Non-interest expense	8	(14)	92	48	176
Net income (loss) before income taxes ⁽¹⁾	(132)	(128)	(161)	(428)	(400)
Income taxes (recoveries) ⁽¹⁾	(142)	(143)	(122)	(253)	(347)
Net income (loss) ⁽²⁾	\$ 10	\$ 15	\$ (39)	\$ (175)	\$ (53)

(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 July 31, 2018 was \$7 million (April 30, 2018 – \$7 million; July 31, 2017 – \$9 million) and for the nine months ended July 31, 2018 was \$23 million (July 31, 2017 – \$26 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 July 31, 2018 was \$157 million, compared to \$151 million in the prior quarter and \$107 million last year.

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

Q3 2018

Net income was \$10 million, largely due to asset/liability management activities.

Q2 2018

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

Q3 2017

Net loss was \$39 million, largely reflecting severance costs.

Q3 2018 (Nine months ended)

Net loss was \$175 million, largely due to the impact of the U.S. Tax Reform of \$178 million, partially offset by asset/liability management activities.

Q3 2017 (Nine months ended)

Net loss was \$53 million, as asset/liability management activities were more than offset by higher severance and legal costs.

Quarterly results and trend analysis

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

Quarterly results ⁽¹⁾

(Millions of Canadian dollars, except per share and percentage amounts)	2018				2017			2016
	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4
Net interest income	\$ 4,596	\$ 4,421	\$ 4,445	\$ 4,361	\$ 4,257	\$ 4,198	\$ 4,324	\$ 4,187
Non-interest income ⁽²⁾	6,429	5,633	6,383	6,162	5,831	6,214	5,322	5,177
Total revenue ⁽²⁾	\$ 11,025	\$ 10,054	\$ 10,828	\$ 10,523	\$ 10,088	\$ 10,412	\$ 9,646	\$ 9,364
PCL ⁽³⁾	346	274	334	234	320	302	294	358
PBCAE	925	421	836	1,137	643	1,090	183	397
Non-interest expense ⁽²⁾	5,858	5,482	5,611	5,611	5,537	5,331	5,315	5,297
Net income before income taxes	\$ 3,896	\$ 3,877	\$ 4,047	\$ 3,541	\$ 3,588	\$ 3,689	\$ 3,854	\$ 3,312
Income taxes	787	817	1,035	704	792	880	827	769
Net income	\$ 3,109	\$ 3,060	\$ 3,012	\$ 2,837	\$ 2,796	\$ 2,809	\$ 3,027	\$ 2,543
EPS – basic	\$ 2.10	\$ 2.06	\$ 2.02	\$ 1.89	\$ 1.86	\$ 1.86	\$ 1.98	\$ 1.66
– diluted	2.10	2.06	2.01	1.88	1.85	1.85	1.97	1.65
Segments – net income (loss)								
Personal & Commercial Banking	\$ 1,510	\$ 1,459	\$ 1,521	\$ 1,404	\$ 1,399	\$ 1,360	\$ 1,592	\$ 1,275
Wealth Management	578	537	597	491	486	431	430	396
Insurance	158	172	127	265	161	166	134	228
Investor & Treasury Services	155	212	219	156	178	193	214	174
Capital Markets	698	665	748	584	611	668	662	482
Corporate Support	10	15	(200)	(63)	(39)	(9)	(5)	(12)
Net income	\$ 3,109	\$ 3,060	\$ 3,012	\$ 2,837	\$ 2,796	\$ 2,809	\$ 3,027	\$ 2,543
Effective income tax rate	20.2%	21.1%	25.6%	19.9%	22.1%	23.9%	21.5%	23.2%
Period average US\$ equivalent of C\$1.00	\$ 0.767	\$ 0.778	\$ 0.794	\$ 0.792	\$ 0.770	\$ 0.746	\$ 0.752	\$ 0.757

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

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

(3) Under IFRS 9, PCL relates primarily to loans, acceptances, and commitments, and also applies to all financial assets except for those classified or designated as FVTPL and equity securities designated as FVOCI. Prior to the adoption of IFRS 9, PCL related only to loans, acceptances, and commitments. PCL on loans, acceptances, and commitments is comprised of PCL on impaired loans (Stage 3 PCL under IFRS 9 and PCL on impaired loans under IAS 39) and PCL on performing loans (Stage 1 and Stage 2 PCL under IFRS 9 and PCL on loans not yet identified as impaired under IAS 39). Refer to the Credit risk section and Note 2 of our Condensed Financial Statements for further details.

Seasonality

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

Trend analysis

The Canadian economy generally had strong growth throughout the first half of 2017 reflecting robust gains in consumer spending amid strong employment growth, low interest rates, and wealth effects from rising home prices. The third quarter of 2017 saw unsustainable growth, which moderated in the following periods. With the economic expansion experienced throughout 2017 and 2018, the BoC raised its overnight rate in January and July 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 June 2018, the Fed raised its funds target range for the sixth time over the period. Global markets had been appreciating since the beginning of the period, with highs in equity markets reached in mid-January 2018. However, growing geopolitical tensions have generated higher levels of volatility in the past two quarters. 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 and higher spreads since the latter half of 2017, higher fee-based revenue, and our share of the gain from the sale of the U.S. operations of Moneris in the first quarter of 2017. Our Wealth Management results reflect growth in average fee-based assets due to capital appreciation and net sales, volume growth, and the impact from higher interest rates since the first half of fiscal 2017, which was partially offset by higher variable compensation on improved results and costs in support of business growth. Capital Markets results have generally trended upwards over the period, driven by increased client activity and generally improved market conditions, as well as a lower effective tax rate reflecting changes in earning mix and the benefits from the U.S. Tax Reform. 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. After a slight peak in the first quarter of 2018, results have stabilized. Results in our Insurance segment were impacted by the annual actuarial adjustments in the fourth quarter of each year and favourable investment-related experience over the period. Investor and Treasury Services results generally experienced higher trends in the first half of 2018 due to increased client activity from our asset services business, combined with funding & liquidity performance in the first quarter of each year driven by higher spreads. Our current period performance continues to be impacted by higher costs in support of business growth and increased investment in efficiency related technologies. Earnings in the first quarter of 2018 were negatively impacted by the U.S. Tax Reform which resulted in the write-down of net deferred tax assets, however, this was offset by ongoing lower corporate tax rate on U.S. earnings, which commenced on January 1, 2018.

Revenue has generally increased over the period, reflecting solid volume growth, higher spreads since the latter half of 2017, and higher fee-based revenue in our Personal & Commercial Banking businesses. The first quarter of 2017 benefitted from our share of the gain on sale of the U.S. operations of Moneris as noted previously. Wealth Management revenue has generally trended upwards primarily due to growth in average fee-based assets and higher net interest income reflecting volume growth and the impact from higher interest rates since the first half of 2017. Capital Markets benefitted from improving and stabilizing credit spreads which, resulted in generally strong lending and trading performance throughout the period. Towards the end of 2017, trading revenue was impacted by low volatility and lower market activity, which was partially offset by higher Investment banking revenue due to increased efforts to expand in the U.S. The favourable impact of foreign exchange translation due to a generally weaker Canadian dollar over much of the period was partially offset by the generally strengthening Canadian dollar from the latter half of 2017 to the first quarter of 2018. Insurance revenue was primarily impacted by changes in the fair value of investments backing our policyholder liabilities, and the impact of new group annuity and restructured international life contracts, which are largely offset in PBCAE.

PCL saw a general improvement in 2017 due to lower provisions and higher recoveries in our Capital Markets and Canadian Banking portfolios. On November 1, 2017, we adopted IFRS 9, which resulted in the introduction of PCL on performing financial assets. This was partially offset by lower PCL on impaired loans in Capital Markets and U.S. Wealth Management (including City National) throughout 2018.

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

While we continue to focus on efficiency management activities, Non-interest expense has generally trended upwards over the period. Growth in Non-interest expense since 2017 mainly reflects higher variable compensation on improved results and regulatory costs in Wealth Management and Capital Markets, as well as higher costs in support of business growth and our ongoing investments in technology, including digital initiatives. 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. In addition, the decrease over the second quarter of 2018 mainly reflects the change in the fair value of our U.S. share-based compensation plan, which was largely offset in Revenue, and lower variable compensation. The favourable impact of foreign exchange translation due to a generally strengthening Canadian dollar since the second quarter of 2017 was followed by an overall weakening of the Canadian dollar since the first quarter of 2018.

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. 2018 was impacted by higher favourable tax adjustments. The first quarter of 2018 was adversely impacted by the U.S. Tax Reform, which resulted in the write-down of net deferred tax assets, however, this was offset by the ongoing lower corporate tax rate in 2018.

Financial condition

Condensed balance sheets

(Millions of Canadian dollars)	As at	
	July 31 2018	October 31 2017
Assets		
Cash and due from banks	\$ 32,015	\$ 28,407
Interest-bearing deposits with banks	49,159	32,662
Securities, net of applicable allowance ⁽¹⁾	217,132	218,379
Assets purchased under reverse repurchase agreements and securities borrowed	264,170	220,977
Loans		
Retail	394,884	385,170
Wholesale	171,050	159,606
Allowance for loan losses	(2,837)	(2,159)
Other – Derivatives	88,503	95,023
– Other ⁽²⁾	78,298	74,788
Total assets	\$ 1,292,374	\$ 1,212,853
Liabilities		
Deposits	\$ 832,261	\$ 789,635
Other – Derivatives	86,082	92,127
– Other ⁽²⁾	287,030	247,398
Subordinated debentures	9,129	9,265
Total liabilities	1,214,502	1,138,425
Equity attributable to shareholders	77,781	73,829
Non-controlling interests	91	599
Total equity	77,872	74,428
Total liabilities and equity	\$ 1,292,374	\$ 1,212,853

(1) 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.

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

Q3 2018 vs. Q4 2017

Total assets increased \$80 billion or 7% from October 31, 2017. Foreign exchange translation increased total assets by \$6 billion.

Cash and due from banks was up \$4 billion or 13%, mainly due to higher deposits with central and commercial banks, reflecting cash management and liquidity requirements.

Interest-bearing deposits with banks increased \$16 billion or 51%, primarily due to higher deposits with central banks, reflecting cash management activities.

Securities, net of applicable allowance, were down \$1 billion or 1%, largely due to lower positions in government securities, driven by liquidity requirements, partially offset by the change in classification of certain securities in loans and receivables to investment securities as a result of adopting IFRS 9, an increase in equity securities reflecting market conditions, and the impact of foreign exchange translation.

Assets purchased under reverse repurchase agreements (reverse repos) and securities borrowed increased \$43 billion or 20%, mainly attributable to increased client activities.

Loans (net of Allowance for loan losses) were up \$20 billion or 4%, largely due to volume growth, which led to higher wholesale loans and residential mortgages, partially offset by the reclassification of certain securities in loans and receivables to investment securities as mentioned above.

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

Other assets were up \$4 billion or 5%.

Total liabilities increased \$76 billion or 7% from October 31, 2017. Foreign exchange translation increased total liabilities by \$6 billion.

Deposits increased \$43 billion or 5%, mainly as a result of higher business and retail deposits, driven by client activity, and higher issuances of fixed term notes due to funding requirements.

Derivative liabilities were down \$6 billion or 7%, mainly attributable to lower fair values on foreign exchange contracts and interest rate swaps, partial offset by the impact of foreign exchange translation.

Other liabilities increased \$40 billion or 16%, mainly due to higher obligations related to repurchase agreements due to client activity.

Total equity increased \$3 billion or 5% reflecting earnings, net of dividends and share repurchases, partially offset by our adoption of IFRS 9 which resulted in a decrease in equity of \$637 million. For further details on the impacts of the adoption of IFRS 9, refer to Note 2 of our Condensed Financial Statements.

Off-balance sheet arrangements

In the normal course of business, we engage in a variety of financial transactions that, for accounting purposes, are not recorded on our Consolidated Balance Sheets. Off-balance sheet transactions are generally undertaken for risk, capital and funding management purposes which benefit us and our clients. These include transactions with structured entities and may also include the issuance of guarantees. These transactions give rise to, among other risks, varying degrees of market, credit, and liquidity and funding risk. For further details on our framework and activities to manage risks, refer to the risk sections of our 2017 Annual Report and the Risk management section of this Q3 2018 Report to Shareholders. Our significant off-balance sheet transactions include those described on pages 48 to 50 of our 2017 Annual Report.

Risk management

Credit risk

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

Expected credit loss impairment model

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

Performing financial assets

Stage 1

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

Stage 2

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

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

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

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

Impaired financial assets

Stage 3

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

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

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

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

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

Gross credit risk exposure by portfolio, sector and geography

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

		As at					April 30	October 31	
		July 31 2018					2018	2017	
		Lending-related and other			Trading-related				
		Outstanding (1)	Undrawn commitments (2)	Other (3)	Repo-style transactions	Derivatives (4)	Total exposure (5)	Total exposure (5)	
(Millions of Canadian dollars)									
By portfolio									
Residential mortgages		\$ 278,291	\$ 973	\$ 301	\$ –	\$ –	\$ 279,565	\$ 274,573	\$ 271,435
Personal		92,791	98,182	194	–	–	191,167	188,873	180,590
Credit cards		19,027	23,790	–	–	–	42,817	43,276	39,861
Small business (6)		4,775	7,024	6	–	–	11,805	11,523	11,387
Retail		\$ 394,884	\$ 129,969	\$ 501	\$ –	\$ –	\$ 525,354	\$ 518,245	\$ 503,273
Business (6)									
Agriculture		\$ 8,031	\$ 1,435	\$ 68	\$ –	\$ 45	\$ 9,579	\$ 9,408	\$ 8,859
Automotive		9,247	6,468	429	–	404	16,548	16,202	15,067
Consumer goods		12,183	10,206	625	–	424	23,438	23,911	21,389
Energy									
Oil & Gas		5,718	9,706	1,517	–	1,613	18,554	21,188	19,835
Utilities		8,475	16,959	3,431	–	2,267	31,132	25,647	25,554
Financing products		5,551	2,115	390	1,304	451	9,811	10,047	10,401
Forest products		992	771	106	–	26	1,895	1,885	1,647
Health services		6,866	7,012	2,342	–	446	16,666	16,204	13,923
Holding and investments		9,066	840	540	60	95	10,601	10,237	10,501
Industrial products		6,764	8,815	504	–	583	16,666	15,704	14,253
Mining & metals		1,244	3,759	936	–	70	6,009	5,971	6,057
Non-bank financial services		14,739	17,569	11,744	422,473	43,156	509,681	484,506	408,295
Other services		17,063	9,935	3,282	1,095	471	31,846	29,525	27,914
Real estate & related		51,001	13,126	1,721	2	486	66,336	64,043	59,513
Technology & media		11,578	24,091	1,168	1,402	3,484	41,723	36,777	26,413
Transportation & environment		5,942	6,025	2,666	–	719	15,352	16,290	15,803
Other sectors		2,381	60	2,107	220	758	5,526	8,561	12,862
Sovereign (6)		5,776	9,897	134,791	50,005	13,914	214,383	200,456	182,933
Bank (6)		4,532	1,402	133,840	113,150	23,453	276,377	284,956	268,409
Wholesale		\$ 187,149	\$ 150,191	\$ 302,207	\$ 589,711	\$ 92,865	\$ 1,322,123	\$ 1,281,518	\$ 1,149,628
Total exposure		\$ 582,033	\$ 280,160	\$ 302,708	\$ 589,711	\$ 92,865	\$ 1,847,477	\$ 1,799,763	\$ 1,652,901
By geography (7)									
Canada		\$ 481,890	\$ 172,847	\$ 110,522	\$ 70,993	\$ 26,006	\$ 862,258	\$ 841,772	\$ 808,249
U.S.		75,508	81,830	78,037	295,658	17,113	548,146	544,726	490,574
Europe		10,750	22,023	87,183	120,505	42,312	282,773	289,252	242,702
Other International		13,885	3,460	26,966	102,555	7,434	154,300	124,013	111,376
Total exposure		\$ 582,033	\$ 280,160	\$ 302,708	\$ 589,711	\$ 92,865	\$ 1,847,477	\$ 1,799,763	\$ 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.

Q3 2018 vs. Q2 2018

Total gross credit risk exposure increased \$48 billion or 3% from the prior quarter, primarily due to growth in loans and acceptances, higher deposits with central banks, business growth in repo-style transactions and the impact of foreign exchange translation.

Retail exposure increased \$7 billion or 1%, largely driven by growth in residential mortgages and personal lending.

Wholesale exposure increased \$41 billion or 3%, primarily attributable to growth in loans and acceptances, higher deposits with central banks, business growth in repo-style transactions and the impact of foreign exchange translation. The increase in the Non-bank financial services sector was primarily driven by growth in repo-style transactions.

The geographic mix of our gross credit risk exposure remained relatively unchanged from the prior quarter. Our exposure in Canada, the U.S., Europe and Other International was 47%, 30%, 15% and 8%, respectively (April 30, 2018 – 47%, 30%, 16% and 7%, respectively). Growth in the Canada exposure was largely driven by business growth in loans and acceptances, and the increase in Other International was largely attributable to business growth in repo-style transactions and the impact of foreign exchange translation.

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

(Millions of Canadian dollars)	As at									April 30 2018	October 31 2017
	July 31 2018										
	Asset type				Client type						
	Loans Outstanding	Securities ⁽³⁾	Repo-style transactions	Derivatives	Financials	Sovereign	Corporate	Total			
U.K.	\$ 7,924	\$ 10,246	\$ 438	\$ 1,613	\$ 8,814	\$ 2,828	\$ 8,579	\$ 20,221	\$ 26,901	\$ 20,503	
Germany	2,204	10,399	2	197	3,968	5,932	2,902	12,802	12,335	14,195	
France	530	10,072	22	363	763	9,558	666	10,987	11,423	10,720	
Total U.K., Germany, France	\$ 10,658	\$ 30,717	\$ 462	\$ 2,173	\$ 13,545	\$ 18,318	\$ 12,147	\$ 44,010	\$ 50,659	\$ 45,418	
Ireland	\$ 568	\$ 33	\$ 69	\$ 21	\$ 96	\$ 8	\$ 587	\$ 691	\$ 741	\$ 586	
Italy	61	66	–	14	69	21	51	141	139	226	
Portugal	–	7	31	–	31	–	7	38	2	17	
Spain	100	868	–	3	850	–	121	971	487	777	
Total Peripheral ⁽⁴⁾	\$ 729	\$ 974	\$ 100	\$ 38	\$ 1,046	\$ 29	\$ 766	\$ 1,841	\$ 1,369	\$ 1,606	
Luxembourg ⁽⁵⁾	\$ 1,566	\$ 12,228	\$ 17	\$ 98	\$ 849	\$ 11,955	\$ 1,105	\$ 13,909	\$ 12,236	\$ 6,567	
Netherlands ⁽⁵⁾	858	1,953	69	164	2,094	130	820	3,044	3,591	3,471	
Norway	224	2,345	1	3	1,846	468	259	2,573	2,611	4,413	
Sweden	349	6,040	38	11	2,611	3,457	370	6,438	5,467	4,726	
Switzerland	364	5,535	121	96	641	5,308	167	6,116	6,313	3,533	
Other	1,669	2,674	89	205	1,301	1,736	1,600	4,637	3,576	3,510	
Total Other Europe	\$ 5,030	\$ 30,775	\$ 335	\$ 577	\$ 9,342	\$ 23,054	\$ 4,321	\$ 36,717	\$ 33,794	\$ 26,220	
Net exposure to Europe ⁽⁶⁾	\$ 16,417	\$ 62,466	\$ 897	\$ 2,788	\$ 23,933	\$ 41,401	\$ 17,234	\$ 82,568	\$ 85,822	\$ 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 \$118 billion against repo-style transactions (April 30, 2018 – \$115 billion) and \$11.7 billion against derivatives (April 30, 2018 – \$11.8 billion).

(3) Securities include \$19.4 billion of trading securities (April 30, 2018 – \$18.0 billion), \$31.2 billion of deposits (April 30, 2018 – \$35.5 billion), and \$11.9 billion of securities carried at FVOCI (April 30, 2018 – \$11.3 billion).

(4) Gross credit risk exposure to peripheral Europe is comprised of Ireland \$27.1 billion (April 30, 2018 – \$25.6 billion), Italy \$0.3 billion (April 30, 2018 – \$0.4 billion), Portugal \$0.6 (April 30, 2018 – \$nil), and Spain \$0.9 billion (April 30, 2018 – \$1 billion).

(5) Excludes \$4.6 billion (April 30, 2018 – \$3.4 billion) of exposures to supranational agencies.

(6) Reflects \$1.5 billion of mitigation through credit default swaps, which are largely used to hedge single name exposures and market risk (April 30, 2018 – \$1.6 billion).

Q3 2018 vs. Q2 2018

Net credit risk exposure to Europe decreased \$3.3 billion from last quarter, largely driven by decreased exposure in the United Kingdom, partially offset by increased exposure in Luxembourg. Our net exposure to peripheral Europe, which includes Ireland, Italy, Portugal and Spain, was \$1.8 billion for the quarter, an increase of \$472 million primarily due to increased exposure in Spain.

Our European corporate loan book is managed on a global basis with underwriting standards reflecting the same approach to the use of our balance sheet as we have applied in both Canada and the U.S. PCL on this portfolio during the quarter was (\$23) million. The gross impaired loans ratio of this loan book was 110 bps, down from 130 bps last quarter.

