

First Quarter 2023



Royal Bank of Canada first quarter 2023 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 \$3.2 Billion Down 22% YoY	Diluted EPS ¹ \$2.29 Down 19% YoY	Total PCL ¹ \$532 Million PCL on loans ratio ¹ up 7 bps ¹ QoQ	ROE ² 12.6% Down from 17.3% last year	CET1 Ratio ¹ 12.7% Well above regulatory requirements
Net income excluding specified item ³ \$4.3 Billion Up 4% YoY	Diluted EPS excluding specified item ³ \$3.05 Up 7% YoY	Total ACL ¹ \$4.5 Billion ACL on loans ratio ¹ up 3 bps QoQ	ROE excluding specified item ³ 16.8% Down from 17.3% last year	Leverage Ratio ¹ 4.4% Unchanged QoQ

TORONTO, March 1, 2023 – Royal Bank of Canada⁴ (RY on TSX and NYSE) today reported net income of \$3.2 billion for the quarter ended January 31, 2023, down \$881 million or 22% from the prior year. Diluted EPS was \$2.29, down 19% over the same period. Excluding the specified item³ for the impact of the Canada Recovery Dividend (CRD) and other tax related adjustments, net income of \$4.3 billion was up 4% from the prior year. Higher earnings in Personal & Commercial Banking, Capital Markets and Wealth Management were partly offset by lower results in Insurance.

Results this quarter also reflected higher provisions for credit losses, with a PCL on loans ratio of 25 bps, mainly attributable to provisions taken on performing loans in the current quarter, reflecting unfavourable changes in our macroeconomic and credit quality outlook, as compared to releases in the prior year. Higher provisions on impaired loans also contributed to the increase.

Pre-provision, pre-tax earnings⁵ of \$5.9 billion were up \$385 million or 7% from a year ago, mainly reflecting higher net interest income driven by higher interest rates and strong loan growth in Canadian Banking and Wealth Management. Higher Global Markets revenue in Capital Markets, reflecting strong client activity, also contributed to the increase. These factors were partially offset by higher expenses, largely due to higher salaries and variable and stock-based compensation, as well as ongoing technology investments and higher discretionary costs to support strong client-driven growth.

Compared to last quarter, net income was down 17%. Excluding the specified item³, net income was up 10% with higher results in Capital Markets and Wealth Management. These factors were partially offset by lower results in Insurance and Personal & Commercial Banking.

Return on equity was 12.6%, or 16.8% excluding the specified item³, reflecting strong organic capital generation. Our capital position remained robust, with a CET1 ratio of 12.7%, supporting strong volume growth and \$1.8 billion in common share dividends. We also had a strong average Liquidity Coverage Ratio (LCR) of 130%.

"In a complex and uncertain world, RBC is relentlessly focused on bringing leadership, stability and advice to our clients and communities. As our first quarter results demonstrate, we are prudently managing risk while delivering strong revenue growth driven by our diversified business model. Looking ahead, RBC's premium businesses, robust balance sheet and strategic advantages will allow us to continue transforming our bank for the future and creating value for our clients, communities and shareholders."

– Dave McKay, RBC President and Chief Executive Officer

Q1 2023 Compared to Q1 2022	Reported:	Excluding specified item³:
	<ul style="list-style-type: none"> Net income of \$3,214 million ↓ 22% Diluted EPS of \$2.29 ↓ 19% ROE of 12.6% ↓ 470 bps CET1 ratio of 12.7% ↓ 80 bps 	<ul style="list-style-type: none"> Net income of \$4,264 million ↑ 4% Diluted EPS of \$3.05 ↑ 7% ROE of 16.8% ↓ 50 bps
Q1 2023 Compared to Q4 2022	<ul style="list-style-type: none"> Net income of \$3,214 million ↓ 17% Diluted EPS of \$2.29 ↓ 16% ROE of 12.6% ↓ 300 bps CET1 ratio of 12.7% ↑ 10 bps 	<ul style="list-style-type: none"> Net income of \$4,264 million ↑ 10% Diluted EPS of \$3.05 ↑ 11% ROE of 16.8% ↑ 120 bps

- See Glossary section of this Q1 2023 Report to Shareholders for composition of this measure.
- 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 2023 Report to Shareholders.
- This is a non-GAAP measure, which is calculated excluding a specified item. For further information, including a reconciliation, refer to the Key performance and non-GAAP measures section of this Q1 2023 Report to Shareholders.
- When we say "we", "us", "our", or "RBC", we mean Royal Bank of Canada and its subsidiaries, as applicable.
- Pre-provision, pre-tax (PPPT) earnings is calculated as income (January 31, 2023: \$3,214 million; January 31, 2022: \$4,095 million) before income taxes (January 31, 2023: \$2,128 million; January 31, 2022: \$1,289 million) and PCL (January 31, 2023: \$532 million; January 31, 2022: \$105 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 periods ended or as at January 31, 2023, compared to the corresponding period in the prior fiscal year and the three month period ended October 31, 2022. This MD&A should be read in conjunction with our unaudited Interim Condensed Consolidated Financial Statements for the quarter ended January 31, 2023 (Condensed Financial Statements) and related notes and our 2022 Annual Report. This MD&A is dated February 28, 2023. 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 2022 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 2023 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., U.K., European and global economies, the regulatory environment in which we operate, the impact from rising interest rates, the expected closing of the transaction involving CACEIS and the risk environment including our credit risk, market risk, liquidity and funding risk, and includes our President and Chief Executive Officer's statements. The forward-looking information contained in this document is presented for the purpose of assisting the holders of our securities and financial analysts in understanding our financial position and results of operations as at and for the periods ended on the dates presented, as well as our financial performance objectives, vision and strategic goals, and may not be appropriate for other purposes. Forward-looking statements are typically identified by words such as "believe", "expect", "foresee", "forecast", "anticipate", "intend", "estimate", "goal", "commit", "target", "objective", "plan" and "project" and similar expressions of future or conditional verbs such as "will", "may", "might", "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 that our financial performance, environmental & social or other objectives, vision and strategic goals will not be achieved and that our actual results may differ materially from such predictions, forecasts, projections, expectations or conclusions.

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, model, legal and regulatory environment, systemic risks and other risks discussed in the risk sections of our 2022 Annual Report and the Risk management section of this Q1 2023 Report to Shareholders; including business and economic conditions in the geographic regions in which we operate, Canadian housing and household indebtedness, information technology and cyber risks, geopolitical uncertainty, environmental and social risk (including climate change), digital disruption and innovation, privacy, data and third-party related risks, regulatory changes, culture and conduct risks, 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. Additional factors that could cause actual results to differ materially from the expectations in such forward-looking statements can be found in the risk sections of our 2022 Annual Report.

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 2023 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 sections in our 2022 Annual Report, as updated by the Economic, market and regulatory review and outlook section of this Q1 2023 Report to Shareholders. Except as required by law, we do not undertake to update any forward-looking statement, whether written or oral, that may be made from time to time by us or on our behalf.

Additional information about these and other factors can be found in the risk sections of our 2022 Annual Report and the Risk management section of this Q1 2023 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 97,000+ 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](https://www.rbc.com).

Effective the first quarter of 2023, we simplified our reporting structure by eliminating the Investor & Treasury Services segment and moving its former businesses to existing segments. We moved our Investor Services business to our Wealth Management segment, and our Treasury Services and Transaction Banking businesses to our Capital Markets segment. From a reporting perspective, there were no changes to our Personal & Commercial Banking and Insurance segments. Comparative results in this MD&A have been revised to conform to our new basis of segment presentation.

Our business segments are described below.

Personal & Commercial Banking	Provides a broad suite of financial products and services in Canada, the Caribbean and the U.S. Our commitment to building and maintaining deep and meaningful relationships with our clients is underscored by the breadth of our product suite, our depth of expertise, and the features of our digital solutions.
Wealth Management	Serves affluent, high net worth (HNW) and ultra-high net worth (UHNW) clients from our offices in key financial centres mainly in Canada, the U.S., the United Kingdom (U.K.), Europe, and Asia. We offer a comprehensive suite of investment, trust, banking, credit and other advice-based solutions. We also provide asset management products to institutional and individual clients through our distribution channels and third-party distributors. Asset and payment services are also provided to financial institutions and asset owners worldwide.
Insurance	Offers a wide range of advice and solutions for individual and business clients including life, health, wealth, home, auto, travel, annuities and reinsurance.
Capital Markets	Provides expertise in advisory & origination, sales & trading, and lending & financing, and transaction banking to corporations, institutional clients, asset managers, private equity firms and governments globally. We serve clients from 63 offices in 18 countries across North America, the U.K. & Europe, and Australia, Asia & other regions.
Corporate Support	Corporate Support consists of Technology & Operations, which provides the technological and operational foundation required to effectively deliver products and services to our clients, Functions, which includes our finance, human resources, risk management, internal audit and other functional groups, as well as our Corporate Treasury function.

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 2023	October 31 2022	January 31 2022	Q1 2023 vs. Q4 2022	Q1 2023 vs. Q1 2022
Total revenue	\$ 15,094	\$ 12,567	\$ 13,066	\$ 2,527	\$ 2,028
Provision for credit losses (PCL)	532	381	105	151	427
Insurance policyholder benefits, claims and acquisition expense (PBCAE)	1,545	116	997	1,429	548
Non-interest expense	7,675	7,209	6,580	466	1,095
Income before income taxes	5,342	4,861	5,384	481	(42)
Net income	\$ 3,214	\$ 3,882	\$ 4,095	\$ (668)	\$ (881)
Net income excluding specified item (1)	\$ 4,264	n.a.	n.a.	n.a.	n.a.
Segments – net income					
Personal & Commercial Banking	\$ 2,126	\$ 2,139	\$ 1,974	\$ (13)	\$ 152
Wealth Management (2)	848	836	821	12	27
Insurance	148	268	197	(120)	(49)
Capital Markets (2)	1,223	713	1,122	510	101
Corporate Support	(1,131)	(74)	(19)	(1,057)	(1,112)
Net income	\$ 3,214	\$ 3,882	\$ 4,095	\$ (668)	\$ (881)
Selected information					
Earnings per share (EPS) – basic	\$ 2.29	\$ 2.75	\$ 2.84	\$ (0.46)	\$ (0.55)
– diluted	2.29	2.74	2.84	(0.45)	(0.55)
Earnings per share (EPS) – basic excluding specified item (1)	3.05	n.a.	n.a.	n.a.	n.a.
– diluted excluding specified item (1)	3.05	n.a.	n.a.	n.a.	n.a.
Return on common equity (ROE) (3)	12.6%	15.6%	17.3%	(300) bps	(470) bps
Return on common equity (ROE) excluding specified item (1)	16.8%	n.a.	n.a.	n.a.	n.a.
Average common equity (3)	\$ 99,700	\$ 97,150	\$ 92,450	\$ 2,550	\$ 7,250
Net interest margin (NIM) – on average earning assets, net (4)	1.47%	1.56%	1.39%	(9) bps	8 bps
PCL on loans as a % of average net loans and acceptances	0.25%	0.18%	0.05%	7 bps	20 bps
PCL on performing loans as a % of average net loans and acceptances	0.08%	0.06%	(0.04)%	2 bps	12 bps
PCL on impaired loans as a % of average net loans and acceptances	0.17%	0.12%	0.09%	5 bps	8 bps
Gross impaired loans (GIL) as a % of loans and acceptances	0.31%	0.26%	0.28%	5 bps	3 bps
Liquidity coverage ratio (LCR) (5)	130%	125%	124%	500 bps	600 bps
Net stable funding ratio (NSFR) (5)	112%	112%	113%	–	(100) bps
Capital, Leverage and Total loss absorbing capacity (TLAC) ratios (6)					
Common Equity Tier 1 (CET1) ratio	12.7%	12.6%	13.5%	10 bps	(80) bps
Tier 1 capital ratio	13.9%	13.8%	14.8%	10 bps	(90) bps
Total capital ratio	15.7%	15.4%	16.6%	30 bps	(90) bps
Leverage ratio	4.4%	4.4%	4.8%	–	(40) bps
TLAC ratio (6)	28.2%	26.4%	26.4%	180 bps	180 bps
TLAC leverage ratio (6)	9.0%	8.5%	8.5%	50 bps	50 bps
Selected balance sheet and other information (7)					
Total assets	\$ 1,933,019	\$ 1,917,219	\$ 1,752,469	\$ 15,800	\$ 180,550
Securities, net of applicable allowance	320,553	318,223	303,095	2,330	17,458
Loans, net of allowance for loan losses	823,794	819,965	740,031	3,829	83,763
Derivative related assets	130,120	154,439	92,319	(24,319)	37,801
Deposits	1,203,842	1,208,814	1,142,842	(4,972)	61,000
Common equity	100,363	100,746	94,469	(383)	5,894
Total risk-weighted assets (RWA)	614,250	609,879	569,285	4,371	44,965
Assets under management (AUM) (4)	1,051,300	999,700	1,021,500	51,600	29,800
Assets under administration (AUA) (4), (8)	5,780,100	5,649,700	6,445,900	130,400	(665,800)
Common share information					
Shares outstanding (000s) – average basic	1,382,754	1,386,925	1,421,807	(4,171)	(39,053)
– average diluted	1,384,536	1,388,548	1,424,602	(4,012)	(40,066)
– end of period	1,382,818	1,382,911	1,416,020	(93)	(33,202)
Dividends declared per common share	\$ 1.32	\$ 1.28	\$ 1.20	\$ 0.04	\$ 0.12
Dividend yield (4)	4.0%	4.0%	3.5%	–	50 bps
Dividend payout ratio (4)	58%	47%	42%	1,100 bps	1,600 bps
Common share price (RY on TSX) (9)	\$ 136.16	\$ 126.05	\$ 144.93	\$ 10.11	\$ (8.77)
Market capitalization (TSX) (9)	188,284	174,316	205,224	13,968	(16,940)
Business information (number of)					
Employees (full-time equivalent) (FTE)	92,662	91,427	85,211	1,235	7,451
Bank branches	1,265	1,271	1,287	(6)	(22)
Automated teller machines (ATMs)	4,363	4,368	4,368	(5)	(5)
Period average US\$ equivalent of C\$1.00 (10)	0.745	0.739	0.787	0.006	(0.042)
Period-end US\$ equivalent of C\$1.00	0.752	0.734	0.787	0.018	(0.035)

(1) This is a non-GAAP measure, which is calculated excluding the impact of the Canada Recovery Dividend (CRD) and other tax related adjustments. For further details, including a reconciliation, refer to the Key performance and non-GAAP measures section.

(2) Amounts have been revised from those previously presented to conform to our new basis of segment presentation. For further details, refer to the About Royal Bank of Canada section.

(3) 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.

(4) See Glossary for composition of this measure.

(5) 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.

(6) Capital ratios are calculated using OSFI's Capital Adequacy Requirements (CAR) guideline, the Leverage ratio is calculated using OSFI's Leverage Requirements (LR) guideline, and both the TLAC and TLAC leverage ratios 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 \$6 billion (October 31, 2022 – \$15 billion and \$6 billion; January 31, 2022 – \$15 billion and \$3 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 28, 2023

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

Unemployment remains very low across most advanced economies with labour shortages limiting further increases in production and pushing wages higher. However, we expect unemployment rates will rise as higher interest rates and elevated inflation add to growth headwinds. Global inflation pressures have eased with the price of key commodities and shipping costs declining from peak levels in calendar 2022 and the breadth of inflation pressures across goods and services has shown signs of narrowing. Most advanced economy central banks are likely at or close to the end of interest rate increases. However, the lagged impact of aggressive increases in interest rates in calendar 2022 will continue to increase household and business borrowing costs in calendar 2023. The U.S., Canadian, and U.K. economies are expected to undergo moderate recessions in calendar 2023. GDP in the Euro area is expected to grow but at a slow pace in calendar 2023 with higher interest rates adding to inflation and disruptions from the war in Ukraine.

Canada

Canadian GDP is expected to contract by 0.5%¹ in the first calendar quarter of 2023 following an expected increase of 1.5%¹ in the final calendar quarter of 2022. The Bank of Canada (BoC) is not expected to increase interest rates further after the 25 basis point rise in the overnight rate to 4.50% in January. Inflation is still high, but has begun to moderate as global supply chain disruptions have eased and the breadth of price growth across products has narrowed. However, the lagged impact of the 425 basis points of BoC increases to the overnight rate over the last year will slow household and business spending in calendar 2023. Labour market conditions remain competitive with an elevated number of job openings and unemployment rates at close to multi-decade lows. Unemployment is expected to increase as rising household debt servicing costs, high consumer price growth, and declining house prices weaken household confidence and purchasing power. We expect GDP to decline by a further 1.0%¹ in the second calendar quarter of 2023 and then resume positive growth over the second half of calendar 2023, supported in part by strong levels of immigration and population growth.

U.S.

U.S. GDP is expected to remain flat in the first calendar quarter of 2023 following a 2.9%¹ increase in the fourth calendar quarter of 2022. The economy is expected to slip into a moderate recession in the second calendar quarter of 2023. The unemployment rate remains very low at 3.4% in January 2023, but is expected to increase as higher interest rates lower GDP. U.S. job openings have declined from early calendar 2022 peaks, and wage growth has shown signs of slowing. Inflation rates are moving meaningfully lower, with supply chain disruptions easing and gasoline prices declining. The breadth of inflation has narrowed. The Federal Reserve (Fed) is expected to increase the fed funds target range by another 25 basis points before pausing at a 4.75% to 5% range by the end of the first calendar quarter of 2023. Thereafter, gradual interest rate cuts are expected starting in the fourth calendar quarter of 2023. GDP is expected to return to slow but positive growth in the fourth calendar quarter of 2023.

Europe

Euro area GDP is expected to grow modestly by 0.1% in the first calendar quarter of 2023 and by a similar increase in the second calendar quarter of 2023 following a 0.1% increase in the fourth calendar quarter of 2022. GDP growth is expected to strengthen in the second half of the 2023 calendar year. The European Central Bank (ECB) is expected to increase the deposit rate to 3.25% in the second calendar quarter of 2023 in response to high inflation rates. U.K. GDP remained flat in the fourth quarter of 2022 and is expected to contract by 0.3% in the first calendar quarter of 2023. The unemployment rate remains historically low. Inflation in the U.K. has likely peaked but remains well above the Bank of England's (BoE) target. The BoE increased the Bank Rate by 50 bps in February, and we anticipate a further 25 basis point increase in March, bringing the Bank Rate to 4.25%. The U.K. economy is expected to grow at a modest pace over the second half of calendar 2023.

Financial markets

Bond yields have broadly edged lower in recent months on signs that inflation pressures globally may be past their peak and markets begin to price in future central bank interest rate cuts. The spread between longer and shorter duration bond yields, which is a commonly used recession indicator, has continued to invert to deeply negative values in the U.S. and Canada. Equity markets remain well below levels at the end of calendar 2021, but have increased from lows in calendar 2022.

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 2022 Annual Report and updates are listed below.

Global uncertainty

Significant uncertainty about inflationary and trade pressures, geopolitical tensions and supply chain disruptions all pose risks to the global economic outlook. In January 2023, the International Monetary Fund (IMF) projected global growth of 2.9% in calendar 2023, up 0.2% from its October forecast, due in part to China ending its Zero-COVID policy. However, uncertainty

¹ Annualized rate

remains regarding the extent and duration of central bank monetary policy tightening, the impact of higher interest rates, the persistence of elevated inflation, the resilience of global economies to withstand another health crisis, and ongoing geopolitical tensions including those between Russia and Ukraine. While the outcome of the conflict between Russia and Ukraine remains uncertain, our exposure to Russia and Ukraine is extremely limited, as we do not have operations in these countries, consistent with our strategy and risk appetite. Our diversified business model, as well as our product and geographic diversification, continue to help mitigate the risks posed by global uncertainty.

For a discussion on risk factors resulting from these and other developments which may affect our business and financial results, refer to the risk sections of our 2022 Annual Report. For further details on our framework and activities to manage risks, refer to the risk and Capital management sections of this Q1 2023 Report to Shareholders.

Financial performance

Overview

Q1 2023 vs. Q1 2022

Net income of \$3,214 million was down \$881 million or 22% from a year ago. Diluted EPS of \$2.29 was down \$0.55 or 19% and ROE of 12.6% was down from 17.3% last year. Our CET1 ratio of 12.7% was down 80 bps from a year ago.

Excluding the specified item for the impact of the CRD and other tax related adjustments as described below, net income of \$4,264 million was up \$169 million or 4% from a year ago. Excluding the specified item, diluted EPS of \$3.05 was up \$0.21 or 7% and ROE of 16.8% was down from 17.3% last year.

Our earnings were down from last year, primarily driven by the specified item, which is reported in Corporate Support. Excluding the impact of the specified item, net income increased from last year driven by higher earnings in Personal & Commercial Banking, Capital Markets and Wealth Management, partially offset by lower results in Insurance.

Q1 2023 vs. Q4 2022

Net income of \$3,214 million was down \$668 million or 17% from last quarter. Diluted EPS of \$2.29 was down \$0.45 or 16% and ROE of 12.6% down from 15.6% in the prior quarter. Our CET1 ratio of 12.7% was up 10 bps from last quarter.

Excluding the specified item, net income of \$4,264 million was up \$382 million or 10% from last quarter. Excluding the specified item, diluted EPS of \$3.05 was up \$0.31 or 11% and ROE of 16.8% was up from 15.6% last quarter.

Our earnings were down from last quarter, primarily driven by the specified item, which is reported in Corporate Support. Excluding the impact of the specified item, net income increased from last quarter driven by higher earnings in Capital Markets and Wealth Management, partially offset by lower results in Insurance and Personal & Commercial Banking.

Specified item

For the three months ended January 31, 2023, our results reflect the impact of the CRD and the 1.5% increase in the Canadian corporate tax rate applicable to fiscal 2022, net of deferred tax adjustments, which were announced in the Government of Canada's 2022 budget and enacted in the current quarter, which increased income taxes and reduced net income by \$1,050 million (after-tax). Results excluding this specified item are non-GAAP measures. For further details, including a reconciliation, refer to the Key performance and non-GAAP section.

