

Second Quarter 2020



Royal Bank of Canada second quarter 2020 results

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

Net Income
\$1.5 Billion
Down 54% YoY

Diluted EPS⁽¹⁾
\$1.00
Down 55% YoY

Total PCL⁽²⁾
\$2.8 Billion
Total PCL ratio on loans
up 139 bps⁽³⁾ QoQ

ROE⁽⁴⁾
7.3%
Down from 17.5% last year

CET1 Ratio
11.7%
Well above regulatory requirements

TORONTO, May 27, 2020 — Royal Bank of Canada (RY on TSX and NYSE) today reported net income of \$1,481 million for the quarter ended April 30, 2020, down \$1,749 million or 54% from the prior year. Diluted EPS¹ was \$1.00, down 55% over the same period. The unprecedented challenges brought on by the COVID-19 pandemic led to increased provision for credit losses of \$2,830 million, up \$2,404 million from last year. The increased provisions unfavourably impacted results in Personal & Commercial Banking, Capital Markets and Wealth Management. These factors were partially offset by higher earnings in Investor & Treasury Services and Insurance.

Compared to last quarter, net income was down \$2,028 million with lower results in Personal & Commercial Banking, Capital Markets and Wealth Management. Earnings in Insurance were relatively flat compared to the prior quarter. These factors were partially offset by higher results in Investor & Treasury Services.

The total PCL ratio on loans was 165 bps, up 139 bps from last quarter as we prudently increased reserves due to the impact of the COVID-19 pandemic. The PCL ratio on impaired loans of 37 bps increased 16 bps from last quarter, due to higher PCL on impaired loans mainly in Capital Markets. Our capital position remained robust, with a Common Equity Tier 1 (CET1) ratio of 11.7%. We also had a strong average Liquidity Coverage Ratio (LCR) of 130%.

“My sincere thanks to all those on the frontlines who are combatting the virus with courage and compassion, and to the RBCers who are living our Purpose with extraordinary dedication to help our clients manage during these uncertain times,” said Dave McKay, RBC President and Chief Executive Officer. “We entered this period of heightened macroeconomic uncertainty from a position of strategic and financial strength. Our scale, diversified business mix, technology investments and talented employees define our leading client franchises. Our strong capital and liquidity position, and disciplined risk management, have enabled us to remain resilient and focused on delivering long-term value for our clients, shareholders and communities.”

Q2 2020
Compared to
Q2 2019

- Net income of \$1,481 million ↓ 54%
- Diluted EPS⁽¹⁾ of \$1.00 ↓ 55%
- ROE⁽⁴⁾ of 7.3% ↓ 1,020 bps
- CET1 ratio of 11.7% ↓ 10 bps

Q2 2020
Compared to
Q1 2020

- Net income of \$1,481 million ↓ 58%
- Diluted EPS⁽¹⁾ of \$1.00 ↓ 58%
- ROE⁽⁴⁾ of 7.3% ↓ 1,030 bps
- CET1 ratio of 11.7% ↓ 30 bps

YTD 2020
Compared to
YTD 2019

- Net income of \$4,990 million ↓ 22%
- Diluted EPS⁽¹⁾ of \$3.40 ↓ 22%
- ROE⁽⁴⁾ of 12.5% ↓ 460 bps

(1) Earnings per share (EPS).

(2) Provision for credit losses (PCL).

(3) Basis points (bps).

(4) Return on Equity (ROE). This measure does not have a standardized meaning under GAAP. For further information, refer to the Key performance and non-GAAP measures section of this Q2 2020 Report to Shareholders.

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Management's Discussion and Analysis

Management's Discussion and Analysis (MD&A) is provided to enable a reader to assess our results of operations and financial condition for the three and six month periods ended or as at April 30, 2020, compared to the corresponding periods in the prior fiscal year and the three month period ended January 31, 2020. This MD&A should be read in conjunction with our unaudited Interim Condensed Consolidated Financial Statements for the quarter ended April 30, 2020 (Condensed Financial Statements) and related notes and our 2019 Annual Report. This MD&A is dated May 26, 2020. All amounts are in Canadian dollars, unless otherwise specified, and are based on financial statements prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB), unless otherwise noted.

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

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

Caution regarding forward-looking statements

From time to time, we make written or oral forward-looking statements within the meaning of certain securities laws, including the "safe harbour" provisions of the *United States Private Securities Litigation Reform Act of 1995* and any applicable Canadian securities legislation. We may make forward-looking statements in this Q2 2020 Report to Shareholders, in other filings with Canadian regulators or the SEC, in other reports to shareholders, and in other communications, including statements by our President and Chief Executive Officer. 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 the potential continued impacts of the coronavirus (COVID-19) pandemic on our business operations, financial results and financial condition and on the global economy and financial market conditions. The forward-looking information contained in this document is presented for the purpose of assisting the holders of our securities and financial analysts in understanding our financial position and results of operations as at and for the periods ended on the dates presented, as well as our financial performance objectives, vision and strategic goals, and may not be appropriate for other purposes. Forward-looking statements are typically identified by words such as "believe", "expect", "foresee", "forecast", "anticipate", "intend", "estimate", "goal", "plan" and "project" and similar expressions of future or conditional verbs such as "will", "may", "should", "could" or "would".

By their very nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties, which give rise to the possibility that our predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that our assumptions may not be correct and that our financial performance objectives, vision and strategic goals will not be achieved. We caution readers not to place undue reliance on these statements as a number of risk factors could cause our actual results to differ materially from the expectations expressed in such forward-looking statements. These factors – many of which are beyond our control and the effects of which can be difficult to predict – include: credit, market, liquidity and funding, insurance, operational, regulatory compliance, strategic, reputation, legal and regulatory environment, competitive and systemic risks and other risks discussed in the risk sections of our 2019 Annual Report and the Risk management and Significant developments: COVID-19 sections of this Q2 2020 Report to Shareholders; including information technology and cyber risk, privacy, data and third party related risks, geopolitical uncertainty, Canadian housing and household indebtedness, regulatory changes, digital disruption and innovation, climate change, the business and economic conditions in the geographic regions in which we operate, the effects of changes in government fiscal, monetary and other policies, tax risk and transparency, environmental and social risk and the emergence of widespread health emergencies or public health crises such as pandemics and epidemics, including the COVID-19 pandemic and its impact on the global economy and financial market conditions and our business operations, financial results and financial condition.

We caution that the foregoing list of risk factors is not exhaustive and other factors could also adversely affect our results. When relying on our forward-looking statements to make decisions with respect to us, investors and others should carefully consider the foregoing factors and other uncertainties and potential events. Material economic assumptions underlying the forward-looking statements contained in this Q2 2020 Report to Shareholders are set out in the Economic, market and regulatory review and outlook and for each business segment under the Strategic priorities and Outlook headings in our 2019 Annual Report, as updated by the Economic, market and regulatory review and outlook and Significant developments: COVID-19 sections of this Q2 2020 Report to Shareholders. Except as required by law, we do not undertake to update any forward-looking statement, whether written or oral, that may be made from time to time by us or on our behalf.

Additional information about these and other factors can be found in the risk sections of our 2019 Annual Report and the Risk management section of this Q2 2020 Report to Shareholders.

Overview and outlook

About Royal Bank of Canada

Royal Bank of Canada is a global financial institution with a purpose-driven, principles-led approach to delivering leading performance. Our success comes from the 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 17 million clients in Canada, the U.S. and 34 other countries. Learn more at rbc.com.

Selected financial and other highlights

(Millions of Canadian dollars, except per share, number of and percentage amounts) (1)	As at or for the three months ended			As at or for the six months ended	
	April 30 2020	January 31 2020	April 30 2019	April 30 2020	April 30 2019
Total revenue	\$ 10,333	\$ 12,836	\$ 11,499	\$ 23,169	\$ 23,088
Provision for credit losses (PCL)	2,830	419	426	3,249	940
Insurance policyholder benefits, claims and acquisition expense (PBCAE)	(177)	1,614	1,160	1,437	2,385
Non-interest expense	5,942	6,378	5,916	12,320	11,828
Income before income taxes	1,738	4,425	3,997	6,163	7,935
Net income	\$ 1,481	\$ 3,509	\$ 3,230	\$ 4,990	\$ 6,402
Segments – net income					
Personal & Commercial Banking	\$ 532	\$ 1,686	\$ 1,549	\$ 2,218	\$ 3,120
Wealth Management	424	623	585	1,047	1,182
Insurance	180	181	154	361	320
Investor & Treasury Services	226	143	151	369	312
Capital Markets	105	882	776	987	1,429
Corporate Support	14	(6)	15	8	39
Net income	\$ 1,481	\$ 3,509	\$ 3,230	\$ 4,990	\$ 6,402
Selected information					
Earnings per share (EPS) – basic	\$ 1.00	\$ 2.41	\$ 2.20	\$ 3.41	\$ 4.36
– diluted	1.00	2.40	2.20	3.40	4.34
Return on common equity (ROE) (2), (3)	7.3%	17.6%	17.5%	12.5%	17.1%
Average common equity (2)	\$ 79,100	\$ 77,850	\$ 74,000	\$ 78,450	\$ 73,800
Net interest margin (NIM) – on average earning assets (4)	1.61%	1.59%	1.62%	1.60%	1.61%
PCL on loans as a % of average net loans and acceptances	1.65%	0.26%	0.29%	0.96%	0.32%
PCL on performing loans as a % of average net loans and acceptances	1.28%	0.05%	–%	0.67%	0.04%
PCL on impaired loans as a % of average net loans and acceptances	0.37%	0.21%	0.29%	0.29%	0.28%
Gross impaired loans (GIL) as a % of loans and acceptances	0.51%	0.45%	0.49%	0.51%	0.49%
Liquidity coverage ratio (LCR) (5)	130%	129%	127%	130%	127%
Capital ratios and Leverage ratio					
Common Equity Tier 1 (CET1) ratio	11.7%	12.0%	11.8%	11.7%	11.8%
Tier 1 capital ratio	12.7%	13.1%	12.9%	12.7%	12.9%
Total capital ratio	14.6%	14.9%	14.8%	14.6%	14.8%
Leverage ratio	4.5%	4.2%	4.3%	4.5%	4.3%
Selected balance sheet and other information (6)					
Total assets (7)	\$ 1,675,682	\$ 1,476,304	\$ 1,378,885	\$ 1,675,682	\$ 1,378,885
Securities, net of applicable allowance	269,941	266,667	240,991	269,941	240,991
Loans, net of allowance for loan losses	673,448	629,940	602,392	673,448	602,392
Derivative related assets	140,807	93,982	84,812	140,807	84,812
Deposits (4)	1,009,447	902,284	863,136	1,009,447	863,136
Common equity (7)	79,236	78,256	76,114	79,236	76,114
Total capital risk-weighted assets	558,412	523,725	510,463	558,412	510,463
Assets under management (AUM)	789,000	799,900	733,100	789,000	733,100
Assets under administration (AUA) (8)	5,381,800	5,723,700	5,655,600	5,381,800	5,655,600
Common share information					
Shares outstanding (000s) – average basic	1,422,754	1,427,599	1,435,091	1,425,203	1,436,099
– average diluted	1,427,871	1,433,060	1,441,163	1,430,468	1,442,194
– end of period	1,422,566	1,423,212	1,434,879	1,422,566	1,434,879
Dividends declared per common share	\$ 1.08	\$ 1.05	\$ 1.02	\$ 2.13	\$ 2.00
Dividend yield (9)	4.7%	4.0%	3.9%	4.7%	4.0%
Dividend payout ratio	108%	44%	46%	62%	46%
Common share price (RY on TSX) (10)	\$ 85.63	\$ 104.58	\$ 106.77	\$ 85.63	\$ 106.77
Market capitalization (TSX) (10)	121,814	148,840	153,202	121,814	153,202
Business information (number of)					
Employees (full-time equivalent) (FTE)	82,499	82,491	82,197	82,499	82,197
Bank branches	1,329	1,330	1,335	1,329	1,335
Automated teller machines (ATMs)	4,564	4,619	4,569	4,564	4,569
Period average US\$ equivalent of C\$1.00 (11)	\$ 0.725	\$ 0.760	\$ 0.751	\$ 0.742	\$ 0.750
Period-end US\$ equivalent of C\$1.00	\$ 0.718	\$ 0.756	\$ 0.746	\$ 0.718	\$ 0.746

(1) Effective November 1, 2019, we adopted IFRS 16 Leases. Results from periods prior to November 1, 2019 are reported in accordance with IAS 17 Leases in this Q2 2020 Report to Shareholders. For further details on the impacts of the adoption of IFRS 16 including the description of accounting policies selected, refer to Note 2 of our Condensed Financial Statements.

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

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

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

(5) LCR is the average for the three months ended for each respective period and is calculated in accordance with the Office of the Superintendent of Financial Institutions' (OSFI) Liquidity Adequacy Requirements (LAR) guideline as updated in accordance with the Q2 2020 guidance. For further details, including this Q2 2020 guidance, refer to the Liquidity and funding risk section.

(6) Represents period-end spot balances.

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

(8) AUA includes \$16.1 billion and \$6.7 billion (January 31, 2020 – \$15.4 billion and \$7.8 billion; April 30, 2019 – \$16.2 billion and \$8.3 billion) of securitized residential mortgages and credit card loans, respectively.

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

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

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

Economic, market and regulatory review and outlook – data as at May 26, 2020

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

Economic and market review and outlook

Measures to contain the COVID-19 pandemic have sharply curtailed economic activity in many countries, resulting in unprecedented declines in GDP and a substantial increase in unemployment. Significant fiscal and monetary policy stimulus has been implemented across many jurisdictions that is intended to prevent longer-term damage to economies and assist in eventual recoveries. However, significant uncertainty remains with regards to the timing and the extent of recovery, including the possibility of subsequent waves.

Canada

Containment measures put in place to address the COVID-19 pandemic led to a sharp contraction in economic activity in Canada as GDP reportedly fell by 10%¹ in the first calendar quarter of 2020. While provinces began gradually easing containment measures in May 2020, based on most recent projections, economic output is expected to decline by a further 40%¹ in the second calendar quarter of 2020. Temporary business closures and projected declines in revenue have prompted widespread layoffs, with 3 million Canadians losing their jobs in March and April 2020, pushing the unemployment rate to 13.0%, and millions more working reduced hours. Although economic activity and unemployment are expected to partially rebound in the second half of calendar 2020, a full recovery is likely to be held back by the impact of income loss and health concerns placed on consumer spending and housing activity. Additionally, challenges in the energy sector, higher debt levels and weaker profitability weighing on business sentiment, are also contributing to expectations for only a partial rebound. The federal government is supporting the economy with significant fiscal measures including income support and wage subsidies, as well as loans and tax deferrals for businesses. The Bank of Canada (BoC) cut its policy rate to 0.25% in March from 1.75% at the start of calendar 2020 and has provided significant support to maintain the resilience and stability of the financial system. Nonetheless, GDP is expected to remain well below 2019 levels through the remainder of the calendar year.

U.S.

U.S. GDP declined by 4.8%¹ in the first calendar quarter of 2020 amid the significant contraction in economic activity as the result of extensive containment measures. While some states have started to gradually re-open their economies, based on most recent projections, we expect ongoing containment measures will drive a further 35%¹ drop in economic activity in the second calendar quarter of 2020, including sharp contractions in consumer spending and business investment. Unemployment has increased to 14.7% in April 2020 though the negative impact on household incomes has been cushioned by significant federal fiscal support, including higher unemployment benefits and incentives for businesses to maintain payrolls. Economic activity is expected to partially rebound and unemployment is likely to decline over the second half of calendar 2020. The Federal Reserve (Fed) lowered its policy rate to a range of 0-0.25% in March from 1.50-1.75% at the start of calendar 2020 and has significantly expanded its balance sheet through quantitative easing and a number of other liquidity programs designed to improve the flow of credit to businesses. However, GDP is expected to remain well below 2019 levels through the remainder of the calendar year.

Europe

With the severity of localized COVID-19 outbreaks and early implementation of containment measures, the Euro area GDP fell by 3.8%² in the first calendar quarter of 2020 with a further 26%² decline expected in the second calendar quarter. In the United Kingdom (U.K.), where containment measures were implemented slightly later, GDP declined by 2%² in the first calendar quarter of 2020 followed by an expected decline of 18%² in the second calendar quarter. The European Central Bank (ECB) has held interest rates low and the Bank of England (BoE) lowered its policy rate to nearly zero. Economic activity is expected to partially rebound in the second half of calendar 2020, underpinned by substantial fiscal and monetary policy support. However, GDP is expected to remain well below 2019 levels through the remainder of the calendar year.

Financial markets

The economic fallout of the COVID-19 pandemic resulted in sharp losses in equity markets with the Standard & Poor's 500 Index recording a 34% decline at the onset of the global spread, however, equities have since retraced about half of that decline amid significant fiscal and monetary policy support. Oil prices have fallen sharply with a substantial drop in demand having been exacerbated by a price war between Saudi Arabia and Russia. The resolution of that dynamic has failed to support oil prices which remain at their lowest levels in more than 20 years. Central bank interest rate policies have put downward pressure on government bond yields, however their large scale asset purchases have helped offset upward pressure on government borrowing costs arising from significant debt issuances to fund fiscal programs.

Regulatory environment

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

¹ Annualized Rate

² Non-annualized Rate

regulatory changes instituted by governments globally and OSFI during the second quarter of 2020 in response to the COVID-19 pandemic are included in the Significant developments: COVID-19, Liquidity and funding risk and Capital management sections of this Q2 2020 Report to Shareholders.

Global uncertainty

Significant uncertainty about the impacts of the COVID-19 pandemic, trade policy and geopolitical tensions continue to pose risks to the global economic outlook. In April 2020, the International Monetary Fund (IMF) projected global growth in calendar 2020 to fall to -3%; a baseline scenario which would mark the worst recession since the Great Depression and far worse than the global financial crisis of 2008. Uncertainty around the duration and intensity of the health and financial crisis could result in global GDP declining further if the pandemic does not recede this year, and even if the pandemic does recede there could be longer-term effects on economic growth and commercial activity. Estimates around the expected recovery beyond this fiscal year are equally uncertain, as the timelines for economic recovery are largely dependent on the duration of the pandemic, including the possibility of subsequent waves, and the effectiveness of the fiscal and monetary policy measures introduced in response. Trade policy also remains a source of uncertainty, as the Brexit transition period deadline of December 31, 2020 remains in place, despite delayed negotiations between the U.K. and the European Union (EU) and requests from the IMF to extend the transition. In March 2020, Canada ratified the Canada-United States-Mexico Agreement reducing lingering uncertainty about trade within North America, but the post-pandemic future of global trade policy remains uncertain as countries may look to decrease reliance on the global supply chain. Finally, global financial markets remain vulnerable to geopolitical tensions, such as those between Russia and the Organization of the Petroleum Exporting Countries (OPEC), which could result in increased market and commodity price volatility, and the uncertain future of the U.S.-China trade relationship. Our diversified business model, as well as our product and geographic diversification, continue to help mitigate the risks posed by global uncertainty.

United States Tax Reform

The U.S. Treasury continues to release guidance on the Tax Cuts and Jobs Act. There has been no material impact for us; however, we will continue to monitor future guidance and the impact, if any, on us.

Regulatory initiatives

Government agencies and regulators have extended the effective dates for various regulations, primarily due to the impact of the COVID-19 pandemic, including:

- Canadian benchmark rate for qualifying insured mortgages – The government has suspended the previous effective date of April 6, 2020 until further notice.
- Client focused reforms – The Canadian Securities Administrators have extended the first phase relating to conflicts of interest and the related disclosure requirements which will not come into effect until June 30, 2021, extended from its previous effective date of December 31, 2020. The timeline to comply with the second phase is unchanged.
- Control and Divestiture Proceedings rule – The Fed has revised the effective date to September 30, 2020, extended from the previous effective date of April 1, 2020.
- Central Securities Depository Regulation – The EU has revised the effective date to February 2021, extended from its previous effective date of September 2020.
- Transaction reporting of securities financing transactions – This guidance is now expected to take effect in the third calendar quarter of 2020, extended from its previous effective date of the second calendar quarter 2020.

For a discussion on risk factors, including our framework and activities to manage these risks and other regulatory developments which may affect our business and financial results, refer to the Risk management – Top and emerging risks and Legal and regulatory environment risk sections of our 2019 Annual Report and the Risk and Capital management sections of this Q2 2020 Report to Shareholders.

Significant developments: COVID-19

On March 11, 2020, the World Health Organization declared the outbreak of a strain of novel coronavirus disease, COVID-19, a global pandemic. The breadth and depth of the impact of COVID-19 on the global economy and financial markets continues to evolve with disruptive effects in countries in which we operate and the global economy while also contributing to increased market volatility and changes to the macroeconomic environment. In addition, COVID-19 continues to effect our employees, clients and communities with resultant impacts on our operations, financial results and present and future risks to our business. For further details on these risks, refer to the Impact of pandemic risk factor section below.

Measures to contain the spread of COVID-19, including business closures, social distancing protocols, travel restrictions and school closures have been widespread. Although gradual and staged reopening plans have begun across several regions, these measures are continuing to have extensive implications for the global economy and related market functions, unemployment rates, and fiscal and monetary policies. The pandemic and the containment measures implemented in response to COVID-19 could also have longer-term effects on the economic and commercial activity and consumer behaviour after the pandemic recedes and the measures are lifted. In conjunction with the COVID-19 pandemic containment measures, governments, regulatory bodies, central banks and private organizations around the globe have extended unprecedented relief programs and temporary measures to facilitate the continued operation of the global economy and financial system which are intended to provide support to individuals and businesses. Regulatory guidance from the Government of Canada and OSFI have also been implemented to facilitate the continued strength of the Canadian financial systems, including the expansion of existing facilities, the introduction of new funding programs and capital modifications to support the programs

implemented in response to COVID-19. In addition, the BoC, the Fed and other central banks have taken further steps to stimulate the economy through reductions in benchmark interest rates. Despite these measures and programs, the extent and duration of the impact of COVID-19 continues to be uncertain.

For further details on these measures and their impact on us, refer to Impact of pandemic risk factor and Relief program sections outlined below as well as the Liquidity and funding risk and Capital management sections of this Q2 2020 Report to Shareholders.

In addition to the broad impacts of COVID-19 on our employees, clients, communities and operations, COVID-19 has impacted our financial results in Q2 2020 across all of our business segments to varying degrees. The impact on our consolidated results is primarily reflected in higher PCL and fair value changes due to the impact of market volatility, including movements in Other comprehensive income (OCI). Results across all of our business segments in Q2 2020 were also impacted by downstream implications from the changes in the macroeconomic environment, including lower interest rates, reduced consumer spending, widening of credit spreads, as well as other impacts including, increased client-driven volumes and higher operating costs. Notwithstanding these challenges, our financial results and condition amid these challenges demonstrate the resilience of our capital and liquidity positions, which were bolstered by our position of strength at the time of entering this crisis and throughout the period.

Given the uncertainty in the extent and duration of the COVID-19 impacts on the economy and society as a whole, as well as the timeline of the transition to reopen the economy, the future impact on our businesses and our financial results and condition remains uncertain.

In response to the COVID-19 pandemic, we have instituted various measures and programs to protect and support our employees, clients and communities, while also striving to ensure continued customer service to our clients, including the following:

- Promoting the safety and well-being of our employees by transitioning the majority of our workforce to work from home arrangements, offering paid leave days, additional compensation for those required to work on-site and 24/7 access to mental well-being support networks.
- Supporting our clients with targeted outreach and relief programs for our individual, small business, commercial and corporate clients such as payment deferrals, refinancing or restructuring and new loans as well as participation in various government relief programs. For further details, refer to the Relief programs section below.
- In response to the needs of our communities, we have committed to support efforts focused on food security, mental health and strategic preparedness and response as well as the introduction of the Frontline Healthcare Workers Essential Care Program.

Impact of pandemic risk factor

Pandemics, epidemics or outbreaks of an infectious disease in Canada or worldwide could have an adverse impact on our business, including changes to the way we operate and on our financial results and condition. During Q2 2020, the spread of the COVID-19 pandemic adversely affected our business and caused uncertainty in the global economy and it continues to pose risks to the global economy, our clients and our business operations. Governments and regulatory bodies in affected areas have imposed a number of measures designed to contain the pandemic, including widespread business closures, travel restrictions, quarantines, and restrictions on gatherings and events. These measures are significantly impacting global economic activity and contributing to increased market volatility and changes to the macroeconomic environment. As impacts continue to materialize, the effects of the disruption on our business strategies and initiatives have adversely affected and may continue to adversely affect our financial results, including the realization of credit, market, or operational risk losses.

Governments, monetary authorities, regulators and financial institutions, including us, have taken actions to support the economy and financial system. These actions include fiscal, monetary and other financial measures to increase liquidity, and provide financial aid to individual, small business, commercial and corporate clients. Additionally, regulatory relief measures in support of financial institutions has also been provided. For more information on these programs, refer to the Relief programs, Liquidity and funding risk and Capital management sections below.

We are closely monitoring the potential continued effects and impacts of the COVID-19 pandemic, which is a rapidly evolving situation. Uncertainty remains as to the full impacts of COVID-19 on the global economy, financial markets, and us, including on our financial results, regulatory capital and liquidity ratios and ability to meet regulatory and other requirements. The ultimate impacts will depend on future developments that are highly uncertain and cannot be predicted, including the scope, severity, duration and the possibility of subsequent waves of the pandemic, and the effectiveness of actions and measures taken by government, monetary and regulatory authorities and other third parties. With respect to client relief programs, we may face challenges, including increased risk of client disputes, litigation, government and regulatory scrutiny as a result of the effects of the COVID-19 pandemic on market and economic conditions and actions government authorities take in response to those actions. We may also face increased operational and reputational risk and financial losses such as higher credit losses amongst other things, depending on the effectiveness of these programs for our individual, small business, commercial and corporate clients. The effectiveness of these programs will depend on the duration and scale of COVID-19 and will vary by region and industry, with varying degrees of benefit to our clients.

The COVID-19 pandemic has and may continue to result in disruptions to our clients and the way in which we conduct our business, including the closure of certain branches, increased staff working off premise, and changes to our operations due to higher volumes of client requests, as well as disruptions to key suppliers of our goods and services. These factors have and may continue to adversely impact our business operations and the quality and continuity of service to customers. To date, we have taken proactive measures through our business continuity plans and our crisis management teams have increased their

efforts to preserve the well-being of our employees and our ability to serve clients. Additionally, we have launched various relief programs beyond the available government programs to further support our clients in financial need. For more information on our relief programs, refer to the Relief programs section below.

In addition to the impact that the COVID-19 pandemic has on our business, it may also continue to increase financial stress on our clients. This could lead to increased pressure on our individual clients as well as on the financial performance of our small business, commercial and corporate clients in conjunction with operational constraints due to the impacts of social distancing, including but not limited to continued closures or reduced operating hours, lost sales opportunities and/or increased operating costs, which could result in higher than expected credit losses for us.

If the COVID-19 pandemic is prolonged, including the possibility of subsequent waves, or further diseases emerge that give rise to similar effects, the adverse impact on the economy could deepen and result in further volatility and declines in financial markets. Moreover, it remains uncertain how the macroeconomic environment, societal and business norms will be impacted following this pandemic. Unexpected developments in financial markets, regulatory environments, or consumer behaviour and confidence may have adverse impacts on our financial results and condition, business operations and reputation, for a substantial period of time.

In virtually all aspects of our operations, our view of risks is not static. Consistent with our Enterprise Risk Management Framework (ERMF), we continue to evaluate top risks which are evolving and emerging risks arising from the impacts of the COVID-19 pandemic, including:

- Information Technology (IT) and Cyber risks have increased as malicious activities are creating more threats for cyber-attacks including COVID-19 phishing emails, malware-embedded mobile apps that purport to track infection rates, and targeting of vulnerabilities in remote access platforms as companies move to telework arrangements. Our IT and cyber controls are operating effectively and we are continuing to monitor the threat landscape.
- Privacy, Data and Third Party risks have also heightened as the use of telework arrangements have become common practice. As our employees continue to work from home, we are continuously monitoring and enforcing best practices as we seek to maintain the privacy and confidentiality of all sensitive information. Our security awareness program is required to be completed by each employee annually and includes cyber awareness training on managing risks while working remotely. Third party providers critical to our operations are being monitored for any impact on their ability to deliver services, including fourth party risk.
- Canadian Housing and Household Indebtedness risks have increased as a result of a rise in unemployment and decline in labour participation. While interest rate cuts, government support programs and relief programs offered by banks will help many households, concerns related to housing affordability in certain markets and levels of Canadian household debt were already elevated before the additional challenges brought on by the COVID-19 pandemic and could continue to rise if the COVID-19 pandemic worsens, resulting in, among other things, higher credit losses.

Our business activities expose us to a wide variety of risks and as a global financial institution with a diversified business model, we actively manage risks to help protect and enable our businesses. As described in our 2019 Annual Report, our ERMF provides an overview of our enterprise-wide programs for managing risk, including identifying, assessing, measuring, controlling, monitoring and reporting on significant risks that face the organization. Our ERMF has continuously evolved, well positioning us to manage through adverse economic and market conditions and providing us with a strong foundation to allow us to navigate through these periods of heightened risk.

For further details on how we manage our risks, refer to the risk sections in our 2019 Annual Report.

Relief programs

In response to the COVID-19 pandemic, several government programs have been developed to provide financial aid to individuals and businesses, which include wage replacement for individuals, wage subsidies and rent relief for businesses, and lending programs for businesses, which we are administering for our clients. To further support our clients in financial need, we have also launched various relief programs beyond available government programs.

RBC relief programs

During the second quarter of 2020, we announced the RBC Client Relief program which provides immediate and long-term relief for clients impacted by the COVID-19 pandemic. Through this program, we are helping our clients by implementing various relief measures, including payment deferrals, reduced credit card charges and refinancing or credit restructuring, fee waivers and temporary limit increases across various retail, small business and commercial products.

As at April 30, 2020, more than 492,500 clients globally have been approved to participate in our payment deferral program, including clients that have continued to make payments, and the following table summarizes the number of loans and their associated gross carrying amounts outstanding.

(Millions of Canadian dollars, except number of loan amounts)	As at April 30, 2020	
	Number of loans	Gross carrying amount of loans outstanding
Residential mortgages	198,843	\$ 54,064
Personal	118,434	3,477
Credit cards	249,405	1,746
Small business	8,310	1,142
Wholesale	20,646	16,189
Total	595,638	\$ 76,618

Government programs in response to the COVID-19 pandemic

Government of Canada

On March 13, 2020, the Department of Finance Canada announced new programs to help support the functioning of markets and finance businesses while ensuring the financial sector remains sound, well-capitalized and resilient, in light of the impact of the COVID-19 pandemic. To support businesses experiencing cash flow challenges during this unprecedented time, the government has established the following programs:

- The Canada Emergency Business Account (CEBA) – Under this program, Canadian banks are able to provide interest-free loans of up to \$40,000 to existing eligible small business clients as a source of liquidity for immediate operating costs. The loans are funded by the Government of Canada, with the Canadian banks retaining no credit risk.
- The Business Credit Availability Program (BCAP) – This program is comprised of the Export Development Canada (EDC) BCAP Guarantee and the Business Development Bank of Canada (BDC) Co-Lending Program.
 - Export Development Canada (EDC) BCAP Guarantee – Under this program, Canadian banks are able to provide existing eligible mid-sized and large business clients, focused on both export oriented and domestic sales-based businesses, with loans of up to \$6.25 million to support short-term liquidity needs. These loans must be used for certain operating costs and are 80% guaranteed by the EDC.
 - Business Development Bank of Canada (BDC) Co-Lending Program – Under this program, Canadian banks and the BDC will jointly provide loans to eligible business clients of up to \$6.25 million to meet their operational and liquidity needs. The maximum loan varies by the size of the business and may be structured with an interest-only payment obligation for the first year.

These programs were launched during Q2 2020 with over 115,250 clients and a corresponding total of \$4.5 billion relief approved through the CEBA program, of which \$1.3 billion was funded as at April 30, 2020.

In addition to this, the Government of Canada and other governing bodies have provided guidance in other areas including but not limited to the extension of regulatory and tax filings. We are currently reviewing the impact of these provisions, and expect the impact to be immaterial for us.

United States Government

On March 27, 2020, the Coronavirus Aid, Relief and Economic Security (CARES) Act was signed into law, which is in addition to other programs that have been enacted by the United States Federal Government. As part of the CARES Act, the Paycheck Protection Program (PPP) offers small businesses with loans, guaranteed by the United States Federal Government, to support the payment of up to 8 weeks of payroll costs, interest on mortgages, rent, and utilities. Through this program, we have provided loans directly to our clients based on their assessment of certain eligibility requirements and failure to meet these requirements will result in recourse actions for the borrower. In some cases, the United States Small Business Administration may forgive all or a portion of the loan. As at April 30, 2020, we have provided \$5,119 million (US\$3,678 million) of funding to 8,850 clients through this program.

Separately, the U.S. Department of the Treasury provided guidance deferring due dates for various tax returns, other tax filings and tax payments. We are currently reviewing the impact of these provisions, and expect the impact to be immaterial for us.

Programs in support of liquidity and funding

Governments and federal agencies have also expanded the eligibility criteria to their existing funding programs and announced new programs to provide further liquidity to banks as well as providing additional sources to access funding for which we can support our clients during this time of uncertainty, including:

- Existing funding programs – The BoC has increased funding available and broadened eligibility requirements for existing term repo facilities and the revised insured mortgage purchase programs through Canada Mortgage Housing Corporation. These programs also include central banks' programs in other jurisdictions, such as the BoE's U.S. dollar swap facility.
- New funding programs – The BoC added the Banker's Acceptance Purchase Facility and the Standing Term Liquidity Facility. Additionally, the Fed introduced the Primary Dealer Credit Facility.

For further details on how we are managing our liquidity and funding profile, refer to the Liquidity and funding risk section of this Q2 2020 Report to Shareholders.

We will continue to monitor and provide updates on new programs or further interpretations and guidance announced by us, governments and federal agencies. In order to support all of the aforementioned programs, central banks and domestic and global regulators have provided guidance on regulatory capital, liquidity and reporting requirements. For a discussion on these initiatives, refer to the Risk and Capital management sections of this Q2 2020 Report to Shareholders.