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

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

	For the three months ended				For the nine months ended	
	July 31 2018		April 30 2018		July 31 2018	
	Uninsured		Uninsured		Uninsured	
Region (3)	Residential mortgages (1)	Homeline products (2)	Residential mortgages (1)	Homeline products (2)	Residential mortgages (1)	Homeline products (2)
Atlantic provinces	74%	75%	73%	74%	74%	74%
Quebec	72	74	73	73	72	73
Ontario	69	68	70	67	70	68
Alberta	72	72	72	72	73	71
Saskatchewan and Manitoba	74	74	74	74	74	74
B.C. and territories	67	64	67	64	67	64
U.S.	71	n.m.	74	n.m.	72	n.m.
Other International	56	n.m.	60	n.m.	58	n.m.
Average of newly originated and acquired for the period (4), (5)	69%	68%	70%	68%	70%	68%
Total Canadian Banking residential mortgages portfolio (6)	55%	49%	55%	50%	55%	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.

Effective November 1, 2017, we adopted IFRS 9. Under IFRS 9, credit loss allowances and provisions are applied to impaired financial assets as well as performing financial assets. Credit loss allowances and provisions relating to periods prior to November 1, 2017 are not directly comparable to current period results, as prior periods do not include corresponding credit loss allowances or provisions on other financial assets and performing financial assets. Refer to Note 2 of our Condensed Financial Statements for further details. For more information on key economic drivers impacting our credit loss allowances and provisions on loans, refer to Note 5 of our Condensed Financial Statements.

Provision for (recovery of) credit losses

	IFRS 9		IAS 39		IFRS 9		IAS 39	
	For the three months ended				For the nine months ended			
	July 31 2018	April 30 2018	July 31 2017	July 31 2018	July 31 2017			
(Millions of Canadian dollars, except percentage amounts)								
Personal & Commercial Banking	\$ 330	\$ 306	\$ 273	\$ 948	\$ 784			
Wealth Management	3	(20)	6	(19)	34			
Capital Markets	4	(9)	44	20	100			
Corporate Support and Other (1)	1	1	(3)	1	(2)			
PCL – Loans	\$ 338	\$ 278	\$ 320	\$ 950	\$ 916			
PCL – Other financial assets	8	(4)		4				
Total PCL	\$ 346	\$ 274	\$ 320	\$ 954	\$ 916			
Retail	\$ 44	\$ 26		\$ 90				
Wholesale	46	(46)		(11)				
PCL on performing loans (2)	\$ 90	\$ (20)	\$ –	\$ 79	\$ –			
Retail	\$ 259	\$ 259	\$ 226	\$ 763	\$ 693			
Wholesale	(11)	39	94	108	223			
PCL on impaired loans (3)	\$ 248	\$ 298	\$ 320	\$ 871	\$ 916			
PCL – Loans	\$ 338	\$ 278	\$ 320	\$ 950	\$ 916			
PCL ratio – Loans (4)	0.23%	0.20%	0.23%	0.23%	0.23%			
PCL on impaired loans ratio (5)	0.17%	0.22%	0.23%	0.21%	0.23%			

Additional information by geography

Canada (6)					
Residential mortgages	\$ 10	\$ 7	\$ 7	\$ 27	\$ 22
Personal	117	107	101	337	310
Credit cards	115	119	107	341	324
Small business	9	8	7	24	22
Retail	251	241	222	729	678
Wholesale	3	21	37	58	76
PCL on impaired loans (3)	\$ 254	\$ 262	\$ 259	\$ 787	\$ 754
U.S. (6), (7)					
Retail	\$ 1	\$ 1	\$ –	\$ 3	\$ 1
Wholesale	7	1	67	30	151
PCL on impaired loans (3)	\$ 8	\$ 2	\$ 67	\$ 33	\$ 152
Other International (6), (7)					
Retail	\$ 7	\$ 17	\$ 4	\$ 31	\$ 14
Wholesale	(21)	17	(10)	20	(4)
PCL on impaired loans (3)	\$ (14)	\$ 34	\$ (6)	\$ 51	\$ 10
PCL on impaired loans (3)	\$ 248	\$ 298	\$ 320	\$ 871	\$ 916

(1) Amounts from periods prior to November 1, 2017 are primarily comprised of PCL for loans not yet identified as impaired. For further information, refer to the How we measure and report our business segments section.

(2) Represents Stage 1 and 2 PCL on loans, acceptances, and commitments under IFRS 9 and PCL for loans not yet identified as impaired under IAS 39.

(3) Represents Stage 3 PCL under IFRS 9 and PCL on impaired loans under IAS 39.

(4) PCL ratio – Loans is calculated using PCL on Loans as a percentage of average net loans and acceptances.

(5) PCL on impaired loans ratio is calculated using PCL on impaired loans as a percentage of average net loans and acceptances. PCL on impaired loans represents Stage 3 PCL on loans, acceptances, and commitments under IFRS 9 and PCL on impaired loans under IAS 39.

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

(7) Includes acquired credit-impaired loans.

Q3 2018 vs. Q3 2017

Total PCL was \$346 million. PCL on loans of \$338 million increased \$18 million, or 6% from the prior year, mainly due to higher provisions in Personal & Commercial Banking, largely offset by lower provisions in Capital Markets. The PCL ratio on loans of 23 bps remained flat.

PCL on performing loans was \$90 million this quarter, relating to Personal & Commercial Banking, Capital Markets, and Wealth Management. Though our base economic outlook remained unchanged, we have reflected cautionary elements in our provisions as external risks to the macroeconomic outlook have risen, with volume growth also contributing to the increase. For further details on our economic outlook, refer to the Economic, market, and regulatory review and outlook section.

PCL on impaired loans of \$248 million was \$72 million lower than the prior year, mainly due to lower provisions in Capital Markets and Wealth Management.

PCL on loans in Personal & Commercial Banking increased \$57 million, reflecting an increase in provisions on performing loans primarily in the Canadian Personal Banking portfolios, as described above.

PCL on loans in Wealth Management decreased \$3 million, reflecting lower impaired loans in U.S. Wealth Management (including City National) mainly due to repayments. This was largely offset by provisions on performing loans, as described above.

PCL on loans in Capital Markets decreased \$40 million, primarily driven by a decrease in provisions on impaired loans and partially offset by provisions on performing loans in our wholesale portfolios, as described above. The decrease in provisions on impaired loans is mainly due to provisions in the real estate & related sector in the prior year and higher recoveries in the oil & gas sector in the current year, partially offset by a provision taken on one account in the transportation sector in the current year.

Q3 2018 vs. Q2 2018

PCL on loans of \$338 million increased \$60 million, or 22% from the prior quarter, mainly due to higher provisions in Personal & Commercial Banking and Wealth Management. PCL ratio on loans increased 3 bps.

PCL on performing loans of \$90 million, compared to (\$20) million in the prior quarter, was related to Capital Markets, Personal & Commercial Banking, and Wealth Management. Though our base economic outlook remained unchanged, we have reflected cautionary elements in our provisions as external risks to the macroeconomic outlook have risen, with volume growth also contributing to the increase. For further details on our economic outlook, refer to the Economic, market, and regulatory review and outlook section.

PCL on impaired loans of \$248 million decreased \$50 million from the prior quarter, primarily due to lower provisions in Capital Markets and Personal & Commercial Banking.

PCL on loans in Personal & Commercial Banking increased \$24 million due to an increase in provisions on performing loans in the Canadian Banking portfolios, as described above. This was partially offset by a decrease in provisions on impaired loans, reflecting overall stable credit quality trends.

PCL on loans in Wealth Management of \$3 million, compared to (\$20) million in the prior quarter, was primarily due to higher provisions on performing loans in U.S. Wealth Management (including City National), as described above. This was partially offset by lower provisions on impaired loans due to loans returning to performing status within U.S. Wealth Management (including City National).

PCL on loans in Capital Markets of \$4 million, compared to (\$9) million in the prior quarter, was primarily driven by an increase in provisions on performing loans, as described above. This was partially offset by lower provisions on impaired loans primarily in the oil & gas and consumer goods sectors, which had provisions in the prior quarter and recoveries in the current quarter, partially offset by a provision taken on one account in the transportation sector.

Q3 2018 vs. Q3 2017 (Nine months ended)

PCL on loans increased \$34 million, or 4% from the prior year, mainly due to higher provisions in Personal & Commercial Banking, partially offset by lower provisions in Capital Markets and Wealth Management. PCL ratio on loans remained flat.

PCL on performing loans of \$79 million this year was primarily attributable to Personal & Commercial Banking, partially offset by a decrease in provisions in Capital Markets and Wealth Management.

PCL on impaired loans of \$871 million decreased \$45 million from the prior year, mainly due to lower provisions in Capital Markets and Wealth Management, partially offset by higher provisions in Personal & Commercial Banking.

PCL on loans in Personal & Commercial Banking increased \$164 million, mainly due to the adoption of IFRS 9, which led to provisions on performing loans.

PCL on loans in Wealth Management of (\$19) million, compared to \$34 million in the prior year, was primarily due to lower provisions on impaired loans in U.S. Wealth Management (including City National). The decrease in provisions was also due to repayments and maturities on performing loans, partially offset by volume growth.

PCL on loans in Capital Markets decreased \$80 million, primarily due to provisions in the real estate & related sector in the prior year partially offset by a provision taken on one account in the consumer goods sector.

Gross impaired loans (GIL)

	IFRS 9		IAS 39
	As at		
	July 31 2018	April 30 2018	July 31 2017
(Millions of Canadian dollars, except percentage amounts)			
Personal & Commercial Banking	\$ 1,632	\$ 1,755	\$ 1,511
Wealth Management (1)	194	228	601
Capital Markets	495	672	784
Investor & Treasury Services	—	—	—
Corporate Support and Other	—	—	—
Total GIL (2)	\$ 2,321	\$ 2,655	\$ 2,896
Canada (3)			
Retail	\$ 710	\$ 722	\$ 563
Wholesale	383	527	467
GIL	1,093	1,249	1,030
U.S. (1), (3)			
Retail	\$ 32	\$ 37	\$ 61
Wholesale	354	497	978
GIL	386	534	1,039
Other International (3)			
Retail	\$ 336	\$ 343	\$ 335
Wholesale	506	529	492
GIL	842	872	827
Total GIL (2)	\$ 2,321	\$ 2,655	\$ 2,896
Impaired loans, beginning balance	\$ 2,655	\$ 2,527	\$ 3,249
Classified as impaired during the period (new impaired) (4)	387	594	494
Net repayments (4)	(249)	(133)	(225)
Amounts written off	(395)	(346)	(351)
Other (1), (2), (4), (5)	(77)	13	(271)
Impaired loans, balance at end of period	\$ 2,321	\$ 2,655	\$ 2,896
GIL ratio (6)			
Total GIL ratio	0.40%	0.47%	0.53%
Personal & Commercial Banking	0.38%	0.41%	0.37%
Canadian Banking	0.26%	0.29%	0.25%
Caribbean Banking	6.63%	6.63%	6.28%
Wealth Management	0.34%	0.41%	1.17%
Capital Markets	0.57%	0.80%	0.94%

- (1) Effective November 1, 2017, GIL excludes \$229 million of ACI loans related to our acquisition of City National Bank (City National) that have returned to performing status. As at July 31, 2018, \$20 million (April 30, 2018 – \$21 million) of ACI loans that remain impaired are included in GIL. As at July 31, 2017, GIL includes \$268 million related to the ACI loans portfolio from our acquisition of City National. ACI loans included in GIL added 5 bps to our July 31, 2017 GIL ratio. For further details, refer to Note 5 of our Condensed Financial Statements.
- (2) Effective November 1, 2017, the definition of gross impaired loans has been shortened for certain products to align with a definition of default of 90 days past due under IFRS 9, resulting in an increase in GIL of \$134 million.
- (3) Geographic information is based on residence of borrower.
- (4) Certain GIL movements for Canadian Banking retail and wholesale portfolios are generally allocated to new impaired, as return to performing status, Net repayments, sold, and exchange and other movements amounts are not reasonably determinable. Certain GIL movements for Caribbean Banking retail and wholesale portfolios are generally allocated to Net repayments and new impaired, as return to performing status, sold, and exchange and other movements amounts are not reasonably determinable.
- (5) Includes return to performing status during the period, recoveries of loans and advances previously written off, sold, and exchange and other movements.
- (6) GIL as a % of related loans and acceptances.

Q3 2018 vs. Q3 2017

Total GIL of \$2,321 million decreased \$575 million or 20% from the prior year, and the total GIL ratio of 40 bps improved 13 bps, largely reflecting lower impaired loans in Wealth Management and Capital Markets, partially offset by higher impaired loans in Personal & Commercial Banking.

GIL in Personal & Commercial Banking increased \$121 million or 8%, primarily due to a change in the definition of impaired under IFRS 9, effective November 1, 2017, for certain products in our Canadian Personal Banking portfolios. This was partially offset by lower impaired loans in our Canadian Business Banking portfolios.

GIL in Wealth Management decreased \$407 million or 68%. This mainly reflects fewer impaired loans in U.S. Wealth Management (including City National) due to the exclusion of \$229 million in ACI loans that have returned to performing status since our acquisition of City National and a change in the definition of impaired for certain products effective November 1, 2017.

GIL in Capital Markets decreased \$289 million or 37%, mainly due to lower impaired loans in the oil & gas sector compared to the prior year.

Q3 2018 vs. Q2 2018

Total GIL decreased \$334 million or 13% from the prior quarter, and the total GIL ratio of 40 bps improved 7 bps.

GIL in Personal & Commercial Banking decreased \$123 million or 7% from the prior quarter, mainly due to lower impaired loans in our Canadian Business Banking portfolios.

GIL in Wealth Management decreased \$34 million or 15%, mainly due to loans that have returned to performing status in U.S. Wealth Management (including City National).

GIL in Capital Markets decreased \$177 million or 26%, primarily due to repayments in the oil & gas sector.

Allowance for credit losses (ACL)

	IFRS 9		IAS 39
	As at		
	July 31 2018	April 30 2018	July 31 2017
(Millions of Canadian dollars)			
Personal & Commercial Banking	\$ 2,523	\$ 2,478	\$ 484
Wealth Management	196	197	91
Capital Markets	335	353	243
Investor & Treasury Services	2	2	–
Corporate Support & Other ⁽¹⁾	1	–	1,509
ACL on loans	\$ 3,057	\$ 3,030	\$ 2,327
ACL on other financial assets	113	104	
Total ACL	\$ 3,170	\$ 3,134	\$ 2,327
ACL on loans is comprised of:			
ACL on performing loans ⁽²⁾	\$ 2,338	\$ 2,242	\$ 1,509
ACL on impaired loans ⁽³⁾	719	788	818
ACL on loans			
Retail	\$ 1,724	\$ 1,678	
Wholesale	614	564	
ACL on performing loans ⁽²⁾	\$ 2,338	\$ 2,242	\$ 1,509
Canada ⁽⁴⁾			
Retail	\$ 161	\$ 152	\$ 143
Wholesale	104	141	128
ACL on impaired loans ⁽³⁾	\$ 265	\$ 293	\$ 271
U.S. ⁽⁴⁾			
Retail	\$ 1	\$ 2	\$ 1
Wholesale	126	137	238
ACL on impaired loans ⁽³⁾	\$ 127	\$ 139	\$ 239
Other International ⁽⁴⁾			
Retail	\$ 171	\$ 171	\$ 163
Wholesale	156	185	145
ACL on impaired loans ⁽³⁾	\$ 327	\$ 356	\$ 308
ACL on impaired loans ⁽³⁾	\$ 719	\$ 788	\$ 818

(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.

Q3 2018 vs. Q3 2017

Total ACL of \$3,170 million increased \$843 million or 36% from the prior year, reflecting an increase of \$730 million in ACL on loans and the inclusion of \$113 million in ACL on other financial assets primarily due to the adoption of IFRS 9.

ACL on performing loans of \$2,338 million is \$829 million higher than the Allowance for loans not yet identified as impaired of \$1,509 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 \$719 million decreased \$99 million from the prior year, primarily due to lower ACL on loans in Capital Markets and Wealth Management, partially offset by higher ACL in Personal & Commercial Banking.

Q3 2018 vs. Q2 2018

Total ACL of \$3,170 million increased \$36 million or 1% from the prior quarter, reflecting an increase of \$27 million in ACL on loans and \$9 million in ACL on other financial assets.

ACL on performing loans of \$2,338 million increased \$96 million from the prior quarter, mainly reflecting higher ACL on loans in Personal & Commercial Banking, Capital Markets and Wealth Management largely driven by PCL, as described above.

ACL on impaired loans of \$719 million decreased \$69 million from the prior quarter, primarily due to lower ACL on loans in Capital Markets, Personal & Commercial Banking and 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. We continue to manage the controls and governance procedures that ensure that our market risk exposure is consistent with risk appetite constraints set by the Board of Directors. These controls include limits on probabilistic measures of potential loss in trading positions, such as Value-at-Risk (VaR) and Stressed Value-at-Risk (SVaR).

Market risk controls are also in place to manage structural interest rate risk (SIRR) arising from traditional banking products. Factors contributing to SIRR include the mismatch between future asset and liability repricing dates, relative changes in asset and liability rates, and product features that could affect the expected timing of cash flows, such as options to pre-pay loans or redeem term deposits prior to contractual maturity. To monitor and control SIRR, we assess two primary financial metrics, 12-month Net Interest Income (NII) risk and Economic Value of Equity (EVE) risk, under a range of market shocks and scenarios. For further details of our approach to the management of market risk, refer to the Market risk section of our 2017 Annual Report.

Market risk measures – FVTPL positions

VaR and SVaR

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

(Millions of Canadian dollars)	July 31, 2018				April 30, 2018		July 31, 2017		
	As at	For the three months ended			As at	For the three months ended		For the three months ended	
		Average	High	Low		Average	As at	Average	
Equity	\$ 11	\$ 10	\$ 17	\$ 6	\$ 9	\$ 15	\$ 8	\$ 14	
Foreign exchange	4	5	8	4	5	4	4	5	
Commodities	2	2	2	1	2	1	2	3	
Interest rate (1)	10	17	30	10	16	21	16	18	
Credit specific (2)	4	5	5	4	5	5	4	4	
Diversification (3)	(15)	(17)	n.m.	n.m.	(17)	(18)	(17)	(20)	
Market risk VaR	\$ 16	\$ 22	\$ 31	\$ 13	\$ 20	\$ 28	\$ 17	\$ 24	
Market risk Stressed VaR	\$ 57	\$ 66	\$ 97	\$ 48	\$ 61	\$ 97	\$ 53	\$ 59	

(Millions of Canadian dollars)	July 31, 2018				July 31, 2017		
	As at	For the nine months ended			As at	For the nine months ended	
		Average	High	Low		Average	
Equity	\$ 11	\$ 14	\$ 27	\$ 6	\$ 8	\$ 13	
Foreign exchange	4	4	8	2	4	4	
Commodities	2	2	3	1	2	3	
Interest rate (1)	10	18	30	10	16	17	
Credit specific (2)	4	5	6	4	4	4	
Diversification (3)	(15)	(18)	n.m.	n.m.	(17)	(17)	
Market risk VaR	\$ 16	\$ 25	\$ 38	\$ 13	\$ 17	\$ 24	
Market risk Stressed VaR	\$ 57	\$ 81	\$ 149	\$ 40	\$ 53	\$ 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

Q3 2018 vs. Q3 2017

Average market risk VaR of \$22 million decreased \$2 million from the prior year, driven by lower average exposures in our equity derivatives trading business, largely offset by 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.

Average SVaR of \$66 million increased \$7 million from the prior year, mainly due to the inclusion of certain equity and debt portfolios due to the change in classification as a result of adopting IFRS 9, and increased equity markets volatility.

Q3 2018 vs. Q2 2018

Average market risk VaR of \$22 million decreased \$6 million from the prior quarter due to lower average exposures in the equity derivatives trading business.

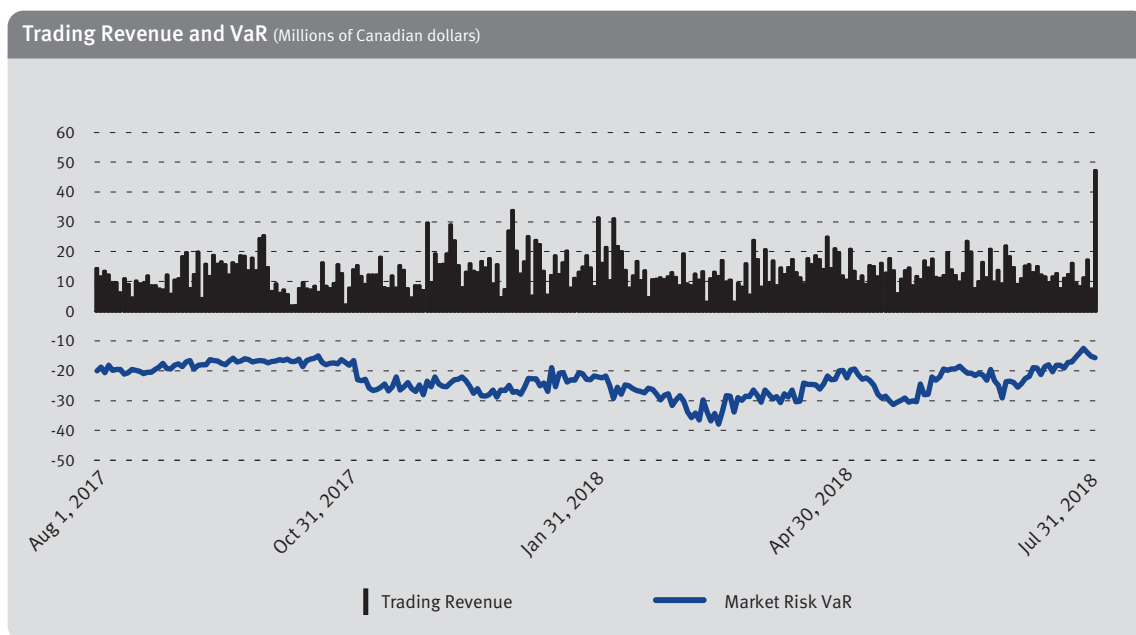
Average SVaR of \$66 million decreased \$31 million from the prior quarter, reflecting lower average equity exposures in the equity derivatives trading business and the impact of foreign exchange translation.

