

First Quarter 2022



Royal Bank of Canada first quarter 2022 results

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

Net Income
\$4.1 Billion
Up 6% YoY

Diluted EPS⁽¹⁾
\$2.84
Up 7% YoY

PCL⁽¹⁾
\$105 Million
PCL on loans ratio⁽¹⁾ up
17 bps⁽¹⁾ QoQ

ROE⁽²⁾
17.3%
Down 130 bps YoY

CET1 Ratio⁽¹⁾
13.5%
Robust capital levels, up
100 bps YoY

TORONTO, February 24, 2022 — Royal Bank of Canada (RY on TSX and NYSE) today reported net income of \$4.1 billion for the quarter ended January 31, 2022, up \$248 million or 6% from the prior year, with strong diluted EPS growth of 7% over the same period. Personal & Commercial Banking and Wealth Management saw strong earnings growth, while robust Capital Markets results were down from record first quarter earnings last year. Investor & Treasury Services and Insurance results were also lower.

Pre-provision, pre-tax earnings³ of \$5.5 billion were up 10% from a year ago, primarily attributable to higher average fee-based client assets, record investment banking revenue and higher net interest income reflecting strong client-driven growth in volumes that more than offset lower spreads. These factors were partially offset by higher expenses driven by higher variable compensation and continued investments in our franchises, and lower Global Markets revenue.

Compared to last quarter, net income was up \$203 million with higher results in Wealth Management, Capital Markets, and Investor & Treasury Services, partially offset by lower results in Insurance and Personal & Commercial Banking.

The PCL on loans ratio of 5 bps was up 17 bps from last quarter, primarily due to higher provisions in Personal & Commercial Banking, partially offset by lower provisions in Wealth Management. The PCL on impaired loans ratio of 9 bps increased 2 bps from last quarter.

Our capital position remained robust, with a Common Equity Tier 1 (CET1) ratio of 13.5% supporting strong client-driven organic growth, \$1.7 billion in common share dividends and \$1.2 billion (or 8.9 million common shares) in common share buybacks. We also had a strong average Liquidity Coverage Ratio (LCR) of 124%.

"RBC's first quarter performance reflects the significant momentum we continue to build while facing change and uncertainty in the current operating environment. This is a testament to our scale, diversified business model, and strategic investments in technology, talent and innovation to create differentiated value for our clients and shareholders. While the Omicron variant has created headwinds to the global economic recovery over the past quarter, RBC employees remained unwavering in their commitment to supporting our clients and communities. I'm proud of how they continue to make a difference in the lives of those we serve. Looking forward, we remain focused on our Purpose-led approach to delivering the advice, products and services our clients need in a changing world, while also accelerating our commitments to enable a sustainable and inclusive future."

– Dave McKay, RBC President and Chief Executive Officer

Q1 2022
Compared to
Q1 2021

- Net income of \$4,095 million ↑ 6%
- Diluted EPS of \$2.84 ↑ 7%
- ROE of 17.3% ↓ 130 bps
- CET1 ratio of 13.5% ↑ 100 bps

Q1 2022
Compared to
Q4 2021

- Net income of \$4,095 million ↑ 5%
- Diluted EPS of \$2.84 ↑ 6%
- ROE of 17.3% ↑ 40 bps
- CET1 ratio of 13.5% ↓ 20 bps

(1) See Glossary section of this Q1 2022 Report to Shareholders for composition of this measure.

(2) Return on equity (ROE). This measure does not have a standardized meaning under generally accepted accounting principles (GAAP). For further information, refer to the Key performance and non-GAAP measures section of this Q1 2022 Report to Shareholders.

(3) Pre-provision, pre-tax (PPPT) earnings is calculated as income (January 31, 2022: \$4,095 million; January 31, 2021: \$3,847 million) before income taxes (January 31, 2022: \$1,289 million; January 31, 2021: \$1,038 million) and PCL (January 31, 2022: \$105 million; January 31, 2021: \$110 million). This is a non-GAAP measure. PPPT earnings do not have a standardized meaning under GAAP and may not be comparable to similar measures disclosed by other financial institutions. We use PPPT earnings to assess our ability to generate sustained earnings growth outside of credit losses, which are impacted by the cyclical nature of a credit cycle. We believe that certain non-GAAP measures are more reflective of our ongoing operating results and provide readers with a better understanding of management's perspective on our performance.

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Management's Discussion and Analysis

Management's Discussion and Analysis (MD&A) is provided to enable a reader to assess our results of operations and financial condition for the three month period ended or as at January 31, 2022, compared to the corresponding period in the prior fiscal year and the three month period ended October 31, 2021. This MD&A should be read in conjunction with our unaudited Interim Condensed Consolidated Financial Statements for the quarter ended January 31, 2022 (Condensed Financial Statements) and related notes and our 2021 Annual Report. This MD&A is dated February 23, 2022. All amounts are in Canadian dollars, unless otherwise specified, and are based on financial statements presented 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 2021 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 Q1 2022 Report to Shareholders, in other filings with Canadian regulators or the SEC, in other reports to shareholders, and in other communications. Forward-looking statements in this document include, but are not limited to, statements relating to our financial performance objectives, vision and strategic goals, the Economic, market, and regulatory review and outlook for Canadian, U.S., European and global economies, the regulatory environment in which we operate, and the risk environment including our credit risk, market risk, liquidity and funding risk, and the potential continued impacts of the coronavirus (COVID-19) pandemic on our business operations, financial results, condition and objectives and on the global economy and financial market conditions and includes our President and Chief Executive Officer's statements. The forward-looking information contained in this document is presented for the purpose of assisting the holders of our securities and financial analysts in understanding our financial position and results of operations as at and for the periods ended on the dates presented, as well as our financial performance objectives, vision and strategic goals, and may not be appropriate for other purposes. Forward-looking statements are typically identified by words such as "believe", "expect", "foresee", "forecast", "anticipate", "intend", "estimate", "goal", "plan" and "project" and similar expressions of future or conditional verbs such as "will", "may", "should", "could" or "would".

By their very nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties, which give rise to the possibility that our predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that our assumptions may not be correct and that our financial performance objectives, vision and strategic goals will not be achieved. We caution readers not to place undue reliance on these statements as a number of risk factors could cause our actual results to differ materially from the expectations expressed in such forward-looking statements. These factors – many of which are beyond our control and the effects of which can be difficult to predict – include: credit, market, liquidity and funding, insurance, operational, regulatory compliance (which could lead to us being subject to various legal and regulatory proceedings, the potential outcome of which could include regulatory restrictions, penalties and fines), strategic, reputation, competitive, legal and regulatory environment, and systemic risks and other risks discussed in the risk sections and Impact of COVID-19 pandemic section of our 2021 Annual Report and the Risk management section of this Q1 2022 Report to Shareholders; including business and economic conditions, information technology and cyber risks, environmental and social risk (including climate change), digital disruption and innovation, Canadian housing and household indebtedness, geopolitical uncertainty, privacy, data and third-party related risks, regulatory changes, culture and conduct, the business and economic conditions in the geographic regions in which we operate, the effects of changes in government fiscal, monetary and other policies, tax risk and transparency, and 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, financial market conditions and our business operations, and financial results, condition and objectives. In addition, as we work to advance our climate goals, external factors outside of RBC's reasonable control may act as constraints on their achievement, including varying decarbonization efforts across economies, the need for thoughtful climate policies around the world, more and better data, reasonably supported methodologies, technological advancements, the evolution of consumer behaviour, the challenges of balancing interim emissions goals with an orderly and just transition, and other significant considerations such as legal and regulatory obligations.

We caution that the foregoing list of risk factors is not exhaustive and other factors could also adversely affect our results. When relying on our forward-looking statements to make decisions with respect to us, investors and others should carefully consider the foregoing factors and other uncertainties and potential events. Material economic assumptions underlying the forward-looking statements contained in this Q1 2022 Report to Shareholders are set out in the Economic, market and regulatory review and outlook section and for each business segment under the Strategic priorities and Outlook headings in our 2021 Annual Report, as updated by the Economic, market and regulatory review and outlook section of this Q1 2022 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 and Impact of COVID-19 pandemic section of our 2021 Annual Report and the Risk management section of this Q1 2022 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 88,000+ employees who leverage their imaginations and insights to 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 27 other countries. Learn more at rbc.com.

Selected financial and other highlights

(Millions of Canadian dollars, except per share, number of and percentage amounts)	As at or for the three months ended			For the three months ended	
	January 31 2022	October 31 2021	January 31 2021	Q1 2022 vs. Q4 2021	Q1 2022 vs. Q1 2021
Total revenue	\$ 13,066	\$ 12,376	\$ 12,943	\$ 690	\$ 123
Provision for credit losses (PCL)	105	(227)	110	332	(5)
Insurance policyholder benefits, claims and acquisition expense (PBCAE)	997	1,032	1,406	(35)	(409)
Non-interest expense	6,580	6,583	6,542	(3)	38
Income before income taxes	5,384	4,988	4,885	396	499
Net income	\$ 4,095	\$ 3,892	\$ 3,847	\$ 203	\$ 248
Segments – net income					
Personal & Commercial Banking	\$ 1,974	\$ 2,033	\$ 1,793	\$ (59)	\$ 181
Wealth Management (1)	795	558	641	237	154
Insurance	197	267	201	(70)	(4)
Investor & Treasury Services	118	109	123	9	(5)
Capital Markets	1,030	920	1,067	110	(37)
Corporate Support (1)	(19)	5	22	(24)	(41)
Net income	\$ 4,095	\$ 3,892	\$ 3,847	\$ 203	\$ 248
Selected information					
Earnings per share (EPS) – basic	\$ 2.84	\$ 2.68	\$ 2.66	\$ 0.16	\$ 0.18
– diluted	2.84	2.68	2.66	0.16	0.18
Return on common equity (ROE) (2)	17.3%	16.9%	18.6%	40 bps	(130) bps
Average common equity (2)	\$ 92,450	\$ 89,500	\$ 80,750	\$ 2,950	\$ 11,700
Net interest margin (NIM) – on average earning assets, net (3)	1.39%	1.43%	1.50%	(4) bps	(11) bps
PCL on loans as a % of average net loans and acceptances	0.05%	(0.12)%	0.07%	17 bps	(2) bps
PCL on performing loans as a % of average net loans and acceptances	(0.04)%	(0.19)%	(0.06)%	15 bps	2 bps
PCL on impaired loans as a % of average net loans and acceptances	0.09%	0.07%	0.13%	2 bps	(4) bps
Gross impaired loans (GIL) as a % of loans and acceptances	0.28%	0.31%	0.41%	(3) bps	(13) bps
Liquidity coverage ratio (LCR) (4)	124%	123%	141%	100 bps	(1,700) bps
Net stable funding ratio (NSFR) (4)	113%	116%	118%	(300) bps	(500) bps
Capital, Leverage and Total loss absorbing capacity (TLAC) ratios (5)					
Common Equity Tier 1 (CET1) ratio	13.5%	13.7%	12.5%	(20) bps	100 bps
Tier 1 capital ratio	14.8%	14.9%	13.8%	(10) bps	100 bps
Total capital ratio	16.6%	16.7%	15.5%	(10) bps	110 bps
Leverage ratio	4.8%	4.9%	4.8%	(10) bps	0 bps
TLAC ratio (6)	26.4%	n.a.	n.a.	n.a.	n.a.
TLAC leverage ratio (6)	8.5%	n.a.	n.a.	n.a.	n.a.
Selected balance sheet and other information (7)					
Total assets	\$ 1,752,469	\$ 1,706,323	\$ 1,671,151	\$ 46,146	\$ 81,318
Securities, net of applicable allowance	303,095	284,724	287,482	18,371	15,613
Loans, net of allowance for loan losses	740,031	717,575	672,563	22,456	67,468
Derivative related assets	92,319	95,541	110,917	(3,222)	(18,598)
Deposits	1,142,842	1,100,831	1,054,597	42,011	88,245
Common equity	94,469	91,983	82,934	2,486	11,535
Total risk-weighted assets (RWA)	569,285	552,541	557,519	16,744	11,766
Assets under management (AUM) (3)	1,021,500	1,008,700	897,400	12,800	124,100
Assets under administration (AUA) (3), (8)	6,445,900	6,347,300	6,133,600	98,600	312,300
Common share information					
Shares outstanding (000s) – average basic	1,421,807	1,424,534	1,423,350	(2,727)	(1,543)
– average diluted	1,424,602	1,427,225	1,425,280	(2,623)	(678)
– end of period	1,416,020	1,424,525	1,424,083	(8,505)	(8,063)
Dividends declared per common share	\$ 1.20	\$ 1.08	\$ 1.08	\$ 0.12	\$ 0.12
Dividend yield (3)	3.5%	3.3%	4.3%	20 bps	(80) bps
Dividend payout ratio (3)	42%	40%	41%	200 bps	100 bps
Common share price (RY on TSX) (9)	\$ 144.93	\$ 128.82	\$ 103.50	\$ 16.11	\$ 41.43
Market capitalization (TSX) (9)	205,224	183,507	147,393	21,717	57,831
Business information (number of)					
Employees (full-time equivalent) (FTE)	85,211	85,301	84,030	(90)	1,181
Bank branches	1,287	1,295	1,328	(8)	(41)
Automated teller machines (ATMs)	4,368	4,378	4,523	(10)	(155)
Period average US\$ equivalent of C\$1.00 (10)	0.787	0.796	0.779	(0.009)	0.008
Period-end US\$ equivalent of C\$1.00	0.787	0.808	0.782	(0.021)	0.005

- (1) Effective Q4 2021, gains (losses) on economic hedges of our U.S. share-based compensation plans, which are reflected in revenue, and related variability in share-based compensation expense driven by changes in the fair value of liabilities relating to our U.S. share-based compensation plans have been reclassified from our Wealth Management segment to Corporate Support. Comparative amounts have been reclassified to conform with this presentation.
- (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) See Glossary for composition of this measure.
- (4) The LCR and NSFR are calculated in accordance with the Office of the Superintendent of Financial Institutions' (OSFI) Liquidity Adequacy Requirements (LAR) guideline. LCR is the average for the three months ended for each respective period. For further details, refer to the Liquidity and funding risk section.
- (5) Capital ratios are calculated using OSFI's Capital Adequacy Requirements (CAR) guideline and the Leverage ratio is calculated using OSFI's Leverage Requirements (LR) guideline.
- (6) Effective November 1, 2021, OSFI requires Canadian Domestic Systemically Important Banks (D-SIBs) to meet minimum risk-based TLAC ratio and TLAC leverage ratio requirements which are calculated using OSFI's TLAC guideline. For further details, refer to the Capital management section.
- (7) Represents period-end spot balances.
- (8) AUA includes \$15 billion and \$3 billion (October 31, 2021 – \$15 billion and \$3 billion; January 31, 2021 – \$15 billion and \$4 billion) of securitized residential mortgages and credit card loans, respectively.
- (9) Based on TSX closing market price at period-end.
- (10) Average amounts are calculated using month-end spot rates for the period.
- n.a. not applicable

Economic, market and regulatory review and outlook – data as at February 23, 2022

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

The rapid emergence of the Omicron variant of COVID-19 late in calendar 2021 prompted the re-imposition of containment measures to varying degrees in certain regions, largely focused on limiting activity in high-contact travel, hospitality, and entertainment services. However, the impact of this latest virus wave is expected to be less severe and of shorter duration than prior waves with some containment measures already eased or lifted. While vaccines have been effective at limiting severe outcomes, healthcare capacity has been stretched in some regions and the large number of workers self-isolating has intensified labour shortages. Recent virus-related disruptions are expected to be temporary with the economic impact confined to the first calendar quarter of 2022, and rising inflation and increasingly tight labour markets are expected to keep central banks on track to raise or continue to raise interest rates in calendar 2022. The economic outlook remains subject to ongoing uncertainty due to the evolving and unpredictable nature of the COVID-19 pandemic. Supply chain disruptions, rising business input costs, and labour shortages are also limiting the pace of further improvement and adding to inflation concerns.

Canada

Re-imposed containment measures and near-term disruptions to labour supply driven by the spread of the Omicron variant are expected to weigh on GDP, with growth expected to be limited to 1.5%¹ in the first calendar quarter of 2022 following an expected increase of 6.0%¹ in the final calendar quarter of 2021. Re-imposed restrictions to date have been more limited compared to prior waves, although they have once again been concentrated across high-contact travel, hospitality, and entertainment services. The unemployment rate rose to 6.5% in January 2022 from 6.0% in December 2021, and hours worked fell over the same period due to higher levels of absenteeism from illness and self-isolation. However, given the rapid pace of initial spread and a relatively highly vaccinated population, virus-related disruptions are expected to be of shorter duration than earlier waves, with some containment measures already eased or lifted. GDP growth is expected to rebound over the second and third calendar quarters of 2022. Consumer price growth has continued to accelerate, and higher business input costs driven by rising demand and supply chain disruptions are threatening further increases at above pre-pandemic rates throughout calendar 2022. Widespread labour shortages are also expected to remain as a significant constraint on further production growth. With Omicron-related disruptions to the economy expected to be temporary, and labour shortages and inflation pressures intensifying, the Bank of Canada (BoC) is expected to begin raising interest rates in March 2022.

U.S.

U.S. GDP is expected to increase 2.5%¹ in the first calendar quarter of 2022 following a 6.9%¹ increase in the final calendar quarter of 2021. The emergence of the rapidly spreading Omicron variant is expected to temporarily lower consumer spending on high-contact leisure and hospitality services and intensify near-term labour shortages with a large share of the workforce self-isolating. Despite the rapid spread of the Omicron variant, the unemployment rate remained low at 4.0% in January 2022. Inflation has also continued to accelerate. The Federal Reserve (Fed) is expected to look through the recent macroeconomic disruptions from the Omicron variant and begin raising interest rates in March 2022. Global supply chain disruptions and labour shortages are expected to limit the pace of further GDP growth in calendar 2022, while high levels of household savings are expected to support consumer demand and drive continued pricing pressures. Higher business input costs and expected further growth in household demand are increasing the risk that inflation growth will persist at rates above pre-pandemic levels for longer than expected.

Europe

Euro area GDP grew 0.3% in the fourth calendar quarter of 2021. GDP growth in the first calendar quarter of 2022 is expected to be limited to 0.4% due to the rapid spread of the Omicron variant, with growth anticipated to strengthen in the second calendar quarter of 2022 as disruptions begin to fade. Labour markets in the Euro area have tightened significantly, and inflation has also accelerated. The European Central Bank (ECB) has signaled that it will be winding down asset purchase programs this year and is expected to raise interest rates in the third calendar quarter of 2022. United Kingdom (U.K.) GDP is expected to rise 0.7% in the first calendar quarter of 2022 following a 1.0% increase in the final calendar quarter of 2021. With disruptions from the Omicron variant expected to be temporary and labour market shortages and inflation pressures expected to persist, the Bank of England is expected to continue raising interest rates in March 2022 to build on the 15 basis point increase in December 2021 and 25 basis point increase in February 2022.

Financial markets

While government bond yields remain low by historical standards, they have increased in recent months as the global economic recovery has continued and inflation rates have risen. Equity markets remain elevated, supported by the positive economic outlook, and prices for some raw materials, including crude oil, remain well above pre-pandemic levels reflecting limited supply and rising demand.

¹ Annualized rate

Regulatory environment

We continue to monitor and prepare for regulatory developments and changes in a manner that seeks to ensure compliance with new requirements while mitigating adverse business or financial impacts. Such impacts could result from new or amended laws or regulations and the expectations of those who enforce them. A high level summary of the key regulatory changes that have the potential to increase or decrease our costs and the complexity of our operations is included in the Legal and regulatory environment risk section of our 2021 Annual Report, as updated below. A summary of the additional regulatory changes and relief instituted by governments globally and by OSFI in response to the COVID-19 pandemic is included in the Impact of COVID-19 pandemic, Liquidity and funding risk and Capital management sections of our 2021 Annual Report, with updates provided in the Capital management section of this Q1 2022 Report to Shareholders.

Global uncertainty

Significant uncertainty about the impacts of the COVID-19 pandemic, supply chain disruptions, trade policy and geopolitical tensions continue to pose risks to the global economic outlook. In January 2022, the International Monetary Fund (IMF) projected global growth of 4.4% in calendar 2022, down 0.5% from its October forecast, reflecting downward revisions from the removal of U.S. government fiscal policies, an earlier than expected withdrawal of extraordinary monetary stimulus and continued supply chain disruptions. While recent virus-related disruptions are expected to be temporary, the economic outlook remains subject to ongoing uncertainty due to the evolving and unpredictable nature of the COVID-19 pandemic. Finally, global financial markets remain vulnerable to geopolitical tensions, such as those between the U.S. and China, which mainly centers around trade and technology, as well as those between Russia and Ukraine. Our diversified business model, as well as our product and geographic diversification, continue to help mitigate the risks posed by global uncertainty.

Interest Rate Benchmark Reform

On December 16, 2021 the Canadian Alternative Reference Rate (CARR) working group made a recommendation to Refinitiv Benchmark Services (UK) Limited (RBSL), the administrator of Canadian Dollar Offered Rate (CDOR), to cease publication of all of CDOR's remaining tenors after the end of June 2024. Although this recommendation does not constitute a public statement or publication of information that CDOR has ceased or will cease, this recommendation does increase the likelihood of the ultimate cessation of CDOR. Furthermore, on January 31, 2022, RBSL published a public consultation to invite feedback on the CARR recommendation with a due date of February 28, 2022. We will continue to monitor any updates and future developments.

Basel III reforms

On January 31, 2022, OSFI announced revised capital, leverage, liquidity and disclosure rules that incorporate the final Basel Committee on Banking Supervision (BCBS) Basel III reforms. The revised rules include new Capital Adequacy Requirements (CAR), Leverage Requirements (LR), Liquidity Adequacy Requirements (LAR) guidelines and related Pillar 3 disclosure requirements. The revised CAR (other than credit valuation adjustment (CVA) and market risk), LR and Pillar 3 guidelines come into effect for us in Q2 2023. The revised LAR guidelines are effective for us on April 1, 2023. The revised CVA and market risk chapters of the CAR guidelines are effective for us in Q1 2024. We are currently assessing the impact of the revised framework and taking appropriate steps to ensure we are ready for adoption. We do not anticipate any issues in complying with the requirements.

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 Impact of COVID-19 pandemic section, including the Impact of pandemic risk factor, and the Risk management - Top and emerging risks and Legal and regulatory environment risk sections of our 2021 Annual Report and the Risk and Capital management sections of this Q1 2022 Report to Shareholders.

Financial performance

Overview

Q1 2022 vs. Q1 2021

Net income of \$4,095 million was up \$248 million or 6% from a year ago. Diluted earnings per share (EPS) of \$2.84 was up \$0.18 or 7% and return on common equity (ROE) of 17.3% was down from 18.6% last year. Our Common Equity Tier 1 (CET1) ratio of 13.5% was up 100 bps from a year ago.

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

Q1 2022 vs. Q4 2021

Net income of \$4,095 million was up \$203 million or 5% from last quarter. Diluted EPS of \$2.84 was up \$0.16 or 6% and ROE of 17.3% was up from 16.9% in the prior quarter. Our CET1 ratio of 13.5% was down 20 bps from last quarter.

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

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

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	
	Q1 2022 vs. Q1 2021	Q1 2022 vs. Q4 2021
<i>Increase (decrease):</i>		
Total revenue	\$ (66)	\$ 35
PCL	1	–
Non-interest expense	(52)	23
Income taxes	(4)	2
Net income	(11)	10
Impact on EPS		
Basic	\$ (0.01)	\$ 0.01
Diluted	(0.01)	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		
	January 31 2022	October 31 2021	January 31 2021
U.S. dollar	0.787	0.796	0.779
British pound	0.586	0.584	0.574
Euro	0.695	0.684	0.644

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

Total revenue

(Millions of Canadian dollars, except percentage amounts)	For the three months ended		
	January 31 2022	October 31 2021	January 31 2021
Interest and dividend income	\$ 7,378	\$ 7,014	\$ 7,236
Interest expense	2,107	1,953	2,201
Net interest income	\$ 5,271	\$ 5,061	\$ 5,035
NIM	1.39%	1.43%	1.50%
Insurance premiums, investment and fee income	\$ 1,399	\$ 1,501	\$ 1,809
Trading revenue	314	103	524
Investment management and custodial fees	1,961	1,888	1,703
Mutual fund revenue	1,165	1,142	1,000
Securities brokerage commissions	399	350	401
Service charges	485	475	458
Underwriting and other advisory fees	701	655	590
Foreign exchange revenue, other than trading	271	239	289
Card service revenue	291	247	272
Credit fees	476	418	332
Net gains on investment securities	15	20	35
Share of profit in joint ventures and associates	29	34	25
Other	289	243	470
Non-interest income	7,795	7,315	7,908
Total revenue	\$ 13,066	\$ 12,376	\$ 12,943
Additional trading information			
Net interest income (1)	\$ 720	\$ 618	\$ 740
Non-interest income	314	103	524
Total trading revenue	\$ 1,034	\$ 721	\$ 1,264

(1) Reflects net interest income arising from trading-related positions, including assets and liabilities that are classified or designated at fair value through profit or loss (FVTPL).

Q1 2022 vs. Q1 2021

Total revenue increased \$123 million or 1% from a year ago, mainly due to higher investment management and custodial fees and net interest income. Higher mutual fund revenue, credit fees and underwriting and other advisory fees also contributed to the increase. These factors were partially offset by lower insurance premiums, investment and fee income (Insurance revenue), trading revenue and other revenue.

Net interest income increased \$236 million or 5%, largely due to volume growth in Canadian Banking and U.S. Wealth Management (including City National) that more than offset the impact of lower spreads.

NIM was down 11 bps compared to last year, mainly due to changes in average earning asset mix with volume growth primarily in reverse repos, as well as spread compression in reverse repos and Canadian Banking.

Insurance revenue decreased \$410 million or 23%, primarily reflecting the change in fair value of investments backing policyholder liabilities, which is largely offset in PBCAE. This was partially offset by higher group annuity sales and business growth.

Trading revenue decreased \$210 million or 40%, mainly due to lower fixed income trading in the U.S. and Europe driven by reduced client activity reflecting market conditions.

Investment management and custodial fees increased \$258 million or 15%, mainly due to higher average fee-based client assets reflecting market appreciation and net sales.

Mutual fund revenue increased \$165 million or 17%, primarily due to higher average fee-based client assets reflecting market appreciation and net sales in Wealth Management, and higher average mutual fund balances driving higher distribution fees in Canadian Banking.

Underwriting and other advisory fees increased \$111 million or 19%, largely driven by higher M&A activity across most regions.

Credit fees increased \$144 million or 43%, largely attributable to higher loan syndication activity across most regions.

Other revenue decreased \$181 million or 39%, mainly attributable to 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.

Q1 2022 vs. Q4 2021

Total revenue increased \$690 million or 6% from last quarter, mainly due to higher trading revenue and net interest income. Higher investment management and custodial fees and credit fees also contributed to the increase. These factors were partially offset by lower insurance revenue.

Net interest income increased \$210 million or 4%, primarily due to volume growth in Canadian Banking and U.S. Wealth Management (including City National), and higher trading revenue in Capital Markets.

Insurance revenue decreased \$102 million or 7%, primarily reflecting the change in fair value of investments backing policyholder liabilities, which is largely offset in PBCAE. This was partially offset by investment income and higher group annuity sales.

Trading revenue increased \$211 million, mainly attributable to higher fixed income and equity trading across most regions reflecting increased client activity.

Investment management and custodial fees increased \$73 million or 4%, mainly due to higher average fee-based client assets reflecting market appreciation and net sales.

Credit fees increased \$58 million or 14%, primarily attributable to higher loan syndication activity across most regions.

Provision for credit losses

Q1 2022 vs. Q1 2021

Total PCL decreased \$5 million from a year ago.

PCL on loans of \$100 million decreased \$21 million or 17%, due to lower provisions in Personal & Commercial Banking, partially offset by lower releases of provisions in Wealth Management. The PCL on loans ratio of 5 bps decreased 2 bps.

Q1 2022 vs. Q4 2021

Total PCL increased \$332 million from last quarter.

PCL on loans of \$100 million increased \$318 million, primarily due to higher provisions in Personal & Commercial Banking, partially offset by lower provisions in Wealth Management. The PCL on loans ratio increased 17 bps.