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 2023 vs. Q1 2022	Q1 2023 vs. Q4 2022
<i>Increase (decrease):</i>		
Total revenue	\$ 215	\$ 30
PCL	6	(1)
Non-interest expense	122	29
Income taxes	8	–
Net income	79	2
<i>Impact on EPS</i>		
Basic	\$ 0.06	\$ –
Diluted	0.06	–

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 2023	October 31 2022	January 31 2022
U.S. dollar	0.745	0.739	0.787
British pound	0.612	0.648	0.586
Euro	0.698	0.746	0.695

(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 2023	October 31 2022	January 31 2022
Interest and dividend income	\$ 19,337	\$ 14,898	\$ 7,378
Interest expense	13,135	8,616	2,107
Net interest income	\$ 6,202	\$ 6,282	\$ 5,271
NIM	1.47%	1.56%	1.39%
Insurance premiums, investment and fee income	\$ 1,891	\$ 644	\$ 1,399
Trading revenue	1,069	451	314
Investment management and custodial fees	2,056	1,900	1,961
Mutual fund revenue	1,015	1,010	1,165
Securities brokerage commissions	361	349	399
Service charges	511	512	485
Underwriting and other advisory fees	512	481	701
Foreign exchange revenue, other than trading	433	266	271
Card service revenue	325	310	291
Credit fees	379	337	476
Net gains on investment securities	53	(23)	15
Share of profit in joint ventures and associates	29	24	29
Other	258	24	289
Non-interest income	8,892	6,285	7,795
Total revenue	\$ 15,094	\$ 12,567	\$ 13,066
Additional trading information			
Net interest income (1)	\$ 186	\$ 403	\$ 625
Non-interest income	1,069	451	314
Total trading revenue	\$ 1,255	\$ 854	\$ 939

(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 2023 vs. Q1 2022

Total revenue increased \$2,028 million or 16% from a year ago, largely due to higher net interest income and trading revenue. Higher Insurance premiums, investment and fee income (Insurance revenue) and foreign exchange revenue, other than trading also contributed to the increase. These factors were partially offset by lower underwriting and other advisory fees and mutual fund revenue.

Net interest income increased \$931 million or 18%, primarily due to higher spreads in Personal & Commercial Banking and Wealth Management, as well as average volume growth in Canadian Banking. These factors were partially offset by lower fixed income trading revenue and lower revenue from non-trading derivatives, which was offset in Other revenue, both in Capital Markets.

NIM was up 8 bps compared to last year, mainly due to the benefit of higher interest rates in our Canadian Banking and Wealth Management segments, partially offset by the impact of higher funding costs in Capital Markets with related trading revenue recorded in non-interest income.

Insurance revenue increased \$492 million or 35%, primarily due to the change in fair value of investments backing policyholder liabilities, which is largely offset in PBCAE. This was partially offset by lower group annuity sales.

Trading revenue increased \$755 million, mainly due to higher fixed income trading revenue across most regions reflecting increased client activity.

Foreign exchange revenue, other than trading increased \$162 million or 60%, primarily driven by foreign currency translation gains associated with certain foreign currency denominated funding, which was offset by the impact of economic hedges in Other revenue.

Mutual fund revenue decreased \$150 million or 13%, largely due to lower average fee-based client assets largely driven by unfavourable market conditions in Wealth Management, and lower average mutual fund balances driving lower distribution fees in Canadian Banking.

Underwriting and other advisory fees decreased \$189 million or 27%, largely driven by lower debt and equity origination across all regions.

Other revenue decreased \$31 million or 11%. An unfavourable impact from economic hedges was largely offset by gains on non-trading derivatives, which was offset in Net interest income, and 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 2023 vs. Q4 2022

Total revenue increased \$2,527 million or 20% from last quarter, largely due to higher insurance revenue, trading revenue and other revenue. Higher foreign exchange revenue, other than trading and investment management and custodial fees also contributed to the increase.

Insurance revenue increased \$1,247 million, primarily due to the change in fair value of investments backing policyholder liabilities, which is largely offset in PBCAE. Higher group annuity sales and realized investment gains in the current quarter also contributed to the increase.

Trading revenue increased \$618 million, mainly due to higher fixed income and equity trading revenue across most regions.

Investment management and custodial fees increased \$156 million or 8%, mainly reflecting the inclusion of RBC Brewin Dolphin.

Foreign exchange revenue, other than trading increased \$167 million or 63%, primarily driven by foreign currency translation gains associated with certain foreign currency denominated funding, which was offset by the impact of economic hedges in Other revenue.

Other revenue increased \$234 million, 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, and gains from our non-trading portfolios, which were offset in Net interest income. These factors were partially offset by the impact of economic hedges.

Provision for credit losses ⁽¹⁾

	For the three months ended		
	January 31 2023	October 31 2022	January 31 2022
(Millions of Canadian dollars, except percentage amounts)			
Personal & Commercial Banking	\$ 140	\$ 56	\$ (63)
Wealth Management ⁽²⁾	24	52	(13)
Capital Markets ⁽²⁾	9	18	(4)
PCL on performing loans	173	126	(80)
Personal & Commercial Banking	\$ 262	\$ 232	\$ 191
Wealth Management ⁽²⁾	42	11	1
Capital Markets ⁽²⁾	53	11	(12)
PCL on impaired loans	357	254	180
PCL – Loans	530	380	100
PCL – Other financial assets ⁽³⁾	2	1	5
Total PCL	\$ 532	\$ 381	\$ 105
PCL on loans is comprised of:			
Retail	\$ 134	\$ 82	\$ (58)
Wholesale	39	44	(22)
PCL on performing loans	173	126	(80)
Retail	239	201	138
Wholesale	118	53	42
PCL on impaired loans	357	254	180
PCL – Loans	\$ 530	\$ 380	\$ 100
PCL on loans as a % of average net loans and acceptances	0.25%	0.18%	0.05%
PCL on impaired loans as a % of average net loans and acceptances	0.17%	0.12%	0.09%

(1) Information on loans represents loans, acceptance and commitments.

(2) Amounts have been revised from those previously presented to conform to our new basis of segment presentation. For further details, refer to the About Royal Bank of Canada section.

(3) 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 guaranties.

Q1 2023 vs. Q1 2022

Total PCL increased \$427 million from a year ago, mainly reflecting higher provisions in Personal & Commercial Banking. Provisions taken in the current quarter as compared to releases in the prior year in Wealth Management and Capital Markets also contributed to the increase. The PCL on loans ratio increased 20 bps.

PCL on performing loans was \$173 million compared to \$(80) million last year, reflecting unfavourable changes in our macroeconomic and credit quality outlook, primarily in Personal & Commercial Banking largely in our Canadian Banking retail portfolios.

PCL on impaired loans increased \$177 million, largely reflecting higher provisions in our Canadian Banking retail portfolios. Provisions taken in the current quarter in Capital Markets, mainly in the telecom and media and consumer staples sectors, and higher provisions in U.S. Wealth Management (including City National), mainly in the other services and consumer discretionary sectors, also contributed to the increase.

Q1 2023 vs. Q4 2022

Total PCL increased \$151 million from last quarter, due to higher provisions in Personal & Commercial Banking and Capital Markets. The PCL on loans ratio increased 7 bps.

PCL on performing loans increased \$47 million or 37%, largely attributable to higher provisions in Personal & Commercial Banking, as last quarter reflected the impact of releases of provisions in our Caribbean Banking portfolios driven by the recovery from the COVID-19 pandemic and model updates. This was partially offset by lower provisions in Wealth Management, primarily in U.S. Wealth Management (including City National), reflecting reduced impacts from unfavourable changes in our credit quality and macroeconomic outlook.

PCL on impaired loans increased \$103 million or 41%, largely reflecting higher provisions in Capital Markets in a few sectors, including the telecom and media sector. Higher provisions in U.S. Wealth Management (including City National), largely in the other services and consumer discretionary sectors, and our Canadian Banking retail portfolios also contributed to the increase.

Insurance policyholder benefits, claims and acquisition expense (PBCAE)**Q1 2023 vs. Q1 2022**

PBCAE increased \$548 million or 55% from a year ago, primarily reflecting the change in fair value of investments backing policyholder liabilities, which is largely offset in revenue. Lower favourable investment-related experience and the impact of new longevity reinsurance contracts in the prior year also contributed to the increase. These factors were partially offset by lower group annuity sales and improved claims experience mainly in life retrocession.

Q1 2023 vs. Q4 2022

PBCAE increased \$1,429 million from last quarter, primarily reflecting the change in fair value of investments backing policyholder liabilities, which is largely offset in revenue. The impact of favourable annual actuarial assumption updates in the prior quarter, largely related to economic assumption updates, also contributed to the increase.

Non-interest expense

(Millions of Canadian dollars, except percentage amounts)	For the three months ended		
	January 31 2023	October 31 2022	January 31 2022
Salaries	\$ 2,037	\$ 1,935	\$ 1,748
Variable compensation	2,025	1,959	1,941
Benefits and retention compensation	544	486	549
Share-based compensation	270	3	47
Human resources	4,876	4,383	4,285
Equipment	569	571	501
Occupancy	411	401	386
Communications	282	319	228
Professional fees	404	472	319
Amortization of other intangibles	369	354	337
Other	764	709	524
Non-interest expense	\$ 7,675	\$ 7,209	\$ 6,580
Efficiency ratio ⁽¹⁾	50.8%	57.4%	50.4%
Efficiency ratio excluding the change in fair value of investments backing policyholder liabilities ⁽²⁾	53.2%	55.4%	48.8%

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

(2) This is a non-GAAP ratio. This measure excludes 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 2023 vs. Q1 2022

Non-interest expense increased \$1,095 million or 17% from a year ago, mainly due to higher staff and technology related costs as well as the change in the fair value of our U.S. share-based compensation plans, which was largely offset in Other revenue. The inclusion of RBC Brewin Dolphin and related costs, the impacts of foreign exchange translation and a legal provision release in U.S. Wealth Management (including City National) in the same quarter last year, also contributed to the increase.

Our efficiency ratio of 50.8% increased 40 bps from 50.4% last year. Excluding the change in fair value of investments backing policyholder liabilities, our efficiency ratio of 53.2% increased 440 bps from 48.8% last year.

Q1 2023 vs. Q4 2022

Non-interest expense increased \$466 million or 6% from last quarter, mainly due the change in the fair value of our U.S. share-based compensation plans, which was largely offset in Other revenue. The inclusion of RBC Brewin Dolphin and related costs, as well as higher staff-related costs, largely reflecting seasonally higher compensation, also contributed to the increase.

Our efficiency ratio of 50.8% decreased 660 bps from 57.4% last quarter. Excluding the change in fair value of investments backing policyholder liabilities, our efficiency ratio of 53.2% decreased 220 bps from 55.4% 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

	For the three months ended		
	January 31 2023	October 31 2022	January 31 2022
(Millions of Canadian dollars, except percentage amounts)			
Income taxes	\$ 2,128	\$ 979	\$ 1,289
Income before income taxes	5,342	4,861	5,384
Effective income tax rate	39.8%	20.1%	23.9%
Effective income tax rate excluding specified item (1)	20.2%	n.a.	n.a.

(1) This is a non-GAAP measure. This measure excludes the impact of the CRD and other tax related adjustments. For further details, including a reconciliation, refer to the Key performance and non-GAAP measures section.
n.a. not applicable

Q1 2023 vs. Q1 2022

Income tax expense increased \$839 million or 65% and the effective income tax rate of 39.8% increased 15.9% from a year ago, primarily due to the impact of the CRD and the 1.5% increase in the Canadian corporate tax rate applicable to fiscal 2022, net of deferred tax adjustments, which were announced in the Government of Canada's 2022 budget and enacted in the current quarter. This factor was partially offset by the impact of changes in earnings mix. Excluding the specified item, our effective tax rate of 20.2% decreased 370 bps from 23.9% last year, primarily due to the impact of changes in earnings mix.

Q1 2023 vs. Q4 2022

Income tax expense increased \$1,149 million and the effective income tax rate of 39.8% increased 19.7% from last quarter, primarily due to the specified item as described above. Excluding the specified item, our effective tax rate of 20.2% increased 10 bps from 20.1% last quarter.

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

Business segment results

How we measure and report our business segments

The key methodologies and assumptions used in our management reporting framework are periodically reviewed by management to ensure they remain valid. Effective the first quarter of 2023, we simplified our reporting structure by eliminating the Investor & Treasury Services segment and moving its former businesses to existing segments. For further details, refer to the About Royal Bank of Canada section. Other than changes necessary to effect our new basis of segment presentation, our key methodologies and assumptions remain unchanged from October 31, 2022.

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 2022 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 2023						2022	2022
	Personal & Commercial Banking	Wealth Management	Insurance	Capital Markets	Corporate Support	Total	Total	Total
Net income available to common shareholders	\$ 2,113	\$ 836	\$ 147	\$ 1,210	\$ (1,138)	\$ 3,168	\$ 3,809	\$ 4,039
Total average common equity (1), (2)	28,100	24,650	2,050	28,200	16,700	99,700	97,150	92,450
ROE (3)	29.8%	13.5%	28.6%	17.0%	n.m.	12.6%	15.6%	17.3%

(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 (including non-GAAP ratios) 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, 2023 with the corresponding periods in the prior year and the three months ended October 31, 2022. Non-GAAP measures do not have a standardized meaning under GAAP and may not be comparable to similar measures disclosed by other financial institutions.

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

Results excluding specified item

We believe that providing results and certain measures excluding the specified item discussed below enhance comparability with prior periods and enables readers to better assess trends in the underlying businesses. For the three months ended January 31, 2023, our results were impacted by the following specified item:

- The CRD and other tax related adjustments. For further details, refer to the Overview – Specified item section, and Note 9 of our Condensed Financial Statements.

The following table provides our consolidated results as well as certain measures excluding the specified item. The results and measures excluding the specified item presented below are non-GAAP measures.

Consolidated results

(Millions of Canadian dollars, except per share and percentage amounts)	For the three months ended (1)		
	January 31 2023		
	As reported	Item excluded The impact of the CRD and other related tax adjustments (2)	Excluding specified Item
Total revenue	\$ 15,094	\$ –	\$ 15,094
PCL	532	–	532
Non-interest expense	7,675	–	7,675
Income taxes	2,128	(1,050)	1,078
Net income	\$ 3,214	\$ 1,050	\$ 4,264
Net income available to common shareholders	3,168	1,050	4,218
Average number of common shares (thousands)	1,382,754		1,382,754
Basic earnings per share (in dollars)	\$ 2.29	\$ 0.76	\$ 3.05
Average number of diluted common shares (thousands)	1,384,536		1,384,536
Diluted earnings per share (in dollars)	\$ 2.29	\$ 0.76	\$ 3.05
ROE (3)	12.6%	4.2%	16.8%
Effective income tax rate	39.8%	(19.6)%	20.2%

(1) There were no specified items for the three months ended January 31, 2022 or October 31, 2022.

(2) These amounts have been recognized in Corporate Support. Does not include \$0.2 billion recognized in other comprehensive income.

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

Efficiency ratio excluding the change in fair value of investments backing policyholder liabilities

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 efficiency ratio excluding the change in fair value of investments backing policyholder liabilities is a non-GAAP ratio and is calculated using total revenue excluding the impact from the change in fair value of investments backing policyholder liabilities, which is a non-GAAP measure. We believe the efficiency ratio excluding the change in fair value of investments backing policyholder liabilities 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 2023			October 31 2022			January 31 2022		
	As reported	Item excluded Change in fair value of investments backing policyholder liabilities	Excluding the change in fair value of investments backing policyholder liabilities	As reported	Item excluded Change in fair value of investments backing policyholder liabilities	Excluding the change in fair value of investments backing policyholder liabilities	As reported	Item excluded Change in fair value of investments backing policyholder liabilities	Excluding the change in fair value of investments backing policyholder liabilities
Total revenue	\$ 15,094	\$ (663)	\$ 14,431	\$ 12,567	\$ 440	\$ 13,007	\$ 13,066	\$ 430	\$ 13,496
Non-interest expense	7,675	–	7,675	7,209	–	7,209	6,580	–	6,580
Efficiency ratio	50.8%		53.2%	57.4%		55.4%	50.4%		48.8%

Personal & Commercial Banking

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	As at or for the three months ended		
	January 31 2023	October 31 2022	January 31 2022
Net interest income	\$ 4,007	\$ 3,901	\$ 3,229
Non-interest income	1,534	1,518	1,574
Total revenue	5,541	5,419	4,803
PCL on performing assets	141	56	(60)
PCL on impaired assets	260	230	189
PCL	401	286	129
Non-interest expense	2,229	2,270	2,022
Income before income taxes	2,911	2,863	2,652
Net income	\$ 2,126	\$ 2,139	\$ 1,974
Revenue by business			
Canadian Banking	\$ 5,284	\$ 5,179	\$ 4,598
Caribbean & U.S. Banking	257	240	205
Selected balance sheet and other information			
ROE	29.8%	30.5%	29.8%
NIM	2.76%	2.72%	2.41%
Efficiency ratio	40.2%	41.9%	42.1%
Operating leverage (1)	5.2%	8.9%	3.1%
Average total earning assets, net	\$ 575,900	\$ 569,000	\$ 530,800
Average loans and acceptances, net	581,800	574,300	534,400
Average deposits	579,800	570,200	539,300
AUA (2)	349,600	336,400	371,100
Average AUA	343,500	338,300	372,600
PCL on impaired loans as a % of average net loans and acceptances	0.18%	0.16%	0.14%
Other selected information – Canadian Banking			
Net income	\$ 2,056	\$ 1,999	\$ 1,914
NIM	2.73%	2.70%	2.41%
Efficiency ratio	39.0%	40.3%	40.8%
Operating leverage	5.1%	9.2%	2.8%

(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, 2023 of \$15 billion and \$6 billion, respectively (October 31, 2022 – \$15 billion and \$6 billion; January 31, 2022 – \$15 billion and \$3 billion).

Financial performance

Q1 2023 vs. Q1 2022

Net income increased \$152 million or 8% from a year ago, primarily attributable to higher net interest income, driven by improved spreads and average volume growth of 8% in Canadian Banking. This was partially offset by higher PCL and staff-related costs, lower average mutual fund balances driving lower distribution fees, as well as a higher effective tax rate reflecting the 1.5% increase in the Canadian corporate tax rate.

Total revenue increased \$738 million or 15%.

Canadian Banking revenue increased \$686 million or 15%, primarily due to higher net interest income reflecting higher spreads, and average volume growth of 9% in loans and 8% in deposits. This was partially offset by lower average mutual fund balances driving lower distribution fees and the impact of realized gains from commercial mortgage securitization activities in the prior year.

Caribbean & U.S. Banking revenue increased \$52 million or 25%, mainly due to higher net interest income reflecting improved spreads.

NIM was up 35 bps, mainly due to the impact of the rising interest rate environment, partially offset by changes in product mix.

PCL increased \$272 million, mainly attributable to provisions taken on performing loans in the current quarter as compared to releases in the prior year, primarily in our Canadian Banking retail portfolios, driven by unfavourable changes in our macroeconomic and credit quality outlook. Higher provisions on impaired loans, primarily in our Canadian Banking retail portfolios, also contributed to the increase, resulting in an increase of 4 bps in the PCL on impaired loans ratio.

Non-interest expense increased \$207 million or 10%, mainly attributable to higher staff and technology related costs, including digital initiatives, as well as higher marketing costs.

Q1 2023 vs. Q4 2022

Net income decreased \$13 million or 1% from last quarter, primarily attributable to higher PCL, partially offset by higher net interest income reflecting higher spreads.

Total revenue increased \$122 million or 2%, mainly driven by higher net interest income reflecting higher spreads.

NIM was up 4 bps, mainly due to the impact of the rising interest rate environment, partially offset by changes in product mix.

PCL increased \$115 million or 40%, largely attributable to higher provisions on performing loans in our Caribbean Banking portfolios as last quarter reflected the impact of releases driven by the recovery from the COVID-19 pandemic and model updates. Higher provisions on impaired loans, mainly in our Canadian Banking retail portfolios, also contributed to the increase, resulting in an increase of 2 bps in the PCL on impaired loans ratio.

Non-interest expense decreased \$41 million or 2%, largely reflecting the timing of professional fees and marketing costs, partially offset by higher staff-related costs.

Wealth Management

	As at or for the three months ended		
	January 31 2023	October 31 2022 (1)	January 31 2022 (1)
(Millions of Canadian dollars, except number of, percentage amounts and as otherwise noted)			
Net interest income	\$ 1,225	\$ 1,210	\$ 853
Non-interest income	3,360	3,098	3,165
Total revenue	4,585	4,308	4,018
PCL on performing assets	24	52	(13)
PCL on impaired assets	42	11	1
PCL	66	63	(12)
Non-interest expense	3,434	3,174	2,944
Income before income taxes	1,085	1,071	1,086
Net income	\$ 848	\$ 836	\$ 821
Revenue by business			
Canadian Wealth Management	\$ 1,111	\$ 1,095	\$ 1,072
U.S. Wealth Management (including City National)	2,128	2,068	1,727
U.S. Wealth Management (including City National) (US\$ millions)	1,585	1,529	1,359
Global Asset Management	683	644	736
International Wealth Management	288	169	78
Investor Services (2)	375	332	405
Selected balance sheet and other information			
ROE	13.5%	14.8%	16.7%
NIM	2.63%	2.77%	2.06%
Pre-tax margin (3)	23.7%	24.9%	27.0%
Number of advisors (4)	6,199	6,158	5,564
Average total earning assets, net	\$ 185,200	\$ 173,100	\$ 164,100
Average loans and acceptances, net	122,300	120,100	102,300
Average deposits	185,600	195,300	203,900
AUA (5)	5,412,000	5,294,800	6,057,600
U.S. Wealth Management (including City National) (5)	713,100	700,100	712,700
U.S. Wealth Management (including City National) (US\$ millions) (5)	536,100	513,700	560,800
Investor Services (5)	3,974,100	3,906,900	4,716,500
AUM (5)	1,042,900	991,500	1,013,100
Average AUA	5,423,100	5,454,500	6,010,400
Average AUM	1,027,300	942,000	1,021,200
PCL on impaired loans as a % of average net loans and acceptances	0.13%	0.04%	0.00%

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 2023 vs. Q1 2022	Q1 2023 vs. Q4 2022
Increase (decrease):		
Total revenue	\$ 95	\$ 22
PCL	3	(1)
Non-interest expense	75	20
Net income	13	3
Percentage change in average U.S. dollar equivalent of C\$1.00	(5)%	1%
Percentage change in average British pound equivalent of C\$1.00	4%	(6)%
Percentage change in average Euro equivalent of C\$1.00	–%	(6)%

(1) Amounts have been revised from those previously presented to conform to our new basis of segment presentation. For further details, refer to the About Royal Bank of Canada section.

(2) Effective Q1 2023, we entered into a definitive agreement to sell the European asset servicing activities of RBC Investor Services® and its associated Malaysian centre of excellence. For further details, refer to Note 6 of our Condensed Financial Statements.

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

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

(5) Represents period-end spot balances.

Financial performance

Q1 2023 vs. Q1 2022

Net income increased \$27 million or 3% from a year ago, mainly due to higher net interest income reflecting higher interest rates, which also drove higher revenue from sweep deposits. Higher transactional revenue also contributed to the increase. These factors were partially offset by lower average fee-based client assets largely driven by unfavourable market conditions, the impact of a legal provision release in U.S. Wealth Management (including City National) in the same quarter last year, higher PCL, as well as higher staff-related costs.

Total revenue increased \$567 million or 14%.

Canadian Wealth Management revenue increased \$39 million or 4%, primarily due to higher net interest income from higher interest rates partially offset by lower deposit volume, as well as lower average fee-based client assets largely driven by unfavourable market conditions.