Q3 2018 vs. Q3 2017 (Nine months ended)

Average market risk VaR of \$25 million remained relatively consistent from the prior year.

Average SVaR of \$81 million increased \$26 million compared to the prior year, largely driven by the change in classification as a result of adopting IFRS 9. Expiries and repurchases of certain hedging instruments in our equity derivatives trading portfolio in the second quarter of 2018 also contributed to volatility in this metric during the year.

The following chart displays a bar graph of our daily trading profit and loss and a line graph of our daily market risk VaR. We incurred no net trading losses in the three months ended July 31, 2018 and April 30, 2018.



Market risk measures for other FVTPL positions – Assets and liabilities of RBC Insurance

We offer a range of insurance products to clients and hold investments to meet the future obligations to policyholders. The investments which support actuarial liabilities are predominantly fixed income assets designated as FVTPL. Consequently, changes in the fair values of these assets are recorded in investment income within Total revenue in the Consolidated Statements of Income and are largely offset by changes in the fair value of the actuarial liabilities, the impact of which is reflected in Insurance policyholder benefits, claims and acquisition expense. As at July 31, 2018, we had liabilities with respect to insurance obligations of \$10.1 billion, up from \$9.8 billion in the prior quarter, and trading securities of \$8.2 billion in support of the liabilities, up from \$7.9 billion last quarter.

Market risk measures – Structural Interest Rate Sensitivities

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

(Millions of Canadian dollars)	July 31 2018						April 30 2018		July 31 2017	
	EVE risk			NII risk (1)			EVE risk	NII risk (1)	EVE risk	NII risk (1)
	Canadian dollar impact	U.S. dollar impact (2)	Total	Canadian dollar impact	U.S. dollar impact (2)	Total				
Before-tax impact of:										
100bps increase in rates	\$ (983)	\$ (14)	\$ (997)	\$ 398	\$ 182	\$ 580	\$ (1,086)	\$ 555	\$ (1,325)	\$ 379
100bps decrease in rates	881	(298)	583	(479)	(188)	(667)	669	(656)	753	(546)

(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 July 31, 2018, an immediate and sustained -100 bps shock would have had a negative impact to our NII of \$667 million, up from \$656 million last quarter. An immediate and sustained +100 bps shock at the end of July 31, 2018 would have had a negative impact to our EVE of \$997 million, down from \$1,086 million reported last quarter. Both Canadian and US dollar EVE risk marginally declined and NII risk remained relatively unchanged over the prior quarter. During the third 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 \$43.7 billion of investment securities carried at FVOCI as at July 31, 2018 compared to \$42.7 billion in the prior quarter. We hold debt securities carried at FVOCI primarily as investments, as well as to manage liquidity risk and hedge interest rate risk in our non-trading banking balance sheet. As at July 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 \$7 million as measured by the change in the value of the securities for a one basis point parallel increase in yields. The portfolio also exposes us to credit spread risk of a pre-tax change in value of \$18 million, as measured by the change in value for a one basis point widening of credit spreads. The value of the investment securities carried at

FVOCI included in our SIRR measure as at July 31, 2018 was \$7.8 billion, down from \$8.6 billion in the prior quarter. Our investment securities carried at FVOCI also include equity exposures of \$0.4 billion as at July 31, 2018, unchanged from the prior quarter.

Derivatives related to non-trading activity

Derivatives are also used to hedge market risk exposures unrelated to our trading activity. In aggregate, derivative assets not related to trading activity of \$3.0 billion as at July 31, 2018 were down from \$3.5 billion last quarter, and derivative liabilities of \$2.9 billion as at July 31, 2018 were unchanged from 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 \$1.4 billion as at July 31, 2018, down from \$1.5 billion as at April 30, 2018, and derivative liabilities of \$1.7 billion as at July 31, 2018, down from \$1.8 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 \$10 million as of July 31, 2018 compared to \$9 million as of April 30, 2018.

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

We also use foreign exchange derivatives to manage our exposure to equity investments in subsidiaries that are denominated in foreign currencies, particularly the U.S. dollar, British pound, and Euro. Changes in the fair value of these hedges and the cumulative translation adjustment related to our structural foreign exchange risk are reported in Other comprehensive income.

Other non-trading derivatives

Derivatives, including interest rate swaps and foreign exchange derivatives, that are not in designated hedge accounting relationships are used to manage other non-trading exposures. Changes in the fair value of these derivatives are reflected in the Consolidated Statement of Income. Derivative assets of \$1.6 billion as at July 31, 2018 were down from \$2.0 billion as at April 30, 2018, and derivative liabilities of \$1.2 billion as at July 31, 2018 were up from \$1.1 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:

(Millions of Canadian dollars)	As at July 31, 2018			
	Balance sheet amount	Market risk measure		Non-traded risk primary risk sensitivity
		Traded risk (1)	Non-traded risk (2)	
Assets subject to market risk				
Cash and due from banks (3)	\$ 32,015	\$ –	\$ 32,015	Interest rate
Interest-bearing deposits with banks (4)	49,159	28,586	20,573	Interest rate
Securities				
Trading (5)	126,386	118,198	8,188	Interest rate, credit spread
Investment, net of applicable allowance (6)	90,746	–	90,746	Interest rate, credit spread, equity
Assets purchased under reverse repurchase agreements and securities borrowed (7)	264,170	190,332	73,838	Interest rate
Loans				
Retail (8)	394,884	6,519	388,365	Interest rate
Wholesale (9)	171,050	8,014	163,036	Interest rate
Allowance for loan losses	(2,837)	–	(2,837)	Interest rate
Segregated fund net assets (10)	1,396	–	1,396	Interest rate
Derivatives	88,503	85,533	2,970	Interest rate, foreign exchange
Other assets (11)	71,600	2,942	68,658	Interest rate
Assets not subject to market risk (12)	5,302			
Total assets	\$ 1,292,374	\$ 440,124	\$ 846,948	
Liabilities subject to market risk				
Deposits (13)	\$ 832,261	\$ 80,526	\$ 751,735	Interest rate
Segregated fund liabilities (14)	1,396	–	1,396	Interest rate
Other				
Obligations related to securities sold short	33,192	33,192	–	
Obligations related to assets sold under repurchase agreements and securities loaned (15)	178,170	172,342	5,828	Interest rate
Derivatives	86,082	83,226	2,856	Interest rate, foreign exchange
Other liabilities (16)	68,588	6,468	62,120	Interest rate
Subordinated debentures	9,129	–	9,129	Interest rate
Preferred share liabilities	–	–	–	
Liabilities not subject to market risk (17)	5,684			
Total liabilities	\$ 1,214,502	\$ 375,754	\$ 833,064	
Total equity	\$ 77,872			
Total liabilities and equity	\$ 1,292,374			

(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 \$17,169 million included in SIRR. An additional \$14,846 million is included in other risk controls.

(4) Interest-bearing deposits with banks of \$20,573 million are included in SIRR.

(5) Trading securities include \$8,188 million in securities for asset/liability management of RBC Insurance.

(6) Includes investment securities carried at FVOCI of \$43,654 million and investment securities, net of applicable allowance, carried at amortized cost of \$47,092 million. \$54,897 million of the total securities are included in SIRR. An additional \$1,897 million are held by RBC Insurance. The remaining \$33,952 million are captured in other internal non-trading market risk reporting.

(7) Assets purchased under reverse repurchase agreements include \$33,758 million reflected in SIRR. An additional \$40,080 million is included in other risk controls.

(8) Retail loans include \$377,702 million reflected in SIRR and \$293 million is used for asset/liability management of RBC Insurance. An additional \$10,370 million is included in other risk controls.

(9) Wholesale loans include \$161,182 million reflected in SIRR. An additional \$1,854 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 \$42,122 million reflected in SIRR and \$2,316 million is used for asset/liability management of RBC Insurance. An additional \$24,220 million is included in other risk controls.

(12) Assets not subject to market risk include \$5,302 million of physical and other assets.

(13) Deposits include \$666,911 million reflected in SIRR. The remaining \$84,824 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) There are no obligations related to assets sold under repurchase agreements and securities loaned reflected in SIRR. An additional \$5,828 million is included in other risk controls.

(16) Other liabilities include \$39,875 million reflected in SIRR and \$10,775 million of RBC Insurance liabilities. An additional \$11,470 million is included in other risk controls.

(17) Liabilities not subject to market risk include \$5,684 million of payroll related and other liabilities.

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

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

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

The following footnotes provide additional information on the Non-traded risk amounts:

(3) Cash and due from banks includes \$23,925 million included in SIRR. An additional \$8,840 million is included in other risk controls.

(4) Interest-bearing deposits with banks of \$18,353 million are included in SIRR.

(5) Trading securities include \$7,861 million in securities for asset/liability management of RBC Insurance.

(6) Includes investment securities carried at FVOCI of \$42,668 million and investment securities, net of applicable allowance, carried at amortized cost of \$47,005 million. \$55,626 million of the total securities are included in SIRR. An additional \$2,073 million are held by RBC Insurance. The remaining \$31,974 million are captured in other internal non-trading market risk reporting.

(7) Assets purchased under reverse repurchase agreements include \$34,487 million reflected in SIRR. An additional \$37,855 million is included in other risk controls.

(8) Retail loans include \$371,591 million reflected in SIRR and \$284 million is used for asset/liability management of RBC Insurance. An additional \$10,851 million is included in other risk controls.

(9) Wholesale loans include \$156,626 million reflected in SIRR. An additional \$1,762 million is used for asset/liability management of RBC Insurance.

(10) Investments for the account of segregated fund holders are included in RBC Insurance risk measures.

(11) Other assets include \$41,604 million reflected in SIRR and \$2,478 million is used for asset/liability management of RBC Insurance. An additional \$23,352 million is included in other risk controls.

(12) Assets not subject to market risk include \$5,852 million of physical and other assets.

(13) Deposits include \$660,214 million reflected in SIRR. The remaining \$80,716 million are captured in other internal non-trading market risk reporting.

(14) Insurance and investment contracts for the account of segregated fund holders are included in RBC Insurance risk measures.

(15) Obligations related to assets sold under repurchase agreements and securities loaned include \$242 million reflected in SIRR. An additional \$6,524 million is included in other risk controls.

(16) Other liabilities include \$37,306 million reflected in SIRR and \$10,698 million of RBC Insurance liabilities. An additional \$12,313 million is included in other risk controls.

(17) Liabilities not subject to market risk include \$5,908 million of payroll related and other liabilities.

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. For details of our LRMF, refer to the Liquidity and funding risk section of 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.

(Millions of Canadian dollars)	As at July 31, 2018				
	Bank-owned liquid assets	Securities received as collateral from securities financing and derivative transactions	Total liquid assets	Encumbered liquid assets	Unencumbered liquid assets
Cash and due from banks	\$ 32,015	\$ –	\$ 32,015	\$ 3,039	\$ 28,976
Interest-bearing deposits with banks	49,159	–	49,159	347	48,812
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks (1)	176,772	212,568	389,340	254,900	134,440
Other securities	75,155	120,518	195,673	73,340	122,333
Undrawn credit lines granted by central banks (2)	11,843	–	11,843	–	11,843
Other assets eligible as collateral for discount (3)	100,282	–	100,282	–	100,282
Other liquid assets (4)	20,193	–	20,193	19,093	1,100
Total liquid assets	\$ 465,419	\$ 333,086	\$ 798,505	\$ 350,719	\$ 447,786

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

(Millions of Canadian dollars)	As at	
	July 31 2018	April 30 2018
Royal Bank of Canada	\$ 212,175	\$ 223,332
Foreign branches	76,200	64,285
Subsidiaries	159,411	153,681
Total unencumbered liquid assets	\$ 447,786	\$ 441,298

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

Q3 2018 vs. Q2 2018

Total liquid assets increased \$18 billion, primarily due to higher interest-bearing deposits with banks, as well as an increase in securities received as collateral under collateral swap transactions. The collateral swap transactions however, are contractually offset with a corresponding increase in collateral pledged under encumbered liquid assets.

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 July 31, 2018, our Unencumbered assets available as collateral comprised 31% of our total assets (April 30, 2018 – 32%).

Asset encumbrance

(Millions of Canadian dollars)	As at									
	July 31 2018					April 30 2018				
	Encumbered		Unencumbered			Encumbered		Unencumbered		
	Pledged as collateral	Other (1)	Available as collateral (2)	Other (3)	Total	Pledged as collateral	Other (1)	Available as collateral (2)	Other (3)	Total
Cash and due from banks	\$ –	\$ 3,039	\$ 28,976	\$ –	\$ 32,015	\$ –	\$ 3,026	\$ 29,739	\$ –	\$ 32,765
Interest-bearing deposits with banks	–	347	48,812	–	49,159	–	386	36,593	–	36,979
Securities										
Trading	40,993	–	82,023	3,370	126,386	46,630	–	80,912	3,626	131,168
Investment, net of applicable allowance	9,750	–	80,938	58	90,746	5,477	–	84,138	58	89,673
Assets purchased under reverse repurchase agreements and securities borrowed (4)	294,719	20,142	53,652	7,566	376,079	281,300	21,573	58,941	6,766	368,580
Loans										
Retail										
Mortgage securities	34,324	–	32,498	–	66,822	34,420	–	32,349	–	66,769
Mortgage loans	37,656	–	17,757	156,056	211,469	35,562	–	16,895	154,157	206,614
Non-mortgage loans	7,692	–	61,901	47,000	116,593	7,011	–	61,474	46,690	115,175
Wholesale	–	–	33,401	137,649	171,050	–	–	33,477	132,166	165,643
Allowance for loan losses	–	–	–	(2,837)	(2,837)	–	–	–	(2,808)	(2,808)
Segregated fund net assets	–	–	–	1,396	1,396	–	–	–	1,308	1,308
Other – Derivatives	–	–	–	88,503	88,503	–	–	–	94,175	94,175
– Others (5)	19,093	–	1,100	56,709	76,902	18,076	–	1,026	57,030	76,132
Total assets	\$ 444,227	\$ 23,528	\$ 441,058	\$ 495,470	\$ 1,404,283	\$ 428,476	\$ 24,985	\$ 435,544	\$ 493,168	\$ 1,382,173

- (1) Includes assets restricted from use to generate secured funding due to legal or other constraints.
- (2) Includes loans that could be used to collateralize central bank advances. Our unencumbered Canadian dollar non-mortgage loan book (at face value) could, subject to satisfying conditions for borrowing and application of prescribed collateral margin requirements, be pledged to the BoC for advances under its ELA program. It also includes our unencumbered mortgage loans that qualify as eligible collateral at FHLB. We also lodge loans that qualify as eligible collateral for the discount window facility available to us at the Federal Reserve Bank of New York. ELA, FHLB, and other central bank facilities are not considered sources of available liquidity in our normal liquidity risk profile. However, banks could monetize assets meeting collateral criteria during periods of extraordinary and severe disruption to market-wide liquidity.
- (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 \$20.1 billion (April 30, 2018 – \$21.6 billion) of collateral received through reverse repurchase transactions that cannot be rehypothecated in its current legal form.
- (5) The Pledged as collateral amount represents cash collateral and margin deposit amounts pledged related to OTC and exchange-traded derivative transactions.

Funding

Funding strategy

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

Deposit and funding profile

As at July 31, 2018, relationship-based deposits, which are the primary source of funding for retail loans and mortgages, were \$538 billion or 51% of our total funding (April 30, 2018 – \$532 billion or 52%). 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.

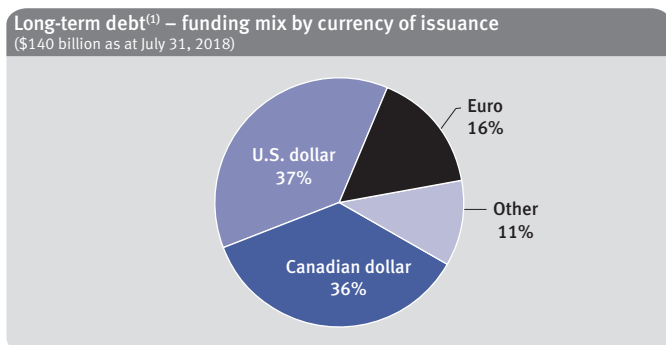
Long-term debt issuance

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.

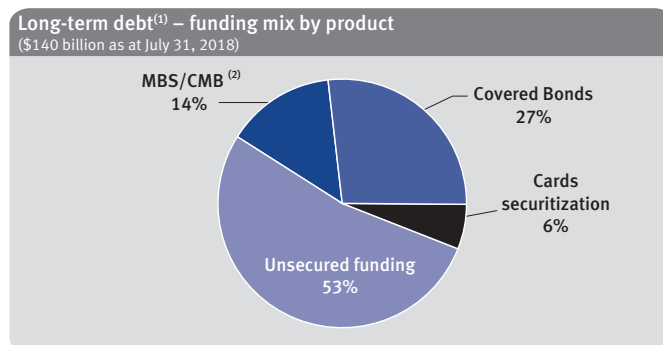
Programs by geography

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



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



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

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

Composition of wholesale funding⁽¹⁾

(Millions of Canadian dollars)	As at July 31, 2018							
	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⁾	\$ 9,414	\$ 73	\$ 49	\$ 42	\$ 9,578	\$ –	\$ –	\$ 9,578
Certificates of deposit and commercial paper	4,319	12,589	11,011	13,724	41,643	1,040	130	42,813
Asset-backed commercial paper ⁽³⁾	1,802	3,719	4,631	5,916	16,068	–	–	16,068
Senior unsecured medium-term notes ⁽⁴⁾	1,763	4,637	6,222	12,687	25,309	15,325	37,296	77,930
Senior unsecured structured notes ⁽⁵⁾	823	333	390	652	2,198	2,243	5,567	10,008
Mortgage securitization	–	993	2,474	1,041	4,508	3,258	11,933	19,699
Covered bonds/asset-backed securities ⁽⁶⁾	–	4,898	21	6,148	11,067	10,144	24,137	45,348
Subordinated liabilities	–	–	–	–	–	103	9,262	9,365
Other ⁽⁷⁾	7,212	1,692	1,158	1,439	11,501	4	7,935	19,440
Total	\$ 25,333	\$ 28,934	\$ 25,956	\$ 41,649	\$ 121,872	\$ 32,117	\$ 96,260	\$ 250,249
Of which:								
– Secured	\$ 6,966	\$ 10,493	\$ 7,126	\$ 13,105	\$ 37,690	\$ 13,402	\$ 36,070	\$ 87,162
– Unsecured	18,367	18,441	18,830	28,544	84,182	18,715	60,190	163,087

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

(1) Excludes bankers' acceptances and repos.

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

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

(4) Includes deposit notes.

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

(6) Includes credit card and mortgage loans.

(7) Includes tender option bonds (secured) of \$6,047 million (April 30, 2018 – \$6,844 million), bearer deposit notes (unsecured) of \$5,621 million (April 30, 2018 – \$4,666 million) and other long-term structured deposits (unsecured) of \$7,772 million (April 30, 2018 – \$6,411 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 August 21, 2018		
	Short-term debt	Senior long-term debt	Outlook
Moody's ⁽²⁾	P-1	Aa2	stable
Standard & Poor's ⁽³⁾	A-1+	AA-	stable
Fitch Ratings ⁽⁴⁾	F1+	AA	stable
DBRS ⁽⁵⁾	R-1(high)	AA	positive

- (1) Credit ratings are not recommendations to purchase, sell or hold a financial obligation inasmuch as they do not comment on market price or suitability for a particular investor. Ratings are determined by the rating agencies based on criteria established from time to time by them, and are subject to revision or withdrawal at any time by the rating organization.
- (2) On July 16, 2018, Moody's upgraded our senior long-term debt rating two notches, along with our large Canadian peers, and revised our outlook to stable from negative.
- (3) On June 27, 2018, S&P revised our outlook to stable from negative.
- (4) On October 27, 2017, Fitch Ratings revised our outlook to stable from negative.
- (5) On June 26, 2018, DBRS revised our outlook to positive from stable.