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

Insurance policyholder benefits, claims and acquisition expense (PBCAE)

Q1 2022 vs. Q1 2021

PBCAE decreased \$409 million or 29% from a year ago, primarily reflecting the change in fair value of investments backing policyholder liabilities, which is largely offset in revenue. Higher favourable investment-related experience also contributed to the decrease. These factors were partially offset by higher group annuity sales, business growth, claims experience mainly in life retrocession, and the impact of lower new longevity reinsurance contracts.

Q1 2022 vs. Q4 2021

PBCAE decreased \$35 million or 3% from last quarter, primarily reflecting the change in fair value of investments backing policyholder liabilities, which is largely offset in revenue. Investment-related experience also contributed to the decrease. These factors were partially offset by favourable annual actuarial assumption updates in the prior quarter, largely related to mortality and economic assumptions, the impact of lower new longevity reinsurance contracts, as well as claims experience mainly in life retrocession.

Non-interest expense

(Millions of Canadian dollars, except percentage amounts)	For the three months ended		
	January 31 2022	October 31 2021	January 31 2021
Salaries	\$ 1,748	\$ 1,744	\$ 1,655
Variable compensation	1,941	1,651	1,804
Benefits and retention compensation	549	496	543
Share-based compensation	47	97	286
Human resources	4,285	3,988	4,288
Equipment	501	514	493
Occupancy	386	393	404
Communications	228	279	213
Professional fees	319	417	291
Amortization of other intangibles	337	330	319
Other	524	662	534
Non-interest expense	\$ 6,580	\$ 6,583	\$ 6,542
Efficiency ratio ⁽¹⁾	50.4%	53.2%	50.5%
Efficiency ratio adjusted ⁽²⁾	48.8%	52.1%	51.9%

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

(2) This is a non-GAAP ratio. This measure has been adjusted by excluding the change in fair value of investments backing policyholder liabilities from total revenue. For further details, refer to the Key performance and non-GAAP measures section.

Q1 2022 vs. Q1 2021

Non-interest expense remained relatively flat as higher variable compensation commensurate with increased revenue and higher staff and technology-related costs were largely offset by the change in the fair value of our U.S. share-based compensation plans, which was largely offset in Other revenue, and the partial release of a legal provision taken in U.S. Wealth Management (including City National) in the prior quarter.

Our efficiency ratio of 50.4% decreased 10 bps from 50.5% last year. Excluding the change in fair value of investments backing policyholder liabilities, our efficiency ratio of 48.8% decreased 310 bps from 51.9% last year.

Q1 2022 vs. Q4 2021

Non-interest expense remained flat. The current quarter reflected the partial release of a legal provision taken in U.S. Wealth Management (including City National) in the prior quarter, as well as the change in the fair value of our U.S. share-based compensation plans, which was largely offset in Other revenue. These factors were offset by higher variable compensation commensurate with increased revenue.

Our efficiency ratio of 50.4% decreased 280 bps from 53.2% last quarter. Excluding the change in fair value of investments backing policyholder liabilities, our efficiency ratio of 48.8% decreased 330 bps from last quarter.

Efficiency ratio excluding the change in fair value of investments backing policyholder liabilities is a non-GAAP ratio. 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		
	January 31 2022	October 31 2021	January 31 2021
Income taxes	\$ 1,289	\$ 1,096	\$ 1,038
Income before income taxes	5,384	4,988	4,885
Effective income tax rate	23.9%	22.0%	21.2%

Q1 2022 vs. Q1 2021

Income tax expense increased \$251 million or 24% from a year ago, primarily due to higher income before income taxes and the net impact of tax adjustments.

The effective income tax rate of 23.9% increased 270 bps, mainly due to the impact of the tax adjustments noted above and changes in earnings mix.

Q1 2022 vs. Q4 2021

Income tax expense increased \$193 million or 18% from last quarter, primarily due to higher income before income taxes and the net impact of tax adjustments.

The effective income tax rate of 23.9% increased 190 bps, primarily due to the impact of the tax adjustments noted above and changes in earnings mix.

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, 2021. 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 2021 Annual Report.

Key performance and non-GAAP measures

Performance measures

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. Certain financial metrics, including ROE, do not have a standardized meaning under generally accepted accounting principles (GAAP) and may not be comparable to similar measures disclosed by other financial institutions.

Return on common equity

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.

Our consolidated ROE calculation is based on net income available to common shareholders divided by total average common equity for the period. Business segment ROE calculations are based on net income available to common shareholders divided by average attributed capital for the period. For each segment, average attributed capital includes the capital required to underpin various risks as described in the Capital management section and amounts invested in goodwill and intangibles.

The attribution of capital involves the use of assumptions, judgments and methodologies that are regularly reviewed and revised by management as deemed necessary. Changes to such assumptions, judgments and methodologies can have a material effect on the business segment ROE information that we report. Other companies that disclose information on similar attributions and related return measures may use different assumptions, judgments and methodologies.

The following table provides a summary of our ROE calculations:

(Millions of Canadian dollars, except percentage amounts)	For the three months ended							October 31	January 31
	January 31							2021	2021
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total	Total
Net income available to common shareholders	\$ 1,957	\$ 785	\$ 196	\$ 116	\$ 1,015	\$ (30)	\$ 4,039	\$ 3,819	\$ 3,787
Total average common equity (1), (2)	26,100	17,600	2,400	2,950	24,550	18,850	92,450	89,500	80,750
ROE (3)	29.8%	17.7%	32.4%	15.7%	16.4%	n.m.	17.3%	16.9%	18.6%

(1) Total average common equity represents rounded figures.

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

(3) ROE is based on actual balances of average common equity before rounding.
n.m. not meaningful

Non-GAAP measures

We believe that certain non-GAAP measures described below are more reflective of our ongoing operating results and provide readers with a better understanding of management's perspective on our performance. These measures enhance the comparability of our financial performance for the three months ended January 31, 2022 with the corresponding period in the prior year and the three months ended October 31, 2021. Non-GAAP measures (including non-GAAP ratios) 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.

Adjusted efficiency ratio

Our efficiency ratio is impacted by the change in fair value of investments backing policyholder liabilities, which is reported in revenue and largely offset in PBCAE. The adjusted efficiency ratio is a non-GAAP ratio and is calculated using adjusted total revenue, which is a non-GAAP measure as it excludes the impact from the change in fair value of investments backing policyholder liabilities. We believe the adjusted efficiency ratio is a useful measure as changes in the fair value of investments backing policyholder liabilities can lead to volatility in total revenue that could obscure trends in underlying business performance and reduce comparability with prior periods.

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

(Millions of Canadian dollars, except percentage amounts)	For the three months ended								
	January 31 2022			October 31 2021			January 31 2021		
	Item excluded			Item excluded			Item excluded		
	As reported	Change in fair value of investments backing policyholder liabilities	Adjusted	As reported	Change in fair value of investments backing policyholder liabilities	Adjusted	As reported	Change in fair value of investments backing policyholder liabilities	Adjusted
Total revenue	\$ 13,066	\$ 430	\$ 13,496	\$ 12,376	\$ 266	\$ 12,642	\$ 12,943	\$ (346)	\$ 12,597
Non-interest expense	6,580	–	6,580	6,583	–	6,583	6,542	–	6,542
Efficiency ratio	50.4%		48.8%	53.2%		52.1%	50.5%		51.9%

Personal & Commercial Banking

	As at or for the three months ended		
	January 31 2022	October 31 2021	January 31 2021
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)			
Net interest income	\$ 3,229	\$ 3,169	\$ 3,161
Non-interest income	1,574	1,436	1,402
Total revenue	4,803	4,605	4,563
PCL on performing assets	(60)	(342)	(60)
PCL on impaired assets	189	134	225
PCL	129	(208)	165
Non-interest expense	2,022	2,087	1,978
Income before income taxes	2,652	2,726	2,420
Net income	\$ 1,974	\$ 2,033	\$ 1,793
Revenue by business			
Canadian Banking	\$ 4,598	\$ 4,414	\$ 4,352
Caribbean & U.S. Banking	205	191	211
Selected balance sheet and other information			
ROE	29.8%	32.5%	30.1%
NIM	2.41%	2.42%	2.56%
Efficiency ratio	42.1%	45.3%	43.3%
Operating leverage (1)	3.1%	2.5%	(0.7)%
Average total earning assets, net	\$ 530,800	\$518,900	\$489,800
Average loans and acceptances, net	534,400	522,200	493,500
Average deposits	539,300	524,300	490,100
AUA (2)	371,100	367,700	320,900
Average AUA	372,600	363,500	315,900
PCL on impaired loans as a % of average net loans and acceptances	0.14%	0.10%	0.18%
Other selected information – Canadian Banking			
Net income	\$ 1,914	\$ 1,970	\$ 1,754
NIM	2.41%	2.42%	2.54%
Efficiency ratio	40.8%	43.8%	41.9%
Operating leverage	2.8%	2.7%	(1.6)%

(1) See Glossary for composition of this measure.

(2) AUA represents period-end spot balances and includes securitized residential mortgages and credit card loans as at January 31, 2022 of \$15 billion and \$3 billion, respectively (October 31, 2021 – \$15 billion and \$3 billion; January 31, 2021 – \$15 billion and \$4 billion).

Financial performance

Q1 2022 vs. Q1 2021

Net income increased \$181 million or 10% from a year ago, primarily attributable to higher non-interest income and higher net interest income reflecting average volume growth of 9% in Canadian Banking that more than offset lower spreads.

Total revenue increased \$240 million or 5%.

Canadian Banking revenue increased \$246 million or 6%, primarily due to higher net interest income reflecting average volume growth of 10% in deposits and 8% in loans that more than offset the impact of lower spreads. Higher average mutual fund balances driving higher distribution fees and realized gains from commercial mortgage securitization activities also contributed to the increase.

Caribbean & U.S. Banking revenue decreased \$6 million.

NIM was down 15 bps, mainly due to changes in product mix, the ongoing impact of the low interest rate environment and competitive pricing pressures.

PCL decreased \$36 million or 22%, primarily reflecting lower provisions on impaired loans in our Canadian Banking portfolios, resulting in a decrease of 4 bps in the PCL on impaired loans ratio. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$44 million or 2%, mainly attributable to higher staff and technology related costs as well as increased marketing costs. These factors were partially offset by lower COVID-19 related costs.

Q1 2022 vs. Q4 2021

Net income decreased \$59 million or 3% from last quarter, primarily attributable to higher PCL. This was partially offset by higher non-interest income, higher net interest income driven by average volume growth of 3% in Canadian Banking, lower professional fees and seasonally lower marketing costs.

Total revenue increased \$198 million or 4%, mainly driven by higher net interest income reflecting average volume growth of 3% in Canadian Banking. Higher card service revenue, higher foreign exchange revenue reflecting increased client activity, and realized gains from commercial mortgage securitization activities also contributed to the increase.

NIM remained relatively flat.

PCL increased \$337 million, primarily reflecting lower releases of provisions on performing loans. Higher provisions on impaired loans, largely in our Canadian Banking portfolios, also contributed to the increase, resulting in an increase of 4 bps in the PCL on impaired loans ratio. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense decreased \$65 million or 3%, primarily attributable to lower professional fees and seasonally lower marketing costs.

Wealth Management

	As at or for the three months ended		
	January 31 2022	October 31 2021	January 31 2021
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)			
Net interest income	\$ 745	\$ 675	\$ 666
Non-interest income (1)	2,868	2,769	2,553
Total revenue (1)	3,613	3,444	3,219
PCL on performing assets	(13)	(7)	(2)
PCL on impaired assets	1	12	(27)
PCL	(12)	5	(29)
Non-interest expense (1)	2,581	2,718	2,406
Income before income taxes (1)	1,044	721	842
Net income (1)	\$ 795	\$ 558	\$ 641
Revenue by business			
Canadian Wealth Management	\$ 1,072	\$ 1,032	\$ 900
U.S. Wealth Management (including City National) (1)	1,727	1,628	1,534
U.S. Wealth Management (including City National) (US\$ millions) (1)	1,359	1,296	1,196
Global Asset Management	736	711	695
International Wealth Management	78	73	90
Selected balance sheet and other information			
ROE	17.7%	13.1%	15.4%
NIM	2.11%	2.06%	2.34%
Pre-tax margin (1), (2)	28.9%	20.9%	26.2%
Number of advisors (3)	5,564	5,548	5,457
Average total earning assets, net	\$ 139,900	\$ 130,000	\$ 112,900
Average loans and acceptances, net	92,900	87,000	81,800
Average deposits	161,500	151,500	137,900
AUA (4)	1,341,100	1,322,300	1,180,400
U.S. Wealth Management (including City National) (4)	712,700	704,200	623,000
U.S. Wealth Management (including City National) (US\$ millions) (4)	560,800	568,800	487,000
AUM (4)	1,013,100	1,000,600	890,000
Average AUA	1,351,300	1,314,100	1,171,300
Average AUM	1,021,200	997,400	883,800
PCL on impaired loans as a % of average net loans and acceptances	0.00%	0.05%	(0.13)%

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

(Millions of Canadian dollars, except percentage amounts)

	For the three months ended	
	Q1 2022 vs. Q1 2021	Q1 2022 vs. Q4 2021
Increase (decrease):		
Total revenue	\$ (24)	\$ 20
PCL	–	–
Non-interest expense	(19)	16
Net income	(4)	4
Percentage change in average U.S. dollar equivalent of C\$1.00	1%	(1)%
Percentage change in average British pound equivalent of C\$1.00	2%	–%
Percentage change in average Euro equivalent of C\$1.00	8%	2%

(1) Effective Q4 2021, gains (losses) on economic hedges of our U.S. share-based compensation plans, which are reflected in revenue, and related variability in share-based compensation expense driven by changes in the fair value of liabilities relating to our U.S. share-based compensation plans have been reclassified from our Wealth Management segment to Corporate Support. Comparative amounts have been reclassified to conform with this presentation.

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

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

(4) Represents period-end spot balances.

Financial performance

Q1 2022 vs. Q1 2021

Net income increased \$154 million or 24% from a year ago, mainly due to higher average fee-based client assets. A partial release of a legal provision taken in U.S. Wealth Management (including City National) in the prior quarter, and higher net interest income driven by average volume growth that more than offset lower spreads also contributed to the increase. These factors were partially offset by higher variable compensation and higher staff-related costs.

Total revenue increased \$394 million or 12%.

Canadian Wealth Management revenue increased \$172 million or 19%, primarily due to higher average fee-based client assets reflecting market appreciation and net sales.

U.S. Wealth Management (including City National) revenue increased \$193 million or 13%. In U.S. dollars, revenue increased \$163 million or 14%, primarily due to higher average fee-based client assets reflecting market appreciation and net sales and higher net interest income reflecting average volume growth of 13% in loans and 21% in deposits that more than offset the impact of lower spreads.

Global Asset Management revenue increased \$41 million or 6%, primarily due to higher average fee-based client assets reflecting market appreciation and net sales. This was partially offset by lower performance fees and changes in the fair value of seed capital investments.

International Wealth Management revenue decreased \$12 million.

PCL increased \$17 million or 59%, largely in U.S. Wealth Management (including City National), reflecting higher provisions and lower recoveries on impaired loans in the current quarter as compared to the prior year, resulting in an increase of 13 bps in the PCL on impaired loans ratio. This was partially offset by higher releases on performing loans in the current quarter. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$175 million or 7%, mainly due to higher variable compensation commensurate with increased results. Higher staff and technology-related costs also contributed to the increase. Partly offsetting these factors was the partial release of a legal provision taken in U.S. Wealth Management (including City National) in the prior quarter.

Q1 2022 vs. Q4 2021

Net income increased \$237 million or 42% from last quarter, as we released a portion of a legal provision that was taken in U.S. Wealth Management (including City National) in the prior quarter. Higher average fee-based client assets and higher net interest income driven by average volume growth also contributed to the increase.

Total revenue increased \$169 million or 5%, largely due to higher average fee-based client assets reflecting market appreciation and net sales, as well as higher net interest income driven by average volume growth of 7% in both loans and deposits.

PCL decreased \$17 million, largely reflecting lower provisions and higher recoveries on impaired loans in U.S. Wealth Management (including City National), resulting in a decrease of 5 bps in the PCL on impaired loans ratio. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense decreased \$137 million or 5%, as we released a portion of a legal provision that was taken in U.S. Wealth Management (including City National) in the prior quarter. This was partially offset by higher staff-related costs, mainly reflecting seasonally higher share-based compensation.

Insurance

	As at or for the three months ended		
	January 31 2022	October 31 2021	January 31 2021
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)			
Non-interest income			
Net earned premiums	\$ 1,599	\$ 1,569	\$ 1,248
Investment income, gains/(losses) on assets supporting insurance policyholder liabilities (1)	(252)	(128)	524
Fee income	52	60	37
Total revenue	1,399	1,501	1,809
PCL	–	(1)	–
Insurance policyholder benefits and claims (1)	914	939	1,331
Insurance policyholder acquisition expense	83	93	75
Non-interest expense	147	152	149
Income before income taxes	255	318	254
Net income	\$ 197	\$ 267	\$ 201
Revenue by business			
Canadian Insurance	\$ 693	\$ 796	\$ 1,157
International Insurance	706	705	652
Selected balances and other information			
ROE	32.4%	42.8%	34.5%
Premiums and deposits (2)	\$ 1,814	\$ 1,795	\$ 1,444
Fair value changes on investments backing policyholder liabilities (1)	(430)	(266)	346

(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 PBCAE.

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

Financial performance

Q1 2022 vs. Q1 2021

Net income decreased \$4 million or 2% from a year ago, largely due to claims experience and the impact of lower new longevity reinsurance contracts. These factors were partially offset by business growth and higher favourable investment-related experience.

Total revenue decreased \$410 million or 23%.

Canadian Insurance revenue decreased \$464 million or 40%, primarily due to the change in fair value of investments backing policyholder liabilities, which is largely offset in PBCAE as indicated below. This was partially offset by higher group annuity sales and business growth across all products.

International Insurance revenue increased \$54 million or 8%, primarily due to the change in fair value of investments backing policyholder liabilities, which is largely offset in PBCAE as indicated below, and business growth in longevity reinsurance.

PBCAE decreased \$409 million or 29%, primarily reflecting the change in fair value of investments backing policyholder liabilities, which is largely offset in revenue. Higher favourable investment-related experience also contributed to the decrease. These factors were partially offset by higher group annuity sales, business growth, claims experience mainly in life retrocession, and the impact of lower new longevity reinsurance contracts.

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

Q1 2022 vs. Q4 2021

Net income decreased \$70 million or 26% from last quarter, primarily due to favourable annual actuarial assumption updates in the prior quarter.

Total revenue decreased \$102 million or 7%, mainly due to the change in fair value of investments backing policyholder liabilities, which is largely offset in PBCAE as indicated below. This was partially offset by investment income and higher group annuity sales.

PBCAE decreased \$35 million or 3%, primarily reflecting the change in fair value of investments backing policyholder liabilities, which is largely offset in revenue. Investment-related experience also contributed to the decrease. These factors were partially offset by favourable annual actuarial assumption updates in the prior quarter, largely related to mortality and economic assumptions, the impact of lower new longevity reinsurance contracts, as well as claims experience mainly in life retrocession.

Non-interest expense decreased \$5 million or 3%.

Investor & Treasury Services

	As at or for the three months ended		
	January 31 2022	October 31 2021	January 31 2021
<i>(Millions of Canadian dollars, except percentage amounts and as otherwise noted)</i>			
Net interest income	\$ 163	\$ 155	\$ 91
Non-interest income	424	393	474
Total revenue	587	548	565
PCL on performing assets	–	(1)	(2)
PCL on impaired assets	–	–	–
PCL	–	(1)	(2)
Non-interest expense	420	412	401
Income before income taxes	167	137	166
Net income	\$ 118	\$ 109	\$ 123
Selected balance sheet and other information			
ROE	15.7%	15.2%	15.3%
Average deposits	\$ 244,000	\$ 233,300	\$ 204,300
Average client deposits	66,300	65,700	63,100
Average wholesale funding deposits	177,700	167,600	141,200
AUA ⁽¹⁾	4,716,500	4,640,900	4,617,300
Average AUA	4,659,100	4,745,400	4,628,700

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

(Millions of Canadian dollars, except percentage amounts)

	For the three months ended	
	Q1 2022 vs. Q1 2021	Q1 2022 vs. Q4 2021
Increase (decrease):		
Total revenue	\$ (16)	\$ (3)
PCL	–	–
Non-interest expense	(15)	(3)
Net income	–	–
Percentage change in average U.S. dollar equivalent of C\$1.00	1%	(1)%
Percentage change in average British pound equivalent of C\$1.00	2%	–%
Percentage change in average Euro equivalent of C\$1.00	8%	2%

(1) Represents period-end spot balances

Financial performance

Q1 2022 vs. Q1 2021

Net income decreased \$5 million or 4% from a year ago, mainly reflecting higher technology-related costs that more than offset higher funding and liquidity revenue.

Total revenue increased \$22 million or 4%, mainly due to higher funding and liquidity revenue reflecting a heightened impact from elevated enterprise liquidity in the prior year and increased market opportunities, partially offset by lower gains from the disposition of investment securities. Higher client deposit revenue reflecting growth in client deposit volumes and cash management activity, as well as higher revenue from increased client activity in our asset services business also contributed to the increase. These factors were partially offset by the impact of foreign exchange translation.

Non-interest expense increased \$19 million or 5%, largely attributable to higher technology-related costs. The impact of ongoing efficiency initiatives, reflecting continued investment partly offset by realized benefits, and a favourable value added and sales tax adjustment in the prior year also contributed to the increase. These factors were partially offset by the impact of foreign exchange translation.

Q1 2022 vs. Q4 2021

Net income increased \$9 million or 8% from last quarter, mainly driven by higher revenue from funding and liquidity and client deposits, partially offset by annual regulatory costs and higher taxes due to favourable tax adjustments in the prior quarter.

Total revenue increased \$39 million or 7%, primarily due to higher funding and liquidity revenue driven by money market opportunities in the current quarter, and higher client deposit revenue reflecting improved client deposit margins and cash management activity.

Non-interest expense increased \$8 million or 2%, largely attributable to annual regulatory costs in the current quarter, partially offset by the impact of ongoing efficiency initiatives.

Capital Markets

	As at or for the three months ended		
	January 31 2022	October 31 2021	January 31 2021
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)			
Net interest income (1)	\$ 1,241	\$ 1,111	\$ 1,199
Non-interest income (1)	1,569	1,187	1,509
Total revenue (1)	2,810	2,298	2,708
PCL on performing assets	(6)	(11)	(41)
PCL on impaired assets	(6)	(11)	18
PCL	(12)	(22)	(23)
Non-interest expense	1,472	1,155	1,441
Income before income taxes	1,350	1,165	1,290
Net income	\$ 1,030	\$ 920	\$ 1,067
Revenue by business			
Corporate and Investment Banking	\$ 1,393	\$ 1,225	\$ 1,112
Global Markets	1,498	1,122	1,626
Other	(81)	(49)	(30)
Selected balance sheet and other information			
ROE	16.4%	16.1%	18.5%
Average total assets	\$ 806,600	\$ 717,000	\$ 743,100
Average trading securities	139,600	125,300	125,200
Average loans and acceptances, net	111,100	106,100	98,300
Average deposits	75,900	73,700	73,600
PCL on impaired loans as a % of average net loans and acceptances	(0.04)%	(0.04)%	0.07%

(1) The taxable equivalent basis (teb) adjustment for the three months ended January 31, 2022 was \$142 million (October 31, 2021 – \$125 million; January 31, 2021 – \$128 million). For further discussion, refer to the How we measure and report our business segments section of our 2021 Annual Report.

Financial performance

Q1 2022 vs. Q1 2021

Net income decreased \$37 million or 3% from a year ago, as higher revenue in Corporate and Investment Banking was more than offset by lower fixed income trading revenue in Global Markets, higher taxes reflecting favourable tax adjustments last year and changes in earnings mix, and higher compensation.

Total revenue increased \$102 million or 4%.

Corporate and Investment Banking revenue increased \$281 million or 25%, primarily driven by higher loan syndication and M&A activity, as well as higher lending revenue, across most regions.

Global Markets revenue decreased \$128 million or 8%, largely due to lower fixed income trading revenue in the U.S. and Europe driven by reduced client activity reflecting market conditions.

Other revenue decreased \$51 million, mainly reflecting fair value changes in our legacy U.S. portfolios.

PCL increased \$11 million or 48%, mainly reflecting lower releases of provisions on performing loans in the current quarter and higher provisions on other financial assets. This was partially offset by recoveries on impaired loans in the current quarter as compared to provisions taken on impaired loans in the prior year, resulting in a decrease of 11 bps in the PCL on impaired loans ratio. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$31 million or 2%, mainly due to higher compensation on increased revenue.

Q1 2022 vs. Q4 2021

Net income increased \$110 million or 12% from last quarter, largely driven by higher revenue in Global Markets and Corporate and Investment Banking. These factors were partially offset by higher compensation.

Total revenue increased \$512 million or 22%, mainly due to higher fixed income and equity trading revenue across most regions reflecting increased client activity. Higher M&A activity across all regions and higher loan syndication activity across most regions also contributed to the increase.

PCL increased \$10 million or 45%, primarily reflecting provisions taken on other financial assets in the current quarter as compared to releases in the prior quarter.

Non-interest expense increased \$317 million or 27%, primarily due to higher compensation on improved results.

Corporate Support

(Millions of Canadian dollars)	For the three months ended		
	January 31 2022	October 31 2021	January 31 2021
Net interest income (loss) (1)	\$ (107)	\$ (49)	\$ (82)
Non-interest income (loss) (1), (2)	(39)	29	161
Total revenue (1), (2)	(146)	(20)	79
PCL	–	–	(1)
Non-interest expense (2)	(62)	59	167
Income (loss) before income taxes (1), (2)	(84)	(79)	(87)
Income taxes (recoveries) (1), (2)	(65)	(84)	(109)
Net income (loss) (2)	\$ (19)	\$ 5	\$ 22

(1) Teb adjusted.

(2) Effective Q4 2021, gains (losses) on economic hedges of our U.S. share-based compensation plans, which are reflected in revenue, and related variability in share-based compensation expense driven by changes in the fair value of liabilities relating to our U.S. share-based compensation plans have been reclassified from our Wealth Management segment to Corporate Support. Comparative amounts have been reclassified to conform with this presentation.

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

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

The teb amount for the three months ended January 31, 2022 was \$142 million, compared to \$125 million in the prior quarter and \$128 million in the same quarter last year. For the three months ended January 31, 2022, revenue included losses of \$89 million (October 31, 2021 and January 31, 2021 – gains of \$41 million and gains of \$168 million, respectively) on economic hedges of our U.S. Wealth Management (including City National) share-based compensation plans, and non-interest expense included \$(71) million (October 31, 2021 and January 31, 2021 – \$42 million and \$157 million, respectively) of share-based compensation expense driven by changes in the fair value of liabilities relating to our U.S. Wealth Management (including City National) share-based compensation plans.

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

Q1 2022

Net loss was \$19 million, primarily due to unfavourable tax adjustments, partially offset by residual unallocated items.

Q4 2021

Net income was \$5 million.

Q1 2021

Net income was \$22 million, primarily 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)	2022		2021			2020		
	Q1	Q4	Q3	Q2	Q1	Q4	Q3	Q2
Personal & Commercial Banking	\$ 4,803	\$ 4,605	\$ 4,651	\$ 4,527	\$ 4,563	\$ 4,373	\$ 4,348	\$ 4,400
Wealth Management ⁽²⁾	3,613	3,444	3,373	3,260	3,219	3,061	3,008	2,955
Insurance	1,399	1,501	1,754	536	1,809	958	2,212	197
Investor & Treasury Services	587	548	517	534	565	521	484	709
Capital Markets ⁽³⁾	2,810	2,298	2,463	2,718	2,708	2,275	2,748	2,313
Corporate Support ^{(2), (3)}	(146)	(20)	(2)	43	79	(96)	120	(241)
Total revenue	13,066	12,376	12,756	11,618	12,943	11,092	12,920	10,333
PCL	105	(227)	(540)	(96)	110	427	675	2,830
PBCAE	997	1,032	1,304	149	1,406	461	1,785	(177)
Non-interest expense	6,580	6,583	6,420	6,379	6,542	6,058	6,380	5,942
Income before income taxes	5,384	4,988	5,572	5,186	4,885	4,146	4,080	1,738
Income taxes	1,289	1,096	1,276	1,171	1,038	900	879	257
Net income	\$ 4,095	\$ 3,892	\$ 4,296	\$ 4,015	\$ 3,847	\$ 3,246	\$ 3,201	\$ 1,481
EPS – basic	\$ 2.84	\$ 2.68	\$ 2.97	\$ 2.76	\$ 2.66	\$ 2.23	\$ 2.20	\$ 1.00
– diluted	2.84	2.68	2.97	2.76	2.66	2.23	2.20	1.00
Effective income tax rate	23.9%	22.0%	22.9%	22.6%	21.2%	21.7%	21.5%	14.8%
Period average US\$ equivalent of C\$1.00	\$ 0.787	\$ 0.796	\$ 0.812	\$ 0.798	\$ 0.779	\$ 0.756	\$ 0.737	\$ 0.725

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

(2) Effective Q4 2021, gains (losses) on economic hedges of our U.S. share-based compensation plans, which are reflected in revenue, and related variability in share-based compensation expense driven by changes in the fair value of liabilities relating to our U.S. share-based compensation plans have been reclassified from our Wealth Management segment to Corporate Support. Comparative amounts have been reclassified to conform with this presentation.