Financial performance

Overview

Q2 2020 vs. Q2 2019

Net income of \$1,481 million was down \$1,749 million or 54% from a year ago. Diluted earnings per share (EPS) of \$1.00 was down \$1.20 or 55% and return on common equity (ROE) of 7.3% was down from 17.5% last year. Our Common Equity Tier 1 (CET1) ratio of 11.7% was down 10 bps from a year ago.

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

Personal & Commercial Banking earnings decreased primarily due to higher PCL, mainly driven by the impact of the COVID-19 pandemic on performing assets, and lower spreads. These factors were partially offset by average volume growth of 9% in Canadian Banking.

Capital Markets results were down primarily due to higher PCL, mainly driven by the impact of the COVID-19 pandemic on performing assets and higher provisions on impaired assets in a couple of sectors. Lower revenue in Corporate and Investment Banking also contributed to the decrease. These factors were partially offset by higher revenue in Global Markets and lower taxes due to an increase in the proportion of earnings from lower tax rate jurisdictions.

Wealth Management results decreased primarily due to higher PCL, mainly driven by the impact of the COVID-19 pandemic on performing assets, and higher staff and technology-related costs. Also contributing to the decrease was the impact of market volatility during the current quarter which resulted in unfavourable changes in the fair value of seed capital investments, interest rate derivatives and the net impact of our U.S. share-based compensation plans. These factors were partially offset by an increase in revenue from higher average fee-based client assets, net of the associated variable compensation costs.

Investor & Treasury Services earnings increased primarily due to higher funding and liquidity revenue.

Insurance results were up mainly due to higher favourable investment-related experience and new longevity reinsurance contracts, partially offset by the impact of actuarial adjustments and lower benefits from favourable reinsurance contract renegotiations.

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

Q2 2020 vs. Q1 2020

Net income of \$1,481 million was down \$2,028 million or 58% from the prior quarter. Diluted EPS of \$1.00 was down \$1.40 or 58% and ROE of 7.3% was down from 17.6% in the prior quarter. Our CET1 ratio of 11.7% was down 30 bps.

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

Personal & Commercial Banking results were lower reflecting higher PCL, mainly due to the impact of the COVID-19 pandemic on performing assets. Lower card service revenue due to a significant decrease in purchase volumes, two less days in the quarter and lower spreads also contributed to the decrease. These factors were partially offset by average volume growth of 2% in Canadian Banking.

Capital Markets earnings were down largely due to higher PCL, mainly driven by the impact of the COVID-19 pandemic on performing assets and higher provisions on impaired assets in a couple of sectors. Lower fixed income trading revenue in Corporate and Investment Banking primarily from loan underwriting markdowns in the U.S. and Europe reflecting widening credit spreads and lower M&A activity primarily in the U.S., also contributed to the decrease. These factors were partially offset by lower compensation on decreased revenue and lower taxes due to an increase in the proportion of earnings from lower tax rate jurisdictions. Net Income was also impacted by higher fixed income trading revenue in Global Markets in Canada and Europe due to increased client activity, partially offset by lower fixed income trading revenue in the U.S.

Wealth Management earnings decreased largely due to higher PCL, mainly driven by the impact of the COVID-19 pandemic on performing assets. Also contributing to the decrease was the impact of market volatility during the current quarter which resulted in unfavourable changes in the fair value of seed capital investments, interest rate derivatives and the net impact of our U.S. share-based compensation plans. Net interest income was relatively flat as average volume growth was offset by the impact of lower interest rates. These factors were partially offset by lower variable compensation commensurate with the decline in commissionable revenue.

Insurance results were relatively flat as higher travel claims costs, the impact of lower new longevity reinsurance contracts and unfavourable actuarial adjustments were largely offset by higher favourable investment-related experience.

Investor & Treasury Services results increased primarily due to higher funding and liquidity revenue reflecting the impact of interest rate movements in the current quarter and higher gains from the disposition of securities, partially offset by higher funding costs related to enterprise liquidity. Higher revenue from increased client activity in our asset services business resulting from elevated market volatility in the current quarter also contributed to the increase.

Q2 2020 vs. Q2 2019 (Six months ended)

Net income of \$4,990 million decreased \$1,412 million or 22% from a year ago. Six month diluted EPS of \$3.40 was down \$0.94 or 22% and ROE of 12.5% was down from 17.1% in the prior year.

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

Personal & Commercial Banking earnings were down reflecting higher PCL, mainly due to the impact of the COVID-19 pandemic on performing assets. Lower spreads and higher staff-related costs also contributed to the decrease. These factors were partially offset by average volume growth of 8% in Canadian Banking.

Capital Markets results decreased primarily due to higher PCL, mainly driven by the impact of the COVID-19 pandemic on performing assets and higher provisions on impaired assets in a couple of sectors. Higher compensation on increased revenue also contributed to the decrease. These factors were partially offset by higher revenue in Global Markets.

Wealth Management results were lower primarily due to higher staff and technology-related costs, as well as higher PCL mainly driven by the impact of the COVID-19 pandemic on performing assets. Also contributing to the decrease was the impact of market volatility during the current quarter which resulted in unfavourable changes in the fair value of seed capital investments, interest rate derivatives and the net impact of our U.S. share-based compensation plans. The prior period also included the impact of a favourable accounting adjustment in Canadian Wealth Management. These factors were partially offset by an increase in revenue from higher average fee-based client assets, net of the associated variable compensation costs, and an increase in transaction volumes.

Investor & Treasury Services results were up largely driven by higher funding and liquidity revenue.

Insurance earnings increased mainly due to new longevity reinsurance contracts and higher favourable investment-related experience, partially offset by lower benefits from favourable reinsurance contract renegotiations.

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 six months ended	
	Q2 2020 vs. Q2 2019	Q2 2020 vs. Q1 2020	Q2 2020 vs. Q2 2019	
<i>Increase (decrease):</i>				
Total revenue	\$ 98	\$ 140	\$	33
PCL	28	43		28
Non-interest expense	73	104		28
Income taxes	(5)	(8)		(7)
Net income	2	1		(16)
<i>Impact on EPS</i>				
Basic	\$ –	\$ –	\$	(0.01)
Diluted	–	–		(0.01)

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

(Average foreign currency equivalent of C\$1.00) (1)	For the three months ended			For the six months ended	
	April 30 2020	January 31 2020	April 30 2019	April 30 2020	April 30 2019
U.S. dollar	0.725	0.760	0.751	0.742	0.750
British pound	0.575	0.579	0.573	0.577	0.578
Euro	0.659	0.684	0.667	0.671	0.661

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

Total revenue

(Millions of Canadian dollars)	For the three months ended			For the six months ended	
	April 30 2020	January 31 2020	April 30 2019	April 30 2020	April 30 2019
Interest and dividend income	\$ 9,226	\$ 10,238	\$ 10,132	\$ 19,464	\$ 20,281
Interest expense (1)	3,761	5,017	5,359	8,778	10,661
Net interest income (1)	\$ 5,465	\$ 5,221	\$ 4,773	\$ 10,686	\$ 9,620
NIM (1)	1.61%	1.59%	1.62%	1.60%	1.61%
Insurance premiums, investment and fee income	\$ 197	\$ 1,994	\$ 1,515	\$ 2,191	\$ 3,094
Trading revenue (1)	(66)	458	314	392	709
Investment management and custodial fees	1,500	1,535	1,381	3,035	2,831
Mutual fund revenue	890	946	899	1,836	1,772
Securities brokerage commissions	460	318	316	778	658
Service charges	468	488	466	956	934
Underwriting and other advisory fees	544	627	554	1,171	899
Foreign exchange revenue, other than trading	280	253	243	533	492
Card service revenue	212	287	266	499	548
Credit fees	304	360	288	664	603
Net gains on investment securities	45	11	37	56	83
Share of profit in joint ventures and associates	15	22	14	37	29
Other	19	316	433	335	816
Non-interest income	\$ 4,868	\$ 7,615	\$ 6,726	\$ 12,483	\$ 13,468
Total revenue	\$ 10,333	\$ 12,836	\$ 11,499	\$ 23,169	\$ 23,088
Additional information					
Total trading revenue					
Net interest income (1)	\$ 1,064	\$ 700	\$ 555	\$ 1,764	\$ 1,119
Non-interest income (1)	(66)	458	314	392	709
Total trading revenue	\$ 998	\$ 1,158	\$ 869	\$ 2,156	\$ 1,828

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

Q2 2020 vs. Q2 2019

Total revenue decreased \$1,166 million or 10% from last year, mainly due to a reduction in insurance premiums, investment and fee income (Insurance revenue), lower other revenue and lower trading revenue. These factors were partially offset by higher net interest income, securities brokerage commissions, investment management and custodial fees, and the impact of foreign exchange translation which increased total revenue by \$98 million.

Net interest income increased \$692 million or 14%, largely due to higher trading revenue in Capital Markets primarily in repo products, volume growth in Canadian Banking and Wealth Management, as well as higher funding and liquidity revenue within our Investor & Treasury Services business. These factors were partially offset by lower spreads in Wealth Management and Canadian Banking. The impact associated with higher funding and liquidity revenue within our Investor & Treasury Services business was more than offset by lower related gains on non-trading derivatives in Other revenue.

NIM was down 1 bp compared to last year, mainly due to lower spreads in Wealth Management and Personal and Commercial Banking primarily driven by the impact of lower interest rates, and changes in average earning asset mix with volume growth primarily in reverse repos. These factors were partially offset by higher spreads in our trading portfolios in Capital Markets and higher funding and liquidity revenue within our Investor & Treasury Services business. The impact of higher funding and liquidity revenue within our Investor & Treasury Services business was more than offset by lower related gains on non-trading derivatives in Other revenue.

Insurance revenue decreased \$1,318 million or 87%, primarily due to the change in fair value of investments backing policyholder liabilities and lower group annuity sales, partially offset by business growth in International Insurance, all of which are largely offset in PBCAE.

Trading revenue decreased \$380 million or 121%, mainly attributable to Capital Markets driven by lower fixed income trading largely in the U.S. reflecting widening credit spreads, including the impact of loan underwriting markdowns. Lower equity trading revenue primarily in Canada also contributed to the decrease.

Investment management and custodial fees increased \$119 million or 9%, primarily due to higher average fee-based client assets mainly reflecting net sales.

Security brokerage commissions increased \$144 million or 46%, mainly due to higher transaction volumes in Wealth Management and higher revenue in cash equities due to increased client activity in Capital Markets.

Other revenue decreased \$414 million or 96%, mainly driven by the change in the fair value of the hedges related to our U.S. share-based compensation plans, which was largely offset in Non-interest expense. Lower gains on non-trading derivatives in our Investor & Treasury Services business, which were largely offset in Net interest income, also contributed to the decrease.

Q2 2020 vs. Q1 2020

Total revenue decreased \$2,503 million or 19% from the prior quarter, mainly due to lower Insurance revenue, trading revenue and other revenue. These factors were partially offset by higher net interest income, higher securities brokerage commissions, and the impact of foreign exchange translation which increased total revenue by \$140 million.

Net interest income was up \$244 million or 5%, mainly driven by higher trading revenue in Capital Markets primarily in repo products, volume growth in Wealth Management and Canadian Banking, as well as higher funding and liquidity revenue within our Investor & Treasury Services business. These factors were partially offset by two less days in the quarter and lower spreads in Wealth Management and Canadian Banking. The impact associated with higher funding and liquidity revenue within our Investor & Treasury Services business was more than offset by lower related gains on non-trading derivatives in Other revenue.

Insurance revenue decreased \$1,797 million or 90%, primarily due to the change in fair value of investments backing policyholder liabilities and lower group annuity sales, both of which are largely offset in PBCAE.

Trading revenue decreased \$524 million or 114%, mainly attributable to Capital Markets driven by lower fixed income trading largely in the U.S. reflecting widening credit spreads, including the impact of loan underwriting markdowns. Lower equity trading revenue primarily in Canada also contributed to the decrease.

Security brokerage commissions increased \$142 million or 45%, mainly due to higher revenue in cash equities due to increased client activity in Capital Markets and higher transaction volumes in Wealth Management.

Other revenue decreased \$297 million or 94%, mainly driven by the change in the fair value of the hedges related to our U.S. share-based compensation plans, which was largely offset in Non-interest expense, lower gains on non-trading derivatives in our Investor & Treasury Services business and the unfavourable impact of economic hedges. The impact of changes in the fair value of seed capital investments also contributed to the decrease. These factors were partially offset by higher net gains in our non-trading investment portfolios.

Q2 2020 vs. Q2 2019 (Six months ended)

Total revenue remained relatively flat from the prior year as higher net interest income, underwriting and other advisory fees, investment management and custodial fees, securities brokerage commissions, mutual fund revenue and credit fees were largely offset by a decrease in Insurance revenue, other revenue and trading revenue. The impact of foreign exchange translation also increased total revenue by \$33 million.

Net interest income increased \$1,066 million or 11%, largely due to volume growth in Canadian Banking and Wealth Management and higher trading revenue in Capital Markets primarily in repo products. Higher funding and liquidity revenue within our Investor & Treasury Services business also contributed to the increase. These factors were partially offset by lower spreads in Wealth Management and Canadian Banking. The impact associated with higher funding and liquidity revenue was more than offset by lower related gains on non-trading derivatives in Other revenue.

Insurance revenue decreased \$903 million or 29%, largely reflecting the change in fair value of investments backing policyholder liabilities partially offset by business growth in longevity reinsurance, both of which are largely offset in PBCAE.

Trading revenue decreased \$317 million or 45%, mainly due to lower revenue in Capital Markets from equity trading in North America and lower fixed income trading in the U.S., including the impact of loan underwriting markdowns reflecting widening credit spreads. These factors were partially offset by higher fixed income trading within rates products in Capital Markets primarily in Europe and Canada.

Investment management and custodial fees increased \$204 million or 7%, driven by higher average fee-based client assets primarily reflecting net sales and market appreciation, partially offset by the impact of a favourable accounting adjustment in Canadian Wealth Management in the prior year.

Underwriting and other advisory fees increased \$272 million or 30%, largely due to higher debt origination and M&A activity primarily in North America.

Other revenue decreased \$481 million or 59%, mainly driven by lower gains on non-trading derivatives in our Investor & Treasury Services business, which were largely offset in Net interest income. The change in the fair value of the hedges related to our U.S. share-based compensation plans, which was largely offset in Non-interest expense, also contributed to the decrease.

Provision for credit losses

Q2 2020 vs. Q2 2019

Total PCL increased \$2,404 million from the prior year.

PCL on loans of \$2,734 million increased \$2,293 million from the prior year, largely due to the impact of the COVID-19 pandemic on performing loans, resulting in higher provisions in Personal and Commercial Banking, Capital Markets and Wealth Management. The PCL on loans ratio of 165 bps increased 136 bps.

Q2 2020 vs. Q1 2020

Total PCL increased \$2,411 million from the prior quarter.

PCL on loans of \$2,734 million increased \$2,313 million from the prior quarter, largely due to the impact of the COVID-19 pandemic on performing loans, resulting in higher provisions in Personal and Commercial Banking, Capital Markets and Wealth Management. The PCL on loans ratio increased 139 bps.

Q2 2020 vs. Q2 2019 (Six months ended)

Total PCL increased \$2,309 million from the prior year.

PCL on loans of \$3,155 million increased \$2,198 million from the prior year, largely due to the impact of the COVID-19 pandemic on performing loans, resulting in higher provisions in Personal and Commercial Banking, Capital Markets and Wealth Management. The PCL on loans ratio of 96 bps increased 64 bps.

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

Insurance policyholder benefits, claims and acquisition expense (PBCAE)

Q2 2020 vs. Q2 2019

PBCAE decreased \$1,337 million from the prior year, mainly reflecting the change in fair value of investments backing policyholder liabilities and lower group annuity sales, both of which are largely offset in revenue. Higher favourable investment-related experience and the impact of new longevity reinsurance contracts also contributed to the decrease. These factors were partially offset by business growth in International Insurance which is largely offset in revenue, the impact of actuarial adjustments and lower favourable reinsurance contract renegotiations. Claims costs were relatively flat as the increase in travel claims associated with the COVID-19 pandemic were offset by improved life retrocession claims.

Q2 2020 vs. Q1 2020

PBCAE decreased \$1,791 million from the prior quarter, mainly reflecting the change in fair value of investments backing policyholder liabilities and lower group annuity sales, both of which are largely offset in revenue. Higher favourable investment-related experience also contributed to the decrease. These factors were partially offset by higher claims costs primarily related to travel, the impact of lower new longevity reinsurance contracts and unfavourable actuarial adjustments.

Q2 2020 vs. Q2 2019 (Six months ended)

PBCAE decreased \$948 million or 40% from the prior year, mainly reflecting the change in fair value of investments backing policyholder liabilities which is largely offset in revenue, the impact of higher favourable new longevity reinsurance contracts and higher favourable investment-related experience. These factors were partially offset by business growth which is largely offset in revenue, and the lower impact of reinsurance contract renegotiations.

Non-interest expense

(Millions of Canadian dollars, except percentage amounts)	For the three months ended			For the six months ended	
	April 30 2020	January 31 2020	April 30 2019	April 30 2020	April 30 2019
Salaries	\$ 1,671	\$ 1,652	\$ 1,607	\$ 3,323	\$ 3,215
Variable compensation	1,370	1,646	1,430	3,016	2,818
Benefits and retention compensation	508	541	471	1,049	963
Share-based compensation	24	221	114	245	269
Human resources	\$ 3,573	\$ 4,060	\$ 3,622	\$ 7,633	\$ 7,265
Equipment	468	462	445	930	876
Occupancy	417	397	405	814	802
Communications	252	250	273	502	513
Professional fees	324	284	290	608	595
Amortization of other intangibles	315	303	299	618	589
Other	593	622	582	1,215	1,188
Non-interest expense	\$ 5,942	\$ 6,378	\$ 5,916	\$ 12,320	\$ 11,828
Efficiency ratio (1)	57.5%	49.7%	51.4%	53.2%	51.2%
Efficiency ratio adjusted (2)	52.6%	51.6%	53.2%	52.1%	52.7%

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

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

Q2 2020 vs. Q2 2019

Non-interest expense increased \$26 million from the prior year, largely due to higher staff-related costs (excluding share-based compensation), the impact of foreign exchange translation and an increase in technology and related costs. Additional compensation in the current quarter instituted for certain employees, primarily those client-facing amidst the COVID-19 pandemic, as well as other incremental COVID-19 related costs, also contributed to the increase. These factors were partially offset by the change in the fair value of our U.S. share-based compensation plans, which was largely offset in Other revenue.

Our efficiency ratio of 57.5% increased 610 bps from 51.4% last year. Excluding the change in fair value of investments backing our policyholder liabilities, our efficiency ratio of 52.6% decreased 60 bps from 53.2% last year.

Q2 2020 vs. Q1 2020

Non-interest expense decreased \$436 million or 7% from the prior quarter, primarily due to lower variable compensation on decreased results, and the change in the fair value of our U.S. share-based compensation plans which was largely offset in Other revenue. These factors were partially offset by the impact of foreign exchange translation.

Our efficiency ratio of 57.5% increased 780 bps from 49.7% last quarter. Excluding the change in fair value of investments backing our policyholder liabilities, our efficiency ratio of 52.6% increased 100 bps from 51.6% last quarter.

Q2 2020 vs. Q2 2019 (Six months ended)

Non-interest expense increased \$492 million or 4% from the prior year, primarily attributable to higher variable compensation on increased revenue, higher staff-related costs and an increase in technology and related costs, including digital initiatives. These factors were partially offset by the change in the fair value of our U.S. share-based compensation plans, which was largely offset in Other revenue.

Our efficiency ratio of 53.2% increased 200 bps from 51.2%. Excluding the change in fair value of investments backing our policyholder liabilities, our efficiency ratio of 52.1% decreased 60 bps from last year.

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

Income taxes

(Millions of Canadian dollars, except percentage amounts)	For the three months ended			For the six months ended	
	April 30 2020	January 31 2020	April 30 2019	April 30 2020	April 30 2019
Income taxes	\$ 257	\$ 916	\$ 767	\$ 1,173	\$ 1,533
Income before income taxes	\$ 1,738	\$ 4,425	\$ 3,997	\$ 6,163	\$ 7,935
Effective income tax rate	14.8%	20.7%	19.2%	19.0%	19.3%

Q2 2020 vs. Q2 2019

Income tax expense decreased \$510 million or 66% from last year, primarily due to lower income before income taxes in the current quarter.

The effective income tax rate of 14.8% decreased 440 bps, mainly due to a higher proportion of tax exempt income and income from lower tax rate jurisdictions relative to the overall decline in earnings. These factors were partially offset by favourable tax adjustments in the prior year.

Q2 2020 vs. Q1 2020

Income tax expense decreased \$659 million or 72% from last quarter, primarily due to lower income before income taxes in the current quarter.

The effective income tax rate of 14.8% decreased 590 bps, mainly due to a higher proportion of income from lower tax rate jurisdictions and tax exempt income relative to the overall decline in earnings.

Q2 2020 vs. Q2 2019 (Six months ended)

Income tax expense decreased \$360 million or 23% from last year, mainly due to lower income before income taxes in the current year.

The effective income tax rate of 19.0% decreased 30 bps, mainly due to a higher proportion of tax exempt income relative to the overall decline in earnings, partially offset by net favourable tax adjustments 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, 2019.

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

Key performance and non-GAAP measures

Performance measures

Return on common equity

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

The following table provides a summary of our ROE calculations:

(Millions of Canadian dollars, except percentage amounts)	For the three months ended								January 31 2020	April 30 2019
	April 30 2020							Total		
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total		Total	Total
Net income available to common shareholders	\$ 516	\$ 411	\$ 178	\$ 222	\$ 86	\$ 7	\$ 1,420	\$ 3,439	\$ 3,161	
Total average common equity (1), (2)	23,500	16,100	2,200	3,200	23,450	10,650	79,100	77,850	74,000	
ROE (3)	9.0%	10.4%	33.0%	28.4%	1.5%	n.m.	7.3%	17.6%	17.5%	

(Millions of Canadian dollars, except percentage amounts)	For the six months ended								April 30 2019
	April 30 2020							Total	
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total		Total
Net income available to common shareholders	\$ 2,179	\$ 1,021	\$ 357	\$ 362	\$ 949	\$ (9)	\$ 4,859	\$ 6,257	
Total average common equity (1), (2)	23,400	15,750	2,200	3,150	23,100	10,850	78,450	73,800	
ROE (3)	18.7%	13.0%	32.7%	23.2%	8.3%	n.m.	12.5%	17.1%	

(1) Total average common equity represents rounded figures.

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

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

n.m. not meaningful

Non-GAAP measures

We believe that certain non-GAAP measures described below are more reflective of our ongoing operating results and provide readers with a better understanding of management's perspective on our performance. These measures enhance the comparability of our financial performance for the three and six months ended April 30, 2020 with the corresponding periods in the prior year and the three months ended January 31, 2020. Non-GAAP measures do not have a standardized meaning under GAAP and may not be comparable to similar measures disclosed by other financial institutions.

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

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

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

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

(Millions of Canadian dollars, except percentage amounts)	For the three months ended								
	April 30 2020			January 31 2020			April 30 2019		
	As reported	Item excluded		As reported	Item excluded		As reported	Item excluded	
		Change in fair value of investments backing policyholder liabilities	Adjusted		Change in fair value of investments backing policyholder liabilities	Adjusted		Change in fair value of investments backing policyholder liabilities	Adjusted
Total revenue	\$ 10,333	\$ 953	\$ 11,286	\$ 12,836	\$ (468)	\$ 12,368	\$ 11,499	\$ (383)	\$ 11,116
Non-interest expense	5,942	–	5,942	6,378	–	6,378	5,916	–	5,916
Efficiency ratio	57.5%		52.6%	49.7%		51.6%	51.4%		53.2%

(Millions of Canadian dollars, except percentage amounts)	For the six months ended								
	April 30 2020			April 30 2019					
	As reported	Item excluded		As reported	Item excluded				
		Change in fair value of investments backing policyholder liabilities	Adjusted		Change in fair value of investments backing policyholder liabilities	Adjusted			
Total revenue	\$ 23,169	\$ 485	\$ 23,654	\$ 23,088	\$ (630)	\$ 22,458			
Non-interest expense	12,320	–	12,320	11,828	–	11,828			
Efficiency ratio	53.2%		52.1%	51.2%		52.7%			

Personal & Commercial Banking

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	As at or for the three months ended			As at or for the six months ended	
	April 30 2020	January 31 2020	April 30 2019	April 30 2020	April 30 2019
Net interest income	\$ 3,149	\$ 3,226	\$ 3,060	\$ 6,375	\$ 6,194
Non-interest income	1,251	1,384	1,273	2,635	2,557
Total revenue	4,400	4,610	4,333	9,010	8,751
PCL on performing assets	1,370	66	9	1,436	44
PCL on impaired assets	336	276	363	612	676
PCL	1,706	342	372	2,048	720
Non-interest expense	1,947	1,984	1,887	3,931	3,802
Income before income taxes	747	2,284	2,074	3,031	4,229
Net income	\$ 532	\$ 1,686	\$ 1,549	\$ 2,218	\$ 3,120
Revenue by business					
Canadian Banking	\$ 4,170	\$ 4,368	\$ 4,099	\$ 8,538	\$ 8,269
Caribbean & U.S. Banking	230	242	234	472	482
Selected balance sheet and other information					
ROE	9.0%	28.3%	27.2%	18.7%	26.9%
NIM	2.73%	2.77%	2.85%	2.75%	2.85%
Efficiency ratio	44.3%	43.0%	43.5%	43.6%	43.4%
Operating leverage	(1.7)%	0.7%	2.4%	(0.4)%	1.0%
Average total earning assets, net	\$ 468,400	\$ 463,400	\$ 440,300	\$ 465,900	\$ 438,700
Average loans and acceptances, net	471,300	466,800	441,900	469,000	440,000
Average deposits	428,700	413,700	389,000	421,100	385,500
AUA ⁽¹⁾	275,700	294,200	283,300	275,700	283,300
Average AUA	275,900	290,600	277,900	283,300	270,800
PCL on impaired loans as a % of average net loans and acceptances	0.28%	0.24%	0.34%	0.26%	0.31%
Other selected information – Canadian Banking					
Net income	\$ 649	\$ 1,624	\$ 1,460	\$ 2,273	\$ 3,004
NIM	2.70%	2.72%	2.80%	2.71%	2.79%
Efficiency ratio	42.7%	41.3%	42.0%	42.0%	41.8%
Operating leverage	(1.8)%	0.7%	1.7%	(0.4)%	0.7%

(1) AUA represents period-end spot balances and includes securitized residential mortgages and credit card loans as at April 30, 2020 of \$16.1 billion and \$6.7 billion, respectively (January 31, 2020 – \$15.4 billion and \$7.8 billion; April 30, 2019 – \$16.2 billion and \$8.3 billion).

Financial performance

Q2 2020 vs. Q2 2019

Net income decreased \$1,017 million or 66% from last year, primarily attributable to higher PCL mainly driven by the impact of the COVID-19 pandemic on performing assets, and lower spreads. These factors were partially offset by average volume growth of 9% in Canadian Banking.

Total revenue increased \$67 million or 2%.

Canadian Banking revenue increased \$71 million or 2% compared to last year, largely reflecting average volume growth of 7% in loans and 11% in deposits, partially offset by lower spreads and lower card service revenue driven by a significant decrease in purchase volumes.

Caribbean & U.S. Banking revenue decreased \$4 million or 2% compared to last year.

Net interest margin was down 12 bps, mainly due to the impact of competitive pricing pressures, lower interest rates and changes in product mix.

PCL increased \$1,334 million, largely reflecting higher provisions on performing loans due to the impact of the COVID-19 pandemic. Higher provisions on impaired loans in our Canadian Banking retail portfolios were more than offset by lower provisions on impaired loans in our Canadian Banking commercial and Caribbean Banking portfolios, as the prior year reflected higher provisions taken in the public works & infrastructure and information technology sectors. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$60 million or 3%, primarily attributable to higher staff-related costs, including additional compensation in the current quarter instituted for certain employees, primarily those client-facing amidst the COVID-19 pandemic, as well as other incremental COVID-19 related costs.

Q2 2020 vs. Q1 2020

Net income decreased \$1,154 million or 68% from last quarter, reflecting higher PCL, mainly due to the impact of the COVID-19 pandemic on performing assets. Lower card service revenue due to a significant decrease in purchase volumes, two less days in the quarter and lower spreads also contributed to the decrease. These factors were partially offset by average volume growth of 2% in Canadian Banking.

Net interest margin was down 4 bps, mainly due to the impact of lower interest rates.

Q2 2020 vs. Q2 2019 (Six months ended)

Net income decreased \$902 million or 29% from last year, reflecting higher PCL, mainly due to the impact of the COVID-19 pandemic on performing assets. Lower spreads and higher staff-related costs also contributed to the decrease. These factors were partially offset by average volume growth of 8% in Canadian Banking.

Total revenue increased \$259 million or 3% from last year, mainly driven by average volume growth in Canadian Banking of 7% in loans and 10% in deposits and higher average balances driving higher mutual fund distribution fees, partially offset by lower spreads and lower card service revenue driven by a significant decrease in purchase volumes.

PCL increased \$1,328 million, largely reflecting higher provisions on performing loans due to the impact of the COVID-19 pandemic. Higher provisions on impaired loans in our Canadian Banking retail portfolios were more than offset by lower provisions on impaired loans in our Canadian Banking commercial and Caribbean Banking portfolios, as the prior year reflected higher provisions taken in the public works & infrastructure and information technology sectors. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$129 million or 3%, primarily attributable to higher staff-related costs, and an increase in technology and related costs, including digital initiatives.

Wealth Management

(Millions of Canadian dollars, except number of, percentage amounts and as otherwise noted)	As at or for the three months ended			As at or for the six months ended	
	April 30 2020	January 31 2020	April 30 2019	April 30 2020	April 30 2019
Net interest income	\$ 737	\$ 738	\$ 731	\$ 1,475	\$ 1,475
Non-interest income					
Fee-based revenue	1,774	1,847	1,663	3,621	3,377
Transaction and other revenue	311	581	585	892	1,075
Total revenue	2,822	3,166	2,979	5,988	5,927
PCL on performing assets	76	(1)	13	75	28
PCL on impaired assets	15	(1)	17	14	28
PCL	91	(2)	30	89	56
Non-interest expense	2,169	2,370	2,204	4,539	4,368
Income before income taxes	562	798	745	1,360	1,503
Net income	\$ 424	\$ 623	\$ 585	\$ 1,047	\$ 1,182
Revenue by business					
Canadian Wealth Management	\$ 835	\$ 843	\$ 808	\$ 1,678	\$ 1,650
U.S. Wealth Management (including City National)	1,384	1,624	1,539	3,008	3,010
U.S. Wealth Management (including City National) (US\$ millions)	1,003	1,234	1,155	2,237	2,258
Global Asset Management	500	594	538	1,094	1,081
International Wealth Management	103	105	94	208	186
Selected balance sheet and other information					
ROE	10.4%	15.8%	16.5%	13.0%	16.5%
NIM	2.97%	3.17%	3.66%	3.07%	3.66%
Pre-tax margin (1)	19.9%	25.2%	25.0%	22.7%	25.4%
Number of advisors (2)	5,333	5,299	5,176	5,333	5,176
Average total earning assets, net	\$ 100,900	\$ 92,500	\$ 81,900	\$ 96,700	\$ 81,200
Average loans and acceptances, net	75,100	69,600	62,200	72,300	61,700
Average deposits	119,100	105,600	93,000	112,300	93,600
AUA (3)	1,053,700	1,106,900	1,050,900	1,053,700	1,050,900
U.S. Wealth Management (including City National) (3)	559,200	578,600	537,200	559,200	537,200
U.S. Wealth Management (including City National) (US\$ millions) (3)	401,700	437,300	400,900	401,700	400,900
AUM (3)	782,100	792,900	726,600	782,100	726,600
Average AUA	1,040,200	1,097,100	1,027,300	1,068,900	1,006,700
Average AUM	770,400	780,200	712,200	775,300	693,300
PCL on impaired loans as a % of average net loans and acceptances	0.08%	(0.01)%	0.12%	0.04%	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 six months ended
	Q2 2020 vs. Q2 2019	Q2 2020 vs. Q1 2020	Q2 2020 vs. Q2 2019
Increase (decrease):			
Total revenue	\$ 48	\$ 66	\$ 22
PCL	4	5	4
Non-interest expense	41	55	19
Net income	3	5	(1)
Percentage change in average U.S. dollar equivalent of C\$1.00	(3)%	(5)%	(1)%
Percentage change in average British pound equivalent of C\$1.00	–%	(1)%	–%
Percentage change in average Euro equivalent of C\$1.00	(1)%	(4)%	2%

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

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

(3) Represents period-end spot balances.

Financial performance

Q2 2020 vs. Q2 2019

Net income decreased \$161 million or 28%, primarily attributable to higher PCL, mainly driven by the impact of the COVID-19 pandemic on performing assets, and higher staff and technology-related costs. Also contributing to the decrease was the impact of market volatility during the current quarter which resulted in unfavourable changes in the fair value of seed capital investments, interest rate derivatives and the net impact of our U.S. share-based compensation plans. These factors were partially offset by an increase in revenue from higher average fee-based client assets, net of the associated variable compensation costs.

Total revenue decreased \$157 million or 5%.

Canadian Wealth Management revenue increased \$27 million or 3%, mainly due to higher transaction volumes driven primarily by the impact of elevated market volatility and higher average fee-based client assets largely reflecting net sales.

U.S. Wealth Management (including City National) revenue decreased \$155 million or 10%. In U.S. dollars, revenue decreased \$152 million or 13%, primarily attributable to the impact of market volatility during the current quarter resulting in unfavourable changes in the fair value of the hedges related to our U.S. share-based compensation plans, which was largely offset in non-interest expense, as well as changes in the fair value of interest rate derivatives from widening credit spreads. Average volume growth from an increase in business activity in the current quarter was more than offset by the impact of lower interest rates resulting in a decline in net interest income. These factors were partially offset by higher average fee-based client assets mainly reflecting net sales.

Global Asset Management revenue decreased \$38 million or 7%, largely due to the unfavourable change in fair value of seed capital investments driven by the impact of market volatility in the current quarter.

PCL increased \$61 million, reflecting higher provisions on performing loans in U.S. Wealth Management (including City National) due to the impact of the COVID-19 pandemic. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense decreased \$35 million or 2%, mainly due to the change in the fair value of our U.S. share-based compensation plans, which was largely offset in revenue. This factor was partially offset by higher staff-related costs in support of business growth, the impact of foreign exchange translation, higher technology and related costs, and higher regulatory costs.