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

(Millions of Canadian dollars)	As at					
	July 31 2018			April 30 2018		
	One-notch downgrade	Two-notch downgrade	Three-notch downgrade	One-notch downgrade	Two-notch downgrade	Three-notch downgrade
Contractual derivatives funding or margin requirements	\$ 178	\$ 78	\$ 156	\$ 59	\$ 165	\$ 455
Other contractual funding or margin requirements ⁽¹⁾	183	174	–	182	148	–

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

Liquidity Coverage Ratio (LCR)

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

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

Liquidity coverage ratio common disclosure template ⁽¹⁾

	For the three months ended			
	July 31 2018		April 30 2018	
	Total unweighted value (average) ⁽²⁾	Total weighted value (average)	Total unweighted value (average) ⁽²⁾	Total weighted value (average)
(Millions of Canadian dollars, except percentage amounts)				
High-quality liquid assets				
Total high-quality liquid assets (HQLA)		219,719		214,242
Cash outflows				
Retail deposits and deposits from small business customers, of which:				
<i>Stable deposits</i> ⁽³⁾	252,338	19,458	250,010	18,964
<i>Less stable deposits</i>	82,520	2,476	86,239	2,587
<i>Less stable deposits</i>	169,818	16,982	163,771	16,377
Unsecured wholesale funding, of which:				
<i>Operational deposits (all counterparties) and deposits in networks of cooperative banks</i> ⁽⁴⁾	282,184	127,647	269,470	121,605
<i>Operational deposits (all counterparties) and deposits in networks of cooperative banks</i> ⁽⁴⁾	127,159	30,351	122,645	29,226
<i>Non-operational deposits</i>	130,873	73,144	126,571	72,125
<i>Unsecured debt</i>	24,152	24,152	20,254	20,254
Secured wholesale funding		24,595		24,091
Additional requirements, of which:				
<i>Outflows related to derivative exposures and other collateral requirements</i>	257,140	80,032	242,501	77,741
<i>Outflows related to loss of funding on debt products</i>	63,454	43,804	66,010	44,523
<i>Outflows related to loss of funding on debt products</i>	5,708	5,708	5,484	5,484
<i>Credit and liquidity facilities</i>	187,978	30,520	171,007	27,734
Other contractual funding obligations ⁽⁵⁾	43,563	43,563	43,575	43,575
Other contingent funding obligations ⁽⁶⁾	427,781	7,369	439,419	7,291
Total cash outflows		302,664		293,267
Cash inflows				
Secured lending (e.g., reverse repos)	218,333	44,388	197,362	39,502
Inflows from fully performing exposures	15,153	10,646	14,953	10,532
Other cash inflows	64,995	64,995	67,597	67,597
Total cash inflows		120,029		117,631
		Total adjusted value		Total adjusted value
Total HQLA		219,719		214,242
Total net cash outflows		182,635		175,636
Liquidity coverage ratio		120%		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 July 31, 2018 is calculated as an average of 64 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.

Q3 2018 vs. Q2 2018

The average LCR for the quarter ended July 31, 2018 was 120%, which translates into a surplus of approximately \$37 billion, compared to 122% in the prior quarter. The slight decline in the LCR surplus from the previous quarter reflects the impact of on- and off-balance sheet movements and the actions taken to manage funding and liquidity that occur in the normal course of business.

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.

(Millions of Canadian dollars)	As at July 31, 2018									
	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	\$ 78,464	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ 2,710	\$ 81,174
Securities										
Trading (1)	84,451	12	69	32	16	40	55	6,665	35,046	126,386
Investment, net of applicable allowance	2,003	5,628	4,215	1,420	2,619	10,631	23,400	40,462	368	90,746
Assets purchased under reverse repurchase agreements and securities borrowed	144,570	50,211	28,522	16,703	11,969	2,623	–	–	9,572	264,170
Loans, net of applicable allowance	19,642	17,104	20,597	21,416	29,807	117,204	210,142	38,528	88,657	563,097
Other										
Customers' liability under acceptances	10,941	5,075	77	–	1	5	–	–	(16)	16,083
Derivatives	5,544	6,338	6,488	3,315	2,765	9,852	23,678	30,523	–	88,503
Other financial assets	23,720	803	672	139	192	111	200	1,668	2,159	29,664
Total financial assets	\$ 369,335	\$ 85,171	\$ 60,640	\$ 43,025	\$ 47,369	\$ 140,466	\$ 257,475	\$ 117,846	\$ 138,496	\$ 1,259,823
Other non-financial assets	2,623	1,309	477	357	312	1,075	1,402	1,203	23,793	32,551
Total assets	\$ 371,958	\$ 86,480	\$ 61,117	\$ 43,382	\$ 47,681	\$ 141,541	\$ 258,877	\$ 119,049	\$ 162,289	\$ 1,292,374
Liabilities and equity										
Deposits (2)										
Unsecured borrowing	\$ 61,121	\$ 38,395	\$ 33,110	\$ 32,071	\$ 29,358	\$ 32,503	\$ 52,701	\$ 14,890	\$ 437,169	\$ 731,318
Secured borrowing	2,348	5,644	8,534	6,954	3,263	8,707	21,365	6,526	–	63,341
Covered bonds	–	4,887	–	2,586	1,536	7,714	19,643	1,236	–	37,602
Other										
Acceptances	10,941	5,075	77	–	1	5	–	–	–	16,099
Obligations related to securities sold short	33,192	–	–	–	–	–	–	–	–	33,192
Obligations related to assets sold under repurchase agreements and securities loaned	136,476	30,389	2,455	298	82	12	–	–	8,458	178,170
Derivatives	5,251	6,660	5,490	3,233	3,408	8,483	–	53,557	–	86,082
Other financial liabilities	25,408	546	525	267	287	134	466	5,638	857	34,128
Subordinated debentures	–	–	–	–	–	103	317	8,709	–	9,129
Total financial liabilities	\$ 274,737	\$ 91,596	\$ 50,191	\$ 45,409	\$ 37,935	\$ 57,661	\$ 94,492	\$ 90,556	\$ 446,484	\$ 1,189,061
Other non-financial liabilities	1,080	789	3,926	240	235	712	837	9,583	8,039	25,441
Equity	–	–	–	–	–	–	–	–	77,872	77,872
Total liabilities and equity	\$ 275,817	\$ 92,385	\$ 54,117	\$ 45,649	\$ 38,170	\$ 58,373	\$ 95,329	\$ 100,139	\$ 532,395	\$ 1,292,374
Off-balance sheet items										
Financial guarantees	\$ 273	\$ 868	\$ 2,311	\$ 1,673	\$ 1,690	\$ 1,597	\$ 4,062	\$ 446	\$ 55	\$ 12,975
Lease commitments	64	130	195	191	194	693	1,494	2,892	–	5,853
Commitments to extend credit	2,919	5,733	13,170	11,813	12,436	40,541	150,604	16,384	7,712	261,312
Other credit-related commitments	686	729	1,238	1,573	1,354	434	782	259	108,089	115,144
Other commitments	64	650	–	–	–	–	–	–	399	1,113
Total off-balance sheet items	\$ 4,006	\$ 8,110	\$ 16,914	\$ 15,250	\$ 15,674	\$ 43,265	\$ 156,942	\$ 19,981	\$ 116,255	\$ 396,397

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

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

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

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

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

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 Q3 2018 Report to Shareholders.

OSFI expects Canadian banks to currently meet the Basel III “all-in” targets for CET1, Tier 1 and Total capital ratios. Effective January 1, 2014, OSFI allowed Canadian banks to phase in the Basel III Credit Valuation Adjustment (CVA) risk capital charge over a five-year period ending December 31, 2018. In fiscal 2018, the CVA scalars are 80%, 83% and 86% for CET1, Tier 1 and Total capital, respectively, and will reach 100% for each tier of capital in fiscal 2019.

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

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

On June 20, 2018, OSFI announced that all D-SIBs will be required to publicly disclose their Pillar 2 domestic stability buffer (DSB) as part of their quarterly disclosures, similar to other current capital-related disclosure requirements. The level of the buffer will range between 0% and 2.5% of the entity's total RWA and is currently set at 1.5% of total RWA for the six systemically important banks in Canada. The DSB requirements must be met at the Common Equity Tier 1 (CET1) capital level. OSFI will undertake a review of the DSB on a semi-annual basis, in June and December, and will publicly announce any changes at that time.

The following table provides a summary of OSFI's current regulatory target ratios under Basel III and Pillar 2 requirements:

Basel III Capital ratios and leverage	OSFI regulatory target requirements for large banks under Basel III					RBC capital and leverage ratios as at July 31, 2018	Meet or exceed OSFI regulatory target ratios	Domestic Stability Buffer	Minimum including Capital Buffers, D-SIB/G-SIB surcharge and Domestic Stability Buffer
	Minimum	Capital Buffers (1)	Minimum including Capital Buffers	D-SIB/G-SIB Surcharge (2)	Minimum including Capital Buffers and D-SIB/G-SIB surcharge (2)				
Common Equity Tier 1	> 4.5%	2.5%	> 7.0%	1.0%	> 8.0%	11.1%	√	1.50%	> 9.5%
Tier 1 capital	> 6.0%	2.5%	> 8.5%	1.0%	> 9.5%	12.3%	√	1.50%	> 11.0%
Total capital	> 8.0%	2.5%	> 10.5%	1.0%	> 11.5%	14.1%	√	1.50%	> 13.0%
Leverage ratio	> 3.0%	n.a.	> 3.0%	n.a.	> 3.0%	4.3%	√	n.a.	> 3.0%

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

(2) Effective January 1, 2018, a capital surcharge, equal to the higher of our D-SIB surcharge and the BCBS's G-SIB surcharge, is applicable to risk-weighted capital.
n.a. not applicable

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

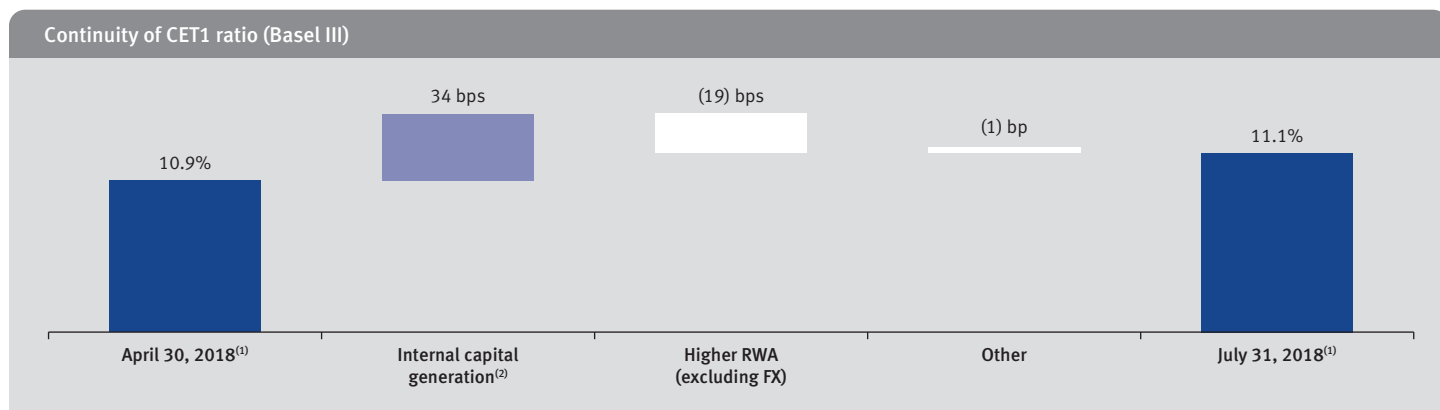
	As at		
	July 31 2018	April 30 2018	October 31 2017
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)			
Capital (1)			
CET1 capital	\$ 55,054	\$ 53,277	\$ 51,572
Tier 1 capital	61,332	60,058	58,361
Total capital	70,525	69,214	67,556
Risk-weighted Assets (RWA) used in calculation of capital ratios (1), (2)			
CET1 capital RWA	\$ 497,949	\$ 488,226	\$ 474,478
Tier 1 capital RWA	498,422	488,699	474,478
Total capital RWA	498,896	489,172	474,478
Total capital RWA consisting of: (1)			
Credit risk	\$ 407,477	\$ 396,996	\$ 376,519
Market risk	29,921	31,750	27,618
Operational risk	61,498	60,426	59,203
Regulatory floor adjustment (3)	–	–	11,138
Total capital RWA	\$ 498,896	\$ 489,172	\$ 474,478
Capital ratios and Leverage ratio (1)			
CET1 ratio	11.1%	10.9%	10.9%
Tier 1 capital ratio	12.3%	12.3%	12.3%
Total capital ratio	14.1%	14.1%	14.2%
Leverage ratio	4.3%	4.3%	4.4%
Leverage ratio exposure (billions)	\$ 1,413.9	\$ 1,381.0	\$ 1,315.5

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

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

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

Q3 2018 vs. Q2 2018



(1) Represents rounded figures.

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

Our CET1 ratio was 11.1%, up 20 bps from last quarter, mainly reflecting internal capital generation, partially offset by higher RWA due to business growth.

CET1 capital RWA increased \$10 billion, primarily due to business growth in wholesale loans and underwriting activities.

Our Tier 1 capital ratio of 12.3% was flat, mainly reflecting internal capital generation offset by higher RWA due to business growth and the redemption of RBC Trust Capital Securities.

Our Total capital ratio of 14.1% was flat, reflecting the factors noted above under the Tier 1 ratio.

Our Leverage ratio of 4.3% was flat from last quarter, as internal capital generation was offset by higher leverage exposures due to business growth, primarily in cash and deposits, loans, and off-balance sheet exposures, and the redemption of RBC Trust Capital Securities.

Selected capital management activity

The following table provides our selected capital management activity:

(Millions of Canadian dollars, except number of shares)	For the three months ended July 31, 2018		For the nine months ended July 31, 2018	
	Number of shares (000s)	Amount	Number of shares (000s)	Amount
Tier 1 capital				
Common shares activity				
Issued in connection with share-based compensation plans (1)	440	\$ 24	1,105	\$ 69
Purchased for cancellation	(1,283)	(16)	(12,837)	(157)
Redemption of preferred shares, Series C-1 (2)	–	–	(82)	(107)
Redemption of RBC Trust Capital Securities, Series 2008-1 (2)		(500)		(500)

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

(2) For further details, refer to Note 9 of our Condensed Financial Statements.

On February 23, 2018, we announced a normal course issuer bid (NCIB) to purchase up to 30 million of our common shares. The NCIB commenced on February 27, 2018 and will continue until February 26, 2019 or such earlier date as we complete the repurchase of all shares permitted under the bid. Our previous NCIB for the purchase of up to 30 million of our common shares commenced on March 14, 2017 and was completed on January 31, 2018. We determine the amount and timing of the purchases under the NCIB, subject to prior consultation with OSFI. Purchases may be made through the TSX, the NYSE and other designated exchanges and alternative Canadian trading systems. The price paid for such repurchased shares will be the prevailing market price at the time of acquisition.

For the three months ended July 31, 2018, the total number of common shares repurchased and cancelled under our NCIB program was approximately 1.3 million. The total cost of the shares repurchased was \$128 million.

For the nine months ended July 31, 2018, the total number of common shares repurchased and cancelled under our NCIB programs was approximately 12.8 million, including 9.3 million common shares repurchased pursuant to a specific share repurchase program. The total cost of the shares repurchased was \$1,275 million. Purchases made under the specific share repurchase program were from an arm's length third party seller and at a discount to the prevailing market price of our common shares at the time of purchases.

We had innovative capital instruments, RBC Trust Capital Securities, issued through our structured entity RBC Capital Trust (Trust). On June 30, 2018, we redeemed all 500,000 units of its issued and outstanding Trust Capital Securities – Series 2008-1 at a redemption price of \$1,000 per unit.

Selected share data

(Millions of Canadian dollars, except number of shares and as otherwise noted)	As at July 31, 2018		
	Number of shares (000s)	Amount	Dividends declared per share
Common shares outstanding (1)	1,441,166	\$ 17,642	\$ 0.94
First preferred shares outstanding			
Non-cumulative Series W (2)	12,000	300	0.31
Non-cumulative Series AA	12,000	300	0.28
Non-cumulative Series AC	8,000	200	0.29
Non-cumulative Series AD	10,000	250	0.28
Non-cumulative Series AE	10,000	250	0.28
Non-cumulative Series AF	8,000	200	0.28
Non-cumulative Series AG	10,000	250	0.28
Non-cumulative Series AJ (3)	13,579	339	0.22
Non-cumulative Series AK (3)	2,421	61	0.20
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	8	–	
Treasury shares held – common	(1,158)	(109)	
Stock options			
Outstanding	8,863		
Exercisable	4,087		
Dividends			
Common		1,355	
Preferred		71	

(1) For further details about our capital management activity, refer to Note 9 of our Condensed Financial Statements.

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

(3) Dividend rate will reset every five years.

(4) Non-viable contingent capital (NVCC) instruments.

(5) Represents 815,400 depositary shares relating to preferred shares Series C-2. Each depositary share represents one-fortieth interest in a share of Series C-2.

As at August 17, 2018, the number of outstanding common shares were 1,439,948,844, net of treasury shares held of 1,244,475, and the number of stock options and awards was 8,835,694.

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 2,744 million RBC common shares, in aggregate, which would represent a dilution impact of 65.56% based on the number of RBC common shares outstanding as at July 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:

(Millions of Canadian dollars)	For the three months ended		
	July 31 2018	April 30 2018	January 31 2018
Credit risk	\$ 22,550	\$ 21,400	\$ 21,650
Market risk (trading and non-trading)	3,850	4,150	3,850
Operational risk	5,650	5,500	5,550
Business and fixed asset risk	3,400	3,400	3,350
Insurance risk	700	700	650
Goodwill and other intangibles	15,600	15,550	15,300
Regulatory capital allocation	13,100	11,550	11,450
Attributed capital	\$ 64,850	\$ 62,250	\$ 61,800
Unattributed capital	4,800	5,200	5,050
Average common equity	\$ 69,650	\$ 67,450	\$ 66,850

Q3 2018 vs. Q2 2018

Attributed capital increased \$2.6 billion, mainly due to organic business growth.

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

Capital, liquidity and other regulatory developments

Revisions to the G-SIB Framework

On July 5, 2018, the BCBS published the Global systemically important banks: revised assessment methodology and the higher loss absorbency requirement, which includes revisions to the G-SIB framework. The objective of the G-SIB framework is to ensure G-SIBs hold higher capital buffers and provides incentives for such firms to reduce their systemic importance. Although core elements of the framework were maintained, the revisions include amendments to the definition of cross-jurisdictional indicators, the introduction of a trading volume indicator, extending the scope of consolidation to insurance subsidiaries, revised disclosure requirements, and further guidance on the higher loss absorbency requirements. We are currently assessing the impact of these amendments. The BCBS expects member jurisdictions to implement these revisions by 2021. OSFI has not yet released their expected implementation date.

Total Loss Absorbing Capacity (TLAC)

On April 18, 2018, OSFI released its final guideline on TLAC, which applies to Canadian D-SIBs as part of the Federal Government's Canadian Bank Recapitalization Regime. The guideline is consistent with the TLAC standard released on November 9, 2015 by the FSB for institutions designated as global systemically important banks (G-SIBs), but tailored to the Canadian context.

On August 21, 2018, OSFI provided notification requiring systemically important banks to maintain a minimum of 21.5% of TLAC-eligible instruments relative to their RWAs and 6.75% relative to their leverage exposures. We are expected to comply with the minimum TLAC requirements by November 1, 2021 and to begin disclosing our TLAC ratios in the first quarter of 2019. We do not anticipate any challenges in meeting these TLAC requirements.

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 Q3 2018 Report to Shareholders. For further details on our framework and activities to manage risks, refer to the Risk management and Capital management sections of our 2017 Annual Report and the Risk management and Capital management sections of this Q3 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 Q3 2018 Condensed Financial Statements.

Changes in accounting policies and disclosures

Changes in accounting policies

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

Future changes in accounting policies and disclosures

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

Conceptual Framework for Financial Reporting

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

Controls and procedures**Disclosure controls and procedures**

As of July 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 July 31, 2018.

Internal control over financial reporting

No changes were made in our internal control over financial reporting during the quarter ended July 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, Q3 2018 Report to Shareholders (RTS) and Supplementary Financial Information package (SFI), in accordance with recommendations from the Financial Stability Board's (FSB) Enhanced Disclosure Task Force (EDTF).