U.S. Wealth Management (including City National) revenue increased \$401 million or 23%. In U.S. dollars, revenue increased \$226 million or 17%, primarily due to higher net interest income reflecting higher interest rates, which also drove higher revenue from sweep deposits. Higher transactional revenue also contributed to the increase. These factors were partially offset by lower average fee-based client assets, largely driven by unfavourable market conditions.

Global Asset Management revenue decreased \$53 million or 7%, primarily due to lower average fee-based client assets, largely driven by unfavourable market conditions. This was partially offset by changes in the fair value of seed capital investments.

International Wealth Management revenue increased \$210 million, primarily reflecting the inclusion of RBC Brewin Dolphin, as well as an increase in net interest income driven by higher interest rates.

Investor Services revenue decreased \$30 million or 7%, primarily due to lower net interest income, largely driven by lower deposit volume, and lower fee-based revenue. These factors were partially offset by higher transactional revenue.

PCL was \$66 million compared to \$(12) million last year, primarily in U.S. Wealth Management (including City National), largely attributable to higher provisions on impaired loans, mainly in the other services and consumer discretionary sectors, resulting in an increase of 13 bps in the PCL on impaired loans ratio. Provisions taken on performing loans in the current quarter as compared to releases in the prior year, primarily driven by unfavourable changes in our macroeconomic outlook, also contributed to the increase.

Non-interest expense increased \$490 million or 17%, largely due to the inclusion of RBC Brewin Dolphin and related costs, and the impact of a legal provision release in U.S. Wealth Management (including City National) in the same quarter last year. The impact of foreign exchange translation, as well as higher staff and technology related costs also contributed to the increase.

Q1 2023 vs. Q4 2022

Net income increased \$12 million or 1% from last quarter, mainly due to higher transactional revenue, partially offset by higher staff-related costs mainly reflecting seasonally higher compensation.

Total revenue increased \$277 million or 6%, mainly reflecting the inclusion of RBC Brewin Dolphin and higher transactional revenue. The impact of foreign exchange translation as well as higher net interest income reflecting higher interest rates also contributed to the increase.

PCL increased \$3 million or 5%, due to higher provisions on impaired loans, primarily in U.S. Wealth Management (including City National) mainly in the other services and consumer discretionary sectors, resulting in an increase of 9 bps in the PCL on impaired loans ratio. This was largely offset by lower provisions on performing loans in U.S. Wealth Management (including City National), reflecting reduced impacts from unfavourable changes in our credit quality and macroeconomic outlook.

Non-interest expense increased \$260 million or 8%, largely due to the inclusion of RBC Brewin Dolphin and related costs, as well as higher staff-related costs and variable compensation, mainly reflecting seasonally higher compensation. Higher annual regulatory fees, and the impact of foreign exchange translation, also contributed to the increase.

Insurance

	As at or for the three months ended		
	January 31 2023	October 31 2022	January 31 2022
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)			
Non-interest income			
Net earned premiums	\$ 1,042	\$ 908	\$ 1,599
Investment income, gains/(losses) on assets supporting insurance			
policyholder liabilities (1)	798	(334)	(252)
Fee income	51	70	52
Total revenue	1,891	644	1,399
Insurance policyholder benefits and claims (1)	1,465	42	914
Insurance policyholder acquisition expense	80	74	83
Non-interest expense	156	157	147
Income before income taxes	190	371	255
Net income	\$ 148	\$ 268	\$ 197
Revenue by business			
Canadian Insurance	\$ 1,297	\$ (130)	\$ 693
International Insurance	594	774	706
Selected balances and other information			
ROE	28.6%	46.7%	32.4%
Premiums and deposits (2)	\$ 1,239	\$ 1,071	\$ 1,814
Fair value changes on investments backing policyholder liabilities (1)	663	(440)	(430)

(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 2023 vs. Q1 2022

Net income decreased \$49 million or 25% from a year ago, primarily due to higher capital funding costs, partially offset by improved claims experience.

Total revenue increased \$492 million or 35%.

Canadian Insurance revenue increased \$604 million or 87%, 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 lower group annuity sales.

International Insurance revenue decreased \$112 million or 16%, mainly due to the change in fair value of investments backing policyholder liabilities, which is largely offset in PBCAE as indicated below, and lower longevity reinsurance volumes.

PBCAE increased \$548 million or 55%, primarily reflecting the change in fair value of investments backing policyholder liabilities, which is largely offset in revenue. Lower favourable investment-related experience and the impact of new longevity reinsurance contracts in the prior year also contributed to the increase. These factors were partially offset by lower group annuity sales and improved claims experience mainly in life retrocession.

Non-interest expense increased \$9 million or 6%, primarily due to costs in support of sales and client service activities.

Q1 2023 vs. Q4 2022

Net income decreased \$120 million or 45% from last quarter, primarily due to the impact of favourable annual actuarial assumption updates in the prior quarter.

Total revenue increased \$1,247 million, primarily due to the change in fair value of investments backing policyholder liabilities, which is largely offset in PBCAE as indicated below. Higher group annuity sales and realized investment gains in the current quarter also contributed to the increase.

PBCAE increased \$1,429 million, primarily reflecting the change in fair value of investments backing policyholder liabilities, which is largely offset in revenue. The impact of favourable annual actuarial assumption updates in the prior quarter, largely related to economic assumption updates, also contributed to the increase.

Non-interest expense remained relatively flat.

Capital Markets

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	As at or for the three months ended		
	January 31 2023	October 31 2022 (1)	January 31 2022 (1)
Net interest income (2)	\$ 768	\$ 1,078	\$ 1,296
Non-interest income (2)	2,353	1,406	1,696
Total revenue (2)	3,121	2,484	2,992
PCL on performing assets	12	19	(6)
PCL on impaired assets	53	13	(6)
PCL	65	32	(12)
Non-interest expense	1,701	1,677	1,529
Income before income taxes	1,355	775	1,475
Net income	\$ 1,223	\$ 713	\$ 1,122
Revenue by business			
Corporate and Investment Banking	\$ 1,299	\$ 1,277	\$ 1,460
Global Markets	1,885	1,317	1,613
Other	(63)	(110)	(81)
Selected balance sheet and other information			
ROE	17.0%	9.9%	16.9%
Average total assets	\$ 1,184,600	\$ 1,118,100	\$ 1,027,100
Average trading securities	155,100	137,900	144,200
Average loans and acceptances, net	138,500	132,900	113,400
Average deposits	306,900	296,700	277,500
PCL on impaired loans as a % of average net loans and acceptances	0.15%	0.03%	(0.04)%

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 2023 vs. Q1 2022	Q1 2023 vs. Q4 2022
Increase (decrease):		
Total revenue	\$ 81	\$ 15
PCL	3	–
Non-interest expense	32	11
Net income	42	4
Percentage change in average U.S. dollar equivalent of C\$1.00	(5)%	1%
Percentage change in average British pound equivalent of C\$1.00	4%	(6)%
Percentage change in average Euro equivalent of C\$1.00	–%	(6)%

(1) Amounts have been revised from those previously presented to conform to our new basis of segment presentation. For further details, refer to the About Royal Bank of Canada section.

(2) The taxable equivalent basis (teb) adjustment for the three months ended January 31, 2023 was \$116 million (October 31, 2022 – \$142 million; January 31, 2022 – \$142 million). For further discussion, refer to the How we measure and report our business segments section of our 2022 Annual Report.

Financial performance Q1 2023 vs. Q1 2022

Net income increased \$101 million or 9% from a year ago, primarily driven by a lower effective tax rate reflecting changes in earnings mix, and higher revenue in Global Markets. These factors were partially offset by lower revenue in Corporate & Investment Banking and higher PCL.

Total revenue increased \$129 million or 4%.

Global Markets revenue increased \$272 million or 17%, largely due to higher fixed income trading revenue across most regions reflecting increased client activity.

Corporate and Investment Banking revenue decreased \$161 million or 11%, primarily due to lower debt and equity origination across all regions and lower loan syndication activity in the U.S. and Europe.

Other revenue improved \$18 million or 22%, mainly reflecting fair value changes in our legacy U.S. portfolios.

PCL was \$65 million compared to \$(12) million last year, primarily attributable to provisions taken on impaired loans in the current quarter, mainly in the telecom and media and consumer staples sectors, resulting in an increase of 19 bps in the PCL on impaired loans ratio.

Non-interest expense increased \$172 million or 11%, mainly driven by higher technology-related costs, higher compensation and the impact of foreign exchange translation. Higher marketing and business development costs also contributed to the increase.

Q1 2023 vs. Q4 2022

Net income increased \$510 million or 72% from last quarter, largely driven by higher revenue in Global Markets.

Total revenue increased \$637 million or 26%, largely driven by higher fixed income and equity trading revenue across most regions.

PCL increased \$33 million, largely attributable to higher provisions on impaired loans in a few sectors including the telecom and media sector, resulting in an increase of 12 bps in the PCL on impaired loans ratio.

Non-interest expense increased \$24 million or 1%, primarily due to higher compensation on improved results while the prior quarter included true-ups related to our variable compensation plans.

Corporate Support

(Millions of Canadian dollars)	For the three months ended		
	January 31 2023	October 31 2022	January 31 2022
Net interest income (loss) (1)	\$ 202	\$ 93	\$ (107)
Non-interest income (loss) (1), (2)	(246)	(381)	(39)
Total revenue (1), (2)	(44)	(288)	(146)
PCL	–	–	–
Non-interest expense (2)	155	(69)	(62)
Income (loss) before income taxes (1)	(199)	(219)	(84)
Income taxes (recoveries) (1)	932	(145)	(65)
Net income (loss)	\$ (1,131)	\$ (74)	\$ (19)

(1) Teb adjusted.

(2) Revenue for the three months ended January 31, 2023 included gains of \$121 million (October 31, 2022 and January 31, 2022 – losses of \$98 million and losses of \$89 million, respectively) on economic hedges of our U.S. Wealth Management (including City National) share-based compensation plans, and non-interest expense included \$100 million (October 31, 2022 and January 31, 2022 – \$(81) million and \$(71) 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.

Due to the nature of activities and consolidation adjustments reported in this segment, we believe that a comparative period analysis is not relevant.

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, 2023 was \$116 million, compared to \$142 million in the prior quarter and \$142 million in the same quarter last year.

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

Q1 2023

Net loss was \$1,131 million, primarily due to the impact of the CRD and other tax related adjustments of \$1,050 million (for further details, refer to the Overview - Specified item section). Asset/liability management activities and residual unallocated items also contributed to the net loss.

Q4 2022

Net loss was \$74 million, primarily due to residual unallocated items and unfavourable tax adjustments.

Q1 2022

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

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⁾

	2023		2022			2021		
	Q1	Q4	Q3	Q2	Q1	Q4	Q3	Q2
<i>(Millions of Canadian dollars, except per share and percentage amounts)</i>								
Personal & Commercial Banking	\$ 5,541	\$ 5,419	\$ 5,182	\$ 4,739	\$ 4,803	\$ 4,605	\$ 4,651	\$ 4,527
Wealth Management ⁽²⁾	4,585	4,308	4,022	4,001	4,018	3,862	3,774	3,664
Insurance	1,891	644	1,233	234	1,399	1,501	1,754	536
Capital Markets ^{(2), (3)}	3,121	2,484	1,864	2,503	2,992	2,428	2,579	2,848
Corporate Support ⁽³⁾	(44)	(288)	(169)	(257)	(146)	(20)	(2)	43
Total revenue	15,094	12,567	12,132	11,220	13,066	12,376	12,756	11,618
PCL	532	381	340	(342)	105	(227)	(540)	(96)
PBCAE	1,545	116	850	(180)	997	1,032	1,304	149
Non-interest expense	7,675	7,209	6,386	6,434	6,580	6,583	6,420	6,379
Income before income taxes	5,342	4,861	4,556	5,308	5,384	4,988	5,572	5,186
Income taxes	2,128	979	979	1,055	1,289	1,096	1,276	1,171
Net income	\$ 3,214	\$ 3,882	\$ 3,577	\$ 4,253	\$ 4,095	\$ 3,892	\$ 4,296	\$ 4,015
EPS – basic	\$ 2.29	\$ 2.75	\$ 2.52	\$ 2.97	\$ 2.84	\$ 2.68	\$ 2.97	\$ 2.76
– diluted	2.29	2.74	2.51	2.96	2.84	2.68	2.97	2.76
Effective income tax rate	39.8%	20.1%	21.5%	19.9%	23.9%	22.0%	22.9%	22.6%
Period average US\$ equivalent of C\$1.00	\$ 0.745	\$ 0.739	\$ 0.783	\$ 0.789	\$ 0.787	\$ 0.796	\$ 0.812	\$ 0.798

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

(2) Amounts have been revised from those previously presented to conform to our new basis of segment presentation. For further details, refer to the About Royal Bank of Canada section.

(3) Teb adjusted. For further discussion, refer to the How we measure and report our business segments section of our 2022 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 over the period have been impacted by the factors noted below.

Personal & Commercial Banking revenue has benefitted from solid volume growth in loans and deposits over the period. NIM has been favourably impacted by the rising interest rate environment over the recent quarters, whereas a low interest rate environment persisted in the earlier part of the period.

Wealth Management revenue has benefitted from growth in average fee-based client assets, which is impacted by market conditions, and volume growth in loans and deposits over the period. The rising interest rate environment also favourably impacted revenue over the recent quarters, whereas a low interest rate environment persisted in the earlier part of the period. The revenue of RBC Brewin Dolphin has been included since the acquisition closed on September 27, 2022.

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 half of the fiscal year.

Capital Markets revenue is influenced, to a large extent, by market conditions that impact client activity. Trading revenue across the first half of the period benefitted from increased client activity. Beginning in the second quarter of 2022, there was a decline in global fee pools. Trading results were further impacted notably in the third quarter of 2022 amidst challenging market conditions, driving lower fixed income trading revenue, including the impact from loan underwriting markdowns. The first quarter of 2023 saw significant improvement in trading results, reflecting strong client activity.

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 changes in macroeconomic conditions, credit quality, exposures and portfolio composition. Throughout 2021 and the first half of 2022, we saw improvements in our macroeconomic and credit quality outlook, as the economic impact from the COVID-19 pandemic eased in most regions, resulting in releases of provisions on performing assets. In the last half of 2022 and first quarter of 2023, unfavourable changes in our macroeconomic outlook resulted in an increase in provisions. PCL on impaired assets remained below pre-pandemic levels over most of the period, though provisions started to increase towards the end of the period.

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 been impacted by fluctuations in variable compensation over the period, commensurate with fluctuations in revenue and earnings. 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. While we continue to focus on efficiency management activities, expenses over the period also reflect investments in staff and technology. 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. Non-interest expenses of RBC Brewin Dolphin have been included since the acquisition closed on September 27, 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 and fourth quarters of 2022 reflected the impact of net favourable tax adjustments and an increase in income from lower tax rate jurisdictions, respectively. The first quarter of 2023 reflects the impact of the CRD and other tax related adjustments.

Financial condition

Condensed balance sheets

	As at	
	January 31 2023	October 31 2022
(Millions of Canadian dollars)		
Assets		
Cash and due from banks	\$ 86,277	\$ 72,397
Interest-bearing deposits with banks	93,495	108,011
Securities, net of applicable allowance (1)	320,553	318,223
Assets purchased under reverse repurchase agreements and securities borrowed	328,379	317,845
Loans		
Retail	549,893	549,751
Wholesale	277,900	273,967
Allowance for loan losses	(3,999)	(3,753)
Other – Derivatives	130,120	154,439
– Other (2)	150,401	126,339
Total assets	\$ 1,933,019	\$ 1,917,219
Liabilities		
Deposits	\$ 1,203,842	\$ 1,208,814
Other – Derivatives	131,082	153,491
– Other (2)	478,766	436,714
Subordinated debentures	11,530	10,025
Total liabilities	1,825,220	1,809,044
Equity attributable to shareholders	107,696	108,064
Non-controlling interests	103	111
Total equity	107,799	108,175
Total liabilities and equity	\$ 1,933,019	\$ 1,917,219

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

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

Q1 2023 vs. Q4 2022

Total assets increased \$16 billion or 1% from October 31, 2022. Foreign exchange translation decreased total assets by \$41 billion.

Cash and due from banks was up \$14 billion or 19%, primarily due to higher deposits with central banks, reflecting our short-term cash management activities.

Interest-bearing deposits with banks decreased \$15 billion or 13%, primarily due to the classification of certain interest-bearing deposits as assets held for sale, which are presented in Other assets. For further details, refer to Note 6 of our Condensed Financial Statements. This decrease was partially offset by higher deposits with central banks, reflecting our short-term cash management activities.

Securities, net of applicable allowance, were up \$2 billion or 1%, primarily due to higher equity trading securities reflecting favourable market conditions and an increase in corporate debt securities. These factors were partially offset by the impact of foreign exchange translation and lower government debt securities.

Assets purchased under reverse repurchase agreements (reverse repos) and securities borrowed increased \$11 billion or 3%, primarily due to increased client demand, partially offset by the impact of foreign exchange translation.

Loans (net of Allowance for loan losses) were up \$4 billion, primarily due to volume growth in wholesale loans, partially offset by the impact of foreign exchange translation.

Derivative assets were down \$24 billion or 16%, primarily due to the impact of foreign exchange translation and lower fair values on interest rate contracts, partially offset by higher fair values on foreign exchange contracts.

Other assets were up \$24 billion or 19%, primarily due to the reclassification of certain interest-bearing deposits noted above, partially offset by lower cash collateral.

Total liabilities increased \$16 billion or 1%. Foreign exchange translation decreased total liabilities by \$41 billion.

Deposits decreased \$5 billion, primarily due to the classification of certain deposits as liabilities held for sale, which are presented in Other liabilities, and lower business and government deposits driven by client activity. These factors were partially offset by the issuances of long-term notes due to funding requirements and higher retail deposits.

Derivative liabilities were down \$22 billion or 15%, primarily due to the impact of foreign exchange translation and lower fair values on interest rate contracts, partially offset by higher fair values on foreign exchange contracts.

Other liabilities were up \$42 billion or 10%, primarily due to the reclassification of certain deposits noted above and higher obligations related to repurchase agreements (repos) reflecting increased client demand.

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 2023 Report to Shareholders.

The following provides an update to our significant off-balance sheet transactions, which are described on pages 56 to 58 of our 2022 Annual Report.

Involvement with unconsolidated structured entities

RBC-administered multi-seller conduits

We administer multi-seller conduits which are used primarily for the securitization of our clients' financial assets. Our maximum exposure to loss under these transactions primarily relates to backstop liquidity and partial credit enhancement facilities extended to the conduits. As at January 31, 2023, the total assets of the multi-seller conduits were \$52 billion (October 31, 2022 – \$47 billion) and our maximum exposure to loss was \$53 billion (October 31, 2022 – \$48 billion). The increase reflects higher securitization activities since October 31, 2022 in most asset classes. This was partially offset by the impact of foreign exchange translation.

As at January 31, 2023, the total asset-backed commercial paper (ABCP) issued by the conduits amounted to \$35 billion (October 31, 2022 – \$33 billion). The rating agencies that rate the ABCP rated 100% (October 31, 2022 – 100%) of the total amount issued within the top ratings category.

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 2022 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, 2023					
	Residential mortgages			Home equity lines of credit (2)		
	Insured (3)		Uninsured		Total	Total
Region (4)						
Canada						
Atlantic provinces	\$ 8,422	45%	\$ 10,202	55%	\$ 18,624	\$ 1,636
Quebec	12,268	28	30,827	72	43,095	3,235
Ontario	31,277	16	159,310	84	190,587	16,669
Alberta	19,404	47	22,216	53	41,620	4,755
Saskatchewan and Manitoba	8,749	43	11,795	57	20,544	1,887
B.C. and territories	12,221	17	59,935	83	72,156	7,188
Total Canada (5)	92,341	24	294,285	76	386,626	35,370
U.S.	–	–	31,572	100	31,572	1,967
Other International	–	–	2,984	100	2,984	1,667
Total International	–	–	34,556	100	34,556	3,634
Total	\$ 92,341	22%	\$ 328,841	78%	\$ 421,182	\$ 39,004

(Millions of Canadian dollars, except percentage amounts)	As at October 31, 2022					
	Residential mortgages			Home equity lines of credit (2)		
	Insured (3)		Uninsured		Total	Total
Region (4)						
Canada						
Atlantic provinces	\$ 8,460	46%	\$ 10,052	54%	\$ 18,512	\$ 1,659
Quebec	12,444	29	30,623	71	43,067	3,300
Ontario	31,409	17	156,700	83	188,109	17,009
Alberta	19,663	47	22,154	53	41,817	4,923
Saskatchewan and Manitoba	8,847	43	11,808	57	20,655	1,940
B.C. and territories	12,290	17	59,347	83	71,637	7,386
Total Canada (5)	93,113	24	290,684	76	383,797	36,217
U.S.	–	–	31,956	100	31,956	1,776
Other International	–	–	3,043	100	3,043	1,621
Total International	–	–	34,999	100	34,999	3,397
Total	\$ 93,113	22%	\$ 325,683	78%	\$ 418,796	\$ 39,614

- (1) Disclosure is provided in accordance with the requirements of OSFI's Guideline B-20 (Residential Mortgage Underwriting Practices and Procedures).
- (2) Includes \$38,982 million and \$22 million of uninsured and insured home equity lines of credit, respectively (October 31, 2022 – \$39,591 million and \$23 million, respectively), reported within the personal loan category. The amounts in the U.S. and Other International include term loans collateralized by residential properties.
- (3) 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.
- (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 \$387 billion (October 31, 2022 – \$384 billion) includes \$12 billion (October 31, 2022 – \$12 billion) of mortgages with commercial clients in Canadian Banking, of which \$9 billion (October 31, 2022 – \$9 billion) are insured, and \$18 billion (October 31, 2022 – \$17 billion) of residential mortgages in Capital Markets, of which \$17 billion (October 31, 2022 – \$17 billion) of residential mortgages are held for securitization purposes in Capital Markets. All of the residential mortgages held for securitization purposes are insured (October 31, 2022 – 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 2023			October 31 2022		
	Canada (2)	U.S. and other International	Total	Canada (2)	U.S. and other International	Total
≤ 25 years	57%	25%	54%	57%	25%	54%
> 25 years ≤ 30 years	16	75	21	16	75	21
> 30 years ≤ 35 years	1	–	1	2	–	2
> 35 years	26	–	24	25	–	23
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).
- (2) Our policy is to originate mortgages with amortization periods of 30 years or less. Amortization periods greater than 30 years reflect the impact of increases in interest rates on our variable rate mortgage portfolios. For these loans, the amortization period resets to the original amortization schedule upon renewal.