Q2 2020 vs. Q1 2020

Net income decreased \$199 million or 32%, largely due to higher PCL, mainly driven by the impact of the COVID-19 pandemic on performing assets. Also contributing to the decrease was the impact of market volatility during the current quarter which resulted in unfavourable changes in the fair value of seed capital investments, interest rate derivatives and the net impact of our U.S. share-based compensation plans. Net interest income was relatively flat as average volume growth was offset by the impact of lower interest rates. These factors were partially offset by lower variable compensation commensurate with the decline in commissionable revenue.

Q2 2020 vs. Q2 2019 (Six months ended)

Net income decreased \$135 million or 11% from a year ago, primarily due to higher staff and technology-related costs, as well as higher PCL mainly driven by the impact of the COVID-19 pandemic on performing assets. Also contributing to the decrease was the impact of market volatility during the current quarter which resulted in unfavourable changes in the fair value of seed capital investments, interest rate derivatives and the net impact of our U.S. share-based compensation plans. The prior period also included the impact of a favourable accounting adjustment in Canadian Wealth Management. These factors were partially offset by an increase in revenue from higher average fee-based client assets, net of the associated variable compensation costs, and an increase in transaction volumes.

Total revenue increased \$61 million or 1%, largely due to higher average fee-based client assets primarily reflecting net sales and market appreciation, an increase in transaction volumes and the impact of foreign exchange translation. These factors were partially offset by the impact of market volatility in the second quarter of 2020 resulting in unfavourable changes in the fair value of the hedges related to our U.S. share-based compensation plans, which was largely offset in non-interest expense, seed capital investments, and interest rate derivatives from widening credit spreads, as well as the impact of a favourable accounting adjustment in Canadian Wealth Management in the prior period. Net interest income was flat as average volume growth was offset by the impact of lower spreads.

PCL increased \$33 million, reflecting higher provisions on performing loans in U.S. Wealth Management (including City National) largely due to the impact of the COVID-19 pandemic. This was partially offset by lower provisions on impaired loans driven by higher recoveries in the information technology and other services sectors. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$171 million or 4%, primarily due to higher variable compensation commensurate with increased commissionable revenue, and higher staff-related costs in support of business growth. Higher technology and related costs and the impact of foreign exchange translation also contributed to the increase. These factors were partially offset by the change in the fair value of our U.S. share-based compensation plans, which was largely offset in revenue.

Insurance

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	As at or for the three months ended			As at or for the six months ended	
	April 30 2020	January 31 2020	April 30 2019	April 30 2020	April 30 2019
Non-interest income					
Net earned premiums	\$ 957	\$ 1,350	\$ 964	\$ 2,307	\$ 2,126
Investment income, gains/(losses) on assets supporting insurance policyholder liabilities (1)	(796)	609	515	(187)	896
Fee income	36	35	36	71	72
Total revenue	197	1,994	1,515	2,191	3,094
PCL	1	-	-	1	-
Insurance policyholder benefits and claims (1)	(257)	1,535	1,077	1,278	2,206
Insurance policyholder acquisition expense	80	79	83	159	179
Non-interest expense	148	153	150	301	304
Income before income taxes	225	227	205	452	405
Net income	\$ 180	\$ 181	\$ 154	\$ 361	\$ 320
Revenue by business					
Canadian Insurance	\$ (344)	\$ 1,383	\$ 1,004	\$ 1,039	\$ 2,043
International Insurance	541	611	511	1,152	1,051
Selected balances and other information					
ROE	33.0%	32.5%	32.4%	32.7%	33.5%
Premiums and deposits (2)	\$ 1,148	\$ 1,542	\$ 1,106	\$ 2,690	\$ 2,420
Fair value changes on investments backing policyholder liabilities (1)	(953)	468	383	(485)	630

(1) Includes unrealized gains and losses on investments backing policyholder liabilities attributable to fluctuation of assets designated as FVTPL. The investments which support actuarial liabilities are predominantly fixed income assets designated as FVTPL. Consequently, changes in the fair values of these assets are recorded in Insurance premiums, investment and fee income in the Consolidated Statements of Income and are largely offset by changes in the fair value of the actuarial liabilities, the impact of which is reflected in Insurance policyholder benefits, claims and acquisition expense.

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

Financial performance

Q2 2020 vs. Q2 2019

Net income increased \$26 million or 17% from a year ago, mainly due to higher favourable investment-related experience and new longevity reinsurance contracts, partially offset by the impact of actuarial adjustments and lower benefits from favourable reinsurance contract renegotiations.

Total revenue decreased \$1,318 million or 87%, primarily due to the impact of the change in fair value of investments backing policyholder liabilities, which is largely offset in PBCAE as indicated below. The change in fair value is largely related to widening spreads partially offset by the impact of lower Canadian interest rates.

Canadian Insurance revenue decreased \$1,348 million, primarily due to the change in fair value of investment backing policyholder liabilities and lower group annuity sales, both of which are largely offset in PBCAE as indicated below.

International Insurance revenue increased \$30 million or 6%, as business growth in longevity reinsurance was partially offset by the change in fair value of investment backing policyholder liabilities, both of which are largely offset in PBCAE as indicated below.

PBCAE decreased \$1,337 million, mainly reflecting the change in fair value of investments backing policyholder liabilities and lower group annuity sales. Higher favourable investment-related experience and the impact of new longevity reinsurance contracts also contributed to the decrease. These factors were partially offset by business growth in International Insurance, the impact of actuarial adjustments and lower favourable reinsurance contract renegotiations. Claims costs were relatively flat as the increase in travel claims associated with the COVID-19 pandemic were offset by improved life retrocession claims.

Non-interest expense decreased \$2 million or 1%.

Q2 2020 vs. Q1 2020

Net income decreased \$1 million or 1%, mainly due higher travel claims costs, the impact of lower new longevity reinsurance contracts and unfavourable actuarial adjustments. These factors were largely offset by higher favourable investment-related experience.

Q2 2020 vs. Q2 2019 (Six months ended)

Net income increased \$41 million or 13% from a year ago, mainly due to new longevity reinsurance contracts and higher favourable investment-related experience. These factors were partially offset by lower benefits from favourable reinsurance contract renegotiations.

Total revenue decreased \$903 million or 29% compared to the prior year, largely reflecting the change in fair value of investments backing policyholder liabilities partially offset by business growth in longevity reinsurance, both of which are largely offset in PBCAE as indicated below.

PBCAE decreased \$948 million or 40%, mainly reflecting the change in fair value of investments backing policyholder liabilities, the impact of higher favourable new longevity reinsurance contracts and higher favourable investment-related experience. These factors were partially offset by business growth and the lower impact of reinsurance contract renegotiations.

Non-interest expense decreased \$3 million or 1%.

Investor & Treasury Services

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	As at or for the three months ended			As at or for the six months ended	
	April 30 2020	January 31 2020	April 30 2019	April 30 2020	April 30 2019
Net interest income	\$ 74	\$ 58	\$ (34)	\$ 132	\$ (65)
Non-interest income	635	539	621	1,174	1,283
Total revenue	709	597	587	1,306	1,218
PCL on performing assets	14	–	–	14	–
PCL on impaired assets	–	–	–	–	–
PCL	14	–	–	14	–
Non-interest expense	392	402	388	794	806
Net income before income taxes	303	195	199	498	412
Net income	\$ 226	\$ 143	\$ 151	\$ 369	\$ 312
Selected balance sheet and other information					
ROE	28.4%	18.0%	17.4%	23.2%	17.3%
Average deposits	\$ 194,700	\$ 174,500	\$ 173,900	\$ 184,500	\$ 172,900
Average client deposits	64,900	57,900	58,200	61,300	58,700
Average wholesale funding deposits	129,800	116,600	115,700	123,200	114,200
AUA ⁽¹⁾	4,037,700	4,308,200	4,307,800	4,037,700	4,307,800
Average AUA	4,292,800	4,286,200	4,271,000	4,289,500	4,230,500

(1) Represents period-end spot balances.

Financial performance

Q2 2020 vs. Q2 2019

Net income increased \$75 million or 50%, primarily due to higher funding and liquidity revenue.

Total revenue increased \$122 million or 21%, mainly due to higher funding and liquidity revenue primarily driven by the impact of interest rate movements in the current quarter and higher gains from the disposition of securities, partially offset by higher funding costs related to enterprise liquidity. Higher revenue from increased client activity in our asset services business resulting from elevated market volatility in the current quarter also contributed to the increase.

Non-interest expense remained relatively flat.

Q2 2020 vs. Q1 2020

Net income increased \$83 million or 58%, primarily driven by higher funding and liquidity revenue reflecting the impact of interest rate movements in the current quarter and higher gains from the disposition of securities, partially offset by higher funding costs related to enterprise liquidity. Higher revenue from increased client activity in our asset services business resulting from elevated market volatility in the current quarter also contributed to the increase.

Q2 2020 vs. Q2 2019 (Six months ended)

Net income increased \$57 million or 18%, largely driven by higher funding and liquidity revenue.

Total revenue increased \$88 million or 7%, mainly due to higher funding and liquidity revenue primarily driven by the impact of interest rate movements in the current period and higher gains from the disposition of securities, partially offset by higher funding costs related to enterprise liquidity.

Non-interest expense decreased \$12 million or 1%.

Capital Markets

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	As at or for the three months ended			As at or for the six months ended	
	April 30 2020	January 31 2020	April 30 2019	April 30 2020	April 30 2019
Net interest income (1), (2)	\$ 1,456	\$ 1,161	\$ 993	\$ 2,617	\$ 1,962
Non-interest income (1), (2)	857	1,387	1,176	2,244	2,305
Total revenue (1)	2,313	2,548	2,169	4,861	4,267
PCL on performing assets	723	18	(23)	741	15
PCL on impaired assets	294	61	48	355	150
PCL	1,017	79	25	1,096	165
Non-interest expense	1,291	1,435	1,289	2,726	2,519
Net income before income taxes	5	1,034	855	1,039	1,583
Net income	\$ 105	\$ 882	\$ 776	\$ 987	\$ 1,429
Revenue by business					
Corporate and Investment Banking	\$ 722	\$ 1,141	\$ 969	\$ 1,863	\$ 1,896
Global Markets	1,694	1,450	1,235	3,144	2,462
Other	(103)	(43)	(35)	(146)	(91)
Selected balance sheet and other information					
ROE	1.5%	15.1%	13.6%	8.3%	12.2%
Average total assets	\$ 820,700	\$ 716,000	\$ 648,900	\$ 767,800	\$ 646,200
Average trading securities	108,100	115,700	101,200	112,000	101,700
Average loans and acceptances, net	117,600	99,300	101,800	108,300	100,000
Average deposits (2)	79,300	76,500	78,200	77,900	79,100
PCL on impaired loans as a % of average net loans and acceptances	0.94%	0.24%	0.19%	0.62%	0.30%

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

(Millions of Canadian dollars, except percentage amounts)

	For the three months ended		For the six months ended
	Q2 2020 vs. Q2 2019	Q2 2020 vs. Q1 2020	Q2 2020 vs. Q2 2019
Increase (decrease):			
Total revenue	\$ 35	\$ 52	\$ 9
PCL	23	35	22
Non-interest expense	22	31	10
Net income	(5)	(7)	(17)
Percentage change in average U.S. dollar equivalent of C\$1.00	(3)%	(5)%	(1)%
Percentage change in average British pound equivalent of C\$1.00	–%	(1)%	–%
Percentage change in average Euro equivalent of C\$1.00	(1)%	(4)%	2%

(1) The taxable equivalent basis (teb) adjustment for the three months ended April 30, 2020 was \$132 million (January 31, 2020 – \$128 million; April 30, 2019 – \$120 million) and for the six months ended April 30, 2020 was \$260 million (April 30, 2019 – \$227 million). For further discussion, refer to the How we measure and report our business segments section of our 2019 Annual Report.

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

Financial performance

Q2 2020 vs. Q2 2019

Net income decreased \$671 million or 86%, primarily due to higher PCL, mainly driven by the impact of the COVID-19 pandemic on performing assets and higher provisions on impaired assets in a couple of sectors. Lower revenue in Corporate and Investment Banking also contributed to the decrease. These factors were partially offset by higher revenue in Global Markets and lower taxes due to an increase in the proportion of earnings from lower tax rate jurisdictions.

Total revenue increased \$144 million or 7%.

Corporate and Investment Banking revenue decreased \$247 million or 25%, mainly due to lower fixed income trading revenue primarily from loan underwriting markdowns in the U.S. and Europe driven by widening credit spreads.

Global Markets revenue increased \$459 million or 37%, driven by higher fixed income trading revenue across all regions primarily due to increased client activity in rates and repo products amidst elevated market volatility in the current quarter. Higher commissions revenue in cash equities due to increased client activity also contributed to the increase. Global Markets revenue was also impacted by lower equity trading revenue mainly in Canada and Europe, partially offset by higher equity trading revenue in the U.S.

Other revenue decreased \$68 million largely reflecting higher residual funding costs.

PCL increased \$992 million, largely reflecting higher provisions on performing assets mainly due to the impact of the COVID-19 pandemic. Higher provisions on impaired loans also contributed to the increase, largely due to provisions taken in the oil & gas sector due to continued pressure on oil prices and provisions taken in the consumer discretionary sector, resulting in an increase of 75 bps in the impaired loans ratio. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense remained relatively flat.

Q2 2020 vs. Q1 2020

Net income decreased \$777 million or 88% largely due to higher PCL, mainly driven by the impact of the COVID-19 pandemic on performing assets and higher provisions on impaired assets in a couple of sectors. Lower fixed income trading revenue in

Corporate and Investment Banking primarily from loan underwriting markdowns in the U.S. and Europe reflecting widening credit spreads and lower M&A activity primarily in the U.S. also contributed to the decrease. These factors were partially offset by lower compensation on decreased revenue and lower taxes due to an increase in the proportion of earnings from lower tax rate jurisdictions. Net Income was also impacted by higher fixed income trading revenue in Global Markets in Canada and Europe due to increased client activity, partially offset by lower fixed income trading revenue in the U.S.

Q2 2020 vs. Q2 2019 (Six months ended)

Net income decreased \$442 million or 31%, primarily due to higher PCL, mainly driven by the impact of the COVID-19 pandemic on performing assets and higher provisions on impaired assets in a couple of sectors. Higher compensation on increased revenue also contributed to the decrease. These factors were partially offset by higher revenue in Global Markets.

Total revenue increased \$594 million or 14%, mainly due to higher fixed income trading revenue in Global Markets across all regions as well as higher debt origination and M&A activity primarily in North America. Higher loan syndication activity in the U.S. also contributed to the increase. These factors were partially offset by lower fixed income trading revenue in Corporate and Investment Banking primarily from loan underwriting markdowns in the U.S. and Europe reflecting widening credit spreads, lower equity trading revenue across all regions, as well as lower gains on the sale of certain investment securities.

PCL increased \$931 million, largely reflecting higher provisions on performing assets due to the impact of the COVID-19 pandemic. Higher provisions on impaired loans also contributed to the increase, resulting in an increase of 32 bps in the impaired loans ratio, largely due to provisions taken in the oil & gas sector reflecting continued pressure on oil prices and the consumer discretionary sector in the current year, partially offset by a provision taken in the utilities sector in the prior year. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$207 million or 8%, largely reflecting higher compensation on increased revenue.

Corporate Support

(Millions of Canadian dollars)	For the three months ended			For the six months ended	
	April 30 2020	January 31 2020	April 30 2019	April 30 2020	April 30 2019
Net interest income (loss) (1)	\$ 49	\$ 38	\$ 23	\$ 87	\$ 54
Non-interest income (loss) (1)	(157)	(117)	(107)	(274)	(223)
Total revenue (1)	(108)	(79)	(84)	(187)	(169)
PCL	1	–	(1)	1	(1)
Non-interest expense	(5)	34	(2)	29	29
Net income (loss) before income taxes (1)	(104)	(113)	(81)	(217)	(197)
Income taxes (recoveries) (1)	(118)	(107)	(96)	(225)	(236)
Net income (loss)	\$ 14	\$ (6)	\$ 15	\$ 8	\$ 39

(1) Teb adjusted.

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

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

The teb amount for the three months ended April 30, 2020 was \$132 million, as compared to \$128 million in the prior quarter and \$120 million last year. The teb amount for the six months ended April 30, 2020 was \$260 million, as compared to \$227 million in the prior year.

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

Q2 2020

Net income was \$14 million, largely due to asset/liability management activities, partially offset by net unfavourable tax adjustments.

Q1 2020

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

Q2 2019

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

Q2 2020 (Six months ended)

Net income was \$8 million, mainly due to asset/liability management activities, partially offset by net unfavourable tax adjustments and residual unallocated costs.

Q2 2019 (Six months ended)

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

Quarterly results and trend analysis

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

Quarterly results ⁽¹⁾

(Millions of Canadian dollars, except per share and percentage amounts)	2020			2019			2018	
	Q2	Q1	Q4	Q3	Q2	Q1	Q4	Q3
Personal & Commercial Banking	\$ 4,400	\$ 4,610	\$ 4,568	\$ 4,546	\$ 4,333	\$ 4,418	\$ 4,364	\$ 4,284
Wealth Management	2,822	3,166	3,187	3,029	2,979	2,948	2,740	2,798
Insurance	197	1,994	1,153	1,463	1,515	1,579	1,039	1,290
Investor & Treasury Services	709	597	566	561	587	631	624	620
Capital Markets ⁽²⁾	2,313	2,548	1,987	2,034	2,169	2,098	2,056	2,157
Corporate Support ⁽²⁾	(108)	(79)	(91)	(89)	(84)	(85)	(154)	(124)
Total revenue	\$ 10,333	\$ 12,836	\$ 11,370	\$ 11,544	\$ 11,499	\$ 11,589	\$ 10,669	\$ 11,025
PCL	2,830	419	499	425	426	514	353	346
PBCAE	(177)	1,614	654	1,046	1,160	1,225	494	925
Non-interest expense	5,942	6,378	6,319	5,992	5,916	5,912	5,882	5,858
Income before income taxes	\$ 1,738	\$ 4,425	\$ 3,898	\$ 4,081	\$ 3,997	\$ 3,938	\$ 3,940	\$ 3,896
Income taxes	257	916	692	818	767	766	690	787
Net income	\$ 1,481	\$ 3,509	\$ 3,206	\$ 3,263	\$ 3,230	\$ 3,172	\$ 3,250	\$ 3,109
EPS – basic	\$ 1.00	\$ 2.41	\$ 2.19	\$ 2.23	\$ 2.20	\$ 2.15	\$ 2.21	\$ 2.10
– diluted	1.00	2.40	2.18	2.22	2.20	2.15	2.20	2.10
Effective income tax rate	14.8%	20.7%	17.8%	20.0%	19.2%	19.5%	17.5%	20.2%
Period average US\$ equivalent of C\$1.00	\$ 0.725	\$ 0.760	\$ 0.755	\$ 0.754	\$ 0.751	\$ 0.749	\$ 0.767	\$ 0.767

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

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

Seasonality

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

Trend analysis

Earnings have generally trended upward over the period. However, earnings in the second quarter of 2020 reflect the impact of the COVID-19 pandemic across all of our business segments primarily resulting in a significant increase in PCL and fluctuations in revenue from the impact of market volatility, including interest rates and credit spreads, as well as client activity. Results in the first quarter of 2019 were impacted by challenging market conditions throughout the earlier part of the quarter. Quarterly earnings are also affected by the impact of foreign exchange translation.

Personal & Commercial Banking revenue has benefitted from solid volume growth since the beginning of the period. Higher spreads throughout 2018 and the early half of 2019 reflecting higher interest rates have been partially offset by the ongoing impact of competitive pricing pressures. Net interest margin in Canadian Banking has generally declined over the latter part of the period, largely reflecting the impact of competitive pricing pressures. In addition, the BoC lowered rates by 150 bps in the second quarter of 2020. The second quarter of 2020 also saw lower card service revenue driven by a significant decrease in purchase volumes.

Wealth Management revenue has generally trended upwards primarily due to growth in average fee-based client assets which benefitted from market appreciation and net sales. Net interest income has also increased throughout the majority of the period largely driven by volume growth across the period and the impact of higher interest rates throughout the earlier part of the period. The impact of the U.S. Fed rate cuts resulted in lower spreads throughout the latter part of the period. A gain on the sale of the private debt business of BlueBay contributed to the increase in the fourth quarter of 2019. The change in the fair value of the hedges related to our U.S. share-based compensation plans, which is largely offset in Non-interest expense, also contributed to fluctuations in revenue over the period, including the heightened impact resulting from market volatility in the second quarter of 2020. The impact of market volatility during the second quarter of 2020 also resulted in unfavourable changes in our average fee-based client assets, as well as the fair value of interest rate derivatives and seed capital investments.

Insurance revenue fluctuated over the period, primarily due to the impact of changes in the fair value of investments backing policyholder liabilities which is largely offset in PBCAE. Revenue has benefitted from business growth in Canadian and International Insurance over the majority of the period, with the exception of lower group annuity sales impacting the majority of the latter part of the period.

Investor & Treasury Services revenue has been impacted by fluctuations in market conditions and client activity across the period. Revenue from our funding and liquidity business have fluctuated throughout the latter part of the period driven primarily by changes in money market opportunities. During the first half of 2019 our asset services business was impacted by challenging market conditions. While, the latter half of the period was generally impacted by lower client activity and lower

client deposit margins, the second quarter of 2020 was favourably impacted by interest rate movements and elevated market volatility contributing to increased client activity.

Capital Markets revenue is influenced, to a large extent, by market conditions that impact client activity in our Corporate and Investment Banking and Global Markets businesses, with the first quarter results generally stronger than the remaining quarters. The decline experienced in the fourth quarter of 2018 largely resulted from lower fixed income trading revenue. Client activity in 2019 was impacted by challenging market conditions resulting in lower investment banking fee revenues experienced across the industry. The impact of challenging market conditions also resulted in lower equity trading revenue across much of the latter part of the period. The first quarter of 2020 saw more favourable market conditions and increased client activity resulting in higher fixed income trading revenue and M&A activity. Elevated market volatility in the second quarter of 2020 resulted in increased client activity being more than offset by lower fixed income trading revenue, including the impact of loan underwriting markdowns.

PCL on performing assets has fluctuated over the period as it is impacted by macroeconomic conditions, volume growth, changes in credit quality and model changes, with the impact of the COVID-19 pandemic resulting in a significant increase in provisions in the second quarter of 2020. PCL on impaired assets saw lower provisions and higher recoveries across a few sectors in the latter half of 2018, although the fourth quarter of 2018 was impacted by the restructuring of portfolios in Barbados. After relatively benign credit conditions, we returned to a more normalized level of credit losses towards the end of 2019, though the first quarter of 2020 saw lower provisions on impaired loans in Personal & Commercial Banking and Wealth Management. The second quarter of 2020 saw higher provisions on impaired loans in Capital Markets in the oil & gas and consumer discretionary sectors.

PBCAE has fluctuated quarterly as it includes the changes to the fair value of investments backing our policyholder liabilities and business growth, including the impact of group annuity sales, both of which are largely offset in Revenue. PBCAE has also fluctuated due to investment-related experience and claims costs over the period, with the second quarter of 2020 being impacted by higher travel claims associated with the COVID-19 pandemic. Since late 2018, PBCAE has been positively impacted by favourable reinsurance contract renegotiations. Actuarial adjustments, which generally occur in the fourth quarter of each year, also impact PBCAE results.

While we continue to focus on efficiency management activities, Non-interest expense trended upwards over majority of the period. Growth mainly reflects higher costs in support of business growth and our ongoing investments in technology and related costs, including digital initiatives, and higher staff-related costs, including variable compensation. The increase in the fourth quarter of 2019 reflected severance and related costs associated with repositioning of our Investor & Treasury Services business. The second quarter of 2020 was affected by the impact of market volatility on the change in fair value of our U.S. share-based compensation plans which was largely offset in Revenue as well as lower variable compensation on decreased results.

Our effective income tax rate has fluctuated over the period, mostly due to various levels of tax adjustments and changes in earnings mix. The first quarter of 2019 included a write-down of deferred tax assets resulting from a change in the corporate tax rate in Barbados. The second quarter of 2020 saw a decrease mainly due to a higher proportion of tax exempt income and income from lower tax rate jurisdictions relative to the overall decline in earnings.

Financial condition

Condensed balance sheets

(Millions of Canadian dollars)	As at	
	April 30 2020	October 31 2019
Assets		
Cash and due from banks	\$ 98,777	\$ 26,310
Interest-bearing deposits with banks	48,398	38,345
Securities, net of applicable allowance (1)	269,941	249,004
Assets purchased under reverse repurchase agreements and securities borrowed	325,534	306,961
Loans		
Retail	435,409	426,086
Wholesale	243,269	195,870
Allowance for loan losses	(5,230)	(3,100)
Other – Derivatives	140,807	101,560
– Other (2)	118,777	87,899
Total assets	\$ 1,675,682	\$ 1,428,935
Liabilities		
Deposits	\$ 1,009,447	\$ 886,005
Other – Derivatives	144,710	98,543
– Other (2)	426,711	350,947
Subordinated debentures	9,774	9,815
Total liabilities	1,590,642	1,345,310
Equity attributable to shareholders	84,935	83,523
Non-controlling interests	105	102
Total equity	85,040	83,625
Total liabilities and equity	\$ 1,675,682	\$ 1,428,935

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

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

Q2 2020 vs. Q4 2019

Total assets increased \$247 billion or 17% from October 31, 2019. Foreign exchange translation increased total assets by \$30 billion.

Cash and due from banks was up \$72 billion or 275%, primarily due to higher deposits with central banks reflecting our short term cash and liquidity management activities amidst the COVID-19 pandemic.

Interest-bearing deposits with banks increased \$10 billion or 26%, primarily due to higher deposits with central banks, reflecting our cash and liquidity management activities amidst the COVID-19 pandemic.

Securities, net of applicable allowance, were up \$21 billion or 8%, largely due to higher government debt securities, largely driven by our liquidity management activities and the impact of foreign exchange translation. These factors were partially offset by a decrease in equity trading securities reflecting unfavourable market conditions.

Assets purchased under reverse repurchase agreements (reverse repos) and securities borrowed increased \$19 billion or 6%, mainly attributable to the impact of foreign exchange translation, increased client activities and lower financial netting.

Loans (net of Allowances for loan losses) were up \$55 billion or 9%, largely due to volume growth in wholesale loans in part to support our clients during this unprecedented time. Volume growth in residential mortgages and the impact of foreign exchange translation also contributed to the increase.

Derivative assets were up \$39 billion or 39%, primarily attributable to higher fair values on foreign exchange contracts and interest rate contracts.

Other assets were up \$31 billion or 35%, largely reflecting higher cash collateral balances and an increase in premises and equipment as a result of adopting IFRS 16. Higher margin requirements and the impact of foreign exchange translation also contributed to the increase.

Total liabilities increased \$245 billion or 18%. Foreign exchange translation increased total liabilities by \$30 billion.

Deposits increased \$123 billion or 14%, mainly as a result of higher business and retail deposits driven by increased client activities. The impact of foreign exchange translation and higher bank deposits also contributed to the increase.

Derivative liabilities were up \$46 billion or 47%, primarily attributable to higher fair values on foreign exchange contracts and interest rate contracts.

Other liabilities increased \$76 billion or 22%, mainly attributable to higher obligations related to repurchase agreements reflecting increased funding activities and lower financial netting. The impact of foreign currency translation, higher lease liabilities as a result of adopting IFRS 16 and higher obligations related to securities sold short also contributed to the increase.

Total equity increased \$1 billion or 2%.

Off-balance sheet arrangements

In the normal course of business, we engage in a variety of financial transactions that, for accounting purposes, are not recorded on our Consolidated Balance Sheets. Off-balance sheet transactions are generally undertaken for risk, capital and funding management purposes which benefit us and our clients. These include transactions with structured entities and may also include the issuance of guarantees. These transactions give rise to, among other risks, varying degrees of market, credit, and liquidity and funding risk, which are discussed in the Risk management section of this Q2 2020 Report to Shareholders.

The following provides an update to our significant off-balance sheet transactions, which are described on pages 45 to 47 of our 2019 Annual Report.

Involvement with unconsolidated structured entities

RBC-administered multi-seller conduits

We administer multi-seller conduits which are used primarily for the securitization of our clients' financial assets. Our maximum exposure to loss under these transactions primarily relates to backstop liquidity and partial credit enhancement facilities extended to the conduits. As at April 30, 2020, the total assets of the multi-seller conduits were \$42.3 billion (October 31, 2019 – \$37.2 billion) and our maximum exposure to loss was \$43.2 billion (October 31, 2019 – \$37.9 billion). The change reflects the impact of foreign exchange translation and an increase in securitization activities since October 31, 2019, primarily in Auto loans and leases and Equipment receivables asset classes.

As at April 30, 2020, the total asset-backed commercial paper (ABCP) issued by the conduits amounted to \$28.2 billion (October 31, 2019 – \$23.8 billion). The rating agencies that rate the ABCP rated 100% of the total amount issued within the top ratings category (October 31, 2019 – 100%).

Risk management

Credit risk

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

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

Credit risk exposure by portfolio, sector and geography

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

(Millions of Canadian dollars)	As at							January 31 2020
	April 30 2020						Total exposure	
	Credit risk (1)		Counterparty credit risk (2)		Total exposure			
On-balance sheet amount	Off-balance sheet amount (3)		Repo-style transactions	Derivatives		Total exposure	Total exposure	
	Undrawn	Other (4)						
Retail								
Residential secured (5)	\$ 325,460	\$ 85,590	\$ –	\$ –	\$ –	\$ 411,050	\$ 403,152	
Qualifying revolving (6)	24,858	67,389	–	–	–	92,247	91,656	
Other retail	63,277	13,201	70	–	–	76,548	75,353	
Total retail	\$ 413,595	\$ 166,180	\$ 70	\$ –	\$ –	\$ 579,845	\$ 570,161	
Wholesale								
Agriculture	\$ 9,559	\$ 1,748	\$ 48	\$ –	\$ 139	\$ 11,494	\$ 11,198	
Automotive	13,157	5,715	319	–	974	20,165	17,949	
Banking	37,659	1,867	573	44,094	20,910	105,103	106,230	
Consumer discretionary	18,965	7,735	733	–	593	28,026	25,187	
Consumer staples	7,006	6,595	545	–	1,317	15,463	14,127	
Oil & gas	9,402	10,939	1,688	–	1,555	23,584	21,161	
Financial services	33,012	21,753	2,933	111,292	21,192	190,182	193,281	
Financing products	3,728	870	545	311	753	6,207	5,129	
Forest products	1,589	660	102	–	68	2,419	2,411	
Governments	231,575	8,190	1,513	32,585	7,610	281,473	163,053	
Industrial products	9,685	8,221	660	–	898	19,464	16,784	
Information technology	8,080	5,217	251	–	2,127	15,675	14,303	
Investments	17,668	2,787	392	11	453	21,311	20,521	
Mining & metals	3,046	3,370	868	–	340	7,624	6,833	
Public works & infrastructure	2,091	1,462	421	–	226	4,200	4,063	
Real estate & related	68,921	12,961	1,355	–	1,256	84,493	80,086	
Other services	27,911	10,765	996	28	2,019	41,719	39,903	
Telecommunication & media	7,790	6,934	87	–	1,798	16,609	16,476	
Transportation	8,306	5,296	1,833	–	2,613	18,048	15,440	
Utilities	12,155	17,538	4,504	–	5,274	39,471	33,728	
Other sectors	1,759	258	3	32	15,341	17,393	21,779	
Total wholesale	\$ 533,064	\$ 140,881	\$ 20,369	\$ 188,353	\$ 87,456	\$ 970,123	\$ 829,642	
Total exposure (7)	\$ 946,659	\$ 307,061	\$ 20,439	\$ 188,353	\$ 87,456	\$ 1,549,968	\$ 1,399,803	
By geography (8)								
Canada	\$ 632,572	\$ 239,475	\$ 10,407	\$ 77,920	\$ 38,589	\$ 998,963	\$ 912,174	
U.S.	214,250	49,738	8,947	45,774	20,857	339,566	297,411	
Europe	61,136	15,622	950	54,699	22,350	154,757	133,376	
Other International	38,701	2,226	135	9,960	5,660	56,682	56,842	
Total exposure (7)	\$ 946,659	\$ 307,061	\$ 20,439	\$ 188,353	\$ 87,456	\$ 1,549,968	\$ 1,399,803	

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

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

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

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

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

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

(7) Excludes securitization, banking book equities and other assets not subject to the standardized or IRB approach as well as exposures from the Paycheck Protection Program (PPP) instituted by the U.S. government in Q2 2020. For further details on the PPP, refer to the Significant developments: COVID-19 section of this Q2 2020 Report to Shareholders.

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

Q2 2020 vs. Q1 2020

Total credit risk exposure increased \$150 billion or 11% from the prior quarter, largely due to higher deposits with central banks, volume growth in loans and acceptances and the favourable impact of foreign exchange translation.

Retail exposure increased \$10 billion or 2%, largely driven by volume growth in the residential secured portfolio.

Wholesale exposure increased \$140 billion or 17%, largely due to higher deposits with central banks reflecting our short term cash and liquidity management activities and volume growth in loans and acceptances in support of clients across many sectors during the COVID-19 pandemic. The favourable impact of foreign exchange translation also contributed to the increase.

The geographic mix of our credit risk exposure remained largely consistent to the prior quarter. Our exposure in Canada, the U.S., Europe and Other International was 64%, 22%, 10% and 4%, respectively (January 31, 2020 – 65%, 21%, 10% and 4% respectively).