(3) Teb adjusted. For further discussion, refer to the How we measure and report our business segments section of our 2021 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 generally results in lower client activity and may negatively impact the results of our Capital Markets trading business.

Trend analysis

Earnings have generally trended upward over the period. Earnings in the second quarter of 2020 reflected the impact of the onset of the COVID-19 pandemic across all of our business segments which resulted 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. Market conditions subsequently improved, and while impacts from the COVID-19 pandemic and its associated downstream implications persist, earnings have increased since the second quarter of 2020. Quarterly earnings are also affected by the impact of foreign exchange translation.

Personal & Commercial Banking revenue has benefitted from solid volume growth over the period. NIM has been negatively impacted by margin compression over the period from the low interest rate environment, mainly reflecting cumulative BoC rate cuts of 150 bps in the second quarter of 2020.

Wealth Management revenue has benefitted from growth in average-fee based client assets and volume growth over the period. The low interest rate environment, mainly reflecting the cumulative U.S. Fed rate cuts of 150 bps in the second quarter of 2020, has negatively impacted revenue over the period.

Insurance revenue has fluctuated over the period, primarily due to the impact of changes in the fair value of investments backing policyholder liabilities as well as the timing of group annuity sales, both of which are largely offset in PBCAE. Group annuity sales are generally higher in the first and fourth quarters.

Investor & Treasury Services revenue has been impacted by interest rate movements, market volatility and client activity over the period, which resulted in heightened fluctuations in the second and third quarters of 2020 following the onset of the COVID-19 pandemic.

Capital Markets revenue is influenced, to a large extent, by market conditions that impact client activity, with first quarter results generally stronger than those in the remaining quarters. Markets experienced significant levels of volatility following the onset of the COVID-19 pandemic, which resulted in increased client activity and fluctuations in trading revenue, including higher trading revenue in the third quarter of 2020 and the first quarter of 2021. Elevated market volatility in the second quarter of 2020 also resulted in loan underwriting markdowns, with partial reversals in the latter half of 2020. The period starting from the first quarter of 2021 generally saw strong results from M&A and loan syndication activity as well as equity origination.

PCL is comprised of provisions taken on performing assets and provisions taken on impaired assets. PCL on performing assets has fluctuated over the period as it is impacted by macroeconomic conditions, changes in exposures and credit quality. The impact of the COVID-19 pandemic resulted in a significant increase in provisions in 2020, largely in the second quarter. Throughout 2021 and the first quarter of 2022, we saw improvements in our macroeconomic and credit quality outlook resulting in releases of provisions on performing assets. PCL on impaired assets trended lower over the period. The recovery that has been underway since the sharp drop of economic activity in calendar 2020 as well as the impact of the COVID-19 related government support and calendar 2020 payment deferral programs resulted in lower provisions on impaired loans, largely in our Canadian Banking retail portfolios, beginning the second half of 2020, with the fourth quarter of 2021 reflecting the lowest levels seen over the period. We saw higher provisions on impaired loans in Capital Markets, largely in the oil and gas sector, over the majority of 2020. Since the first quarter of 2021, we saw lower provisions on impaired loans in Capital Markets, largely due to recoveries in the oil and gas sector.

PBCAE has fluctuated over the period reflecting changes in the fair value of investments backing policyholder liabilities, which is impacted by changes in market conditions, as well as group annuity sales, both of which are largely offset in revenue. PBCAE has also fluctuated due to the impact of investment-related experience and claims costs over the period. Actuarial adjustments, which generally occur in the fourth quarter of each year, also impact PBCAE.

Non-interest expense has generally trended upwards over the period. Variable compensation has fluctuated over the period, commensurate with fluctuations in revenue and earnings, including the impact of decreased results in the second quarter of 2020. Changes in the fair value of our U.S. share-based compensation plans, which are largely offset in revenue, have also contributed to fluctuations over the period and are impacted by market conditions. In 2020, Non-interest expense also reflected incremental COVID-19 related costs that subsided in 2021. The fourth quarter of 2021 included a legal provision in U.S. Wealth Management (including City National) that was partially released in the first quarter of 2022.

Our effective income tax rate has fluctuated over the period, mostly due to varying levels of tax adjustments and changes in earnings mix. 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 lower earnings in that quarter.

Financial condition

Condensed balance sheets

(Millions of Canadian dollars)	As at	
	January 31 2022	October 31 2021
Assets		
Cash and due from banks	\$ 131,163	\$ 113,846
Interest-bearing deposits with banks	63,420	79,638
Securities, net of applicable allowance (1)	303,095	284,724
Assets purchased under reverse repurchase agreements and securities borrowed	312,126	307,903
Loans		
Retail	513,970	503,598
Wholesale	230,108	218,066
Allowance for loan losses	(4,047)	(4,089)
Other – Derivatives	92,319	95,541
– Other (2)	110,315	107,096
Total assets	\$1,752,469	\$ 1,706,323
Liabilities		
Deposits	\$1,142,842	\$ 1,100,831
Other – Derivatives	88,102	91,439
– Other (2)	408,956	405,698
Subordinated debentures	10,561	9,593
Total liabilities	1,650,461	1,607,561
Equity attributable to shareholders	101,910	98,667
Non-controlling interests	98	95
Total equity	102,008	98,762
Total liabilities and equity	\$1,752,469	\$ 1,706,323

(1) Securities are comprised of trading and investment securities.

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

Q1 2022 vs. Q4 2021

Total assets increased \$46 billion or 3% from October 31, 2021. Foreign exchange translation increased total assets by \$25 billion.

Cash and due from banks was up \$17 billion or 15%, primarily due to higher deposits with central banks, reflecting our short-term cash and liquidity management activities.

Interest-bearing deposits with banks decreased \$16 billion or 20%, primarily due to lower deposits with central banks, reflecting our short-term cash management activities.

Securities, net of applicable allowance, were up \$18 billion or 6%, mainly due to higher equity trading securities reflecting favourable market conditions, and higher government securities and corporate debt securities largely driven by our short-term cash management activities. The impact of foreign exchange translation also contributed to the increase.

Assets purchased under reverse repurchase agreements (reverse repos) and securities borrowed increased \$4 billion or 1%, largely due to the impact of foreign exchange translation, partially offset by decreased client demand.

Loans (net of Allowance for loan losses) were up \$22 billion or 3%, largely due to volume growth in wholesale loans and residential mortgages. The impact of foreign exchange translation also contributed to the increase.

Derivative assets were down \$3 billion or 3%, mainly attributable to lower fair values on foreign exchange, interest rate and other contracts. These factors were largely offset by the impact of foreign exchange translation.

Other assets were up \$3 billion or 3%, largely due to higher margin deposits and the impact of foreign exchange translation.

Total liabilities increased \$43 billion or 3%. Foreign exchange translation increased total liabilities by \$25 billion.

Deposits increased \$42 billion or 4%, mainly as a result of higher retail and business deposits driven by both increased client activities and higher liquidity maintained by our clients amidst the COVID-19 pandemic. The impact of foreign exchange translation and issuances of fixed term notes due to funding requirements also contributed to the increase.

Derivative liabilities were down \$3 billion or 4%, mainly attributable to lower fair values on foreign exchange, other and interest rate contracts. These factors were largely offset by the impact of foreign exchange translation.

Other liabilities were up \$3 billion or 1%, largely due to the impact of foreign exchange translation.

Total equity increased \$3 billion or 3%, reflecting earnings, net of dividends and share repurchases. Foreign currency translation adjustments and the issuance of preferred shares also contributed to the increase.

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 Q1 2022 Report to Shareholders. Our significant off-balance sheet transactions include those described on pages 50 to 52 of our 2021 Annual Report.

Risk management

Credit risk

Credit risk is the risk of loss associated with an obligor's potential inability or unwillingness to fulfill its contractual obligations on a timely basis and may arise directly from the risk of default of a primary obligor (e.g., issuer, debtor, counterparty, borrower or policyholder), indirectly from a secondary obligor (e.g., guarantor or reinsurer), through off-balance sheet exposures, contingent credit risk, associated credit risk and/or transactional risk. Credit risk includes counterparty credit risk arising from both trading and non-trading activities.

Our Enterprise Credit Risk Management Framework (ECRMF) 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 ECRMF as described in our 2021 Annual Report.

Residential mortgages and home equity lines of credit (insured vs. uninsured) ⁽¹⁾

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

(Millions of Canadian dollars, except percentage amounts)	As at January 31, 2022					
	Residential mortgages				Home equity lines of credit ⁽³⁾	
	Insured ⁽²⁾		Uninsured		Total	Total
Region ⁽⁴⁾						
Canada						
Atlantic provinces	\$ 8,392	48%	\$ 9,195	52%	\$ 17,587	\$ 1,603
Quebec	12,618	31	28,397	69	41,015	3,142
Ontario	33,305	19	141,413	81	174,718	16,014
Alberta	20,458	49	21,144	51	41,602	5,249
Saskatchewan and Manitoba	9,133	46	10,820	54	19,953	1,959
B.C. and territories	13,035	19	54,071	81	67,106	7,359
Total Canada ⁽⁵⁾	96,941	27	265,040	73	361,981	35,326
U.S.	–	–	25,309	100	25,309	1,434
Other International	–	–	2,811	100	2,811	1,624
Total International	–	–	28,120	100	28,120	3,058
Total	\$ 96,941	25%	\$ 293,160	75%	\$ 390,101	\$ 38,384

(Millions of Canadian dollars, except percentage amounts)	As at October 31, 2021					
	Residential mortgages				Home equity lines of credit ⁽³⁾	
	Insured ⁽²⁾		Uninsured		Total	Total
Region ⁽⁴⁾						
Canada						
Atlantic provinces	\$ 8,407	48%	\$ 8,944	52%	\$ 17,351	\$ 1,602
Quebec	12,742	32	27,567	68	40,309	3,135
Ontario	34,211	20	135,767	80	169,978	15,891
Alberta	20,680	50	20,821	50	41,501	5,343
Saskatchewan and Manitoba	9,179	46	10,714	54	19,893	1,970
B.C. and territories	13,314	20	51,823	80	65,137	7,383
Total Canada ⁽⁵⁾	98,533	28	255,636	72	354,169	35,324
U.S.	1	–	23,422	100	23,423	1,413
Other International	–	–	2,740	100	2,740	1,518
Total International	1	–	26,162	100	26,163	2,931
Total	\$ 98,534	26%	\$ 281,798	74%	\$ 380,332	\$ 38,255

- (1) Disclosure is provided in accordance with the requirements of OSFI's Guideline B-20 (Residential Mortgage Underwriting Practices and Procedures).
- (2) Insured residential mortgages are mortgages whereby our exposure to default is mitigated by insurance through the Canadian Mortgage and Housing Corporation or other private mortgage default insurers.
- (3) Home equity lines of credit are uninsured and reported within the personal loan category. The amounts in the U.S. and Other International include term loans collateralized by residential mortgages.
- (4) 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; B.C. and territories are comprised of British Columbia, Nunavut, Northwest Territories and Yukon.
- (5) Total consolidated residential mortgages in Canada of \$362 billion (October 31, 2021 – \$354 billion) includes \$11 billion (October 31, 2021 – \$11 billion) of mortgages with commercial clients in Canadian Banking, of which \$8 billion (October 31, 2021 – \$8 billion) are insured, and \$18 billion (October 31, 2021 – \$18 billion) of residential mortgages held for securitization purposes in Capital Markets. All of the residential mortgages held for securitization purposes are insured (October 31, 2021 – all insured).

Residential mortgages portfolio by amortization period ⁽¹⁾

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

Amortization period	As at					
	January 31 2022			October 31 2021		
	Canada	U.S. and other International	Total	Canada	U.S. and other International	Total
≤ 25 years	74%	26%	71%	75%	27%	71%
> 25 years ≤ 30 years	26	74	29	25	71	28
> 30 years ≤ 35 years	–	–	–	–	2	1
Total	100%	100%	100%	100%	100%	100%

- (1) Disclosure is provided in accordance with the requirements of OSFI's Guideline B-20 (Residential Mortgage Underwriting Practices and Procedures).

Average loan-to-value (LTV) ratios ⁽¹⁾

The following table provides a summary of our average LTV ratios for newly originated and acquired uninsured residential mortgages and RBC Homeline Plan[®] products by geographic region, as well as the respective LTV ratios for our total Canadian Banking residential mortgage portfolio outstanding.

	For the three months ended			
	January 31 2022		October 31 2021	
	Uninsured		Uninsured	
	Residential mortgages (2)	RBC Homeline Plan [®] products (3)	Residential mortgages (2)	RBC Homeline Plan [®] products (3)
Average of newly originated and acquired for the period, by region ⁽⁴⁾				
Atlantic provinces	73%	74%	74%	74%
Quebec	72	73	72	73
Ontario	71	67	71	67
Alberta	73	72	74	72
Saskatchewan and Manitoba	74	75	73	75
B.C. and territories	68	66	69	66
U.S.	76	n.m.	74	n.m.
Other International	72	n.m.	74	n.m.
Average of newly originated and acquired for the period ^{(5), (6)}	71%	68%	71%	68%
Total Canadian Banking residential mortgages portfolio ⁽⁷⁾	52%	46%	52%	46%

- (1) Disclosure is provided in accordance with the requirements of OSFI's Guideline B-20 (Residential Mortgage Underwriting Practices and Procedures).
(2) Residential mortgages exclude residential mortgages within the RBC Homeline Plan[®] products.
(3) RBC Homeline Plan[®] products are comprised of both residential mortgages and home equity lines of credit.
(4) 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.
(5) The average LTV ratios for newly originated and acquired uninsured residential mortgages and RBC Homeline Plan[®] products are calculated on a weighted basis by mortgage amounts at origination.
(6) 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.
(7) Weighted by mortgage balances and adjusted for property values based on the Teranet – National Bank National Composite House Price Index.
n.m. not meaningful

Net International wholesale exposure by region, asset type and client type ^{(1), (2)}

The following table provides a breakdown of our credit risk exposure by region, asset type and client type.

(Millions of Canadian dollars)	As at								October 31 2021
	January 31 2022								
	Asset type				Client type				
	Loans Outstanding	Securities ⁽³⁾	Repo-style transactions	Derivatives	Financials	Sovereign	Corporate	Total	Total
Europe (excluding U.K.)	\$ 14,785	\$ 34,407	\$ 1,211	\$ 1,370	\$ 16,789	\$ 22,242	\$ 12,742	\$ 51,773	\$ 49,893
U.K.	10,031	33,496	629	1,659	12,597	23,255	9,963	45,815	34,075
Latin America and the Caribbean	8,038	11,645	345	133	7,294	4,964	7,903	20,161	22,937
Asia-Pacific	6,203	30,600	1,175	702	8,950	25,225	4,505	38,680	27,871
Other ⁽⁴⁾	199	78	295	1	341	10	222	573	555
Net International exposure ^{(5), (6)}	\$ 39,256	\$ 110,226	\$ 3,655	\$ 3,865	\$ 45,971	\$ 75,696	\$ 35,335	\$ 157,002	\$ 135,331

- (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 \$351 billion against repo-style transactions (October 31, 2021 – \$349 billion) and \$9 billion against derivatives (October 31, 2021 – \$11 billion).
(3) Securities include \$20 billion of trading securities (October 31, 2021 – \$22 billion), \$57 billion of deposits (October 31, 2021 – \$34 billion), and \$33 billion of investment securities (October 31, 2021 – \$33 billion).
(4) Includes exposures in the Middle East and Africa.
(5) Excludes \$3 billion (October 31, 2021 – \$3 billion) of exposures to supranational agencies.
(6) Reflects \$2 billion of mitigation through credit default swaps, which are largely used to hedge single name exposures and market risk (October 31, 2021 – \$2 billion).

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		
	January 31 2022	October 31 2021	January 31 2021
Personal & Commercial Banking	\$ 128	\$ (204)	\$ 168
Wealth Management	(12)	5	(28)
Capital Markets	(16)	(18)	(19)
Corporate Support and other	–	(1)	–
PCL – Loans	100	(218)	121
PCL – Other financial assets (1)	5	(9)	(11)
Total PCL	\$ 105	\$ (227)	\$ 110
PCL on loans is comprised of:			
Retail	\$ (58)	\$ (210)	\$ (63)
Wholesale	(22)	(145)	(34)
PCL on performing loans	(80)	(355)	(97)
Retail	138	119	180
Wholesale	42	18	38
PCL on impaired loans	180	137	218
PCL – Loans	\$ 100	\$ (218)	\$ 121
PCL on loans as a % of average net loans and acceptances	0.05%	(0.12)%	0.07%
PCL on impaired loans as a % of average net loans and acceptances	0.09%	0.07%	0.13%

Additional information by geography (2)

Canada			
Residential mortgages	\$ 2	\$ (1)	\$ 15
Personal	60	50	85
Credit cards	70	65	67
Small business	6	10	9
Retail	138	124	176
Wholesale	37	15	34
PCL on impaired loans	175	139	210
U.S.			
Retail	(1)	4	(1)
Wholesale	3	7	(21)
PCL on impaired loans	2	11	(22)
Other International			
Retail	1	(9)	5
Wholesale	2	(4)	25
PCL on impaired loans	3	(13)	30
PCL on impaired loans	\$ 180	\$ 137	\$ 218

(1) PCL on other financial assets mainly represents provisions on debt securities measured at fair value through other comprehensive income (FVOCI) and amortized cost, accounts receivable and financial guarantees.

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

Q1 2022 vs. Q1 2021

Total PCL was \$105 million. PCL on loans of \$100 million decreased \$21 million or 17% from a year ago, due to lower provisions in Personal & Commercial Banking, partially offset by lower releases of provisions in Wealth Management. The PCL on loans ratio of 5 bps decreased 2 bps.

PCL on performing loans was \$(80) million, compared to \$(97) million in the prior year, increasing \$17 million or 18%, primarily reflecting lower releases of provisions in Capital Markets, partially offset by higher releases of provisions in Wealth Management.

PCL on impaired loans of \$180 million decreased \$38 million or 17%, largely reflecting lower provisions in Personal & Commercial Banking and recoveries in Capital Markets in the current quarter as compared to provisions taken in the prior year. This was partially offset by provisions taken in the current quarter as compared to recoveries in the prior year in Wealth Management.

PCL on other financial assets was \$5 million, compared to \$(11) million in the prior year, mainly in Capital Markets reflecting provisions taken in the current quarter as compared to releases in the prior year.

PCL on loans in Personal & Commercial Banking decreased \$40 million or 24%, primarily reflecting lower provisions on impaired loans in the majority of our Canadian Banking retail portfolios due to the economic recovery underway and the continued impact of the COVID-19 related government support programs.

PCL on loans in Wealth Management increased \$16 million or 57%, largely in U.S. Wealth Management (including City National). The increase reflected higher provisions and lower recoveries on impaired loans in the current quarter as compared to the prior year, primarily in the consumer discretionary sector, partially offset by higher releases on performing loans in the current quarter primarily driven by improvements in our macroeconomic and credit quality outlook.

PCL on loans in Capital Markets increased \$3 million or 16%, mainly due to lower releases of provisions on performing loans as the current quarter releases reflected a lower impact from improvements in our macroeconomic and credit quality outlook. This was largely offset by recoveries on impaired loans in the current quarter as compared to provisions taken in the prior year.

Q1 2022 vs. Q4 2021

PCL on loans of \$100 million increased \$318 million from last quarter, primarily due to higher provisions in Personal & Commercial Banking, partially offset by lower provisions in Wealth Management. The PCL on loans ratio of 5 bps increased 17 bps.

PCL on performing loans was \$(80) million, compared to \$(355) million in the prior quarter, increasing \$275 million or 77%, primarily due to lower releases of provisions in Personal & Commercial Banking as the current quarter releases reflected a lower impact from improvements in our macroeconomic and credit quality outlook.

PCL on impaired loans of \$180 million increased \$43 million or 31%, primarily due to higher provisions in Personal & Commercial Banking, partially offset by lower provisions in Wealth Management.

PCL on loans in Personal & Commercial Banking increased \$332 million, primarily due to lower releases of provisions on performing loans in our Canadian Banking portfolios, as described above. Higher provisions on impaired loans in our Canadian Banking commercial portfolios, largely in the other services sector, and higher provisions in our Canadian Banking retail portfolios also contributed to the increase.

PCL on loans in Wealth Management decreased \$17 million, largely due to lower provisions and higher recoveries on impaired loans in U.S. Wealth Management (including City National) in the current quarter.

Gross impaired loans

(Millions of Canadian dollars, except percentage amounts)	As at and for the three months ended		
	January 31 2022	October 31 2021	January 31 2021
Personal & Commercial Banking	\$ 1,524	\$ 1,590	\$ 1,726
Wealth Management	199	233	289
Capital Markets	418	485	857
Total GIL	\$ 2,141	\$ 2,308	\$ 2,872
Canada (1)			
Retail	\$ 694	\$ 716	\$ 768
Wholesale	497	555	708
GIL	1,191	1,271	1,476
U.S. (1)			
Retail	23	23	27
Wholesale	393	412	677
GIL	416	435	704
Other International (1)			
Retail	209	212	215
Wholesale	325	390	477
GIL	534	602	692
Total GIL	\$ 2,141	\$ 2,308	\$ 2,872
Impaired loans, beginning balance	\$ 2,308	\$ 2,561	\$ 3,195
Classified as impaired during the period (new impaired) (2)	263	298	530
Net repayments (2)	(125)	(106)	(206)
Amounts written off	(237)	(286)	(314)
Other (2), (3)	(68)	(159)	(333)
Impaired loans, balance at end of period	\$ 2,141	\$ 2,308	\$ 2,872
GIL as a % of related loans and acceptances			
Total GIL as a % of related loans and acceptances	0.28%	0.31%	0.41%
Personal & Commercial Banking	0.28%	0.30%	0.35%
Canadian Banking	0.22%	0.24%	0.28%
Caribbean Banking	4.54%	4.65%	4.36%
Wealth Management	0.21%	0.26%	0.34%
Capital Markets	0.37%	0.45%	0.84%

(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 Net repayments and certain Other movements are not reasonably determinable. Certain GIL movements for Caribbean Banking retail and wholesale portfolios are generally allocated to Net repayments and new impaired, as Net repayments and certain Other movements 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.

Q1 2022 vs. Q1 2021

Total GIL of \$2,141 million decreased \$731 million or 25% from a year ago and the total GIL ratio of 28 bps decreased 13 bps, due to lower impaired loans in Capital Markets, Personal & Commercial Banking and Wealth Management.

GIL in Personal & Commercial Banking decreased \$202 million or 12%, mainly due to lower impaired loans in our Canadian Banking commercial portfolios, largely in the real estate and related sector. Lower impaired loans in the majority of our Canadian Banking retail portfolios also contributed to the decrease, reflecting the economic recovery underway and the continued impact of the COVID-19 related government support programs.

GIL in Wealth Management decreased \$90 million or 31%, due to lower impaired loans in U.S. Wealth Management (including City National) and International Wealth Management, primarily in the consumer staples and investments sectors, respectively.

GIL in Capital Markets decreased \$439 million or 51%, due to lower impaired loans in many sectors, including the oil and gas and consumer discretionary sectors.

Q1 2022 vs. Q4 2021

Total GIL decreased \$167 million or 7% from last quarter, and the total GIL ratio of 28 bps decreased 3 bps, due to lower impaired loans in Capital Markets, Personal & Commercial Banking and Wealth Management.

GIL in Personal & Commercial Banking decreased \$66 million or 4%, mainly due to lower impaired loans in our Canadian Banking commercial portfolios, primarily in the real estate and related sector. Lower impaired loans in the majority of our Canadian Banking retail portfolios also contributed to the decrease.

GIL in Wealth Management decreased \$34 million or 15%, reflecting lower impaired loans in International Wealth Management and U.S. Wealth Management (including City National), primarily in the investments and real estate and related sectors, respectively.

GIL in Capital Markets decreased \$67 million or 14%, primarily in the consumer discretionary sector.

Allowance for credit losses (ACL)

(Millions of Canadian dollars)	As at		
	January 31 2022	October 31 2021	January 31 2021
Personal & Commercial Banking	\$ 3,462	\$ 3,478	\$ 4,391
Wealth Management	324	320	365
Capital Markets	602	620	1,152
Corporate Support and other	1	1	6
ACL on loans	4,389	4,419	5,914
ACL on other financial assets (1)	53	52	131
Total ACL	\$ 4,442	\$ 4,471	\$ 6,045
ACL on loans is comprised of:			
Retail	\$ 2,236	\$ 2,287	\$ 2,859
Wholesale	1,428	1,435	2,161
ACL on performing loans	\$ 3,664	\$ 3,722	\$ 5,020
ACL on impaired loans	725	697	894

Additional information by geography (2)

Canada			
Retail	\$ 153	\$ 150	\$ 195
Wholesale	203	182	215
ACL on impaired loans	356	332	410
U.S.			
Retail	1	3	1
Wholesale	139	126	175
ACL on impaired loans	140	129	176
Other International			
Retail	105	107	116
Wholesale	124	129	192
ACL on impaired loans	229	236	308
ACL on impaired loans	\$ 725	\$ 697	\$ 894

(1) ACL on other financial assets mainly represents allowances on debt securities measured at FVOCI and amortized cost, accounts receivable and financial guarantees.

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

Q1 2022 vs. Q1 2021

Total ACL of \$4,442 million decreased \$1,603 million or 27% from a year ago, primarily reflecting a decrease of \$1,525 million in ACL on loans.

ACL on performing loans of \$3,664 million decreased \$1,356 million or 27%, due to lower ACL in Personal & Commercial Banking, Capital Markets and Wealth Management, reflecting improvements in our macroeconomic and credit quality outlook driven by the economic recovery underway.

ACL on impaired loans of \$725 million decreased \$169 million or 19%, primarily due to lower ACL in Capital Markets and Personal & Commercial Banking.

Q1 2022 vs. Q4 2021

Total ACL of \$4,442 million decreased \$29 million or 1% from last quarter, primarily reflecting a decrease of \$30 million in ACL on loans.

ACL on performing loans of \$3,664 million decreased \$58 million or 2%, primarily due to lower ACL in Personal & Commercial Banking driven by improvements in our macroeconomic and credit quality outlook.

ACL on impaired loans of \$725 million increased \$28 million or 4%, largely due to higher ACL in Personal & Commercial Banking, partially offset by lower ACL in Capital Markets.

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

Market risk

Market risk is defined to be the impact of market prices upon our financial condition. This includes potential gains or losses due to changes in market-determined variables such as interest rates, credit spreads, equity prices, commodity prices, foreign exchange rates and implied volatilities. There have been no material changes to our Market Risk Management Framework from the framework described in our 2021 Annual Report. Using that framework, we continuously seek to ensure that our market risk exposure is consistent with risk appetite constraints set by the Board of Directors.