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 2023		October 31 2022	
	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	70%	70%	71%	71%
Quebec	69	70	71	71
Ontario	71	65	71	65
Alberta	72	71	72	72
Saskatchewan and Manitoba	73	73	72	74
B.C. and territories	69	64	68	64
U.S.	74	n.m.	74	n.m.
Other International	71	n.m.	70	n.m.
Average of newly originated and acquired for the period (5), (6)	71%	66%	71%	66%
Total Canadian Banking residential mortgages portfolio (7)	55%	49%	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; 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 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									
	January 31 2023								October 31 2022	
	Asset type				Client type				Total	Total
	Loans Outstanding	Securities (3)	Repo-style transactions	Derivatives	Financials	Sovereign	Corporate			
Europe (excluding U.K.)	\$ 15,792	\$ 44,167	\$ 1,989	\$ 2,132	\$ 19,025	\$ 31,953	\$ 13,102	\$ 64,080	\$ 57,753	
U.K.	7,846	28,667	840	2,491	15,806	16,174	7,864	39,844	39,949	
Caribbean	8,053	10,304	393	379	7,194	3,773	8,162	19,129	19,688	
Asia-Pacific	6,924	34,748	961	494	12,275	26,024	4,828	43,127	35,338	
Other (4)	571	1,713	610	135	744	1,655	630	3,029	3,043	
Net International exposure (5), (6)	\$ 39,186	\$ 119,599	\$ 4,793	\$ 5,631	\$ 55,044	\$ 79,579	\$ 34,586	\$ 169,209	\$ 155,771	

(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 \$361 billion against repo-style transactions (October 31, 2022 – \$357 billion) and \$13 billion against derivatives (October 31, 2022 – \$14 billion).

(3) Securities include \$13 billion of trading securities (October 31, 2022 – \$13 billion), \$69 billion of deposits (October 31, 2022 – \$56 billion), and \$38 billion of investment securities (October 31, 2022 – \$35 billion).

(4) Includes exposures in the Middle East, Africa and Latin America.

(5) Excludes \$4,862 million (October 31, 2022 – \$5,213 million) of exposures to supranational agencies.

(6) Reflects \$2,603 million of mitigation through credit default swaps, which are largely used to hedge single name exposures and market risk (October 31, 2022 – \$2,233 million).

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.

Gross impaired loans

(Millions of Canadian dollars, except percentage amounts)	As at and for the three months ended	
	January 31 2023	October 31 2022
Personal & Commercial Banking	\$ 1,517	\$ 1,362
Wealth Management	396	278
Capital Markets	686	559
Total GIL	\$ 2,599	\$ 2,199
Impaired loans, beginning balance	\$ 2,199	\$ 2,059
Classified as impaired during the period (new impaired) (1)	874	592
Net repayments (1)	(128)	(130)
Amounts written off	(299)	(362)
Other (2)	(47)	40
Impaired loans, balance at end of period	\$ 2,599	\$ 2,199
GIL as a % of related loans and acceptances		
Total GIL as a % of related loans and acceptances	0.31%	0.26%
Personal & Commercial Banking	0.26%	0.23%
Canadian Banking	0.21%	0.18%
Caribbean Banking	3.84%	3.93%
Wealth Management (3)	0.33%	0.23%
Capital Markets (3)	0.49%	0.42%

(1) 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.

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

(3) Amounts have been revised from those previously presented to conform to our new basis of segment presentation. For further details, refer to the About Royal Bank of Canada section.

Q1 2023 vs. Q4 2022

Total GIL increased \$400 million or 18% from last quarter, and the total GIL ratio increased 5 bps, due to higher impaired loans in Personal & Commercial Banking, Capital Markets and Wealth Management.

GIL in Personal & Commercial Banking increased \$155 million or 11%, largely due to higher impaired loans in our Canadian Banking retail portfolios. Higher impaired loans in our Canadian Banking commercial portfolios, mainly in the real estate and related sector, partially offset by lower impaired loans in the consumer staples sector, also contributed to the increase.

GIL in Wealth Management increased \$118 million or 42%, due to higher impaired loans in U.S. Wealth Management (including City National), primarily in the consumer staples, consumer discretionary and other services sectors.

GIL in Capital Markets increased \$127 million or 23%, due to higher impaired loans in a few sectors, including the real estate and related and consumer staples sectors.

Allowance for credit losses (ACL)

(Millions of Canadian dollars)	As at	
	January 31 2023	October 31 2022
Personal & Commercial Banking	\$ 3,369	\$ 3,200
Wealth Management (1)	429	384
Capital Markets (1)	651	597
ACL on loans	4,449	4,181
ACL on other financial assets (2)	36	33
Total ACL	\$ 4,485	\$ 4,214
ACL on loans is comprised of:		
Retail	\$ 2,419	\$ 2,285
Wholesale	1,253	1,227
ACL on performing loans	\$ 3,672	\$ 3,512
ACL on impaired loans	777	669

(1) Amounts have been revised from those previously presented to conform to our new basis of segment presentation. For further details, refer to the About Royal Bank of Canada section.

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

Q1 2023 vs. Q4 2022

Total ACL increased \$271 million or 6% from last quarter, primarily reflecting an increase of \$268 million in ACL on loans.

ACL on performing loans increased \$160 million or 5%, primarily due to higher ACL in Personal & Commercial Banking, mainly in our Canadian Banking retail portfolios, primarily attributable to our unfavourable macroeconomic forecast and credit quality outlook.

ACL on impaired loans increased \$108 million or 16%, due to higher ACL in Capital Markets, Personal & Commercial Banking and Wealth Management.

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

Market risk

Market risk is defined to be the impact of market factors and prices upon our financial condition. This includes potential financial 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 2022 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 2022 Annual Report. For further details of our approach to the management of market risk, refer to the Market risk section of our 2022 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, 2023				October 31, 2022		January 31, 2022	
	As at	For the three months ended			As at	For the three months ended	As at	For the three months ended
		Average	High	Low		Average		Average
Equity	\$ 19	\$ 34	\$ 47	\$ 19	\$ 45	\$ 34	\$ 39	\$ 34
Foreign exchange	3	3	6	2	3	3	4	5
Commodities	5	6	8	4	6	5	4	4
Interest rate (1)	41	44	50	37	47	44	29	39
Credit specific (2)	5	5	5	4	5	4	8	9
Diversification (3)	(31)	(37)	n.m.	n.m.	(47)	(32)	(33)	(35)
Market risk VaR (4)	\$ 42	\$ 55	\$ 65	\$ 42	\$ 59	\$ 58	\$ 51	\$ 56
Market risk Stressed VaR (4)	\$ 97	\$ 176	\$ 205	\$ 97	\$ 192	\$ 158	\$ 65	\$ 71

(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.

(4) The average market risk VaR and average SVaR for the three months ended January 31, 2023 includes \$20 million and \$117 million, respectively (October 31, 2022 – \$26 million and \$81 million; January 31, 2022 – \$8 million and \$10 million), related to loan underwriting commitments.

n.m. not meaningful

Q1 2023 vs. Q1 2022

Average market risk VaR of \$55 million remained relatively stable from a year ago.

Average SVaR of \$176 million increased \$105 million, largely driven by unfavourable market conditions that improved towards the end of the quarter, which impacted loan underwriting commitments.

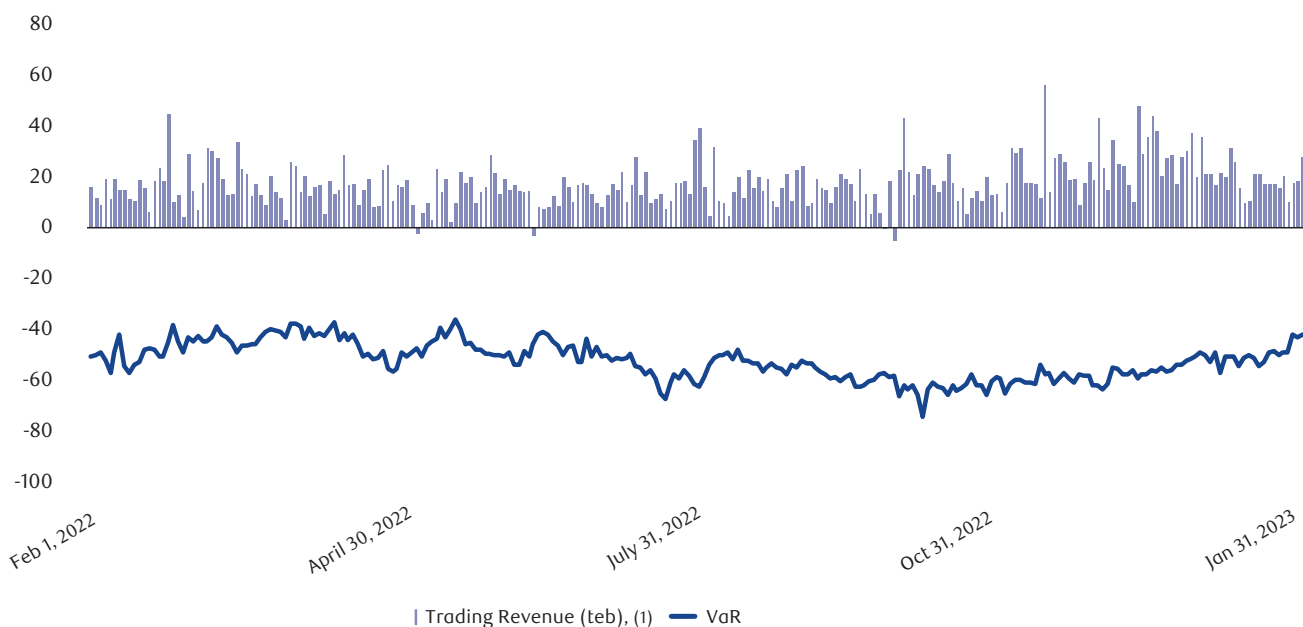
Q1 2023 vs. Q4 2022

Average market risk VaR of \$55 million remained relatively stable from last quarter.

Average SVaR of \$176 million increased \$18 million, largely driven by unfavourable market conditions as noted above, partially offset by reduced exposures in equity derivative and fixed income portfolios.

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, 2023 and two days of net trading losses in the three months ended October 31, 2022.

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



(1) Trading revenue (teb) in the chart above excludes the impact of loan underwriting commitments.

Market risk measures for assets and liabilities of RBC Insurance®

We offer a range of insurance products to clients and hold investments to meet the future obligations to policyholders. The investments which support actuarial liabilities are predominantly fixed income assets designated as FVTPL. Consequently, changes in the fair values of these assets are recorded in the Consolidated Statements of Income and are largely offset by changes in the fair value of the actuarial liabilities, the impact of which is reflected in PBCAE. As at January 31, 2023, we held assets in support of \$12 billion of liabilities with respect to insurance obligations (October 31, 2022 – \$12 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. 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 2023						October 31 2022	January 31 2022		
	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	\$ (1,480)	\$ (589)	\$ (2,069)	\$ 527	\$ 136	\$ 663	\$ (1,900)	\$ 781	\$ (2,162)	\$ 853
100 bps decrease in rates	1,428	380	1,808	(593)	(183)	(776)	1,709	(839)	1,519	(964)

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

As at January 31, 2023, an immediate and sustained -100 bps shock would have had a negative impact to our NII of \$776 million, down from \$839 million last quarter. An immediate and sustained +100 bps shock as at January 31, 2023 would have had a negative impact to the bank's EVE of \$2,069 million, up from \$1,900 million last quarter. Quarter-over-quarter NII sensitivity remained relatively stable, while quarter-over-quarter EVE sensitivity increased primarily in response to a marginal increase in the term of fixed rate assets. During the first quarter of 2023, 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, 2023			
	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	\$ 86,277	\$ –	\$ 86,277	Interest rate
Interest-bearing deposits with banks (3)	93,495	87,860	5,635	Interest rate
Securities				
Trading	145,517	133,681	11,836	Interest rate, credit spread
Investment, net of applicable allowance	175,036	–	175,036	Interest rate, credit spread, equity
Assets purchased under reverse repurchase agreements and securities borrowed	328,379	279,899	48,480	Interest rate
Loans				
Retail	549,893	6,470	543,423	Interest rate
Wholesale	277,900	11,149	266,751	Interest rate
Allowance for loan losses	(3,999)	–	(3,999)	Interest rate
Segregated fund net assets	2,827	–	2,827	Interest rate
Other				
Derivatives	130,120	126,298	3,822	Interest rate, foreign exchange
Other assets (3)	132,567	7,578	124,989	Interest rate
Assets not subject to market risk (4)	15,007			
Total assets	\$ 1,933,019	\$ 652,935	\$ 1,265,077	
Liabilities subject to market risk				
Deposits (3)	\$ 1,203,842	\$ 134,237	\$ 1,069,605	Interest rate
Segregated fund liabilities	2,827	–	2,827	Interest rate
Other				
Obligations related to securities sold short	35,247	35,247	–	
Obligations related to assets sold under repurchase agreements and securities loaned	290,367	262,942	27,425	Interest rate
Derivatives	131,082	120,080	11,002	Interest rate, foreign exchange
Other liabilities (3)	129,970	10,400	119,570	Interest rate
Subordinated debentures	11,530	–	11,530	Interest rate
Liabilities not subject to market risk (5)	20,355			
Total liabilities	\$ 1,825,220	\$ 562,906	\$ 1,241,959	
Total equity	107,799			
Total liabilities and equity	\$ 1,933,019			

(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) Effective Q1 2023, we entered into a definitive agreement to sell the European asset servicing activities of RBC Investor Services and its associated Malaysian centre of excellence. For further details, refer to Note 6 of our Condensed Financial Statements.

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

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

(Millions of Canadian dollars)	As at October 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	\$ 72,397	\$ –	\$ 72,397	Interest rate
Interest-bearing deposits with banks	108,011	84,468	23,543	Interest rate
Securities				
Trading	148,205	137,293	10,912	Interest rate, credit spread
Investment, net of applicable allowance	170,018	–	170,018	Interest rate, credit spread, equity
Assets purchased under reverse repurchase agreements and securities borrowed	317,845	264,665	53,180	Interest rate
Loans				
Retail	549,751	6,128	543,623	Interest rate
Wholesale	273,967	8,558	265,409	Interest rate
Allowance for loan losses	(3,753)	–	(3,753)	Interest rate
Segregated fund net assets	2,638	–	2,638	Interest rate
Other				
Derivatives	154,439	151,244	3,195	Interest rate, foreign exchange
Other assets	109,629	8,826	100,803	Interest rate
Assets not subject to market risk (3)	14,072			
Total assets	\$ 1,917,219	\$ 661,182	\$ 1,241,965	
Liabilities subject to market risk				
Deposits	\$ 1,208,814	\$ 141,319	\$ 1,067,495	Interest rate
Segregated fund liabilities	2,638	–	2,638	Interest rate
Other				
Obligations related to securities sold short	35,511	35,511	–	
Obligations related to assets sold under repurchase agreements and securities loaned	273,947	248,712	25,235	Interest rate
Derivatives	153,491	139,406	14,085	Interest rate, foreign exchange
Other liabilities	102,881	10,594	92,287	Interest rate
Subordinated debentures	10,025	–	10,025	Interest rate
Liabilities not subject to market risk (4)	21,737			
Total liabilities	\$ 1,809,044	\$ 575,542	\$ 1,211,765	
Total equity	108,175			
Total liabilities and equity	\$ 1,917,219			

(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 2022 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.

(Millions of Canadian dollars)	As at January 31, 2023				
	Bank-owned liquid assets	Securities received as collateral from securities financing and derivative transactions	Total liquid assets	Encumbered liquid assets	Unencumbered liquid assets
Cash and deposits with banks ⁽¹⁾	\$ 200,958	\$ –	\$ 200,958	\$ 3,555	\$ 197,403
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks ⁽²⁾	244,210	346,165	590,375	387,355	203,020
Other securities	117,919	115,480	233,399	139,625	93,774
Other liquid assets ⁽³⁾	39,074	–	39,074	36,008	3,066
Total liquid assets	\$ 602,161	\$ 461,645	\$ 1,063,806	\$ 566,543	\$ 497,263

(Millions of Canadian dollars)	As at October 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
Cash and deposits with banks	\$ 180,408	\$ –	\$ 180,408	\$ 3,601	\$ 176,807
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks ⁽²⁾	246,916	326,089	573,005	373,893	199,112
Other securities	110,057	119,129	229,186	135,349	93,837
Other liquid assets ⁽³⁾	42,090	–	42,090	40,318	1,772
Total liquid assets	\$ 579,471	\$ 445,218	\$ 1,024,689	\$ 553,161	\$ 471,528

(Millions of Canadian dollars)	As at	
	January 31 2023	October 31 2022
Royal Bank of Canada	\$ 199,223	\$ 186,855
Foreign branches	116,965	90,910
Subsidiaries	181,075	193,763
Total unencumbered liquid assets	\$ 497,263	\$ 471,528

(1) Includes balances that were classified as held for sale and presented in Other assets. For further details, refer to Note 6 of our Condensed Financial Statements.

(2) Includes liquid securities issued by provincial governments and U.S. government-sponsored entities working under U.S. Federal government's conservatorship (e.g., Federal National Mortgage Association and Federal Home Loan Mortgage Corporation).

(3) Encumbered liquid assets amount represents cash collateral and margin deposit amounts pledged related to over-the-counter and exchange-traded derivative transactions.

The liquidity reserve is typically most affected by routine flows of retail and commercial client banking activities, where liquid asset portfolios reflect changes in deposit and loan balances, as well as business strategies and client flows related to the activities in Capital Markets. Corporate Treasury and Capital Markets activities also affect liquidity reserves through the management of funding issuances where reserves absorb timing mismatches between debt issuances and deployment into business activities.

Q1 2023 vs. Q4 2022

Total unencumbered liquid assets increased \$26 billion or 5% from last quarter, mainly due to an increase in cash and deposits with banks, reflecting higher wholesale funding and deposit 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, 2023, our unencumbered assets available as collateral comprised 25% of total assets (October 31, 2022 – 24%).

(Millions of Canadian dollars)	As at									
	January 31 2023					October 31 2022				
	Encumbered		Unencumbered			Encumbered		Unencumbered		
	Pledged as collateral	Other (1)	Available as collateral (2)	Other (3)	Total	Pledged as collateral	Other (1)	Available as collateral (2)	Other (3)	Total
Cash and deposits with banks (4)	\$ –	\$ 3,555	\$ 197,403	\$ –	\$ 200,958	\$ –	\$ 3,601	\$ 176,807	\$ –	\$ 180,408
Securities										
Trading	63,483	–	89,639	3,010	156,132	62,941	–	91,738	3,303	157,982
Investment, net of applicable allowance	8,783	–	167,070	–	175,853	7,996	–	162,022	–	170,018
Assets purchased under reverse repurchase agreements and securities borrowed (5)	473,404	21,443	7,758	2,328	504,933	456,292	21,709	9,192	3,409	490,602
Loans										
Retail										
Mortgage securities	27,713	–	28,033	–	55,746	28,208	–	27,263	–	55,471
Mortgage loans	75,859	–	23,879	265,698	365,436	62,905	–	26,696	273,724	363,325
Non-mortgage loans	5,920	–	–	122,791	128,711	6,066	–	–	124,889	130,955
Wholesale	–	–	9,311	269,218	278,529	–	–	9,119	264,848	273,967
Allowance for loan losses	–	–	–	(3,999)	(3,999)	–	–	–	(3,753)	(3,753)
Segregated fund net assets	–	–	–	2,827	2,827	–	–	–	2,638	2,638
Other										
Derivatives	–	–	–	130,283	130,283	–	–	–	154,439	154,439
Others (6)	36,008	–	3,066	82,113	121,187	40,318	–	1,772	81,611	123,701
Total assets	\$ 691,170	\$ 24,998	\$ 526,159	\$ 874,269	\$ 2,116,596	\$ 664,726	\$ 25,310	\$ 504,609	\$ 905,108	\$ 2,099,753

(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 National Housing Act Mortgage-Backed Securities (NHA MBS), our unencumbered mortgage loans that qualify as eligible collateral at FHLB, as well as loans that qualify as eligible collateral for 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 balances that were classified as held for sale and presented in Other assets. For further details, refer to Note 6 of our Condensed Financial Statements.

(5) Includes bank-owned liquid assets and securities received as collateral from off-balance sheet securities financing, derivative transactions, and margin lending. Includes \$21 billion (October 31, 2022 – \$22 billion) of collateral received through reverse repurchase transactions that cannot be rehypothecated in its current legal form.

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

Funding

Funding strategy

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

Deposit and funding profile

As at January 31, 2023, relationship-based deposits, which are the primary source of funding for retail and commercial lending, were \$814 billion or 52% of our total funding (October 31, 2022 – \$819 billion or 54%). The remaining portion is comprised of short- and long-term wholesale funding.

Funding for highly liquid assets consists primarily of short-term wholesale funding that reflects the monetization period of those assets. Long-term wholesale funding is used mostly to fund less liquid wholesale assets and to support 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, 2023, the notional value of issued and outstanding long-term debt subject to conversion under the Bail-in regime was \$94 billion (October 31, 2022 – \$85 billion).