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

(Millions of Canadian dollars)	As at								January 31 2020
	April 30 2020								
	Asset type				Client type				
	Loans Outstanding	Securities (3)	Repo-style Transactions	Derivatives	Financials	Sovereign	Corporate	Total	Total
U.K.	\$ 9,841	\$ 17,231	\$ 2,509	\$ 5,640	\$ 14,820	\$ 10,684	\$ 9,717	\$ 35,221	\$ 29,029
Germany	2,328	7,953	28	623	6,348	1,708	2,876	10,932	8,592
France	1,900	11,764	4	229	1,227	11,014	1,656	13,897	10,559
Total U.K., Germany, France	\$ 14,069	\$ 36,948	\$ 2,541	\$ 6,492	\$ 22,395	\$ 23,406	\$ 14,249	\$ 60,050	\$ 48,180
Ireland	\$ 898	\$ 95	\$ 394	\$ 60	\$ 625	\$ 24	\$ 798	\$ 1,447	\$ 1,368
Italy	115	85	–	5	61	72	72	205	497
Portugal	–	20	–	–	10	–	10	20	48
Spain	408	315	–	67	302	17	471	790	525
Total peripheral	\$ 1,421	\$ 515	\$ 394	\$ 132	\$ 998	\$ 113	\$ 1,351	\$ 2,462	\$ 2,438
Luxembourg	\$ 2,591	\$ 8,408	\$ 59	\$ 62	\$ 1,672	\$ 7,915	\$ 1,533	\$ 11,120	\$ 10,844
Netherlands	1,731	922	28	621	915	–	2,387	3,302	2,650
Norway	124	1,949	45	48	1,889	90	187	2,166	2,185
Sweden	348	1,595	–	20	937	634	392	1,963	3,048
Switzerland	842	4,117	161	350	747	3,832	891	5,470	4,381
Other	2,098	2,085	102	213	1,471	1,164	1,863	4,498	4,498
Total other Europe	\$ 7,734	\$ 19,076	\$ 395	\$ 1,314	\$ 7,631	\$ 13,635	\$ 7,253	\$ 28,519	\$ 27,606
Net exposure to Europe ^{(4), (5)}	\$ 23,224	\$ 56,539	\$ 3,330	\$ 7,938	\$ 31,024	\$ 37,154	\$ 22,853	\$ 91,031	\$ 78,224

(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 \$149.6 billion against repo-style transactions (January 31, 2020 – \$157.6 billion) and \$13.0 billion against derivatives (January 31, 2020 – \$10.2 billion).

(3) Securities include \$5.9 billion of trading securities (January 31, 2020 – \$8.7 billion), \$33.1 billion of deposits (January 31, 2020 – \$27.6 billion), and \$17.5 billion of debt securities carried at fair value through other comprehensive income (FVOCI) (January 31, 2020 – \$13.7 billion).

(4) Excludes \$2.7 billion (January 31, 2020 – \$2.5 billion) of exposures to supranational agencies, predominantly in Luxembourg.

(5) Reflects \$2.0 billion of mitigation through credit default swaps, which are largely used to hedge single name exposures and market risk (January 31, 2020 – \$2.6 billion).

Q2 2020 vs. Q1 2020

Net credit risk exposure to Europe increased by \$12.8 billion or 16% from last quarter, mainly driven by higher deposits with central banks in France and the United Kingdom, higher volume growth in loans across most of Europe and higher derivatives largely in the United Kingdom.

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. The PCL on loans during the quarter was \$220 million. GIL was \$285 million with a GIL ratio of 123 bps, up 62 bps from last quarter, mainly across a few sectors.

Average loan-to-value (LTV) ratios

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

	For the three months ended				For the six months ended	
	April 30 2020		January 31 2020		April 30 2020	
	Uninsured		Uninsured		Uninsured	
	Residential mortgages (1)	RBC Homeline Plan® products (2)	Residential mortgages (1)	RBC Homeline Plan® products (2)	Residential mortgages (1)	RBC Homeline Plan® products (2)
Region (3)						
Atlantic provinces	74%	76%	74%	74%	74%	75%
Quebec	72	73	72	73	72	73
Ontario	71	68	71	67	71	68
Alberta	73	72	72	71	73	72
Saskatchewan and Manitoba	74	75	74	75	74	75
B.C. and territories	68	66	68	65	68	65
U.S.	72	n.m.	73	n.m.	73	n.m.
Other International	67	n.m.	71	n.m.	69	n.m.
Average of newly originated and acquired for the period (4), (5)	71%	69%	71%	68%	71%	68%
Total Canadian Banking residential mortgages portfolio (6)	58%	50%	58%	50%	58%	50%

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

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

(3) Region is based upon the 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 RBC Homeline Plan® products is calculated on a weighted basis by mortgage amounts at origination.

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

(6) Weighted by mortgage balances and adjusted for property values based on the Teranet – National Bank National Composite House Price Index.
n.m. not meaningful

Credit quality performance

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

Provision for credit losses

(Millions of Canadian dollars, except percentage amounts)	For the three months ended			For the six months ended	
	April 30 2020	January 31 2020	April 30 2019	April 30 2020	April 30 2019
Personal & Commercial Banking	\$ 1,687	\$ 343	\$ 385	\$ 2,030	\$ 732
Wealth Management	87	(2)	30	85	56
Capital Markets	950	80	27	1,030	170
Corporate Support and other	10	-	(1)	10	(1)
PCL – Loans	\$ 2,734	\$ 421	\$ 441	\$ 3,155	\$ 957
PCL – Other financial assets	96	(2)	(15)	94	(17)
Total PCL	\$ 2,830	\$ 419	\$ 426	\$ 3,249	\$ 940
PCL on loans is comprised of:					
Retail	\$ 725	\$ 34	\$ 30	\$ 759	\$ 63
Wholesale	1,396	49	(24)	1,445	36
PCL on performing loans	\$ 2,121	\$ 83	\$ 6	\$ 2,204	\$ 99
Retail	\$ 281	\$ 271	\$ 258	\$ 552	\$ 527
Wholesale	332	67	177	399	331
PCL on impaired loans	\$ 613	\$ 338	\$ 435	\$ 951	\$ 858
PCL – Loans	\$ 2,734	\$ 421	\$ 441	\$ 3,155	\$ 957
PCL on loans as a % of average net loans and acceptances	1.65%	0.26%	0.29%	0.96%	0.32%
PCL on impaired loans as a % of average net loans and acceptances	0.37%	0.21%	0.29%	0.29%	0.28%

Additional information by geography (1)

Canada					
Residential mortgages	\$ 9	\$ 10	\$ 6	\$ 19	\$ 16
Personal	138	129	116	267	237
Credit cards	139	137	122	276	238
Small business	14	12	9	26	14
Retail	300	288	253	588	505
Wholesale	76	6	113	82	154
PCL on impaired loans	\$ 376	\$ 294	\$ 366	\$ 670	\$ 659
U.S.					
Retail	\$ 2	\$ (2)	\$ 1	\$ –	\$ 3
Wholesale	178	55	48	233	158
PCL on impaired loans	\$ 180	\$ 53	\$ 49	\$ 233	\$ 161
Other International					
Retail	\$ (21)	\$ (15)	\$ 4	\$ (36)	\$ 19
Wholesale	78	6	16	84	19
PCL on impaired loans	\$ 57	\$ (9)	\$ 20	\$ 48	\$ 38
PCL on impaired loans	\$ 613	\$ 338	\$ 435	\$ 951	\$ 858

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

Q2 2020 vs. Q2 2019

Total PCL was \$2,830 million. PCL on loans of \$2,734 million increased \$2,293 million from the prior year, primarily due to higher provisions in Personal & Commercial Banking, Capital Markets and Wealth Management. The PCL on loans ratio of 165 bps increased 136 bps.

PCL on performing loans of \$2,121 million increased \$2,115 million, primarily reflecting higher provisions in Personal & Commercial Banking, Capital Markets and Wealth Management due to the impact of the COVID-19 pandemic.

PCL on impaired loans of \$613 million increased \$178 million, largely reflecting higher provisions in Capital Markets, partially offset by lower provisions in Personal & Commercial Banking.

PCL on other financial assets of \$96 million increased \$111 million, largely reflecting higher provisions in Capital Markets primarily due to the impact of the COVID-19 pandemic.

PCL on loans in Personal & Commercial Banking increased \$1,302 million, largely reflecting higher provisions on performing loans in our Canadian Banking portfolios as described above. Higher provisions on impaired loans in our Canadian Banking retail portfolios were more than offset by lower provisions on impaired loans in our Canadian Banking commercial and Caribbean Banking portfolios, as the prior year reflected higher provisions taken in the public works & infrastructure and information technology sectors.

PCL on loans in Wealth Management increased \$57 million, reflecting higher provisions on performing loans in U.S. Wealth Management (including City National) as described above.

PCL on loans in Capital Markets increased \$923 million, largely reflecting higher provisions on performing loans as described above. Higher provisions on impaired loans also contributed to the increase, largely due to provisions taken in the oil & gas sector reflecting continued pressure on oil prices and provisions taken in the consumer discretionary sector.

Q2 2020 vs. Q1 2020

PCL on loans of \$2,734 million increased \$2,313 million from the prior quarter, primarily due to higher provisions in Personal & Commercial Banking, Capital Markets and Wealth Management. The PCL on loans ratio of 165 bps increased 139 bps.

PCL on performing loans of \$2,121 million increased \$2,038 million, primarily reflecting higher provisions in Personal & Commercial Banking, Capital Markets and Wealth Management due to the impact of the COVID-19 pandemic.

PCL on impaired loans of \$613 million increased \$275 million, largely reflecting higher provisions in Capital Markets and Personal & Commercial Banking.

PCL on other financial assets of \$96 million increased \$98 million, largely reflecting higher provisions in Capital Markets primarily due to the impact of the COVID-19 pandemic.

PCL on loans in Personal & Commercial Banking increased \$1,344 million, largely reflecting higher provisions on performing loans in our Canadian Banking portfolios as described above. Higher provisions on impaired loans in our Canadian Banking portfolios also contributed to the increase.

PCL on loans in Wealth Management increased \$89 million, largely reflecting higher provisions on performing loans in U.S. Wealth Management (including City National) as described above.

PCL on loans in Capital Markets increased \$870 million, largely due to higher provisions on performing loans as described above. Higher provisions on impaired loans also contributed to the increase, largely due to provisions taken in the oil & gas sector reflecting continued pressure on oil prices and provisions taken in the consumer discretionary sector.

Q2 2020 vs. Q2 2019 (Six months ended)

Total PCL was \$3,249 million. PCL on loans of \$3,155 million increased \$2,198 million from the prior year, primarily due to higher provisions in Personal & Commercial Banking, Capital Markets and Wealth Management. The PCL on loans ratio of 96 bps increased 64 bps.

PCL on performing loans of \$2,204 million increased \$2,105 million, primarily reflecting higher provisions in Personal & Commercial Banking, Capital Markets and Wealth Management due to the impact of the COVID-19 pandemic.

PCL on impaired loans of \$951 million increased \$93 million, reflecting higher provisions in Capital Markets, partially offset by lower provisions in Personal & Commercial Banking and Wealth Management.

PCL on other financial assets of \$94 million increased \$111 million, largely reflecting higher provisions in Capital Markets, primarily due to the impact of the COVID-19 pandemic.

PCL on loans in Personal & Commercial Banking increased \$1,298 million, largely reflecting higher provisions on performing loans in our Canadian Banking portfolios as described above. Higher provisions on impaired loans in our Canadian Banking retail portfolios were more than offset by lower provisions on impaired loans in our Canadian Banking commercial and Caribbean Banking portfolios, as the prior year reflected higher provisions taken in the public works & infrastructure and information technology sectors.

PCL on loans in Wealth Management increased \$29 million, largely reflecting 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 driven by higher recoveries in the information technology and other services sectors.

PCL on loans in Capital Markets increased \$860 million, largely reflecting higher provisions on performing loans as described above. Higher provisions on impaired loans also contributed to the increase, largely due to provisions taken in the oil & gas sector reflecting continued pressure on oil prices and provisions taken in the consumer discretionary sector in the current year. This was partially offset by a provision taken in the utilities sector in the prior year.

Gross impaired loans

	As at		
	April 30 2020	January 31 2020	April 30 2019
(Millions of Canadian dollars, except percentage amounts)			
Personal & Commercial Banking	\$ 1,637	\$ 1,689	\$ 1,786
Wealth Management	329	344	243
Capital Markets	1,563	903	1,013
Corporate Support and other	—	—	—
Total GIL	\$ 3,529	\$ 2,936	\$ 3,042
Canada (1)			
Retail	\$ 832	\$ 816	\$ 763
Wholesale	625	709	630
GIL	1,457	1,525	1,393
U.S. (1)			
Retail	\$ 31	\$ 31	\$ 31
Wholesale	1,311	793	969
GIL	1,342	824	1,000
Other International (1)			
Retail	\$ 211	\$ 235	\$ 324
Wholesale	519	352	325
GIL	730	587	649
Total GIL	\$ 3,529	\$ 2,936	\$ 3,042
Impaired loans, beginning balance	\$ 2,936	\$ 2,976	\$ 2,782
Classified as impaired during the period (new impaired) (2)	1,308	713	1,162
Net repayments (2)	(253)	(304)	(129)
Amounts written off	(423)	(399)	(501)
Other (2), (3)	(39)	(50)	(272)
Impaired loans, balance at end of period	\$ 3,529	\$ 2,936	\$ 3,042
GIL as a % of related loans and acceptances			
Total GIL as a % of related loans and acceptances	0.51%	0.45%	0.49%
Personal & Commercial Banking	0.34%	0.36%	0.40%
Canadian Banking	0.28%	0.29%	0.29%
Caribbean Banking	3.84%	4.46%	6.23%
Wealth Management	0.40%	0.48%	0.38%
Capital Markets	1.19%	0.89%	0.99%

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

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

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

Q2 2020 vs. Q2 2019

Total GIL of \$3,529 million increased \$487 million or 16% from the prior year and the total GIL ratio of 51 bps increased 2 bps, reflecting higher impaired loans in Capital Markets and Wealth Management, partially offset by lower impaired loans in Personal & Commercial Banking.

GIL in Personal & Commercial Banking decreased \$149 million or 8% due to lower impaired loans in our Caribbean Banking and Canadian Banking commercial portfolios, partially offset by higher impaired loans in our Canadian Banking retail portfolios.

GIL in Wealth Management increased \$86 million or 35%, primarily reflecting higher impaired loans in U.S. Wealth Management (including City National), primarily in the consumer staples sector.

GIL in Capital Markets increased \$550 million or 54%, mainly due to higher impaired loans in a few sectors, including the consumer discretionary and oil & gas sectors, partially offset by lower impaired loans in the utilities sector.

Q2 2020 vs. Q1 2020

Total GIL increased \$593 million or 20% from the prior quarter, and the total GIL ratio of 51 bps increased 6 bps, reflecting higher impaired loans in Capital Markets partially offset by lower impaired loans in Personal & Commercial Banking and Wealth Management.

GIL in Personal & Commercial Banking decreased \$52 million or 3%, reflecting lower impaired loans in our Canadian Banking commercial and Caribbean Banking portfolios, partially offset by higher impaired loans in our Canadian Banking retail portfolios.

GIL in Wealth Management decreased \$15 million or 4%, largely reflecting lower impaired loans in U.S. Wealth Management (including City National) in the consumer discretionary sector, partially offset by higher impaired loans in the consumer staples sector.

GIL in Capital Markets increased \$660 million or 73%, mainly due to higher impaired loans in the oil & gas and consumer discretionary sectors.

Allowance for credit losses (ACL)

(Millions of Canadian dollars)	As at		
	April 30 2020	January 31 2020	April 30 2019
Personal & Commercial Banking	\$ 4,102	\$ 2,714	\$ 2,692
Wealth Management	336	254	218
Capital Markets	1,415	501	378
Corporate Support and other	12	2	2
ACL on loans	\$ 5,865	\$ 3,471	\$ 3,290
ACL on other financial assets	118	43	56
Total ACL	\$ 5,983	\$ 3,514	\$ 3,346
ACL on loans is comprised of:			
Retail	\$ 2,635	\$ 1,910	\$ 1,818
Wholesale	2,158	746	677
ACL on performing loans	\$ 4,793	\$ 2,656	\$ 2,495
ACL on impaired loans	1,072	815	795

Additional information by geography (1)

Canada			
Retail	\$ 216	\$ 200	\$ 169
Wholesale	207	153	192
ACL on impaired loans	\$ 423	\$ 353	\$ 361
U.S.			
Retail	\$ 2	\$ 2	\$ –
Wholesale	279	159	141
ACL on impaired loans	\$ 281	\$ 161	\$ 141
Other International			
Retail	\$ 117	\$ 129	\$ 169
Wholesale	251	172	124
ACL on impaired loans	\$ 368	\$ 301	\$ 293
ACL on impaired loans	\$ 1,072	\$ 815	\$ 795

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

Q2 2020 vs. Q2 2019

Total ACL of \$5,983 million increased \$2,637 million or 79% from the prior year, largely reflecting an increase of \$2,575 million in ACL on loans.

ACL on performing loans of \$4,793 million increased \$2,298 million from the prior year, largely reflecting higher ACL in Personal & Commercial Banking, Capital Markets and Wealth Management due to the impact of the COVID-19 pandemic.

ACL on impaired loans of \$1,072 million increased \$277 million from the prior year, due to higher ACL in Capital Markets, partially offset by lower ACL in Personal & Commercial Banking. Higher ACL on impaired loans in our Canadian Banking retail portfolios were more than offset by lower ACL in our Caribbean Banking and Canadian Banking commercial portfolios.

ACL on other financial assets of \$118 million increased \$62 million from the prior year, largely reflecting higher ACL in Capital Markets, primarily due to the impact of the COVID-19 pandemic.

Q2 2020 vs. Q1 2020

Total ACL of \$5,983 million increased \$2,469 million or 70% from the prior quarter, reflecting an increase of \$2,394 million in ACL on loans.

ACL on performing loans of \$4,793 million increased \$2,137 million from the prior quarter, largely reflecting higher ACL in Personal & Commercial Banking, Capital Markets and Wealth Management due to the impact of the COVID-19 pandemic.

ACL on impaired loans of \$1,072 million increased \$257 million from the prior quarter, largely due to higher ACL in Capital Markets.

ACL on other financial assets of \$118 million increased \$75 million from the prior quarter, largely reflecting higher ACL in Capital Markets, primarily due to the impact of the COVID-19 pandemic.

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

Market risk

Market risk is defined to be the impact of market prices upon our financial condition. This includes potential gains or losses due to changes in market determined variables such as interest rates, credit spreads, equity prices, commodity prices, foreign exchange rates and implied volatilities. There have been no material changes to our Market Risk Framework from the framework described in our 2019 Annual Report. We continue to manage the controls and governance procedures that ensure

that our market risk exposure is consistent with risk appetite constraints set by the Board of Directors. These controls include limits on probabilistic measures of potential loss in trading positions, such as Value-at-Risk (VaR) and Stressed Value-at-Risk (SVaR).

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

Market risk measures – FVTPL positions

VaR and SVaR

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

(Millions of Canadian dollars)	April 30, 2020				January 31, 2020		April 30, 2019	
	As at	For the three months ended			As at	For the three months ended	As at	For the three months ended
		Average	High	Low		Average		Average
Equity	\$ 55	\$ 39	\$ 64	\$ 13	\$ 22	\$ 20	\$ 14	\$ 15
Foreign exchange	3	3	5	2	3	2	4	4
Commodities	5	3	5	2	1	2	1	1
Interest rate (1)	132	61	178	12	13	13	15	13
Credit specific (2)	6	6	7	5	6	5	5	5
Diversification (3)	(15)	(20)	n.m.	n.m.	(18)	(17)	(21)	(18)
Market risk VaR (4)	\$ 186	\$ 92	\$ 232	\$ 20	\$ 27	\$ 25	\$ 18	\$ 20
Market risk Stressed VaR (4)	\$ 139	\$ 147	\$ 228	\$ 75	\$ 95	\$ 84	\$ 86	\$ 96

(Millions of Canadian dollars)	April 30, 2020				April 30, 2019	
	As at	For the six months ended			As at	For the six months ended
		Average	High	Low		Average
Equity	\$ 55	\$ 30	\$ 64	\$ 13	\$ 14	\$ 18
Foreign exchange	3	3	5	1	4	5
Commodities	5	2	5	1	1	2
Interest rate (1)	132	37	178	11	15	15
Credit specific (2)	6	5	7	4	5	5
Diversification (3)	(15)	(19)	n.m.	n.m.	(21)	(18)
Market risk VaR (5)	\$ 186	\$ 58	\$ 232	\$ 18	\$ 18	\$ 27
Market risk Stressed VaR (5)	\$ 139	\$ 115	\$ 228	\$ 72	\$ 86	\$ 110

(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.

(4) The average market risk VaR and average SVaR for the three months ended April 30, 2020 includes \$41 million and \$41 million, respectively (January 31, 2020 – \$1 million and \$5 million; April 30, 2019 – \$nil and \$2 million), related to loan underwriting commitments, with the remainder related to our core trading portfolio.

(5) The average market risk VaR and average SVaR for the six months ended April 30, 2020 includes \$21 million and \$23 million, respectively (April 30, 2019 – \$1 million and \$4 million), related to loan underwriting commitments, with the remainder related to our core trading portfolio.

n.m. not meaningful

The historical period used to compute VaR is comprised of the last two years of equally weighted market data, and is rolled forward on at least a monthly basis. The period used for VaR in April 2020 includes the market turmoil in March 2020. It therefore reflects a greater potential loss than the estimate for the SVaR historical period, which is currently a period covering the 2008 global financial crisis. In Q3 2020, the SVaR period will be updated to reflect the market volatility observed during Q2 2020.

Q2 2020 vs. Q2 2019

Average market risk VaR of \$92 million increased \$72 million and average SVaR of \$147 million increased \$51 million from the prior year, primarily due to credit spread widening and the impact of significant market volatility in the current period. This impacted loan underwriting commitments, as well as fixed income and equity portfolios.

Q2 2020 vs. Q1 2020

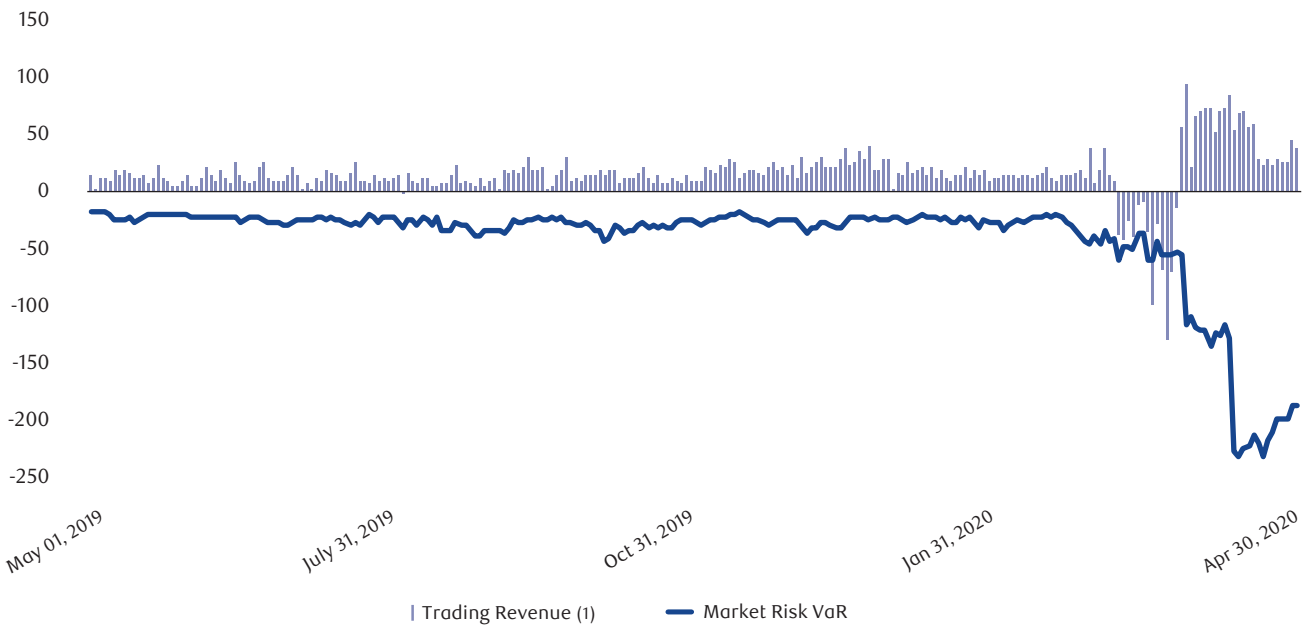
Average market risk VaR of \$92 million increased \$67 million and average SVaR of \$147 million increased \$63 million from the prior quarter, mainly driven by credit spread widening and the impact of significant market volatility in the current quarter. This impacted loan underwriting commitments, as well as fixed income and equity portfolios.

Q2 2020 vs. Q2 2019 (Six months ended)

Average market risk VaR of \$58 million increased \$31 million and average SVaR of \$115 million increased \$5 million from the prior year, both mainly reflecting the factors noted above.

The following chart displays a bar graph of our daily trading profit and loss and a line graph of our daily market risk VaR. We incurred 13 days with net trading losses during the three months ended April 30, 2020 due to the significant market volatility in the current quarter. Four of these net trading loss days exceeded VaR. We incurred no net trading losses in the three months ended January 31, 2020.

Trading revenue (1) and VaR (Millions of Canadian dollars)



(1) Includes loan underwriting commitments.

Market risk measures for assets and liabilities of RBC Insurance®

We offer a range of insurance products to clients and hold investments to meet the future obligations to policyholders. The investments which support actuarial liabilities are predominantly fixed income assets designated as FVTPL. Consequently, changes in the fair values of these assets are recorded in the Consolidated Statements of Income and are largely offset by changes in the fair value of the actuarial liabilities, the impact of which is reflected in Insurance policyholder benefits, claims and acquisition expense. As at April 30, 2020, we held assets in support of \$11.4 billion liabilities with respect to insurance obligations (January 31, 2020 – \$12.3 billion).

Market risk measures – Structural Interest Rate Sensitivities

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

(Millions of Canadian dollars)	April 30 2020						January 31 2020		April 30 2019	
	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:										
100 bps increase in rates	\$ (1,465)	\$ (243)	\$ (1,708)	\$ 566	\$ 135	\$ 701	\$ (1,564)	\$ 468	\$ (1,112)	\$ 469
100 bps decrease in rates	1,292	167	1,459	(571)	(155)	(726)	1,143	(627)	505	(612)

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

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

As at April 30, 2020, an immediate and sustained -100 bps shock would have had a negative impact to our NII of \$726 million, up from \$627 million last quarter. An immediate and sustained +100 bps shock at the end of April 30, 2020 would have had a negative impact to the bank's EVE of \$1,708 million, up from \$1,564 million reported last quarter. The quarter-over-quarter change in NII sensitivity is largely attributed to growth in deposits combined with a marginal impact from lower rates, while the quarter-over-quarter change in EVE sensitivity is mainly attributed to structural balance sheet growth. During the second quarter of 2020, SIRR NII and EVE risks remained within approved limits.

Market risk measures for other material non-trading portfolios

Investment securities carried at FVOCI

We held \$89.0 billion of investment securities carried at FVOCI as at April 30, 2020, compared to \$77.5 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 April 30, 2020, our portfolio of investment securities carried at FVOCI is interest rate sensitive and would impact OCI by a pre-tax change in value of \$8 million as measured by the change in the value of the securities for a one basis point parallel increase in yields. The portfolio also exposes us to credit spread risk of a pre-tax change in value of \$25 million, as measured by the change in value for a one basis point widening of credit spreads. The value of the investment securities carried at FVOCI included in our SIRR measure as at April 30, 2020 was \$11.5 billion. Our investment securities carried at FVOCI also include equity exposures of \$0.5 billion as at April 30, 2020, compared to \$0.5 billion in the prior quarter.

Non-trading foreign exchange rate risk

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

Derivatives related to non-trading activity

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

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

Linkage of market risk to selected balance sheet items

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

(Millions of Canadian dollars)	As at April 30, 2020			
	Balance sheet amount	Market risk measure		Non-traded risk primary risk sensitivity
		Traded risk (1)	Non-traded risk (2)	
Assets subject to market risk				
Cash and due from banks	\$ 98,777	\$ –	\$ 98,777	Interest rate
Interest-bearing deposits with banks	48,398	33,794	14,604	Interest rate
Securities				
Trading	135,778	125,087	10,691	Interest rate, credit spread
Investment, net of applicable allowance	134,163	–	134,163	Interest rate, credit spread, equity
Assets purchased under reverse repurchase agreements and securities borrowed	325,534	271,679	53,855	Interest rate
Loans				
Retail	435,409	8,045	427,364	Interest rate
Wholesale	243,269	8,258	235,011	Interest rate
Allowance for loan losses	(5,230)	–	(5,230)	Interest rate
Segregated fund net assets	1,743	–	1,743	Interest rate
Other				
Derivatives	140,807	136,597	4,210	Interest rate, foreign exchange
Other assets	106,392	6,112	100,280	Interest rate
Assets not subject to market risk (3)	10,642			
Total assets	\$ 1,675,682	\$ 589,572	\$ 1,075,468	
Liabilities subject to market risk				
Deposits	\$ 1,009,447	\$ 123,955	\$ 885,492	Interest rate
Segregated fund liabilities	1,743	–	1,743	Interest rate
Other				
Obligations related to securities sold short	40,347	40,347	–	
Obligations related to assets sold under repurchase agreements and securities loaned	278,605	265,708	12,897	Interest rate
Derivatives	144,710	141,353	3,357	Interest rate, foreign exchange
Other liabilities	91,499	11,049	80,450	Interest rate
Subordinated debentures	9,774	–	9,774	Interest rate
Liabilities not subject to market risk (4)	14,517			
Total liabilities	\$ 1,590,642	\$ 582,412	\$ 993,713	
Total equity	\$ 85,040			
Total liabilities and equity	\$ 1,675,682			

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

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

(3) Assets not subject to market risk include \$10,642 million of physical and other assets.

(4) Liabilities not subject to market risk include \$14,517 million of payroll related and other liabilities.

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

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

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

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

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

Liquidity and funding risk

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

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

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

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

During Q2 2020, governments and federal agencies have instituted and also expanded the eligibility criteria to their existing funding programs and announced new programs to provide further liquidity to banks. In addition to these measures, OSFI announced a series of regulatory measures and provided additional guidance to allow banks to focus on their resilience efforts and to enhance the financial system's stability. These measures have provided additional flexibility in lending activities permitting banks to fall below the regulatory minimum through the use of available buffers above the regulatory authorized minimum for the Liquidity Coverage Ratio (LCR) and temporary modifications in limits, including those used for covered bonds, and adjustments to other liquidity metrics.

Liquidity reserve

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

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

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

	As at April 30, 2020				
	Bank-owned liquid assets	Securities received as collateral from securities financing and derivative transactions	Total liquid assets	Encumbered liquid assets	Unencumbered liquid assets
(Millions of Canadian dollars)					
Cash and due from banks	\$ 98,777	\$ –	\$ 98,777	\$ 3,178	\$ 95,599
Interest-bearing deposits with banks	48,398	–	48,398	348	48,050
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks (1)	242,169	345,253	587,422	385,690	201,732
Other securities	87,640	107,169	194,809	98,721	96,088
Undrawn credit lines granted by central banks (2)	24,692	–	24,692	–	24,692
Other assets eligible as collateral for discount (3), (4)	117,122	–	117,122	–	117,122
Other liquid assets (5)	39,139	–	39,139	36,647	2,492
Total liquid assets	\$ 657,937	\$ 452,422	\$ 1,110,359	\$ 524,584	\$ 585,775

	As at January 31, 2020				
	Bank-owned liquid assets	Securities received as collateral from securities financing and derivative transactions	Total liquid assets	Encumbered liquid assets	Unencumbered liquid assets
(Millions of Canadian dollars)					
Cash and due from banks	\$ 34,120	\$ –	\$ 34,120	\$ 2,899	\$ 31,221
Interest-bearing deposits with banks	31,331	–	31,331	331	31,000
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks (1)	221,047	327,977	549,024	381,064	167,960
Other securities	97,168	116,376	213,544	93,188	120,356
Undrawn credit lines granted by central banks (2)	7,679	–	7,679	–	7,679
Other assets eligible as collateral for discount (3)	107,727	–	107,727	–	107,727
Other liquid assets (5)	21,955	–	21,955	20,993	962
Total liquid assets	\$ 521,027	\$ 444,353	\$ 965,380	\$ 498,475	\$ 466,905

	As at	
	April 30 2020	January 31 2020
(Millions of Canadian dollars)		
Royal Bank of Canada	\$ 309,677	\$ 232,799
Foreign branches	96,843	64,856
Subsidiaries	179,255	169,250
Total unencumbered liquid assets	\$ 585,775	\$ 466,905

- (1) Includes liquid securities issued by provincial governments and U.S. government-sponsored entities working under U.S. Federal government's conservatorship (e.g., Federal National Mortgage Association and Federal Home Loan Mortgage Corporation).
- (2) Includes loans that qualify as eligible collateral for the discount window facility available to us at the Federal Reserve Bank of New York (FRBNY). Amounts are face value and would be subject to collateral margin requirements applied by the FRBNY to determine collateral value/borrowing capacity. Access to the discount window borrowing program is conditional on meeting requirements set by the FRBNY and borrowings are typically expected to be infrequent and due to uncommon occurrences requiring temporary accommodation.
- (3) Represents our unencumbered Canadian dollar non-mortgage loan book (at face value) that could, subject to satisfying conditions precedent to borrowing and application of prescribed collateral margin requirements, be pledged to the BoC for advances under its Emergency Lending Assistance (ELA) program. ELA is not considered a source of available liquidity in our normal liquidity risk profile but could in extraordinary circumstances, where normal market liquidity is seriously impaired, allow us and other banks to monetize assets eligible as collateral to meet requirements and mitigate further market liquidity disruption. The balance also includes our unencumbered mortgage loans that qualify as eligible collateral at Federal Home Loan Bank (FHLB).
- (4) Excludes mortgage loans eligible for pledging to BoC in accordance with the expanded eligibility criteria announced in Q2 2020. For further details, refer to the Significant developments: COVID-19 section of this Q2 2020 Report to Shareholders.
- (5) Encumbered liquid assets amount represents cash collateral and margin deposit amounts pledged related to over-the-counter (OTC) and exchange-traded derivative transactions.

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

Q2 2020 vs. Q1 2020

Total liquid assets increased \$145 billion or 15%, primarily due to increased eligibility of bank's assets for central bank facilities, higher client deposits as well as actions taken to maintain a prudent liquidity position.

Asset encumbrance

The table below provides a summary of our on- and off-balance sheet amounts for cash, securities and other assets, distinguishing between those that are encumbered or available for sale or use as collateral in secured funding transactions. Other assets, such as mortgages and credit card receivables, can also be monetized, albeit over longer timeframes than those required for marketable securities. As at April 30, 2020, our unencumbered assets available as collateral comprised 31% of total assets (January 31, 2020 – 28%).