Market risk controls include limits on probabilistic measures of potential loss in trading positions, such as Value-at-Risk (VaR), Stressed Value-at-Risk (SVaR), stress testing and Incremental Risk Charge (IRC). Market risk controls are also in place to manage Interest Rate Risk in the Banking Book (IRRBB). To monitor and control IRRBB, we assess two primary metrics, Net Interest Income (NII) risk and Economic Value of Equity (EVE) risk, under a range of market shocks, scenarios, and time horizons. There has been no material change to the IRRBB measurement methodology, controls, or limits from those described in our 2021 Annual Report. For further details of our approach to the management of market risk, refer to the Market risk section of our 2021 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)	January 31, 2022				October 31, 2021		January 31, 2021	
	As at	For the three months ended			As at	Average	As at	Average
		Average	High	Low				
Equity	\$ 39	\$ 34	\$ 48	\$ 23	\$ 24	\$ 28	\$ 17	\$ 17
Foreign exchange	4	5	7	3	4	4	4	3
Commodities	4	4	5	3	3	3	2	3
Interest rate (1)	29	39	62	23	61	42	36	40
Credit specific (2)	8	9	10	8	9	8	7	7
Diversification (3)	(33)	(35)	n.m.	n.m.	(51)	(35)	(25)	(31)
Market risk VaR	\$ 51	\$ 56	\$ 87	\$ 34	\$ 50	\$ 50	\$ 41	\$ 39
Market risk Stressed VaR	\$ 65	\$ 71	\$ 106	\$ 47	\$ 59	\$ 53	\$ 49	\$ 55

(1) General credit spread risk and funding spread risk associated with uncollateralized derivatives are included under interest rate VaR.

(2) Credit specific risk captures issuer-specific credit spread volatility.

(3) Market risk VaR is less than the sum of the individual risk factor VaR results due to risk factor diversification.

n.m. not meaningful

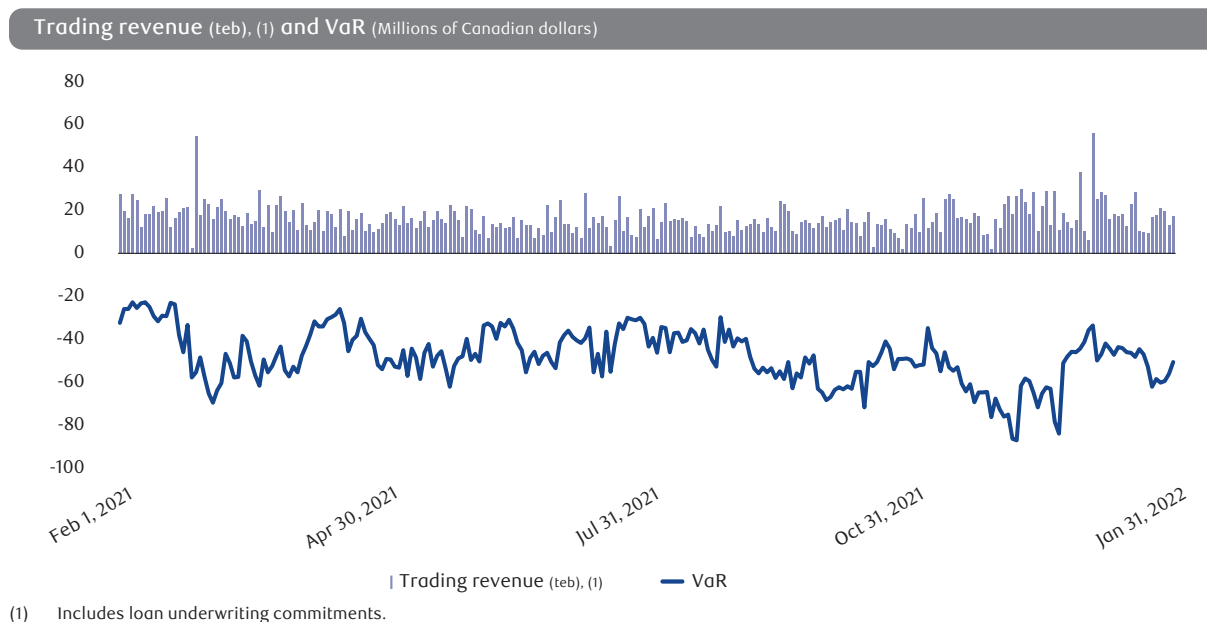
Q1 2022 vs. Q1 2021

Average market risk VaR of \$56 million increased \$17 million and average SVaR of \$71 million increased \$16 million from a year ago. This was driven by the impact of heightened market volatility in the current quarter on our equity derivatives portfolio, and increased exposures in fixed income and interest rate derivative portfolios from client-driven activities which were reduced towards calendar year-end.

Q1 2022 vs. Q4 2021

Average market risk VaR of \$56 million increased \$6 million and average SVaR of \$71 million increased \$18 million from last quarter, mainly due to the effects noted above.

The following chart displays a bar graph of our daily trading profit and loss and a line graph of our daily market risk VaR. We incurred no net trading losses in the three months ended January 31, 2022 and October 31, 2021.



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 January 31, 2022, we held assets in support of \$13 billion of liabilities with respect to insurance obligations (October 31, 2021 – \$13 billion).

Market risk measures – IRRBB 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, assuming no subsequent hedging. Rate floors are applied within the declining rates scenarios which prevent EVE valuation and NII simulation rate levels from falling below a minimum average level of negative 25 bps across major currencies. Interest rate risk measures are based on current on and off-balance sheet positions which can change over time in response to business activity and management actions.

(Millions of Canadian dollars)	January 31 2022						October 31 2021		January 31 2021	
	EVE risk			NII risk (1)			EVE risk	NII risk (1)	EVE risk	NII risk (1)
	Canadian dollar impact	U.S. dollar impact	Total	Canadian dollar impact	U.S. dollar impact	Total				
Before-tax impact of:										
100 bps increase in rates	\$ (1,625)	\$ (537)	\$ (2,162)	\$ 530	\$ 323	\$ 853	\$ (2,009)	\$ 929	\$ (1,882)	\$ 836
100 bps decrease in rates	1,471	48	1,519	(653)	(311)	(964)	1,537	(921)	1,433	(714)

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

As at January 31, 2022, an immediate and sustained -100 bps shock would have had a negative impact to our NII of \$964 million, up from \$921 million last quarter. An immediate and sustained +100 bps shock as at January 31, 2022 would have had a negative impact to the bank's EVE of \$2,162 million, up from \$2,009 million last quarter. The quarter-over-quarter increase in NII sensitivity was largely in response to higher interest rates, while the quarter-over-quarter increase in EVE sensitivity mainly reflects balance sheet growth. During the first quarter of 2022, NII and EVE risks remained within approved limits.

Linkage of market risk to selected balance sheet items

The following tables provide 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 January 31, 2022			
	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	\$ 131,163	\$ –	\$ 131,163	Interest rate
Interest-bearing deposits with banks	63,420	50,222	13,198	Interest rate
Securities				
Trading	149,525	137,203	12,322	Interest rate, credit spread
Investment, net of applicable allowance	153,570	–	153,570	Interest rate, credit spread, equity
Assets purchased under reverse repurchase agreements and securities borrowed	312,126	270,142	41,984	Interest rate
Loans				
Retail	513,970	4,538	509,432	Interest rate
Wholesale	230,108	11,348	218,760	Interest rate
Allowance for loan losses	(4,047)	–	(4,047)	Interest rate
Segregated fund net assets	2,730	–	2,730	Interest rate
Other				
Derivatives	92,319	90,252	2,067	Interest rate, foreign exchange
Other assets	95,890	9,101	86,789	Interest rate
Assets not subject to market risk (3)	11,695			
Total assets	\$ 1,752,469	\$ 572,806	\$ 1,167,968	
Liabilities subject to market risk				
Deposits	\$ 1,142,842	\$ 140,180	\$ 1,002,662	Interest rate
Segregated fund liabilities	2,730	–	2,730	Interest rate
Other				
Obligations related to securities sold short	41,544	41,544	–	
Obligations related to assets sold under repurchase agreements and securities loaned	265,009	238,833	26,176	Interest rate
Derivatives	88,102	85,474	2,628	Interest rate, foreign exchange
Other liabilities	81,297	9,620	71,677	Interest rate
Subordinated debentures	10,561	–	10,561	Interest rate
Liabilities not subject to market risk (4)	18,376			
Total liabilities	\$ 1,650,461	\$ 515,651	\$ 1,116,434	
Total equity	102,008			
Total liabilities and equity	\$ 1,752,469			

(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, SVaR, IRC and stress testing are used as risk controls for traded risk.

(2) Non-traded risk includes positions used in the management of IRRBB 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 IRRBB.

(3) Assets not subject to market risk include physical and other assets.

(4) Liabilities not subject to market risk include payroll related and other liabilities.

(Millions of Canadian dollars)	As at October 31, 2021				Non-traded risk primary risk sensitivity
	Balance sheet amount	Market risk measure		Non-traded risk (2)	
		Traded risk (1)			
Assets subject to market risk					
Cash and due from banks	\$ 113,846	\$ –	\$ 113,846		Interest rate
Interest-bearing deposits with banks	79,638	56,896	22,742		Interest rate
Securities					
Trading	139,240	127,259	11,981		Interest rate, credit spread
Investment, net of applicable allowance	145,484	–	145,484		Interest rate, credit spread, equity
Assets purchased under reverse repurchase agreements and securities borrowed	307,903	265,011	42,892		Interest rate
Loans					
Retail	503,598	9,231	494,367		Interest rate
Wholesale	218,066	9,685	208,381		Interest rate
Allowance for loan losses	(4,089)	–	(4,089)		Interest rate
Segregated fund net assets	2,666	–	2,666		Interest rate
Other					
Derivatives	95,541	92,829	2,712		Interest rate, foreign exchange
Other assets	92,157	8,615	83,542		Interest rate
Assets not subject to market risk (3)	12,273				
Total assets	\$ 1,706,323	\$ 569,526	\$ 1,124,524		
Liabilities subject to market risk					
Deposits	\$ 1,100,831	\$ 136,927	\$ 963,904		Interest rate
Segregated fund liabilities	2,666	–	2,666		Interest rate
Other					
Obligations related to securities sold short	37,841	37,841	–		
Obligations related to assets sold under repurchase agreements and securities loaned	262,201	236,146	26,055		Interest rate
Derivatives	91,439	89,290	2,149		Interest rate, foreign exchange
Other liabilities	87,084	8,528	78,556		Interest rate
Subordinated debentures	9,593	–	9,593		Interest rate
Liabilities not subject to market risk (4)	15,906				
Total liabilities	\$ 1,607,561	\$ 508,732	\$ 1,082,923		
Total equity	98,762				
Total liabilities and equity	\$ 1,706,323				

(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, SVaR, IRC and stress testing are used as risk controls for traded risk.

(2) Non-traded risk includes positions used in the management of IRRBB 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 IRRBB.

(3) Assets not subject to market risk include physical and other assets.

(4) Liabilities not subject to market risk include 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. 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 2021 Annual Report.

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

Liquidity reserve

Our liquidity reserve consists of available unencumbered liquid assets. 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. Similarly, uncommitted and undrawn central bank borrowing facilities that could be accessed subject to satisfying certain preconditions as set by various central banks (e.g., BoC, the Fed, Bank of England, and Bank of France), as well as amounts that qualify as eligible collateral at the Federal Reserve Bank of New York (FRBNY) and Federal Home Loan Bank (FHLB) are also excluded from the determination of the liquidity reserve.

	As at January 31, 2022				
	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	\$ 131,163	\$ –	\$ 131,163	\$ 3,438	\$ 127,725
Interest-bearing deposits with banks	63,420	–	63,420	–	63,420
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks (1)	222,651	323,397	546,048	363,498	182,550
Other securities	126,888	124,251	251,139	143,135	108,004
Other liquid assets (2)	29,604	–	29,604	27,529	2,075
Total liquid assets	\$ 573,726	\$ 447,648	\$1,021,374	\$ 537,600	\$ 483,774

	As at October 31, 2021				
	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	\$ 113,846	\$ –	\$ 113,846	\$ 3,405	\$ 110,441
Interest-bearing deposits with banks	79,638	–	79,638	–	79,638
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks (1)	214,326	313,732	528,058	357,927	170,131
Other securities	114,692	115,396	230,088	132,360	97,728
Other liquid assets (2)	27,600	–	27,600	25,981	1,619
Total liquid assets	\$ 550,102	\$ 429,128	\$ 979,230	\$ 519,673	\$ 459,557

	As at	
	January 31 2022	October 31 2021
(Millions of Canadian dollars)		
Royal Bank of Canada	\$ 234,654	\$ 233,342
Foreign branches	82,729	68,567
Subsidiaries	166,391	157,648
Total unencumbered liquid assets	\$ 483,774	\$ 459,557

(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) 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.

Q1 2022 vs. Q4 2021

Total unencumbered liquid assets increased \$24 billion or 5% from last quarter, mainly due to an increase in on-balance sheet securities reflecting higher deposit and wholesale funding levels.

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 January 31, 2022, our unencumbered assets available as collateral comprised 26% of total assets (October 31, 2021 – 26%).

(Millions of Canadian dollars)	As at										
	January 31 2022					October 31 2021					
	Encumbered		Unencumbered			Encumbered		Unencumbered			Total
	Pledged as collateral	Other (1)	Available as collateral (2)	Other (3)	Total	Pledged as collateral	Other (1)	Available as collateral (2)	Other (3)		
Cash and due from banks	\$ –	\$ 3,438	\$ 127,725	\$ –	\$ 131,163	\$ –	\$ 3,405	\$ 110,441	\$ –	\$ 113,846	
Interest-bearing deposits with banks	–	–	63,420	–	63,420	–	–	79,638	–	79,638	
Securities											
Trading	63,438	–	92,821	3,384	159,643	56,602	–	87,311	3,633	147,546	
Investment, net of applicable allowance	12,020	–	141,550	–	153,570	12,055	–	133,429	–	145,484	
Assets purchased under reverse repurchase agreements and securities borrowed (4)	447,021	22,711	13,448	3,616	486,796	437,408	18,310	17,436	5,343	478,497	
Loans											
Retail											
Mortgage securities	29,786	–	29,921	–	59,707	29,370	–	30,778	–	60,148	
Mortgage loans	49,007	–	31,211	250,176	330,394	46,699	–	29,858	243,627	320,184	
Non-mortgage loans	3,297	–	7,290	113,282	123,869	3,213	–	8,110	111,943	123,266	
Wholesale	–	–	–	230,108	230,108	–	–	–	218,066	218,066	
Allowance for loan losses	–	–	–	(4,047)	(4,047)	–	–	–	(4,089)	(4,089)	
Segregated fund net assets	–	–	–	2,730	2,730	–	–	–	2,666	2,666	
Other											
Derivatives	–	–	–	92,319	92,319	–	–	–	95,541	95,541	
Others (5)	27,529	–	2,075	77,981	107,585	25,981	–	1,619	76,830	104,430	
Total assets	\$632,098	\$26,149	\$ 509,461	\$769,549	\$1,937,257	\$ 611,328	\$ 21,715	\$ 498,620	\$ 753,560	\$ 1,885,223	

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

(2) Represents assets that are readily available for use as collateral, including NHA MBS, our unencumbered mortgage loans that qualify as eligible collateral at FHLB, as well as loans that qualify as eligible collateral for the discount window facility available to us and lodged at the FRBNY.

(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.

(4) Includes bank-owned liquid assets and securities received as collateral from off-balance sheet securities financing, derivative transactions, and margin lending. Includes \$23 billion (October 31, 2021 – \$18 billion) of collateral received through reverse repurchase transactions that cannot be rehypothecated in its current legal form.

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

Funding

Funding strategy

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

Deposit and funding profile

As at January 31, 2022, relationship-based deposits, which are the primary source of funding for retail loans and mortgages, were \$786 billion or 54% of our total funding (October 31, 2021 – \$771 billion or 55%). 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 liquid asset buffers.

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 Canada Deposit Insurance Corporation (CDIC) to convert all or a portion of certain shares and liabilities of that bank into common shares. As at January 31, 2022, the notional value of issued and outstanding long-term debt subject to conversion under the Bail-in regime was \$60 billion (October 31, 2021 – \$53 billion).

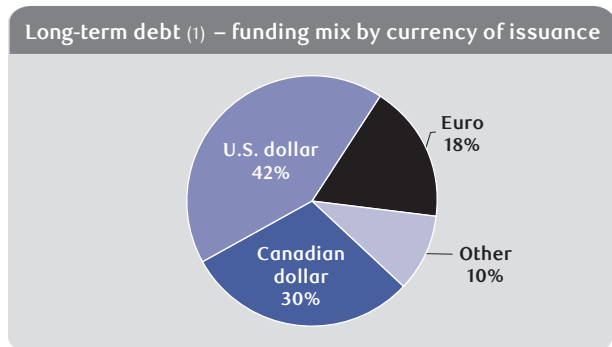
For further details on our wholesale funding, refer to the Composition of wholesale funding tables below.

Long-term debt issuance

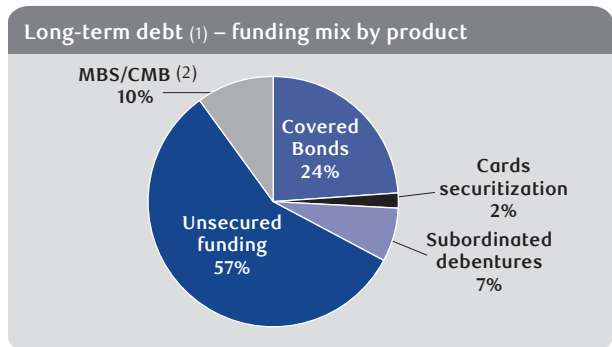
Our wholesale funding activities are well-diversified by geography, investor segment, instrument, currency, structure and maturity. We maintain an ongoing presence in different funding markets, which allows us to continuously monitor market developments and trends, identify opportunities and risks, and 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
<ul style="list-style-type: none"> Canadian Shelf Program – \$25 billion 	<ul style="list-style-type: none"> U.S. Shelf Program – US\$50 billion 	<ul style="list-style-type: none"> 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) Includes unsecured and secured long-term funding and subordinated debentures with an original term to maturity greater than 1 year



(1) Includes unsecured and secured long-term funding and subordinated debentures with an 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 January 31, 2022							
	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)	\$ 7,487	\$ 69	\$ –	\$ 51	\$ 7,607	\$ –	\$ –	\$ 7,607
Certificates of deposit and commercial paper	12,238	15,408	22,873	26,854	77,373	–	–	77,373
Asset-backed commercial paper (3)	3,114	2,909	3,930	2,616	12,569	–	–	12,569
Senior unsecured medium-term notes (4)	2,297	6,777	83	8,123	17,280	17,088	38,172	72,540
Senior unsecured structured notes (5)	622	327	369	613	1,931	3,189	7,224	12,344
Mortgage securitization	–	1,300	482	1,673	3,455	3,538	9,842	16,835
Covered bonds/asset-backed securities (6)	–	508	3,345	3,018	6,871	7,426	28,029	42,326
Subordinated liabilities	–	–	192	56	248	110	10,292	10,650
Other (7)	7,580	1,032	1,052	1,353	11,017	8,977	491	20,485
Total	\$ 33,338	\$ 28,330	\$ 32,326	\$ 44,357	\$ 138,351	\$ 40,328	\$ 94,050	\$ 272,729
Of which:								
– Secured	\$ 9,553	\$ 4,901	\$ 8,083	\$ 7,307	\$ 29,844	\$ 10,964	\$ 38,342	\$ 79,150
– Unsecured	23,785	23,429	24,243	37,050	108,507	29,364	55,708	193,579

(Millions of Canadian dollars)	As at October 31, 2021							
	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)	\$ 5,202	\$ –	\$ –	\$ –	\$ 5,202	\$ –	\$ –	\$ 5,202
Certificates of deposit and commercial paper	7,118	17,013	19,046	27,053	70,230	918	–	71,148
Asset-backed commercial paper (3)	2,378	2,563	4,076	3,697	12,714	–	–	12,714
Senior unsecured medium-term notes (4)	27	939	8,944	2,622	12,532	16,296	37,617	66,445
Senior unsecured structured notes (5)	118	825	817	714	2,474	2,914	5,879	11,267
Mortgage securitization	–	354	1,302	917	2,573	4,260	9,729	16,562
Covered bonds/asset-backed securities (6)	–	847	495	5,189	6,531	6,087	27,521	40,139
Subordinated liabilities	–	–	–	188	188	165	9,267	9,620
Other (7)	6,637	2,194	1,448	827	11,106	7,531	466	19,103
Total	\$ 21,480	\$ 24,735	\$ 36,128	\$ 41,207	\$ 123,550	\$ 38,171	\$ 90,479	\$ 252,200
Of which:								
– Secured	\$ 8,467	\$ 4,017	\$ 6,108	\$ 9,803	\$ 28,395	\$ 10,347	\$ 37,695	\$ 76,437
– Unsecured	13,013	20,718	30,020	31,404	95,155	27,824	52,784	175,763

(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 \$7,419 million (October 31, 2021 – \$7,020 million), bearer deposit notes (unsecured) of \$3,235 million (October 31, 2021 – \$3,798 million), other long-term structured deposits (unsecured) of \$9,831 million (October 31, 2021 – \$8,285 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 2021 Annual Report.

Credit ratings ⁽¹⁾

	As at February 23, 2022			
	Short-term debt	Legacy senior long-term debt ⁽²⁾	Senior long-term debt ⁽³⁾	Outlook
Moody's ⁽⁴⁾	P-1	Aa1	A1	stable
Standard & Poor's ⁽⁵⁾	A-1+	AA-	A	stable
Fitch Ratings ⁽⁶⁾	F1+	AA	AA-	stable
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 January 27, 2022, Moody's upgraded our long-term debt ratings and assessments, as well as affirmed our short-term debt ratings. Following this rating action, our outlook is stable. This rating action concludes the review for upgrade initiated by Moody's on October 7, 2021.
- (5) On December 16, 2021, Standard & Poor's affirmed our ratings with a stable outlook.
- (6) On July 15, 2021, Fitch Ratings downgraded our legacy senior long-term debt rating to AA from AA+ and our senior long-term debt rating to AA- from AA and revised our ratings outlook to stable from negative.
- (7) On May 14, 2021, DBRS affirmed our ratings with a stable outlook.

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.

(Millions of Canadian dollars)	As at					
	January 31 2022			October 31 2021		
	One-notch downgrade	Two-notch downgrade	Three-notch downgrade	One-notch downgrade	Two-notch downgrade	Three-notch downgrade
Contractual derivatives funding or margin requirements	\$ 158	\$ 76	\$ 136	\$ 312	\$ 112	\$ 140
Other contractual funding or margin requirements ⁽¹⁾	169	17	14	157	13	–

- (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 available to meet liquidity needs over a 30-day period in an acute stress scenario. The BCBS and OSFI regulatory minimum coverage level for LCR is 100%.

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

Liquidity coverage ratio common disclosure template ⁽¹⁾

	For the three months ended	
	January 31 2022	
	Total unweighted value (average) (2)	Total weighted value (average)
<i>(Millions of Canadian dollars, except percentage amounts)</i>		
High-quality liquid assets		
Total high-quality liquid assets (HQLA)		\$ 366,789
Cash outflows		
Retail deposits and deposits from small business customers, of which:	\$ 376,588	\$ 35,367
<i>Stable deposits</i> (3)	129,322	3,880
<i>Less stable deposits</i>	247,266	31,487
Unsecured wholesale funding, of which:	450,361	211,539
<i>Operational deposits (all counterparties) and deposits in networks of cooperative banks</i> (4)	198,068	47,052
<i>Non-operational deposits</i>	220,049	132,243
<i>Unsecured debt</i>	32,244	32,244
Secured wholesale funding		30,507
Additional requirements, of which:	285,932	68,401
<i>Outflows related to derivative exposures and other collateral requirements</i>	52,138	20,738
<i>Outflows related to loss of funding on debt products</i>	7,621	7,621
<i>Credit and liquidity facilities</i>	226,173	40,042
Other contractual funding obligations (5)	27,410	27,410
Other contingent funding obligations (6)	657,669	10,581
Total cash outflows		\$ 383,805
Cash inflows		
Secured lending (e.g., reverse repos)	\$ 284,970	\$ 45,614
Inflows from fully performing exposures	15,515	9,915
Other cash inflows	31,893	31,893
Total cash inflows		\$ 87,422
		Total adjusted value
Total HQLA		\$ 366,789
Total net cash outflows		296,383
Liquidity coverage ratio		124%

	October 31 2021	
	Total adjusted value	
<i>(Millions of Canadian dollars, except percentage amounts)</i>		
Total HQLA		\$ 351,831
Total net cash outflows		285,314
Liquidity coverage ratio		123%

- (1) The LCR is calculated in accordance with OSFI's LAR guideline, which, in turn, reflects liquidity-related requirements issued by the BCBS. The LCR for the quarter ended January 31, 2022 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, are deposits which clients need to keep with the bank in order to facilitate their access and ability to use payment and settlement systems primarily for clearing, custody and cash management activities.
- (5) Other contractual funding obligations primarily include outflows from unsettled securities trades and outflows from obligations related to securities sold short.
- (6) Other contingent funding obligations include outflows related to other off-balance sheet facilities that carry low LCR runoff factors (0% – 5%).

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

We maintain HQLAs in major currencies with dependable market depth and breadth. Our treasury management practices ensure that the levels of HQLA are actively managed to meet target LCR objectives. Our Level 1 assets, as calculated according to OSFI LAR and the BCBS LCR requirements, represent 88% of total HQLA. These assets consist of cash, placements with central banks and highly rated securities issued or guaranteed by governments, central banks and supranational entities.

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

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

Q1 2022 vs. Q4 2021

The average LCR for the quarter ended January 31, 2022 was 124%, which translates into a surplus of approximately \$70 billion, compared to 123% and a surplus of approximately \$67 billion in the prior quarter. LCR has remained relatively stable compared to the previous quarter as growth in retail and wholesale loans was offset by increases in client deposits and the issuance of term funding. Increases in HQLA were largely offset by an increase in net cash outflows associated with additional non-core deposits and short-term funding.

Net Stable Funding Ratio (NSFR)

NSFR is a Basel III metric that measures the sufficiency of available stable funding relative to the amount of required stable funding. The BCBS and OSFI regulatory minimum coverage level for NSFR is 100%.

Available stable funding is defined as the portion of capital and liabilities expected to be reliable over the time horizon considered by the NSFR, which extends to one year. Required stable funding is a function of the liquidity characteristics and residual maturities of the various assets held by the bank as well as those of its off-balance sheet exposures.

OSFI requires Canadian D-SIBs to disclose the NSFR using the standard Basel disclosure template. Amounts presented in this disclosure template are determined in accordance with the requirements of OSFI's LAR guideline and are not necessarily aligned with the classification requirements prescribed under IFRS.

Net Stable Funding Ratio common disclosure template (1)

	As at January 31, 2022					Weighted value
	Unweighted value by residual maturity (2)				Weighted value	
	No maturity	< 6 months	6 months to < 1 year	≥ 1 year		
(Millions of Canadian dollars, except percentage amounts)						
Available Stable Funding (ASF) Item						
Capital:	\$ 101,893	\$ –	\$ –	\$ 10,009	\$ 111,902	
Regulatory Capital	101,893	–	–	10,009	111,902	
Other Capital Instruments	–	–	–	–	–	
Retail deposits and deposits from small business customers:	346,366	59,801	18,367	21,591	412,115	
Stable deposits (3)	112,557	29,266	10,170	8,775	153,169	
Less stable deposits	233,809	30,535	8,197	12,816	258,946	
Wholesale funding:	328,305	402,809	45,666	106,618	309,728	
Operational deposits (4)	195,296	–	–	–	97,648	
Other wholesale funding	133,009	402,809	45,666	106,618	212,080	
Liabilities with matching interdependent assets (5)	–	3,549	3,344	24,179	–	
Other liabilities:	40,273	–	204,510	–	13,114	
NSFR derivative liabilities	–	–	10,708	–	–	
All other liabilities and equity not included in the above categories	40,273	–	–	–	13,114	
Total ASF						\$ 846,859
Required Stable Funding (RSF) Item						
Total NSFR high-quality liquid assets (HQLA)						\$ 44,592
Deposits held at other financial institutions for operational purposes	–	2,388	–	–	–	1,194
Performing loans and securities:	179,233	277,223	99,184	445,908	600,974	
Performing loans to financial institutions secured by Level 1 HQLA	–	97,134	11,561	9	11,600	
Performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	4,271	65,982	33,142	21,475	49,491	
Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, central banks and PSEs, of which:	105,174	85,352	33,024	130,235	255,300	
With a risk weight of less than or equal to 35% under the Basel II standardized approach for credit risk	–	1,145	1,039	4,092	3,752	
Performing residential mortgages, of which:	37,305	24,235	20,680	271,846	235,338	
With a risk weight of less than or equal to 35% under the Basel II standardized approach for credit risk	37,305	24,204	20,652	270,833	234,447	
Securities that are not in default and do not qualify as HQLA, including exchange-traded equities	32,483	4,520	777	22,343	49,245	
Assets with matching interdependent liabilities (5)	–	3,549	3,344	24,179	–	
Other assets:	2,075	–	252,475	–	78,315	
Physical traded commodities, including gold	2,075	–	–	–	1,763	
Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs	–	–	20,486	–	17,413	
NSFR derivative assets	–	–	15,982	–	5,275	
NSFR derivative liabilities before deduction of variation margin posted	–	–	29,381	–	1,469	
All other assets not included in the above categories	–	135,953	56	50,617	52,395	
Off-balance sheet items	–	–	666,292	–	24,235	
Total RSF						\$ 749,310
Net Stable Funding Ratio (%)						113%

As at October 31, 2021

	Weighted value
(Millions of Canadian dollars, except percentage amounts)	
Total ASF	\$ 827,827
Total RSF	713,338
Net Stable Funding Ratio (%)	116%

(1) The NSFR is calculated in accordance with OSFI's LAR guideline, which, in turn, reflects liquidity-related requirements issued by the BCBS.