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

Long-term debt issuance

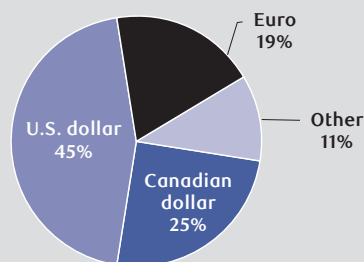
Our wholesale funding activities are well-diversified by geography, investor segment, instrument, currency, structure and maturity. We maintain an ongoing presence in different funding markets, which allows us to continuously monitor market developments and trends, identify opportunities and risks, and 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
• Canadian Shelf Program – \$25 billion	• U.S. Shelf Program – US\$50 billion	• European Debt Issuance Program – US\$40 billion
		• Global Covered Bond Program – €75 billion
		• Japanese Issuance Programs – ¥1 trillion

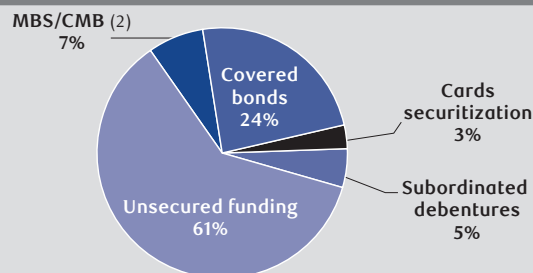
We also raise long-term funding using Canadian Senior Notes, Canadian National Housing Act MBS, Canada Mortgage Bonds, credit card receivable-backed securities, Kangaroo Bonds (issued in the Australian domestic market by foreign firms) and Yankee Certificates of Deposit (issued in the U.S. domestic market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

Long-term debt (1) – funding mix by currency of issuance



(1) Includes unsecured and secured long-term funding and subordinated debentures with an original term to maturity greater than 1 year

Long-term debt (1) – funding mix by product



(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, 2023							
	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⁾	\$ 5,834	\$ 304	\$ 1,196	\$ 1,112	\$ 8,446	\$ –	\$ –	\$ 8,446
Certificates of deposit and commercial paper	9,882	12,662	23,745	32,375	78,664	–	–	78,664
Asset-backed commercial paper ⁽³⁾	3,541	4,658	3,245	1,271	12,715	–	815	13,530
Senior unsecured medium-term notes ⁽⁴⁾	35	1,754	5,082	15,739	22,610	23,433	49,895	95,938
Senior unsecured structured notes ⁽⁵⁾	1,467	1,432	1,847	4,044	8,790	2,434	10,812	22,036
Mortgage securitization	–	420	614	2,530	3,564	2,295	9,986	15,845
Covered bonds/asset-backed securities ⁽⁶⁾	–	2,112	2,169	3,969	8,250	3,688	46,332	58,270
Subordinated liabilities	–	–	110	–	110	2,992	8,933	12,035
Other ⁽⁷⁾	9,085	7,440	7,949	7,123	31,597	7,264	18	38,879
Total	\$ 29,844	\$ 30,782	\$ 45,957	\$ 68,163	\$ 174,746	\$ 42,106	\$ 126,791	\$ 343,643
Of which:								
– Secured	\$ 10,746	\$ 12,639	\$ 13,290	\$ 7,770	\$ 44,445	\$ 5,983	\$ 57,133	\$ 107,561
– Unsecured	19,098	18,143	32,667	60,393	130,301	36,123	69,658	236,082

(Millions of Canadian dollars)	As at October 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⁾	\$ 5,758	\$ 34	\$ 311	\$ 1,766	\$ 7,869	\$ –	\$ –	\$ 7,869
Certificates of deposit and commercial paper	9,482	16,575	23,676	39,674	89,407	–	–	89,407
Asset-backed commercial paper ⁽³⁾	3,488	2,373	6,646	722	13,229	–	323	13,552
Senior unsecured medium-term notes ⁽⁴⁾	375	5,968	2,846	13,189	22,378	19,108	48,556	90,042
Senior unsecured structured notes ⁽⁵⁾	404	721	2,136	4,091	7,352	2,363	9,898	19,613
Mortgage securitization	–	1,238	421	2,614	4,273	2,402	9,697	16,372
Covered bonds/asset-backed securities ⁽⁶⁾	–	1,016	1,960	2,838	5,814	4,575	42,194	52,583
Subordinated liabilities	60	–	–	110	170	1,483	8,986	10,639
Other ⁽⁷⁾	7,241	2,934	8,673	4,387	23,235	10,219	409	33,863
Total	\$ 26,808	\$ 30,859	\$ 46,669	\$ 69,391	\$ 173,727	\$ 40,150	\$ 120,063	\$ 333,940
Of which:								
– Secured	\$ 9,030	\$ 6,641	\$ 15,367	\$ 7,536	\$ 38,574	\$ 6,977	\$ 52,605	\$ 98,156
– Unsecured	17,778	24,218	31,302	61,855	135,153	33,173	67,458	235,784

(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 \$5,816 million (October 31, 2022 – \$6,038 million), bearer deposit notes (unsecured) of \$7,186 million (October 31, 2022 – \$5,805 million), other long-term structured deposits (unsecured) of \$11,777 million (October 31, 2022 – \$12,411 million) and FHLB advances (secured) of \$14,100 million (October 31, 2022 – \$9,609 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 2022 Annual Report.

Credit ratings ⁽¹⁾

	As at February 28, 2023			
	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) In December 2022, Moody's affirmed our ratings and assessments with a stable outlook following the announcement of the acquisition of HSBC Canada.
- (5) On May 13, 2022, Standard & Poor's affirmed our ratings with a stable outlook.
- (6) On July 11, 2022, Fitch Ratings affirmed our ratings with a stable outlook.
- (7) On May 13, 2022, 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 2023			October 31 2022		
	One-notch downgrade	Two-notch downgrade	Three-notch downgrade	One-notch downgrade	Two-notch downgrade	Three-notch downgrade
Contractual derivatives funding or margin requirements	\$ 200	\$ 80	\$ 167	\$ 236	\$ 146	\$ 304
Other contractual funding or margin requirements ⁽¹⁾	44	23	94	38	21	25

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

Liquidity Coverage Ratio (LCR)

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

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 2023	
	Total unweighted value (average) ⁽²⁾	Total weighted value (average)
(Millions of Canadian dollars, except percentage amounts)		
High-quality liquid assets		
Total high-quality liquid assets (HQLA)		\$ 383,200
Cash outflows		
Retail deposits and deposits from small business customers, of which:	\$ 365,637	\$ 34,224
<i>Stable deposits</i> ⁽³⁾	122,578	3,677
<i>Less stable deposits</i>	243,059	30,547
Unsecured wholesale funding, of which:	428,287	204,248
<i>Operational deposits (all counterparties) and deposits in networks of cooperative banks</i> ⁽⁴⁾	173,461	41,259
<i>Non-operational deposits</i>	222,758	130,921
<i>Unsecured debt</i>	32,068	32,068
Secured wholesale funding		32,826
Additional requirements, of which:	343,637	79,158
<i>Outflows related to derivative exposures and other collateral requirements</i>	73,166	21,586
<i>Outflows related to loss of funding on debt products</i>	10,179	10,179
<i>Credit and liquidity facilities</i>	260,292	47,393
Other contractual funding obligations ⁽⁵⁾	27,935	27,935
Other contingent funding obligations ⁽⁶⁾	737,106	11,811
Total cash outflows		\$ 390,202
Cash inflows		
Secured lending (e.g., reverse repos)	\$ 289,777	\$ 49,358
Inflows from fully performing exposures	17,528	10,816
Other cash inflows	35,257	35,257
Total cash inflows		\$ 95,431
		Total adjusted value
Total HQLA		\$ 383,200
Total net cash outflows		294,771
Liquidity coverage ratio		130%

	October 31 2022	
	Total adjusted value	
(Millions of Canadian dollars, except percentage amounts)		
Total HQLA	\$	364,478
Total net cash outflows		291,618
Liquidity coverage ratio		125%

- (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, 2023 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 89% 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 2023 vs. Q4 2022

The average LCR for the quarter ended January 31, 2023 was 130%, which translates into a surplus of approximately \$88 billion, compared to 125% and a surplus of approximately \$73 billion last quarter. LCR levels increased compared to the prior quarter mainly due to the issuance of term funding and increases in client deposits, partially offset by growth in wholesale loans.

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 Domestic Systemically Important Banks (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, 2023				
	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:	\$ 107,675	\$ –	\$ –	\$ 11,081	\$ 118,756
Regulatory Capital	107,675	–	–	11,081	118,756
Other Capital Instruments	–	–	–	–	–
Retail deposits and deposits from small business customers:	310,147	86,092	41,117	41,196	442,612
Stable deposits ⁽³⁾	100,708	38,531	20,269	18,182	169,714
Less stable deposits	209,439	47,561	20,848	23,014	272,898
Wholesale funding:	295,116	484,855	72,429	134,259	348,675
Operational deposits ⁽⁴⁾	175,908	–	–	–	87,954
Other wholesale funding	119,208	484,855	72,429	134,259	260,721
Liabilities with matching interdependent assets ⁽⁵⁾	–	2,050	4,786	21,477	–
Other liabilities:	48,097	–	218,398	–	11,141
NSFR derivative liabilities	–	–	27,012	–	–
All other liabilities and equity not included in the above categories	48,097	–	–	–	11,141
Total ASF					\$ 921,184
Required Stable Funding (RSF) Item					
Total NSFR high-quality liquid assets (HQLA)					\$ 40,558
Deposits held at other financial institutions for operational purposes	–	1,691	–	–	845
Performing loans and securities:	198,290	319,024	102,244	509,610	668,655
Performing loans to financial institutions secured by Level 1 HQLA	–	121,525	14,843	1	13,643
Performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	4,099	95,539	26,054	28,020	55,433
Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, central banks and PSEs, of which:	121,250	71,333	32,868	158,545	284,472
With a risk weight of less than or equal to 35% under the Basel II standardized approach for credit risk	–	815	738	3,119	2,804
Performing residential mortgages, of which:	37,875	26,853	27,502	297,975	261,623
With a risk weight of less than or equal to 35% under the Basel II standardized approach for credit risk	37,875	26,829	27,478	296,992	260,764
Securities that are not in default and do not qualify as HQLA, including exchange-traded equities	35,066	3,774	977	25,069	53,484
Assets with matching interdependent liabilities ⁽⁵⁾	–	2,050	4,786	21,477	–
Other assets:	3,066	–	299,378	–	83,676
Physical traded commodities, including gold	3,066	–	–	–	2,606
Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs	–	–	27,848	–	23,671
NSFR derivative assets	–	–	18,027	–	–
NSFR derivative liabilities before deduction of variation margin posted	–	–	58,396	–	2,920
All other assets not included in the above categories	–	142,484	9	52,614	54,479
Off-balance sheet items	–	–	722,357	–	27,202
Total RSF					\$ 820,936
Net Stable Funding Ratio (%)					112%

As at October 31, 2022

	Weighted value
(Millions of Canadian dollars, except percentage amounts)	
Total ASF	\$ 904,456
Total RSF	809,254
Net Stable Funding Ratio (%)	112%

- (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 central counterparties (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 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 2023 vs. Q4 2022

The NSFR as at January 31, 2023 was 112%, which translates into a surplus of approximately \$100 billion, compared to 112% and a surplus of approximately \$95 billion last quarter. While NSFR remained flat compared to last quarter, the surplus increased mainly due to the issuance of term funding and increases in client deposits, partially offset by growth in wholesale loans.

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 2022 Annual Report.

(Millions of Canadian dollars)	As at January 31, 2023									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	\$ 177,299	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ 2,473	\$ 179,772
Securities										
Trading (1)	79,624	36	8	–	28	125	132	9,754	55,810	145,517
Investment, net of applicable allowance	7,698	6,237	4,365	4,279	3,944	12,396	53,605	81,558	954	175,036
Assets purchased under reverse repurchase agreements and securities borrowed (2)	157,406	78,914	30,994	27,371	16,864	1	–	–	16,829	328,379
Loans, net of applicable allowance	30,933	23,895	37,367	33,298	32,644	165,122	337,720	75,586	87,229	823,794
Other										
Customers' liability under acceptances	12,963	6,264	–	–	2	–	–	–	(41)	19,188
Derivatives	8,280	11,373	6,985	5,489	7,388	17,236	30,487	42,851	31	130,120
Other financial assets	66,475	8,155	1,746	136	525	216	246	2,331	3,424	83,254
Total financial assets	540,678	134,874	81,465	70,573	61,395	195,096	422,190	212,080	166,709	1,885,060
Other non-financial assets	4,659	1,551	197	(302)	202	4,460	2,541	5,458	29,193	47,959
Total assets	\$ 545,337	\$ 136,425	\$ 81,662	\$ 70,271	\$ 61,597	\$ 199,556	\$ 424,731	\$ 217,538	\$ 195,902	\$ 1,933,019
Liabilities and equity										
Deposits (3)										
Unsecured borrowing	\$ 103,157	\$ 53,165	\$ 72,200	\$ 75,994	\$ 69,898	\$ 48,428	\$ 69,735	\$ 22,891	\$ 587,362	\$ 1,102,830
Secured borrowing	5,037	5,693	5,291	5,083	2,152	5,377	15,083	8,179	–	51,895
Covered bonds	–	2,112	2,147	–	2,451	3,689	32,485	6,233	–	49,117
Other										
Acceptances	12,963	6,263	–	–	2	–	–	–	1	19,229
Obligations related to securities sold short	35,247	–	–	–	–	–	–	–	–	35,247
Obligations related to assets sold under repurchase agreements and securities loaned (2)	242,465	27,723	1,828	–	1,080	335	–	–	16,936	290,367
Derivatives	9,893	14,196	7,061	5,616	7,896	16,275	29,797	40,347	1	131,082
Other financial liabilities	45,791	8,313	8,797	967	1,361	839	2,270	11,218	22,461	102,017
Subordinated debentures	–	–	110	–	–	–	1,873	9,547	–	11,530
Total financial liabilities	454,553	117,465	97,434	87,660	84,840	74,943	151,243	98,415	626,761	1,793,314
Other non-financial liabilities	1,102	1,159	169	183	3,687	972	1,771	13,141	9,722	31,906
Equity	–	–	–	–	–	–	–	–	107,799	107,799
Total liabilities and equity	\$ 455,655	\$ 118,624	\$ 97,603	\$ 87,843	\$ 88,527	\$ 75,915	\$ 153,014	\$ 111,556	\$ 744,282	\$ 1,933,019
Off-balance sheet items										
Financial guarantees	\$ 1,002	\$ 2,377	\$ 2,961	\$ 3,580	\$ 2,977	\$ 1,391	\$ 4,870	\$ 1,037	\$ 18	\$ 20,213
Commitments to extend credit	2,981	10,176	17,727	12,902	21,406	54,825	199,763	19,344	11,546	350,670
Other credit-related commitments	7,295	1,147	1,416	1,532	1,710	659	497	48	84,492	98,796
Other commitments	7	10	16	15	15	54	129	190	898	1,334
Total off-balance sheet items	\$ 11,285	\$ 13,710	\$ 22,120	\$ 18,029	\$ 26,108	\$ 56,929	\$ 205,259	\$ 20,619	\$ 96,954	\$ 471,013

(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, 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	\$ 177,946	\$ 2	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ 2,460	\$ 180,408
Securities										
Trading (1)	86,491	592	71	8	–	104	170	8,710	52,059	148,205
Investment, net of applicable allowance	3,250	7,490	7,390	3,537	4,873	12,303	50,979	79,387	809	170,018
Assets purchased under reverse repurchase agreements and securities borrowed (2)	122,836	76,590	58,750	19,246	17,212	1,131	–	–	22,080	317,845
Loans, net of applicable allowance	31,203	21,795	29,253	39,919	34,658	150,826	348,411	75,091	88,809	819,965
Other										
Customers' liability under acceptances	11,632	6,235	5	–	–	–	–	–	(45)	17,827
Derivatives	13,100	19,753	10,184	7,004	6,009	20,709	36,081	41,571	28	154,439
Other financial assets	48,485	1,964	1,666	199	457	246	231	2,364	3,025	58,637
Total financial assets	494,943	134,421	107,319	69,913	63,209	185,319	435,872	207,123	169,225	1,867,344
Other non-financial assets	6,744	1,609	196	(357)	2,647	1,691	2,510	5,192	29,643	49,875
Total assets	\$ 501,687	\$ 136,030	\$ 107,515	\$ 69,556	\$ 65,856	\$ 187,010	\$ 438,382	\$ 212,315	\$ 198,868	\$ 1,917,219
Liabilities and equity										
Deposits (3)										
Unsecured borrowing	\$ 91,052	\$ 56,920	\$ 52,671	\$ 64,685	\$ 83,220	\$ 39,327	\$ 60,161	\$ 18,500	\$ 645,195	\$ 1,111,731
Secured borrowing	4,343	6,271	7,365	2,007	4,626	6,059	15,400	7,824	–	53,895
Covered bonds	–	1,016	1,960	1,993	–	3,839	28,692	5,688	–	43,188
Other										
Acceptances	11,632	6,235	5	–	–	–	–	–	–	17,872
Obligations related to securities sold short	35,511	–	–	–	–	–	–	–	–	35,511
Obligations related to assets sold under repurchase agreements and securities loaned (2)	211,929	35,600	7,743	1,055	313	946	–	–	16,361	273,947
Derivatives	13,096	22,073	10,994	7,097	5,244	20,135	34,226	40,626	–	153,491
Other financial liabilities	57,152	1,390	1,353	656	958	892	2,378	11,411	1,117	77,307
Subordinated debentures	–	–	–	110	–	–	1,881	8,034	–	10,025
Total financial liabilities	424,715	129,505	82,091	77,603	94,361	71,198	142,738	92,083	662,673	1,776,967
Other non-financial liabilities	1,021	6,585	298	156	178	1,046	1,073	12,357	9,363	32,077
Equity	–	–	–	–	–	–	–	–	108,175	108,175
Total liabilities and equity	\$ 425,736	\$ 136,090	\$ 82,389	\$ 77,759	\$ 94,539	\$ 72,244	\$ 143,811	\$ 104,440	\$ 780,211	\$ 1,917,219
Off-balance sheet items										
Financial guarantees	\$ 545	\$ 2,211	\$ 3,745	\$ 3,274	\$ 3,446	\$ 1,415	\$ 4,550	\$ 1,068	\$ 37	\$ 20,291
Commitments to extend credit	7,016	6,879	14,184	21,094	17,133	49,135	193,990	19,269	4,516	333,216
Other credit-related commitments	1,934	1,135	1,674	1,448	1,469	541	520	85	90,821	99,627
Other commitments	24	11	16	16	16	60	136	187	849	1,315
Total off-balance sheet items	\$ 9,519	\$ 10,236	\$ 19,619	\$ 25,832	\$ 22,064	\$ 51,151	\$ 199,196	\$ 20,609	\$ 96,223	\$ 454,449

- (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 2022 Annual Report. In addition, we continue to monitor for new regulatory capital developments, including OSFI guidance relating to the BCBS Basel III reforms, in order to ensure timely and accurate compliance with these requirements as disclosed in the Capital management section in our 2022 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.

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 external 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.

On December 8, 2022, OSFI announced an increase in the Domestic Stability Buffer's (DSB) upper limit to 4% of total RWA from the current upper limit of 2.5% of total RWA, effective February 1, 2023. In addition, effective February 1, 2023, the DSB level increased from the current 2.5% to 3% of total RWA.

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:

- Exclusion of central bank reserves that qualify as HQLA from leverage ratio exposure amounts. On September 13, 2022, OSFI announced that exclusion of these central bank reserves from the leverage ratio will cease effective April 1, 2023.
- 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 in Q2 2023.

For further details, refer to the Capital management section of our 2022 Annual Report. 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, 2023	Domestic Stability Buffer (3)	Minimum including Capital Buffers, D-SIB/G-SIB surcharge and Domestic Stability Buffer as at January 31, 2023	Minimum including Capital Buffers, D-SIB/G-SIB surcharge and Domestic Stability Buffer effective February 1, 2023 (4)
	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%	12.7%	2.5%	10.5%	11.0%
Tier 1 capital	6.0%	2.5%	8.5%	1.0%	9.5%	13.9%	2.5%	12.0%	12.5%
Total capital	8.0%	2.5%	10.5%	1.0%	11.5%	15.7%	2.5%	14.0%	14.5%
Leverage ratio	3.0%	n.a.	3.0%	n.a.	3.0%	4.4%	n.a.	3.0%	3.5%
TLAC ratio	21.5%	n.a.	21.5%	n.a.	21.5%	28.2%	2.5%	24.0%	24.5%
TLAC leverage ratio	6.75%	n.a.	6.75%	n.a.	6.75%	9.0%	n.a.	6.75%	7.25%

(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) The DSB can range from 0% to 4% of total RWA and as at January 31, 2023 is set at 2.5% by OSFI.

(4) Effective February 1, 2023 the DSB level, the leverage ratio minimum and the TLAC leverage ratio minimum increased by 50 bps.

n.a. not applicable

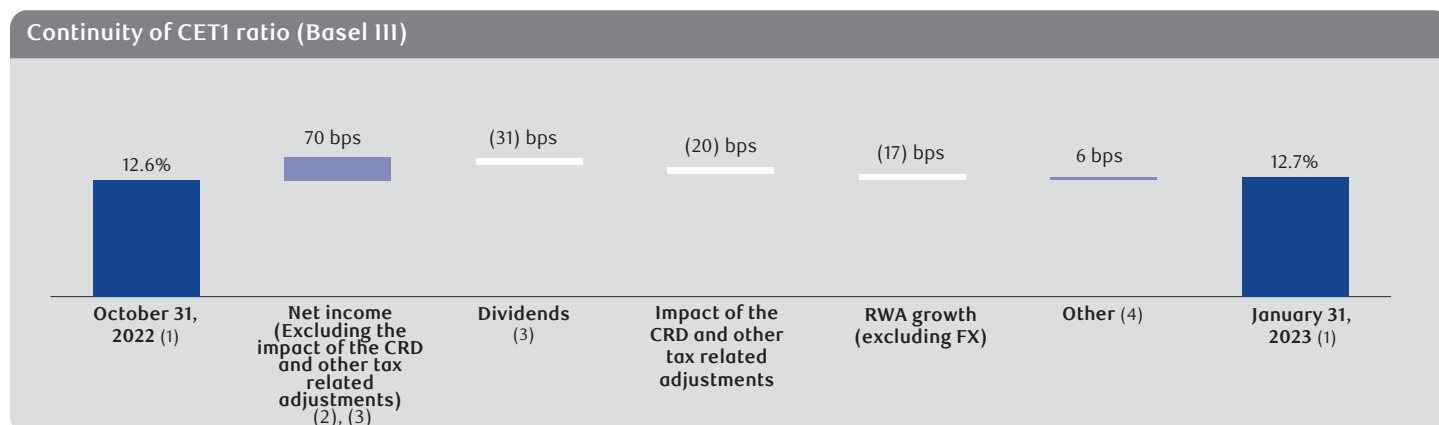
The following table provides details on our regulatory capital, TLAC available, RWA, and on ratios for capital, leverage and TLAC. Our capital position remains strong and our capital, leverage and TLAC ratios remain well above OSFI regulatory targets.

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	As at		
	January 31 2023	October 31 2022	January 31 2022
Capital (1)			
CET1 capital	\$ 78,055	\$ 76,945	\$ 77,080
Tier 1 capital	85,357	84,242	84,493
Total capital	96,438	93,850	94,502
RWA used in calculation of capital ratios (1)			
Credit risk	\$ 502,807	\$ 496,898	\$ 452,697
Market risk	32,635	35,342	41,812
Operational risk	78,808	77,639	74,776
Total RWA	\$ 614,250	\$ 609,879	\$ 569,285
Capital ratios and Leverage ratio (1)			
CET1 ratio	12.7%	12.6%	13.5%
Tier 1 capital ratio	13.9%	13.8%	14.8%
Total capital ratio	15.7%	15.4%	16.6%
Leverage ratio	4.4%	4.4%	4.8%
Leverage ratio exposure (billions)	\$ 1,921	\$ 1,898	\$ 1,761
TLAC available and ratios (2)			
TLAC available	\$ 173,179	\$ 160,961	\$ 150,136
TLAC ratio	28.2%	26.4%	26.4%
TLAC leverage ratio	9.0%	8.5%	8.5%

(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) TLAC available and TLAC ratios are calculated using OSFI's TLAC guideline. 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. The TLAC ratio and TLAC leverage ratio are calculated using the TLAC available as a percentage of total RWA and leverage exposure, respectively.

Q1 2023 vs. Q4 2022



(1) Represents rounded figures.

(2) This is a non-GAAP measure. This measure excludes the impact of the CRD and other tax related adjustments. For further details, including a reconciliation, refer to the Key performance and non-GAAP measures section.

(3) Represents net internal capital generation of \$2.4 billion or 39 bps consisting of Net income available to shareholders excluding the specified item, as noted above, less common and preferred share dividends and distributions on other equity instruments.

(4) Includes fair value OCI adjustments 10 bps and other movements.

Our CET1 ratio was 12.7%, up 10 bps from last quarter, mainly reflecting net internal capital generation and a favourable impact from fair value OCI adjustments, partially offset by the impact of the CRD and other tax related adjustments and RWA growth (excluding FX).