Asset encumbrance

(Millions of Canadian dollars)	As at									
	April 30 2020					January 31 2020				
	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	\$ –	\$ 3,178	\$ 95,599	\$ –	\$ 98,777	\$ –	\$ 2,899	\$ 31,221	\$ –	\$ 34,120
Interest-bearing deposits with banks	–	348	48,050	–	48,398	–	331	31,000	–	31,331
Securities										
Trading	49,125	–	84,214	2,439	135,778	44,278	–	98,240	2,497	145,015
Investment, net of applicable allowance	19,024	–	115,090	49	134,163	16,481	–	105,122	49	121,652
Assets purchased under reverse repurchase agreements and securities borrowed (4)	429,018	17,100	35,908	5,136	487,162	432,249	23,468	34,221	5,578	495,516
Loans										
Retail										
Mortgage securities	30,233	–	44,508	–	74,741	30,834	–	41,281	–	72,115
Mortgage loans (5)	64,629	–	32,783	149,771	247,183	49,997	–	21,210	170,882	242,089
Non-mortgage loans	5,967	–	74,009	33,509	113,485	7,129	–	59,583	49,925	116,637
Wholesale	–	–	35,874	207,395	243,269	–	–	35,226	167,012	202,238
Allowance for loan losses	–	–	–	(5,230)	(5,230)	–	–	–	(3,139)	(3,139)
Segregated fund net assets	–	–	–	1,743	1,743	–	–	–	1,788	1,788
Other										
Derivatives	–	–	–	140,807	140,807	–	–	–	93,982	93,982
Others (6)	36,647	–	2,492	77,895	117,034	20,993	–	962	72,334	94,289
Total assets	\$ 634,643	\$ 20,626	\$ 568,527	\$ 613,514	\$ 1,837,310	\$ 601,961	\$ 26,698	\$ 458,066	\$ 560,908	\$ 1,647,633

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

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

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

(4) Includes bank-owned liquid assets and securities received as collateral from off-balance sheet securities financing, derivative transactions, and margin lending. Includes \$17.1 billion (January 31, 2020 – \$23.5 billion) of collateral received through reverse repurchase transactions that cannot be rehypothecated in its current legal form.

(5) Excludes mortgage loans eligible for pledging to BoC in accordance with the expanded eligibility criteria announced in Q2 2020. For further details, refer to the Significant developments: COVID-19 section of this Q2 2020 Report to Shareholders.

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

Funding**Funding strategy**

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

Deposit and funding profile

As at April 30, 2020, relationship-based deposits, which are the primary source of funding for retail loans and mortgages, were \$673 billion or 50% of our total funding (January 31, 2020 – \$601 billion or 50%). The remaining portion is comprised of short- and long-term wholesale funding.

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

On April 18, 2018, the Department of Finance published bail-in regulations under the Canada Deposit Insurance Corporation (CDIC) Act and the Bank Act, which became effective September 23, 2018. Senior long-term debt issued by the bank on or after September 23, 2018, that has an original term greater than 400 days and is marketable, subject to certain exceptions, is subject to the Canadian Bank Recapitalization (Bail-in) regime. Under the Bail-in regime, in circumstances when the Superintendent of Financial Institutions has determined that a bank may no longer be viable, the Governor in Council may, upon a recommendation of the Minister of Finance that he or she is of the opinion that it is in the public interest to do so,

grant an order directing the CDIC to convert all or a portion of certain shares and liabilities of that bank into common shares. As at April 30, 2020, the notional value of issued and outstanding long-term debt subject to conversion under the Bail-in regime was \$31,074 million (January 31, 2020 – \$26,684 million).

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

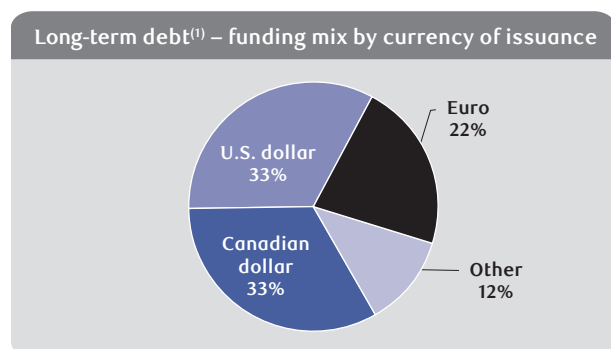
Long-term debt issuance

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

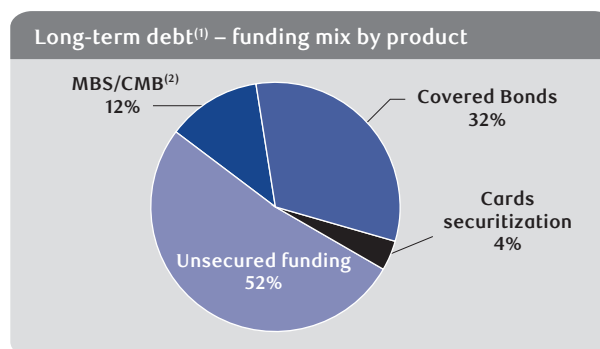
Programs by geography

Canada	U.S.	Europe/Asia
• Canadian Shelf Program – \$25 billion	• U.S. Shelf Program – US\$40 billion	• European Debt Issuance Program – US\$40 billion
		• Global Covered Bond Program – €60 billion
		• Japanese Issuance Programs – ¥1 trillion

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



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



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

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

Composition of wholesale funding ⁽¹⁾

(Millions of Canadian dollars)	As at April 30, 2020							
	Less than 1 month	1 to 3 months	3 to 6 months	6 to 12 months	Less than 1 year sub-total	1 year to 2 years	2 years and greater	Total
Deposits from banks ⁽²⁾	\$ 4,719	\$ 278	\$ 80	\$ 906	\$ 5,983	\$ –	\$ –	\$ 5,983
Certificates of deposit and commercial paper	4,920	15,165	21,920	24,817	66,822	445	–	67,267
Asset-backed commercial paper ⁽³⁾	3,017	3,844	3,438	6,423	16,722	–	–	16,722
Senior unsecured medium-term notes ⁽⁴⁾	18	5,107	9,728	14,589	29,442	14,466	31,920	75,828
Senior unsecured structured notes ⁽⁵⁾	274	176	764	1,498	2,712	1,758	5,329	9,799
Mortgage securitization	–	371	355	1,406	2,132	3,753	11,475	17,360
Covered bonds/asset-backed securities ⁽⁶⁾	–	–	5,486	9,733	15,219	6,751	28,574	50,544
Subordinated liabilities	–	–	1,000	1,500	2,500	1,000	5,937	9,437
Other ⁽⁷⁾	11,687	3,615	1,777	1,746	18,825	776	7,820	27,421
Total	\$ 24,635	\$ 28,556	\$ 44,548	\$ 62,618	\$ 160,357	\$ 28,949	\$ 91,055	\$ 280,361
Of which:								
– Secured	\$ 11,700	\$ 5,329	\$ 9,359	\$ 17,747	\$ 44,135	\$ 10,504	\$ 40,049	\$ 94,688
– Unsecured	12,935	23,227	35,189	44,871	116,222	18,445	51,006	185,673

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

(1) Excludes bankers' acceptances and repos.

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

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

(4) Includes deposit notes.

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

(6) Includes credit card and mortgage loans.

(7) Includes tender option bonds (secured) of \$8,529 million (January 31, 2020 – \$7,889 million), bearer deposit notes (unsecured) of \$6,825 million (January 31, 2020 – \$4,399 million), other long-term structured deposits (unsecured) of \$10,536 million (January 31, 2020 – \$10,245 million), and FHLB advances (secured) of \$1,531 million (January 31, 2020 – \$2,779 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.

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

Credit ratings (1)

	As at May 26, 2020			
	Short-term debt	Legacy senior long-term debt (2)	Senior long-term debt (3)	Outlook
Moody's (4)	P-1	Aa2	A2	stable
Standard & Poor's (5)	A-1+	AA-	A	stable
Fitch Ratings (6)	F1+	AA+	AA	negative
DBRS (7)	R-1(high)	AA (high)	AA	stable

(1) Credit ratings are not recommendations to purchase, sell or hold a financial obligation inasmuch as they do not comment on market price or suitability for a particular investor. Ratings are determined by the rating agencies based on criteria established from time to time by them, and are subject to revision or withdrawal at any time by the rating organization.

(2) Includes senior long-term debt issued prior to September 23, 2018 and senior long-term debt issued on or after September 23, 2018 which is excluded from the Bail-in regime.

(3) Includes senior long-term debt issued on or after September 23, 2018 which is subject to conversion under the Bail-in regime.

(4) On August 1, 2019, Moody's affirmed our ratings with a stable outlook.

(5) On June 24, 2019, Standard & Poor's affirmed our ratings with a stable outlook.

(6) On April 3, 2020, Fitch Ratings upgraded our rating for legacy senior long-term debt to AA+ from AA and revised our outlook to negative from stable.

(7) On June 18, 2019, DBRS revised our outlook to stable from positive, upgraded our legacy senior long-term debt rating to AA (high) from AA and upgraded our senior long-term debt rating to AA from AA (low).

Additional contractual obligations for rating downgrades

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

Additional contractual obligations for rating downgrades

(Millions of Canadian dollars)	As at					
	April 30 2020			January 31 2020		
	One-notch downgrade	Two-notch downgrade	Three-notch downgrade	One-notch downgrade	Two-notch downgrade	Three-notch downgrade
Contractual derivatives funding or margin requirements	\$ 272	\$ 84	\$ 127	\$ 194	\$ 65	\$ 135
Other contractual funding or margin requirements (1)	209	–	–	205	45	9

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

Liquidity Coverage Ratio (LCR)

The LCR is a Basel III metric that measures the sufficiency of high-quality liquid assets (HQLA) available to meet liquidity needs over a 30-day period in an acute stress scenario. The Basel Committee on Banking Supervision (BCBS) and OSFI regulatory minimum coverage level for LCR is 100%. However, in accordance with OSFI's announcement addressing concerns around the impact of the COVID-19 pandemic, Canadian banks are temporarily permitted to fall below the regulatory minimum level of 100% by using their HQLA buffer.

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

Liquidity coverage ratio common disclosure template ⁽¹⁾

	For the three months ended			
	April 30 2020		January 31 2020	
	Total unweighted value (average) (2)	Total weighted value (average)	Total unweighted value (average) (2)	Total weighted value (average)
(Millions of Canadian dollars, except percentage amounts)				
High-quality liquid assets				
Total high-quality liquid assets (HQLA)	n.a.	\$ 288,979	n.a.	\$ 249,762
Cash outflows				
Retail deposits and deposits from small business customers, of which:	\$ 289,867	27,113	\$ 271,090	21,973
<i>Stable deposits</i> (3)	108,519	3,256	96,833	2,905
<i>Less stable deposits</i>	181,348	23,857	174,257	19,068
Unsecured wholesale funding, of which:	338,508	156,041	308,718	142,391
<i>Operational deposits (all counterparties) and deposits in networks of cooperative banks</i> (4)	145,260	34,793	135,265	32,379
<i>Non-operational deposits</i>	160,358	88,358	144,506	81,065
<i>Unsecured debt</i>	32,890	32,890	28,947	28,947
Secured wholesale funding	n.a.	30,596	n.a.	30,074
Additional requirements, of which:	255,490	62,145	239,573	52,559
<i>Outflows related to derivative exposures and other collateral requirements</i>	51,944	21,136	34,796	15,092
<i>Outflows related to loss of funding on debt products Credit and liquidity facilities</i>	11,723	11,723	7,633	7,633
<i>Credit and liquidity facilities</i>	191,823	29,286	197,144	29,834
Other contractual funding obligations (5)	26,143	26,143	20,196	20,196
Other contingent funding obligations (6)	502,821	8,243	460,167	8,091
Total cash outflows	n.a.	\$ 310,281	n.a.	\$ 275,284
Cash inflows				
Secured lending (e.g., reverse repos)	\$ 302,560	\$ 47,866	\$ 281,430	\$ 46,792
Inflows from fully performing exposures	12,937	7,558	14,151	9,708
Other cash inflows	32,029	32,029	25,039	25,039
Total cash inflows	n.a.	\$ 87,453	n.a.	\$ 81,539
		Total adjusted value		Total adjusted value
Total HQLA		\$ 288,979		\$ 249,762
Total net cash outflows		222,828		193,745
Liquidity coverage ratio		130%		129%

(1) The LCR is calculated in accordance with OSFI's LAR guideline, which, in turn, reflects liquidity-related requirements issued by the BCBS as updated in accordance with the Q2 2020 guidance described above. The LCR for the quarter ended April 30, 2020 is calculated as an average of 62 daily positions.

(2) With the exception of other contingent funding obligations, unweighted inflow and outflow amounts are items maturing or callable in 30 days or less. Other contingent funding obligations also include debt securities with remaining maturity greater than 30 days.

(3) As defined by the BCBS, stable deposits from retail and small business customers are deposits that are insured and are either held in transactional accounts or the bank has an established relationship with the client making the withdrawal unlikely.

(4) Operational deposits from customers other than retail and small and medium-sized enterprises (SMEs), are deposits which clients need to keep with the bank in order to facilitate their access and ability to use payment and settlement systems primarily for clearing, custody and cash management activities.

(5) Other contractual funding obligations primarily include outflows from unsettled securities trades and outflows from obligations related to securities sold short.

(6) Other contingent funding obligations include outflows related to other off-balance sheet facilities that carry low LCR runoff factors (0% – 5%).

n.a. not applicable

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

We maintain HQLAs in major currencies with dependable market depth and breadth. Our treasury management practices ensure that the levels of HQLA are actively managed to meet target LCR objectives. Our Level 1 assets, as calculated according to OSFI LAR and the BCBS LCR requirements, represent 85% of total HQLA. These assets consist of cash, placements with central banks and highly rated securities issued or guaranteed by governments, central banks and supranational entities.

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

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

Q2 2020 vs. Q1 2020

The average LCR for the quarter ended April 30, 2020 was 130%, which translates into a surplus of approximately \$66 billion, compared to 129% in the prior quarter. The increase in the LCR surplus from the previous quarter is primarily due to higher business and retail deposit growth partially offset by higher corporate lending resulting from drawdowns on credit facilities, as well as additional actions taken to maintain our liquidity position.

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

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

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

(Millions of Canadian dollars)	As at April 30, 2020									
	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	\$ 144,577	\$ 3	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ 2,595	\$ 147,175
Securities										
Trading (1)	91,976	20	27	19	41	89	105	9,354	34,147	135,778
Investment, net of applicable allowance	5,670	6,684	4,873	3,739	8,340	28,100	24,258	52,000	499	134,163
Assets purchased under reverse repurchase agreements and securities borrowed	151,988	95,167	39,179	12,582	16,679	227	–	–	9,712	325,534
Loans, net of applicable allowance	25,038	17,605	28,979	29,465	29,177	132,605	270,196	57,226	83,157	673,448
Other										
Customers' liability under acceptances	13,967	5,422	145	4	–	–	5	–	(105)	19,438
Derivatives	8,788	13,267	7,406	8,544	4,226	12,729	25,059	60,784	4	140,807
Other financial assets	44,931	2,438	2,034	154	224	241	333	1,963	3,707	56,025
Total financial assets	\$486,935	\$140,606	\$ 82,643	\$54,507	\$58,687	\$173,991	\$319,956	\$181,327	\$133,716	\$1,632,368
Other non-financial assets	4,622	1,569	541	(31)	499	3,010	1,909	6,188	25,007	43,314
Total assets	\$491,557	\$142,175	\$ 83,184	\$54,476	\$59,186	\$177,001	\$321,865	\$187,515	\$158,723	\$1,675,682
Liabilities and equity										
Deposits (2)										
Unsecured borrowing	\$ 69,061	\$ 49,596	\$ 65,099	\$31,398	\$50,060	\$ 24,397	\$ 53,348	\$ 19,339	\$543,005	\$ 905,303
Secured borrowing	2,930	5,762	6,830	6,738	2,289	10,289	17,645	6,351	–	58,834
Covered bonds	–	–	5,504	1,914	5,490	4,833	16,419	11,150	–	45,310
Other										
Acceptances	13,967	5,423	145	–	–	–	–	–	13	19,548
Obligations related to securities sold short	40,347	–	–	–	–	–	–	–	–	40,347
Obligations related to assets sold under repurchase agreements and securities loaned	207,115	31,627	12,683	1,004	19,229	500	–	–	6,447	278,605
Derivatives	9,347	14,337	7,890	9,045	4,486	12,545	26,423	60,537	100	144,710
Other financial liabilities	37,305	3,531	1,706	517	578	882	2,374	13,242	432	60,567
Subordinated debentures	–	–	–	–	–	–	326	9,448	–	9,774
Total financial liabilities	\$380,072	\$110,276	\$ 99,857	\$50,616	\$82,132	\$ 53,446	\$116,535	\$120,067	\$549,997	\$1,562,998
Other non-financial liabilities	904	949	178	3,125	446	761	764	11,070	9,447	27,644
Equity	–	–	–	–	–	–	–	–	85,040	85,040
Total liabilities and equity	\$380,976	\$111,225	\$100,035	\$53,741	\$82,578	\$ 54,207	\$117,299	\$131,137	\$644,484	\$1,675,682
Off-balance sheet items										
Financial guarantees	\$ 493	\$ 2,375	\$ 2,437	\$ 2,432	\$ 2,023	\$ 785	\$ 5,102	\$ 1,303	\$ 81	\$ 17,031
Commitments to extend credit	5,783	5,210	7,513	9,049	18,406	38,212	154,369	18,064	2,451	259,057
Other credit-related commitments	946	1,367	1,324	1,555	1,567	238	539	9	86,189	93,734
Other commitments	88	12	19	18	18	66	188	370	538	1,317
Total off-balance sheet items	\$ 7,310	\$ 8,964	\$ 11,293	\$13,054	\$22,014	\$ 39,301	\$160,198	\$ 19,746	\$ 89,259	\$ 371,139

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

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

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

Capital management

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

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

Prior to the widespread impact of COVID-19, on December 10, 2019, OSFI announced that the Domestic Stability Buffer (DSB) would be increased from 2.0% to 2.25% of total RWA to be effective April 30, 2020. Subsequently, to address the disruption related to the COVID-19 pandemic and support the banks' ability to supply additional credit to the economy, on March 13, 2020, OSFI announced a decrease in the DSB from 2.25% to 1.0% of total RWA, with the buffer decrease effective immediately. At that time, OSFI also committed to not increasing the DSB for a period of 18 months and announced its expectation that all banks should not increase their dividend payments and should stop any share buybacks.

Similarly, on March 27, 2020, OSFI announced a series of regulatory adjustments and guidance to further support the financial and operational resilience of the banking sector in response to the COVID-19 pandemic, including:

- Regulatory adjustments to RWA:
 - Delaying the past due treatment of all loan deferrals for a period of six months, thereby alleviating any increase to RWA when clients request payment deferrals for their loans including but not limited to, mortgages, credit cards, auto loans, small business loans or commercial loans; and
 - Temporary reductions to stressed VaR multipliers from three to one and the exclusion of Funding Valuation Adjustment hedges from market risk.
- Modifications for increases in expected credit loss provisions on CET1 capital by applying a 70% after-tax exclusion rate for growth in Stage 1 and Stage 2 allowances between Q1 2020 and the respective quarter for the remainder of fiscal 2020. Thereafter, the exclusion rate will be reduced to 50% and 25% in fiscal 2021 and 2022, respectively. These modifications are not available for a financial institution's IRB portfolio in any quarter in which the financial institution has a shortfall in allowances.
- Permitting the use of available buffers above the regulatory authorized minimum for the leverage ratio.

In relation to the relief programs launched by the Government of Canada and described in the Significant developments: COVID-19 section in this Q2 2020 Report to Shareholders, on March 30, 2020, OSFI provided guidance on the associated capital treatment of these programs:

- Loans issued under the CEBA program are to be excluded from risk-based capital and leverage ratios as they are fully guaranteed by the government.
- The appropriate risk-weighting for both the guaranteed and unsecured portion of the loans issued as part of the EDC BCAP Guarantee program should be in accordance with existing regulatory guidelines. However, the full amount of the loan is required to be included in the leverage ratio calculation.
- Risk-based capital and leverage ratio calculations should reflect only the financial institutions' own proportion of new loans issued under the BDC Co-Lending program.

Further regulatory guidance was provided by OSFI on April 9, 2020 and April 16, 2020, in support of capital and liquidity measures, which were effective immediately:

- Leverage ratio exposure amounts are to exclude central bank reserves and sovereign-issued securities that qualify as high quality liquid assets (HQLA) for a period of one year ending April 30, 2021.
- Reduction in the current regulatory capital floor for financial institutions using the Internal Ratings Based Approach (IRB) from 75% to 70% of RWA under the SA. The reduced floor factor will remain in place until the adoption of the Basel III reforms in Q1 2023.
- Exclusion of exposures acquired through the U.S. Paycheck Protection Program (PPP) Lending Facility from RWA and leverage exposure amounts.

We have incorporated the above adjustments and guidance, as applicable, into our Q2 2020 results and capital planning activities.

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

Basel III capital and leverage ratios	OSFI regulatory target requirements for large banks under Basel III					RBC capital and leverage ratios as at April 30, 2020	Domestic Stability Buffer ⁽³⁾	Minimum including Capital Buffers, D-SIB/G-SIB surcharge and Domestic Stability Buffer
	Minimum	Capital Buffers ⁽¹⁾	Minimum including Capital Buffers	D-SIB/G-SIB Surcharge ⁽²⁾	Minimum including Capital Buffers and D-SIB/G-SIB surcharge ⁽²⁾			
Common Equity Tier 1	4.5%	2.5%	7.0%	1.0%	8.0%	11.7%	1.0%	9.0%
Tier 1 capital	6.0%	2.5%	8.5%	1.0%	9.5%	12.7%	1.0%	10.5%
Total capital	8.0%	2.5%	10.5%	1.0%	11.5%	14.6%	1.0%	12.5%
Leverage ratio	3.0%	n.a.	3.0%	n.a.	3.0%	4.5%	n.a.	3.0%

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

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

(3) As at January 31, 2020, the DSB was 2.0% with an increase to 2.25% to be effective April 30, 2020. However, effective March 13, 2020, in accordance with the revised guidance noted above, OSFI lowered the level for the DSB to 1.0% of RWA from 2.25%.

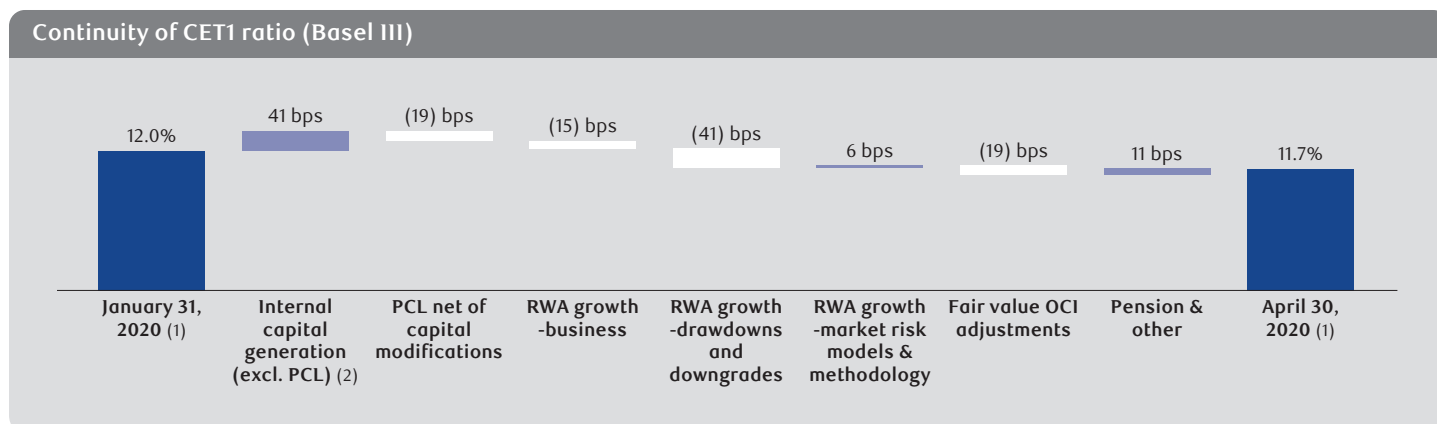
n.a. not applicable.

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

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	As at		
	April 30 2020	January 31 2020	October 31 2019
Capital (1)			
CET1 capital	\$ 65,198	\$ 63,054	\$ 62,184
Tier 1 capital	70,854	68,709	67,861
Total capital	81,469	78,220	77,888
Risk-weighted Assets (RWA) used in calculation of capital ratios (1)			
Credit risk	\$ 463,567	\$ 428,067	\$ 417,835
Market risk	26,900	28,415	28,917
Operational risk	67,945	67,243	66,104
Total capital RWA	\$ 558,412	\$ 523,725	\$ 512,856
Capital ratios and Leverage ratio (1)			
CET1 ratio	11.7%	12.0%	12.1%
Tier 1 capital ratio	12.7%	13.1%	13.2%
Total capital ratio	14.6%	14.9%	15.2%
Leverage ratio	4.5%	4.2%	4.3%
Leverage ratio exposure (billions)	\$ 1,578	\$ 1,630	\$ 1,570

(1) Capital, RWA, and capital ratios are calculated using OSFI's Capital Adequacy Requirements (CAR) guideline and the Leverage ratio is calculated using OSFI Leverage Requirements Guideline as updated in accordance with the Q2 2020 guidance described above. Both the CAR guideline and Leverage Requirements Guideline are based on the Basel III framework.

Q2 2020 vs. Q1 2020



(1) Represents rounded figures.

(2) Internal capital generation of \$2.1 billion which represents Net income available to shareholders excluding PCL, less common and preferred shares dividends.

Our CET1 ratio was 11.7%, down 30 bps from last quarter, mainly reflecting higher RWA, driven by drawdowns on credit facilities, net credit downgrades and balance sheet growth. The unfavourable impact of fair value OCI adjustments, and the impact of higher PCL net of related capital modifications for expected loss provisioning, also contributed to the decrease. These factors were partially offset by internal capital generation, the impact of higher discount rates in determining our pension and other post-employment benefit obligations and the capital modifications associated with the reduction in market risk.

Our Tier 1 capital ratio of 12.7% was down 40 bps, reflecting the factors noted above under the CET1 ratio.

Our Total capital ratio of 14.6% was down 30 bps, reflecting the factors noted above under the CET1 ratio. Total capital ratio was also positively impacted by the inclusion of excess provisions, net of capital modifications applied.

RWA increased by \$35 billion, mainly driven by the impact of foreign exchange translation, drawdowns on credit facilities and the impact of net credit downgrades. Business growth in wholesale and personal lending also contributed to the increase. These factors were partially offset by the impact of market risk model and methodology updates. The impact of foreign exchange translation on RWA is largely mitigated with economic hedges in our CET1 ratio.

Our Leverage ratio of 4.5% was up 30 bps from last quarter, as the impact of regulatory modifications from central bank reserves and sovereign-issued securities qualifying as HQLA and internal capital generation were partially offset by higher leverage exposures, the unfavourable impact of fair value OCI adjustments and the impact of higher PCL net of capital modifications for expected loss provisioning. The increase in leverage exposures was primarily attributable to growth in cash and interest-bearing deposits as well as higher corporate lending driven by increased drawdowns on credit facilities.

Selected capital management activity

The following table provides our selected capital management activity:

(Millions of Canadian dollars, except number of shares)	For the three months ended April 30, 2020			For the six months ended April 30, 2020		
	Issuance or redemption date	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)		314	\$ 26	547	\$ 44	
Purchased for cancellation		(867)	(11)	(7,860)	(97)	
Tier 2 capital						
Redemption of December 6, 2024 subordinated debentures (2)	December 6, 2019		\$ –		\$ (2,000)	
Issuance of December 23, 2029 subordinated debentures (2), (3)	December 23, 2019		–		1,500	
Other						
Purchase and cancellation of preferred shares Series C-2 (2)	December 17, 2019		\$ –	(5)	\$ (8)	

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

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

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

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

On February 27, 2020, we announced an NCIB program to purchase up to 20 million of our common shares, commencing on March 2, 2020 and continuing until March 1, 2021, or such earlier date as we complete the repurchase of all shares permitted under the bid. Since the inception of this NCIB, the total number of common shares repurchased and cancelled was approximately 0.4 million, at a cost of approximately \$39 million. In accordance with OSFI's announcement of its expectation that share buybacks should be stopped, we ceased the repurchase of our common shares effective March 13, 2020.

For the three-months ended April 30, 2020, the total number of common shares repurchased and cancelled under our NCIB program was approximately 0.9 million. The total cost of the shares repurchased was \$87 million.

For the six-months ended April 30, 2020, the total number of common shares repurchased and cancelled under our NCIB programs was approximately 7.9 million. The total cost of the shares repurchased was \$814 million.

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

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

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

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

On April 24, 2020, we also announced our intention to redeem all \$1,000 million of our outstanding NVCC 2.48% subordinated debentures due on June 4, 2025 for 100% of their principal amount plus interest accrued to, but excluding, the redemption date, on June 4, 2020.

Selected share data ⁽¹⁾

(Millions of Canadian dollars, except number of shares and as otherwise noted)	As at April 30, 2020		
	Number of shares (000s)	Amount	Dividends declared per share
Common shares issued	1,423,365	\$ 17,592	\$ 1.08
Treasury shares – common shares	(799)	(75)	
Common shares outstanding	1,422,566	\$ 17,517	
Stock options and awards			
Outstanding	8,231		
Exercisable	3,818		
First preferred shares issued			
Non-cumulative Series W ⁽²⁾	12,000	\$ 300	\$ 0.31
Non-cumulative Series AA	12,000	300	0.28
Non-cumulative Series AC	8,000	200	0.29
Non-cumulative Series AE	10,000	250	0.28
Non-cumulative Series AF	8,000	200	0.28
Non-cumulative Series AG	10,000	250	0.28
Non-cumulative Series AZ ^{(3), (4)}	20,000	500	0.23
Non-cumulative Series BB ^{(3), (4)}	20,000	500	0.23
Non-cumulative Series BD ^{(3), (4)}	24,000	600	0.23
Non-cumulative Series BF ^{(3), (4)}	12,000	300	0.23
Non-cumulative Series BH ⁽⁴⁾	6,000	150	0.31
Non-cumulative Series BI ⁽⁴⁾	6,000	150	0.31
Non-cumulative Series BJ ⁽⁴⁾	6,000	150	0.33
Non-cumulative Series BK ^{(3), (4)}	29,000	725	0.34
Non-cumulative Series BM ^{(3), (4)}	30,000	750	0.34
Non-cumulative Series BO ^{(3), (4)}	14,000	350	0.30
Non-cumulative Series C-2 ⁽⁵⁾	15	23	US\$ 16.88
Preferred shares issued	227,015	\$ 5,698	
Treasury shares – preferred shares ⁽⁶⁾	15	1	
Preferred shares outstanding	227,030	\$ 5,699	
Dividends			
Common		\$ 1,538	
Preferred ⁽⁷⁾		64	

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

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

(3) Dividend rate will reset every five years.

(4) NVCC instruments.

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

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

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

As at May 22, 2020, the number of outstanding common shares was 1,423,110,363, net of treasury shares held of 255,482, and the number of stock options and awards was 8,234,318.

NVCC provisions require the conversion of the capital instrument into a variable number of common shares in the event that OSFI deems a bank to be non-viable or a federal or provincial government in Canada publicly announces that a bank has accepted or agreed to accept a capital injection. If a NVCC trigger event were to occur, our NVCC capital instruments, which are the preferred shares Series AZ, BB, BD, BF, BH, BI, BJ, BK, BM, BO, and subordinated debentures due on September 29, 2026, June 4, 2025, January 20, 2026, January 27, 2026, July 25, 2029 and December 23, 2029, would be converted into common shares pursuant to an automatic conversion formula with a conversion price based on the greater of: (i) a contractual floor price of \$5.00, and (ii) the current market price of our common shares at the time of the trigger event (10-day weighted average). Based on a floor price of \$5.00 and including an estimate for accrued dividends and interest, these NVCC capital instruments would convert into a maximum of 3,464 million common shares, in aggregate, which would represent a dilution impact of 70.89% based on the number of common shares outstanding as at April 30, 2020.

Total loss absorbing capacity (TLAC)

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

TLAC requirements established two minimum standards, which are required to be met effective November 1, 2021: the risk-based TLAC ratio, which builds on the risk-based capital ratios described in the CAR guideline, and the TLAC leverage ratio,

which builds on the leverage ratio described in OSFI's Leverage Requirements guideline. On April 16, 2020, OSFI notified systemically important banks of the requirement to maintain a minimum TLAC ratio of 22.5%, which includes the revised DSB of 1.0% as noted above. OSFI continues to require a TLAC leverage ratio of 6.75%. We began issuing bail-in eligible debt in the fourth quarter of 2018 and this has contributed to increasing our TLAC ratio. We expect our TLAC ratio to increase through normal course refinancing of maturing unsecured term debt.

Regulatory developments

Basel III reforms

On March 27, 2020, the BCBS extended the effective implementation dates of the following regulatory requirements in recognition of the operational challenges brought about by the COVID-19 pandemic for both bank supervisors such as OSFI and the banks they supervise, including:

- Basel III reforms to January 1, 2023 from the previous effective date of January 1, 2022.
- Minimum capital requirements for market risk to January 1, 2023 from the previous effective date of January 1, 2022.
- Revised Pillar 3 disclosure requirements deferred to January 1, 2023.

On March 27, 2020, OSFI also announced the effective implementation requirements for the Basel III reforms applicable to us and other Canadian D-SIBs to January 31, 2023, which is aligned with the BCBS and the Minimum capital requirements for market risk to January 31, 2024.

Global systemically important banks (G-SIB)

On April 3, 2020, the BCBS announced its postponement of the implementation of the revised G-SIB framework from 2021 to 2022 in order to provide additional operational capacity for banks and supervisors in light of the COVID-19 pandemic.

Accounting and control matters

Summary of accounting policies and estimates

Our Condensed Financial Statements are presented in compliance with International Accounting Standard (IAS) 34 *Interim Financial Reporting*. Our significant accounting policies are described in Note 2 of our audited 2019 Annual Consolidated Financial Statements and our Q2 2020 Condensed Financial Statements.