(2) Totals for the following rows encompass the residual maturity categories of less than 6 months, 6 months to less than 1 year, and greater than or equal to 1 year in accordance with the requirements of the common disclosure template prescribed by OSFI: Other liabilities, NSFR derivative liabilities, Other assets, Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs, NSFR derivative assets, NSFR derivative liabilities before deduction of variation margin posted, and Off-balance sheet items.

(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, 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) Interdependent assets and liabilities represent National Housing Act Mortgage-Backed Securities (NHA MBS) liabilities, including liabilities arising from transactions involving the Canada Mortgage Bond program and their corresponding encumbered mortgages.

Available stable funding is comprised primarily of a diversified pool of personal and commercial deposits, capital, as well as long-term wholesale liabilities. Required stable funding is driven mainly by the bank's mortgage and loan portfolio, secured loans to financial institutions and to a lesser extent by other less liquid assets. NSFR does not reflect any unused market funding capacity that we believe is available to the bank.

Volume and composition of available stable funding is actively managed to optimize our structural funding position and meet NSFR objectives. Our NSFR is managed in accordance with our comprehensive LRMF.

Q1 2022 vs. Q4 2021

The NSFR as at January 31, 2022 was 113%, which translates into a surplus of approximately \$98 billion, compared to 116% and a surplus of approximately \$114 billion in the prior quarter. NSFR decreased from the prior quarter primarily due to growth in retail and wholesale loans, an increase in on-balance sheet securities and changes in derivative positions, partially offset by increases in client deposits and the issuance of term funding.

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 2021 Annual Report.

(Millions of Canadian dollars)	As at January 31, 2022									
	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	\$ 192,271	\$ 2	\$ –	\$ –	\$ 10	\$ –	\$ –	\$ –	\$ 2,300	\$ 194,583
Securities										
Trading (1)	67,761	2,519	848	6	8	32	174	10,197	67,980	149,525
Investment, net of applicable allowance	3,059	8,821	5,807	6,364	6,901	19,393	33,100	69,576	549	153,570
Assets purchased under reverse repurchase agreements and securities borrowed (2)	122,904	92,846	29,606	27,554	12,936	776	–	–	25,504	312,126
Loans, net of applicable allowance	33,606	19,223	29,413	27,831	29,737	140,174	312,950	64,557	82,540	740,031
Other										
Customers' liability under acceptances	13,672	5,280	–	–	2	5	–	–	(83)	18,876
Derivatives	6,098	7,379	5,099	3,262	6,205	8,813	17,098	38,353	12	92,319
Other financial assets	35,028	1,704	959	171	129	266	279	2,103	3,447	44,086
Total financial assets	474,399	137,774	71,732	65,188	55,928	169,459	363,601	184,786	182,249	1,705,116
Other non-financial assets	6,821	1,612	267	256	552	2,380	2,314	5,865	27,286	47,353
Total assets	\$ 481,220	\$ 139,386	\$ 71,999	\$ 65,444	\$ 56,480	\$ 171,839	\$ 365,915	\$ 190,651	\$ 209,535	\$ 1,752,469
Liabilities and equity										
Deposits (3)										
Unsecured borrowing	\$ 100,325	\$ 53,231	\$ 43,700	\$ 36,878	\$ 45,970	\$ 30,950	\$ 49,037	\$ 16,702	\$ 674,323	\$ 1,051,116
Secured borrowing	2,342	7,803	6,410	3,908	2,783	7,991	15,257	6,174	–	52,668
Covered bonds	–	–	2,686	1,918	1,111	6,687	17,949	8,707	–	39,058
Other										
Acceptances	13,663	5,280	–	–	2	5	–	–	9	18,959
Obligations related to securities sold short	41,544	–	–	–	–	–	–	–	–	41,544
Obligations related to assets sold under repurchase agreements and securities loaned (2)	189,351	43,348	6,404	1,347	2	676	–	–	23,881	265,009
Derivatives	6,120	7,296	5,071	3,206	4,949	8,897	17,347	35,216	–	88,102
Other financial liabilities	32,915	1,592	915	328	479	830	2,272	11,272	841	51,444
Subordinated debentures	–	–	191	–	–	110	1,924	8,336	–	10,561
Total financial liabilities	386,260	118,550	65,377	47,585	55,296	56,146	103,786	86,407	699,054	1,618,461
Other non-financial liabilities	1,308	1,080	222	172	3,530	1,053	965	13,561	10,109	32,000
Equity	–	–	–	–	–	–	–	–	102,008	102,008
Total liabilities and equity	\$ 387,568	\$ 119,630	\$ 65,599	\$ 47,757	\$ 58,826	\$ 57,199	\$ 104,751	\$ 99,968	\$ 811,171	\$ 1,752,469
Off-balance sheet items										
Financial guarantees	\$ 1,072	\$ 1,863	\$ 2,739	\$ 2,561	\$ 2,735	\$ 1,312	\$ 3,972	\$ 1,121	\$ 29	\$ 17,404
Commitments to extend credit	2,081	9,097	13,303	9,424	16,780	52,011	172,026	16,153	3,833	294,708
Other credit-related commitments	970	1,102	1,473	1,386	1,576	323	698	36	99,991	107,555
Other commitments	27	11	17	17	20	70	164	303	605	1,234
Total off-balance sheet items	\$ 4,150	\$ 12,073	\$ 17,532	\$ 13,388	\$ 21,111	\$ 53,716	\$ 176,860	\$ 17,613	\$ 104,458	\$ 420,901

(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) Open reverse repo and repo contracts, which have no set maturity date and are typically short term, have been included in the with no specific maturity category.

(3) 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.

(Millions of Canadian dollars)	As at October 31, 2021									Total
	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	
Assets										
Cash and deposits with banks	\$ 190,995	\$ 2	\$ 1	\$ –	\$ –	\$ –	\$ –	\$ –	\$ 2,486	\$ 193,484
Securities										
Trading (1)	67,655	46	87	41	6	20	169	9,845	61,371	139,240
Investment, net of applicable allowance	7,220	4,811	5,546	5,832	5,514	22,368	31,393	62,289	511	145,484
Assets purchased under reverse repurchase agreements and securities borrowed (2)	104,301	89,612	51,664	22,982	16,987	98	–	–	22,259	307,903
Loans, net of applicable allowance	28,517	21,630	26,094	31,910	26,921	139,050	298,659	62,215	82,579	717,575
Other										
Customers' liability under acceptances	12,654	7,209	5	–	–	5	–	–	(75)	19,798
Derivatives	5,325	10,788	4,318	4,334	3,005	10,139	17,890	39,733	9	95,541
Other financial assets	33,149	1,523	1,942	145	135	270	277	2,044	3,351	42,836
Total financial assets	449,816	135,621	89,657	65,244	52,568	171,950	348,388	176,126	172,491	1,661,861
Other non-financial assets	6,079	1,681	164	217	185	1,957	2,377	5,898	25,904	44,462
Total assets	\$ 455,895	\$ 137,302	\$ 89,821	\$ 65,461	\$ 52,753	\$ 173,907	\$ 350,765	\$ 182,024	\$ 198,395	\$1,706,323
Liabilities and equity										
Deposits (3)										
Unsecured borrowing	\$ 82,183	\$ 44,058	\$ 56,519	\$ 36,342	\$ 35,792	\$ 30,625	\$ 45,745	\$ 18,320	\$ 661,924	\$1,011,508
Secured borrowing	2,442	4,244	7,543	4,362	2,804	9,557	15,040	6,118	–	52,110
Covered bonds	1	848	–	2,693	1,878	5,350	18,321	8,122	–	37,213
Other										
Acceptances	12,653	7,207	5	2	–	5	–	–	1	19,873
Obligations related to securities sold short	37,841	–	–	–	–	–	–	–	–	37,841
Obligations related to assets sold under repurchase agreements and securities loaned (2)	168,763	62,338	5,610	4,742	848	668	–	–	19,232	262,201
Derivatives	5,456	9,903	4,938	3,747	2,723	9,211	18,727	36,733	1	91,439
Other financial liabilities	33,489	1,299	1,048	439	373	1,000	2,115	10,226	795	50,784
Subordinated debentures	–	–	–	–	188	110	1,912	7,383	–	9,593
Total financial liabilities	342,828	129,897	75,663	52,327	44,606	56,526	101,860	86,902	681,953	1,572,562
Other non-financial liabilities	1,663	6,907	434	290	155	1,108	1,172	13,360	9,910	34,999
Equity	–	–	–	–	–	–	–	–	98,762	98,762
Total liabilities and equity	\$ 344,491	\$ 136,804	\$ 76,097	\$ 52,617	\$ 44,761	\$ 57,634	\$ 103,032	\$ 100,262	\$ 790,625	\$1,706,323
Off-balance sheet items										
Financial guarantees	\$ 387	\$ 1,950	\$ 2,999	\$ 2,928	\$ 2,206	\$ 1,829	\$ 3,326	\$ 1,181	\$ 61	\$ 16,867
Commitments to extend credit	5,964	5,538	11,400	16,231	12,024	56,688	160,789	16,733	4,544	289,911
Other credit-related commitments	966	1,064	1,569	1,536	1,376	370	726	38	99,815	107,460
Other commitments	101	11	20	21	21	64	144	278	618	1,278
Total off-balance sheet items	\$ 7,418	\$ 8,563	\$ 15,988	\$ 20,716	\$ 15,627	\$ 58,951	\$ 164,985	\$ 18,230	\$ 105,038	\$ 415,516

(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) Open reverse repo and repo contracts, which have no set maturity date and are typically short term, have been included in the with no specific maturity category.

(3) 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 2021 Annual Report. In addition, we continue to monitor for new regulatory capital developments, including OSFI guidance relating to the BCBS Basel III reforms and guidance issued in response to the COVID-19 pandemic, in order to ensure timely and accurate compliance with these requirements as disclosed in the Capital management section in our 2021 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.

The Financial Stability Board (FSB) has re-designated us as a Global Systemically Important Bank (G-SIB). This designation requires us to maintain a higher loss absorbency requirement (common equity as a percentage of RWA) of 1% consistent with the D-SIB requirement.

Effective November 1, 2021, OSFI's Total Loss Absorbing Capacity (TLAC) guideline establishes two minimum standards: 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 LR guideline. The TLAC requirement is intended to address the sufficiency of a D-SIB'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.

In Q2 2020, OSFI announced a series of regulatory adjustments and guidance to support the financial and operational resilience of the banking sector in response to the ongoing COVID-19 pandemic and subsequently continued, as needed, to release guidance implementing, clarifying, updating or unwinding certain aspects or requirements. While some measures and guidance issued in response to the COVID-19 pandemic have been unwound, certain measures and guidance continue to remain in place, such as:

- Modifications for increases in expected credit loss provisions on CET1 capital by applying a 25% after-tax exclusion rate for growth in Stage 1 and Stage 2 allowances between Q1 2020 and the respective quarters of fiscal 2022. The exclusion rate was reduced to the current 25% in fiscal 2022 from 50% in fiscal 2021, and will cease to apply beginning in fiscal 2023. 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.
- Exclusion of central bank reserves that qualify as HQLA from leverage ratio exposure amounts.
- Reduction in the current regulatory capital floor for financial institutions using the IRB approach to 70% of RWA under the SA. The reduced floor factor will remain in place until the adoption of the Basel III reforms.
- Clarification of the applicable capital and leverage ratio treatment of certain government relief programs.

For further details, refer to the Capital management section of our 2021 Annual Report. OSFI has assessed and will continue to assess the need for these measures. We have incorporated the effective adjustments and guidance, as applicable, into our results and in our ongoing 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, leverage and TLAC requirements imposed by OSFI:

Basel III capital, leverage and TLAC ratios	OSFI regulatory target requirements for large banks under Basel III					RBC capital, leverage and TLAC ratios as at January 31, 2022	Domestic Stability Buffer ⁽³⁾	Minimum including Capital Buffers, D-SIB/G-SIB surcharge and Domestic Stability Buffer as at January 31, 2022
	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%	13.5%	2.5%	10.5%
Tier 1 capital	6.0%	2.5%	8.5%	1.0%	9.5%	14.8%	2.5%	12.0%
Total capital	8.0%	2.5%	10.5%	1.0%	11.5%	16.6%	2.5%	14.0%
Leverage ratio	3.0%	n.a.	3.0%	n.a.	3.0%	4.8%	n.a.	3.0%
TLAC ratio ⁽⁴⁾	21.5%	n.a.	21.5%	n.a.	21.5%	26.4%	2.5%	24.0%
TLAC leverage ratio ⁽⁴⁾	6.75%	n.a.	6.75%	n.a.	6.75%	8.5%	n.a.	6.75%

(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) On December 10, 2021, OSFI reaffirmed the DSB at 2.50% of total RWA.

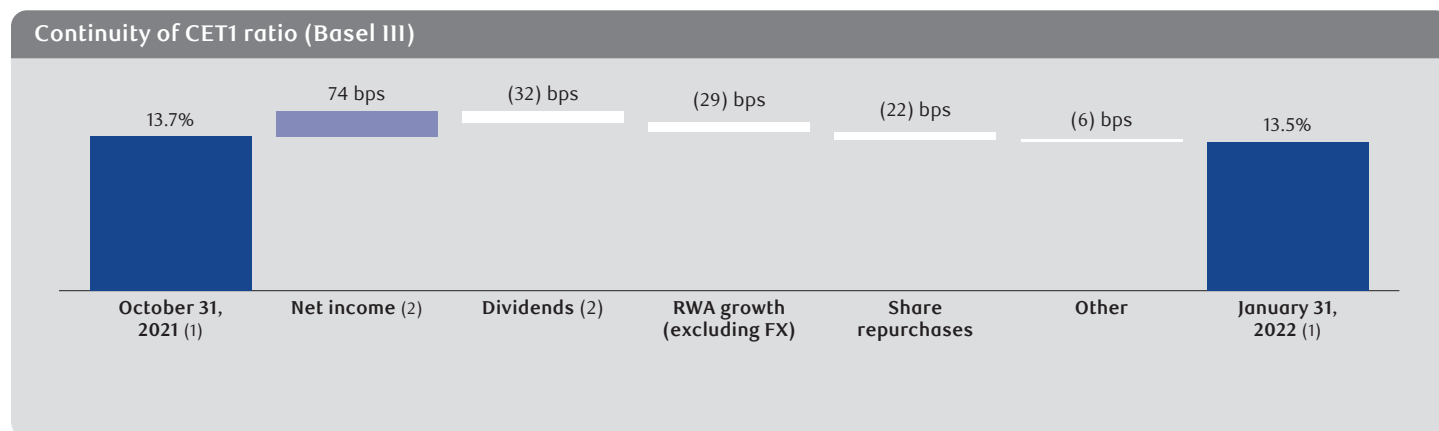
(4) Effective November 1, 2021, OSFI requires D-SIBs to meet minimum risk-based TLAC ratio and TLAC leverage ratio requirements which are calculated using OSFI's TLAC guideline. n.a. not applicable

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

	As at		
	January 31 2022	October 31 2021	January 31 2021
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)			
Capital (1)			
CET1 capital	\$ 77,080	\$ 75,583	\$ 69,555
Tier 1 capital	84,493	82,246	76,733
Total capital	94,502	92,026	86,543
RWA used in calculation of capital ratios (1)			
Credit risk	\$ 452,697	\$ 444,142	\$ 458,162
Market risk	41,812	34,806	28,449
Operational risk	74,776	73,593	70,908
Total RWA	\$ 569,285	\$ 552,541	\$ 557,519
Capital ratios and Leverage ratio (1)			
CET1 ratio	13.5%	13.7%	12.5%
Tier 1 capital ratio	14.8%	14.9%	13.8%
Total capital ratio	16.6%	16.7%	15.5%
Leverage ratio	4.8%	4.9%	4.8%
Leverage ratio exposure (billions)	\$ 1,761	\$ 1,662	\$ 1,585
TLAC available and ratios (2), (3)			
TLAC available	\$ 150,136	n.a.	n.a.
TLAC ratio	26.4%	n.a.	n.a.
TLAC leverage ratio	8.5%	n.a.	n.a.

- (1) Capital, RWA, and capital ratios are calculated using OSFI's CAR guideline and the Leverage ratio is calculated using OSFI's LR guideline as updated in accordance with the regulatory guidance issued by OSFI in response to the COVID-19 pandemic. Both the CAR guideline and LR guideline are based on the Basel III framework.
- (2) Effective November 1, 2021, OSFI requires D-SIBs to meet minimum risk-based TLAC ratio and TLAC leverage ratio requirements which are calculated using OSFI's TLAC guideline.
- (3) The TLAC standard is applied at the resolution entity level which for us is deemed to be Royal Bank of Canada and its subsidiaries. A resolution entity and its subsidiaries are collectively called a resolution group. Both the TLAC ratio and TLAC leverage ratio are calculated using the TLAC available as percentage of total RWA and leverage exposure, respectively.
- n.a. not applicable

Q1 2022 vs. Q4 2021



- (1) Represents rounded figures.
- (2) Represents internal capital generation of \$2.3 billion consisting of Net income available to shareholders, less common and preferred share dividends and distributions on other equity instruments.

Our CET1 ratio was 13.5%, down 20 bps from last quarter, mainly reflecting RWA growth (excluding FX) and share repurchases, partially offset by internal capital generation.

RWA increased by \$17 billion, mainly reflecting business growth in wholesale lending, including loan underwriting commitments, market risk, and residential mortgages, partially offset by lower derivatives. The impact of foreign exchange translation also contributed to the increase. These factors were partially offset by net credit migration, mainly in our wholesale portfolios. The impact of foreign exchange translation on RWA is largely mitigated with economic hedges in our CET1 ratio.

Our Tier 1 capital ratio of 14.8% was down 10 bps, reflecting the factors noted above under the CET1 ratio and a favourable impact from the issuance of preferred shares.

Our Total capital ratio of 16.6% was down 10 bps, reflecting the factors noted above under the Tier 1 capital ratio and a favourable impact from the issuance of subordinated debentures.

Our Leverage ratio of 4.8% was down 10 bps, mainly due to the reversal of the regulatory modification for sovereign-issued securities qualifying as HQLA, as announced by OSFI. Business-driven growth in leverage exposures and share repurchases also contributed to the decrease. These factors were partially offset by internal capital generation and the issuance of preferred shares.

Leverage exposures increased by \$99 billion, mainly driven by the reversal of the regulatory modification noted above, business growth in loans and securities, and the impact of foreign exchange translation.

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 January 31, 2022		
	Issuance or redemption date	Number of shares (000s)	Amount
Tier 1 capital			
Common shares activity			
Issued in connection with share-based compensation plans (1)		407	\$ 34
Purchased for cancellation (2)		(8,871)	(111)
Issuance of preferred shares, Series BT (2), (3)	November 5, 2021	750	750
Tier 2 capital			
Issuance of May 3, 2032 subordinated debentures (2), (3)	January 25, 2022		\$ 1,000

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

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

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

On December 6, 2021, we announced a normal course issuer bid (NCIB) to purchase up to 45 million of our common shares, commencing on December 8, 2021 and continuing until December 7, 2022, 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 9 million, at a cost of approximately \$1,214 million.

We determine the amount and timing of 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 November 5, 2021, we issued 750 thousand of Non-Cumulative 5-Year Fixed Rate Reset First Preferred Shares Series BT to certain institutional investors at a price of \$1,000 per share.

On January 25, 2022, we issued \$1,000 million of NVCC subordinated debentures. The notes bear interest at a fixed rate of 2.94% per annum until May 3, 2027, and at the three-month Canadian Dollar Offered Rate plus 0.76% thereafter until their maturity on May 3, 2032.

During the quarter, we also announced our intention to redeem all 6 million of our issued and outstanding Non-Cumulative First Preferred Shares Series B) at a price of \$25.75 per share. The shares will be redeemed on February 24, 2022.

Selected share data ⁽¹⁾

(Millions of Canadian dollars, except number of shares and as otherwise noted)	As at January 31, 2022		
	Number of shares (000s)	Amount	Dividends declared per share
Common shares issued	1,416,723	\$ 17,651	\$ 1.20
Treasury shares – common shares ⁽²⁾	(703)	(79)	
Common shares outstanding	1,416,020	\$ 17,572	
Stock options and awards			
Outstanding	8,418		
Exercisable	3,788		
First preferred shares issued			
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	0.20
Non-cumulative Series BF ^{(3), (4)}	12,000	300	0.19
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 BO ^{(3), (4)}	14,000	350	0.30
Non-cumulative Series BT ^{(3), (4)}	750	750	12.77
Non-cumulative Series C-2 ⁽⁵⁾	15	23	US\$ 16.88
Other equity instruments issued			
Limited recourse capital notes Series 1 ^{(3), (4), (6), (7)}	1,750	1,750	4.50%
Limited recourse capital notes Series 2 ^{(3), (4), (6), (7)}	1,250	1,250	4.00%
Limited recourse capital notes Series 3 ^{(3), (4), (6), (7)}	1,000	1,000	3.65%
Preferred shares and other equity instruments issued	112,765	7,473	
Treasury instruments – preferred shares and other equity instruments ⁽²⁾	(35)	(32)	
Preferred shares and other equity instruments outstanding	112,730	\$ 7,441	
Dividends on common shares		\$ 1,702	
Dividends on preferred shares and distributions on other equity instruments ⁽⁸⁾		54	

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

(2) Positive amounts represent a short position and negative amounts represent a long position.

(3) Dividend rate will reset every five years.

(4) NVCC instruments.

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

(6) For LRCNs, the number of shares represent the number of notes issued and the dividends declared per share represent the annual interest rate percentage applicable to the notes issued as at the reporting date.

(7) In connection with the issuance of LRCN Series 1, on July 28, 2020, we issued \$1,750 million of First Preferred Shares Series BQ (Series BQ); in connection with the issuance of LRCN Series 2, on November 2, 2020, we issued \$1,250 million of First Preferred Shares Series BR (Series BR); and in connection with the issuance of LRCN Series 3, on June 8, 2021, we issued \$1,000 million of First Preferred Shares Series BS (Series BS). The Series BQ, BR and BS preferred shares were issued at a price of \$1,000 per share and were issued to a consolidated trust to be held as trust assets in connection with the LRCN structure. For further details, refer to Note 19 of our 2021 Annual Consolidated Financial Statements.

(8) Excludes distributions to non-controlling interests.

As at February 18, 2022, the number of outstanding common shares was 1,416,620,149, net of treasury shares held of 150,487, and the number of stock options and awards was 8,370,739.

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 as at January 31, 2022, which were the preferred shares Series AZ, BB, BD, BF, BH, BI, BJ, BO, BT, LRCN Series 1, LRCN Series 2, LRCN Series 3 and subordinated debentures due on January 27, 2026, July 25, 2029, December 23, 2029, June 30, 2030, January 28, 2033, November 3, 2031, and May 3, 2032 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 4,529 million common shares, in aggregate, which would represent a dilution impact of 76.18% based on the number of common shares outstanding as at January 31, 2022.

Global systemically important banks (G-SIBs) 13 assessment indicators ⁽¹⁾

The BCBS and FSB use 13 indicators in the assessment methodology for determining the systemic importance of large global banks. As noted previously, we are designated as a G-SIB. The following table provides the 13 indicators (2020: 12 indicators) used in the G-SIB assessment methodology:

(Millions of Canadian dollars)	October 31 2021	October 31 2020
Cross-jurisdictional activity ⁽²⁾		
Cross-jurisdictional claims ⁽³⁾	\$ 864,580	\$ 723,906
Cross-jurisdictional liabilities	682,547	570,311
Size ⁽⁴⁾		
Total exposures as defined for use in the Basel III leverage ratio ⁽⁵⁾	1,927,048	1,774,946
Interconnectedness ⁽⁶⁾		
Intra-financial system assets ⁽⁵⁾	211,054	187,039
Intra-financial system liabilities ⁽⁵⁾	175,554	163,705
Securities outstanding ⁽⁵⁾	415,329	335,640
Substitutability/financial institution infrastructure ⁽⁷⁾		
Payment activity	53,048,298	48,993,443
Assets under custody	4,909,994	4,473,237
Underwritten transactions in debt and equity markets	321,168	374,919
Trading volume ⁽⁸⁾		
Fixed income	6,341,568	n.a.
Equities and other securities	5,187,311	n.a.
Complexity ⁽⁹⁾		
Notional amount of over-the-counter derivatives ⁽⁵⁾	22,271,423	22,713,363
Trading and investment securities	77,693	59,664
Level 3 assets ⁽⁵⁾	3,594	2,857

(1) The G-SIBs indicators are prepared based on the methodology prescribed in BCBS guidelines published in July 2013 and updated in July 2018, and are disclosed in accordance with OSFI's Global Systemically Important Banks – Public Disclosure Requirements Advisory. The indicators are based on the regulatory scope of consolidation, which excludes RBC Insurance® subsidiaries, unless otherwise specified by the assessment methodology. For our 2021 standalone G-SIB disclosure, please refer to our Regulatory Disclosures at rbc.com/investor-relations.

(2) Represents a bank's level of interaction outside its domestic jurisdiction.

(3) Effective for our 2021 G-SIB disclosure, Cross-jurisdictional claims includes foreign derivative claims on an ultimate risk basis. This change has been reflected prospectively.

(4) Represents the total on- and off- balance sheet exposures of the bank determined as per OSFI's Basel III leverage ratio rules before regulatory adjustments.

(5) Effective for our 2021 G-SIB disclosure, OSFI extended the scope of consolidation for these indicators to include insurance activities. This change has been reflected prospectively.

(6) Represents transactions with other financial institutions.

(7) Represents the extent to which the bank's services could be substituted by other institutions.

(8) Effective for our 2021 G-SIB disclosure, the trading volume indicator has been added as a primary indicator.

(9) Includes the level of complexity and volume of a bank's trading activities represented through derivatives, trading securities, investment securities and level 3 assets.

n.a. not applicable

2021 vs. 2020

During 2021, notional amounts of over-the-counter derivatives decreased mainly in interest rate contracts due to lower trading activity and hedging requirements. Assets under custody increased primarily due to higher market returns. The increase in total exposures as defined for use in the Basel III leverage ratio was mainly driven by business growth in loans, interest-bearing deposits with banks, securities, undrawn commitments, repo-style transactions and derivatives, partially offset by the impact of foreign exchange translation. Other movements from the prior year primarily reflect normal changes in business activity as well as impacts from the COVID-19 pandemic, including additional payments related to government relief programs and increased liquidity levels driven by client deposit inflows resulting from industry-wide impacts of the pandemic and corresponding central bank actions.

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 2021 Annual Consolidated Financial Statements.

Application of critical accounting judgments, estimates and assumptions

The economic outlook remains subject to ongoing uncertainty due to the evolving and unpredictable nature of the COVID-19 pandemic, which could continue to impact our financial results. We continue to monitor and assess the impacts of the COVID-19 pandemic on our critical accounting judgments, estimates and assumptions, which are described in Note 2 of our audited 2021 Annual Consolidated Financial Statements.

Future changes in accounting policies and disclosures

Future changes in accounting policies and disclosures that are not yet effective for us are also described in Note 2 of our audited 2021 Annual Consolidated Financial Statements.