RWA increased by \$4 billion, mainly reflecting business growth in wholesale lending, including loan underwriting commitments, securities and due from banks, as well as retail lending. These factors were partially offset by lower trading exposures, and the impact of foreign exchange translation. The impact of foreign exchange translation on RWA is largely mitigated with economic hedges in our CET1 ratio.

Our Tier 1 capital ratio of 13.9% was up 10 bps, reflecting the factors noted above under the CET1 ratio.

Our Total capital ratio of 15.7% was up 30 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 4.4% was flat from last quarter, as net internal capital generation was offset by growth in leverage exposure and the impact of the CRD and other tax related adjustments.

Leverage exposures increased by \$23 billion, mainly driven by business growth in repo-style transactions, undrawn commitments, wholesale and retail loans, as well as securities. These factors were partially offset by the higher regulatory modification for central bank reserves and the impact of foreign exchange translation.

Our TLAC ratio of 28.2% was up 180 bps, reflecting a favourable impact from the net issuance of external TLAC instruments, as well as the factors noted above under the Total capital ratio.

Our TLAC leverage ratio of 9.0% was up 50 bps, reflecting a favourable impact from the net issuance of external TLAC instruments and the issuance of subordinated debentures, as well as the factors noted above under the Leverage ratio.

External TLAC instruments include long-term debt subject to conversion under the Bail-in regime. For further details, refer to Deposit and funding profile in the Liquidity and funding risk section.

Selected capital management activity

The following table provides our selected capital management activity:

	For the three months ended January 31, 2023		
	Issuance or redemption date	Number of shares (000s)	Amount
<i>(Millions of Canadian dollars, except number of shares)</i>			
Tier 1 capital			
Common shares activity			
Issued in connection with share-based compensation plans (1)		269	\$ 24
Tier 2 capital			
Issuance of February 1, 2033 subordinated debentures (2), (3)	January 31, 2023		\$1,500

(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 10 of our Condensed Financial Statements.

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

As at January 31, 2023, we did not have an active normal course issuer bid (NCIB).

On January 31, 2023, we issued \$1,500 million of NVCC subordinated debentures. The notes bear interest at a fixed rate of 5.01% per annum until February 1, 2028, and at the Daily Compounded Canadian Overnight Repo Rate Average plus 2.12% thereafter until their maturity on February 1, 2033.

Selected share data ⁽¹⁾

(Millions of Canadian dollars, except number of shares and as otherwise noted)	As at January 31, 2023		
	Number of shares (000s)	Amount	Dividends declared per share
Common shares issued	1,385,860	\$ 17,342	\$ 1.32
Treasury shares – common shares ⁽²⁾	(3,042)	(389)	
Common shares outstanding	1,382,818	\$ 16,953	
Stock options and awards			
Outstanding	8,354		
Exercisable	4,306		
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 BO ^{(3), (4)}	14,000	350	0.30
Non-cumulative Series BT ^{(3), (4), (5)}	750	750	4.20%
Non-cumulative Series C-2 ⁽⁶⁾	15	23	US\$ 16.88
Other equity instruments issued			
Limited recourse capital notes Series 1 ^{(3), (4), (7), (8)}	1,750	1,750	4.50%
Limited recourse capital notes Series 2 ^{(3), (4), (7), (8)}	1,250	1,250	4.00%
Limited recourse capital notes Series 3 ^{(3), (4), (7), (8)}	1,000	1,000	3.65%
Preferred shares and other equity instruments issued	106,765	7,323	
Treasury instruments – preferred shares and other equity instruments ⁽²⁾	8	10	
Preferred shares and other equity instruments outstanding	106,773	\$ 7,333	
Dividends on common shares		\$ 1,829	
Dividends on preferred shares and distributions on other equity instruments ⁽⁹⁾		44	

(1) For further details about our capital management activity, refer to Note 10 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) The dividends declared per share represent the per annum dividend rate applicable to the shares issued as at the reporting date.

(6) 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.

(7) For Limited Recourse Capital Notes (LRCN) Series, 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.

(8) 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 20 of our 2022 Annual Consolidated Financial Statements.

(9) Excludes distributions to non-controlling interests.

As at February 24, 2023, the number of outstanding common shares was 1,389,959,859, net of treasury shares held of 644,883, and the number of stock options and awards was 8,196,767.

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, 2023, which were the preferred shares Series AZ, BB, BD, BF, BH, BI, 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, May 3, 2032, and February 1, 2033 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 4,987 million common shares, in aggregate, which would represent a dilution impact of 78.29% based on the number of common shares outstanding as at January 31, 2023.

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 used in the G-SIB assessment methodology:

(Millions of Canadian dollars)	October 31 2022	October 31 2021
Cross-jurisdictional activity ⁽²⁾		
Cross-jurisdictional claims	\$ 1,046,441	\$ 864,580
Cross-jurisdictional liabilities	819,735	682,547
Size ⁽³⁾		
Total exposures as defined for use in the Basel III leverage ratio	2,107,274	1,921,807
Interconnectedness ⁽⁴⁾		
Intra-financial system assets	185,901	211,054
Intra-financial system liabilities	182,473	175,554
Securities outstanding	470,005	415,329
Substitutability/financial institution infrastructure ⁽⁵⁾		
Payment activity	50,504,158	53,048,298
Assets under custody	4,214,247	4,909,994
Underwritten transactions in debt and equity markets	224,039	321,168
Trading volume		
Fixed income	7,484,605	6,341,568
Equities and other securities	5,086,612	5,187,311
Complexity ⁽⁶⁾		
Notional amount of over-the-counter derivatives	25,226,394	22,271,423
Trading and investment securities	71,774	77,693
Level 3 assets	4,552	3,594

(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 2022 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) 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.

(4) Represents transactions with other financial institutions.

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

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

2022 vs. 2021

During 2022, notional amounts of over-the-counter derivatives increased mainly due to higher trading activity in interest rate and foreign exchange contracts. Assets under custody decreased primarily due to unfavourable market conditions. The increase in total exposures as defined for use in the Basel III leverage ratio was mainly driven by business growth in retail and wholesale loans, undrawn commitments and the impact of foreign exchange translation. Other movements from the prior year primarily reflect normal changes in business activity.

Regulatory developments**Basel III reforms**

On January 31, 2022, OSFI announced revised capital, leverage, liquidity and disclosure rules that incorporate the final BCBS Basel III reforms. The revised rules include new CAR, LR, 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 guideline will be effective for us in Q1 2024. In Q2 2023, we expect implementation of revised credit risk and operational risk chapters of the CAR guideline to increase our CET1 ratio by approximately 70-80 bps, which reflects anticipated RWA reductions. This estimate is subject to change based on portfolio size or portfolio mix. The revised LR and LAR guidelines are not expected to have a material impact and we do not anticipate any issues in complying with the new requirements.

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 2022 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 described in Note 2 of our audited 2022 Annual Consolidated Financial Statements.

Controls and procedures

Disclosure controls and procedures

As of January 31, 2023, 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, 2023.

Internal control over financial reporting

No changes were made in our internal control over financial reporting during the quarter ended January 31, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Related party transactions

In the ordinary course of business, we provide normal banking services and operational services, and enter into other transactions with associated and other related corporations, including our joint venture entities, on terms similar to those offered to non-related parties. We grant loans to directors, officers and other employees at rates normally accorded to preferred clients. In addition, we offer deferred share and other plans to non-employee directors, executives and certain other key employees. For further information, refer to Notes 12 and 26 of our audited 2022 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.

ACL on loans ratio

ACL on loans ratio is calculated as ACL on loans as a percentage of total loans and acceptances.

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, 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, 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.

Efficiency Ratio

Non-interest expense as a percentage of total revenue.

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 (NIM) 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, sponsor member guarantees, 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 OSFI's Capital Adequacy Requirements guidelines. 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 RWA for the credit risk exposures. Credit assessments by OSFI-recognized external credit rating agencies of S&P, Moody's, Fitch, and DBRS 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 Loss Absorbing Capacity (TLAC)

The aggregate of Tier 1 capital, Tier 2 capital, and external TLAC instruments which allow conversion in whole or in part into common shares under the Canada Deposit Insurance Corporation Act and meet 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.

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.

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.

Enhanced Disclosure Task Force recommendations index

We aim to present transparent, high-quality risk disclosures by providing disclosures in our 2022 Annual Report, Q1 2023 Report to Shareholders (RTS), Supplementary Financial Information package (SFI), and Pillar 3 Report, in accordance with recommendations from the FSB's 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 2023 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	46	128	1
	2	Define risk terminology and measures		60-65, 126-127	–
	3	Top and emerging risks		58-60	–
	4	New regulatory ratios	38-40	105-110	–
Risk governance, risk management and business model	5	Risk management organization		60-65	–
	6	Risk culture		60-65	–
	7	Risk in the context of our business activities		113	–
	8	Stress testing		63-64, 76	–
Capital adequacy and risk-weighted assets (RWA)	9	Minimum Basel III capital ratios and Domestic systemically important bank surcharge	39	105-110	–
	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		105-110	–
	13	RWA by business segments		–	21
	14	Analysis of capital requirement, and related measurement model information		66-69	*
	15	RWA credit risk and related risk measurements		–	*
	16	Movement of RWA by risk type		–	21
	17	Basel back-testing		63, 66-67	32
Liquidity	18	Quantitative and qualitative analysis of our liquidity reserve	29-30	83-84, 88-89	–
Funding	19	Encumbered and unencumbered assets by balance sheet category, and contractual obligations for rating downgrades	30, 33	84, 87	–
	20	Maturity analysis of consolidated total assets, liabilities and off-balance sheet commitments analyzed by remaining contractual maturity at the balance sheet date	37-38	91-92	–
	21	Sources of funding and funding strategy	31-32	84-86	–
Market risk	22	Relationship between the market risk measures for trading and non-trading portfolios and the balance sheet	27-28	80-81	–
	23	Decomposition of market risk factors	25-26	76-81	–
	24	Market risk validation and back-testing		76	–
	25	Primary risk management techniques beyond reported risk measures and parameters		76-79	–
Credit risk	26	Bank's credit risk profile	21-25	66-75, 175-182	22-32,*
		Quantitative summary of aggregate credit risk exposures that reconciles to the balance sheet	59-63	120-125	*
	27	Policies for identifying impaired loans		68-70, 115, 147-149	–
	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 over-the-counter derivatives or exchange-traded derivatives		71	33
	30	Credit risk mitigation, including collateral held for all sources of credit risk		69-70	*
Other	31	Other risk types		94-104	–
	32	Publicly known risk events		98-99, 219-220	–

* These disclosure requirements are satisfied or partially satisfied by disclosures provided in our Pillar 3 Report for the quarter ended January 31, 2023 and for the year ended October 31, 2022.

Interim Condensed Consolidated Financial Statements (unaudited)

Interim Condensed Consolidated Balance Sheets (unaudited)

(Millions of Canadian dollars)	As at	
	January 31 2023	October 31 2022
Assets		
Cash and due from banks	\$ 86,277	\$ 72,397
Interest-bearing deposits with banks	93,495	108,011
Securities		
Trading	145,517	148,205
Investment, net of applicable allowance (Note 4)	175,036	170,018
	320,553	318,223
Assets purchased under reverse repurchase agreements and securities borrowed	328,379	317,845
Loans (Note 5)		
Retail	549,893	549,751
Wholesale	277,900	273,967
	827,793	823,718
Allowance for loan losses (Note 5)	(3,999)	(3,753)
	823,794	819,965
Segregated fund net assets	2,827	2,638
Other		
Customers' liability under acceptances	19,188	17,827
Derivatives	130,120	154,439
Premises and equipment	7,019	7,214
Goodwill	12,204	12,277
Other intangibles	5,957	6,083
Other assets (Note 6)	103,206	80,300
	277,694	278,140
Total assets	\$ 1,933,019	\$ 1,917,219
Liabilities and equity		
Deposits (Note 7)		
Personal	\$ 418,287	\$ 404,932
Business and government	738,923	759,870
Bank	46,632	44,012
	1,203,842	1,208,814
Segregated fund net liabilities	2,827	2,638
Other		
Acceptances	19,229	17,872
Obligations related to securities sold short	35,247	35,511
Obligations related to assets sold under repurchase agreements and securities loaned	290,367	273,947
Derivatives	131,082	153,491
Insurance claims and policy benefit liabilities	12,103	11,511
Other liabilities (Note 6)	118,993	95,235
	607,021	587,567
Subordinated debentures (Note 10)	11,530	10,025
Total liabilities	1,825,220	1,809,044
Equity attributable to shareholders		
Preferred shares and other equity instruments	7,333	7,318
Common shares (Note 10)	16,953	16,984
Retained earnings	78,369	78,037
Other components of equity	5,041	5,725
	107,696	108,064
Non-controlling interests	103	111
Total equity	107,799	108,175
Total liabilities and equity	\$ 1,933,019	\$ 1,917,219

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

Interim Condensed Consolidated Statements of Income (unaudited)

(Millions of Canadian dollars, except per share amounts)	For the three months ended	
	January 31 2023	January 31 2022
Interest and dividend income (Note 3)		
Loans	\$ 9,997	\$ 5,557
Securities	3,003	1,379
Assets purchased under reverse repurchase agreements and securities borrowed	4,766	349
Deposits and other	1,571	93
	19,337	7,378
Interest expense (Note 3)		
Deposits and other	7,772	1,295
Other liabilities	5,225	770
Subordinated debentures	138	42
	13,135	2,107
Net interest income	6,202	5,271
Non-interest income		
Insurance premiums, investment and fee income	1,891	1,399
Trading revenue	1,069	314
Investment management and custodial fees	2,056	1,961
Mutual fund revenue	1,015	1,165
Securities brokerage commissions	361	399
Service charges	511	485
Underwriting and other advisory fees	512	701
Foreign exchange revenue, other than trading	433	271
Card service revenue	325	291
Credit fees	379	476
Net gains on investment securities	53	15
Share of profit in joint ventures and associates	29	29
Other	258	289
	8,892	7,795
Total revenue	15,094	13,066
Provision for credit losses (Notes 4 and 5)	532	105
Insurance policyholder benefits, claims and acquisition expense	1,545	997
Non-interest expense		
Human resources (Note 8)	4,876	4,285
Equipment	569	501
Occupancy	411	386
Communications	282	228
Professional fees	404	319
Amortization of other intangibles	369	337
Other	764	524
	7,675	6,580
Income before income taxes	5,342	5,384
Income taxes (Note 9)	2,128	1,289
Net income	\$ 3,214	\$ 4,095
Net income attributable to:		
Shareholders	\$ 3,212	\$ 4,093
Non-controlling interests	2	2
	\$ 3,214	\$ 4,095
Basic earnings per share (in dollars) (Note 11)	\$ 2.29	\$ 2.84
Diluted earnings per share (in dollars) (Note 11)	2.29	2.84
Dividends per common share (in dollars)	1.32	1.20

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 2023	January 31 2022
Net income	\$ 3,214	\$ 4,095
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	632	(253)
Provision for credit losses recognized in income	–	(7)
Reclassification of net losses (gains) on debt securities and loans at fair value through other comprehensive income to income	(32)	(11)
	600	(271)
Foreign currency translation adjustments		
Unrealized foreign currency translation gains (losses)	(955)	1,474
Net foreign currency translation gains (losses) from hedging activities	64	(507)
Reclassification of losses (gains) on foreign currency translation to income	–	(18)
Reclassification of losses (gains) on net investment hedging activities to income	–	17
	(891)	966
Net change in cash flow hedges		
Net gains (losses) on derivatives designated as cash flow hedges	(398)	98
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	2	31
	(396)	129
Items that will not be reclassified subsequently to income:		
Remeasurement gains (losses) on employee benefit plans (Note 8)	(230)	283
Net gains (losses) from fair value changes due to credit risk on financial liabilities designated at fair value through profit or loss	(796)	180
Net gains (losses) on equity securities designated at fair value through other comprehensive income	10	39
	(1,016)	502
Total other comprehensive income (loss), net of taxes	(1,703)	1,326
Total comprehensive income (loss)	\$ 1,511	\$ 5,421
Total comprehensive income attributable to:		
Shareholders	\$ 1,512	\$ 5,417
Non-controlling interests	(1)	4
	\$ 1,511	\$ 5,421

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 2023	January 31 2022
Income taxes on other comprehensive income		
Net unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income	\$ 171	\$ (77)
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	(9)	(1)
Net foreign currency translation gains (losses) from hedging activities	162	(170)
Reclassification of losses (gains) on net investment hedging activities to income	–	6
Net gains (losses) on derivatives designated as cash flow hedges	(64)	34
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	1	11
Remeasurements of employee benefit plans	(23)	100
Net fair value change due to credit risk on financial liabilities designated at fair value through profit or loss	(306)	64
Net gains (losses) on equity securities designated at fair value through other comprehensive income	12	4
Total income tax expenses (recoveries)	\$ (56)	\$ (30)

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, 2023																								
	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)	\$	7,323	\$	17,318	\$	(5)	\$	(334)	\$	78,037	\$	(2,357)	\$	5,688	\$	2,394	\$	5,725	\$	108,064	\$	111	\$	108,175	
Balance at beginning of period																									
Changes in equity																									
Issues of share capital and other equity instruments				24						1										25				25	
Common shares purchased for cancellation																									
Sales of treasury shares and other equity instruments																									
Purchases of treasury shares and other equity instruments						277		742												1,019				1,019	
Share-based compensation awards						(262)		(797)												(1,059)				(1,059)	
Dividends on common shares										5										5				5	
Dividends on preferred shares and distributions on other equity instruments										(1,829)										(1,829)				(1,829)	
Other										(44)										(44)				(44)	
Net income										3										3				3	
Total other comprehensive income (loss), net of taxes										3,212										3,212				3,212	
Balance at end of period																									
	\$	7,323	\$	17,342	\$	10	\$	(389)	\$	78,369	\$	(1,757)	\$	4,800	\$	1,998	\$	5,041	\$	107,696	\$	103	\$	107,799	

For the three months ended January 31, 2022

	Other components of equity																								
	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																									
Changes in equity																									
Issues of share capital and other equity instruments				34						(1)										783				783	
Common shares purchased for cancellation				(111)						(1,103)										(1,214)				(1,214)	
Sales of treasury shares and other equity instruments																									
Purchases of treasury shares and other equity instruments						156		1,516												1,672				1,672	
Share-based compensation awards						(149)		(1,522)												(1,671)				(1,671)	
Dividends on common shares										2										2				2	
Dividends on preferred shares and distributions on other equity instruments										(1,702)										(1,702)				(1,702)	
Other										(54)										(54)				(54)	
Net income										10										10				10	
Total other comprehensive income (loss), net of taxes										4,093										4,093				4,093	
Balance at end of period																									
	\$	7,473	\$	17,651	\$	(32)	\$	(79)	\$	73,542	\$	(359)	\$	3,019	\$	695	\$	3,355	\$	101,910	\$	98	\$	102,008	

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 2023	January 31 2022
Cash flows from operating activities		
Net income	\$ 3,214	\$ 4,095
Adjustments for non-cash items and others		
Provision for credit losses	532	105
Depreciation	314	313
Deferred income taxes	(239)	227
Amortization and impairment of other intangibles	380	339
Net changes in investments in joint ventures and associates	(29)	(28)
Losses (Gains) on investment securities	(53)	(15)
Adjustments for net changes in operating assets and liabilities		
Insurance claims and policy benefit liabilities	592	157
Net change in accrued interest receivable and payable	397	(11)
Current income taxes	905	(2,718)
Derivative assets	24,156	3,222
Derivative liabilities	(21,999)	(3,337)
Trading securities	2,688	(10,285)
Loans, net of securitizations	(4,704)	(22,864)
Assets purchased under reverse repurchase agreements and securities borrowed	(10,534)	(4,223)
Obligations related to assets sold under repurchase agreements and securities loaned	16,420	2,808
Obligations related to securities sold short	(264)	3,703
Deposits, net of securitizations	16,145	42,011
Brokers and dealers receivable and payable	(971)	2,013
Other	(9,091)	(7,078)
Net cash from (used in) operating activities	17,859	8,434
Cash flows from investing activities		
Change in interest-bearing deposits with banks	(3,666)	16,218
Proceeds from sales and maturities of investment securities	34,282	23,101
Purchases of investment securities	(40,515)	(28,664)
Net acquisitions of premises and equipment and other intangibles	(698)	(590)
Net cash from (used in) investing activities	(10,597)	10,065
Cash flows from financing activities		
Issuance of subordinated debentures	1,500	1,000
Repayment of subordinated debentures	(60)	–
Issue of common shares, net of issuance costs	22	31
Common shares purchased for cancellation	–	(1,214)
Issue of preferred shares and other equity instruments, net of issuance costs	–	749
Sales of treasury shares and other equity instruments	1,019	1,672
Purchases of treasury shares and other equity instruments	(1,059)	(1,671)
Dividends paid on shares and distributions paid on other equity instruments	(1,841)	(1,608)
Dividends/distributions paid to non-controlling interests	(7)	(1)
Change in short-term borrowings of subsidiaries	4,491	–
Repayment of lease liabilities	(166)	(163)
Net cash from (used in) financing activities	3,899	(1,205)
Effect of exchange rate changes on cash and due from banks	2,719	23
Net change in cash and due from banks	13,880	17,317
Cash and due from banks at beginning of period ⁽¹⁾	72,397	113,846
Cash and due from banks at end of period ⁽¹⁾	\$ 86,277	\$ 131,163
Cash flows from operating activities include:		
Amount of interest paid	\$ 11,226	\$ 1,771
Amount of interest received	17,492	6,826
Amount of dividends received	832	867
Amount of income taxes paid	1,436	3,679

(1) We are required to maintain balances with central banks and other regulatory authorities. The total balances were \$2 billion as at January 31, 2023 (October 31, 2022 – \$2 billion; January 31, 2022 – \$2 billion; October 31, 2021 – \$2 billion).

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

Note 1 General information

Royal Bank of Canada and its subsidiaries (the Bank) provide diversified financial services including Personal & Commercial Banking, Wealth Management, Insurance and Capital Markets products and services on a global basis. Refer to Note 13 for further details on our business segments.

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 2022 Annual Consolidated Financial Statements and the accompanying notes included on pages 138 to 229 in our 2022 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 28, 2023, 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 the preparation of our audited 2022 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 2022 Annual Consolidated Financial Statements.