Application of critical accounting judgments, estimates and assumptions

The COVID-19 pandemic is rapidly evolving and the economic environment in which we operate could be subject to sustained volatility, which could continue to negatively impact our financial results, as the duration of the pandemic, including the possibility of subsequent waves, and the effectiveness of steps undertaken by governments and central banks remains uncertain. We continue to monitor and assess the impacts of the COVID-19 pandemic on our critical accounting judgments, estimates and assumptions, as described in Note 2 of our Annual Consolidated Financial Statements and Note 2 of our Q2 2020 Condensed Financial Statements. Certain critical judgments, relating to allowance for credit losses, goodwill, RBC client relief programs, and government programs are particularly complex in the current uncertain environment and significantly different amounts could be reported under different conditions or assumptions.

Changes in accounting policies and disclosures

Changes in accounting policies

During the first quarter of 2020, we adopted IFRS 16. As permitted by the transition provisions of IFRS 16, we elected not to restate comparative period results; accordingly, all comparative period information prior to the first quarter of 2020 is presented in accordance with our previous accounting policies, as described in our 2019 Annual Report. As a result of the adoption of IFRS 16, we recognized right-of-use assets, lease liabilities and an adjustment to opening retained earnings as at November 1, 2019. Refer to Note 2 of our Condensed Financial Statements for details of these changes.

During the first quarter of 2020, we early adopted amendments to IFRS 9 *Financial Instruments*, IAS 39 *Financial Instruments: Recognition and Measurement* and IFRS 7 *Financial Instruments: Disclosures (Amendments)*. Refer to Note 2 of our Condensed Financial Statements for details of these changes.

Future changes in accounting policies and disclosures

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

Controls and procedures

Disclosure controls and procedures

As of April 30, 2020, management evaluated, under the supervision of and with the participation of the President and Chief Executive Officer and the Chief Financial Officer, the effectiveness of our disclosure controls and procedures as defined under rules adopted by the U.S. SEC. Based on that evaluation, the President and Chief Executive Officer and the Chief Financial Officer concluded that our disclosure controls and procedures were effective as of April 30, 2020.

Internal control over financial reporting

No changes were made in our internal control over financial reporting during the quarter ended April 30, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Related party transactions

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

EDTF recommendations index

We aim to present transparent, high-quality risk disclosures by providing disclosures in our 2019 Annual Report, Q2 2020 Report to Shareholders (RTS), Supplementary Financial Information package (SFI), and Pillar 3 Report, in accordance with recommendations from the Financial Stability Board's (FSB) Enhanced Disclosure Task Force (EDTF). Information within the SFI and Pillar 3 Report is not and should not be considered incorporated by reference into our Q2 2020 Report to Shareholders.

The following index summarizes our disclosure by EDTF recommendation:

Type of Risk	Recommendation	Disclosure	Location of disclosure		
			RTS page	Annual Report page	SFI page
General	1	Table of contents for EDTF risk disclosure	52	110	1
	2	Define risk terminology and measures		49-54, 213-214	–
	3	Top and emerging risks		47-48	–
	4	New regulatory ratios	45-47	90-94	–
Risk governance, risk management and business model	5	Risk management organization		49-54	–
	6	Risk culture		50-54	–
	7	Risk in the context of our business activities		97	–
	8	Stress testing		51-52, 66	–
Capital adequacy and risk-weighted assets (RWA)	9	Minimum Basel III capital ratios and Domestic systemically important bank surcharge	46	90-94	–
	10	Composition of capital and reconciliation of the accounting balance sheet to the regulatory balance sheet		–	20-23
	11	Flow statement of the movements in regulatory capital		–	24
	12	Capital strategic planning		90-94	–
	13	RWA by business segments		–	25
	14	Analysis of capital requirement, and related measurement model information		55-58	*
	15	RWA credit risk and related risk measurements		–	*
	16	Movement of risk-weighted assets by risk type		–	25
Liquidity	17	Basel back-testing		51, 55	37
	18	Quantitative and qualitative analysis of our liquidity reserve	39-40	72-74, 78-79	–
Funding	19	Encumbered and unencumbered assets by balance sheet category, and contractual obligations for rating downgrades	40,42	74,77	–
	20	Maturity analysis of consolidated total assets, liabilities and off-balance sheet commitments analyzed by remaining contractual maturity at the balance sheet date	44-45	79-80	–
	21	Sources of funding and funding strategy	40-42	74-76	–
Market risk	22	Relationship between the market risk measures for trading and non-trading portfolios and the balance sheet	37-38	70-71	–
	23	Decomposition of market risk factors	33-36	66-69	–
	24	Market risk validation and back-testing		66	–
	25	Primary risk management techniques beyond reported risk measures and parameters		66-69	–
	26	Bank's credit risk profile	26-33	54-65, 156-163	26-37,*
Credit risk		Quantitative summary of aggregate credit risk exposures that reconciles to the balance sheet	72-78	104-109	*
	27	Policies for identifying impaired loans		56-58, 99-100, 129-132	–
	28	Reconciliation of the opening and closing balances of impaired loans and impairment allowances during the year		–	28,33
	29	Quantification of gross notional exposure for OTC derivatives or exchange-traded derivatives		59	39
	30	Credit risk mitigation, including collateral held for all sources of credit risk		57-58	36
	Other	31	Other risk types		82-89
	32	Publicly known risk events		85-86, 201-202	–

* These disclosure requirements are satisfied or partially satisfied by disclosures provided in our Pillar 3 Report for the quarter ended April 30, 2020 and for the year ended October 31, 2019.

Interim Condensed Consolidated Financial Statements (unaudited)

Interim Condensed Consolidated Balance Sheets (unaudited)

(Millions of Canadian dollars)	As at	
	April 30 2020	October 31 2019
Assets		
Cash and due from banks	\$ 98,777	\$ 26,310
Interest-bearing deposits with banks	48,398	38,345
Securities		
Trading	135,778	146,534
Investment, net of applicable allowance (Note 4)	134,163	102,470
	269,941	249,004
Assets purchased under reverse repurchase agreements and securities borrowed	325,534	306,961
Loans (Note 5)		
Retail	435,409	426,086
Wholesale	243,269	195,870
	678,678	621,956
Allowance for loan losses (Note 5)	(5,230)	(3,100)
	673,448	618,856
Segregated fund net assets	1,743	1,663
Other		
Customers' liability under acceptances	19,438	18,062
Derivatives	140,807	101,560
Premises and equipment	8,394	3,191
Goodwill	11,591	11,236
Other intangibles	4,736	4,674
Other assets	72,875	49,073
	257,841	187,796
Total assets	\$ 1,675,682	\$ 1,428,935
Liabilities and equity		
Deposits (Note 6)		
Personal	\$ 328,386	\$ 294,732
Business and government	632,725	565,482
Bank	48,336	25,791
	1,009,447	886,005
Segregated fund net liabilities	1,743	1,663
Other		
Acceptances	19,548	18,091
Obligations related to securities sold short	40,347	35,069
Obligations related to assets sold under repurchase agreements and securities loaned	278,605	226,586
Derivatives	144,710	98,543
Insurance claims and policy benefit liabilities	11,383	11,401
Other liabilities	75,085	58,137
	569,678	447,827
Subordinated debentures (Note 8)	9,774	9,815
Total liabilities	1,590,642	1,345,310
Equity attributable to shareholders		
Preferred shares (Note 8)	5,699	5,707
Common shares (Note 8)	17,517	17,587
Retained earnings	57,466	55,981
Other components of equity	4,253	4,248
	84,935	83,523
Non-controlling interests	105	102
Total equity	85,040	83,625
Total liabilities and equity	\$ 1,675,682	\$ 1,428,935

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

Interim Condensed Consolidated Statements of Income (unaudited)

(Millions of Canadian dollars, except per share amounts)	For the three months ended		For the six months ended	
	April 30 2020	April 30 2019	April 30 2020	April 30 2019
Interest and dividend income (Note 3)				
Loans	\$ 5,937	\$ 6,123	\$ 12,295	\$ 12,283
Securities	1,730	1,702	3,472	3,398
Assets purchased under reverse repurchase agreements and securities borrowed	1,492	2,191	3,501	4,339
Deposits and other	67	116	196	261
	9,226	10,132	19,464	20,281
Interest expense (Note 3)				
Deposits and other	2,337	3,267	5,357	6,529
Other liabilities	1,343	1,999	3,257	3,947
Subordinated debentures	81	93	164	185
	3,761	5,359	8,778	10,661
Net interest income	5,465	4,773	10,686	9,620
Non-interest income				
Insurance premiums, investment and fee income	197	1,515	2,191	3,094
Trading revenue	(66)	314	392	709
Investment management and custodial fees	1,500	1,381	3,035	2,831
Mutual fund revenue	890	899	1,836	1,772
Securities brokerage commissions	460	316	778	658
Service charges	468	466	956	934
Underwriting and other advisory fees	544	554	1,171	899
Foreign exchange revenue, other than trading	280	243	533	492
Card service revenue	212	266	499	548
Credit fees	304	288	664	603
Net gains on investment securities	45	37	56	83
Share of profit in joint ventures and associates	15	14	37	29
Other	19	433	335	816
	4,868	6,726	12,483	13,468
Total revenue	10,333	11,499	23,169	23,088
Provision for credit losses (Notes 4 and 5)	2,830	426	3,249	940
Insurance policyholder benefits, claims and acquisition expense	(177)	1,160	1,437	2,385
Non-interest expense				
Human resources (Note 7)	3,573	3,622	7,633	7,265
Equipment	468	445	930	876
Occupancy	417	405	814	802
Communications	252	273	502	513
Professional fees	324	290	608	595
Amortization of other intangibles	315	299	618	589
Other	593	582	1,215	1,188
	5,942	5,916	12,320	11,828
Income before income taxes	1,738	3,997	6,163	7,935
Income taxes	257	767	1,173	1,533
Net income	\$ 1,481	\$ 3,230	\$ 4,990	\$ 6,402
Net income attributable to:				
Shareholders	\$ 1,484	\$ 3,226	\$ 4,988	\$ 6,396
Non-controlling interests	(3)	4	2	6
	\$ 1,481	\$ 3,230	\$ 4,990	\$ 6,402
Basic earnings per share (in dollars) (Note 9)	\$ 1.00	\$ 2.20	\$ 3.41	\$ 4.36
Diluted earnings per share (in dollars) (Note 9)	1.00	2.20	3.40	4.34
Dividends per common share (in dollars)	1.08	1.02	2.13	2.00

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

Interim Condensed Consolidated Statements of Comprehensive Income (unaudited)

(Millions of Canadian dollars)	For the three months ended		For the six months ended	
	April 30 2020	April 30 2019	April 30 2020	April 30 2019
Net income	\$ 1,481	\$ 3,230	\$ 4,990	\$ 6,402
Other comprehensive income (loss), net of taxes				
Items that will be reclassified subsequently to income:				
Net change in unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income				
Net unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income	(989)	140	(806)	139
Provision for credit losses recognized in income	24	(9)	23	(10)
Reclassification of net losses (gains) on debt securities and loans at fair value through other comprehensive income to income	(64)	(31)	(73)	(60)
	(1,029)	100	(856)	69
Foreign currency translation adjustments				
Unrealized foreign currency translation gains (losses)	2,937	1,096	3,348	1,131
Net foreign currency translation gains (losses) from hedging activities	(1,126)	(398)	(1,304)	(464)
Reclassification of losses (gains) on foreign currency translation to income	–	–	–	2
Reclassification of losses (gains) on net investment hedging activities to income	–	–	–	2
	1,811	698	2,044	671
Net change in cash flow hedges				
Net gains (losses) on derivatives designated as cash flow hedges	(1,103)	(182)	(1,277)	(498)
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	108	(25)	100	(99)
	(995)	(207)	(1,177)	(597)
Items that will not be reclassified subsequently to income:				
Remeasurements of employee benefit plans (Note 7)	457	(92)	(12)	(486)
Net fair value change due to credit risk on financial liabilities designated as fair value through profit or loss	662	(189)	553	(26)
Net gains (losses) on equity securities designated at fair value through other comprehensive income	20	30	21	37
	1,139	(251)	562	(475)
Total other comprehensive income (loss), net of taxes	926	340	573	(332)
Total comprehensive income (loss)	\$ 2,407	\$ 3,570	\$ 5,563	\$ 6,070
Total comprehensive income attributable to:				
Shareholders	\$ 2,404	\$ 3,566	\$ 5,555	\$ 6,063
Non-controlling interests	3	4	8	7
	\$ 2,407	\$ 3,570	\$ 5,563	\$ 6,070

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

(Millions of Canadian dollars)	For the three months ended		For the six months ended	
	April 30 2020	April 30 2019	April 30 2020	April 30 2019
Income taxes on other comprehensive income				
Net unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income	\$ (147)	\$ 48	\$ (92)	\$ 44
Provision for credit losses recognized in income	3	–	3	–
Reclassification of net losses (gains) on debt securities and loans at fair value through other comprehensive income to income	(23)	(15)	(26)	(32)
Unrealized foreign currency translation gains (losses)	1	1	1	2
Net foreign currency translation gains (losses) from hedging activities	(384)	(136)	(446)	(160)
Reclassification of losses (gains) on net investment hedging activities to income	–	–	–	1
Net gains (losses) on derivatives designated as cash flow hedges	(394)	(66)	(457)	(179)
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	39	(9)	36	(36)
Remeasurements of employee benefit plans	165	(45)	(2)	(170)
Net fair value change due to credit risk on financial liabilities designated as fair value through profit or loss	237	(69)	198	(10)
Net gains (losses) on equity securities designated at fair value through other comprehensive income	7	(6)	5	(7)
Total income tax expenses (recoveries)	\$ (496)	\$ (297)	\$ (780)	\$ (547)

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

Interim Condensed Consolidated Statements of Changes in Equity (unaudited)

	For the three months ended April 30, 2020											
	Other components of equity											
	Preferred shares	Common shares	Treasury shares – preferred	Treasury shares – common	Retained earnings	FVOCI securities and loans	Foreign currency translation	Cash flow hedges	Total other components of equity	Equity attributable to shareholders	Non-controlling interests	Total equity
(Millions of Canadian dollars)												
Balance at beginning of period	\$ 5,698	\$ 17,577	\$ 1	\$ (72)	\$ 56,279	\$ 206	\$ 4,454	\$ (188)	\$ 4,472	\$ 83,955	\$ 106	\$ 84,061
Changes in equity												
Issues of share capital	-	26	-	-	-	-	-	-	-	26	-	26
Common shares purchased for cancellation	-	(11)	-	-	(76)	-	-	-	-	(87)	-	(87)
Redemption of preferred shares	-	-	-	-	-	-	-	-	-	-	-	-
Sales of treasury shares	-	-	30	1,605	-	-	-	-	-	1,635	-	1,635
Purchases of treasury shares	-	-	(30)	(1,608)	-	-	-	-	-	(1,638)	-	(1,638)
Share-based compensation awards	-	-	-	-	(2)	-	-	-	-	(2)	-	(2)
Dividends on common shares	-	-	-	-	(1,538)	-	-	-	-	(1,538)	-	(1,538)
Dividends on preferred shares and other	-	-	-	-	(64)	-	-	-	-	(64)	(3)	(67)
Other	-	-	-	-	244	-	-	-	-	244	(1)	243
Net income	-	-	-	-	1,484	-	-	-	-	1,484	(3)	1,481
Total other comprehensive income (loss), net of taxes	-	-	-	-	1,139	(1,029)	1,805	(995)	(219)	920	6	926
Balance at end of period	\$ 5,698	\$ 17,592	\$ 1	\$ (75)	\$ 57,466	\$ (823)	\$ 6,259	\$ (1,183)	\$ 4,253	\$ 84,935	\$ 105	\$ 85,040

	For the three months ended April 30, 2019											
	Other components of equity											
	Preferred shares	Common shares	Treasury shares – preferred	Treasury shares – common	Retained earnings	FVOCI securities and loans	Foreign currency translation	Cash flow hedges	Total other components of equity	Equity attributable to shareholders	Non-controlling interests	Total equity
(Millions of Canadian dollars)												
Balance at beginning of period	\$ 6,406	\$ 17,601	\$ -	\$ (36)	\$ 52,184	\$ (43)	\$ 4,119	\$ 298	\$ 4,374	\$ 80,529	\$ 97	\$ 80,626
Changes in equity												
Issues of share capital	-	38	-	-	-	-	-	-	-	38	-	38
Common shares purchased for cancellation	-	(1)	-	-	(10)	-	-	-	-	(11)	-	(11)
Redemption of preferred shares	(700)	-	-	-	-	-	-	-	-	(700)	-	(700)
Sales of treasury shares	-	-	43	1,272	-	-	-	-	-	1,315	-	1,315
Purchases of treasury shares	-	-	(43)	(1,340)	-	-	-	-	-	(1,383)	-	(1,383)
Share-based compensation awards	-	-	-	-	(8)	-	-	-	-	(8)	-	(8)
Dividends on common shares	-	-	-	-	(1,466)	-	-	-	-	(1,466)	-	(1,466)
Dividends on preferred shares and other	-	-	-	-	(65)	-	-	-	-	(65)	-	(65)
Other	-	-	-	-	5	-	-	-	-	5	-	5
Net income	-	-	-	-	3,226	-	-	-	-	3,226	4	3,230
Total other comprehensive income (loss), net of taxes	-	-	-	-	(251)	100	698	(207)	591	340	-	340
Balance at end of period	\$ 5,706	\$ 17,638	\$ -	\$ (104)	\$ 53,615	\$ 57	\$ 4,817	\$ 91	\$ 4,965	\$ 81,820	\$ 101	\$ 81,921

	For the six months ended April 30, 2020										
	Other components of equity										
	Treasury shares – preferred	Common shares	Treasury shares – common	Retained earnings	FVOCI securities and loans	Foreign currency translation	Cash flow hedges	Total other components of equity	Equity attributable to shareholders	Non-controlling interests	Total equity
(Millions of Canadian dollars)											
Balance at beginning of period	\$ 5,706	\$ 17,645	\$ 1	\$ (58)	\$ 55,981	\$ 33	\$ 4,221	\$ (6)	\$ 4,248	\$ 83,523	\$ 102
Transition adjustment (Note 2)	–	–	–	–	(107)	–	–	–	–	(107)	–
Adjusted balance at beginning of period	\$ 5,706	\$ 17,645	\$ 1	\$ (58)	\$ 55,874	\$ 33	\$ 4,221	\$ (6)	\$ 4,248	\$ 83,416	\$ 102
Changes in equity											
Issues of share capital	–	44	–	–	–	–	–	–	–	44	–
Common shares purchased for cancellation	–	(97)	–	–	(717)	–	–	–	–	(814)	–
Redemption of preferred shares	(8)	–	–	–	–	–	–	–	–	(8)	–
Sales of treasury shares	–	–	63	3,171	–	–	–	–	–	3,234	–
Purchases of treasury shares	–	–	(63)	(3,188)	–	–	–	–	–	(3,251)	–
Share-based compensation awards	–	–	–	–	–	–	–	–	–	–	–
Dividends on common shares	–	–	–	–	(3,034)	–	–	–	–	(3,034)	–
Dividends on preferred shares and other	–	–	–	–	(129)	–	–	–	–	(129)	(4)
Other	–	–	–	–	(78)	–	–	–	–	(78)	(1)
Net income	–	–	–	–	4,988	–	–	–	–	4,988	2
Total other comprehensive income (loss), net of taxes	–	–	–	–	562	(856)	2,038	(1,177)	5	567	6
Balance at end of period	\$ 5,698	\$ 17,592	\$ 1	\$ (75)	\$ 57,466	\$ (823)	\$ 6,259	\$ (1,183)	\$ 4,253	\$ 84,935	\$ 105

	For the six months ended April 30, 2019											
	Other components of equity											
	Preferred shares	Common shares	Treasury shares – preferred	Treasury shares – common	Retained earnings	FVOCI securities and loans	Foreign currency translation	Cash flow hedges	Total other components of equity	Equity attributable to shareholders	Non-controlling interests	Total equity
(Millions of Canadian dollars)												
Balance at beginning of period (Note 2)	\$ 6,306	\$ 17,635	\$ 3	\$ (18)	\$ 51,018	\$ (12)	\$ 4,147	\$ 688	\$ 4,823	\$ 79,767	\$ 94	\$ 79,861
Changes in equity												
Issues of share capital	350	49	–	–	–	–	–	–	–	399	–	399
Common shares purchased for cancellation	–	(46)	–	–	(313)	–	–	–	–	(359)	–	(359)
Redemption of preferred shares	(950)	–	–	–	–	–	–	–	–	(950)	–	(950)
Sales of treasury shares	–	–	125	2,801	–	–	–	–	–	2,926	–	2,926
Purchases of treasury shares	–	–	(128)	(2,887)	–	–	–	–	–	(3,015)	–	(3,015)
Share-based compensation awards	–	–	–	–	(6)	–	–	–	–	(6)	–	(6)
Dividends on common shares	–	–	–	–	(2,873)	–	–	–	–	(2,873)	–	(2,873)
Dividends on preferred shares and other	–	–	–	–	(139)	–	–	–	–	(139)	–	(139)
Other	–	–	–	–	7	–	–	–	–	7	–	7
Net income	–	–	–	–	6,396	–	–	–	–	6,396	6	6,402
Total other comprehensive income (loss), net of taxes	–	–	–	–	(475)	69	670	(597)	142	(333)	1	(332)
Balance at end of period	\$ 5,706	\$ 17,638	\$ –	\$ (104)	\$ 53,615	\$ 57	\$ 4,817	\$ 91	\$ 4,965	\$ 81,820	\$ 101	\$ 81,921

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

Interim Condensed Consolidated Statements of Cash Flows (unaudited)

(Millions of Canadian dollars)	For the three months ended		For the six months ended	
	April 30 2020	April 30 2019	April 30 2020	April 30 2019
Cash flows from operating activities				
Net income	\$ 1,481	\$ 3,230	\$ 4,990	\$ 6,402
Adjustments for non-cash items and others				
Provision for credit losses	2,830	426	3,249	940
Depreciation	326	157	659	307
Deferred income taxes	(428)	(124)	(414)	(295)
Amortization and impairment of other intangibles	316	300	627	593
Net changes in investments in joint ventures and associates	(13)	(13)	(35)	(28)
Losses (Gains) on investment securities	(86)	(47)	(98)	(96)
Losses (Gains) on disposition of businesses	–	–	8	–
Adjustments for net changes in operating assets and liabilities				
Insurance claims and policy benefit liabilities	(876)	494	(18)	1,006
Net change in accrued interest receivable and payable	(231)	108	(329)	230
Current income taxes	(699)	(376)	(954)	(535)
Derivative assets	(46,825)	4	(39,247)	9,227
Derivative liabilities	50,099	402	46,167	(8,070)
Trading securities	8,788	(743)	10,292	(10,658)
Loans, net of securitizations	(46,092)	(12,604)	(57,727)	(25,755)
Assets purchased under reverse repurchase agreements and securities borrowed	(1,347)	(11,860)	(18,573)	(14,918)
Obligations related to assets sold under repurchase agreements and securities loaned	24,214	(549)	52,019	17,166
Obligations related to securities sold short	4,723	807	5,278	1,802
Deposits, net of securitizations	107,220	11,457	124,456	26,939
Brokers and dealers receivable and payable	2,997	162	2,353	(316)
Other	(14,436)	(2,405)	(20,798)	(3,888)
Net cash from (used in) operating activities	91,961	(11,174)	111,905	53
Cash flows from investing activities				
Change in interest-bearing deposits with banks	(17,068)	11,935	(10,052)	9,753
Proceeds from sales and maturities of investment securities	35,777	12,850	52,581	31,154
Purchases of investment securities	(43,533)	(16,218)	(78,733)	(36,886)
Net acquisitions of premises and equipment and other intangibles	(758)	(575)	(1,503)	(1,136)
Net cash from (used in) investing activities	(25,582)	7,992	(37,707)	2,885
Cash flows from financing activities				
Issuance of subordinated debentures	–	–	1,500	–
Repayment of subordinated debentures	–	–	(2,000)	–
Issue of common shares, net of issuance costs	23	30	39	39
Common shares purchased for cancellation	(87)	(11)	(814)	(359)
Issue of preferred shares, net of issuance costs	–	–	–	350
Redemption of preferred shares	–	(700)	(8)	(950)
Sales of treasury shares	1,635	1,315	3,234	2,926
Purchases of treasury shares	(1,638)	(1,383)	(3,251)	(3,015)
Dividends paid	(1,561)	(1,481)	(3,128)	(2,964)
Dividends/distributions paid to non-controlling interests	(3)	–	(4)	–
Change in short-term borrowings of subsidiaries	(1,248)	(1,774)	1,531	3,086
Repayment of lease liabilities	(155)	–	(296)	–
Net cash from (used in) financing activities	(3,034)	(4,004)	(3,197)	(887)
Effect of exchange rate changes on cash and due from banks	1,312	194	1,466	781
Net change in cash and due from banks	64,657	(6,992)	72,467	2,832
Cash and due from banks at beginning of period ⁽¹⁾	34,120	40,033	26,310	30,209
Cash and due from banks at end of period ⁽¹⁾	\$ 98,777	\$ 33,041	\$ 98,777	\$ 33,041
Cash flows from operating activities include:				
Amount of interest paid	\$ 3,811	\$ 5,032	\$ 8,568	\$ 9,780
Amount of interest received	8,903	9,817	18,654	19,477
Amount of dividends received	646	488	1,304	981
Amount of income taxes paid	842	958	1,717	1,749

(1) We are required to maintain balances with central banks and other regulatory authorities. The total balances were \$2.6 billion as at April 30, 2020 (January 31, 2020 – \$2.5 billion; October 31, 2019 – \$2.6 billion; April 30, 2019 – \$2.3 billion; January 31, 2019 – \$2.3 billion; October 31, 2018 – \$2.4 billion).

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

Note 1 General information

Our unaudited Interim Condensed Consolidated Financial Statements (Condensed Financial Statements) are presented in compliance with International Accounting Standard (IAS) 34 *Interim Financial Reporting*. The Condensed Financial Statements do not include all the information and disclosures required in the annual financial statements and should be read in conjunction with our audited 2019 Annual Consolidated Financial Statements and the accompanying notes included on pages 111 to 211 in our 2019 Annual Report. Tabular information is stated in millions of Canadian dollars, except per share amounts and percentages. On May 26, 2020, the Board of Directors authorized the Condensed Financial Statements for issue.

Note 2 Summary of significant accounting policies, estimates and judgments

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

Changes in accounting policies

Leases

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

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

Leasing

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Interest Rate Benchmark Reform

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

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

Hedge Accounting

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

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

Cash flow hedges

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

Fair value hedges

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

Hedging relationships impacted by interest rate benchmark reform

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

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

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

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

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

IFRS 15 *Revenue from Contracts with Customers* (IFRS 15)

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

Significant judgments, estimates, and assumptions

The COVID-19 pandemic is rapidly evolving and the economic environment in which we operate could be subject to sustained volatility, which could continue to negatively impact our financial results, as the duration of the pandemic, including the possibility of subsequent waves, and the effectiveness of steps undertaken by governments and central banks remains uncertain. The current environment required particularly complex judgments and estimates, and we are closely monitoring the changing conditions and their impact to the following areas.

Allowance for credit losses

Our estimation of expected credit losses in stage 1 and stage 2 continues to be a discounted probability-weighted estimate that considers five distinct macroeconomic scenarios. These include our base macroeconomic forecast, upside and downside scenarios based on reasonably possible alternative macroeconomic conditions, and additional and more severe downside scenarios designed to capture a broader range of potential credit losses in the energy and real estate sectors. Our process involves significant judgment to design and weigh macroeconomic scenarios, forecast macroeconomic variables, and assess for significant increases in credit risk.

To reflect certain characteristics not already considered in our modelled, scenario-weighted ACL, including the impact of a pandemic scenario on particularly vulnerable sectors affected by COVID-19 and the effects of bank and government led payment support programs, we applied expert credit judgment to the scenario-weighted ACL in determining the final expected credit losses.

Use of forward looking information

The emergence of the COVID-19 global pandemic significantly impacted our economic outlook, which is reflected in the macroeconomic variables used to estimate our stage 1 and stage 2 credit loss allowances. The environment, including government support measures being introduced, is rapidly evolving and as a result, our macroeconomic outlook has a higher than usual degree of uncertainty and is inherently subject to change, which may materially change our estimate of stage 1 and stage 2 credit loss allowances. We are closely monitoring changes in conditions and their impact on our expected credit losses, and will continue to update our macroeconomic variables as the impact of COVID-19 progresses.

Assessment of significant increase in credit risk

To support our clients during this time, we have launched various hardship relief programs. Utilization of a payment deferral program does not, all else being equal, automatically trigger a significant increase in credit risk. Our assessment of significant increases in credit risk continues to be primarily based on quantitative lifetime probability of default (PD) thresholds and, for our wholesale portfolios, changes in the borrower's risk rating. Additional qualitative reviews and a 30 days past due backstop are also applied. Risk ratings and the broader macroeconomic impacts of the pandemic are largely reflected in an instrument's lifetime PD. To the extent the impacts of COVID-19 are not already reflected within the lifetime PD model, they are reflected through the qualitative review performed to assess the staging results and adjustments are made as necessary.

Note 2 Summary of significant accounting policies, estimates and judgments (continued)***RBC Client relief programs***

We have established relief programs to help personal and business banking clients manage the challenges of COVID-19 through payment deferrals, interest rate reductions, covenant waivers, and refinancing or credit restructuring. In some cases, the original terms of the associated financial asset were renegotiated or otherwise modified, resulting in changes to the contractual terms of the financial asset that affect the contractual cash flows. Where there was a substantial change in terms from the original financial asset, we derecognized the financial asset and recognized a new financial asset. If the modification of contractual terms did not result in derecognition of the financial asset, the carrying amount of the financial asset was 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 was recognized.

Government programs

To support our clients through unprecedented times, we are participating in government relief programs in Canada and in the U.S. For these programs, we have assessed whether we transferred substantially all the risks and rewards associated with the financial assets, relinquished control, or retained the rights to receive the cash flows of the financial assets but assumed an obligation to pay the cash flows to a third party subject to certain pass-through requirements.

Under the Canadian Emergency Business Account program, we have provided interest-free loans to existing eligible small business clients funded by the Export Development Bank of Canada (EDC). As we do not retain substantially all of the risks and rewards of the financial assets, and all cash flows are passed through to the EDC, these loans are not recognized on our Consolidated Balance Sheets.

We have also provided loans to support certain U.S. based clients, guaranteed by the United States Federal Government, as part of the Paycheck Protection Program (PPP) CARES Act. Although these loans are guaranteed by the United States Federal Government, we retain substantially all of the other risk and rewards of the loans. Accordingly, loans provided under this program have been presented in Wholesale loans at amortized cost.

Goodwill

Due to the COVID-19 impacts on the cash flow outlook for our businesses, we completed sensitivity analysis on certain cash-generating units (CGUs) more significantly impacted by the pandemic. This included updating certain key assumptions and judgments used in estimating the recoverable amount of certain CGUs through completing sensitivity testing on our discount rates and forecast future cash flows to determine whether the CGUs' recoverable amounts continue to exceed their carrying amounts. We determined that no impairment existed.

As determined through our sensitivity analysis, the recoverable amount of our Caribbean Banking CGU has been updated to 111% of its carrying amount (October 31, 2019 – 126%). If the post-tax discount rate was increased by 0.7% (October 31, 2019 – 1.8%), or the terminal growth rate was decreased by 0.9% (October 31, 2019 – 2.4%), or we reduced future cash flows by 10% (October 31, 2019 – 21%), holding other individual factors constant, the CGU's carrying amount would approximate its recoverable amount.

We will continue to monitor the impact of COVID-19 and update our key assumptions and judgments as information emerges over future quarters.

For further details on our significant estimates and judgments, refer to Note 2 of our audited Annual Consolidated Financial Statements.

Note 3 Fair value of financial instruments

Carrying value and fair value of financial instruments

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

	As at April 30, 2020							
	Carrying value and fair value				Carrying value		Fair value	
	Financial instruments classified as FVTPL	Financial instruments designated as FVTPL	Financial instruments classified as FVOCI	Financial instruments designated as FVOCI	Financial instruments measured at amortized cost	Financial instruments measured at amortized cost	Total carrying amount	Total fair value
(Millions of Canadian dollars)								
Financial assets								
Interest-bearing deposits with banks	\$ –	\$ 33,783	\$ –	\$ –	\$ 14,615	\$ 14,615	\$ 48,398	\$ 48,398
Securities								
Trading	126,051	9,727	–	–	–	–	135,778	135,778
Investment, net of applicable allowance	–	–	88,430	528	45,205	46,372	134,163	135,330
	126,051	9,727	88,430	528	45,205	46,372	269,941	271,108
Assets purchased under reverse repurchase agreements and securities borrowed	271,679	–	–	–	53,855	53,860	325,534	325,539
Loans, net of applicable allowance								
Retail	162	243	90	–	432,256	435,701	432,751	436,196
Wholesale	8,121	2,019	424	–	230,133	230,598	240,697	241,162
	8,283	2,262	514	–	662,389	666,299	673,448	677,358
Other								
Derivatives	140,807	–	–	–	–	–	140,807	140,807
Other assets (1)	2,998	–	–	–	71,456	71,455	74,454	74,453
Financial liabilities								
Deposits								
Personal	\$ 50	\$ 16,963			\$311,373	\$ 310,738	\$ 328,386	\$ 327,751
Business and government (2)	96	136,805			495,824	496,816	632,725	633,717
Bank (3)	–	13,482			34,854	34,889	48,336	48,371
	146	167,250			842,051	842,443	1,009,447	1,009,839
Other								
Obligations related to securities sold short	40,347	–			–	–	40,347	40,347
Obligations related to assets sold under repurchase agreements and securities loaned	–	265,708			12,897	12,897	278,605	278,605
Derivatives	144,710	–			–	–	144,710	144,710
Other liabilities (4)	(111)	84			73,457	73,467	73,430	73,440
Subordinated debentures	–	–			9,774	9,628	9,774	9,628

Note 3 Fair value of financial instruments (continued)

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

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

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

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

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

Financial assets designated as fair value through profit or loss

For our financial assets designated as FVTPL, we measure the change in fair value attributable to changes in credit risk as the difference between the total change in the fair value of the instrument during the period and the change in fair value calculated using the appropriate risk-free yield curves. For the six months ended April 30, 2020, a loss of \$971 million was attributable to changes in credit risk for positions still held and there were no significant changes in the extent to which credit derivatives or similar instruments mitigate the maximum exposure to credit risk.