The following index summarizes our disclosure by EDTF recommendation:

Type of Risk	Recommendation	Disclosure	Location of disclosure		
			RTS page	Annual Report page	SFI page
General	1	Table of contents for EDTF risk disclosure		116	1
	2	Define risk terminology and measures	50	52, 54-57 206-207	-
	3	Top and emerging risks		53	-
	4	New regulatory ratios	44-45	92-95	-
Risk governance, risk management and business model	5	Risk management organization		52, 54-57	-
	6	Risk culture		54-57	-
	7	Risk in the context of our business activities		100	-
	8	Stress testing		56-57, 69	-
Capital adequacy and risk-weighted assets(RWA)	9	Minimum Basel III capital ratios and Domestic systemically important bank surcharge	45	92-95	-
	10	Composition of capital and reconciliation of the accounting balance sheet to the regulatory balance sheet		-	23-26
	11	Flow statement of the movements in regulatory capital		-	27
	12	Capital strategic planning		92-95	-
	13	RWA by business segments		-	30
	14	Analysis of capital requirement, and related measurement model information		58-60	28-29
	15	RWA credit risk and related risk measurements		-	45-47
	16	Movement of risk-weighted assets by risk type		-	30
Liquidity	17	Basel back-testing		55, 58	45
	18	Quantitative and qualitative analysis of our liquidity reserve	37-38	75-77, 81-82	-
Funding	19	Encumbered and unencumbered assets by balance sheet category, and contractual obligations for rating downgrades	38-39, 41	77, 80	-
	20	Maturity analysis of consolidated total assets, liabilities and off-balance sheet commitments analyzed by remaining contractual maturity at the balance sheet date	43-44	82-83	-
	21	Sources of funding and funding strategy	39-40	77-79	-
Market risk	22	Relationship between the market risk measures for trading and non-trading portfolios and the balance sheet	36-37	73-74	-
	23	Decomposition of market risk factors	33-35	68-72	-
	24	Market risk validation and back-testing		69	-
Credit risk	25	Primary risk management techniques beyond reported risk measures and parameters		68-72	-
	26	Bank's credit risk profile	24-32	58-68, 154-156	33-47
		Quantitative summary of aggregate credit risk exposures that reconciles to the balance sheet	76-82	111-115	43
	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		-	35,40
Other	29	Quantification of gross notional exposure for OTC derivatives or exchange-traded derivatives		61-62	49
	30	Credit risk mitigation, including collateral held for all sources of credit risk		60	44
	31	Other risk types		84-91	-
	32	Publicly known risk events		87-89, 193-194	-

Interim Condensed Consolidated Financial Statements (unaudited)

Interim Condensed Consolidated Balance Sheets (unaudited)

(Millions of Canadian dollars)	As at	
	July 31 2018	October 31 2017
Assets		
Cash and due from banks	\$ 32,015	\$ 28,407
Interest-bearing deposits with banks	49,159	32,662
Securities (Note 2)		
Trading	126,386	127,657
Investment, net of applicable allowance (Notes 2 and 4)	90,746	90,722
	217,132	218,379
Assets purchased under reverse repurchase agreements and securities borrowed	264,170	220,977
Loans (Notes 2 and 5)		
Retail	394,884	385,170
Wholesale	171,050	159,606
	565,934	544,776
Allowance for loan losses (Notes 2 and 5)	(2,837)	(2,159)
	563,097	542,617
Segregated fund net assets	1,396	1,216
Other		
Customers' liability under acceptances	16,083	16,459
Derivatives	88,503	95,023
Premises and equipment	2,771	2,670
Goodwill	11,012	10,977
Other intangibles	4,581	4,507
Other assets	42,455	38,959
	165,405	168,595
Total assets	\$ 1,292,374	\$ 1,212,853
Liabilities and equity		
Deposits (Note 6)		
Personal	\$ 265,555	\$ 260,213
Business and government	534,808	505,665
Bank	31,898	23,757
	832,261	789,635
Segregated fund net liabilities	1,396	1,216
Other		
Acceptances	16,099	16,459
Obligations related to securities sold short	33,192	30,008
Obligations related to assets sold under repurchase agreements and securities loaned	178,170	143,084
Derivatives	86,082	92,127
Insurance claims and policy benefit liabilities	10,105	9,676
Other liabilities (Note 2)	48,068	46,955
	371,716	338,309
Subordinated debentures	9,129	9,265
Total liabilities	1,214,502	1,138,425
Equity attributable to shareholders		
Preferred shares (Note 9)	6,306	6,413
Common shares (Note 9)	17,533	17,703
Retained earnings	49,424	45,359
Other components of equity	4,518	4,354
	77,781	73,829
Non-controlling interests (Note 9)	91	599
Total equity	77,872	74,428
Total liabilities and equity	\$ 1,292,374	\$ 1,212,853

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

Interim Condensed Consolidated Statements of Income (unaudited)

	For the three months ended		For the nine months ended	
	July 31 2018	July 31 2017	July 31 2018	July 31 2017
(Millions of Canadian dollars, except per share amounts)				
Interest and dividend income (Note 3)				
Loans	\$ 5,484	\$ 4,691	\$ 15,516	\$ 13,769
Securities	1,486	1,207	4,236	3,658
Assets purchased under reverse repurchase agreements and securities borrowed	1,501	829	3,894	2,130
Deposits and other	155	81	385	201
	8,626	6,808	24,031	19,758
Interest expense (Note 3)				
Deposits and other	2,633	1,672	6,840	4,689
Other liabilities	1,312	811	3,494	2,091
Subordinated debentures	85	68	235	199
	4,030	2,551	10,569	6,979
Net interest income	4,596	4,257	13,462	12,779
Non-interest income				
Insurance premiums, investment and fee income	1,290	1,009	3,240	2,954
Trading revenue	234	216	788	660
Investment management and custodial fees	1,347	1,227	3,990	3,575
Mutual fund revenue	908	857	2,655	2,491
Securities brokerage commissions	334	330	1,023	1,089
Service charges	458	450	1,341	1,325
Underwriting and other advisory fees	541	537	1,539	1,595
Foreign exchange revenue, other than trading	273	281	831	744
Card service revenue	266	245	790	722
Credit fees	378	355	1,023	1,069
Net gains on investment securities (Notes 2 and 4)	26	44	114	125
Share of profit (loss) in joint ventures and associates	(26)	33	13	325
Other	400	247	1,098	693
	6,429	5,831	18,445	17,367
Total revenue	11,025	10,088	31,907	30,146
Provision for credit losses (Notes 2, 4 and 5)	346	320	954	916
Insurance policyholder benefits, claims and acquisition expense	925	643	2,182	1,916
Non-interest expense				
Human resources (Note 7)	3,521	3,433	10,347	10,031
Equipment	416	361	1,174	1,061
Occupancy	393	383	1,158	1,186
Communications	260	250	733	712
Professional fees	359	326	961	846
Amortization of other intangibles	271	255	798	758
Other	638	529	1,780	1,589
	5,858	5,537	16,951	16,183
Income before income taxes	3,896	3,588	11,820	11,131
Income taxes	787	792	2,639	2,499
Net income	\$ 3,109	\$ 2,796	\$ 9,181	\$ 8,632
Net income attributable to:				
Shareholders	\$ 3,101	\$ 2,783	\$ 9,153	\$ 8,599
Non-controlling interests	8	13	28	33
	\$ 3,109	\$ 2,796	\$ 9,181	\$ 8,632
Basic earnings per share (in dollars) (Note 10)	\$ 2.10	\$ 1.86	\$ 6.19	\$ 5.69
Diluted earnings per share (in dollars) (Note 10)	2.10	1.85	6.16	5.67
Dividends per common share (in dollars)	0.94	0.87	2.79	2.57

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

Interim Condensed Consolidated Statements of Comprehensive Income (unaudited)

(Millions of Canadian dollars)	For the three months ended		For the nine months ended	
	July 31 2018	July 31 2017	July 31 2018	July 31 2017
Net income	\$ 3,109	\$ 2,796	\$ 9,181	\$ 8,632
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		67		66
Reclassification of net losses (gains) on available-for-sale securities to income		(27)		(76)
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	43		5	
Provision for credit losses recognized in income	(9)		15	
Reclassification of net losses (gains) on debt securities and loans at fair value through other comprehensive income to income	(13)		(76)	
	21	40	(56)	(10)
Foreign currency translation adjustments				
Unrealized foreign currency translation gains (losses)	415	(4,405)	387	(3,272)
Net foreign currency translation gains (losses) from hedging activities	(78)	1,538	(130)	1,076
Reclassification of losses (gains) on foreign currency translation to income	-	-	-	(10)
	337	(2,867)	257	(2,206)
Net change in cash flow hedges				
Net gains (losses) on derivatives designated as cash flow hedges	(45)	585	162	595
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	28	(167)	19	(99)
	(17)	418	181	496
Items that will not be reclassified subsequently to income:				
Remeasurements of employee benefit plans (Note 7)	464	510	597	832
Net fair value change due to credit risk on financial liabilities designated as at fair value through profit or loss	(13)	(20)	113	(265)
Net gains (losses) on equity securities designated at fair value through other comprehensive income	2		1	
	453	490	711	567
Total other comprehensive income (loss), net of taxes	794	(1,919)	1,093	(1,153)
Total comprehensive income (loss)	\$ 3,903	\$ 877	\$ 10,274	\$ 7,479
Total comprehensive income attributable to:				
Shareholders	\$ 3,894	\$ 871	\$ 10,245	\$ 7,451
Non-controlling interests	9	6	29	28
	\$ 3,903	\$ 877	\$ 10,274	\$ 7,479

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

(Millions of Canadian dollars)	For the three months ended		For the nine months ended	
	July 31 2018	July 31 2017	July 31 2018	July 31 2017
Income taxes on other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities		\$ 50		\$ 39
Reclassification of net losses (gains) on available-for-sale securities to income		(9)		(29)
Net unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income	\$ 20		\$ 22	
Provision for credit losses recognized in income	9		5	
Reclassification of net losses (gains) on debt securities and loans at fair value through other comprehensive income to income	(10)		(40)	
Unrealized foreign currency translation gains (losses)	1	(9)	1	(7)
Net foreign currency translation gains (losses) from hedging activities	(23)	518	(43)	359
Net gains (losses) on derivatives designated as cash flow hedges	(16)	211	89	215
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	10	(60)	(24)	(36)
Remeasurements of employee benefit plans	166	186	216	292
Net fair value change due to credit risk on financial liabilities designated as at fair value through profit or loss	(4)	(8)	42	(102)
Net gains (losses) on equity securities designated at fair value through other comprehensive income	1		(3)	
Total income tax expenses (recoveries)	\$ 154	\$ 879	\$ 265	\$ 731

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

Interim Condensed Consolidated Statements of Changes in Equity (unaudited)

	Other components of equity										Total equity		
	Preferred shares	Common shares	Treasury shares – preferred	Treasury shares – common	Retained earnings	Available-for-sale securities	FVOCI securities and loans	Foreign currency translation	Cash flow hedges	Total other components of equity		Equity attributable to shareholders	Non-controlling interests
Balance at April 30, 2017	\$ 6,713	\$ 17,717	\$ (1)	\$ (10)	\$ 42,538	\$ 290		\$ 5,344	\$ (21)	\$ 5,613	\$ 72,570	\$ 598	\$ 73,168
Changes in equity													
Issues of share capital	–	42	–	–	–	–	–	–	–	–	42	–	42
Common shares purchased for cancellation	–	–	–	–	–	–	–	–	–	–	–	–	–
Redemption of trust capital securities	–	–	–	–	–	–	–	–	–	–	–	–	–
Redemption of preferred shares	–	–	–	–	–	–	–	–	–	–	–	–	–
Sales of treasury shares	–	–	38	1,099	–	–	–	–	–	–	1,137	–	1,137
Purchases of treasury shares	–	–	(37)	(977)	–	–	–	–	–	–	(1,014)	–	(1,014)
Share-based compensation awards	–	–	–	–	(6)	–	–	–	–	–	(6)	–	(6)
Dividends on common shares	–	–	–	–	(1,269)	–	–	–	–	–	(1,269)	–	(1,269)
Dividends on preferred shares and other	–	–	–	–	(76)	–	–	–	–	–	(76)	–	(93)
Other	–	–	–	–	19	–	–	–	–	–	19	–	19
Net income	–	–	–	–	2,783	–	–	–	–	–	2,783	13	2,796
Total other comprehensive income (loss), net of taxes	–	–	–	–	490	40	(2,860)	418	–	(2,402)	(1,912)	(7)	(1,919)
Balance at July 31, 2017	\$ 6,713	\$ 17,759	\$ –	\$ 112	\$ 44,479	\$ 330		\$ 2,484	\$ 397	\$ 3,211	\$ 72,274	\$ 587	\$ 72,861
Balance at April 30, 2018	\$ 6,306	\$ 17,634	\$ (3)	\$ (95)	\$ 47,405			\$ 84	\$ 629	\$ 4,178	\$ 75,425	\$ 600	\$ 76,025
Changes in equity													
Issues of share capital	–	24	–	–	–	–	–	–	–	–	24	–	24
Common shares purchased for cancellation	–	(16)	–	–	(112)	–	–	–	–	–	(128)	–	(128)
Redemption of trust capital securities	–	–	–	–	–	–	–	–	–	–	–	–	–
Redemption of preferred shares	–	–	–	–	–	–	–	–	–	–	–	(500)	(500)
Sales of treasury shares	–	–	69	1,292	–	–	–	–	–	–	1,361	–	1,361
Purchases of treasury shares	–	–	(66)	(1,306)	–	–	–	–	–	–	(1,372)	–	(1,372)
Share-based compensation awards	–	–	–	–	(2)	–	–	–	–	–	(2)	–	(2)
Dividends on common shares	–	–	–	–	(1,355)	–	–	–	–	–	(1,355)	–	(1,355)
Dividends on preferred shares and other	–	–	–	–	(71)	–	–	–	–	–	(71)	–	(89)
Other	–	–	–	–	5	–	–	–	–	–	5	–	5
Net income	–	–	–	–	3,101	–	–	–	–	–	3,101	8	3,109
Total other comprehensive income (loss), net of taxes	–	–	–	–	453	–	21	336	(17)	340	793	1	794
Balance at July 31, 2018	\$ 6,306	\$ 17,642	\$ –	\$ (109)	\$ 49,424			\$ 105	\$ 612	\$ 4,518	\$ 77,781	\$ 91	\$ 77,872

	Other components of equity										Equity attributable to shareholders	Non-controlling interests	Total equity
	Preferred shares	Common shares	Treasury shares – preferred	Treasury shares – common	Retained earnings	Available-for-sale securities	FVOCI securities and loans	Foreign currency translation	Cash flow hedges	Total other components of equity			
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	–	188	–	–	(1)	–	–	–	–	187	–	187	
Common shares purchased for cancellation	–	(368)	–	–	(2,220)	–	–	–	–	(2,588)	–	(2,588)	
Redemption of trust capital securities	–	–	–	–	–	–	–	–	–	–	–	–	
Redemption of preferred shares	–	–	–	–	–	–	–	–	–	–	–	–	
Sales of treasury shares	–	–	82	3,414	–	–	–	–	–	3,496	–	3,496	
Purchases of treasury shares	–	–	(82)	(3,222)	–	–	–	–	–	(3,304)	–	(3,304)	
Share-based compensation awards	–	–	–	–	(31)	–	–	–	–	(31)	–	(31)	
Dividends on common shares	–	–	–	–	(3,772)	–	–	–	–	(3,772)	–	(3,772)	
Dividends on preferred shares and other	–	–	–	–	(228)	–	–	–	–	(228)	–	(262)	
Other	–	–	–	–	46	–	–	–	–	46	–	44	
Net income	–	–	–	–	8,599	–	–	–	–	8,599	33	8,632	
Total other comprehensive income (loss), net of taxes	–	–	–	–	567	(10)	(2,201)	496	(1,715)	(1,148)	(5)	(1,153)	
Balance at July 31, 2017	\$ 6,713	\$ 17,759	\$ –	\$ 112	\$ 44,479	\$ 330	\$ 2,484	\$ 397	\$ 3,211	\$ 72,274	\$ 587	\$ 72,861	
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)	–	–	(79)	(637)	–	(637)	
Balance at November 1, 2017	\$ 6,413	\$ 17,730	\$ –	\$ (27)	\$ 44,801	\$ –	\$ 3,545	\$ 431	\$ 4,275	\$ 73,192	\$ 599	\$ 73,791	
Changes in equity													
Issues of share capital	–	69	–	–	–	–	–	–	–	69	–	69	
Common shares purchased for cancellation	–	(157)	–	–	(1,118)	–	–	–	–	(1,275)	–	(1,275)	
Redemption of trust capital securities	–	–	–	–	–	–	–	–	–	–	(500)	(500)	
Redemption of preferred shares	(107)	–	–	–	2	–	–	–	–	(105)	–	(105)	
Sales of treasury shares	–	–	202	4,061	–	–	–	–	–	4,263	–	4,263	
Purchases of treasury shares	–	–	(202)	(4,143)	–	–	–	–	–	(4,345)	–	(4,345)	
Share-based compensation awards	–	–	–	–	(6)	–	–	–	–	(6)	–	(6)	
Dividends on common shares	–	–	–	–	(4,030)	–	–	–	–	(4,030)	–	(4,030)	
Dividends on preferred shares and other	–	–	–	–	(214)	–	–	–	–	(214)	(37)	(251)	
Other	–	–	–	–	125	–	–	–	(138)	(13)	–	(13)	
Net income	–	–	–	–	9,153	–	–	–	–	9,153	28	9,181	
Total other comprehensive income (loss), net of taxes	–	–	–	–	711	(56)	256	181	381	1,092	1	1,093	
Balance at July 31, 2018	\$ 6,306	\$ 17,642	\$ –	\$ (109)	\$ 49,424	\$ 105	\$ 3,801	\$ 612	\$ 4,518	\$ 77,781	\$ 91	\$ 77,872	

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

Interim Condensed Consolidated Statements of Cash Flows (unaudited)

(Millions of Canadian dollars)	For the three months ended		For the nine months ended	
	July 31 2018	July 31 2017	July 31 2018	July 31 2017
Cash flows from operating activities				
Net income	\$ 3,109	\$ 2,796	\$ 9,181	\$ 8,632
Adjustments for non-cash items and others				
Provision for credit losses	346	320	954	916
Depreciation	147	141	423	449
Deferred income taxes	90	153	403	183
Amortization and impairment of other intangibles	272	257	799	760
Net changes in investments in joint ventures and associates	26	(33)	(9)	(323)
Losses (Gains) on investment securities (Note 2)	(24)	(66)	(118)	(189)
Losses (Gains) on disposition of business	(40)	-	(40)	2
Impairment of available-for-sale securities		12		43
Adjustments for net changes in operating assets and liabilities				
Insurance claims and policy benefit liabilities	342	69	323	167
Net change in accrued interest receivable and payable	79	92	23	(99)
Current income taxes	(86)	823	(2,597)	(711)
Derivative assets	5,672	(5,070)	6,520	13,111
Derivative liabilities	(4,808)	5,172	(6,045)	(12,347)
Trading securities	4,782	3,661	4,169	22,555
Loans, net of securitizations	(12,012)	(3,009)	(30,286)	(13,695)
Assets purchased under reverse repurchase agreements and securities borrowed	(2,986)	8,262	(43,194)	(22,367)
Deposits, net of securitizations	10,213	(5,715)	43,964	22,279
Obligations related to assets sold under repurchase agreements and securities loaned	7,252	(5,975)	35,086	18,539
Obligations related to securities sold short	145	3,181	3,184	(9,857)
Brokers and dealers receivable and payable	1,302	(537)	358	(355)
Other	1,692	5,847	448	3,722
Net cash from (used in) operating activities	15,513	10,381	23,546	31,415
Cash flows from investing activities				
Change in interest-bearing deposits with banks	(12,180)	(10,223)	(16,497)	(8,247)
Proceeds from sale of investment securities (Note 2)	5,497	2,501	15,994	7,773
Proceeds from maturity of investment securities (Note 2)	8,071	9,297	26,956	30,299
Purchases of investment securities (Note 2)	(14,225)	(16,318)	(38,877)	(44,353)
Net acquisitions of premises and equipment and other intangibles	(521)	(228)	(1,395)	(899)
Proceeds from dispositions	14	-	14	-
Net cash from (used in) investing activities	(13,344)	(14,971)	(13,805)	(15,427)
Cash flows from financing activities				
Redemption of trust capital securities	(500)	-	(500)	-
Repayment of subordinated debentures	-	(119)	-	(119)
Issue of common shares	21	35	53	169
Common shares purchased for cancellation	(128)	-	(1,275)	(2,588)
Redemption of preferred shares	-	-	(105)	-
Sales of treasury shares	1,361	1,137	4,263	3,496
Purchases of treasury shares	(1,372)	(1,014)	(4,345)	(3,304)
Dividends paid	(1,427)	(1,348)	(4,214)	(3,964)
Issuance costs	-	-	-	(1)
Dividends/distributions paid to non-controlling interests	(18)	(17)	(37)	(34)
Change in short-term borrowings of subsidiaries	(898)	(13)	-	(30)
Net cash from (used in) financing activities	(2,961)	(1,339)	(6,160)	(6,375)
Effect of exchange rate changes on cash and due from banks	42	(287)	27	(240)
Net change in cash and due from banks	(750)	(6,216)	3,608	9,373
Cash and due from banks at beginning of period (1)	32,765	30,518	28,407	14,929
Cash and due from banks at end of period (1)	\$ 32,015	\$ 24,302	\$ 32,015	\$ 24,302
Cash flows from operating activities include:				
Amount of interest paid	\$ 3,662	\$ 2,343	\$ 9,668	\$ 6,337
Amount of interest received	8,278	6,654	22,967	18,796
Amount of dividend received	446	411	1,285	1,358
Amount of income taxes paid	908	768	5,076	3,815

(1) We are required to maintain balances with central banks and other regulatory authorities. The total balances were \$2.7 billion as at July 31, 2018 (April 30, 2018 – \$2.6 billion; October 31, 2017 – \$2.3 billion; July 31, 2017 – \$1.8 billion; April 30, 2017 – \$1.8 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 August 21, 2018, the Board of Directors authorized the Condensed Financial Statements for issue.

Note 2 Summary of significant accounting policies, estimates and judgments

Except as indicated below, the Condensed Financial Statements have been prepared using the same accounting policies and methods used in preparation of our audited 2017 Annual Consolidated Financial Statements. Significant accounting policies are described in Note 2 of our audited 2017 Annual Consolidated Financial Statements. Future changes in accounting policies and disclosures that are not yet effective for us are described in Note 2 of our audited 2017 Annual Consolidated Financial Statements and an update is provided in the Accounting and control matters – Changes in accounting policies and disclosures section of our Management's Discussion and Analysis.

Changes in accounting policies

During the first quarter, we adopted IFRS 9 *Financial Instruments* (IFRS 9). As a result of the application of IFRS 9, we changed our accounting policies in the areas outlined below, and these new policies were applicable from November 1, 2017. As permitted by the transition provisions of IFRS 9, we elected not to restate comparative period results; accordingly, all comparative period information is presented in accordance with our previous accounting policies, as described in our 2017 Annual Report. Adjustments to carrying amounts of financial assets and liabilities at the date of initial application (November 1, 2017) were recognized in opening Retained earnings and Other components of equity in the first quarter of 2018. New or amended interim disclosures have been provided for the current period, where applicable, and comparative period disclosures are consistent with those made in the prior year.

Classification of financial assets

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

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

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

All other debt instruments are measured at FVTPL.