Controls and procedures

Disclosure controls and procedures

As of January 31, 2022, management evaluated, under the supervision of and with the participation of the President and Chief Executive Officer and the Chief Financial Officer, the effectiveness of our disclosure controls and procedures as defined under rules adopted by the U.S. SEC. Based on that evaluation, the President and Chief Executive Officer and the Chief Financial Officer concluded that our disclosure controls and procedures were effective as of January 31, 2022.

Internal control over financial reporting

No changes were made in our internal control over financial reporting during the quarter ended January 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Related party transactions

In the ordinary course of business, we provide normal banking services and operational services, and enter into other transactions with associated and other related corporations, including our joint venture entities, on terms similar to those offered to non-related parties. We grant loans to directors, officers and other employees at rates normally accorded to preferred clients. In addition, we offer deferred share and other plans to non-employee directors, executives and certain other key employees. For further information, refer to Notes 11 and 25 of our audited 2021 Annual Consolidated Financial Statements.

Glossary

Acceptances

A bill of exchange or negotiable instrument drawn by the borrower for payment at maturity and accepted by a bank. The acceptance constitutes a guarantee of payment by the bank and can be traded in the money market. The bank earns a "stamping fee" for providing this guarantee.

Allowance for credit losses (ACL)

The amount deemed adequate by management to absorb expected credit losses as at the balance sheet date. The allowance is established for all financial assets subject to impairment assessment, including certain loans, debt securities, customers' liability under acceptances, financial guarantees, and undrawn loan commitments. The allowance is changed by the amount of provision for credit losses recorded, which is charged to income, and decreased by the amount of write-offs net of recoveries in the period.

Asset-backed securities (ABS)

Securities created through the securitization of a pool of assets, for example auto loans or credit card loans.

Assets under administration (AUA)

Assets administered by us, which are beneficially owned by clients, as at October 31, unless otherwise noted. Services provided in respect of assets under administration are of an administrative nature, including safekeeping, collecting investment income, settling purchase and sale transactions, and record keeping.

Assets under management (AUM)

Assets managed by us, which are beneficially owned by clients, as at October 31, unless otherwise noted. Services provided in respect of assets under management include the selection of investments and the provision of investment advice. We have assets under management that are also administered by us and included in assets under administration.

Attributed capital

Attributed capital is based on the Basel III regulatory capital requirements and economic capital.

Auction rate securities (ARS)

Debt securities whose interest rates are regularly reset through an auction process.

Average earning assets, net

Average earning assets include interest-bearing deposits with other banks, securities, net of applicable allowance, assets purchased under reverse repurchase agreements and securities borrowed, loans, net of allowance, cash collateral and margin deposits. Insurance assets, and all other assets not specified are excluded. The averages are based on the daily balances for the period.

Basis point (bp)

One one-hundredth of a percentage point (.01%).

Collateral

Assets pledged as security for a loan or other obligation. Collateral can take many forms, such as cash, highly rated securities, property, inventory, equipment and receivables.

Collateralized debt obligation (CDO)

Securities with multiple tranches that are issued by structured entities and collateralized by debt obligations including bonds and loans. Each tranche offers a varying degree of risk and return so as to meet investor demand.

Commercial mortgage-backed securities (CMBS)

Securities created through the securitization of commercial mortgages.

Commitments to extend credit

Unutilized amount of credit facilities available to clients either in the form of loans, bankers' acceptances and other on-balance sheet financing, or through off-balance sheet products such as guarantees and letters of credit.

Common Equity Tier 1 (CET1) capital

A regulatory Basel III capital measure comprised mainly of common shareholders' equity less regulatory deductions and adjustments for goodwill and intangibles, defined benefit pension fund assets, shortfall in allowances and other specified items.

Common Equity Tier 1 capital ratio

A risk-based capital measure calculated as CET1 capital divided by risk-weighted assets.

Covered bonds

Full recourse on-balance sheet obligations issued by banks and credit institutions that are fully collateralized by assets over which investors enjoy a priority claim in the event of an issuer's insolvency.

Credit default swaps (CDS)

A derivative contract that provides the purchaser with a one-time payment should the referenced entity/entities default (or a similar triggering event occur).

Derivative

A contract between two parties, which requires little or no initial investment and where payments between the parties are dependent upon the movements in price of an underlying instrument, index or financial rate. Examples of derivatives include swaps, options, forward rate agreements and futures. The notional amount of the derivative is the contract amount used as a reference point to calculate the payments to be exchanged between the two parties, and the notional amount itself is generally not exchanged by the parties.

Dividend payout ratio

Common dividends as a percentage of net income available to common shareholders.

Dividend yield

Dividends per common share divided by the average of the high and low share price in the relevant period.

Earnings per share (EPS), basic

Calculated as net income available to common shareholders divided by the average number of shares outstanding.

Earnings per share (EPS), diluted

Calculated as net income available to common shareholders divided by the average number of shares outstanding adjusted for the dilutive effects of stock options and other convertible securities.

Expected credit losses

The difference between the contractual cash flows due to us in accordance with the relevant contractual terms and the cash flows that we expect to receive, discounted to the balance sheet date.

Fair value

Fair value of a financial instrument is the price that would be received to sell an asset or paid to

transfer a liability in an orderly transaction between market participants at the measurement date.

Funding Valuation Adjustment

Funding valuation adjustments are calculated to incorporate cost and benefit of funding in the valuation of uncollateralized and under-collateralized OTC derivatives. Future expected cash flows of these derivatives are discounted to reflect the cost and benefit of funding the derivatives by using a funding curve, implied volatilities and correlations as inputs.

Guarantees and standby letters of credit

These primarily represent irrevocable assurances that a bank will make payments in the event that its client cannot meet its financial obligations to third parties. Certain other guarantees, such as bid and performance bonds, represent non-financial undertakings.

Hedge

A risk management technique used to mitigate exposure from market, interest rate or foreign currency exchange risk arising from normal banking operations. The elimination or reduction of such exposure is accomplished by establishing offsetting positions. For example, assets denominated in foreign currencies can be offset with liabilities in the same currencies or through the use of foreign exchange hedging instruments such as futures, options or foreign exchange contracts.

Hedge funds

A type of investment fund, marketed to accredited high net worth investors, that is subject to limited regulation and restrictions on its investments compared to retail mutual funds, and that often utilize aggressive strategies such as selling short, leverage, program trading, swaps, arbitrage and derivatives.

High-quality liquid assets (HQLA)

Assets are considered to be HQLA if they can be easily and immediately converted into cash at little or no loss of value during a time of stress.

Impaired loans

Loans are classified as impaired when there has been a deterioration of credit quality to the extent that management no longer has reasonable assurance of timely collection of the full amount of principal and interest in accordance with the contractual terms of the loan agreement. Credit card balances are not classified as impaired as they are directly written off after payments are 180 days past due.

International Financial Reporting Standards (IFRS)

IFRS are principles-based standards, interpretations and the framework adopted by the International Accounting Standards Board.

Leverage Ratio

A Basel III regulatory measure, the ratio divides Tier 1 capital by the sum of total assets plus specified off-balance sheet items.

Liquidity Coverage Ratio (LCR)

The Liquidity Coverage Ratio is a Basel III metric that measures the sufficiency of HQLA available to meet net short-term financial obligations over a thirty day period in an acute stress scenario.

Loan-to-value (LTV) ratio

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.

Master netting agreement

An agreement between us and a counterparty designed to reduce the credit risk of multiple derivative transactions through the creation of a legal right of offset of exposure in the event of a default.

Net interest income

The difference between what is earned on assets such as loans and securities and what is paid on liabilities such as deposits and subordinated debentures.

Net interest margin (on average earning assets, net)

Calculated as net interest income divided by average earning assets, net.

Net Stable Funding Ratio (NSFR)

The Net Stable Funding Ratio is a Basel III metric that measures the sufficiency of available stable funding to meet the minimum coverage level of required stable funding.

Normal course issuer bid (NCIB)

A program for the repurchase of our own shares for cancellation through a stock exchange that is subject to the various rules of the relevant stock exchange and securities commission.

Notional amount

The contract amount used as a reference point to calculate payments for derivatives.

Off-balance sheet financial instruments

A variety of arrangements offered to clients, which include credit derivatives, written put options, backstop liquidity facilities, stable value products, financial standby letters of credit, performance guarantees, credit enhancements, mortgage loans sold with recourse, commitments to extend credit, securities lending, documentary and commercial letters of credit, note issuances and revolving underwriting facilities, securities lending indemnifications and indemnifications.

Office of the Superintendent of Financial Institutions Canada (OSFI)

The primary regulator of federally chartered financial institutions and federally administered pension plans in Canada. OSFI's mission is to safeguard policyholders, depositors and pension plan members from undue loss.

Operating leverage

The difference between our revenue growth rate and non-interest expense growth rate.

Options

A contract or a provision of a contract that gives one party (the option holder) the right, but not the obligation, to perform a specified transaction with another party (the option issuer or option writer) according to specified terms.

Provision for credit losses (PCL)

The amount charged to income necessary to bring the allowance for credit losses to a level determined appropriate by management. This includes provisions on performing and impaired financial assets.

PCL on loans ratio

PCL on loans ratio is calculated using PCL on loans as a percentage of average net loans and acceptances.

RBC Homeline Plan® products

This is comprised of residential mortgages and secured personal loans whereby the borrower pledges real estate as collateral.

Repurchase agreements

These involve the sale of securities for cash and the simultaneous repurchase of the securities for value at a later date. These transactions normally do not constitute economic sales and therefore are treated as collateralized financing transactions.

Return on common equity (ROE)

Net income available to common shareholders, expressed as a percentage of average common equity.

Reverse repurchase agreements

These involve the purchase of securities for cash and the simultaneous sale of the securities for value at a later date. These transactions normally do not constitute economic sales and therefore are treated as collateralized financing transactions.

Risk-weighted assets (RWA)

Assets adjusted by a regulatory risk-weight factor to reflect the riskiness of on and off-balance sheet exposures. Certain assets are not risk-weighted, but deducted from capital. The calculation is defined by guidelines issued by OSFI. For more details, refer to the Capital management section.

Securities lending

Transactions in which the owner of securities agrees to lend it under the terms of a prearranged contract to a borrower for a fee. Collateral for the loan consists of either high quality securities or cash and collateral value must be at least equal to the market value of the loaned securities. Borrowers pay a negotiated fee for loans collateralized by securities, whereas for cash collateral lenders pay borrowers interest at a negotiated rate and reinvest the cash collateral to earn a return. An intermediary such as a bank often acts as agent lender for the owner of the security in return for a share of the revenue earned by the owner from lending securities. Most often, agent lenders indemnify the owner against the risk of the borrower's failure to redeliver the loaned securities - counterparty credit risk if a borrower defaults and market risk if the value of the non-cash collateral declines. The agent lender does not indemnify against the investment risk of re-investing cash collateral which is borne by the owner.

Securities sold short

A transaction in which the seller sells securities and then borrows the securities in order to deliver them to the purchaser upon settlement. At a later date, the seller buys identical securities in the market to replace the borrowed securities.

Securitization

The process by which various financial assets are packaged into newly issued securities backed by these assets.

Standardized Approach

Risk weights prescribed by OSFI are used to calculate risk-weighted assets for the credit risk exposures. Credit assessments by OSFI-recognized external credit rating agencies of Standard & Poor's, Moody's, Fitch, DBRS and Kroll Bond Rating Agency are used to risk-weight our Sovereign and Bank exposures based on the standards and guidelines issued by OSFI. For our Business and Retail exposures, we use the standard risk weights prescribed by OSFI.

Structured entities

A structured entity is an entity in which voting or similar rights are not the dominant factor in deciding who controls the entity, such as when

the activities that significantly affect the entity's returns are directed by means of contractual arrangements. Structured entities often have restricted activities, narrow and well defined objectives, insufficient equity to finance their activities, and financing in the form of multiple contractually-linked instruments.

Taxable equivalent basis (teb)

Income from certain specified tax advantaged sources (eligible Canadian taxable corporate dividends) is increased to a level that would make it comparable to income from taxable sources. There is an offsetting adjustment in the tax provision, thereby generating the same after-tax net income.

Tier 1 capital

Tier 1 capital comprises predominantly of CET1 capital, with additional Tier 1 items such as preferred shares, limited recourse capital notes and non-controlling interests in subsidiaries Tier 1 instruments.

Tier 2 capital

Tier 2 capital consists mainly of subordinated debentures that meet certain criteria, certain loan loss allowances and non-controlling interests in subsidiaries' Tier 2 instruments.

Total capital and total capital ratio

Total capital is defined as the total of Tier 1 and Tier 2 capital. The total capital ratio is calculated by dividing total capital by risk-weighted assets.

Total Loss Absorbing Capacity (TLAC)

The aggregate of Tier 1 capital, Tier 2 capital, and other TLAC instruments, which allows conversion in whole or in part into common shares under the Canada Deposit Insurance Corporation Act and meets all of the eligibility criteria under the guideline.

TLAC ratio

The risk-based TLAC ratio is defined as TLAC divided by total risk-weighted assets.

TLAC leverage ratio

The TLAC leverage ratio is defined as TLAC divided by the Leverage ratio exposure.

Tranche

A security class created whereby the risks and returns associated with a pool of assets are packaged into several classes of securities offering different risk and return profiles from those of the underlying asset pool. Tranches are typically rated by ratings agencies, and reflect both the credit quality of underlying collateral as well as the level of protection based on the tranches' relative subordination.

Unattributed capital

Unattributed capital represents common equity in excess of common equity attributed to our business segments and is reported in the Corporate Support segment.

Value-at-Risk (VaR)

A generally accepted risk-measurement concept that uses statistical models based on historical information to estimate within a given level of confidence the maximum loss in market value we would experience in our trading portfolio from an adverse one-day movement in market rates and prices.

EDTF recommendations index

We aim to present transparent, high-quality risk disclosures by providing disclosures in our 2021 Annual Report, Q1 2022 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 Q1 2022 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	48	123	1
	2	Define risk terminology and measures		55-60, 121-122	-
	3	Top and emerging risks		52-54	-
	4	New regulatory ratios	40-42	100-105	-
Risk governance, risk management and business model	5	Risk management organization		55-60	-
	6	Risk culture		56-60	-
	7	Risk in the context of our business activities		108	-
	8	Stress testing		57-58, 73	-
Capital adequacy and risk-weighted assets (RWA)	9	Minimum Basel III capital ratios and Domestic systemically important bank surcharge	40	100-105	-
	10	Composition of capital and reconciliation of the accounting balance sheet to the regulatory balance sheet		-	*
	11	Flow statement of the movements in regulatory capital		-	20
	12	Capital strategic planning		100-105	-
	13	RWA by business segments		-	21
	14	Analysis of capital requirement, and related measurement model information		61-64	*
	15	RWA credit risk and related risk measurements		-	*
	16	Movement of risk-weighted assets by risk type		-	21
Liquidity	17	Basel back-testing		57, 61	32
	18	Quantitative and qualitative analysis of our liquidity reserve	30	80-81, 85-86	-
Funding	19	Encumbered and unencumbered assets by balance sheet category, and contractual obligations for rating downgrades	31, 34	81, 84	-
	20	Maturity analysis of consolidated total assets, liabilities and off-balance sheet commitments analyzed by remaining contractual maturity at the balance sheet date	38-39	88-89	-
	21	Sources of funding and funding strategy	31-33	81-83	-
Market risk	22	Relationship between the market risk measures for trading and non-trading portfolios and the balance sheet	28-29	77-78	-
	23	Decomposition of market risk factors	26-27	72-76	-
	24	Market risk validation and back-testing		73	-
	25	Primary risk management techniques beyond reported risk measures and parameters		72-76	-
Credit risk	26	Bank's credit risk profile	19-25	60-72, 170-177	22-32,*
		Quantitative summary of aggregate credit risk exposures that reconciles to the balance sheet	62-67	115-120	*
	27	Policies for identifying impaired loans		62-65, 110, 143-146	-
	28	Reconciliation of the opening and closing balances of impaired loans and impairment allowances during the year		-	24, 29
	29	Quantification of gross notional exposure for OTC derivatives or exchange-traded derivatives		66	33
Other	30	Credit risk mitigation, including collateral held for all sources of credit risk		64-65	*
	31	Other risk types		91-99	-
	32	Publicly known risk events		94-95, 215-216	-

* These disclosure requirements are satisfied or partially satisfied by disclosures provided in our Pillar 3 Report for the quarter ended January 31, 2022 and for the year ended October 31, 2021.

Interim Condensed Consolidated Financial Statements (unaudited)

Interim Condensed Consolidated Balance Sheets (unaudited)

(Millions of Canadian dollars)	As at	
	January 31 2022	October 31 2021
Assets		
Cash and due from banks	\$ 131,163	\$ 113,846
Interest-bearing deposits with banks	63,420	79,638
Securities		
Trading	149,525	139,240
Investment, net of applicable allowance (Note 4)	153,570	145,484
	303,095	284,724
Assets purchased under reverse repurchase agreements and securities borrowed	312,126	307,903
Loans (Note 5)		
Retail	513,970	503,598
Wholesale	230,108	218,066
	744,078	721,664
Allowance for loan losses (Note 5)	(4,047)	(4,089)
	740,031	717,575
Segregated fund net assets	2,730	2,666
Other		
Customers' liability under acceptances	18,876	19,798
Derivatives	92,319	95,541
Premises and equipment	7,406	7,424
Goodwill	11,010	10,854
Other intangibles	4,459	4,471
Other assets	65,834	61,883
	199,904	199,971
Total assets	\$ 1,752,469	\$ 1,706,323
Liabilities and equity		
Deposits (Note 6)		
Personal	\$ 375,606	\$ 362,488
Business and government	720,089	696,353
Bank	47,147	41,990
	1,142,842	1,100,831
Segregated fund net liabilities	2,730	2,666
Other		
Acceptances	18,959	19,873
Obligations related to securities sold short	41,544	37,841
Obligations related to assets sold under repurchase agreements and securities loaned	265,009	262,201
Derivatives	88,102	91,439
Insurance claims and policy benefit liabilities	12,973	12,816
Other liabilities	67,741	70,301
	494,328	494,471
Subordinated debentures (Note 8)	10,561	9,593
Total liabilities	1,650,461	1,607,561
Equity attributable to shareholders		
Preferred shares and other equity instruments (Note 8)	7,441	6,684
Common shares (Note 8)	17,572	17,655
Retained earnings	73,542	71,795
Other components of equity	3,355	2,533
	101,910	98,667
Non-controlling interests	98	95
Total equity	102,008	98,762
Total liabilities and equity	\$ 1,752,469	\$ 1,706,323

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

Interim Condensed Consolidated Statements of Income (unaudited)

	For the three months ended	
	January 31 2022	January 31 2021
(Millions of Canadian dollars, except per share amounts)		
Interest and dividend income (Note 3)		
Loans	\$ 5,557	\$ 5,507
Securities	1,379	1,276
Assets purchased under reverse repurchase agreements and securities borrowed	349	389
Deposits and other	93	64
	7,378	7,236
Interest expense (Note 3)		
Deposits and other	1,295	1,508
Other liabilities	770	641
Subordinated debentures	42	52
	2,107	2,201
Net interest income	5,271	5,035
Non-interest income		
Insurance premiums, investment and fee income	1,399	1,809
Trading revenue	314	524
Investment management and custodial fees	1,961	1,703
Mutual fund revenue	1,165	1,000
Securities brokerage commissions	399	401
Service charges	485	458
Underwriting and other advisory fees	701	590
Foreign exchange revenue, other than trading	271	289
Card service revenue	291	272
Credit fees	476	332
Net gains on investment securities	15	35
Share of profit in joint ventures and associates	29	25
Other	289	470
	7,795	7,908
Total revenue	13,066	12,943
Provision for credit losses (Notes 4 and 5)	105	110
Insurance policyholder benefits, claims and acquisition expense	997	1,406
Non-interest expense		
Human resources (Note 7)	4,285	4,288
Equipment	501	493
Occupancy	386	404
Communications	228	213
Professional fees	319	291
Amortization of other intangibles	337	319
Other	524	534
	6,580	6,542
Income before income taxes	5,384	4,885
Income taxes	1,289	1,038
Net income	\$ 4,095	\$ 3,847
Net income attributable to:		
Shareholders	\$ 4,093	\$ 3,845
Non-controlling interests	2	2
	\$ 4,095	\$ 3,847
Basic earnings per share (in dollars) (Note 9)	\$ 2.84	\$ 2.66
Diluted earnings per share (in dollars) (Note 9)	2.84	2.66
Dividends per common share (in dollars)	1.20	1.08

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

Interim Condensed Consolidated Statements of Comprehensive Income (unaudited)

(Millions of Canadian dollars)	For the three months ended	
	January 31 2022	January 31 2021
Net income	\$ 4,095	\$ 3,847
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	(253)	369
Provision for credit losses recognized in income	(7)	(2)
Reclassification of net losses (gains) on debt securities and loans at fair value through other comprehensive income to income	(11)	(36)
	(271)	331
Foreign currency translation adjustments		
Unrealized foreign currency translation gains (losses)	1,474	(2,168)
Net foreign currency translation gains (losses) from hedging activities	(507)	792
Reclassification of losses (gains) on foreign currency translation to income	(18)	-
Reclassification of losses (gains) on net investment hedging activities to income	17	-
	966	(1,376)
Net change in cash flow hedges		
Net gains (losses) on derivatives designated as cash flow hedges	98	127
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	31	45
	129	172
Items that will not be reclassified subsequently to income:		
Remeasurements of employee benefit plans (Note 7)	283	781
Net fair value change due to credit risk on financial liabilities designated at fair value through profit or loss	180	(124)
Net gains (losses) on equity securities designated at fair value through other comprehensive income	39	4
	502	661
Total other comprehensive income (loss), net of taxes	1,326	(212)
Total comprehensive income (loss)	\$ 5,421	\$ 3,635
Total comprehensive income attributable to:		
Shareholders	\$ 5,417	\$ 3,637
Non-controlling interests	4	(2)
	\$ 5,421	\$ 3,635

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

(Millions of Canadian dollars)	For the three months ended	
	January 31 2022	January 31 2021
Income taxes on other comprehensive income		
Net unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income	\$ (77)	\$ 47
Provision for credit losses recognized in income	(1)	-
Reclassification of net losses (gains) on debt securities and loans at fair value through other comprehensive income to income	(1)	(13)
Unrealized foreign currency translation gains (losses)	-	2
Net foreign currency translation gains (losses) from hedging activities	(170)	266
Reclassification of losses (gains) on net investment hedging activities to income	6	-
Net gains (losses) on derivatives designated as cash flow hedges	34	45
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	11	16
Remeasurements of employee benefit plans	100	277
Net fair value change due to credit risk on financial liabilities designated at fair value through profit or loss	64	(44)
Net gains (losses) on equity securities designated at fair value through other comprehensive income	4	-
Total income tax expenses (recoveries)	\$ (30)	\$ 596

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 January 31, 2022											
	Preferred shares and other equity instruments	Common shares	Treasury – preferred shares and other equity instruments	Treasury – common shares	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)	\$ 6,723	\$ 17,728	\$ (39)	\$ (73)	\$ 71,795	\$ (88)	\$ 2,055	\$ 566	\$ 2,533	\$ 98,667	\$ 95	\$ 98,762
Balance at beginning of period	750	34	-	-	(1)	-	-	-	-	783	-	783
Changes in equity	-	(111)	-	-	(1,103)	-	-	-	-	(1,214)	-	(1,214)
Issues of share capital and other equity instruments	-	-	-	-	-	-	-	-	-	-	-	-
Common shares purchased for cancellation	-	-	-	-	-	-	-	-	-	-	-	-
Sales of treasury shares and other equity instruments	-	-	156	1,516	-	-	-	-	-	1,672	-	1,672
Purchases of treasury shares and other equity instruments	-	-	(149)	(1,522)	-	-	-	-	-	(1,671)	-	(1,671)
Share-based compensation awards	-	-	-	-	2	-	-	-	-	2	-	2
Dividends on common shares	-	-	-	-	(1,702)	-	-	-	-	(1,702)	-	(1,702)
Dividends on preferred shares and distributions on other equity instruments	-	-	-	-	(54)	-	-	-	-	(54)	(1)	(55)
Other	-	-	-	-	10	-	-	-	-	10	-	10
Net income	-	-	-	-	4,093	-	-	-	-	4,093	2	4,095
Total other comprehensive income (loss), net of taxes	-	-	-	-	502	(271)	964	129	822	1,324	2	1,326
Balance at end of period	\$ 7,473	\$ 17,651	\$ (32)	\$ (79)	\$ 73,542	\$ (359)	\$ 3,019	\$ 695	\$ 3,355	\$ 101,910	\$ 98	\$ 102,008

	For the three months ended January 31, 2021											
	Preferred shares and other equity instruments	Common shares	Treasury – preferred shares and other equity instruments	Treasury – common shares	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)	\$ 5,948	\$ 17,628	\$ (3)	\$ (129)	\$ 59,806	\$ (139)	\$ 4,632	\$ (1,079)	\$ 3,414	\$ 86,664	\$ 103	\$ 86,767
Balance at beginning of period	1,250	36	-	-	(3)	-	-	-	-	1,283	-	1,283
Changes in equity	-	-	-	-	-	-	-	-	-	-	-	-
Issues of share capital and other equity instruments	-	-	-	-	-	-	-	-	-	-	-	-
Common shares purchased for cancellation	-	-	-	-	-	-	-	-	-	-	-	-
Sales of treasury shares and other equity instruments	-	-	46	903	-	-	-	-	-	949	-	949
Purchases of treasury shares and other equity instruments	-	-	(26)	(800)	-	-	-	-	-	(826)	-	(826)
Share-based compensation awards	-	-	-	-	(2)	-	-	-	-	(2)	-	(2)
Dividends on common shares	-	-	-	-	(1,539)	-	-	-	-	(1,539)	-	(1,539)
Dividends on preferred shares and distributions on other equity instruments	-	-	-	-	(58)	-	-	-	-	(58)	(1)	(59)
Other	-	-	-	-	41	-	-	-	-	41	-	41
Net income	-	-	-	-	3,845	-	-	-	-	3,845	2	3,847
Total other comprehensive income (loss), net of taxes	-	-	-	-	661	331	(1,372)	172	(869)	(208)	(4)	(212)
Balance at end of period	\$ 7,198	\$ 17,664	\$ 17	\$ (26)	\$ 62,751	\$ 192	\$ 3,260	\$ (907)	\$ 2,545	\$ 90,149	\$ 100	\$ 90,249

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

Interim Condensed Consolidated Statements of Cash Flows (unaudited)

(Millions of Canadian dollars)	For the three months ended	
	January 31 2022	January 31 2021
Cash flows from operating activities		
Net income	\$ 4,095	\$ 3,847
Adjustments for non-cash items and others		
Provision for credit losses	105	110
Depreciation	313	314
Deferred income taxes	227	332
Amortization and impairment of other intangibles	339	320
Net changes in investments in joint ventures and associates	(28)	(24)
Losses (Gains) on investment securities	(15)	(41)
Adjustments for net changes in operating assets and liabilities		
Insurance claims and policy benefit liabilities	157	539
Net change in accrued interest receivable and payable	(11)	(221)
Current income taxes	(2,718)	279
Derivative assets	3,222	2,571
Derivative liabilities	(3,337)	(3,856)
Trading securities	(10,285)	(11,952)
Loans, net of securitizations	(22,864)	(11,375)
Assets purchased under reverse repurchase agreements and securities borrowed	(4,223)	1,982
Obligations related to assets sold under repurchase agreements and securities loaned	2,808	676
Obligations related to securities sold short	3,703	3,284
Deposits, net of securitizations	42,011	42,664
Brokers and dealers receivable and payable	2,013	(1,138)
Other	(7,078)	2,502
Net cash from (used in) operating activities	8,434	30,813
Cash flows from investing activities		
Change in interest-bearing deposits with banks	16,218	5,282
Proceeds from sales and maturities of investment securities	23,101	29,673
Purchases of investment securities	(28,664)	(33,181)
Net acquisitions of premises and equipment and other intangibles	(590)	(429)
Net cash from (used in) investing activities	10,065	1,345
Cash flows from financing activities		
Issuance of subordinated debentures	1,000	1,000
Repayment of subordinated debentures	–	(1,500)
Issue of common shares, net of issuance costs	31	31
Common shares purchased for cancellation	(1,214)	–
Issue of preferred shares and other equity instruments, net of issuance costs	749	1,247
Sales of treasury shares and other equity instruments	1,672	949
Purchases of treasury shares and other equity instruments	(1,671)	(826)
Dividends paid on shares and distributions paid on other equity instruments	(1,608)	(1,613)
Dividends/distributions paid to non-controlling interests	(1)	(1)
Change in short-term borrowings of subsidiaries	–	(7)
Repayment of lease liabilities	(163)	(146)
Net cash from (used in) financing activities	(1,205)	(866)
Effect of exchange rate changes on cash and due from banks	23	(592)
Net change in cash and due from banks	17,317	30,700
Cash and due from banks at beginning of period ⁽¹⁾	113,846	118,888
Cash and due from banks at end of period ⁽¹⁾	\$ 131,163	\$ 149,588
Cash flows from operating activities include:		
Amount of interest paid	\$ 1,771	\$ 2,134
Amount of interest received	6,826	6,779
Amount of dividends received	867	655
Amount of income taxes paid	3,679	1,026

(1) We are required to maintain balances with central banks and other regulatory authorities. The total balances were \$2 billion as at January 31, 2022 (October 31, 2021 – \$2 billion; January 31, 2021 – \$3 billion; October 31, 2020 – \$3 billion).