Note 3 Fair value of financial instruments

Carrying value and fair value of financial instruments

The following tables provide a comparison of the carrying 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 2022 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, 2023							
	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	\$ –	\$ 87,859	\$ –	\$ –	\$ 5,636	\$ 5,636	\$ 93,495	\$ 93,495
Securities								
Trading	135,417	10,100	–	–	–	–	145,517	145,517
Investment, net of applicable allowance	–	–	97,003	977	77,056	71,919	175,036	169,899
	135,417	10,100	97,003	977	77,056	71,919	320,553	315,416
Assets purchased under reverse repurchase agreements and securities borrowed	279,899	–	–	–	48,480	48,480	328,379	328,379
Loans, net of applicable allowance								
Retail	84	383	229	–	546,746	525,173	547,442	525,869
Wholesale	9,465	3,409	559	–	262,919	257,300	276,352	270,733
	9,549	3,792	788	–	809,665	782,473	823,794	796,602
Other								
Derivatives	130,120	–	–	–	–	–	130,120	130,120
Other assets (1)	3,614	4	–	–	71,513	71,513	75,131	75,131
Financial liabilities								
Deposits								
Personal	\$ 362	\$ 22,899			\$ 395,026	\$ 392,736	\$ 418,287	\$ 415,997
Business and government (2)	143	146,499			592,281	591,798	738,923	738,440
Bank (3)	–	10,633			35,999	35,938	46,632	46,571
	505	180,031			1,023,306	1,020,472	1,203,842	1,201,008
Other								
Obligations related to securities sold short	35,247	–			–	–	35,247	35,247
Obligations related to assets sold under repurchase agreements and securities loaned	–	263,269			27,098	27,098	290,367	290,367
Derivatives	131,082	–			–	–	131,082	131,082
Other liabilities (4)	(430)	43			91,115	91,837	90,728	91,450
Subordinated debentures	–	–			11,530	11,391	11,530	11,391

(Millions of Canadian dollars)	As at October 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			
Financial assets											
Interest-bearing deposits with banks	\$	–	\$ 84,468	\$	–	\$	–	\$ 23,543	\$ 23,543	\$ 108,011	\$ 108,011
Securities											
Trading		138,507	9,698	–	–	–	–	–	–	148,205	148,205
Investment, net of applicable allowance		–	–	92,063	828	77,127	70,073	170,018	162,964		
		138,507	9,698	92,063	828	77,127	70,073	318,223	311,169		
Assets purchased under reverse repurchase agreements and securities borrowed		264,665	–	–	–	53,180	53,180	317,845	317,845		
Loans, net of applicable allowance											
Retail		73	375	218	–	546,767	521,428	547,433	522,094		
Wholesale		6,914	3,222	563	–	261,833	253,816	272,532	264,515		
		6,987	3,597	781	–	808,600	775,244	819,965	786,609		
Other											
Derivatives		154,439	–	–	–	–	–	154,439	154,439		
Other assets (1)		3,377	–	–	–	73,084	73,084	76,461	76,461		
Financial liabilities											
Deposits											
Personal	\$	298	\$ 21,959			\$ 382,675	\$ 380,396	\$ 404,932	\$ 402,653		
Business and government (2)		447	152,119			607,304	605,102	759,870	757,668		
Bank (3)		–	7,196			36,816	36,758	44,012	43,954		
		745	181,274			1,026,795	1,022,256	1,208,814	1,204,275		
Other											
Obligations related to securities sold short		35,511	–			–	–	35,511	35,511		
Obligations related to assets sold under repurchase agreements and securities loaned		–	248,835			25,112	25,112	273,947	273,947		
Derivatives		153,491	–			–	–	153,491	153,491		
Other liabilities (4)		(360)	69			90,348	90,160	90,057	89,869		
Subordinated debentures		–	–			10,025	9,668	10,025	9,668		

(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.

Note 3 Fair value of financial instruments (continued)

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

(Millions of Canadian dollars)	As at									
	January 31, 2023					October 31, 2022				
	Fair value measurements using				Netting adjustments	Fair value	Fair value measurements using			Netting adjustments
Level 1	Level 2	Level 3		Level 1			Level 2	Level 3		
Financial assets										
Interest-bearing deposits with banks	\$ –	\$ 87,859	\$ –	\$ –	\$ 87,859	\$ –	\$ 84,468	\$ –	\$ –	\$ 84,468
Securities										
Trading										
Debt issued or guaranteed by:										
Canadian government (1)										
Federal	15,027	2,953	–	–	17,980	15,024	3,779	–	–	18,803
Provincial and municipal	–	13,752	–	–	13,752	–	13,257	–	–	13,257
U.S. federal, state, municipal and agencies (1), (2)	694	30,097	–	–	30,791	1,254	35,570	4	–	36,828
Other OECD government (3)	1,629	1,673	–	–	3,302	1,325	3,452	–	–	4,777
Mortgage-backed securities (1)	–	2	–	–	2	–	2	–	–	2
Asset-backed securities										
Non-CDO securities (4)	–	1,222	–	–	1,222	–	1,308	2	–	1,310
Corporate debt and other debt	–	22,658	–	–	22,658	–	21,162	7	–	21,169
Equities	49,836	3,868	2,106	–	55,810	46,592	3,593	1,874	–	52,059
	67,186	76,225	2,106	–	145,517	64,195	82,123	1,887	–	148,205
Investment										
Debt issued or guaranteed by:										
Canadian government (1)										
Federal	1,068	3,516	–	–	4,584	1,226	2,555	–	–	3,781
Provincial and municipal	–	2,406	–	–	2,406	–	2,124	–	–	2,124
U.S. federal, state, municipal and agencies (1)	–	45,764	–	–	45,764	440	43,918	–	–	44,358
Other OECD government	–	7,641	–	–	7,641	–	5,144	–	–	5,144
Mortgage-backed securities (1)	–	2,715	28	–	2,743	–	2,860	28	–	2,888
Asset-backed securities										
CDO	–	7,443	–	–	7,443	–	7,524	–	–	7,524
Non-CDO securities	–	473	–	–	473	–	524	–	–	524
Corporate debt and other debt	–	25,800	149	–	25,949	–	25,569	151	–	25,720
Equities	36	521	420	–	977	36	395	397	–	828
	1,104	96,279	597	–	97,980	1,702	90,613	576	–	92,891
Assets purchased under reverse repurchase agreements and securities borrowed	–	279,899	–	–	279,899	–	264,665	–	–	264,665
Loans	–	11,532	2,597	–	14,129	–	9,673	1,692	–	11,365
Other										
Derivatives										
Interest rate contracts	–	35,145	246	–	35,391	–	39,804	263	–	40,067
Foreign exchange contracts	–	82,123	9	–	82,132	–	99,424	13	–	99,437
Credit derivatives	–	355	–	–	355	–	388	–	–	388
Other contracts	2,220	12,862	75	–	15,157	3,939	14,786	62	–	18,787
Valuation adjustments	–	(1,463)	6	–	(1,457)	–	(2,100)	45	–	(2,055)
Total gross derivatives	2,220	129,022	336	–	131,578	3,939	152,302	383	–	156,624
Netting adjustments	–	–	–	(1,458)	(1,458)	–	–	–	(2,185)	(2,185)
Total derivatives	1,411	2,194	13	–	3,618	1,221	2,141	15	–	3,377
Other assets	–	–	–	–	–	–	–	–	–	–
	\$ 71,921	\$ 683,010	\$ 5,649	\$ (1,458)	\$ 759,122	\$ 71,057	\$ 685,985	\$ 4,553	\$ (2,185)	\$ 759,410
Financial liabilities										
Deposits										
Personal	\$ –	\$ 23,011	\$ 250	–	\$ 23,261	\$ –	\$ 22,016	\$ 241	–	\$ 22,257
Business and government	–	146,642	–	–	146,642	–	152,566	–	–	152,566
Bank	–	10,633	–	–	10,633	–	7,196	–	–	7,196
Other										
Obligations related to securities sold short	13,127	22,120	–	–	35,247	16,383	19,128	–	–	35,511
Obligations related to assets sold under repurchase agreements and securities loaned	–	263,269	–	–	263,269	–	248,835	–	–	248,835
Derivatives										
Interest rate contracts	–	33,532	900	–	34,432	–	39,592	1,122	–	40,714
Foreign exchange contracts	–	77,755	72	–	77,827	–	94,310	145	–	94,455
Credit derivatives	–	76	–	–	76	–	125	–	–	125
Other contracts	2,529	17,543	622	–	20,694	3,847	16,663	847	–	21,357
Valuation adjustments	–	(478)	(11)	–	(489)	–	(967)	(8)	–	(975)
Total gross derivatives	2,529	128,428	1,583	–	132,540	3,847	149,723	2,106	–	155,676
Netting adjustments	–	–	–	(1,458)	(1,458)	–	–	–	(2,185)	(2,185)
Total derivatives	405	(792)	–	–	131,082	341	(632)	–	–	153,491
Other liabilities	–	–	–	–	(387)	–	–	–	–	(291)
	\$ 16,061	\$ 593,311	\$ 1,833	\$ (1,458)	\$ 609,747	\$ 20,571	\$ 598,832	\$ 2,347	\$ (2,185)	\$ 619,565

(1) As at January 31, 2023, residential and commercial mortgage-backed securities (MBS) included in all fair value levels of trading securities were \$11,661 million and \$nil (October 31, 2022 – \$12,273 million and \$nil), respectively, and in all fair value levels of Investment securities were \$20,631 million and \$2,832 million (October 31, 2022 – \$23,362 million and \$2,755 million), respectively.

(2) United States (U.S.).

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

(4) Collateralized debt obligations (CDO).

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, 2023, 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, 2023, 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 2022 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, 2023								
	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	\$ 4	\$ –	\$ –	\$ –	\$ (4)	\$ –	\$ –	\$ –	\$ –
Asset-backed securities									
Non-CDO securities	2	–	–	–	(2)	–	–	–	–
Corporate debt and other debt	7	–	–	–	–	–	(7)	–	–
Equities	1,874	(14)	(25)	250	(20)	41	–	2,106	(32)
	1,887	(14)	(25)	250	(26)	41	(7)	2,106	(32)
Investment									
Mortgage-backed securities	28	–	–	–	–	–	–	28	n.a.
Corporate debt and other debt	151	–	(1)	–	(1)	–	–	149	n.a.
Equities	397	–	24	–	(1)	–	–	420	n.a.
	576	–	23	–	(2)	–	–	597	n.a.
Loans	1,692	(52)	(7)	1,193	(120)	28	(137)	2,597	(15)
Other									
Net derivative balances (3)									
Interest rate contracts	(859)	5	5	(20)	173	18	24	(654)	8
Foreign exchange contracts	(132)	5	8	4	37	–	15	(63)	8
Other contracts	(785)	(55)	17	(8)	62	(31)	253	(547)	(26)
Valuation adjustments	53	–	–	–	(36)	–	–	17	–
Other assets	15	–	–	–	(2)	–	–	13	–
	\$ 2,447	\$ (111)	\$ 21	\$ 1,419	\$ 86	\$ 56	\$ 148	\$ 4,066	\$ (57)
Liabilities									
Deposits	\$ (241)	\$ (20)	\$ 1	\$ (35)	\$ 2	\$ (34)	\$ 77	\$ (250)	\$ (14)
Other									
Other liabilities	–	–	–	–	–	–	–	–	–
	\$ (241)	\$ (20)	\$ 1	\$ (35)	\$ 2	\$ (34)	\$ 77	\$ (250)	\$ (14)

Note 3 Fair value of financial instruments (continued)

(Millions of Canadian dollars)	For the three months ended January 31, 2022								Gains (losses) included in earnings for positions still held
	Fair value at beginning of period	Gains (losses) included in earnings	Gains (losses) included in OCI (1)	Purchases (issuances)	Settlement (sales) and other (2)	Transfers into Level 3	Transfers out of Level 3	Fair value at end of period	
Assets									
Securities									
Trading									
Debt issued or guaranteed by:									
U.S. state, municipal and agencies	\$ 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

(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 other comprehensive income (OCI) were \$18 million for the three months ended January 31, 2023 (January 31, 2022 – gains of \$45 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, 2023 included derivative assets of \$336 million (January 31, 2022 – \$441 million) and derivative liabilities of \$1,583 million (January 31, 2022 – \$1,398 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, 2023, transfers out of Level 1 to Level 2 included Investment U.S. federal, state, municipal and agencies debt of \$435 million. During the three months ended January 31, 2022, there were no significant transfers out of Level 1 to Level 2.

During the three months ended January 31, 2023 and January 31, 2022, there were no significant transfers out of Level 2 to Level 1.

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

During the three months ended January 31, 2023 and January 31, 2022, there were no significant transfers out of Level 2 to Level 3.

During the three months ended January 31, 2023, significant transfers out of Level 3 to Level 2 included Other contracts and Loans due to changes in the market observability of inputs and changes in the significance of unobservable inputs. During the three months ended January 31, 2022, there were no significant transfers out of Level 3 to Level 2.

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 2023	January 31 2022
Interest and dividend income ^{(1), (2)}		
Financial instruments measured at fair value through profit or loss	\$ 6,709	\$ 1,419
Financial instruments measured at fair value through other comprehensive income	942	77
Financial instruments measured at amortized cost	11,686	5,882
	19,337	7,378
Interest expense ⁽¹⁾		
Financial instruments measured at fair value through profit or loss	6,240	861
Financial instruments measured at amortized cost	6,895	1,246
	13,135	2,107
Net interest income	\$ 6,202	\$ 5,271

- (1) Excludes the following amounts related to our insurance operations and included in Insurance premiums, investment and fee income in the Interim Condensed Consolidated Statements of Income: for the three months ended January 31, 2023, Interest income of \$133 million (January 31, 2022 – \$196 million), and Interest expense of \$4 million (January 31, 2022 – \$1 million).
- (2) Includes dividend income for the three months ended January 31, 2023 of \$792 million (January 31, 2022 – \$750 million), which is presented in Interest and dividend income in the Interim Condensed 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, 2023				October 31, 2022			
	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	\$ 4,840	\$ 2	\$ (258)	\$ 4,584	\$ 4,081	\$ 1	\$ (301)	\$ 3,781
Provincial and municipal	2,891	1	(486)	2,406	2,685	6	(567)	2,124
U.S. federal, state, municipal and agencies	46,990	286	(1,512)	45,764	46,034	343	(2,019)	44,358
Other OECD government	7,645	4	(8)	7,641	5,154	7	(17)	5,144
Mortgage-backed securities	2,816	2	(75)	2,743	2,985	1	(98)	2,888
Asset-backed securities								
CDO	7,538	3	(98)	7,443	7,741	3	(220)	7,524
Non-CDO securities	485	1	(13)	473	547	–	(23)	524
Corporate debt and other debt	26,020	41	(112)	25,949	25,852	51	(183)	25,720
Equities	674	308	(5)	977	551	284	(7)	828
	\$ 99,899	\$ 648	\$ (2,567)	\$ 97,980	\$ 95,630	\$ 696	\$ (3,435)	\$ 92,891

- (1) Excludes \$77,056 million of held-to-collect securities as at January 31, 2023 that are carried at amortized cost, net of allowance for credit losses (October 31, 2022 – \$77,127 million).
- (2) Gross unrealized gains and losses includes \$(19) million of allowance for credit losses on debt securities at FVOCI as at January 31, 2023 (October 31, 2022 – \$(19) million) recognized in income and Other components of equity.

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.

Note 4 Securities (continued)**Allowance for credit losses – securities at FVOCI** ⁽¹⁾

(Millions of Canadian dollars)	For the three months ended							
	January 31, 2023				January 31, 2022			
	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	\$ 3	\$ 1	\$ (23)	\$ (19)	\$ 2	\$ 1	\$ (12)	\$ (9)
Provision for credit losses								
Transfers to stage 1	–	–	–	–	–	–	–	–
Transfers to stage 2	–	–	–	–	–	–	–	–
Transfers to stage 3	–	–	–	–	–	–	–	–
Purchases	2	–	–	2	–	–	–	–
Sales and maturities	–	–	–	–	–	–	–	–
Changes in risk, parameters and exposures	(1)	–	(2)	(3)	–	–	(2)	(2)
Exchange rate and other	–	–	1	1	–	–	–	–
Balance at end of period	\$ 4	\$ 1	\$ (24)	\$ (19)	\$ 2	\$ 1	\$ (14)	\$ (11)

(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, 2023				January 31, 2022			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	\$ 8	\$ 14	\$ –	\$ 22	\$ 5	\$ 18	\$ –	\$ 23
Provision for credit losses								
Transfers to stage 1	–	–	–	–	–	–	–	–
Transfers to stage 2	–	–	–	–	–	–	–	–
Transfers to stage 3	–	–	–	–	–	–	–	–
Purchases	4	–	–	4	6	–	–	6
Sales and maturities	–	–	–	–	(1)	–	–	(1)
Changes in risk, parameters and exposures	(2)	(1)	–	(3)	(1)	(1)	–	(2)
Exchange rate and other	–	–	–	–	–	–	–	–
Balance at end of period	\$ 10	\$ 13	\$ –	\$ 23	\$ 9	\$ 17	\$ –	\$ 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 2022 Annual Report.

(Millions of Canadian dollars)	As at							
	January 31, 2023				October 31, 2022			
	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	\$ 96,195	\$ 53	\$ –	\$ 96,248	\$ 91,177	\$ 56	\$ –	\$ 91,233
Non-investment grade	606	–	–	606	680	–	–	680
Impaired	–	–	149	149	–	–	150	150
Items not subject to impairment (2)	96,801	53	149	97,003	91,857	56	150	92,063
				977				828
				\$ 97,980				\$ 92,891
Securities at amortized cost								
Investment grade	\$ 75,962	\$ –	\$ –	\$ 75,962	\$ 76,035	\$ –	\$ –	\$ 76,035
Non-investment grade	908	209	–	1,117	898	216	–	1,114
Impaired	–	–	–	–	–	–	–	–
Allowance for credit losses	76,870	209	–	77,079	76,933	216	–	77,149
	10	13	–	23	8	14	–	22
	\$ 76,860	\$ 196	\$ –	\$ 77,056	\$ 76,925	\$ 202	\$ –	\$ 77,127

(1) Reflects \$149 million of purchased credit impaired securities (October 31, 2022 – \$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, 2023					January 31, 2022				
	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	\$ 432	\$ 51	\$ (5)	\$ (9)	\$ 469	\$ 416	\$ (6)	\$ (5)	\$ 4	\$ 409
Personal	1,043	169	(83)	–	1,129	1,079	18	(56)	(3)	1,038
Credit cards	893	136	(102)	(1)	926	875	65	(71)	1	870
Small business	194	17	(9)	2	204	177	3	(4)	2	178
Wholesale	1,574	161	(17)	(38)	1,680	1,797	12	(6)	8	1,811
Customers' liability under acceptances	45	(4)	–	–	41	75	8	–	–	83
	\$ 4,181	\$ 530	\$ (216)	\$ (46)	\$ 4,449	\$ 4,419	\$ 100	\$ (142)	\$ 12	\$ 4,389
Presented as:										
Allowance for loan losses	\$ 3,753				\$ 3,999	\$ 4,089				\$ 4,047
Other liabilities – Provisions	378				403	241				251
Customers' liability under acceptances	45				41	75				83
Other components of equity	5				6	14				8

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.

Note 5 Loans and allowance for credit losses (continued)**Allowance for credit losses – Retail and wholesale loans**

(Millions of Canadian dollars)	For the three months ended								
	January 31, 2023				January 31, 2022				
	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	\$ 235	\$ 65	\$ 132	\$ 432	\$ 186	\$ 92	\$ 138	\$ 416	
Provision for credit losses									
Transfers to stage 1	13	(13)	–	–	24	(19)	(5)	–	
Transfers to stage 2	(6)	10	(4)	–	(2)	2	–	–	
Transfers to stage 3	–	(3)	3	–	(1)	(7)	8	–	
Originations	30	–	–	30	30	–	–	30	
Maturities	(4)	(2)	–	(6)	(7)	(3)	–	(10)	
Changes in risk, parameters and exposures	(13)	25	15	27	(44)	19	(1)	(26)	
Write-offs	–	–	(8)	(8)	–	–	(10)	(10)	
Recoveries	–	–	3	3	–	–	5	5	
Exchange rate and other	(1)	–	(8)	(9)	1	1	2	4	
Balance at end of period	\$ 254	\$ 82	\$ 133	\$ 469	\$ 187	\$ 85	\$ 137	\$ 409	
Personal									
Balance at beginning of period	\$ 285	\$ 661	\$ 97	\$ 1,043	\$ 422	\$ 569	\$ 88	\$ 1,079	
Provision for credit losses									
Transfers to stage 1	150	(150)	–	–	170	(169)	(1)	–	
Transfers to stage 2	(23)	23	–	–	(22)	22	–	–	
Transfers to stage 3	–	(13)	13	–	(1)	(12)	13	–	
Originations	23	–	–	23	26	–	–	26	
Maturities	(12)	(25)	–	(37)	(21)	(25)	–	(46)	
Changes in risk, parameters and exposures	(138)	231	90	183	(171)	162	47	38	
Write-offs	–	–	(112)	(112)	–	–	(86)	(86)	
Recoveries	–	–	29	29	–	–	30	30	
Exchange rate and other	1	(2)	1	–	1	–	(4)	(3)	
Balance at end of period	\$ 286	\$ 725	\$ 118	\$ 1,129	\$ 404	\$ 547	\$ 87	\$ 1,038	
Credit cards									
Balance at beginning of period	\$ 177	\$ 716	\$ –	\$ 893	\$ 233	\$ 642	\$ –	\$ 875	
Provision for credit losses									
Transfers to stage 1	164	(164)	–	–	146	(146)	–	–	
Transfers to stage 2	(20)	20	–	–	(23)	23	–	–	
Transfers to stage 3	–	(94)	94	–	(1)	(70)	71	–	
Originations	4	–	–	4	4	–	–	4	
Maturities	(1)	(7)	–	(8)	(1)	(7)	–	(8)	
Changes in risk, parameters and exposures	(139)	271	8	140	(132)	201	–	69	
Write-offs	–	–	(142)	(142)	–	–	(112)	(112)	
Recoveries	–	–	40	40	–	–	41	41	
Exchange rate and other	(1)	–	–	(1)	–	1	–	1	
Balance at end of period	\$ 184	\$ 742	\$ –	\$ 926	\$ 226	\$ 644	\$ –	\$ 870	
Small business									
Balance at beginning of period	\$ 73	\$ 73	\$ 48	\$ 194	\$ 88	\$ 55	\$ 34	\$ 177	
Provision for credit losses									
Transfers to stage 1	10	(10)	–	–	5	(5)	–	–	
Transfers to stage 2	(3)	3	–	–	(2)	2	–	–	
Transfers to stage 3	–	(2)	2	–	–	(1)	1	–	
Originations	8	–	–	8	9	–	–	9	
Maturities	(4)	(6)	–	(10)	(5)	(7)	–	(12)	
Changes in risk, parameters and exposures	(12)	13	18	19	(10)	11	5	6	
Write-offs	–	–	(11)	(11)	–	–	(6)	(6)	
Recoveries	–	–	2	2	–	–	2	2	
Exchange rate and other	1	2	(1)	2	2	1	(1)	2	
Balance at end of period	\$ 73	\$ 73	\$ 58	\$ 204	\$ 87	\$ 56	\$ 35	\$ 178	
Wholesale									
Balance at beginning of period	\$ 597	\$ 585	\$ 392	\$ 1,574	\$ 566	\$ 794	\$ 437	\$ 1,797	
Provision for credit losses									
Transfers to stage 1	51	(51)	–	–	108	(107)	(1)	–	
Transfers to stage 2	(20)	21	(1)	–	(18)	18	–	–	
Transfers to stage 3	(3)	(14)	17	–	(1)	(4)	5	–	
Originations	153	–	–	153	156	–	–	156	
Maturities	(118)	(71)	–	(189)	(106)	(107)	–	(213)	
Changes in risk, parameters and exposures	(55)	150	102	197	(129)	160	38	69	
Write-offs	–	–	(26)	(26)	–	–	(23)	(23)	
Recoveries	–	–	9	9	–	–	17	17	
Exchange rate and other	(5)	(8)	(25)	(38)	4	11	(7)	8	
Balance at end of period	\$ 600	\$ 612	\$ 468	\$ 1,680	\$ 580	\$ 765	\$ 466	\$ 1,811	

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 2022 Annual Consolidated Financial Statements.