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

Business model assessment

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

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

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

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

SPPI assessment

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

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

Where the contractual terms introduce exposure to risk or variability of cash flows that are inconsistent with a basic lending arrangement, the related financial asset is classified as 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 and dividend income. Interest and dividends accrued on interest-bearing and equity securities sold short are recorded in Interest expense.

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

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

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

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

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

Fair value option

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

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

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

Derivatives

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

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

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

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

Hedge accounting

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

Loans

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

Interest on loans is recognized in Interest and dividend 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 and dividend income over the expected term of such loans using the effective interest method. Where there is a reasonable expectation that a loan will be originated, commitment and standby fees are also recognized as interest income over the expected term of the resulting loans using the effective interest method. Otherwise, such fees are recorded as other liabilities and amortized into Non-interest income over the commitment or standby period. Prepayment fees on mortgage loans are not included as part of the effective interest rate at origination. If prepayment fees are received on a renewal of a mortgage loan, the fee is included as part of the effective interest rate, and if not renewed, the prepayment fee is recognized in interest income at the prepayment date.

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

Allowance for credit losses

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

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

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

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

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

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

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

Note 2 Summary of significant accounting policies, estimates and judgments (continued)*Measurement of expected credit losses*

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

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

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

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

Expected life

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

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

Assessment of significant increase in credit risk

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

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

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

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

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

Use of forward-looking information

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

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

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

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

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

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

Definition of default

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

Credit-impaired financial assets (Stage 3)

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

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

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

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

Individually assessed loans (Stage 3)

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

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

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

Collectively assessed loans (Stage 3)

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

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

The expected principal and interest collection is estimated on a portfolio basis and references historical loss experience of comparable portfolios with similar credit risk characteristics, adjusted for the current environment and expected future conditions. A

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

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 ACL are generally written off when payment is 180 days past due. Personal loans are generally written off at 150 days past due.

Modifications

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

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

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

Impact of adoption of IFRS 9**Mandatory reclassifications**

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

(Millions of Canadian dollars)	IFRS 9		IAS 39	
	As at			
	November 1, 2017		October 31, 2017	
	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

- \$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.
- Loans and securities whose cash flows are not solely payments of principal or interest were reclassified to FVTPL.
- Debt securities managed within a HTC business model were reclassified from available-for-sale to amortized cost. As at July 31, 2018, the fair value of these securities was \$18,575 million. For the three months and nine months ended July 31, 2018, \$1 million and \$241 million of losses would have been recognized in OCI if the securities had not been reclassified, respectively.
- 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.
- 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.

(Millions of Canadian dollars)	IFRS 9		IAS 39	
	As at			
	November 1, 2017		October 31, 2017	
	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.

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

(1) Certain equity securities that are not held for trading purposes have been designated as FVOCI.

(2) Loans in our insurance business were designated as FVTPL to address an accounting mismatch with the related liabilities.

(3) Certain deposits were designated as FVTPL to address an accounting mismatch with the related loans, which were reclassified to FVTPL because their cash flows are not solely payments of principal or interest.

Other

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

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

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

Balance sheet presentation

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

Note 2 Summary of significant accounting policies, estimates and judgments (continued)**Allowance for credit losses**

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

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

(1) Includes the allowance for loans not yet identified as impaired and collectively-assessed allowances for impaired loans.

(2) The allowance for credit losses on financial assets at FVOCI is presented in Other components of equity.

(3) Previously available-for-sale debt securities under IAS 39.

(4) Previously held-to-maturity securities under IAS 39.

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

Consolidated Balance Sheets

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

Note 3 Fair value of financial instruments

Carrying value and fair value of financial instruments

The following tables provide a comparison of the carrying and fair values for each classification of financial instruments. Embedded derivatives are presented on a combined basis with the host contracts. Refer to Note 2 and Note 3 of our audited 2017 Annual Consolidated Financial Statements for a description of the valuation techniques and inputs used in the fair value measurement of our financial instruments. There have been no significant changes to our determination of fair value during the quarter.

(Millions of Canadian dollars)	As at July 31, 2018 (IFRS 9)							
	Carrying value and fair value				Carrying value		Fair value	
	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	\$ –	\$ 28,583	\$ –	\$ –	\$ 20,576	\$ 20,576	\$ 49,159	\$ 49,159
Securities								
Trading	119,465	6,921	–	–	–	–	126,386	126,386
Investment, net of applicable allowance (1)	–	–	43,240	414	47,092	46,455	90,746	90,109
	119,465	6,921	43,240	414	47,092	46,455	217,132	216,495
Assets purchased under reverse repurchase agreements and securities borrowed	190,333	–	–	–	73,837	73,836	264,170	264,169
Loans, net of applicable allowance								
Retail	69	196	97	–	392,591	389,740	392,953	390,102
Wholesale	6,160	1,387	467	–	162,130	160,314	170,144	168,328
	6,229	1,583	564	–	554,721	550,054	563,097	558,430
Other								
Derivatives	88,503	–	–	–	–	–	88,503	88,503
Other assets (2)	1,361	–	–	–	44,386	44,386	45,747	45,747
Financial liabilities								
Deposits								
Personal	\$ 184	\$ 14,676			\$ 250,695	\$ 250,409	\$ 265,555	\$ 265,269
Business and government (3)	8	102,030			432,770	433,464	534,808	535,502
Bank (4)	–	5,123			26,775	26,808	31,898	31,931
	192	121,829			710,240	710,681	832,261	832,702
Other								
Obligations related to securities sold short	33,192	–			–	–	33,192	33,192
Obligations related to assets sold under repurchase agreements and securities loaned	–	172,342			5,828	5,829	178,170	178,171
Derivatives	86,082	–			–	–	86,082	86,082
Other liabilities (5)	(1,419)	13			51,633	51,599	50,227	50,193
Subordinated debentures	–	–			9,129	9,341	9,129	9,341

	As at October 31, 2017 (IAS 39)							
	Carrying value and fair value			Carrying value	Fair value		Total carrying amount	Total fair value
	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			
(Millions of Canadian dollars)								
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**

(Millions of Canadian dollars)	IFRS 9						IAS 39					
	As at						As at					
	July 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
Level 1	Level 2	Level 3	Level 1				Level 2	Level 3				
Financial assets												
Interest-bearing deposits with banks	\$ –	\$ 28,583	\$ –	\$ 28,583	\$ –	\$ 28,583	\$ –	\$ 20,752	\$ –	\$ 20,752	\$ –	\$ 20,752
Securities												
Trading												
Canadian government debt (1)												
Federal	6,643	7,049	–	13,692	–	13,692	9,374	7,929	–	17,303	–	17,303
Provincial and municipal	–	11,302	–	11,302	–	11,302	–	11,422	–	11,422	–	11,422
U.S. state, municipal and agencies debt (1)	979	30,775	65	31,819	–	31,819	1,226	29,634	–	30,860	–	30,860
Other OECD government debt (2)	2,177	7,529	–	9,706	–	9,706	934	10,420	–	11,354	–	11,354
Mortgage-backed securities (1)	–	774	–	774	–	774	–	1,298	–	1,298	–	1,298
Asset-backed securities												
Non-CDO securities (3)	–	3,934	113	4,047	–	4,047	–	732	–	732	–	732
Corporate debt and other debt	10	19,968	22	20,000	–	20,000	52	21,655	29	21,736	–	21,736
Equities	31,158	2,802	1,086	35,046	–	35,046	29,674	2,853	425	32,952	–	32,952
	40,967	84,133	1,286	126,386	–	126,386	41,260	85,943	454	127,657	–	127,657
Investment (4)												
Canadian government debt (1)												
Federal	–	320	–	320	–	320	477	1,124	–	1,601	–	1,601
Provincial and municipal	–	874	–	874	–	874	–	2,503	–	2,503	–	2,503
U.S. state, municipal and agencies debt (1)	–	17,359	–	17,359	–	17,359	8	28,999	508	29,515	–	29,515
Other OECD government debt	–	1,694	–	1,694	–	1,694	479	8,673	–	9,152	–	9,152
Mortgage-backed securities (1)	–	1,815	–	1,815	–	1,815	–	934	–	934	–	934
Asset-backed securities												
CDO	–	5,311	–	5,311	–	5,311	–	3,623	–	3,623	–	3,623
Non-CDO securities	–	823	–	823	–	823	–	2,671	203	2,874	–	2,874
Corporate debt and other debt	–	14,808	236	15,044	–	15,044	–	23,662	797	24,459	–	24,459
Equities	41	102	243	386	–	386	339	38	711	1,088	–	1,088
Loan substitute securities	–	24	4	28	–	28	–	24	4	28	–	28
	41	43,130	483	43,654	–	43,654	1,303	72,251	2,223	75,777	–	75,777
Assets purchased under reverse repurchase agreements and securities borrowed	–	190,333	–	190,333	–	190,333	–	138,979	–	138,979	–	138,979
Loans	–	7,880	496	8,376	–	8,376	–	4,056	179	4,235	–	4,235
Other												
Derivatives												
Interest rate contracts	–	35,041	307	35,348	–	35,348	–	106,145	380	106,525	–	106,525
Foreign exchange contracts	–	38,079	46	38,125	–	38,125	–	42,871	63	42,934	–	42,934
Credit derivatives	–	71	–	71	–	71	–	157	–	157	–	157
Other contracts	4,217	11,802	288	16,307	–	16,307	3,510	10,141	307	13,958	–	13,958
Valuation adjustments	–	(620)	2	(618)	–	(618)	–	(722)	(3)	(725)	–	(725)
Total gross derivatives	4,217	84,373	643	89,233	–	89,233	3,510	158,592	747	162,849	–	162,849
Netting adjustments	–	–	–	–	(730)	(730)	–	–	–	–	(67,826)	(67,826)
Total derivatives	4,217	84,373	643	89,233	(730)	88,503	3,510	158,592	747	162,849	(67,826)	95,023
Other assets	1,064	227	70	1,361	–	1,361	966	247	–	1,213	–	1,213
	\$ 46,289	\$ 438,659	\$ 2,978	\$ 487,926	\$ (730)	\$ 487,196	\$ 47,039	\$ 480,820	\$ 3,603	\$ 531,462	\$ (67,826)	\$ 463,636
Financial liabilities												
Deposits												
Personal	\$ –	\$ 14,391	\$ 469	\$ 14,860	\$ –	\$ 14,860	\$ –	\$ 13,513	\$ 465	\$ 13,978	\$ –	\$ 13,978
Business and government	–	102,038	–	102,038	–	102,038	–	94,509	–	94,509	–	94,509
Bank	–	5,123	–	5,123	–	5,123	–	2,072	–	2,072	–	2,072
Other												
Obligations related to securities sold short	17,782	15,410	–	33,192	–	33,192	12,407	17,601	–	30,008	–	30,008
Obligations related to assets sold under repurchase agreements and securities loaned	–	172,342	–	172,342	–	172,342	–	133,947	–	133,947	–	133,947
Derivatives												
Interest rate contracts	–	30,208	743	30,951	–	30,951	–	100,765	835	101,600	–	101,600
Foreign exchange contracts	–	37,527	20	37,547	–	37,547	–	40,497	42	40,539	–	40,539
Credit derivatives	–	151	–	151	–	151	–	258	–	258	–	258
Other contracts	3,240	14,464	485	18,189	–	18,189	3,417	13,461	488	17,366	–	17,366
Valuation adjustments	–	(32)	6	(26)	–	(26)	–	55	13	68	–	68
Total gross derivatives	3,240	82,318	1,254	86,812	–	86,812	3,417	155,036	1,378	159,831	–	159,831
Netting adjustments	–	–	–	–	(730)	(730)	–	–	–	–	(67,704)	(67,704)
Total derivatives	3,240	82,318	1,254	86,812	(730)	86,082	3,417	155,036	1,378	159,831	(67,704)	92,127
Other liabilities	193	(1,658)	59	(1,406)	–	(1,406)	130	(1,286)	24	(1,132)	–	(1,132)
Subordinated debentures	–	–	–	–	–	–	–	–	–	–	–	–
	\$ 21,215	\$ 389,964	\$ 1,782	\$ 412,961	\$ (730)	\$ 412,231	\$ 15,954	\$ 415,392	\$ 1,867	\$ 433,213	\$ (67,704)	\$ 365,509

- (1) As at July 31, 2018, residential and commercial mortgage-backed securities (MBS) included in all fair value levels of trading securities were \$18,720 million and \$nil (October 31, 2017 – \$17,977 million and \$nil), respectively, and in all fair value levels of investment securities were \$4,652 million and \$1,275 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 July 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 July 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.

(Millions of Canadian dollars)	IFRS 9								
	For the three months ended July 31, 2018								
	Fair value at beginning of period	Total realized/unrealized gains (losses) included in earnings	Total unrealized gains (losses) included in OCI (2)	Purchases of assets/ issuances of liabilities	Sales of assets/ settlements of liabilities and other (3)	Transfers into Level 3	Transfers out of Level 3	Fair value at end of period	Changes in unrealized gains (losses) included in earnings for assets and liabilities for positions still held
Assets									
Securities									
Trading									
U.S. state, municipal and agencies debt	\$ 66	\$ -	\$ 1	\$ -	\$ (2)	\$ -	\$ -	\$ 65	\$ -
Asset-backed securities									
Non-CDO securities	115	1	2	-	(5)	-	-	113	1
Corporate debt and other debt	23	-	-	-	(1)	-	-	22	-
Equities	1,000	(27)	12	87	(16)	30	-	1,086	(11)
	1,204	(26)	15	87	(24)	30	-	1,286	(10)
Investment									
U.S. state, municipal and agencies debt	-	-	-	-	-	-	-	-	n.a.
Asset-backed securities									
Non-CDO securities	-	-	-	-	-	-	-	-	n.a.
Corporate debt and other debt	33	-	1	-	-	202	-	236	n.a.
Equities	246	(1)	(2)	-	-	-	-	243	n.a.
Loan substitute securities	4	-	-	-	-	-	-	4	-
	283	(1)	(1)	-	-	202	-	483	n.a.
Loans	687	2	-	131	(284)	-	(40)	496	2
Other									
Net derivative balances (4)									
Interest rate contracts	(505)	(18)	-	21	72	-	(6)	(436)	(18)
Foreign exchange contracts	34	(10)	(7)	12	-	(1)	(2)	26	(14)
Other contracts	(112)	(13)	(1)	(71)	3	(42)	39	(197)	13
Valuation adjustments	(22)	-	-	-	18	-	-	(4)	-
Other assets	-	-	(1)	71	-	-	-	70	-
	\$ 1,569	\$ (66)	\$ 5	\$ 251	\$ (215)	\$ 189	\$ (9)	\$ 1,724	\$ (27)
Liabilities									
Deposits									
Personal	\$ (254)	\$ (13)	\$ (1)	\$ (54)	\$ 7	\$ (238)	\$ 84	\$ (469)	\$ (11)
Business and government	-	-	-	-	-	-	-	-	-
Other									
Obligations related to securities sold short	-	-	-	-	-	-	-	-	-
Other liabilities	(24)	(2)	-	(35)	2	-	-	(59)	-
	\$ (278)	\$ (15)	\$ (1)	\$ (89)	\$ 9	\$ (238)	\$ 84	\$ (528)	\$ (11)

Note 3 Fair value of financial instruments (continued)

IAS 39

For the three months ended July 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									
U.S. state, municipal and agencies debt	\$ 1	\$ -	\$ -	\$ -	\$ (1)	\$ -	\$ -	\$ -	\$ -
Asset-backed securities									
Non-CDO securities	6	-	-	-	(6)	-	-	-	-
Corporate debt and other debt	59	(2)	-	32	(29)	-	(2)	58	(1)
Equities	440	(24)	(37)	28	(22)	-	-	385	(23)
	506	(26)	(37)	60	(58)	-	(2)	443	(24)
Investment									
U.S. state, municipal and agencies debt	699	-	(33)	-	(104)	-	-	562	n.a.
Asset-backed securities									
Non-CDO securities	217	-	(6)	-	(9)	-	-	202	n.a.
Corporate debt and other debt	927	-	(73)	28	(1)	-	(158)	723	n.a.
Equities	721	31	(60)	9	(70)	-	-	631	n.a.
Loan substitute securities	-	-	-	-	-	-	-	-	n.a.
	2,564	31	(172)	37	(184)	-	(158)	2,118	n.a.
Loans	504	(11)	(12)	202	(15)	-	-	668	(11)
Other									
Net derivative balances (4)									
Interest rate contracts	(425)	63	(20)	(8)	(2)	1	(39)	(430)	64
Foreign exchange contracts	54	(23)	(1)	(2)	(2)	2	(2)	26	(23)
Other contracts	(264)	51	12	(32)	(1)	19	102	(113)	51
Valuation adjustments	(14)	-	-	-	(1)	-	-	(15)	-
	\$ 2,925	\$ 85	\$ (230)	\$ 257	\$ (263)	\$ 22	\$ (99)	\$ 2,697	\$ 57
Liabilities									
Deposits									
Personal	\$ (343)	\$ 21	\$ 17	\$ (190)	\$ 27	\$ (75)	\$ 109	\$ (434)	\$ 21
Business and government	(2)	-	-	-	-	-	2	-	-
Other									
Obligations related to securities sold short	-	-	-	-	-	-	-	-	-
Other liabilities	(26)	-	2	-	-	-	-	(24)	-
	\$ (371)	\$ 21	\$ 19	\$ (190)	\$ 27	\$ (75)	\$ 111	\$ (458)	\$ 21

IFRS 9									
For the nine months ended July 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									
U.S. state, municipal and agencies debt	\$ 508	\$ 16	\$ (4)	\$ –	\$ (455)	\$ –	\$ –	\$ 65	\$ (2)
Asset-backed securities									
Non-CDO securities	196	27	1	–	(111)	–	–	113	12
Corporate debt and other debt	30	(2)	–	–	(1)	–	(5)	22	(1)
Equities	923	(127)	27	320	(89)	34	(2)	1,086	(48)
	1,657	(86)	24	320	(656)	34	(7)	1,286	(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)	6	–	–	206	–	236	n.a.
Equities	217	(1)	25	–	2	–	–	243	n.a.
Loan substitute securities	3	–	1	–	–	–	–	4	n.a.
	249	(6)	32	–	2	206	–	483	n.a.
Loans	477	4	(1)	345	(289)	–	(40)	496	(3)
Other									
Net derivative balances (4)									
Interest rate contracts	(455)	16	–	71	73	–	(141)	(436)	(2)
Foreign exchange contracts	21	(6)	(4)	11	3	4	(3)	26	(11)
Other contracts	(181)	35	–	(87)	(42)	(55)	133	(197)	(8)
Valuation adjustments	(16)	–	–	–	12	–	–	(4)	–
Other assets	–	–	(1)	71	–	–	–	70	–
	\$ 1,752	\$ (43)	\$ 50	\$ 731	\$ (897)	\$ 189	\$ (58)	\$ 1,724	\$ (63)
Liabilities									
Deposits									
Personal	\$ (465)	\$ (58)	\$ (3)	\$ (221)	\$ 33	\$ (398)	\$ 643	\$ (469)	\$ 54
Business and government	–	–	–	–	–	–	–	–	–
Other									
Obligations related to securities sold short	–	–	–	–	–	–	–	–	–
Other liabilities	(24)	(3)	–	(40)	8	–	–	(59)	–
	\$ (489)	\$ (61)	\$ (3)	\$ (261)	\$ 41	\$ (398)	\$ 643	\$ (528)	\$ 54

Note 3 Fair value of financial instruments (continued)

IAS 39									
For the nine months ended July 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									
U.S. state, municipal and agencies debt	\$ 1	\$ –	\$ –	\$ –	\$ (1)	\$ –	\$ –	\$ –	\$ –
Asset-backed securities									
Non-CDO securities	4	–		6	(10)	–	–	–	–
Corporate debt and other debt	62	(4)	1	52	(59)	20	(14)	58	(2)
Equities	376	(66)	(31)	166	(74)	15	(1)	385	(54)
	443	(70)	(30)	224	(144)	35	(15)	443	(56)
Investment									
U.S. state, municipal and agencies debt	747	(5)	(17)	–	(163)	–	–	562	n.a.
Asset-backed securities									
Non-CDO securities	217	–	9	–	(24)	–	–	202	n.a.
Corporate debt and other debt	956	(1)	(64)	44	(34)	–	(178)	723	n.a.
Equities	756	53	(47)	32	(163)	–	–	631	n.a.
Loan substitute securities	–	–	–	–	–	–	–	–	n.a.
	2,676	47	(119)	76	(384)	–	(178)	2,118	n.a.
Loans	329	(4)	(9)	371	(19)	–	–	668	(4)
Other									
Net derivative balances (4)									
Interest rate contracts	(448)	54	(20)	18	(2)	4	(36)	(430)	80
Foreign exchange contracts	(15)	47	2	(2)	(2)	–	(4)	26	15
Other contracts	(122)	63	5	(65)	(5)	(29)	40	(113)	92
Valuation adjustments	(10)	–	–	–	(5)	–	–	(15)	–
	\$ 2,853	\$ 137	\$ (171)	\$ 622	\$ (561)	\$ 10	\$ (193)	\$ 2,697	\$ 127
Liabilities									
Deposits									
Personal	\$ (425)	\$ (1)	\$ 17	\$ (315)	\$ 76	\$ (197)	\$ 411	\$ (434)	\$ 18
Business and government	(2)	–	–	–	–	–	2	–	–
Other									
Obligations related to securities sold short	(1)	–	–	–	1	–	–	–	–
Other liabilities	(88)	(2)	3	–	63	–	–	(24)	–
	\$ (516)	\$ (3)	\$ 20	\$ (315)	\$ 140	\$ (197)	\$ 413	\$ (458)	\$ 18

(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 \$1 million for the three months ended July 31, 2018 (July 31, 2017 – gains of \$2 million) and gains of \$31 million for the nine months ended July 31, 2018 (July 31, 2017 – gains of \$22 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 July 31, 2018 included derivative assets of \$643 million (July 31, 2017 – \$702 million) and derivative liabilities of \$1,254 million (July 31, 2017 – \$1,234 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 July 31, 2018, transfers out of Level 1 to Level 2 included \$247 million of Trading U.S. state, municipal and agencies debt and \$309 million of Obligations related to securities sold short.