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

Note 1 General information

Our unaudited Interim Condensed Consolidated Financial Statements (Condensed Financial Statements) are presented in compliance with International Accounting Standard (IAS) 34 Interim Financial Reporting. The Condensed Financial Statements do not include all the information and disclosures required in the annual financial statements and should be read in conjunction with our audited 2021 Annual Consolidated Financial Statements and the accompanying notes included on pages 133 to 225 in our 2021 Annual Report. Unless otherwise stated, monetary amounts are stated in Canadian dollars. Tabular information is stated in millions of dollars, except as noted. On February 23, 2022, the Board of Directors authorized the Condensed Financial Statements for issue.

Note 2 Summary of significant accounting policies, estimates and judgments

The Condensed Financial Statements have been prepared using the same accounting policies and methods used in preparation of our audited 2021 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 2021 Annual Consolidated Financial Statements.

Interest Rate Benchmark Reform

As part of the interest rate benchmark reform, the publication of all non-USD London Interbank Offered Rate (LIBOR) settings ceased on December 31, 2021. As at January 31, 2022 and consistent with our transition plan, our exposure to financial instruments referencing non-USD LIBOR interest rates is no longer material to our 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 values and fair values for financial instruments classified or designated as fair value through profit or loss (FVTPL) and fair value through other comprehensive income (FVOCI). Embedded derivatives are presented on a combined basis with the host contracts. Refer to Note 2 and Note 3 of our audited 2021 Annual Consolidated Financial Statements for a description of the valuation techniques and inputs used in the fair value measurement of our financial instruments. There have been no significant changes to our determination of fair value during the quarter.

	As at January 31, 2022							
	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	\$ –	\$ 50,175	\$ –	\$ –	\$ 13,245	\$ 13,245	\$ 63,420	\$ 63,420
Securities								
Trading	135,190	14,335	–	–	–	–	149,525	149,525
Investment, net of applicable allowance	–	–	81,092	549	71,929	70,796	153,570	152,437
	135,190	14,335	81,092	549	71,929	70,796	303,095	301,962
Assets purchased under reverse repurchase agreements and securities borrowed	270,142	–	–	–	41,984	41,984	312,126	312,126
Loans, net of applicable allowance								
Retail	–	240	157	–	511,220	508,971	511,617	509,368
Wholesale	9,873	3,283	532	–	214,726	214,501	228,414	228,189
	9,873	3,523	689	–	725,946	723,472	740,031	737,557
Other								
Derivatives	92,319	–	–	–	–	–	92,319	92,319
Other assets (1)	2,663	–	–	–	60,259	60,259	62,922	62,922
Financial liabilities								
Deposits								
Personal	\$ 348	\$ 19,709			\$ 355,549	\$ 355,434	\$ 375,606	\$ 375,491
Business and government (2)	615	140,682			578,792	579,325	720,089	720,622
Bank (3)	–	17,473			29,674	29,674	47,147	47,147
	963	177,864			964,015	964,433	1,142,842	1,143,260
Other								
Obligations related to securities sold short	41,544	–			–	–	41,544	41,544
Obligations related to assets sold under repurchase agreements and securities loaned	–	238,833			26,176	26,176	265,009	265,009
Derivatives	88,102	–			–	–	88,102	88,102
Other liabilities (4)	445	107			64,743	64,724	65,295	65,276
Subordinated debentures	–	–			10,561	10,661	10,561	10,661

Note 3 Fair value of financial instruments (continued)

(Millions of Canadian dollars)	As at October 31, 2021							
	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
Financial assets								
Interest-bearing deposits with banks	\$ –	\$ 56,896	\$ –	\$ –	\$ 22,742	\$ 22,742	\$ 79,638	\$ 79,638
Securities								
Trading	125,801	13,439	–	–	–	–	139,240	139,240
Investment, net of applicable allowance	–	–	77,802	533	67,149	66,823	145,484	145,158
	125,801	13,439	77,802	533	67,149	66,823	284,724	284,398
Assets purchased under reverse repurchase agreements and securities borrowed	265,011	–	–	–	42,892	42,892	307,903	307,903
Loans, net of applicable allowance								
Retail	–	241	327	–	500,621	502,277	501,189	502,845
Wholesale	8,428	2,769	813	–	204,376	204,683	216,386	216,693
	8,428	3,010	1,140	–	704,997	706,960	717,575	719,538
Other								
Derivatives	95,541	–	–	–	–	–	95,541	95,541
Other assets (1)	4,109	–	–	–	58,483	58,483	62,592	62,592
Financial liabilities								
Deposits								
Personal	\$ 321	\$ 18,328			\$ 343,839	\$ 344,040	\$ 362,488	\$ 362,689
Business and government (2)	739	131,630			563,984	565,106	696,353	697,475
Bank (3)	–	17,251			24,739	24,743	41,990	41,994
	1,060	167,209			932,562	933,889	1,100,831	1,102,158
Other								
Obligations related to securities sold short	37,841	–			–	–	37,841	37,841
Obligations related to assets sold under repurchase agreements and securities loaned	–	236,147			26,054	26,054	262,201	262,201
Derivatives	91,439	–			–	–	91,439	91,439
Other liabilities (4)	654	171			64,746	64,749	65,571	65,574
Subordinated debentures	–	–			9,593	9,601	9,593	9,601

(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.

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									
	January 31, 2022					October 31, 2021				
	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	\$ –	\$ 50,175	\$ –	\$ –	\$ 50,175	\$ –	\$ 56,896	\$ –	\$ –	\$ 56,896
Securities										
Trading										
Debt issued or guaranteed by:										
Canadian government (1)										
Federal	6,131	1,775	–	–	7,906	8,977	2,380	–	–	11,357
Provincial and municipal	–	9,785	–	–	9,785	–	11,068	–	–	11,068
U.S. federal, state, municipal and agencies (1)	1,101	26,673	22	–	27,796	215	22,738	25	–	22,978
Other OECD government (2)	3,741	7,037	–	–	10,778	2,729	5,730	–	–	8,459
Mortgage-backed securities (1)	–	13	–	–	13	–	4	–	–	4
Asset-backed securities										
Non-CDO securities (3)	–	1,062	2	–	1,064	–	891	2	–	893
Corporate debt and other debt	–	24,188	15	–	24,203	–	23,085	25	–	23,110
Equities	62,988	3,303	1,689	–	67,980	56,826	3,015	1,530	–	61,371
	73,961	73,836	1,728	–	149,525	68,747	68,911	1,582	–	139,240
Investment										
Debt issued or guaranteed by:										
Canadian government (1)										
Federal	2,068	2,033	–	–	4,101	1,973	1,730	–	–	3,703
Provincial and municipal	–	3,098	–	–	3,098	–	3,132	–	–	3,132
U.S. federal, state, municipal and agencies (1)	–	35,333	–	–	35,333	12	34,815	–	–	34,827
Other OECD government	–	5,948	–	–	5,948	–	5,956	–	–	5,956
Mortgage-backed securities (1)	–	2,720	20	–	2,740	–	2,727	20	–	2,747
Asset-backed securities										
CDO	–	7,157	–	–	7,157	–	7,074	–	–	7,074
Non-CDO securities	–	559	–	–	559	–	586	–	–	586
Corporate debt and other debt	–	22,001	155	–	22,156	–	19,625	152	–	19,777
Equities	46	154	349	–	549	46	153	334	–	533
	2,114	79,003	524	–	81,641	2,031	75,798	506	–	78,335
Assets purchased under reverse repurchase agreements and securities borrowed	–	270,142	–	–	270,142	–	265,011	–	–	265,011
Loans	–	13,406	679	–	14,085	–	11,501	1,077	–	12,578
Other										
Derivatives										
Interest rate contracts	–	31,858	322	–	32,180	–	33,857	320	–	34,177
Foreign exchange contracts	–	42,922	49	–	42,971	–	41,224	74	–	41,298
Credit derivatives	–	82	–	–	82	–	34	–	–	34
Other contracts	2,690	16,003	43	–	18,736	3,175	17,955	26	–	21,156
Valuation adjustments	–	(961)	27	–	(934)	–	(819)	9	–	(810)
Total gross derivatives	2,690	89,904	441	–	93,035	3,175	92,251	429	–	95,855
Netting adjustments	–	–	–	(716)	(716)	–	–	–	(314)	(314)
Total derivatives	2,690	89,904	441	(716)	92,319	3,175	92,251	429	(314)	95,541
Other assets	1,568	1,095	–	–	2,663	1,474	2,635	–	–	4,109
	\$ 80,333	\$ 577,561	\$ 3,372	\$ (716)	\$ 660,550	\$ 75,427	\$ 573,003	\$ 3,594	\$ (314)	\$ 651,710
Financial liabilities										
Deposits										
Personal	\$ –	\$ 19,935	\$ 122	\$ –	\$ 20,057	\$ –	\$ 18,498	\$ 151	\$ –	\$ 18,649
Business and government	–	141,297	–	–	141,297	–	132,369	–	–	132,369
Bank	–	17,473	–	–	17,473	–	17,251	–	–	17,251
Other										
Obligations related to securities sold short	18,789	22,755	–	–	41,544	18,345	19,496	–	–	37,841
Obligations related to assets sold under repurchase agreements and securities loaned	–	238,833	–	–	238,833	–	236,147	–	–	236,147
Derivatives										
Interest rate contracts	–	26,818	877	–	27,695	–	28,566	955	–	29,521
Foreign exchange contracts	–	41,824	42	–	41,866	–	40,484	27	–	40,511
Credit derivatives	–	100	–	–	100	–	120	–	–	120
Other contracts	3,103	15,566	491	–	19,160	3,699	17,456	419	–	21,574
Valuation adjustments	–	9	(12)	–	(3)	–	38	(11)	–	27
Total gross derivatives	3,103	84,317	1,398	–	88,818	3,699	86,664	1,390	–	91,753
Netting adjustments	–	–	–	(716)	(716)	–	–	–	(314)	(314)
Total derivatives	3,103	84,317	1,398	(716)	88,102	3,699	86,664	1,390	(314)	91,439
Other liabilities	332	213	7	–	552	258	560	7	–	825
	\$ 22,224	\$ 524,823	\$ 1,527	\$ (716)	\$ 547,858	\$ 22,302	\$ 510,985	\$ 1,548	\$ (314)	\$ 534,521

(1) As at January 31, 2022, residential and commercial mortgage-backed securities (MBS) included in all fair value levels of trading securities were \$12,029 million and \$nil (October 31, 2021 – \$13,124 million and \$nil), respectively, and in all fair value levels of Investment securities were \$13,389 million and \$2,594 million (October 31, 2021 – \$13,542 million and \$2,592 million), respectively.

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

(3) Collateralized debt obligations (CDO).

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 January 31, 2022, 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 January 31, 2022, 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 audited 2021 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 January 31, 2022								
	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	\$ 25	\$ –	\$ 1	\$ –	\$ (4)	\$ –	\$ –	\$ 22	\$ –
Asset-backed securities									
Non-CDO securities	2	–	–	–	–	–	–	2	–
Corporate debt and other debt	25	(1)	–	–	(5)	–	(4)	15	(1)
Equities	1,530	74	23	82	(20)	–	–	1,689	94
	1,582	73	24	82	(29)	–	(4)	1,728	93
Investment									
Mortgage-backed securities	20	–	–	–	–	–	–	20	n.a.
Corporate debt and other debt	152	–	3	–	–	–	–	155	n.a.
Equities	334	–	45	6	(1)	–	(35)	349	n.a.
	506	–	48	6	(1)	–	(35)	524	n.a.
Loans	1,077	10	(8)	56	(461)	7	(2)	679	10
Other									
Net derivative balances (3)									
Interest rate contracts	(635)	(11)	1	1	82	–	7	(555)	(8)
Foreign exchange contracts	47	(30)	1	–	(4)	–	(7)	7	(32)
Other contracts	(393)	61	(8)	(103)	42	(76)	29	(448)	70
Valuation adjustments	20	–	–	–	–	19	–	39	–
Other assets	–	–	–	–	–	–	–	–	–
	\$ 2,204	\$ 103	\$ 58	\$ 42	\$ (371)	\$ (50)	\$ (12)	\$ 1,974	\$ 133
Liabilities									
Deposits	\$ (151)	\$ (6)	\$ (1)	\$ (27)	\$ 5	\$ (20)	\$ 78	\$ (122)	\$ 6
Other									
Other liabilities	(7)	–	–	–	–	–	–	(7)	–
	\$ (158)	\$ (6)	\$ (1)	\$ (27)	\$ 5	\$ (20)	\$ 78	\$ (129)	\$ 6

For the three months ended January 31, 2021										
(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	\$ 44	\$ –	\$ (1)	\$ –	\$ (4)	\$ –	\$ –	\$ 39	\$ –	
Asset-backed securities										
Non-CDO securities	2	–	–	–	–	–	–	2	–	
Corporate debt and other debt	30	–	–	3	–	14	(11)	36	–	
Equities	1,261	18	(33)	109	(23)	–	–	1,332	25	
	1,337	18	(34)	112	(27)	14	(11)	1,409	25	
Investment										
Mortgage-backed securities	27	–	(6)	–	–	–	–	21	n.a.	
Corporate debt and other debt	160	–	(7)	–	1	–	–	154	n.a.	
Equities	335	–	(1)	–	2	–	–	336	n.a.	
	522	–	(14)	–	3	–	–	511	n.a.	
Loans	1,070	(5)	7	82	3	16	(60)	1,113	18	
Other										
Net derivative balances (3)										
Interest rate contracts	(588)	1	(1)	(3)	(39)	(3)	(10)	(643)	2	
Foreign exchange contracts	22	13	3	5	(6)	1	4	42	10	
Other contracts	(301)	(11)	11	(17)	47	8	163	(100)	13	
Valuation adjustments	40	–	–	–	(4)	–	–	36	–	
Other assets	53	(39)	(2)	–	(3)	–	–	9	(39)	
	\$ 2,155	\$ (23)	\$ (30)	\$ 179	\$ (26)	\$ 36	\$ 86	\$ 2,377	\$ 29	
Liabilities										
Deposits	\$ (139)	\$ (29)	\$ 3	\$ (45)	\$ 13	\$ (72)	\$ 100	\$ (169)	\$ (25)	
Other										
Other liabilities	(38)	22	1	–	2	–	–	(13)	22	
	\$ (177)	\$ (7)	\$ 4	\$ (45)	\$ 15	\$ (72)	\$ 100	\$ (182)	\$ (3)	

(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 \$45 million for the three months ended January 31, 2022 (January 31, 2021 – losses of \$3 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 January 31, 2022 included derivative assets of \$441 million (January 31, 2021 – \$508 million) and derivative liabilities of \$1,398 million (January 31, 2021 – \$1,173 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 January 31, 2022, there were no significant transfers out of Level 1 to Level 2 or 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 January 31, 2022, there were no significant transfers out of Level 3 to Level 2 or out of Level 2 to Level 3.

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	
	January 31 2022	January 31 2021
Interest and dividend income ^{(1), (2)}		
Financial instruments measured at fair value through profit or loss	\$ 1,419	\$ 1,172
Financial instruments measured at fair value through other comprehensive income	77	102
Financial instruments measured at amortized cost	5,882	5,962
	7,378	7,236
Interest expense ⁽¹⁾		
Financial instruments measured at fair value through profit or loss	861	737
Financial instruments measured at amortized cost	1,246	1,464
	2,107	2,201
Net interest income	\$ 5,271	\$ 5,035

(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 January 31, 2022, Interest income of \$196 million (January 31, 2021 – \$149 million), and Interest expense of \$1 million (January 31, 2021 – \$1 million).

(2) Includes dividend income for the three months ended January 31, 2022 of \$750 million (January 31, 2021 – \$608 million), which is presented in Interest and dividend income in the Interim Consolidated Statements of Income.

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

(Millions of Canadian dollars)	As at							
	January 31, 2022				October 31, 2021			
	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⁾	\$ 4,245	\$ –	\$ (144)	\$ 4,101	\$ 3,841	\$ 1	\$ (139)	\$ 3,703
Provincial and municipal	3,343	1	(246)	3,098	3,328	3	(199)	3,132
U.S. federal, state, municipal and agencies ⁽³⁾	35,427	233	(327)	35,333	34,678	353	(204)	34,827
Other OECD government	5,948	2	(2)	5,948	5,949	8	(1)	5,956
Mortgage-backed securities ⁽³⁾	2,755	1	(16)	2,740	2,757	2	(12)	2,747
Asset-backed securities								
CDO	7,157	1	(1)	7,157	7,074	1	(1)	7,074
Non-CDO securities	555	5	(1)	559	580	6	–	586
Corporate debt and other debt	22,128	47	(19)	22,156	19,731	57	(11)	19,777
Equities	245	305	(1)	549	242	292	(1)	533
	\$ 81,803	\$ 595	\$ (757)	\$ 81,641	\$ 78,180	\$ 723	\$ (568)	\$ 78,335

(1) Excludes \$71,929 million of held-to-collect securities as at January 31, 2022 that are carried at amortized cost, net of allowance for credit losses (October 31, 2021 – \$67,149 million).

(2) Gross unrealized gains and losses includes \$(11) million of allowance for credit losses on debt securities at FVOCI as at January 31, 2022 (October 31, 2021 – \$(9) 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 \$2,610 million, \$nil, \$16 million and \$2,594 million, respectively as at January 31, 2022 (October 31, 2021 – \$2,603 million, \$1 million, \$12 million and \$2,592 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							
	January 31, 2022				January 31, 2021			
	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	\$ 2	\$ 1	\$ (12)	\$ (9)	\$ 12	\$ –	\$ (4)	\$ 8
Provision for credit losses								
Transfers to stage 1	–	–	–	–	–	–	–	–
Transfers to stage 2	–	–	–	–	–	–	–	–
Transfers to stage 3	–	–	–	–	–	–	–	–
Purchases	–	–	–	–	2	–	–	2
Sales and maturities	–	–	–	–	(4)	–	–	(4)
Changes in risk, parameters and exposures	–	–	(2)	(2)	(2)	3	(2)	(1)
Exchange rate and other	–	–	–	–	(1)	–	1	–
Balance at end of period	\$ 2	\$ 1	\$ (14)	\$ (11)	\$ 7	\$ 3	\$ (5)	\$ 5

(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							
	January 31, 2022				January 31, 2021			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	\$ 5	\$ 18	\$ –	\$ 23	\$ 10	\$ 19	\$ –	\$ 29
Provision for credit losses								
Transfers to stage 1	–	–	–	–	–	–	–	–
Transfers to stage 2	–	–	–	–	–	–	–	–
Transfers to stage 3	–	–	–	–	–	–	–	–
Purchases	6	–	–	6	3	–	–	3
Sales and maturities	(1)	–	–	(1)	–	–	–	–
Changes in risk, parameters and exposures	(1)	(1)	–	(2)	(5)	1	–	(4)
Exchange rate and other	–	–	–	–	–	(2)	–	(2)
Balance at end of period	\$ 9	\$ 17	\$ –	\$ 26	\$ 8	\$ 18	\$ –	\$ 26

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 2021 Annual Report.

(Millions of Canadian dollars)	As at							
	January 31, 2022				October 31, 2021			
	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	\$ 80,373	\$ 74	\$ –	\$ 80,447	\$ 77,147	\$ 82	\$ –	\$ 77,229
Non-investment grade	476	16	–	492	423	–	–	423
Impaired	–	–	153	153	–	–	150	150
	80,849	90	153	81,092	77,570	82	150	77,802
Items not subject to impairment (2)				549				533
				\$ 81,641				\$ 78,335
Securities at amortized cost								
Investment grade	\$ 70,799	\$ –	\$ –	\$ 70,799	\$ 66,033	\$ –	\$ –	\$ 66,033
Non-investment grade	943	213	–	1,156	928	211	–	1,139
Impaired	–	–	–	–	–	–	–	–
	71,742	213	–	71,955	66,961	211	–	67,172
Allowance for credit losses	9	17	–	26	5	18	–	23
Amortized cost	\$ 71,733	\$ 196	\$ –	\$ 71,929	\$ 66,956	\$ 193	\$ –	\$ 67,149

(1) Reflects \$153 million of purchased credit impaired securities (October 31, 2021 – \$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									
	January 31, 2022					January 31, 2021				
	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	\$ 416	\$ (6)	\$ (5)	\$ 4	\$ 409	\$ 518	\$ 15	\$ (7)	\$ (14)	\$ 512
Personal	1,079	18	(56)	(3)	1,038	1,309	69	(59)	(4)	1,315
Credit cards	875	65	(71)	1	870	1,246	25	(69)	(1)	1,201
Small business	177	3	(4)	2	178	140	8	(5)	–	143
Wholesale	1,797	12	(6)	8	1,811	2,795	(11)	(86)	(76)	2,622
Customers' liability under acceptances	75	8	–	–	83	107	15	–	(1)	121
	\$ 4,419	\$ 100	\$ (142)	\$ 12	\$ 4,389	\$ 6,115	\$ 121	\$ (226)	\$ (96)	\$ 5,914
Presented as:										
Allowance for loan losses	\$ 4,089				\$ 4,047	\$ 5,639				\$ 5,478
Other liabilities – Provisions	241				251	363				309
Customers' liability under acceptances	75				83	107				121
Other components of equity	14				8	6				6

The following table reconciles the opening and closing for each major product of loans and commitments as determined by our modelled, scenario-weighted allowance and the application of expert credit judgment as applicable. Reconciling items include the following:

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

Allowance for credit losses – Retail and wholesale loans

(Millions of Canadian dollars)	For the three months ended								
	January 31, 2022				January 31, 2021				
	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	\$ 186	\$ 92	\$ 138	\$ 416	\$ 206	\$ 160	\$ 152	\$ 518	
Provision for credit losses									
Transfers to stage 1	24	(19)	(5)	–	74	(69)	(5)	–	
Transfers to stage 2	(2)	2	–	–	(6)	8	(2)	–	
Transfers to stage 3	(1)	(7)	8	–	–	(13)	13	–	
Originations	30	–	–	30	30	–	–	30	
Maturities	(7)	(3)	–	(10)	(6)	(4)	–	(10)	
Changes in risk, parameters and exposures	(44)	19	(1)	(26)	(104)	86	13	(5)	
Write-offs	–	–	(10)	(10)	–	–	(9)	(9)	
Recoveries	–	–	5	5	–	–	2	2	
Exchange rate and other	1	1	2	4	(2)	(6)	(6)	(14)	
Balance at end of period	\$ 187	\$ 85	\$ 137	\$ 409	\$ 192	\$ 162	\$ 158	\$ 512	
Personal									
Balance at beginning of period	\$ 422	\$ 569	\$ 88	\$ 1,079	\$ 480	\$ 733	\$ 96	\$ 1,309	
Provision for credit losses									
Transfers to stage 1	170	(169)	(1)	–	197	(196)	(1)	–	
Transfers to stage 2	(22)	22	–	–	(27)	27	–	–	
Transfers to stage 3	(1)	(12)	13	–	(1)	(14)	15	–	
Originations	26	–	–	26	33	–	–	33	
Maturities	(21)	(25)	–	(46)	(22)	(27)	–	(49)	
Changes in risk, parameters and exposures	(171)	162	47	38	(182)	198	69	85	
Write-offs	–	–	(86)	(86)	–	–	(94)	(94)	
Recoveries	–	–	30	30	–	–	35	35	
Exchange rate and other	1	–	(4)	(3)	(2)	–	(2)	(4)	
Balance at end of period	\$ 404	\$ 547	\$ 87	\$ 1,038	\$ 476	\$ 721	\$ 118	\$ 1,315	
Credit cards									
Balance at beginning of period	\$ 233	\$ 642	\$ –	\$ 875	\$ 364	\$ 882	\$ –	\$ 1,246	
Provision for credit losses									
Transfers to stage 1	146	(146)	–	–	226	(226)	–	–	
Transfers to stage 2	(23)	23	–	–	(30)	30	–	–	
Transfers to stage 3	(1)	(70)	71	–	(2)	(60)	62	–	
Originations	4	–	–	4	2	–	–	2	
Maturities	(1)	(7)	–	(8)	(2)	(8)	–	(10)	
Changes in risk, parameters and exposures	(132)	201	–	69	(205)	231	7	33	
Write-offs	–	–	(112)	(112)	–	–	(106)	(106)	
Recoveries	–	–	41	41	–	–	37	37	
Exchange rate and other	–	1	–	1	–	(1)	–	(1)	
Balance at end of period	\$ 226	\$ 644	\$ –	\$ 870	\$ 353	\$ 848	\$ –	\$ 1,201	
Small business									
Balance at beginning of period	\$ 88	\$ 55	\$ 34	\$ 177	\$ 78	\$ 29	\$ 33	\$ 140	
Provision for credit losses									
Transfers to stage 1	5	(5)	–	–	13	(13)	–	–	
Transfers to stage 2	(2)	2	–	–	(1)	1	–	–	
Transfers to stage 3	–	(1)	1	–	–	(1)	1	–	
Originations	9	–	–	9	9	–	–	9	
Maturities	(5)	(7)	–	(12)	(6)	(3)	–	(9)	
Changes in risk, parameters and exposures	(10)	11	5	6	(20)	20	8	8	
Write-offs	–	–	(6)	(6)	–	–	(7)	(7)	
Recoveries	–	–	2	2	–	–	2	2	
Exchange rate and other	2	1	(1)	2	1	–	(1)	–	
Balance at end of period	\$ 87	\$ 56	\$ 35	\$ 178	\$ 74	\$ 33	\$ 36	\$ 143	
Wholesale									
Balance at beginning of period	\$ 566	\$ 794	\$ 437	\$ 1,797	\$ 995	\$ 1,132	\$ 668	\$ 2,795	
Provision for credit losses									
Transfers to stage 1	108	(107)	(1)	–	129	(129)	–	–	
Transfers to stage 2	(18)	18	–	–	(47)	61	(14)	–	
Transfers to stage 3	(1)	(4)	5	–	(1)	(15)	16	–	
Originations	156	–	–	156	207	–	–	207	
Maturities	(106)	(107)	–	(213)	(165)	(139)	–	(304)	
Changes in risk, parameters and exposures	(129)	160	38	69	(207)	257	36	86	
Write-offs	–	–	(23)	(23)	–	–	(98)	(98)	
Recoveries	–	–	17	17	–	–	12	12	
Exchange rate and other	4	11	(7)	8	(16)	(22)	(38)	(76)	
Balance at end of period	\$ 580	\$ 765	\$ 466	\$ 1,811	\$ 895	\$ 1,145	\$ 582	\$ 2,622	

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 and Note 5 of our audited 2021 Annual Consolidated Financial Statements.

While the rapid emergence of the Omicron variant of COVID-19 late in calendar 2021 prompted the re-imposition of containment measures to varying degrees in certain regions, the impact of this latest virus wave is expected to be less severe and of shorter duration than prior waves with some containment measures already eased or lifted. The economic outlook remains subject to ongoing uncertainty as rising inflation concerns, as well as supply chain disruptions, rising business input costs, and labour shortages are limiting the pace of further improvement. In light of the evolving and unpredictable nature of the COVID-19 pandemic, our allowances continue to require the application of heightened judgment.