Fair value of assets and liabilities measured at fair value on a recurring basis and classified using the fair value hierarchy

(Millions of Canadian dollars)	As at									
	April 30, 2020					October 31, 2019				
	Fair value measurements using			Netting adjustments	Fair value	Fair value measurements using			Netting adjustments	Fair value
Level 1	Level 2	Level 3	Level 1			Level 2	Level 3			
Financial assets										
Interest-bearing deposits with banks	\$ –	\$ 33,783	\$ –	\$ –	\$ 33,783	\$ –	\$ 22,283	\$ –	\$ –	\$ 22,283
Securities										
Trading										
Debt issued or guaranteed by:										
Canadian government (1)										
Federal	18,982	5,957	–	–	24,939	14,655	5,474	–	–	20,129
Provincial and municipal	–	13,786	–	–	13,786	–	11,282	–	–	11,282
U.S. state, municipal and agencies (1)	606	30,689	54	–	31,349	2,050	39,584	58	–	41,692
Other OECD government (2)	3,930	2,360	–	–	6,290	2,786	3,710	–	–	6,496
Mortgage-backed securities (1)	–	136	–	–	136	–	482	–	–	482
Asset-backed securities										
Non-CDO securities (3)	–	744	2	–	746	–	1,333	2	–	1,335
Corporate debt and other debt	–	24,366	19	–	24,385	1	23,643	21	–	23,665
Equities	30,614	2,277	1,256	–	34,147	38,309	1,925	1,219	–	41,453
	54,132	80,315	1,331	–	135,778	57,801	87,433	1,300	–	146,534
Investment										
Debt issued or guaranteed by:										
Canadian government (1)										
Federal	–	1,131	–	–	1,131	–	657	–	–	657
Provincial and municipal	–	5,148	–	–	5,148	–	2,898	–	–	2,898
U.S. state, municipal and agencies (1)	487	40,747	–	–	41,234	210	20,666	–	–	20,876
Other OECD government	909	5,877	–	–	6,786	–	4,251	–	–	4,251
Mortgage-backed securities (1)	–	2,927	28	–	2,955	–	2,675	27	–	2,702
Asset-backed securities										
CDO	–	7,489	–	–	7,489	–	7,300	–	–	7,300
Non-CDO securities	–	963	–	–	963	–	849	–	–	849
Corporate debt and other debt	–	22,560	165	–	22,725	–	17,537	153	–	17,690
Equities	40	154	333	–	527	42	127	294	–	463
	1,436	86,996	526	–	88,958	252	56,960	474	–	57,686
Assets purchased under reverse repurchase agreements and securities borrowed	–	271,679	–	–	271,679	–	246,068	–	–	246,068
Loans	–	10,065	994	–	11,059	–	9,294	680	–	9,974
Other										
Derivatives										
Interest rate contracts	–	64,200	564	–	64,764	1	46,095	349	–	46,445
Foreign exchange contracts	–	55,119	103	–	55,222	–	40,768	48	–	40,816
Credit derivatives	–	748	–	–	748	–	169	–	–	169
Other contracts	4,463	18,521	28	–	23,012	2,852	12,674	11	–	15,537
Valuation adjustments	–	(1,644)	3	–	(1,641)	–	(712)	15	–	(697)
Total gross derivatives	4,463	136,944	698	–	142,105	2,853	98,994	423	–	102,270
Netting adjustments	–	–	–	(1,298)	(1,298)	–	–	–	(710)	(710)
Total derivatives	–	–	–	–	140,807	–	–	–	–	101,560
Other assets	1,251	1,698	49	–	2,998	1,119	1,960	77	–	3,156
	\$ 61,282	\$ 621,480	\$ 3,598	\$ (1,298)	\$ 685,062	\$ 62,025	\$ 522,992	\$ 2,954	\$ (710)	\$ 587,261
Financial Liabilities										
Deposits										
Personal	\$ –	\$ 16,850	\$ 163	\$ –	\$ 17,013	\$ –	\$ 17,378	\$ 156	\$ –	\$ 17,534
Business and government	–	136,901	–	–	136,901	–	111,540	–	–	111,540
Bank	–	13,482	–	–	13,482	–	3,032	–	–	3,032
Other										
Obligations related to securities sold short	22,293	18,054	–	–	40,347	20,512	14,557	–	–	35,069
Obligations related to assets sold under repurchase agreements and securities loaned	–	265,708	–	–	265,708	–	218,612	–	–	218,612
Derivatives										
Interest rate contracts	–	57,282	1,160	–	58,442	–	39,165	934	–	40,099
Foreign exchange contracts	–	59,987	37	–	60,024	–	40,183	27	–	40,210
Credit derivatives	–	747	–	–	747	–	282	–	–	282
Other contracts	5,729	21,267	354	–	27,350	2,675	15,776	206	–	18,657
Valuation adjustments	–	(548)	(7)	–	(555)	–	12	(7)	–	5
Total gross derivatives	5,729	138,735	1,544	–	146,008	2,675	95,418	1,160	–	99,253
Netting adjustments	–	–	–	(1,298)	(1,298)	–	–	–	(710)	(710)
Total derivatives	–	–	–	–	144,710	–	–	–	–	98,543
Other liabilities	45	(108)	36	–	(27)	102	(1,280)	60	–	(1,118)
	\$ 28,067	\$ 589,622	\$ 1,743	\$ (1,298)	\$ 618,134	\$ 23,289	\$ 459,257	\$ 1,376	\$ (710)	\$ 483,212

(1) As at April 30, 2020, residential and commercial mortgage-backed securities (MBS) included in all fair value levels of trading securities were \$20,361 million and \$nil (October 31, 2019 – \$22,365 million and \$nil), respectively, and in all fair value levels of Investment securities were \$10,618 million and \$2,200 million (October 31, 2019 – \$6,474 million and \$2,046 million), respectively.

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

(3) CDO stands for collateralized debt obligations.

Note 3 Fair value of financial instruments (continued)**Fair value measurements using significant unobservable inputs (Level 3 Instruments)**

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

During the three months ended April 30, 2020, there were no significant changes made to the valuation techniques and ranges and weighted averages of unobservable inputs used in the determination of fair value of Level 3 financial instruments. As at April 30, 2020, the impacts of adjusting one or more of the unobservable inputs by reasonably possible alternative assumptions did not change significantly from the impacts disclosed in our 2019 Annual Consolidated Financial Statements.

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

(Millions of Canadian dollars)	For the three months ended April 30, 2020								
	Fair value at beginning of period	Gains (losses) included in earnings	Gains (losses) included in OCI (1)	Purchases (issuances)	Settlement (sales) and other (2)	Transfers into Level 3	Transfers out of Level 3	Fair value at end of period	Gains (losses) included in earnings for positions still held
Assets									
Securities									
Trading									
Debt issued or guaranteed by:									
U.S. state, municipal and agencies	\$ 55	\$ -	\$ 4	\$ -	\$ (5)	\$ -	\$ -	\$ 54	\$ -
Asset-backed securities									
Non-CDO securities	2	-	-	-	-	-	-	2	-
Corporate debt and other debt	19	-	-	-	-	-	-	19	-
Equities	1,236	(51)	43	47	(19)	-	-	1,256	(37)
	1,312	(51)	47	47	(24)	-	-	1,331	(37)
Investment									
Mortgage-backed securities	27	-	1	-	-	-	-	28	n.a.
Corporate debt and other debt	158	-	6	1	-	-	-	165	n.a.
Equities	293	-	36	4	-	-	-	333	n.a.
	478	-	43	5	-	-	-	526	n.a.
Loans	995	(7)	-	172	(490)	332	(8)	994	16
Other									
Net derivative balances (3)									
Interest rate contracts	(610)	(114)	(2)	(3)	7	34	92	(596)	(55)
Foreign exchange contracts	25	39	1	5	-	-	(4)	66	33
Other contracts	(155)	(79)	(8)	(72)	(1)	(23)	12	(326)	(60)
Valuation adjustments	16	-	-	-	(6)	-	-	10	-
Other assets	80	(26)	4	-	(9)	-	-	49	(27)
	\$ 2,141	\$ (238)	\$ 85	\$ 154	\$ (523)	\$ 343	\$ 92	\$ 2,054	\$ (130)
Liabilities									
Deposits									
Personal	\$ (268)	\$ 87	\$ (4)	\$ (39)	\$ 8	\$ (66)	\$ 119	\$ (163)	\$ 96
Business and government	-	-	-	-	-	-	-	-	-
Other									
Other liabilities	(59)	16	(3)	1	9	-	-	(36)	16
	\$ (327)	\$ 103	\$ (7)	\$ (38)	\$ 17	\$ (66)	\$ 119	\$ (199)	\$ 112

For the three months ended April 30, 2019

(Millions of Canadian dollars)	Fair value at beginning of period	Gains (losses) included in earnings	Gains (losses) included in OCI (1)	Purchases (issuances)	Settlement (sales) and other (2)	Transfers into Level 3	Transfers out of Level 3	Fair value at end of period	Gains (losses) included in earnings for positions still held
Assets									
Securities									
Trading									
Debt issued or guaranteed by:									
U.S. state, municipal and agencies	\$ 65	\$ -	\$ 2	\$ -	\$ -	\$ -	\$ -	\$ 67	\$ -
Asset-backed securities									
Non-CDO securities	9	-	-	-	(5)	-	-	4	1
Corporate debt and other debt	22	-	-	-	(1)	-	-	21	-
Equities	1,076	(29)	16	70	(35)	9	-	1,107	(12)
	1,172	(29)	18	70	(41)	9	-	1,199	(11)
Investment									
Mortgage-backed securities	27	-	1	-	-	-	-	28	n.a.
Corporate debt and other debt	135	-	11	-	-	-	-	146	n.a.
Equities	247	-	10	-	39	-	-	296	n.a.
	409	-	22	-	39	-	-	470	n.a.
Loans	826	12	1	48	(2)	53	(179)	759	5
Other									
Net derivative balances (3)									
Interest rate contracts	(550)	(27)	-	(193)	184	1	-	(585)	(31)
Foreign exchange contracts	12	1	3	(1)	-	-	2	17	1
Other contracts	(102)	35	(3)	(6)	13	(22)	(105)	(190)	14
Valuation adjustments	13	-	-	-	(7)	-	-	6	-
Other assets	61	10	1	-	(6)	-	-	66	10
	\$ 1,841	\$ 2	\$ 42	\$ (82)	\$ 180	\$ 41	\$ (282)	\$ 1,742	\$ (12)
Liabilities									
Deposits									
Personal	\$ (91)	\$ (4)	\$ -	\$ (24)	\$ 6	\$ (107)	\$ 28	\$ (192)	\$ (7)
Business and government	-	-	-	-	-	-	-	-	-
Other									
Other liabilities	(52)	(5)	(2)	1	2	-	-	(56)	(4)
	\$ (143)	\$ (9)	\$ (2)	\$ (23)	\$ 8	\$ (107)	\$ 28	\$ (248)	\$ (11)

Note 3 Fair value of financial instruments (continued)

(Millions of Canadian dollars)	For the six months ended April 30, 2020								Gains (losses) included in earnings for positions still held
	Fair value at beginning of period	Gains (losses) included in earnings	Gains (losses) included in OCI (1)	Purchases (issuances)	Settlement (sales) and other (2)	Transfers into Level 3	Transfers out of Level 3	Fair value at end of period	
Assets									
Securities									
Trading									
Debt issued or guaranteed by:									
U.S. state, municipal and agencies	\$ 58	\$ -	\$ 4	\$ -	\$ (8)	\$ -	\$ -	\$ 54	\$ -
Asset-backed securities									
Non-CDO securities	2	-	-	-	-	-	-	2	-
Corporate debt and other debt	21	(1)	-	-	(1)	-	-	19	-
Equities	1,219	(78)	47	118	(47)	-	(3)	1,256	(49)
	1,300	(79)	51	118	(56)	-	(3)	1,331	(49)
Investment									
Mortgage-backed securities	27	-	1	-	-	-	-	28	n.a.
Corporate debt and other debt	153	-	11	1	-	-	-	165	n.a.
Equities	294	-	36	4	(1)	-	-	333	n.a.
	474	-	48	5	(1)	-	-	526	n.a.
Loans	680	19	-	490	(499)	340	(36)	994	17
Other									
Net derivative balances (3)									
Interest rate contracts	(585)	(110)	(2)	(39)	8	34	98	(596)	(56)
Foreign exchange contracts	21	40	1	16	-	(5)	(7)	66	31
Other contracts	(195)	(94)	(7)	(74)	7	(33)	70	(326)	(72)
Valuation adjustments	22	-	-	-	(12)	-	-	10	-
Other assets	77	(19)	4	-	(13)	-	-	49	(20)
	\$ 1,794	\$ (243)	\$ 95	\$ 516	\$ (566)	\$ 336	\$ 122	\$ 2,054	\$ (149)
Liabilities									
Deposits									
Personal	\$ (156)	\$ 86	\$ (4)	\$ (213)	\$ 18	\$ (82)	\$ 188	\$ (163)	\$ 94
Business and government	-	-	-	-	-	-	-	-	-
Other									
Other liabilities	(60)	12	(3)	4	11	-	-	(36)	12
	\$ (216)	\$ 98	\$ (7)	\$ (209)	\$ 29	\$ (82)	\$ 188	\$ (199)	\$ 106

(Millions of Canadian dollars)	For the six months ended April 30, 2019								Fair value at end of period	Gains (losses) included in earnings for positions still held
	Fair value at beginning of period	Gains (losses) included in earnings	Gains (losses) included in OCI (1)	Purchases (issuances)	Settlement (sales) and other (2)	Transfers into Level 3	Transfers out of Level 3			
Assets										
Securities										
Trading										
Debt issued or guaranteed by:										
U.S. state, municipal and agencies	\$ 66	\$ (1)	\$ 2	\$ -	\$ -	\$ -	\$ -	\$ 67	\$ -	
Asset-backed securities										
Non-CDO securities	110	15	-	-	(121)	-	-	4	2	
Corporate debt and other debt	21	1	-	-	(1)	-	-	21	-	
Equities	1,148	(47)	16	150	(178)	18	-	1,107	(17)	
	1,345	(32)	18	150	(300)	18	-	1,199	(15)	
Investment										
Mortgage-backed securities	-	-	1	27	-	-	-	28	n.a.	
Corporate debt and other debt	192	(3)	13	-	(56)	-	-	146	n.a.	
Equities	237	-	20	-	39	-	-	296	n.a.	
	429	(3)	34	27	(17)	-	-	470	n.a.	
Loans	551	29	2	312	(4)	53	(184)	759	21	
Other										
Net derivative balances (3)										
Interest rate contracts	(504)	(95)	-	(193)	224	3	(20)	(585)	(37)	
Foreign exchange contracts	21	(6)	9	1	-	(1)	(7)	17	-	
Other contracts	(84)	80	(3)	(15)	(10)	(39)	(119)	(190)	74	
Valuation adjustments	1	-	-	-	5	-	-	6	-	
Other assets	65	10	1	-	(10)	-	-	66	10	
	\$ 1,824	\$ (17)	\$ 61	\$ 282	\$ (112)	\$ 34	\$ (330)	\$ 1,742	\$ 53	
Liabilities										
Deposits										
Personal	\$ (390)	\$ (34)	\$ (1)	\$ (33)	\$ 11	\$ (125)	\$ 380	\$ (192)	\$ (5)	
Business and government	5	-	-	-	-	-	(5)	-	-	
Other										
Other liabilities	(68)	(5)	(2)	1	18	-	-	(56)	(3)	
	\$ (453)	\$ (39)	\$ (3)	\$ (32)	\$ 29	\$ (125)	\$ 375	\$ (248)	\$ (8)	

(1) These amounts include the foreign currency translation gains or losses arising on consolidation of foreign subsidiaries relating to the Level 3 instruments, where applicable. The unrealized gains on Investment securities recognized in OCI were \$25 million for the three months ended April 30, 2020 (April 30, 2019 – gains of \$18 million) and gains of \$29 million for the six months ended April 30, 2020 (April 30, 2019 – gains of \$29 million), excluding the translation gains or losses arising on consolidation.

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

(3) Net derivatives as at April 30, 2020 included derivative assets of \$698 million (April 30, 2019 – \$344 million) and derivative liabilities of \$1,544 million (April 30, 2019 – \$1,096 million).

n.a. not applicable

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

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

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

During the three months ended April 30, 2020, transfers out of Level 1 to Level 2 included Trading U.S. state, municipal and agencies debt and Obligations related to securities sold short of \$403 million and \$256 million, respectively.

During the three months ended April 30, 2020 there were no significant transfers out of Level 2 to Level 1.

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

During the three months ended April 30, 2020, transfers out of Level 2 to Level 3 include:

- \$332 million in Loans, due to changes in the significance of the unobservable inputs.

During the three months ended April 30, 2020, transfers out of Level 3 to Level 2 include:

- \$119 million in Personal deposits, due to changes in the significance of the unobservable inputs.
- \$92 million of Interest rate contracts, comprised of \$190 million of derivative related assets and \$282 million of derivative related liabilities, due to changes in the significance of the unobservable inputs.

Note 3 Fair value of financial instruments (continued)**Net interest income from financial instruments**

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

(Millions of Canadian dollars)	For the three months ended		For the six months ended	
	April 30 2020	April 30 2019	April 30 2020	April 30 2019
Interest and dividend income (1), (2)				
Financial instruments measured at fair value through profit or loss	\$ 2,436	\$ 2,900	\$ 5,421	\$ 5,787
Financial instruments measured at fair value through other comprehensive income	305	288	614	560
Financial instruments measured at amortized cost	6,485	6,944	13,429	13,934
	9,226	10,132	19,464	20,281
Interest expense (1)				
Financial instruments measured at fair value through profit or loss (3)	\$ 1,635	\$ 2,543	\$ 3,995	\$ 5,098
Financial instruments measured at amortized cost (4)	2,126	2,816	4,783	5,563
	3,761	5,359	8,778	10,661
Net interest income (3)	\$ 5,465	\$ 4,773	\$ 10,686	\$ 9,620

- (1) Excludes the following amounts related to our insurance operations and included in Insurance premiums, investment and fee income in the Interim Consolidated Statements of Income. For the three months ended April 30, 2020, Interest income of \$123 million (April 30, 2019 – \$114 million), and Interest expense of \$1 million (April 30, 2019 – \$1 million). For the six months ended April 30, 2020, Interest income of \$255 million (April 30, 2019 – \$243 million), and Interest expense of \$3 million (April 30, 2019 – \$2 million).
- (2) Includes dividend income for the three months ended April 30, 2020 of \$614 million (April 30, 2019 – \$456 million) and for the six months ended April 30, 2020 of \$1,222 million (April 30, 2019 – \$893 million), which is presented in Interest and dividend income in the Interim Consolidated Statements of Income.
- (3) Commencing Q4 2019, the interest component of the valuation of certain deposits carried at fair value through profit or loss (FVTPL) previously presented in trading revenue is presented in net interest income. Comparative amounts have been reclassified to conform with this presentation.
- (4) Includes interest expense on lease liabilities for the three months ended April 30, 2020 of \$32 million and for the six months ended April 30, 2020 of \$63 million, due to the adoption of IFRS 16.

Note 4 Securities**Unrealized gains and losses on securities at FVOCI** (1), (2)

(Millions of Canadian dollars)	As at							
	April 30, 2020				October 31, 2019			
	Cost/ Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Cost/ Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Debt issued or guaranteed by:								
Canadian government								
Federal (3)	\$ 1,132	\$ 1	\$ (2)	\$ 1,131	\$ 655	\$ 3	\$ (1)	\$ 657
Provincial and municipal	5,092	82	(26)	5,148	2,878	43	(23)	2,898
U.S. state, municipal and agencies (3)	41,582	245	(593)	41,234	20,787	215	(126)	20,876
Other OECD government	6,800	4	(18)	6,786	4,254	2	(5)	4,251
Mortgage-backed securities (3)	3,109	3	(157)	2,955	2,709	1	(8)	2,702
Asset-backed securities								
CDO	7,858	6	(375)	7,489	7,334	1	(35)	7,300
Non-CDO securities	1,007	–	(44)	963	847	4	(2)	849
Corporate debt and other debt	22,729	60	(64)	22,725	17,655	45	(10)	17,690
Equities	281	251	(5)	527	248	218	(3)	463
	\$ 89,590	\$ 652	\$ (1,284)	\$ 88,958	\$ 57,367	\$ 532	\$ (213)	\$ 57,686

- (1) Excludes \$45,205 million of held-to-collect securities as at April 30, 2020 that are carried at amortized cost, net of allowance for credit losses (October 31, 2019 – \$44,784 million).
- (2) Gross unrealized gains and losses includes \$23 million of allowance for credit losses on debt securities at FVOCI as at April 30, 2020 (October 31, 2019 – \$(3) million) recognized in income and Other components of equity.
- (3) The majority of the MBS are residential. Cost/Amortized cost, Gross unrealized gains, Gross unrealized losses and Fair value related to commercial MBS are \$2,344 million, \$nil, \$144 million and \$2,200 million, respectively as at April 30, 2020 (October 31, 2019 – \$2,051 million, \$1 million, \$6 million and \$2,046 million, respectively).

Allowance for credit losses on investment securities

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

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

Allowance for credit losses – securities at FVOCI ⁽¹⁾

(Millions of Canadian dollars)	For the three months ended							
	April 30, 2020				April 30, 2019			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3 (2)	Total	Stage 1	Stage 2	Stage 3 (2)	Total
Balance at beginning of period	\$ 6	\$ –	\$ (9)	\$ (3)	\$ 6	\$ –	\$ 3	\$ 9
Provision for credit losses								
Transfers to stage 1	–	–	–	–	–	–	–	–
Transfers to stage 2	–	–	–	–	–	–	–	–
Transfers to stage 3	–	–	–	–	–	–	–	–
Purchases	9	–	–	9	1	–	–	1
Sales and maturities	(2)	–	–	(2)	–	–	–	–
Changes in risk, parameters and exposures	9	–	10	19	(2)	–	(7)	(9)
Exchange rate and other	1	–	(1)	–	–	–	–	–
Balance at end of period	\$ 23	\$ –	\$ –	\$ 23	\$ 5	\$ –	\$ (4)	\$ 1

(Millions of Canadian dollars)	For the six months ended							
	April 30, 2020				April 30, 2019			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3 (2)	Total	Stage 1	Stage 2	Stage 3 (2)	Total
Balance at beginning of period	\$ 4	\$ –	\$ (7)	\$ (3)	\$ 4	\$ 7	\$ –	\$ 11
Provision for credit losses								
Transfers to stage 1	–	–	–	–	–	–	–	–
Transfers to stage 2	–	–	–	–	–	–	–	–
Transfers to stage 3	–	–	–	–	–	–	–	–
Purchases	11	–	–	11	3	–	–	3
Sales and maturities	(2)	–	–	(2)	(1)	(7)	–	(8)
Changes in risk, parameters and exposures	9	–	8	17	(1)	–	(4)	(5)
Exchange rate and other	1	–	(1)	–	–	–	–	–
Balance at end of period	\$ 23	\$ –	\$ –	\$ 23	\$ 5	\$ –	\$ (4)	\$ 1

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

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

Allowance for credit losses – securities at amortized cost

(Millions of Canadian dollars)	For the three months ended							
	April 30, 2020				April 30, 2019			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	\$ 5	\$ 17	\$ –	\$ 22	\$ 6	\$ 30	\$ –	\$ 36
Provision for credit losses								
Transfers to stage 1	–	–	–	–	–	–	–	–
Transfers to stage 2	–	–	–	–	–	–	–	–
Transfers to stage 3	–	–	–	–	–	–	–	–
Purchases	3	–	–	3	3	–	–	3
Sales and maturities	(1)	–	–	(1)	–	–	–	–
Changes in risk, parameters and exposures	2	2	–	4	(2)	(8)	–	(10)
Exchange rate and other	–	1	–	1	–	1	–	1
Balance at end of period	\$ 9	\$ 20	\$ –	\$ 29	\$ 7	\$ 23	\$ –	\$ 30

(Millions of Canadian dollars)	For the six months ended							
	April 30, 2020				April 30, 2019			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	\$ 5	\$ 19	\$ –	\$ 24	\$ 6	\$ 32	\$ –	\$ 38
Provision for credit losses								
Transfers to stage 1	–	–	–	–	–	–	–	–
Transfers to stage 2	–	–	–	–	–	–	–	–
Transfers to stage 3	–	–	–	–	–	–	–	–
Purchases	5	–	–	5	4	–	–	4
Sales and maturities	(1)	–	–	(1)	–	–	–	–
Changes in risk, parameters and exposures	–	1	–	1	(3)	(10)	–	(13)
Exchange rate and other	–	–	–	–	–	1	–	1
Balance at end of period	\$ 9	\$ 20	\$ –	\$ 29	\$ 7	\$ 23	\$ –	\$ 30

Note 4 Securities (continued)**Credit risk exposure by internal risk rating**

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

(Millions of Canadian dollars)	As at								
	April 30, 2020				October 31, 2019				
	Performing		Impaired		Performing		Impaired		
	Stage 1	Stage 2	Stage 3 (1)	Total	Stage 1	Stage 2	Stage 3 (1)	Total	
Investment securities									
Securities at FVOCI									
Investment grade	\$86,236	\$ 33	\$ –	\$86,269	\$ 56,671	\$ 1	\$ –	\$ 56,672	
Non-investment grade	1,998	1	–	1,999	400	1	–	401	
Impaired	–	–	162	162	–	–	150	150	
	\$88,234	\$ 34	\$ 162	\$88,430	\$ 57,071	\$ 2	\$ 150	\$ 57,223	
Items not subject to impairment (2)				528				463	
				\$88,958				\$ 57,686	
Securities at amortized cost									
Investment grade	\$44,102	\$ 7	\$ –	\$44,109	\$ 43,681	\$ 46	\$ –	\$ 43,727	
Non-investment grade	727	398	–	1,125	695	386	–	1,081	
Impaired	–	–	–	–	–	–	–	–	
	\$44,829	\$ 405	\$ –	\$45,234	\$ 44,376	\$ 432	\$ –	\$ 44,808	
Allowance for credit losses	9	20	–	29	5	19	–	24	
Amortized cost	\$44,820	\$ 385	\$ –	\$45,205	\$ 44,371	\$ 413	\$ –	\$ 44,784	

(1) Includes \$162 million of purchased credit impaired securities (October 31, 2019 – \$150 million).

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

Note 5 Loans and allowance for credit losses**Allowance for credit losses**

(Millions of Canadian dollars)	For the three months ended									
	April 30, 2020					April 30, 2019				
	Balance at beginning of period	Provision for credit losses	Net write-offs	Exchange rate and other	Balance at end of period	Balance at beginning of period	Provision for credit losses	Net write-offs	Exchange rate and other	Balance at end of period
Retail										
Residential mortgages	\$ 367	\$ 126	\$ (8)	\$ (1)	\$ 484	\$ 409	\$ (2)	\$ (16)	\$ 4	\$ 395
Personal	940	437	(119)	–	1,258	892	148	(117)	(1)	922
Credit cards	868	393	(142)	2	1,121	780	135	(125)	–	790
Small business	66	50	(9)	–	107	51	7	(8)	(1)	49
Wholesale	1,191	1,660	(67)	6	2,790	1,110	158	(155)	(5)	1,108
Customers' liability under acceptances	39	68	–	(2)	105	31	(5)	–	–	26
	\$ 3,471	\$2,734	\$ (345)	\$ 5	\$ 5,865	\$ 3,273	\$ 441	\$ (421)	\$ (3)	\$ 3,290
Presented as:										
Allowance for loan losses	\$ 3,139				\$ 5,230	\$ 3,061				\$ 3,093
Other liabilities – Provisions	292				529	180				171
Customers' liability under acceptances	39				105	31				26
Other components of equity	1				1	1				–

(Millions of Canadian dollars)	For the six months ended									
	April 30, 2020					April 30, 2019				
	Balance at beginning of period	Provision for credit losses	Net write-offs	Exchange rate and other	Balance at end of period	Balance at beginning of period	Provision for credit losses	Net write-offs	Exchange rate and other	Balance at end of period
Retail										
Residential mortgages	\$ 402	\$ 119	\$ (16)	\$ (21)	\$ 484	\$ 382	\$ 31	\$ (20)	\$ 2	\$ 395
Personal	935	558	(230)	(5)	1,258	895	271	(230)	(14)	922
Credit cards	832	570	(281)	–	1,121	760	275	(245)	–	790
Small business	61	64	(17)	(1)	107	51	13	(13)	(2)	49
Wholesale	1,165	1,762	(108)	(29)	2,790	979	362	(216)	(17)	1,108
Customers' liability under acceptances	24	82	–	(1)	105	21	5	–	–	26
	\$ 3,419	\$3,155	\$ (652)	\$ (57)	\$ 5,865	\$ 3,088	\$ 957	\$ (724)	\$ (31)	\$ 3,290
Presented as:										
Allowance for loan losses	\$ 3,100				\$ 5,230	\$ 2,912				\$ 3,093
Other liabilities – Provisions	295				529	154				171
Customers' liability under acceptances	24				105	21				26
Other components of equity	–				1	1				–

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

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

Note 5 Loans and allowance for credit losses (continued)

Allowance for credit losses – Retail and wholesale loans

(Millions of Canadian dollars)	For the three months ended								
	April 30, 2020				April 30, 2019				
	Performing		Impaired		Performing		Impaired		
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total	
Residential mortgages									
Balance at beginning of period	\$ 132	\$ 80	\$ 155	\$ 367	\$ 138	\$ 79	\$ 192	\$ 409	
Provision for credit losses									
Transfers to stage 1	33	(21)	(12)	–	35	(28)	(7)	–	
Transfers to stage 2	(22)	23	(1)	–	(2)	3	(1)	–	
Transfers to stage 3	(1)	(7)	8	–	–	(10)	10	–	
Originations	11	–	–	11	10	–	–	10	
Maturities	(3)	(4)	–	(7)	(3)	(1)	–	(4)	
Changes in risk, parameters and exposures	(39)	159	2	122	(39)	19	12	(8)	
Write-offs	–	–	(10)	(10)	–	–	(17)	(17)	
Recoveries	–	–	2	2	–	–	1	1	
Exchange rate and other	3	(7)	3	(1)	1	1	2	4	
Balance at end of period	\$ 114	\$ 223	\$ 147	\$ 484	\$ 140	\$ 63	\$ 192	\$ 395	
Personal									
Balance at beginning of period	\$ 273	\$ 517	\$ 150	\$ 940	\$ 235	\$ 519	\$ 138	\$ 892	
Provision for credit losses									
Transfers to stage 1	110	(107)	(3)	–	142	(136)	(6)	–	
Transfers to stage 2	(37)	38	(1)	–	(23)	24	(1)	–	
Transfers to stage 3	(1)	(19)	20	–	(1)	(40)	41	–	
Originations	28	–	–	28	23	1	–	24	
Maturities	(11)	(24)	–	(35)	(5)	(27)	–	(32)	
Changes in risk, parameters and exposures	(20)	352	112	444	(134)	214	76	156	
Write-offs	–	–	(148)	(148)	–	–	(148)	(148)	
Recoveries	–	–	29	29	–	–	31	31	
Exchange rate and other	1	–	(1)	–	1	–	(2)	(1)	
Balance at end of period	\$ 343	\$ 757	\$ 158	\$ 1,258	\$ 238	\$ 555	\$ 129	\$ 922	
Credit cards									
Balance at beginning of period	\$ 174	\$ 694	\$ –	\$ 868	\$ 168	\$ 612	\$ –	\$ 780	
Provision for credit losses									
Transfers to stage 1	117	(117)	–	–	118	(118)	–	–	
Transfers to stage 2	(25)	25	–	–	(20)	20	–	–	
Transfers to stage 3	(1)	(94)	95	–	(1)	(83)	84	–	
Originations	3	–	–	3	1	–	–	1	
Maturities	(4)	(6)	–	(10)	(1)	(5)	–	(6)	
Changes in risk, parameters and exposures	(20)	373	47	400	(98)	197	41	140	
Write-offs	–	–	(173)	(173)	–	–	(158)	(158)	
Recoveries	–	–	31	31	–	–	33	33	
Exchange rate and other	2	–	–	2	(1)	1	–	–	
Balance at end of period	\$ 246	\$ 875	\$ –	\$ 1,121	\$ 166	\$ 624	\$ –	\$ 790	
Small business									
Balance at beginning of period	\$ 29	\$ 11	\$ 26	\$ 66	\$ 16	\$ 18	\$ 17	\$ 51	
Provision for credit losses									
Transfers to stage 1	4	(4)	–	–	6	(6)	–	–	
Transfers to stage 2	(2)	2	–	–	(1)	1	–	–	
Transfers to stage 3	–	–	–	–	–	(2)	2	–	
Originations	5	–	–	5	2	–	–	2	
Maturities	(2)	–	–	(2)	(1)	(2)	–	(3)	
Changes in risk, parameters and exposures	22	11	14	47	(7)	8	7	8	
Write-offs	–	–	(10)	(10)	–	–	(10)	(10)	
Recoveries	–	–	1	1	–	–	2	2	
Exchange rate and other	–	1	(1)	–	–	–	(1)	(1)	
Balance at end of period	\$ 56	\$ 21	\$ 30	\$ 107	\$ 15	\$ 17	\$ 17	\$ 49	
Wholesale									
Balance at beginning of period	\$ 300	\$ 407	\$ 484	\$ 1,191	\$ 301	\$ 361	\$ 448	\$ 1,110	
Provision for credit losses									
Transfers to stage 1	39	(38)	(1)	–	54	(45)	(9)	–	
Transfers to stage 2	(37)	37	–	–	(8)	8	–	–	
Transfers to stage 3	(1)	(27)	28	–	(2)	(17)	19	–	
Originations	413	–	–	413	59	17	–	76	
Maturities	(34)	(42)	–	(76)	(46)	(36)	–	(82)	
Changes in risk, parameters and exposures	555	463	305	1,323	(68)	65	167	164	
Write-offs	–	–	(82)	(82)	–	–	(168)	(168)	
Recoveries	–	–	15	15	–	–	13	13	
Exchange rate and other	11	7	(12)	6	3	5	(13)	(5)	
Balance at end of period	\$ 1,246	\$ 807	\$ 737	\$ 2,790	\$ 293	\$ 358	\$ 457	\$ 1,108	