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

During the three months ended July 31, 2018, significant transfers out of Level 2 to Level 3 included \$202 million of Corporate debt and other debt, \$42 million of OTC equity options in Other contracts, comprised of \$112 million of derivative related assets and \$154 million of derivative related liabilities, and \$238 million of Personal deposits.

During the three months ended July 31, 2018, significant transfers out of Level 3 to Level 2 included \$39 million of OTC equity options in Other contracts, comprised of \$250 million of derivative related assets and \$289 million of derivative related liabilities.

Transfers of Corporate debt and other debt and OTC equity options in Other contracts were due to changes in the market observability of inputs. Transfers relating to Personal deposits resulted from changes in the significance and market observability of inputs used to calculate fair values.

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

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

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

(Millions of Canadian dollars)	IFRS 9			IAS 39		
	As at					
	July 31, 2018			October 31, 2017		
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	\$ 65	\$ –	\$ (1)	\$ –	\$ –	\$ –
Asset-backed securities	113	7	(10)	–	–	–
Corporate debt and other debt	22	–	–	29	–	–
Equities	1,086	11	(11)	425	–	–
Investment						
U.S. state, municipal and agencies debt	–	–	–	508	8	(20)
Asset-backed securities	–	–	–	203	15	(21)
Corporate debt and other debt	236	1	(52)	797	6	(6)
Equities	243	24	(24)	711	40	(24)
Loan substitute securities	4	–	–	4	2	–
Loans	496	5	(6)	179	2	(3)
Derivatives	643	30	(25)	747	34	(30)
Other assets	70	–	–	–	–	–
	\$ 2,978	\$ 78	\$ (129)	\$ 3,603	\$ 107	\$ (104)
Deposits	\$ (469)	\$ 8	\$ (8)	\$ (465)	\$ 11	\$ (11)
Derivatives	(1,254)	50	(51)	(1,378)	37	(48)
Other						
Securities sold short and other liabilities	(59)	–	–	(24)	–	–
	\$ (1,782)	\$ 58	\$ (59)	\$ (1,867)	\$ 48	\$ (59)

Net interest income from financial instruments

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

(Millions of Canadian dollars)	IFRS 9		IAS 39	
	For the three months ended			
	July 31 2018	July 31 2017	July 31 2018	July 31 2017
Interest and dividend income ^{(1) (2)}				
Financial instruments measured at fair value through profit or loss	\$ 2,125	\$ 1,548	\$ 5,626	\$ 4,442
Financial instruments measured at fair value through other comprehensive income	234	–	558	–
Financial instruments measured at amortized cost	6,267	–	17,847	–
Other categories of financial instruments ⁽³⁾	–	5,260	–	15,316
	8,626	6,808	24,031	19,758
Interest expense ⁽¹⁾				
Financial instruments measured at fair value through profit or loss	\$ 1,903	\$ 1,075	\$ 4,935	\$ 2,789
Financial instruments measured at amortized cost	2,127	–	5,634	–
Other categories of financial instruments ⁽³⁾	–	1,476	–	4,190
	4,030	2,551	10,569	6,979
Net interest income	\$ 4,596	\$ 4,257	\$ 13,462	\$ 12,779

- (1) Excludes the following amounts related to our insurance operations and included in Insurance premiums, investment and fee income in the Consolidated Statements of Income: For the three months ended July 31, 2018, Interest income of \$122 million (July 31, 2017 – \$116 million), and Interest expense of \$nil million (July 31, 2017 – \$1 million). For the nine months ended July 31, 2018, Interest income of \$360 million (July 31, 2017 – \$347 million), and Interest expense of \$3 million (July 31, 2017 – \$3 million).
- (2) Includes dividend income for the three months ended July 31, 2018 of \$417 million (July 31, 2017 – \$342 million) and for the nine months ended July 31, 2018 of \$1,177 million (July 31, 2017 – \$1,023 million), which is presented in Interest and dividend income in the Consolidated Statement of Income.
- (3) Includes assets classified as available-for-sale, loans and receivables, and held-to-maturity, and liabilities classified as amortized cost.

Note 4 Securities

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

(Millions of Canadian dollars)	As at			
	July 31, 2018			
	Cost/ Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Canadian government debt				
Federal	\$ 325	\$ –	\$ (5)	\$ 320
Provincial and municipal	888	1	(15)	874
U.S. state, municipal and agencies debt (4)	17,145	320	(106)	17,359
Other OECD government debt	1,693	2	(1)	1,694
Mortgage-backed securities	1,816	1	(2)	1,815
Asset-backed securities				
CDO	5,319	2	(10)	5,311
Non-CDO securities	814	9	–	823
Corporate debt and other debt	15,049	27	(32)	15,044
Equities	198	189	(1)	386
Loan substitute securities	29	1	(2)	28
	\$ 43,276	\$ 552	\$ (174)	\$ 43,654

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

(Millions of Canadian dollars)	As at			
	October 31, 2017			
	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 \$1,276 million, \$nil, \$1 million and \$1,275 million, respectively as at July 31, 2018 (October 31, 2017 – \$727 million, \$1 million, \$1 million and \$727 million, respectively).

(2) Excludes \$47,092 million of held-to-collect securities as at July 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) Gross unrealized gains and losses includes \$45 million of allowance for credit losses on debt securities at FVOCI as at July 31, 2018 recognized in income and retained earnings.

(4) Includes securities issued by U.S. non-agencies backed by government insured assets, MBS and asset-backed securities issued by U.S. government agencies.

Allowance for credit losses on investment securities

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

- Transfers between stages, which are presumed to occur before any corresponding remeasurement of the allowance.
- Purchases and originations, which reflect the allowance related to assets newly recognized during the period, including those assets that were derecognized following a modification of terms.
- Derecognitions and maturities, which reflect the allowance related to assets derecognized during the period without a credit loss being incurred, including those assets that were derecognized following a modification of terms.
- Remeasurements, which comprise the impact of changes in model inputs or assumptions, including changes in forward-looking macroeconomic conditions; partial repayments and additional draws on existing facilities; changes in the measurement following a transfer between stages; and unwinding of the time value discount due to the passage of time.
- During the three and nine months ended July 31, 2018, there were no significant changes to the models used to estimate expected credit losses.

Allowance for credit losses – securities at amortized cost

(Millions of Canadian dollars)	IFRS 9							
	For the three months ended July 31, 2018				For the nine months ended July 31, 2018			
	Performing		Impaired		Performing		Impaired	
Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total	
Balance at beginning of period	\$ 4	\$ 31	\$ –	\$ 35	\$ 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	–	(2)	2	–	–	(2)	2	–
Purchases and originations	1	–	–	1	4	–	–	4
Derecognitions and maturities	–	–	–	–	(2)	(10)	–	(12)
Remeasurements	1	8	–	9	(1)	1	–	–
Exchange rate and other	1	–	–	1	1	(1)	–	–
Balance at end of period	\$ 7	\$ 37	\$ 2	\$ 46	\$ 7	\$ 37	\$ 2	\$ 46

Allowance for credit losses – securities at FVOCI ⁽¹⁾

(Millions of Canadian dollars)	IFRS 9							
	For the three months ended July 31, 2018				For the nine months ended July 31, 2018			
	Performing		Impaired		Performing		Impaired	
Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total	
Balance at beginning of period	\$ 40	\$ 5	\$ –	\$ 45	\$ 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	(36)	–	36	–	(36)	–	36	–
Purchases and originations	1	–	–	1	83	–	–	83
Derecognitions and maturities	(1)	–	–	(1)	(47)	(17)	–	(64)
Remeasurements	–	–	–	–	(1)	1	–	–
Exchange rate and other	–	–	–	–	2	(1)	–	1
Balance at end of period	\$ 4	\$ 5	\$ 36	\$ 45	\$ 4	\$ 5	\$ 36	\$ 45

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

Credit risk exposure by internal risk rating

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

(Millions of Canadian dollars)	IFRS 9			
	As at July 31, 2018			
	Performing		Impaired	
Stage 1	Stage 2	Stage 3	Total	
Investment securities				
Securities at amortized cost				
Investment grade	\$ 46,119	\$ 106	\$ –	\$ 46,225
Non-investment grade	243	658	–	901
Impaired	–	–	12	12
	46,362	764	12	47,138
Allowance for credit losses	7	37	2	46
Amortized cost	46,355	727	10	47,092
Securities at FVOCI				
Investment grade	42,495	36	–	42,531
Non-investment grade	506	1	–	507
Impaired	–	–	202	202
	43,001	37	202	43,240
Items not subject to impairment ⁽¹⁾				414
				\$ 43,654

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

Impairment of available-for-sale securities (IAS 39)

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

Note 4 Securities (continued)**Net gains and losses on available-for-sale securities (IAS 39)** ⁽¹⁾

(Millions of Canadian dollars)	For the three months ended		For the nine months ended	
	July 31 2017		July 31 2017	
Realized gains	\$	63	\$	186
Realized losses		(7)		(18)
Impairment losses		(12)		(43)
	\$	44	\$	125

(1) Realized gains of \$10 million for the three months ended July 31, 2017 and \$21 million for the nine months ended July 31, 2017 related to our insurance operations are excluded from Net gains and losses on Investment securities and are included in Insurance premiums, investment and fee income in the Consolidated Statements of Income. There were no realized losses or impairment losses related to our insurance operations for the three months and nine months ended July 31, 2017.

During the three months ended July 31, 2017, net realized gains of \$56 million mainly comprised of distributions from, and gains on sales of, certain Equities and U.S. state, municipal and agencies debt. Also included in the net gains are \$12 million of impairment losses primarily on certain Equities.

During the nine months ended July 31, 2017, net realized gains of \$168 million mainly comprised of distributions from, and gains on sales of, certain Equities and Other OECD government debt. Also included in the net gains are \$43 million of impairment losses primarily on certain Equities and U.S. state, municipal and agencies debt.

Held-to-maturity securities (IAS 39)

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

Note 5 Loans and Allowance for Credit Losses**Allowance for credit losses**

(Millions of Canadian dollars)	IFRS 9									
	For the three months ended July 31, 2018					For the nine months ended July 31, 2018				
	Balance at beginning of period	Provision for credit losses	Net write-offs	Exchange rate and other (1)	Balance at end of period	Balance at beginning of period	Provision for credit losses	Net write-offs	Exchange rate and other (1)	Balance at end of period
Retail										
Residential mortgages	\$ 381	\$ 20	\$ (12)	\$ –	\$ 389	\$ 378	\$ 52	\$ (35)	\$ (6)	\$ 389
Personal	876	138	(109)	(3)	902	826	405	(318)	(11)	902
Credit Cards	694	129	(118)	–	705	693	363	(351)	–	705
Small business	52	16	(7)	–	61	49	33	(19)	(2)	61
Wholesale										
Business, sovereign and bank	1,012	34	(57)	(5)	984	1,010	101	(93)	(34)	984
Customers' liability under acceptances	15	1	–	–	16	20	(4)	–	–	16
	\$ 3,030	\$ 338	\$ (303)	\$ (8)	\$ 3,057	\$ 2,976	\$ 950	\$ (816)	\$ (53)	\$ 3,057
Presented as:										
Allowance for loan losses	\$ 2,808				\$ 2,837	\$ 2,749				\$ 2,837
Other liabilities – Provisions	206				203	207				203
Customers' liability under acceptances	15				16	20				16
Other components of equity	1				1	–				1

(1) Includes interest income on impaired loans of \$21 million for the three months ended July 31, 2018 and \$58 million for the nine months ended July 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 nine months ended July 31, 2018, there were no significant changes to the models used to estimate expected credit losses.

Allowance for credit losses – Residential mortgages

(Millions of Canadian dollars)	IFRS 9							
	For the three months ended July 31, 2018				For the nine months ended July 31, 2018			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	\$ 149	\$ 62	\$ 170	\$ 381	\$ 140	\$ 65	\$ 173	\$ 378
Provision for credit losses								
Transfers in (out) to Stage 1	10	(10)	–	–	49	(49)	–	–
Transfers in (out) to Stage 2	(4)	5	(1)	–	(15)	17	(2)	–
Transfers in (out) to Stage 3	–	(6)	6	–	(1)	(14)	15	–
Purchases and originations	18	–	–	18	51	–	–	51
Derecognitions and maturities	(3)	(4)	–	(7)	(9)	(9)	–	(18)
Remeasurements	(20)	18	11	9	(66)	54	31	19
Write-offs	–	–	(14)	(14)	–	–	(39)	(39)
Recoveries	–	–	2	2	–	–	4	4
Exchange rate and other	1	–	(1)	–	2	1	(9)	(6)
Balance at end of period	\$ 151	\$ 65	\$ 173	\$ 389	\$ 151	\$ 65	\$ 173	\$ 389

Allowance for credit losses – Personal

(Millions of Canadian dollars)	IFRS 9							
	For the three months ended July 31, 2018				For the nine months ended July 31, 2018			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	\$ 253	\$ 488	\$ 135	\$ 876	\$ 278	\$ 427	\$ 121	\$ 826
Provision for credit losses								
Transfers in (out) to Stage 1	154	(154)	–	–	576	(576)	–	–
Transfers in (out) to Stage 2	(26)	27	(1)	–	(118)	119	(1)	–
Transfers in (out) to Stage 3	(1)	(36)	37	–	(2)	(114)	116	–
Purchases and originations	30	1	–	31	81	4	–	85
Derecognitions and maturities	(9)	(34)	–	(43)	(25)	(99)	–	(124)
Remeasurements	(143)	213	80	150	(530)	745	229	444
Write-offs	–	–	(139)	(139)	–	–	(405)	(405)
Recoveries	–	–	30	30	–	–	87	87
Exchange rate and other	–	–	(3)	(3)	(2)	(1)	(8)	(11)
Balance at end of period	\$ 258	\$ 505	\$ 139	\$ 902	\$ 258	\$ 505	\$ 139	\$ 902

Allowance for credit losses – Credit cards

(Millions of Canadian dollars)	IFRS 9							
	For the three months ended July 31, 2018				For the nine months ended July 31, 2018			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	\$ 199	\$ 495	\$ –	\$ 694	\$ 251	\$ 442	\$ –	\$ 693
Provision for credit losses								
Transfers in (out) to Stage 1	153	(153)	–	–	597	(597)	–	–
Transfers in (out) to Stage 2	(21)	21	–	–	(102)	102	–	–
Transfers in (out) to Stage 3	(1)	(53)	54	–	(2)	(145)	147	–
Purchases and originations	4	1	–	5	10	2	–	12
Derecognitions and maturities	(3)	(12)	–	(15)	(10)	(55)	–	(65)
Remeasurements	(113)	188	64	139	(526)	738	204	416
Write-offs	–	–	(151)	(151)	–	–	(448)	(448)
Recoveries	–	–	33	33	–	–	97	97
Exchange rate and other	(1)	1	–	–	(1)	1	–	–
Balance at end of period	\$ 217	\$ 488	\$ –	\$ 705	\$ 217	\$ 488	\$ –	\$ 705

Note 5 Loans and Allowance for Credit Losses (continued)**Allowance for credit losses – Small business**

(Millions of Canadian dollars)	IFRS 9							
	For the three months ended July 31, 2018				For the nine months ended July 31, 2018			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	\$ 15	\$ 17	\$ 20	\$ 52	\$ 15	\$ 15	\$ 19	\$ 49
Provision for credit losses								
Transfers in (out) to Stage 1	5	(5)	–	–	20	(20)	–	–
Transfers in (out) to Stage 2	(1)	1	–	–	(4)	4	–	–
Transfers in (out) to Stage 3	–	(2)	2	–	–	(8)	8	–
Purchases and originations	3	–	–	3	8	–	–	8
Derecognitions and maturities	(1)	(3)	–	(4)	(3)	(7)	–	(10)
Remeasurements	(5)	15	7	17	(20)	39	16	35
Write-offs	–	–	(9)	(9)	–	–	(25)	(25)
Recoveries	–	–	2	2	–	–	6	6
Exchange rate and other	1	–	(1)	–	1	–	(3)	(2)
Balance at end of period	\$ 17	\$ 23	\$ 21	\$ 61	\$ 17	\$ 23	\$ 21	\$ 61

Allowance for credit losses – Business, sovereign and bank

(Millions of Canadian dollars)	IFRS 9							
	For the three months ended July 31, 2018				For the nine months ended July 31, 2018			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	\$ 254	\$ 295	\$ 463	\$ 1,012	\$ 251	\$ 352	\$ 407	\$ 1,010
Provision for credit losses								
Transfers in (out) to Stage 1	23	(23)	–	–	148	(148)	–	–
Transfers in (out) to Stage 2	(14)	19	(5)	–	(60)	68	(8)	–
Transfers in (out) to Stage 3	–	(9)	9	–	(1)	(28)	29	–
Purchases and originations	56	11	–	67	167	28	–	195
Derecognitions and maturities	(34)	(37)	–	(71)	(112)	(145)	–	(257)
Remeasurements	(15)	68	(15)	38	(123)	199	87	163
Write-offs	–	–	(82)	(82)	–	–	(145)	(145)
Recoveries	–	–	25	25	–	–	52	52
Exchange rate and other	2	2	(9)	(5)	2	–	(36)	(34)
Balance at end of period	\$ 272	\$ 326	\$ 386	\$ 984	\$ 272	\$ 326	\$ 386	\$ 984

Allowance for credit losses

(Millions of Canadian dollars)	IAS 39						
	For the three months ended July 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	\$ 10	\$ (13)	\$ 2	\$ (5)	\$ (13)	\$ 254
Personal	518	101	(133)	32	(3)	(11)	504
Credit cards	386	108	(143)	35	–	–	386
Small business	63	7	(8)	2	–	(6)	58
	1,240	226	(297)	71	(8)	(30)	1,202
Wholesale							
Business	1,015	93	(54)	20	(16)	(27)	1,031
Acquired credit-impaired loans	3	1	–	–	–	(1)	3
Total allowance for loan losses	2,258	320	(351)	91	(24)	(58)	2,236
Allowance for off-balance sheet and other items ⁽¹⁾	91	–	–	–	–	–	91
Total allowance for credit losses	\$ 2,349	\$ 320	\$ (351)	\$ 91	\$ (24)	\$ (58)	\$ 2,327
Individually assessed	\$ 377	\$ 62	\$ (30)	\$ 16	\$ (11)	\$ (31)	\$ 383
Collectively assessed	1,972	258	(321)	75	(13)	(27)	1,944
Total allowance for credit losses	\$ 2,349	\$ 320	\$ (351)	\$ 91	\$ (24)	\$ (58)	\$ 2,327

(Millions of Canadian dollars)	IAS 39						
	For the nine months ended July 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	\$ 36	\$ (37)	\$ 5	\$ (16)	\$ (7)	\$ 254
Personal	529	307	(407)	88	(8)	(5)	504
Credit cards	386	328	(425)	97	–	–	386
Small business	65	22	(28)	7	(2)	(6)	58
	1,253	693	(897)	197	(26)	(18)	1,202
Wholesale Business	979	221	(144)	59	(56)	(28)	1,031
Acquired credit-impaired loans	3	2	–	–	–	(2)	3
Total allowance for loan losses	2,235	916	(1,041)	256	(82)	(48)	2,236
Allowance for off-balance sheet and other items (1)	91	–	–	–	–	–	91
Total allowance for credit losses	\$ 2,326	\$ 916	\$ (1,041)	\$ 256	\$ (82)	\$ (48)	\$ 2,327
Individually assessed	\$ 365	\$ 116	\$ (73)	\$ 44	\$ (43)	\$ (26)	\$ 383
Collectively assessed	1,961	800	(968)	212	(39)	(22)	1,944
Total allowance for credit losses	\$ 2,326	\$ 916	\$ (1,041)	\$ 256	\$ (82)	\$ (48)	\$ 2,327

(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 triggered by changes to any of the above inputs.

Further details on the key inputs and assumptions used as at July 31, 2018 are provided below.

Internal risk ratings

Internal risk ratings are assigned according to the risk management framework and outlined in the internal ratings map for Wholesale and Retail facilities in the Credit Risk section on pages 59-60 of our 2017 Annual Report. Changes in internal risk ratings are reflected in the PD, LGD and EAD parameters, which are estimated based on our historical loss experience at the relevant risk segment or risk rating level, adjusted for forward-looking information.

Forward-looking macroeconomic variables

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

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

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

Scenario design

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

Migration between stages

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

Note 5 Loans and Allowance for Credit Losses (continued)**Credit risk exposure by internal risk rating**

The following table presents the gross carrying amount of loans measured at amortized cost and the full contractual amount of undrawn loan commitments subject to the impairment requirements of IFRS 9. Risk ratings are based on internal ratings as at the reporting date as outlined in the internal ratings maps for Wholesale and Retail facilities provided on pages 59-60 of our 2017 Annual Report.