To reflect relevant risk factors not captured in our modelled results, we applied expert credit judgment in determining significant increases in credit risk since origination and our weighted allowance for credit losses. The impact of expert credit judgment on our allowances remains elevated as compared to pre-pandemic levels. We applied quantitative and qualitative adjustments for the impacts of the unprecedented macroeconomic environment, including the continued impact of government support programs in offsetting the effect of COVID-19 related unemployment on the economy and on mitigating the losses for the sectors most sensitive to the economic impact of the COVID-19 pandemic.

All of our IFRS 9 scenarios are designed to include the impact of COVID-19. The possibility of a more prolonged recovery period due to temporary Omicron-related economic disruptions, labour shortages, intensifying inflationary pressures, and central bank interest rate increases have been reflected in our scenario design and weights.

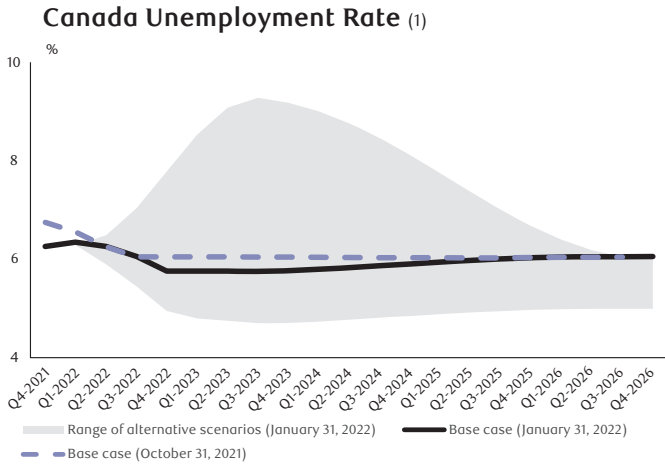
Our base scenario reflects economies that will substantially recover from the sharp drop in economic activity in calendar Q2 2020. Re-imposed containment measures in certain regions in the first calendar quarter of 2022 are expected to weigh on GDP growth in Canada, however, disruptions are expected to be temporary, and GDP growth is expected to rebound over the second and third calendar quarters. Near-term disruptions to labour supply driven by the spread of the Omicron variant and tightening labour markets are also expected to constrain growth in Canada in calendar 2022.

Downside scenarios, including two additional and more severe downside scenarios designed for the energy and real estate sectors, reflect the possibility of a macroeconomic shock beginning in calendar Q2 2022. Conditions are expected to deteriorate from Q1 2022 levels for up to 18 months, followed by a recovery for the remainder of the period. These scenarios assume monetary policy responses that return the economy to a long-run, sustainable growth rate within the forecast period. The possibility of a more prolonged recovery period, including further monetary policy responses to elevated inflation rates which may increase credit risk as compared to our base scenario, is reflected in our general downside scenario.

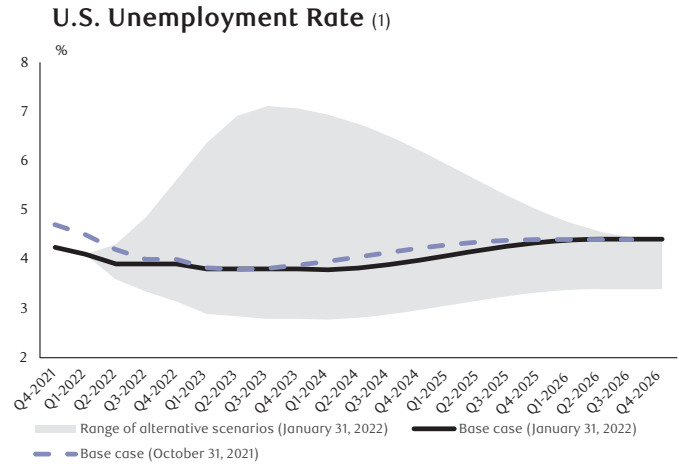
The upside scenario reflects a slightly faster and larger economic recovery than the base scenario, without prompting a further offsetting monetary policy response as compared to our base scenario, followed by a return to a long-run sustainable growth rate within the forecast period.

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

- Unemployment** – In our base forecast, calendar Q1 2022 unemployment rates are expected to increase to 6.3% in Canada, and decline to 4.1% in the U.S. We expect the Canadian unemployment rate to improve in calendar Q2 2022, falling below long run equilibrium by late-2022 until late-2025 when it is expected to stabilize around the long run equilibrium. The U.S. unemployment rate has improved to below long run equilibrium and is expected to return to equilibrium towards the latter end of the forecast horizon.

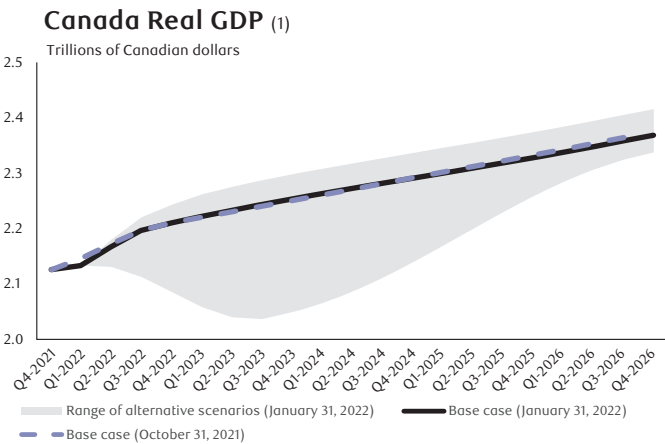


(1) Represents the average quarterly unemployment level over the calendar quarters presented.

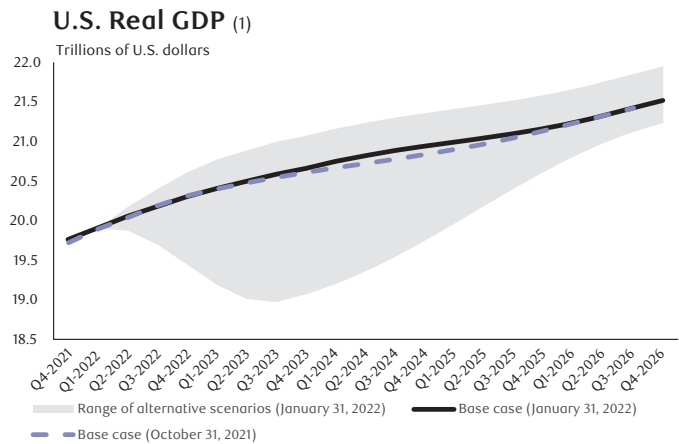


(1) Represents the average quarterly unemployment level over the calendar quarters presented.

- Gross Domestic Product (GDP)** – In our base forecast, we expect Canadian and U.S. GDP to continuously grow in calendar Q1 2022 and thereafter. GDP in calendar Q4 2022 is expected to be 4% above Q4 2021 levels in Canada, and 2.7% above such levels in the U.S.



(1) Represents the seasonally adjusted annual rate indexed to 2012 Canadian dollars over the calendar quarters presented.



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

- Oil price (West Texas Intermediate in US\$)** – In our base forecast, we expect oil prices to average \$76 per barrel over the next 12 months and \$58 per barrel in the following 2 to 5 years. The range of average prices in our alternative downside and upside scenarios is \$27 to \$90 per barrel for the next 12 months and \$37 to \$62 per barrel for the following 2 to 5 years. As at October 31, 2021, our base case forecast included an average price of \$71 per barrel for the next 12 months and \$56 per barrel for the following 2 to 5 years.
- Canadian housing price index** – In our base forecast, we expect housing prices to increase by 0.5% over the next 12 months, with a compound annual growth rate of 4.2% for the following 2 to 5 years. The range of annual housing price growth (contraction) in our alternative downside and upside scenarios is (30.0)% to 10.9% over the next 12 months and 4.2% to 9.6% for the following 2 to 5 years. As at October 31, 2021, our base case forecast included housing price growth of 0.1% for the next 12 months and 4.1% for the following 2 to 5 years.

Note 5 Loans and allowance for credit losses (continued)**Credit risk exposure by internal risk rating**

The following table presents the gross carrying amount of loans measured at amortized cost, and the full contractual amount of undrawn loan commitments subject to the impairment requirements of IFRS 9. Risk ratings are based on internal ratings 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 2021 Annual Report.

(Millions of Canadian dollars)	As at							
	January 31, 2022				October 31, 2021			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Retail								
Loans outstanding – Residential mortgages								
Low risk	\$ 320,587	\$ 1,413	\$ –	\$ 322,000	\$ 310,334	\$ 1,507	\$ –	\$ 311,841
Medium risk	13,924	2,031	–	15,955	15,152	2,051	–	17,203
High risk	3,163	589	–	3,752	3,343	634	–	3,977
Not rated (1)	46,587	945	–	47,532	45,512	913	–	46,425
Impaired	–	–	622	622	–	–	645	645
Total	384,261	4,978	622	389,861	374,341	5,105	645	380,091
Items not subject to impairment (2)				240				241
Total				\$ 390,101				\$ 380,332
Loans outstanding – Personal								
Low risk	\$ 73,068	\$ 681	\$ –	\$ 73,749	\$ 72,267	\$ 698	\$ –	\$ 72,965
Medium risk	5,047	4,308	–	9,355	4,974	4,551	–	9,525
High risk	638	1,037	–	1,675	687	1,045	–	1,732
Not rated (1)	9,553	98	–	9,651	8,934	88	–	9,022
Impaired	–	–	197	197	–	–	197	197
Total	\$ 88,306	\$ 6,124	\$ 197	\$ 94,627	\$ 86,862	\$ 6,382	\$ 197	\$ 93,441
Loans outstanding – Credit cards								
Low risk	\$ 12,621	\$ 17	\$ –	\$ 12,638	\$ 12,864	\$ 24	\$ –	\$ 12,888
Medium risk	1,497	1,525	–	3,022	1,646	1,645	–	3,291
High risk	123	916	–	1,039	136	937	–	1,073
Not rated (1)	593	40	–	633	527	43	–	570
Total	\$ 14,834	\$ 2,498	\$ –	\$ 17,332	\$ 15,173	\$ 2,649	\$ –	\$ 17,822
Loans outstanding – Small business								
Low risk	\$ 8,570	\$ 279	\$ –	\$ 8,849	\$ 8,609	\$ 274	\$ –	\$ 8,883
Medium risk	1,555	971	–	2,526	1,583	979	–	2,562
High risk	203	221	–	424	227	218	–	445
Not rated (1)	4	–	–	4	4	–	–	4
Impaired	–	–	107	107	–	–	109	109
Total	\$ 10,332	\$ 1,471	\$ 107	\$ 11,910	\$ 10,423	\$ 1,471	\$ 109	\$ 12,003
Undrawn loan commitments – Retail								
Low risk	\$ 236,149	\$ 545	\$ –	\$ 236,694	\$ 229,516	\$ 574	\$ –	\$ 230,090
Medium risk	8,684	133	–	8,817	9,475	133	–	9,608
High risk	1,171	97	–	1,268	1,205	97	–	1,302
Not rated (1)	5,211	101	–	5,312	4,854	90	–	4,944
Total	\$ 251,215	\$ 876	\$ –	\$ 252,091	\$ 245,050	\$ 894	\$ –	\$ 245,944
Wholesale – Loans outstanding								
Investment grade	\$ 67,171	\$ 230	\$ –	\$ 67,401	\$ 62,975	\$ 226	\$ –	\$ 63,201
Non-investment grade	122,997	14,886	–	137,883	117,396	15,146	–	132,542
Not rated (1)	10,074	379	–	10,453	9,339	430	–	9,769
Impaired	–	–	1,215	1,215	–	–	1,357	1,357
Total	200,242	15,495	1,215	216,952	189,710	15,802	1,357	206,869
Items not subject to impairment (2)				13,156				11,197
Total				\$ 230,108				\$ 218,066
Undrawn loan commitments – Wholesale								
Investment grade	\$ 253,133	\$ 1,107	\$ –	\$ 254,240	\$ 246,539	\$ 1,122	\$ –	\$ 247,661
Non-investment grade	110,095	11,880	–	121,975	108,063	12,377	–	120,440
Not rated (1)	3,358	–	–	3,358	3,476	1	–	3,477
Total	\$ 366,586	\$ 12,987	\$ –	\$ 379,573	\$ 358,078	\$ 13,500	\$ –	\$ 371,578

- (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.

Loans past due but not impaired (1), (2)

(Millions of Canadian dollars)	As at					
	January 31, 2022			October 31, 2021		
	30 to 89 days	90 days and greater	Total	30 to 89 days	90 days and greater	Total
Retail	\$ 1,130	\$ 160	\$ 1,290	\$ 1,105	\$ 137	\$ 1,242
Wholesale	983	2	985	1,230	–	1,230
	\$ 2,113	\$ 162	\$ 2,275	\$ 2,335	\$ 137	\$ 2,472

(1) Excludes loans less than 30 days past due as they are not generally representative of the borrowers' ability to meet their payment obligations.

(2) 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 refinance, which can fluctuate based on business volumes. Past due loans arising from administrative processes are not representative of the borrowers' ability to meet their payment obligations.

Note 6 Deposits

(Millions of Canadian dollars)	As at							
	January 31, 2022				October 31, 2021			
	Demand (1)	Notice (2)	Term (3)	Total	Demand (1)	Notice (2)	Term (3)	Total
Personal	\$ 213,953	\$ 67,961	\$ 93,692	\$ 375,606	\$ 207,493	\$ 64,613	\$ 90,382	\$ 362,488
Business and government	358,903	20,770	340,416	720,089	356,020	20,800	319,533	696,353
Bank	12,262	474	34,411	47,147	12,549	449	28,992	41,990
	\$ 585,118	\$ 89,205	\$ 468,519	\$ 1,142,842	\$ 576,062	\$ 85,862	\$ 438,907	\$ 1,100,831
Non-interest-bearing (4)								
Canada	\$ 153,989	\$ 8,091	\$ 537	\$ 162,617	\$ 151,475	\$ 8,051	\$ 713	\$ 160,239
United States	54,996	–	–	54,996	54,021	–	–	54,021
Europe (5)	786	–	–	786	632	–	–	632
Other International	8,491	–	–	8,491	8,002	–	–	8,002
Interest-bearing (4)								
Canada	323,534	20,208	327,939	671,681	315,464	19,857	312,987	648,308
United States	7,179	60,140	84,202	151,521	6,978	57,260	77,597	141,835
Europe (5)	30,916	766	44,351	76,033	34,278	693	36,788	71,759
Other International	5,227	–	11,490	16,717	5,212	1	10,822	16,035
	\$ 585,118	\$ 89,205	\$ 468,519	\$ 1,142,842	\$ 576,062	\$ 85,862	\$ 438,907	\$ 1,100,831

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

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

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

(4) The geographical splits of the deposits are based on the point of origin of the deposits and where the revenue is recognized. As at January 31, 2022, deposits denominated in U.S. dollars, British pounds, Euro and other foreign currencies were \$431 billion, \$34 billion, \$44 billion and \$27 billion, respectively (October 31, 2021 – \$399 billion, \$35 billion, \$43 billion and \$27 billion, respectively).

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

Contractual maturities of term deposits

(Millions of Canadian dollars)	As at	
	January 31 2022	October 31 2021
Within 1 year:		
less than 3 months	\$ 163,701	\$ 133,776
3 to 6 months	52,796	64,062
6 to 12 months	92,568	83,871
1 to 2 years	45,628	45,532
2 to 3 years	32,555	29,204
3 to 4 years	20,287	24,573
4 to 5 years	29,401	25,329
Over 5 years	31,583	32,560
	\$ 468,519	\$ 438,907
Aggregate amount of term deposits in denominations of one hundred thousand dollars or more	\$ 440,000	\$ 416,000

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	
	January 31 2022	January 31 2021	January 31 2022	January 31 2021
Current service costs	\$ 77	\$ 90	\$ 10	\$ 11
Past service costs	–	–	2	–
Net interest expense (income)	(21)	2	16	14
Remeasurements of other long-term benefits	–	–	1	1
Administrative expense	3	3	–	–
Defined benefit pension expense	59	95	29	26
Defined contribution pension expense	74	66	–	–
	\$ 133	\$ 161	\$ 29	\$ 26

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	
	January 31 2022	January 31 2021	January 31 2022	January 31 2021
Actuarial (gains) losses:				
Changes in financial assumptions (2)	\$ (661)	\$ (12)	\$ (40)	\$ (22)
Return on plan assets (excluding interest based on discount rate)	318	(1,024)	–	–
	\$ (343)	\$ (1,036)	\$ (40)	\$ (22)

- (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 November 5, 2021, we issued 750 thousand Non-Cumulative 5-Year Fixed Rate Reset First Preferred Shares Series BT to certain institutional investors, at a price of \$1,000 per share, for total gross proceeds of \$750 million. For the initial five year period to the earliest redemption date of February 24, 2027, the shares pay semi-annual cash dividends, if declared, at a rate of 4.2% per annum. The dividend rate will reset on the earliest redemption date and every fifth year thereafter at a rate equal to the 5-year Government of Canada bond yield plus a premium of 2.71%. Subject to the consent of OSFI and the requirements of the *Bank Act* (Canada), we may redeem the Series BT Preferred Shares in whole or in part at a price per share of \$1,000 on the earliest redemption date and every fifth year thereafter. The shares include non-viability contingency capital (NVCC) provisions necessary for them to qualify as Tier 1 regulatory capital under Basel III.

Subordinated debentures

On January 25, 2022, we issued \$1,000 million of NVCC subordinated debentures. The notes bear interest at a fixed rate of 2.94% per annum until May 3, 2027, and at the three-month Canadian Dollar Offered Rate plus 0.76% thereafter until their maturity on May 3, 2032.

Common shares issued (1)

(Millions of Canadian dollars, except number of shares)	For the three months ended			
	January 31, 2022		January 31, 2021	
	Number of shares (thousands)	Amount	Number of shares (thousands)	Amount
Issued in connection with share-based compensation plans (2)	407	\$ 34	496	\$ 36
Purchased for cancellation (3)	(8,871)	(111)	–	–
	(8,464)	\$ (77)	496	\$ 36

- (1) The requirements of our dividend reinvestment plan (DRIP) are satisfied through either open market share purchases or shares issued from treasury. During the three months ended January 31, 2022 and January 31, 2021, our DRIP's requirements were satisfied through open market share purchases.
- (2) Amounts include cash received for stock options exercised during the period and the fair value adjustment to stock options.
- (3) During the three months ended January 31, 2022, we purchased for cancellation common shares at a total fair value of \$1,214 million (average cost of \$136.84 per share), with a book value of \$111 million (book value of \$12.45 per share). During the three months ended January 31, 2021, we did not purchase for cancellation any common shares.

Note 9 Earnings per share

	For the three months ended	
	January 31 2022	January 31 2021
<i>(Millions of Canadian dollars, except share and per share amounts)</i>		
Basic earnings per share		
Net income	\$ 4,095	\$ 3,847
Dividends on preferred shares and distributions on other equity instruments	(54)	(58)
Net income attributable to non-controlling interests	(2)	(2)
Net income available to common shareholders	\$ 4,039	\$ 3,787
Weighted average number of common shares (in thousands)	1,421,807	1,423,350
Basic earnings per share (in dollars)	\$ 2.84	\$ 2.66
Diluted earnings per share		
Net income available to common shareholders	\$ 4,039	\$ 3,787
Weighted average number of common shares (in thousands)	1,421,807	1,423,350
Stock options ⁽¹⁾	2,195	1,188
Issuable under other share-based compensation plans	600	742
Average number of diluted common shares (in thousands)	1,424,602	1,425,280
Diluted earnings per share (in dollars)	\$ 2.84	\$ 2.66

(1) The dilutive effect of stock options was calculated using the treasury stock method. When the exercise price of options outstanding is greater than the average market price of our common shares, the options are excluded from the calculation of diluted earnings per share. For the three months ended January 31, 2022, no outstanding options were excluded from the calculation of diluted earnings per share. For the three months ended January 31, 2021, an average of 1,690,512 outstanding options with an average exercise price of \$105.17 were excluded from the calculation of diluted earnings per share.

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 24 of our audited 2021 Annual Consolidated Financial Statements and as updated below.

London Interbank Offered Rate litigation

In respect of the consolidated class action in New York, on December 30, 2021, the United States Court of Appeals for the Second Circuit issued an opinion affirming in part and reversing in part certain district court rulings that had dismissed a substantial portion of the consolidated class action on jurisdictional grounds and lack of standing. The Second Circuit remanded the matter to the district court for further proceedings consistent with its decision. Based on the facts currently known, it is not possible at this time for us to predict the ultimate outcome of these proceedings or the timing of their resolution.

In respect of the New York class action relating to the setting of LIBOR after its administration was taken over by the Intercontinental Exchange, following the withdrawal of the named plaintiffs and the substitution of the plaintiff in 2021, the United States Court of Appeals for the Second Circuit dismissed the plaintiff's appeal on February 14, 2022 for lack of jurisdiction.

Interchange fees litigation

The courts in all five provinces have approved the global settlement of the Canadian banks, including RBC, and this resolves all pending Canadian class actions involving interchange fees.

Note 11 Results by business segment

(Millions of Canadian dollars)	For the three months ended January 31, 2022						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2)	\$ 3,229	\$ 745	\$ –	\$ 163	\$ 1,241	\$ (107)	\$ 5,271
Non-interest income	1,574	2,868	1,399	424	1,569	(39)	7,795
Total revenue	4,803	3,613	1,399	587	2,810	(146)	13,066
Provision for credit losses	129	(12)	–	–	(12)	–	105
Insurance policyholder benefits, claims and acquisition expense	–	–	997	–	–	–	997
Non-interest expense	2,022	2,581	147	420	1,472	(62)	6,580
Income (loss) before income taxes	2,652	1,044	255	167	1,350	(84)	5,384
Income taxes (recoveries)	678	249	58	49	320	(65)	1,289
Net income	\$ 1,974	\$ 795	\$ 197	\$ 118	\$ 1,030	\$ (19)	\$ 4,095
Non-interest expense includes:							
Depreciation and amortization	\$ 233	\$ 228	\$ 15	\$ 49	\$ 123	\$ 2	\$ 650

(Millions of Canadian dollars)	For the three months ended January 31, 2021						
	Personal & Commercial Banking	Wealth Management (3)	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1), (3)	Total
Net interest income (2)	\$ 3,161	\$ 666	\$ –	\$ 91	\$ 1,199	\$ (82)	\$ 5,035
Non-interest income	1,402	2,553	1,809	474	1,509	161	7,908
Total revenue	4,563	3,219	1,809	565	2,708	79	12,943
Provision for credit losses	165	(29)	–	(2)	(23)	(1)	110
Insurance policyholder benefits, claims and acquisition expense	–	–	1,406	–	–	–	1,406
Non-interest expense	1,978	2,406	149	401	1,441	167	6,542
Income (loss) before income taxes	2,420	842	254	166	1,290	(87)	4,885
Income taxes (recoveries)	627	201	53	43	223	(109)	1,038
Net income	\$ 1,793	\$ 641	\$ 201	\$ 123	\$ 1,067	\$ 22	\$ 3,847
Non-interest expense includes:							
Depreciation and amortization	\$ 224	\$ 220	\$ 14	\$ 49	\$ 125	\$ 1	\$ 633

(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) Effective Q4 2021, gains (losses) on economic hedges of our U.S. share-based compensation plans, which are reflected in revenue, and related variability in share-based compensation expense driven by changes in the fair value of liabilities relating to our U.S. share-based compensation plans have been reclassified from our Wealth Management segment to Corporate Support. Comparative amounts have been reclassified to conform with this presentation.

Total assets and total liabilities by business segment

(Millions of Canadian dollars)	As at January 31, 2022						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total
Total assets	\$ 560,865	\$ 155,336	\$ 23,352	\$ 251,514	\$ 710,070	\$ 51,332	\$ 1,752,469
Total liabilities	560,794	155,547	23,633	251,420	709,481	(50,414)	1,650,461

(Millions of Canadian dollars)	As at October 31, 2021						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total
Total assets	\$ 549,702	\$ 148,990	\$ 22,724	\$ 240,055	\$ 692,278	\$ 52,574	\$ 1,706,323
Total liabilities	549,619	149,096	22,966	239,960	691,767	(45,847)	1,607,561

Note 12 Capital management

Regulatory capital and capital ratios

OSFI formally establishes risk-based capital and leverage minimums and Total Loss Absorbing Capacity (TLAC) ratios for deposit-taking institutions in Canada. During the first quarter of 2022, we complied with all capital, leverage and TLAC requirements, including the domestic stability buffer, imposed by OSFI.

	As at	
	January 31 2022	October 31 2021
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)		
Capital (1)		
CET1 capital	\$ 77,080	\$ 75,583
Tier 1 capital	84,493	82,246
Total capital	94,502	92,026
Risk-weighted assets (RWA) used in calculation of capital ratios (1)		
Credit risk	\$ 452,697	\$ 444,142
Market risk	41,812	34,806
Operational risk	74,776	73,593
Total RWA	\$ 569,285	\$ 552,541
Capital ratios and Leverage ratio (1)		
CET1 ratio	13.5%	13.7%
Tier 1 capital ratio	14.8%	14.9%
Total capital ratio	16.6%	16.7%
Leverage ratio	4.8%	4.9%
Leverage ratio exposure (billions)	\$ 1,761	\$ 1,662
TLAC available and ratios (2), (3)		
TLAC available	\$ 150,136	n.a.
TLAC ratio	26.4%	n.a.
TLAC leverage ratio	8.5%	n.a.

- (1) Capital, RWA, and capital ratios are calculated using OSFI's Capital Adequacy Requirements (CAR) guideline and the Leverage ratio is calculated using OSFI's Leverage Requirements (LR) guideline as updated in accordance with the regulatory guidance issued by OSFI in response to the COVID-19 pandemic. Both the CAR guideline and LR guideline are based on the Basel III framework.
- (2) Effective November 1, 2021, OSFI requires Canadian Domestic Systemically Important Banks (D-SIBs) to meet minimum risk-based TLAC ratio and TLAC leverage ratio requirements which are calculated using OSFI's Total Loss Absorbing Capacity (TLAC) guideline.
- (3) The TLAC standard is applied at the resolution entity level which for us is deemed to be Royal Bank of Canada and its subsidiaries. A resolution entity and its subsidiaries are collectively called a resolution group. Both the TLAC ratio and TLAC leverage ratio are calculated using the TLAC available as percentage of total RWA and leverage exposure, respectively.
- n.a. not applicable

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)

Preferred shares AZ, BB, BD, BF,
BH, BI, BJ¹ and BO are listed on the
TSX. 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

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 45 million
common shares during the
period spanning from
December 8, 2021 to
December 7, 2022, 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 purchases
under the NCIB, subject to
prior consultation with the
Office of the Superintendent
of Financial Institutions
Canada. For further details,
refer to the 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.

2022 Quarterly earnings release dates

First quarter	February 24
Second quarter	May 26
Third quarter	August 24
Fourth quarter	November 30

2022 Annual Meeting

The Annual Meeting of
Common Shareholders will be
held on Thursday, April 7,
2022.

Dividend dates for 2022

Subject to approval by the Board of Directors

	Record dates	Payment dates
Common and preferred shares series AZ, BB, BD, BF, BH, BI, BJ ¹ and BO	January 26 April 25 July 26 October 26	February 24 May 24 August 24 November 23
Preferred shares series C-2 (US\$)	January 28 April 26 July 29 October 28	February 7 May 6 August 8 November 7
Preferred shares series BT	February 16 August 17*	February 24 August 24

* Record date is subject to change.

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.

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

¹ On January 18, 2022, we announced our intention to redeem all 6 million of our issued and outstanding Non-Cumulative First Preferred Shares Series BJ at a price of \$25.75 per share. The shares will be redeemed on February 24, 2022.

CEO AND CFO CERTIFICATIONS

SOX 302 Certification

I, David McKay, certify that:

1. I have reviewed this quarterly report for the period ended January 31, 2022 (the “report”) of Royal Bank of Canada (the “registrant”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: February 24, 2022

/s/ David McKay

Name: David McKay

Title: President and Chief Executive Officer

SOX 302 Certification

I, Nadine Ahn, certify that:

1. I have reviewed this quarterly report for the period ended January 31, 2022 (the “report”) of Royal Bank of Canada (the “registrant”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: February 24, 2022

/s/ Nadine Ahn

Name: Nadine Ahn

Title: Chief Financial Officer