(Millions of Canadian dollars)	For the six months ended								
	April 30, 2020				April 30, 2019				
	Performing		Impaired		Performing		Impaired		
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total	
Residential mortgages									
Balance at beginning of period	\$ 146	\$ 77	\$ 179	\$ 402	\$ 142	\$ 64	\$ 176	\$ 382	
Provision for credit losses									
Transfers to stage 1	60	(39)	(21)	–	43	(36)	(7)	–	
Transfers to stage 2	(26)	29	(3)	–	(5)	7	(2)	–	
Transfers to stage 3	(2)	(15)	17	–	(1)	(18)	19	–	
Originations	27	–	–	27	23	–	–	23	
Maturities	(7)	(7)	–	(14)	(6)	(3)	–	(9)	
Changes in risk, parameters and exposures	(84)	188	2	106	(57)	49	25	17	
Write-offs	–	–	(22)	(22)	–	–	(22)	(22)	
Recoveries	–	–	6	6	–	–	2	2	
Exchange rate and other	–	(10)	(11)	(21)	1	–	1	2	
Balance at end of period	\$ 114	\$ 223	\$ 147	\$ 484	\$ 140	\$ 63	\$ 192	\$ 395	
Personal									
Balance at beginning of period	\$ 272	\$ 520	\$ 143	\$ 935	\$ 242	\$ 512	\$ 141	\$ 895	
Provision for credit losses									
Transfers to stage 1	229	(226)	(3)	–	274	(268)	(6)	–	
Transfers to stage 2	(56)	57	(1)	–	(46)	47	(1)	–	
Transfers to stage 3	(2)	(39)	41	–	(1)	(84)	85	–	
Originations	53	–	–	53	46	1	–	47	
Maturities	(23)	(47)	–	(70)	(12)	(57)	–	(69)	
Changes in risk, parameters and exposures	(131)	493	213	575	(266)	404	155	293	
Write-offs	–	–	(297)	(297)	–	–	(292)	(292)	
Recoveries	–	–	67	67	–	–	62	62	
Exchange rate and other	1	(1)	(5)	(5)	1	–	(15)	(14)	
Balance at end of period	\$ 343	\$ 757	\$ 158	\$ 1,258	\$ 238	\$ 555	\$ 129	\$ 922	
Credit cards									
Balance at beginning of period	\$ 173	\$ 659	\$ –	\$ 832	\$ 161	\$ 599	\$ –	\$ 760	
Provision for credit losses									
Transfers to stage 1	235	(235)	–	–	228	(228)	–	–	
Transfers to stage 2	(47)	47	–	–	(39)	39	–	–	
Transfers to stage 3	(1)	(182)	183	–	(1)	(163)	164	–	
Originations	5	–	–	5	2	–	–	2	
Maturities	(5)	(14)	–	(19)	(2)	(11)	–	(13)	
Changes in risk, parameters and exposures	(114)	600	98	584	(182)	387	81	286	
Write-offs	–	–	(347)	(347)	–	–	(311)	(311)	
Recoveries	–	–	66	66	–	–	66	66	
Exchange rate and other	–	–	–	–	(1)	1	–	–	
Balance at end of period	\$ 246	\$ 875	\$ –	\$ 1,121	\$ 166	\$ 624	\$ –	\$ 790	
Small business									
Balance at beginning of period	\$ 29	\$ 10	\$ 22	\$ 61	\$ 17	\$ 16	\$ 18	\$ 51	
Provision for credit losses									
Transfers to stage 1	5	(5)	–	–	11	(11)	–	–	
Transfers to stage 2	(3)	3	–	–	(2)	2	–	–	
Transfers to stage 3	–	(1)	1	–	–	(5)	5	–	
Originations	8	–	–	8	5	–	–	5	
Maturities	(3)	(1)	–	(4)	(2)	(4)	–	(6)	
Changes in risk, parameters and exposures	20	15	25	60	(14)	19	9	14	
Write-offs	–	–	(20)	(20)	–	–	(17)	(17)	
Recoveries	–	–	3	3	–	–	4	4	
Exchange rate and other	–	–	(1)	(1)	–	–	(2)	(2)	
Balance at end of period	\$ 56	\$ 21	\$ 30	\$ 107	\$ 15	\$ 17	\$ 17	\$ 49	
Wholesale									
Balance at beginning of period	\$ 281	\$ 396	\$ 488	\$ 1,165	\$ 274	\$ 340	\$ 365	\$ 979	
Provision for credit losses									
Transfers to stage 1	66	(64)	(2)	–	78	(69)	(9)	–	
Transfers to stage 2	(45)	46	(1)	–	(17)	19	(2)	–	
Transfers to stage 3	(2)	(45)	47	–	(3)	(33)	36	–	
Originations	479	–	–	479	127	27	–	154	
Maturities	(77)	(95)	–	(172)	(89)	(79)	–	(168)	
Changes in risk, parameters and exposures	538	562	355	1,455	(79)	149	306	376	
Write-offs	–	–	(136)	(136)	–	–	(236)	(236)	
Recoveries	–	–	28	28	–	–	20	20	
Exchange rate and other	6	7	(42)	(29)	2	4	(23)	(17)	
Balance at end of period	\$ 1,246	\$ 807	\$ 737	\$ 2,790	\$ 293	\$ 358	\$ 457	\$ 1,108	

Note 5 Loans and allowance for credit losses (continued)

Key inputs and assumptions

The following provides an update on the key inputs and assumptions used in the measurement of expected credit losses. For further details, refer to Note 2 of our Condensed Financial Statements, and Note 2 and Note 5 of our 2019 Annual Report.

The COVID-19 global pandemic significantly impacted our economic outlook, which has a higher than usual degree of uncertainty given the rapidly evolving environment. Our allowance for credit losses reflects our economic outlook as at April 30, 2020. Subsequent changes to this forecast and related estimates will be reflected in our allowance for credit losses in future periods.

Our base scenario reflects a sharp drop in economic activity in Q2 followed by a partial recovery in the second half of the year as containment measures unwind gradually. The recovery is expected to be gradual with the unemployment rate remaining above pre-shock lows at the end of calendar 2020.

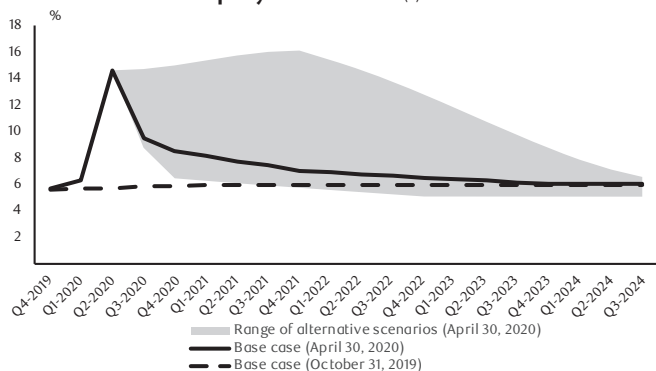
Downside scenarios reflect conditions deteriorating further for up to two years, followed by a recovery for the remainder of the period. These scenarios assume a monetary policy response that returns the economy to a long-run, sustainable growth rate within the forecast period.

The upside scenario reflects stronger economic growth than the base scenario for the first two years, without further monetary policy response, followed by a return to a long-run sustainable growth rate within the forecast period.

The following provides additional detail about our forecasts for certain key macroeconomic variables used in the models to estimate ACL:

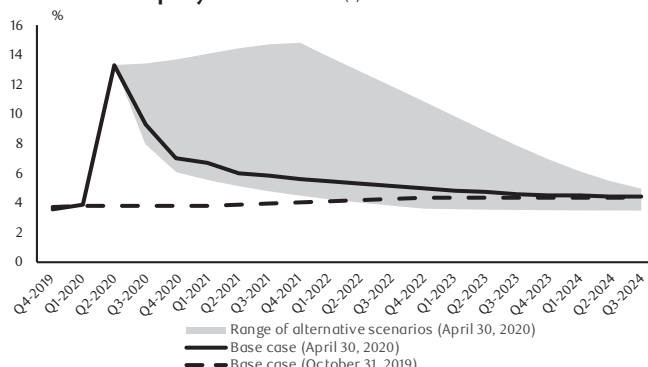
- **Unemployment** – We expect quarterly average Canadian and U.S. unemployment to peak at 14.6% and 13.3%, respectively, for the calendar quarter of Q2 2020, before improving slowly, starting in the latter half of 2020.

Canada Unemployment Rate (1)



(1) Represents the average quarterly unemployment level over the period.

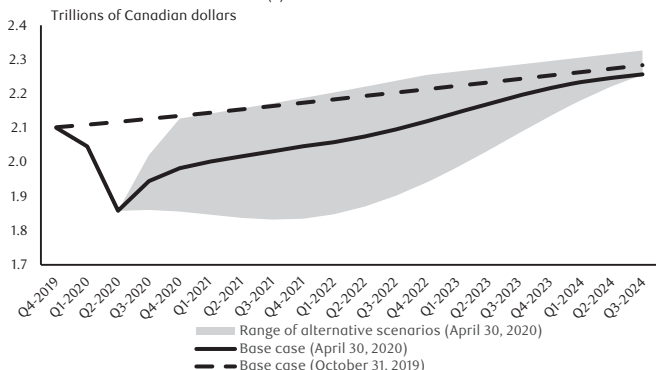
US Unemployment Rate (1)



(1) Represents the average quarterly unemployment level over the period.

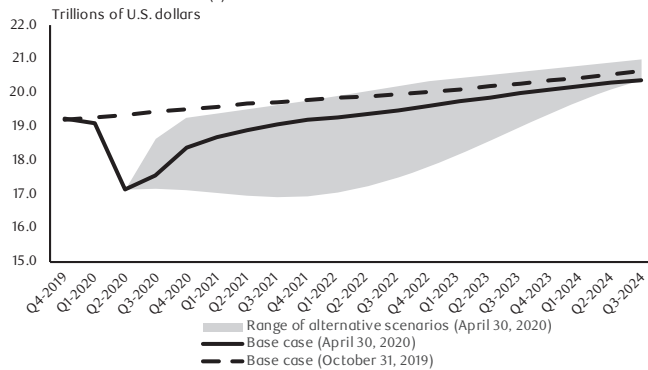
- **Gross Domestic Product (GDP)** – We expect Canadian and U.S. GDP to contract in calendar Q2 2020, with a swoosh-shaped recovery beginning in the latter half of 2020. GDP in calendar Q4 2020 is expected to be 5.6% below Q4 2019 levels in Canada, and 4.5% below such levels in the U.S.

Canada Real GDP (1)



(1) Represents the seasonally adjusted annual rate indexed to 2012 Canadian dollars.

US Real GDP (1)



(1) Represents the seasonally adjusted annual rate indexed to 2012 U.S. dollars.

- **Oil price (West Texas Intermediate in US\$)** – In our base forecast, we expect oil prices to recover from the April 30, 2020 price of \$19 per barrel to an average price of \$30 per barrel over the next 12 months and \$46 per barrel in the following 2 to 5 years. The range of average prices in our alternative downside and upside scenarios is \$21 to \$28 per barrel for the next 12 months and \$37 to \$46 per barrel for the following 2 to 5 years. As at October 31, 2019, our base forecast included an average price of \$59 per barrel for the next 12 months and \$68 per barrel for the following 2 to 5 years.
- **Canadian housing price index** – In our base forecast, we expect housing prices to contract by 3.5% over the next 12 months, with a compound annual growth rate of 5.2% for the following 2 to 5 years. The range of annual housing price growth in our alternative downside and upside scenarios is (30.1)% to 5.3% over the next 12 months and 2.8% to 10.8% for the following 2 to 5 years. As at October 31, 2019, our base forecast included housing price growth of 4.5% for the next 12 months and 4.7% for the following 2 to 5 years.

As described above, our base case scenario reflects a stressed environment as at April 30, 2020, reflective of current market conditions. In determining our IFRS 9 allowance for credit losses, we reassessed our scenario weights to more heavily weight the base case scenario and applied expert credit judgement to the weighted modelled results. As we more heavily weighted the stressed base case scenario, further downside scenarios did not have a material impact on the allowance for credit losses.

Credit risk exposure by internal risk rating

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

(Millions of Canadian dollars)	As at							
	April 30, 2020				October 31, 2019			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Retail								
Loans outstanding – Residential mortgages								
Low risk	\$ 234,742	\$ 20,315	\$ –	\$ 255,057	\$ 238,377	\$ 6,764	\$ –	\$ 245,141
Medium risk	12,837	2,440	–	15,277	14,033	1,347	–	15,380
High risk	2,728	3,145	–	5,873	2,843	2,722	–	5,565
Not rated (1)	43,609	1,032	–	44,641	40,030	726	–	40,756
Impaired	–	–	671	671	–	–	732	732
	293,916	26,932	671	321,519	295,283	11,559	732	307,574
Items not subject to impairment (2)				405				517
Total				321,924				308,091
Loans outstanding – Personal								
Low risk	\$ 69,690	\$ 2,922	\$ –	\$ 72,612	\$ 71,619	\$ 1,944	\$ –	\$ 73,563
Medium risk	4,228	3,710	–	7,938	5,254	3,011	–	8,265
High risk	701	1,930	–	2,631	843	1,874	–	2,717
Not rated (1)	7,049	155	–	7,204	7,293	105	–	7,398
Impaired	–	–	331	331	–	–	307	307
Total	81,668	8,717	331	90,716	85,009	6,934	307	92,250
Loans outstanding – Credit cards								
Low risk	\$ 11,169	\$ 150	\$ –	\$ 11,319	\$ 13,840	\$ 103	\$ –	\$ 13,943
Medium risk	1,833	1,770	–	3,603	2,250	1,827	–	4,077
High risk	99	1,435	–	1,534	137	1,432	–	1,569
Not rated (1)	537	51	–	588	677	45	–	722
Total	13,638	3,406	–	17,044	16,904	3,407	–	20,311
Loans outstanding – Small business								
Low risk	\$ 2,232	\$ 175	\$ –	\$ 2,407	\$ 2,200	\$ 107	\$ –	\$ 2,307
Medium risk	1,996	810	–	2,806	2,163	563	–	2,726
High risk	170	254	–	424	138	196	–	334
Not rated (1)	15	–	–	15	10	–	–	10
Impaired	–	–	73	73	–	–	57	57
Total	4,413	1,239	73	5,725	4,511	866	57	5,434
Undrawn loan commitments – Retail								
Low risk	\$ 208,731	\$ 3,739	\$ –	\$ 212,470	\$ 196,743	\$ 1,894	\$ –	\$ 198,637
Medium risk	8,790	324	–	9,114	8,251	246	–	8,497
High risk	953	159	–	1,112	851	208	–	1,059
Not rated (1)	5,905	139	–	6,044	5,861	146	–	6,007
Total	224,379	4,361	–	228,740	211,706	2,494	–	214,200
Wholesale – Loans outstanding								
Investment grade	\$ 68,722	\$ 664	\$ –	\$ 69,386	\$ 47,133	\$ 97	\$ –	\$ 47,230
Non-investment grade	122,134	31,537	–	153,671	119,778	11,940	–	131,718
Not rated (1)	7,270	408	–	7,678	5,862	320	–	6,182
Impaired	–	–	2,394	2,394	–	–	1,829	1,829
	198,126	32,609	2,394	233,129	172,773	12,357	1,829	186,959
Items not subject to impairment (2)				10,140				8,911
Total				243,269				195,870
Undrawn loan commitments – Wholesale								
Investment grade	\$ 231,701	\$ 2,011	\$ –	\$ 233,712	\$ 222,819	\$ 18	\$ –	\$ 222,837
Non-investment grade	79,823	21,559	–	101,382	96,191	9,007	–	105,198
Not rated (1)	3,519	–	–	3,519	3,986	–	–	3,986
Total	315,043	23,570	–	338,613	322,996	9,025	–	332,021

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

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

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

(Millions of Canadian dollars)	As at							
	April 30, 2020				October 31, 2019			
	1 to 29 days	30 to 89 days	90 days and greater	Total	1 to 29 days	30 to 89 days	90 days and greater	Total
Retail	\$ 2,539	\$ 1,353	\$ 218	\$ 4,110	\$ 3,173	\$ 1,369	\$ 186	\$ 4,728
Wholesale	3,778	1,078	8	4,864	1,543	460	3	2,006
	\$ 6,317	\$ 2,431	\$ 226	\$ 8,974	\$ 4,716	\$ 1,829	\$ 189	\$ 6,734

(1) Loans in our payment deferral programs established to help clients manage through the challenges of COVID-19 have been re-aged to current and will not be aged further during the deferral period. 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.

Loan modifications

We have established relief programs to help clients manage through challenges of COVID-19 through payment deferrals, interest rate reductions, covenant waivers, and refinancing or credit restructuring. In some cases, the original terms of the associated loans were renegotiated or otherwise modified, resulting in changes to the contractual terms of the loans that affect the contractual cash flows. During the three months ended April 30, 2020, the amortized cost of the loans whose contractual terms were modified while in Stage 2 or Stage 3 at the beginning of the period was \$6,316 million, resulting in no material modification losses. The gross carrying amount of loans transferred to Stage 1 whose contractual terms were previously modified while in Stage 2 or Stage 3 was not material for the three months ended April 30, 2020.

Note 6 Deposits

(Millions of Canadian dollars)	As at							
	April 30, 2020				October 31, 2019			
	Demand (1)	Notice (2)	Term (3)	Total	Demand (1)	Notice (2)	Term (3)	Total
Personal	\$ 165,695	\$ 59,057	\$ 103,634	\$ 328,386	\$ 143,958	\$ 49,806	\$ 100,968	\$ 294,732
Business and government	292,896	13,081	326,748	632,725	253,113	13,867	298,502	565,482
Bank	11,065	1,211	36,060	48,336	8,363	920	16,508	25,791
	\$ 469,656	\$ 73,349	\$ 466,442	\$ 1,009,447	\$ 405,434	\$ 64,593	\$ 415,978	\$ 886,005
Non-interest-bearing (4)								
Canada	\$ 105,013	\$ 7,125	\$ 116	\$ 112,254	\$ 93,163	\$ 5,692	\$ 137	\$ 98,992
United States	42,706	–	–	42,706	34,632	–	–	34,632
Europe (5)	808	–	–	808	760	–	–	760
Other International	7,182	–	–	7,182	5,225	5	–	5,230
Interest-bearing (4)								
Canada	263,288	18,217	345,867	627,372	228,386	15,306	333,118	576,810
United States	7,357	47,297	65,756	120,410	4,704	39,626	41,776	86,106
Europe (5)	35,965	710	39,121	75,796	33,073	825	30,090	63,988
Other International	7,337	–	15,582	22,919	5,491	3,139	10,857	19,487
	\$ 469,656	\$ 73,349	\$ 466,442	\$ 1,009,447	\$ 405,434	\$ 64,593	\$ 415,978	\$ 886,005

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

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

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

(4) The geographical splits of the deposits are based on the point of origin of the deposits and where the revenue is recognized. As at April 30, 2020, deposits denominated in U.S. dollars, British pounds, Euro and other foreign currencies were \$377 billion, \$32 billion, \$52 billion and \$34 billion, respectively (October 31, 2019 – \$321 billion, \$23 billion, \$45 billion and \$31 billion, respectively).

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

Contractual maturities of term deposits

(Millions of Canadian dollars)	As at	
	April 30 2020	October 31 2019
Within 1 year:		
less than 3 months	\$ 127,349	\$ 94,585
3 to 6 months	77,433	62,814
6 to 12 months	97,889	92,507
1 to 2 years	39,519	50,055
2 to 3 years	26,858	31,852
3 to 4 years	34,895	31,373
4 to 5 years	25,659	21,130
Over 5 years	36,840	31,662
	\$ 466,442	\$ 415,978
Aggregate amount of term deposits in denominations of one hundred thousand dollars or more	\$ 430,000	\$ 379,000

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

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

Pension and other post-employment benefit expense

(Millions of Canadian dollars)	For the three months ended			
	Pension plans		Other post-employment benefit plans	
	April 30 2020	April 30 2019	April 30 2020	April 30 2019
Current service costs	\$ 91	\$ 74	\$ 12	\$ 9
Net interest expense (income)	5	(5)	15	17
Remeasurements of other long term benefits	–	–	–	4
Administrative expense	5	4	–	–
Defined benefit pension expense	\$ 101	\$ 73	\$ 27	\$ 30
Defined contribution pension expense	55	50	–	–
	\$ 156	\$ 123	\$ 27	\$ 30

(Millions of Canadian dollars)	For the six months ended			
	Pension plans		Other post-employment benefit plans	
	April 30 2020	April 30 2019	April 30 2020	April 30 2019
Current service costs	\$ 183	\$ 148	\$ 23	\$ 19
Net interest expense (income)	10	(10)	30	33
Remeasurements of other long term benefits	–	–	4	6
Administrative expense	9	8	–	–
Defined benefit pension expense	\$ 202	\$ 146	\$ 57	\$ 58
Defined contribution pension expense	118	111	–	–
	\$ 320	\$ 257	\$ 57	\$ 58

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	
	April 30 2020	April 30 2019	April 30 2020	April 30 2019
Actuarial (gains) losses:				
Changes in financial assumptions ⁽²⁾	\$ (1,009)	\$ 653	\$ (95)	\$ 60
Experience adjustments	–	–	(2)	(2)
Return on plan assets (excluding interest based on discount rate)	484	(574)	–	–
	\$ (525)	\$ 79	\$ (97)	\$ 58

(Millions of Canadian dollars)	For the six months ended			
	Defined benefit pension plans		Other post-employment benefit plans	
	April 30 2020	April 30 2019	April 30 2020	April 30 2019
Actuarial (gains) losses:				
Changes in financial assumptions ⁽²⁾	\$ 38	\$ 1,260	\$ 1	\$ 117
Experience adjustments	–	–	(2)	(3)
Return on plan assets (excluding interest based on discount rate)	(23)	(718)	–	–
	\$ 15	\$ 542	\$ (1)	\$ 114

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

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

Note 8 Significant capital and funding transactions

Preferred Shares

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

Subordinated debentures

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

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

Note 8 Significant capital and funding transactions (continued)**Common shares issued** ⁽¹⁾

	For the three months ended			
	April 30, 2020		April 30, 2019	
	Number of shares (thousands)	Amount	Number of shares (thousands)	Amount
(Millions of Canadian dollars, except number of shares)				
Issued in connection with share-based compensation plans ⁽²⁾	314	\$ 26	526	\$ 38
Purchased for cancellation ⁽³⁾	(867)	(11)	(107)	(1)
	(553)	\$ 15	419	\$ 37

	For the six months ended			
	April 30, 2020		April 30, 2019	
	Number of shares (thousands)	Amount	Number of shares (thousands)	Amount
(Millions of Canadian dollars, except number of shares)				
Issued in connection with share-based compensation plans ⁽²⁾	547	\$ 44	685	\$ 49
Purchased for cancellation ⁽³⁾	(7,860)	(97)	(3,791)	(46)
	(7,313)	\$ (53)	(3,106)	\$ 3

- (1) The requirements of our dividend reinvestment plan (DRIP) are satisfied through either open market share purchases or shares issued from treasury. During the three and six months ended April 30, 2020 and April 30, 2019, our DRIP's requirements were satisfied through open market share purchases.
- (2) Amounts include cash received for stock options exercised during the period and the fair value adjustment to stock options.
- (3) During the three months ended April 30, 2020, we purchased for cancellation common shares at a total fair value of \$87 million (average cost of \$100.34 per share), with a book value of \$11 million (book value of \$12.35 per share). During the six months ended April 30, 2020, we purchased for cancellation common shares at a total fair value of \$814 million (average cost of \$103.62 per share), with a book value of \$97 million (book value of \$12.34 per share). During the three months ended April 30, 2019, we purchased for cancellation common shares at a total fair value of \$11 million (average cost of \$101.41 per share), with a book value of \$1 million (book value of \$12.27 per share). During the six months ended April 30, 2019, we purchased for cancellation common shares at a total fair value of \$359 million (average cost of \$94.60 per share), with a book value of \$46 million (book value of \$12.26 per share).

Covered bonds

RBC Covered Bond Guarantor Limited Partnership (Guarantor LP) is a consolidated structured entity to which we periodically transfer mortgages to support funding activities and asset coverage requirements under our covered bond program.

During the quarter, OSFI temporarily increased the limits on covered bond programs and the Bank of Canada temporarily expanded the eligible collateral for its term repo facility to include banks' own covered bonds to provide further liquidity due to the COVID-19 pandemic. As at April 30, 2020, the total amount of mortgages transferred and outstanding in the Guarantor LP was \$117.7 billion (October 31, 2019 – \$53.9 billion), providing further liquidity capacity for the covered bond program and \$45.3 billion of covered bonds were recorded as Deposits on our Consolidated Balance Sheets (October 31, 2019 – \$39.8 billion).

Note 9 Earnings per share

	For the three months ended		For the six months ended	
	April 30 2020	April 30 2019	April 30 2020	April 30 2019
(Millions of Canadian dollars, except share and per share amounts)				
Basic earnings per share				
Net income	\$ 1,481	\$ 3,230	\$ 4,990	\$ 6,402
Preferred share dividends	(64)	(65)	(129)	(139)
Net income attributable to non-controlling interests	3	(4)	(2)	(6)
Net income available to common shareholders	1,420	3,161	4,859	6,257
Weighted average number of common shares (in thousands)	1,422,754	1,435,091	1,425,203	1,436,099
Basic earnings per share (in dollars)	\$ 1.00	\$ 2.20	\$ 3.41	\$ 4.36
Diluted earnings per share				
Net income available to common shareholders	\$ 1,420	\$ 3,161	\$ 4,859	\$ 6,257
Dilutive impact of exchangeable shares	3	3	7	7
Net income available to common shareholders including dilutive impact of exchangeable shares	1,423	3,164	4,866	6,264
Weighted average number of common shares (in thousands)	1,422,754	1,435,091	1,425,203	1,436,099
Stock options ⁽¹⁾	906	2,224	1,280	2,125
Issuable under other share-based compensation plans	753	740	751	739
Exchangeable shares ⁽²⁾	3,458	3,108	3,234	3,231
Average number of diluted common shares (in thousands)	1,427,871	1,441,163	1,430,468	1,442,194
Diluted earnings per share (in dollars)	\$ 1.00	\$ 2.20	\$ 3.40	\$ 4.34

- (1) The dilutive effect of stock options was calculated using the treasury stock method. When the exercise price of options outstanding is greater than the average market price of our common shares, the options are excluded from the calculation of diluted earnings per share. For the three months ended April 30, 2020, an average of 2,941,928 outstanding options with an average price of \$101.06 were excluded from the calculation of diluted earnings per share. For the three months ended April 30, 2019, no outstanding options were excluded from the calculation of diluted earnings per share. For the six months ended April 30, 2020, an average of 1,584,011 outstanding options with an average price of \$103.55 were excluded from the calculation of diluted earnings per share. For the six months ended April 30, 2019, an average of 761,317 outstanding options with an average exercise price of \$102.33 were excluded from the calculation of diluted earnings per share.
- (2) Includes exchangeable preferred shares.

Note 10 Legal and regulatory matters

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

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

London interbank offered rate (LIBOR) regulatory investigations and litigation

On March 26, 2020, Royal Bank of Canada and RBC Capital Markets LLC were dismissed from the purported class action in New York alleging violations of the U.S. antitrust laws and common law principles of unjust enrichment in the setting of LIBOR after the Intercontinental Exchange took over administration of the benchmark interest rate from the British Bankers' Association in 2014. On April 24, 2020, the plaintiffs filed a notice of appeal.

Foreign exchange matters

In May 2020, the US District Court dismissed Royal Bank of Canada from the November 2018 lawsuit brought by certain institutional plaintiffs who had previously opted-out of participating in the August 2018 settlement with class plaintiffs. The matter against RBC Capital Markets, LLC remains pending.

Note 11 Results by business segment

(Millions of Canadian dollars)	For the three months ended April 30, 2020						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2)	\$ 3,149	\$ 737	\$ –	\$ 74	\$ 1,456	\$ 49	\$ 5,465
Non-interest income	1,251	2,085	197	635	857	(157)	4,868
Total revenue	4,400	2,822	197	709	2,313	(108)	10,333
Provision for credit losses	1,706	91	1	14	1,017	1	2,830
Insurance policyholder benefits, claims and acquisition expense	–	–	(177)	–	–	–	(177)
Non-interest expense	1,947	2,169	148	392	1,291	(5)	5,942
Net income (loss) before income taxes	747	562	225	303	5	(104)	1,738
Income taxes (recoveries)	215	138	45	77	(100)	(118)	257
Net income	\$ 532	\$ 424	\$ 180	\$ 226	\$ 105	\$ 14	\$ 1,481
Non-interest expense includes:							
Depreciation and amortization	\$ 223	\$ 223	\$ 14	\$ 54	\$ 127	\$ –	\$ 641

(Millions of Canadian dollars)	For the three months ended April 30, 2019						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2), (3)	\$ 3,060	\$ 731	\$ –	\$ (34)	\$ 993	\$ 23	\$ 4,773
Non-interest income (3)	1,273	2,248	1,515	621	1,176	(107)	6,726
Total revenue	4,333	2,979	1,515	587	2,169	(84)	11,499
Provision for credit losses	372	30	–	–	25	(1)	426
Insurance policyholder benefits, claims and acquisition expense	–	–	1,160	–	–	–	1,160
Non-interest expense	1,887	2,204	150	388	1,289	(2)	5,916
Net income (loss) before income taxes	2,074	745	205	199	855	(81)	3,997
Income taxes (recoveries)	525	160	51	48	79	(96)	767
Net income	\$ 1,549	\$ 585	\$ 154	\$ 151	\$ 776	\$ 15	\$ 3,230
Non-interest expense includes:							
Depreciation and amortization	\$ 157	\$ 152	\$ 12	\$ 35	\$ 100	\$ –	\$ 456

Note 11 Results by business segment (continued)

(Millions of Canadian dollars)	For the six months ended April 30, 2020						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2)	\$ 6,375	\$ 1,475	\$ –	\$ 132	\$ 2,617	\$ 87	\$ 10,686
Non-interest income	2,635	4,513	2,191	1,174	2,244	(274)	12,483
Total revenue	9,010	5,988	2,191	1,306	4,861	(187)	23,169
Provision for credit losses	2,048	89	1	14	1,096	1	3,249
Insurance policyholder benefits, claims and acquisition expense	–	–	1,437	–	–	–	1,437
Non-interest expense	3,931	4,539	301	794	2,726	29	12,320
Net income (loss) before income taxes	3,031	1,360	452	498	1,039	(217)	6,163
Income taxes (recoveries)	813	313	91	129	52	(225)	1,173
Net income	\$ 2,218	\$ 1,047	\$ 361	\$ 369	\$ 987	\$ 8	\$ 4,990
Non-interest expense includes: Depreciation and amortization	\$ 457	\$ 433	\$ 29	\$ 104	\$ 254	\$ –	\$ 1,277

(Millions of Canadian dollars)	For the six months ended April 30, 2019						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2), (3)	\$ 6,194	\$ 1,475	\$ –	\$ (65)	\$ 1,962	\$ 54	\$ 9,620
Non-interest income (3)	2,557	4,452	3,094	1,283	2,305	(223)	13,468
Total revenue	8,751	5,927	3,094	1,218	4,267	(169)	23,088
Provision for credit losses	720	56	–	–	165	(1)	940
Insurance policyholder benefits, claims and acquisition expense	–	–	2,385	–	–	–	2,385
Non-interest expense	3,802	4,368	304	806	2,519	29	11,828
Net income (loss) before income taxes	4,229	1,503	405	412	1,583	(197)	7,935
Income taxes (recoveries)	1,109	321	85	100	154	(236)	1,533
Net income	\$ 3,120	\$ 1,182	\$ 320	\$ 312	\$ 1,429	\$ 39	\$ 6,402
Non-interest expense includes: Depreciation and amortization	\$ 310	\$ 299	\$ 23	\$ 69	\$ 195	\$ –	\$ 896

(1) Taxable equivalent basis.

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

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

Total assets and total liabilities by business segment

(Millions of Canadian dollars)	As at April 30, 2020						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total
Total assets	\$ 493,257	\$ 124,512	\$ 20,052	\$ 239,601	\$ 753,869	\$ 44,391	\$ 1,675,682
Total liabilities	\$ 493,310	\$ 124,464	\$ 20,048	\$ 239,797	\$ 755,881	\$ (42,858)	\$ 1,590,642

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

Note 12 Capital management

Regulatory capital and capital ratios

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

	As at	
	April 30 2020	October 31 2019
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)		
Capital ⁽¹⁾		
CET1 capital	\$ 65,198	\$ 62,184
Tier 1 capital	70,854	67,861
Total capital	81,469	77,888
Risk-weighted Assets (RWA) used in calculation of capital ratios ⁽¹⁾		
Credit risk	\$463,567	\$ 417,835
Market risk	26,900	28,917
Operational risk	67,945	66,104
Total RWA	\$558,412	\$ 512,856
Capital ratios and Leverage ratio ⁽¹⁾		
CET1 ratio	11.7%	12.1%
Tier 1 capital ratio	12.7%	13.2%
Total capital ratio	14.6%	15.2%
Leverage ratio	4.5%	4.3%
Leverage ratio exposure (billions)	\$ 1,578	\$ 1,570

(1) Capital, RWA, and capital ratios are calculated using OSFI's Capital Adequacy Requirements guideline and the Leverage ratio is calculated using OSFI Leverage Requirements Guideline as updated in accordance with the Q2 2020 guidance issued by OSFI in response to the COVID-19 pandemic in Q2 2020. Both the CAR guideline and Leverage Requirements Guideline are based on the Basel III framework.

Shareholder Information

Corporate headquarters

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

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

Transfer Agent and Registrar

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

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

Co-Transfer Agent (U.K.):
Computershare Investor
Services PLC
Securities Services – Registrars
P.O. Box 82, The Pavilions,
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
200 Bay Street
South Tower
Toronto, Ontario M5J 2J5
Canada
Tel: 416-955-7802

or visit our website at
rbc.com/investorrelations

Direct deposit service

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

Eligible dividend designation

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

Common share repurchases

We are engaged in a Normal
Course Issuer Bid (NCIB)
which allows us to repurchase
for cancellation, up to
20 million common shares
during the period spanning
from March 2, 2020 to March 1,
2021, 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.
For further details, refer to
Capital management section.

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

2020 Quarterly earnings release dates

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

Dividend dates for 2020

Subject to approval by the Board of Directors

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

Governance

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

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

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