(Millions of Canadian dollars)	IFRS 9			
	As at July 31, 2018			
	Stage 1	Stage 2	Stage 3	Total
Retail				
Loans outstanding – Residential mortgages				
Low risk	\$ 219,704	\$ 669	\$ –	\$ 220,373
Medium risk	13,146	1,281	–	14,427
High risk	2,917	2,379	–	5,296
Not rated	36,608	585	–	37,193
Impaired	–	–	737	737
	272,375	4,914	737	278,026
Items not subject to impairment ⁽¹⁾				265
Total				278,291
Loans outstanding – Personal				
Low risk	\$ 71,852	\$ 1,430	\$ –	\$ 73,282
Medium risk	5,229	2,460	–	7,689
High risk	810	1,839	–	2,649
Not rated	8,648	226	–	8,874
Impaired	–	–	297	297
	86,539	5,955	297	92,791
Total				92,791
Loans outstanding – Credit cards				
Low risk	\$ 13,024	\$ 162	\$ –	\$ 13,186
Medium risk	2,812	912	–	3,724
High risk	427	954	–	1,381
Not rated	704	32	–	736
	16,967	2,060	–	19,027
Total				19,027
Loans outstanding – Small business				
Low risk	\$ 1,981	\$ 19	\$ –	\$ 2,000
Medium risk	2,166	104	–	2,270
High risk	91	180	–	271
Not rated	189	1	–	190
Impaired	–	–	44	44
	4,427	304	44	4,775
Total				4,775
Undrawn loan commitments – Retail				
Low risk	\$ 180,797	\$ 296	\$ –	\$ 181,093
Medium risk	10,484	365	–	10,849
High risk	3,530	202	–	3,732
Not rated	2,877	148	–	3,025
Total	197,688	1,011	–	198,699

(Millions of Canadian dollars)	IFRS 9			
	As at July 31, 2018			
	Stage 1	Stage 2	Stage 3	Total
Wholesale				
Loans outstanding – Business, Sovereign and Bank				
Investment grade	\$ 43,437	\$ 122	\$ –	\$ 43,559
Non-investment grade	101,431	10,357	–	111,788
Not rated	6,502	411	–	6,913
Impaired	–	–	1,243	1,243
Items not subject to impairment (1)	151,370	10,890	1,243	163,503
Total	151,370	10,890	1,243	171,050
Undrawn loan commitments – Wholesale				
Investment grade	\$ 195,544	\$ 28	\$ –	\$ 195,572
Non-investment grade	85,993	8,033	–	94,026
Not rated	4,233	–	–	4,233
Total	285,770	8,061	–	293,831

(1) Retail Loans outstanding – Residential Mortgages and Wholesale Loans outstanding – Business, Sovereign and Bank items not subject to impairment are loans held at FVTPL.

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

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

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

(2) Excludes ACI loans.

Loans past due but not impaired (1)

(Millions of Canadian dollars)	IFRS 9				IAS 39			
	As at				As at			
	July 31, 2018				October 31, 2017			
	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	\$ 3,257	\$ 1,224	\$ 180	\$ 4,661	\$ 3,097	\$ 1,337	\$ 307	\$ 4,741
Wholesale	1,422	529	–	1,951	1,251	424	–	1,675
Total	\$ 4,679	\$ 1,753	\$ 180	\$ 6,612	\$ 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.

(Millions of Canadian dollars)	IFRS 9		IAS 39	
	As at		As at	
	July 31, 2018	October 31, 2017	July 31, 2018	October 31, 2017
City National				
Unpaid principal balance (1)	\$ 184	\$ 245		
Credit-related fair value adjustments	(5)	(5)		
Interest rate and other related premium/(discount)	15	16		
Carrying value	194	256		
Individually assessed allowance	(4)	(3)		
Carrying value net of related allowance	\$ 190	\$ 253		

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

Note 5 Loans and Allowance for Credit Losses (continued)**FDIC covered loans**

FDIC covered loans are loans that, as at the reporting date, are subject to loss-share agreements with the FDIC under which the FDIC reimburses us for 80% of the net losses incurred on the underlying loan portfolio. As at July 31, 2018, the balance of FDIC covered loans recorded in Loans on the Consolidated Balance Sheet was \$5 million (October 31, 2017 – \$6 million). As at July 31, 2018, the balances for indemnification assets and clawback liabilities were \$nil and \$27 million (October 31, 2017 – \$nil and \$26 million), respectively.

Note 6 Deposits

The following table details our deposit liabilities.

(Millions of Canadian dollars)	As at							
	July 31, 2018				October 31, 2017			
	Demand (1)	Notice (2)	Term (3)	Total	Demand (1)	Notice (2)	Term (3)	Total
Personal	\$ 133,236	\$ 48,663	\$ 83,656	\$ 265,555	\$ 134,184	\$ 47,366	\$ 78,663	\$ 260,213
Business and government	239,642	8,153	287,013	534,808	229,337	9,520	266,808	505,665
Bank	7,275	200	24,423	31,898	8,587	158	15,012	23,757
	\$ 380,153	\$ 57,016	\$ 395,092	\$ 832,261	\$ 372,108	\$ 57,044	\$ 360,483	\$ 789,635
Non-interest-bearing (4)								
Canada	\$ 86,273	\$ 4,965	\$ –	\$ 91,238	\$ 84,498	\$ 4,871	\$ –	\$ 89,369
United States	33,297	–	–	33,297	34,441	90	–	34,531
Europe (5)	873	–	–	873	616	–	–	616
Other International	5,561	5	–	5,566	6,059	5	–	6,064
Interest-bearing (4)								
Canada	211,200	14,934	294,327	520,461	212,456	14,990	274,934	502,380
United States	2,158	32,428	63,929	98,515	847	32,263	55,840	88,950
Europe (5)	37,547	1,524	23,966	63,037	30,148	1,585	19,613	51,346
Other International	3,244	3,160	12,870	19,274	3,043	3,240	10,096	16,379
	\$ 380,153	\$ 57,016	\$ 395,092	\$ 832,261	\$ 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 July 31, 2018, deposits denominated in U.S. dollars, British pounds, Euro and other foreign currencies were \$306 billion, \$19 billion, \$43 billion and \$32 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.

(Millions of Canadian dollars)	As at	
	July 31 2018	October 31 2017
Within 1 year:		
less than 3 months	\$ 112,395	\$ 71,841
3 to 6 months	41,644	41,221
6 to 12 months	75,768	82,588
1 to 2 years	48,924	52,033
2 to 3 years	54,089	40,400
3 to 4 years	21,966	30,062
4 to 5 years	17,654	18,745
Over 5 years	22,652	23,593
	\$ 395,092	\$ 360,483
Aggregate amount of term deposits in denominations of one hundred thousand dollars or more	\$ 335,000	\$ 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

(Millions of Canadian dollars)	For the three months ended			
	Pension plans		Other post-employment benefit plans	
	July 31 2018	July 31 2017	July 31 2018	July 31 2017
Current service costs	\$ 90	\$ 95	\$ 10	\$ 11
Past service costs	–	–	–	–
Net interest expense (income)	2	11	16	17
Remeasurements of other long term benefits	–	–	(1)	–
Administrative expense	4	3	–	–
Defined benefit pension expense	\$ 96	\$ 109	\$ 25	\$ 28
Defined contribution pension expense	45	45	–	–
	\$ 141	\$ 154	\$ 25	\$ 28

(Millions of Canadian dollars)	For the nine months ended			
	Pension plans		Other post-employment benefit plans	
	July 31 2018	July 31 2017	July 31 2018	July 31 2017
Current service costs	\$ 269	\$ 285	\$ 29	\$ 31
Past service costs	–	(2)	–	–
Net interest expense (income)	6	32	50	51
Remeasurements of other long term benefits	–	–	(2)	(2)
Administrative expense	11	10	–	–
Defined benefit pension expense	\$ 286	\$ 325	\$ 77	\$ 80
Defined contribution pension expense	140	129	–	–
	\$ 426	\$ 454	\$ 77	\$ 80

Pension and other post-employment benefit remeasurements ⁽¹⁾

(Millions of Canadian dollars)	For the three months ended			
	Defined benefit pension plans		Other post-employment benefit plans	
	July 31 2018	July 31 2017	July 31 2018	July 31 2017
Actuarial (gains) losses:				
Changes in financial assumptions	\$ (378)	\$ (789)	\$ (40)	\$ (91)
Experience adjustments	–	–	(3)	(3)
Return on plan assets (excluding interest based on discount rate)	(209)	188	–	(1)
	\$ (587)	\$ (601)	\$ (43)	\$ (95)

(Millions of Canadian dollars)	For the nine months ended			
	Defined benefit pension plans		Other post-employment benefit plans	
	July 31 2018	July 31 2017	July 31 2018	July 31 2017
Actuarial (gains) losses:				
Changes in financial assumptions	\$ (571)	\$ (756)	\$ (62)	\$ (68)
Experience adjustments	–	–	(9)	(9)
Return on plan assets (excluding interest based on discount rate)	(171)	(290)	–	(1)
	\$ (742)	\$ (1,046)	\$ (71)	\$ (78)

(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 resulting changes included a reduction in the corporate income tax rate from 35% to 21% which resulted in a write-down of \$178 million (US\$142 million) in the first quarter of 2018, primarily related to net deferred tax assets. As the reduced tax rates are effective on January 1, 2018, the lower average tax rate applicable to subsidiaries includes the fiscal 2018 blended rate for U.S. subsidiaries. Please refer to the Economic, market and regulatory review and outlook – *United States Tax Reform* section of the Management's Discussion and Analysis for further details.

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

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

Trust capital securities

On June 30, 2018, RBC Capital Trust, a closed-end unit trust established by RBC, redeemed all 500,000 units of its issued and outstanding Trust Capital Securities – Series 2008-1 for cash, at a redemption price of \$1,000 per unit. Trust capital securities are included in Non-controlling interests on our Consolidated Balance Sheet.

Common shares issued ⁽¹⁾

(Millions of Canadian dollars, except number of shares)	For the three months ended			
	July 31, 2018		July 31, 2017	
	Number of shares (thousands)	Amount	Number of shares (thousands)	Amount
Issued in connection with share-based compensation plans ⁽²⁾	440	\$ 24	643	\$ 42
Purchased for cancellation ⁽³⁾	(1,283)	(16)	–	–
	(843)	\$ 8	643	\$ 42

(Millions of Canadian dollars, except number of shares)	For the nine months ended			
	July 31, 2018		July 31, 2017	
	Number of shares (thousands)	Amount	Number of shares (thousands)	Amount
Issued in connection with share-based compensation plans ⁽²⁾	1,105	\$ 69	2,861	\$ 188
Purchased for cancellation ⁽³⁾	(12,837)	(157)	(30,321)	(368)
	(11,732)	\$ (88)	(27,460)	\$ (180)

(1) The requirements of our dividend reinvestment plan (DRIP) are satisfied through either open market share purchases or shares issued from treasury. During the three and nine months ended July 31, 2018 and July 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 July 31, 2018, we purchased for cancellation 1.3 million common shares at a total fair value of \$128 million (average cost of \$99.21 per share), with a book value of \$16 million (book value of \$12.23 per share). During the nine months ended July 31, 2018, we purchased for cancellation 12.8 million common shares at a total fair value of \$1,275 million (average cost of \$99.28 per share), with a book value of \$157 million (book value of \$12.22 per share). For the three months ended July 31, 2017, we did not purchase for cancellation any common shares. For the nine months ended July 31, 2017, we purchased for cancellation 30.3 million common shares at a total fair value of \$2,588 million (average cost of \$85.34 per share), with a book value of \$368 million (book value of \$12.14 per share).

Note 10 Earnings per share

(Millions of Canadian dollars, except share and per share amounts)	For the three months ended		For the nine months ended	
	July 31 2018	July 31 2017	July 31 2018	July 31 2017
Basic earnings per share				
Net Income	\$ 3,109	\$ 2,796	\$ 9,181	\$ 8,632
Preferred share dividends	(70)	(76)	(214)	(228)
Net income attributable to non-controlling interest	(8)	(13)	(28)	(33)
Net income available to common shareholders	3,031	2,707	8,939	8,371
Weighted average number of common shares (in thousands)	1,440,477	1,457,854	1,445,136	1,470,066
Basic earnings per share (in dollars)	\$ 2.10	\$ 1.86	\$ 6.19	\$ 5.69
Diluted earnings per share				
Net income available to common shareholders	\$ 3,031	\$ 2,707	\$ 8,939	\$ 8,371
Dilutive impact of exchangeable shares	4	4	11	11
Net income available to common shareholders including dilutive impact of exchangeable shares	3,035	2,711	8,950	8,382
Weighted average number of common shares (in thousands)	1,440,477	1,457,854	1,445,136	1,470,066
Stock options ⁽¹⁾	2,547	3,030	2,776	3,376
Issuable under other share-based compensation plans	731	746	745	743
Exchangeable shares ⁽²⁾	3,201	3,405	3,166	3,430
Average number of diluted common shares (in thousands)	1,446,956	1,465,035	1,451,823	1,477,615
Diluted earnings per share (in dollars)	\$ 2.10	\$ 1.85	\$ 6.16	\$ 5.67

(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 July 31, 2018, an average of 738,258 outstanding options with an average price of \$102.33 were excluded from the calculation of diluted earnings per share. For the three months ended July 31, 2017, no outstanding options were excluded from the calculation of diluted earnings per share. For the nine months ended July 31, 2018, an average of 630,088 outstanding options with an average exercise price of \$102.33 were excluded from the calculation of diluted earnings per share. For the nine months ended July 31, 2017, no outstanding options were excluded from the calculation of diluted earnings per share.

(2) Includes exchangeable preferred shares.

Note 11 Legal and regulatory matters

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

Our significant legal proceedings and regulatory matters include the matters disclosed in our audited 2017 Annual Consolidated Financial Statements as updated below:

LIBOR regulatory investigations and litigation

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

Royal Bank of Canada Trust Company (Bahamas) Limited (RBC Bahamas) proceedings

On June 29, 2018 the French appellate court affirmed the acquittal of all parties, including RBC Bahamas. The acquittals are being appealed.

Interchange fees litigation

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

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

Foreign Exchange Matters

On June 13, 2018, RBC concluded a settlement with the Brazilian civil antitrust authority Administrative Council for Economic Defense (CADE) regarding its investigation into 15 banks, including RBC, as well as 30 individuals, involving foreign exchange trading in the market for Brazilian currency non-deliverable forward contracts. RBC agreed to a penalty of an immaterial amount and continued cooperation with CADE in the proceeding. This resolves the proceeding as it relates to RBC.

Note 12 Results by business segment

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

(Millions of Canadian dollars)	For the three months ended July 31, 2018						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2) (3)	\$ 3,001	\$ 679	\$ –	\$ 32	\$ 913	\$ (29)	\$ 4,596
Non-interest income (2)	1,283	2,119	1,290	588	1,244	(95)	6,429
Total revenue	4,284	2,798	1,290	620	2,157	(124)	11,025
Provision for credit losses (4)	339	3	–	1	3	–	346
Insurance policyholder benefits, claims and acquisition expense	–	–	925	–	–	–	925
Non-interest expense	1,910	2,059	153	416	1,312	8	5,858
Net income (loss) before income taxes	2,035	736	212	203	842	(132)	3,896
Income taxes (recoveries)	525	158	54	48	144	(142)	787
Net income	\$ 1,510	\$ 578	\$ 158	\$ 155	\$ 698	\$ 10	\$ 3,109
Non-interest expense includes:							
Depreciation and amortization	\$ 147	\$ 138	\$ 9	\$ 30	\$ 94	\$ –	\$ 418

Note 12 Results by business segment (continued)

	For the three months ended July 31, 2017						
(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2) (3)	\$ 2,721	\$ 578	\$ –	\$ 141	\$ 845	\$ (28)	\$ 4,257
Non-interest income (2) (5)	1,249	1,969	1,009	453	1,195	(44)	5,831
Total revenue (5)	3,970	2,547	1,009	594	2,040	(72)	10,088
Provision for credit losses (4)	273	6	–	–	44	(3)	320
Insurance policyholder benefits, claims and acquisition expense	–	–	643	–	–	–	643
Non-interest expense (5)	1,826	1,909	147	364	1,199	92	5,537
Net income (loss) before income taxes	1,871	632	219	230	797	(161)	3,588
Income taxes (recoveries)	472	146	58	52	186	(122)	792
Net income	\$ 1,399	\$ 486	\$ 161	\$ 178	\$ 611	\$ (39)	\$ 2,796
Non-interest expense includes:							
Depreciation and amortization (6)	\$ 139	\$ 134	\$ 9	\$ 26	\$ 88	\$ –	\$ 396

	For the nine months ended July 31, 2018						
(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2) (3)	\$ 8,709	\$ 1,923	\$ –	\$ 278	\$ 2,620	\$ (68)	\$ 13,462
Non-interest income (2)	3,843	6,263	3,240	1,689	3,722	(312)	18,445
Total revenue	12,552	8,186	3,240	1,967	6,342	(380)	31,907
Provision for credit losses (4)	956	(19)	–	1	16	–	954
Insurance policyholder benefits, claims and acquisition expense	–	–	2,182	–	–	–	2,182
Non-interest expense (5)	5,539	6,009	443	1,196	3,716	48	16,951
Net income (loss) before income taxes	6,057	2,196	615	770	2,610	(428)	11,820
Income taxes (recoveries)	1,567	484	158	184	499	(253)	2,639
Net income	\$ 4,490	\$ 1,712	\$ 457	\$ 586	\$ 2,111	\$ (175)	\$ 9,181
Non-interest expense includes:							
Depreciation and amortization	\$ 432	\$ 401	\$ 27	\$ 90	\$ 271	\$ –	\$ 1,221

	For the nine months ended July 31, 2017						
(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2) (3)	\$ 7,967	\$ 1,665	\$ –	\$ 551	\$ 2,714	\$ (118)	\$ 12,779
Non-interest income (2) (5)	3,877	5,848	2,954	1,282	3,514	(108)	17,367
Total revenue (5)	11,844	7,513	2,954	1,833	6,228	(226)	30,146
Provision for credit losses (4)	784	34	–	–	100	(2)	916
Insurance policyholder benefits, claims and acquisition expense	–	–	1,916	–	–	–	1,916
Non-interest expense (5)	5,304	5,710	427	1,069	3,497	176	16,183
Net income (loss) before income taxes	5,756	1,769	611	764	2,631	(400)	11,131
Income taxes (recoveries)	1,405	422	150	179	690	(347)	2,499
Net income	\$ 4,351	\$ 1,347	\$ 461	\$ 585	\$ 1,941	\$ (53)	\$ 8,632
Non-interest expense includes:							
Depreciation and amortization (6)	\$ 440	\$ 401	\$ 26	\$ 78	\$ 262	\$ –	\$ 1,207

(1) Taxable equivalent basis.

(2) Inter-segment revenue and share of profit (loss) 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 is 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)	As at July 31, 2018						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total
Total assets	\$ 448,643	\$ 91,252	\$ 15,962	\$ 133,987	\$ 559,004	\$ 43,526	\$ 1,292,374
Total liabilities	\$ 448,621	\$ 91,378	\$ 16,026	\$ 133,917	\$ 558,685	\$ (34,125)	\$ 1,214,502

(Millions of Canadian dollars)	As at October 31, 2017						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total
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 third quarter of 2018, we complied with all capital and leverage requirements, including the domestic stability buffer, imposed by OSFI.

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	As at		
	July 31 2018	April 30 2018	October 31 2017
Capital ⁽¹⁾			
CET1 capital	\$ 55,054	\$ 53,277	\$ 51,572
Tier 1 capital	61,332	60,058	58,361
Total capital	70,525	69,214	67,556
Risk-weighted Assets (RWA) used in calculation of capital ratios ^{(1), (2)}			
CET1 capital RWA	\$ 497,949	\$ 488,226	\$ 474,478
Tier 1 capital RWA	498,422	488,699	474,478
Total capital RWA	498,896	489,172	474,478
Total capital RWA consisting of: ⁽¹⁾			
Credit risk	\$ 407,477	\$ 396,996	\$ 376,519
Market risk	29,921	31,750	27,618
Operational risk	61,498	60,426	59,203
Regulatory floor adjustment ⁽³⁾	–	–	11,138
Total capital RWA	\$ 498,896	\$ 489,172	\$ 474,478
Capital ratios and Leverage ratio ⁽¹⁾			
CET1 ratio	11.1%	10.9%	10.9%
Tier 1 capital ratio	12.3%	12.3%	12.3%
Total capital ratio	14.1%	14.1%	14.2%
Leverage ratio	4.3%	4.3%	4.4%
Leverage ratio exposure (billions)	\$ 1,413.9	\$ 1,381.0	\$ 1,315.5

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

Shareholder Information

Corporate headquarters

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

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

Transfer Agent and Registrar

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

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

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

Stock exchange listings

(Symbol: RY)

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

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

Valuation day price

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

Shareholder contacts

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

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

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

Financial analysts, portfolio managers, institutional investors

For financial information inquiries,
please contact:
Investor Relations
Royal Bank of Canada
155 Wellington Street West
Toronto, Ontario M5V 3K7
Canada
Tel: 416-955-7802

or visit our website at
rbc.com/investorrelations

Direct deposit service

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

Eligible dividend designation

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

Common share repurchases

We are engaged in a Normal Course
Issuer Bid (NCIB) which allows us to
repurchase for cancellation, up to
30 million common shares during
the period spanning from
February 27, 2018 to February 26,
2019, when the bid expires, or such
earlier date as we may complete
the purchases pursuant to our
Notice of Intention filed with the
Toronto Stock Exchange.

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

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.

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

2018 Quarterly earnings release dates

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

2019 Annual Meeting

The Annual Meeting of Common
Shareholders will be held on
Thursday, April 4, 2019, in Halifax,
Nova Scotia, Canada.

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