Our base scenario reflects rising unemployment rates, high inflation, production capacity limits and high central bank policy interest rates, which result in moderate recessions in Canada and the U.S. in calendar 2023. Expectations are that increases in central bank interest rates, including in Canada and the U.S., are likely at or close to the end of the cycle. Our base scenario also reflects declining housing prices in Canada for the first half of calendar 2023.

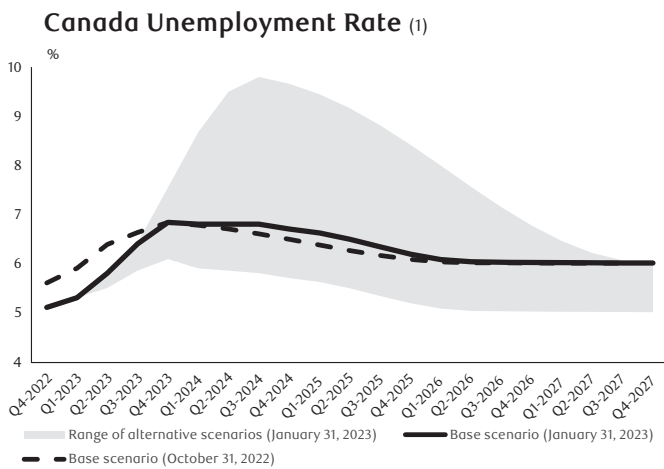
Downside scenarios, including two additional and more severe downside scenarios designed for the energy and real estate sectors, reflect the possibility of a more severe macroeconomic shock beginning in calendar Q2 2023 relative to our base scenario. Conditions are expected to deteriorate from calendar Q1 2023 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 deeper recession and a more prolonged recovery as compared to our base scenario, including further monetary policy responses to elevated inflation rates which may increase credit risk, is reflected in our general downside scenario.

The upside scenario reflects slightly stronger economic growth 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.

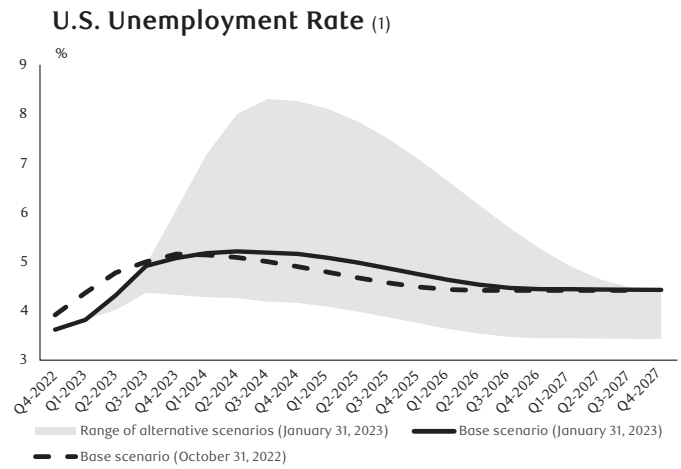
We reduced weight to our downside scenarios relative to October 31, 2022 in order to reflect reduced uncertainty and an increased likelihood of a moderate recession as reflected in our base scenario relative to the more severe recessions reflected in our downside scenarios.

The following provides additional detail about our calendar quarter forecasts for certain key macroeconomic variables used in the models to estimate the allowance for credit losses:

- **Unemployment rates** – In our base forecast, calendar Q1 2023 unemployment rates are expected to rise to 5.3% in Canada and 3.8% in the U.S., peaking in Q4 2023 at 6.8% in Canada and in Q1 2024 at 5.2% in the U.S., and reverting to the long run equilibrium towards the latter end of the forecast horizon.

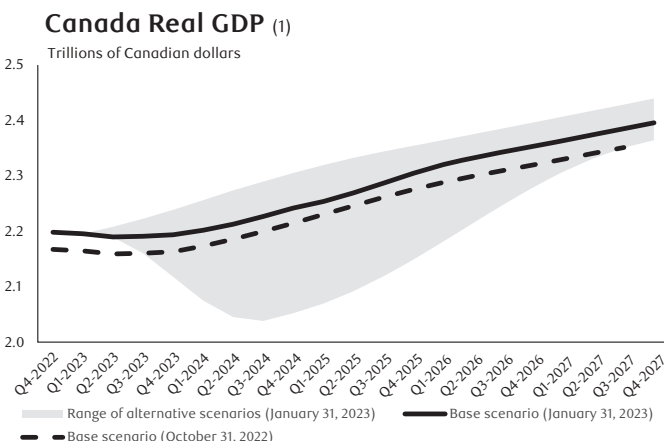


(1) Represents the average quarterly unemployment level over the calendar quarters presented.

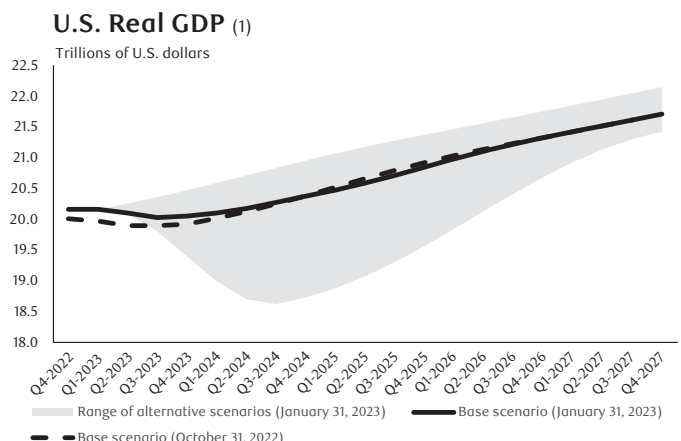


(1) Represents the average quarterly unemployment level over the calendar quarters presented.

- **Gross Domestic Product (GDP)** – In our base forecast, we expect Canadian and U.S. GDP growth to slow, with Canada expected to experience a moderate recession during calendar Q1 and Q2 2023, and the U.S. in calendar Q2 and Q3 2023. GDP in calendar Q4 2023 is expected to be 0.2% below Q4 2022 levels in Canada, and 0.6% below 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.

Note 5 Loans and allowance for credit losses (continued)

- **Oil price (West Texas Intermediate in US\$)** – In our base forecast, we expect oil prices to average \$84 per barrel over the next 12 months from calendar Q1 2023 and \$71 per barrel in the following 2 to 5 years. The range of average prices in our alternative downside and upside scenarios is \$27 to \$96 per barrel for the next 12 months and \$41 to \$73 per barrel for the following 2 to 5 years. As at October 31, 2022, our base forecast included an average price of \$88 per barrel for the next 12 months and \$72 per barrel for the following 2 to 5 years.
- **Canadian housing price index** – In our base forecast, we expect housing prices to increase by 2.6% over the next 12 months from calendar Q1 2023, with a compound annual growth rate of 5.1% for the following 2 to 5 years. The range of annual housing price growth (contraction) in our alternative real estate 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, 2022, our base forecast included housing price contraction of (1.0)% from calendar Q4 2022 for the next 12 months and housing price growth of 5.2% for the following 2 to 5 years.

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 *Financial Instruments*. 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 2022 Annual Report.

(Millions of Canadian dollars)	As at							
	January 31, 2023				October 31, 2022			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Retail								
Loans outstanding – Residential mortgages								
Low risk	\$ 341,075	\$ 3,768	\$ –	\$ 344,843	\$ 340,716	\$ 2,573	\$ –	\$ 343,289
Medium risk	16,113	1,433	–	17,546	15,035	1,932	–	16,967
High risk	1,250	3,720	–	4,970	1,188	3,125	–	4,313
Not rated (1)	51,441	1,321	–	52,762	51,915	1,304	–	53,219
Impaired	–	–	594	594	–	–	560	560
Total	409,879	10,242	594	420,715	408,854	8,934	560	418,348
Items not subject to impairment (2)				467				448
Total				\$ 421,182				\$ 418,796
Loans outstanding – Personal								
Low risk	\$ 72,387	\$ 3,031	\$ –	\$ 75,418	\$ 73,339	\$ 2,575	\$ –	\$ 75,914
Medium risk	5,184	3,028	–	8,212	5,482	3,780	–	9,262
High risk	358	1,858	–	2,216	836	1,660	–	2,496
Not rated (1)	9,368	98	–	9,466	9,733	104	–	9,837
Impaired	–	–	227	227	–	–	200	200
Total	\$ 87,297	\$ 8,015	\$ 227	\$ 95,539	\$ 89,390	\$ 8,119	\$ 200	\$ 97,709
Loans outstanding – Credit cards								
Low risk	\$ 15,063	\$ 96	\$ –	\$ 15,159	\$ 15,088	\$ 83	\$ –	\$ 15,171
Medium risk	1,506	1,524	–	3,030	1,418	1,911	–	3,329
High risk	37	1,315	–	1,352	39	1,255	–	1,294
Not rated (1)	784	33	–	817	751	32	–	783
Total	\$ 17,390	\$ 2,968	\$ –	\$ 20,358	\$ 17,296	\$ 3,281	\$ –	\$ 20,577
Loans outstanding – Small business								
Low risk	\$ 8,496	\$ 951	\$ –	\$ 9,447	\$ 8,571	\$ 838	\$ –	\$ 9,409
Medium risk	1,640	975	–	2,615	1,512	1,130	–	2,642
High risk	111	466	–	577	102	375	–	477
Not rated (1)	6	–	–	6	3	–	–	3
Impaired	–	–	169	169	–	–	138	138
Total	\$ 10,253	\$ 2,392	\$ 169	\$ 12,814	\$ 10,188	\$ 2,343	\$ 138	\$ 12,669
Undrawn loan commitments – Retail								
Low risk	\$ 252,902	\$ 1,385	\$ –	\$ 254,287	\$ 247,620	\$ 1,041	\$ –	\$ 248,661
Medium risk	9,272	267	–	9,539	9,021	246	–	9,267
High risk	870	414	–	1,284	876	367	–	1,243
Not rated (1)	5,872	126	–	5,998	5,668	118	–	5,786
Total	\$ 268,916	\$ 2,192	\$ –	\$ 271,108	\$ 263,185	\$ 1,772	\$ –	\$ 264,957
Wholesale – Loans outstanding								
Investment grade	\$ 90,382	\$ 291	\$ –	\$ 90,673	\$ 88,513	\$ 202	\$ –	\$ 88,715
Non-investment grade	146,386	15,670	–	162,056	145,908	15,758	–	161,666
Not rated (1)	10,398	290	–	10,688	11,789	360	–	12,149
Impaired	–	–	1,609	1,609	–	–	1,301	1,301
Total	247,166	16,251	1,609	265,026	246,210	16,320	1,301	263,831
Items not subject to impairment (2)				12,874				10,136
Total				\$ 277,900				\$ 273,967
Undrawn loan commitments – Wholesale								
Investment grade	\$ 297,620	\$ 291	\$ –	\$ 297,911	\$ 284,481	\$ 179	\$ –	\$ 284,660
Non-investment grade	123,907	11,034	–	134,941	126,225	10,657	–	136,882
Not rated (1)	3,568	–	–	3,568	3,692	1	–	3,693
Total	\$ 425,095	\$ 11,325	\$ –	\$ 436,420	\$ 414,398	\$ 10,837	\$ –	\$ 425,235

- (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, 2023			October 31, 2022		
	30 to 89 days	90 days and greater	Total	30 to 89 days	90 days and greater	Total
Retail	\$ 1,392	\$ 173	\$ 1,565	\$ 1,328	\$ 168	\$ 1,496
Wholesale	1,080	26	1,106	1,279	2	1,281
	\$ 2,472	\$ 199	\$ 2,671	\$ 2,607	\$ 170	\$ 2,777

- (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 refinancing, 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 Significant disposition

Wealth Management

On December 23, 2022, we entered into a definitive agreement to sell the European asset servicing activities of RBC Investor Services and its associated Malaysian centre of excellence to CACEIS (the asset servicing banking group of Crédit Agricole S.A. and Banco Santander, S.A.). The transaction is subject to customary closing conditions, including regulatory and antitrust approvals, and is expected to close in the third calendar quarter of 2023. As a result of the disposition, the assets and liabilities of the disposal group are classified as held for sale, measured at the lower of their carrying amount and fair value less costs to sell and presented in Other assets and Other liabilities. The disposal group consists of assets of \$27 billion, primarily consisting of interest-bearing deposits with banks, and liabilities of \$26 billion, primarily consisting of deposits.

Note 7 Deposits

(Millions of Canadian dollars)	As at							
	January 31, 2023				October 31, 2022			
	Demand (1)	Notice (2)	Term (3)	Total	Demand (1)	Notice (2)	Term (3)	Total
Personal	\$ 195,109	\$ 60,439	\$ 162,739	\$ 418,287	\$ 203,645	\$ 64,743	\$ 136,544	\$ 404,932
Business and government	307,912	15,058	415,953	738,923	348,004	17,855	394,011	759,870
Bank	7,698	1,146	37,788	46,632	10,458	490	33,064	44,012
	\$ 510,719	\$ 76,643	\$ 616,480	\$ 1,203,842	\$ 562,107	\$ 83,088	\$ 563,619	\$ 1,208,814
Non-interest-bearing (4)								
Canada	\$ 140,886	\$ 7,226	\$ 174	\$ 148,286	\$ 149,737	\$ 7,797	\$ 466	\$ 158,000
United States	44,851	–	–	44,851	52,702	–	–	52,702
Europe (5)	21	–	–	21	620	–	–	620
Other International	7,433	–	–	7,433	7,840	–	–	7,840
Interest-bearing (4)								
Canada	295,237	16,645	444,655	756,537	305,779	17,982	409,586	733,347
United States	10,219	52,592	90,539	153,350	11,410	57,055	85,111	153,576
Europe (5)	6,457	180	63,137	69,774	28,276	254	52,144	80,674
Other International	5,615	–	17,975	23,590	5,743	–	16,312	22,055
	\$ 510,719	\$ 76,643	\$ 616,480	\$ 1,203,842	\$ 562,107	\$ 83,088	\$ 563,619	\$ 1,208,814

- (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, 2023, deposits denominated in U.S. dollars, British pounds, Euro and other foreign currencies were \$451 billion, \$38 billion, \$50 billion and \$31 billion, respectively (October 31, 2022 – \$465 billion, \$35 billion, \$50 billion and \$30 billion, respectively).
- (5) Europe includes the United Kingdom, the Channel Islands, France and Luxembourg.

Note 7 Deposits (continued)**Contractual maturities of term deposits**

(Millions of Canadian dollars)	As at	
	January 31 2023	October 31 2022
Within 1 year:		
less than 3 months	\$ 169,164	\$ 159,602
3 to 6 months	79,638	61,996
6 to 12 months	155,578	156,531
1 to 2 years	57,494	49,225
2 to 3 years	45,745	42,809
3 to 4 years	34,562	27,609
4 to 5 years	36,996	33,835
Over 5 years	37,303	32,012
	\$ 616,480	\$ 563,619
Aggregate amount of term deposits in denominations of one hundred thousand dollars or more	\$ 570,000	\$ 521,000

Note 8 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 OCI.

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 2023	January 31 2022	January 31 2023	January 31 2022
Current service costs	\$ 48	\$ 77	\$ 8	\$ 10
Past service costs	–	–	–	2
Net interest expense (income)	(40)	(21)	19	16
Remeasurements of other long-term benefits	–	–	2	1
Administrative expense	3	3	–	–
Defined benefit pension expense	11	59	29	29
Defined contribution pension expense	85	74	–	–
	\$ 96	\$ 133	\$ 29	\$ 29

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 2023	January 31 2022	January 31 2023	January 31 2022
Actuarial (gains) losses:				
Changes in financial assumptions ⁽²⁾	\$ 772	\$ (661)	\$ 75	\$ (40)
Return on plan assets (excluding interest based on discount rate)	(594)	318	–	–
	\$ 178	\$ (343)	\$ 75	\$ (40)

(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 9 Income taxes

On December 15, 2022, Bill C-32, Fall Economic Statement Implementation Act, 2022 (the Bill), tabled by the Government of Canada, received royal assent. The Bill amends the Income Tax Act (Canada) to implement a Canada Recovery Dividend (CRD) and a permanent increase in the Canadian corporate tax rate on banks and life insurer groups.

The CRD is a one-time 15% tax for 2022 determined based on the average taxable income above \$1 billion for taxation years 2020 and 2021 and payable in equal installments over five years. The CRD resulted in an increase in income taxes of \$1.2 billion for the three months ended January 31, 2023, of which \$1 billion was recognized in net income and \$0.2 billion was recognized in other comprehensive income.

The permanent increase in the Canadian corporate tax rate is 1.5% on taxable income above \$100 million and applies to taxation years that end after April 7, 2022, resulting in an increase in the Canadian statutory tax rate from 26.2% to 27.7% for the year ending October 31, 2023.

Note 10 Significant capital and funding transactions

Subordinated debentures

On January 31, 2023, we issued \$1,500 million of non-viability contingent capital (NVCC) subordinated debentures. The notes bear interest at a fixed rate of 5.01% per annum until February 1, 2028, and at the Daily Compounded Canadian Overnight Repo Rate Average plus 2.12% thereafter until their maturity on February 1, 2033.

Common shares issued ⁽¹⁾

	For the three months ended			
	January 31, 2023		January 31, 2022	
	Number of shares (thousands)	Amount	Number of shares (thousands)	Amount
(Millions of Canadian dollars, except number of shares)				
Issued in connection with share-based compensation plans ⁽²⁾	269	\$ 24	407	\$ 34
Purchased for cancellation ⁽³⁾	–	–	(8,871)	(111)
	269	\$ 24	(8,464)	\$ (77)

- (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, 2023 and January 31, 2022, our DRIP's requirements were satisfied through open market purchases. The Bank issued shares from treasury on February 24, 2023 to satisfy the DRIP at a 2% discount from the average market price as defined in the DRIP.
- (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, 2023, we did not purchase for cancellation any common shares. 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).

Note 11 Earnings per share

	For the three months ended	
	January 31 2023	January 31 2022
(Millions of Canadian dollars, except share and per share amounts)		
Basic earnings per share		
Net income	\$ 3,214	\$ 4,095
Dividends on preferred shares and distributions on other equity instruments	(44)	(54)
Net income attributable to non-controlling interests	(2)	(2)
Net income available to common shareholders	\$ 3,168	\$ 4,039
Weighted average number of common shares (in thousands)	1,382,754	1,421,807
Basic earnings per share (in dollars)	\$ 2.29	\$ 2.84
Diluted earnings per share		
Net income available to common shareholders	\$ 3,168	\$ 4,039
Weighted average number of common shares (in thousands)	1,382,754	1,421,807
Stock options ⁽¹⁾	1,756	2,195
Issuable under other share-based compensation plans	26	600
Average number of diluted common shares (in thousands)	1,384,536	1,424,602
Diluted earnings per share (in dollars)	\$ 2.29	\$ 2.84

- (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, 2023, an average of 591,472 outstanding options with an average exercise price of \$131.64 were 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.

Note 12 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. In many proceedings, it is inherently difficult to determine whether any loss is probable or to reliably estimate the amount of any loss. 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 provisions could be material to our results of operations in any particular period.

Our significant legal proceeding and regulatory matters are described in Note 25 of our audited 2022 Annual Consolidated Financial Statements and as updated below.

Vacation pay class action

On December 29, 2022, the Ontario Superior Court of Justice certified a class in an action against RBC Dominion Securities Limited and RBC Dominion Securities Inc. (together, RBC DS). The action commenced in July 2020, asserting claims relating to statutory vacation pay and public holiday pay for investment advisors, associates and assistants in our Canadian Wealth Management business, with the exception of those employed in Alberta and British Columbia. On January 13, 2023, RBC DS served a notice of motion for leave to appeal the court's certification decision. Based on the facts currently known, it is not possible at this time to predict the ultimate outcome of these proceedings or the timing of their resolution.

Note 13 Results by business segment

Composition of business segments

For management purposes, based on the products and services offered, we are organized into four business segments: Personal & Commercial Banking, Wealth Management, Insurance and Capital Markets. Effective the first quarter of 2023, we simplified our reporting structure by eliminating the Investor & Treasury Services segment and moving its former businesses to existing segments. We moved our Investor Services business to our Wealth Management segment, and our Treasury Services and Transaction Banking businesses to our Capital Markets segment. From a reporting perspective, there were no changes to our Personal & Commercial Banking and Insurance segments. Comparative results have been revised to conform to our new basis of segment presentation.

(Millions of Canadian dollars)	For the three months ended January 31, 2023					
	Personal & Commercial Banking	Wealth Management	Insurance	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2)	\$ 4,007	\$ 1,225	\$ –	\$ 768	\$ 202	\$ 6,202
Non-interest income	1,534	3,360	1,891	2,353	(246)	8,892
Total revenue	5,541	4,585	1,891	3,121	(44)	15,094
Provision for credit losses	401	66	–	65	–	532
Insurance policyholder benefits, claims and acquisition expense	–	–	1,545	–	–	1,545
Non-interest expense	2,229	3,434	156	1,701	155	7,675
Income (loss) before income taxes	2,911	1,085	190	1,355	(199)	5,342
Income taxes (recoveries)	785	237	42	132	932	2,128
Net income	\$ 2,126	\$ 848	\$ 148	\$ 1,223	\$ (1,131)	\$ 3,214
Non-interest expense includes:						
Depreciation and amortization	\$ 241	\$ 301	\$ 14	\$ 127	\$ –	\$ 683

(Millions of Canadian dollars)	For the three months ended January 31, 2022					
	Personal & Commercial Banking	Wealth Management (3)	Insurance	Capital Markets (1), (3)	Corporate Support (1)	Total
Net interest income (2)	\$ 3,229	\$ 853	\$ –	\$ 1,296	\$ (107)	\$ 5,271
Non-interest income	1,574	3,165	1,399	1,696	(39)	7,795
Total revenue	4,803	4,018	1,399	2,992	(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	2,944	147	1,529	(62)	6,580
Income (loss) before income taxes	2,652	1,086	255	1,475	(84)	5,384
Income taxes (recoveries)	678	265	58	353	(65)	1,289
Net income	\$ 1,974	\$ 821	\$ 197	\$ 1,122	\$ (19)	\$ 4,095
Non-interest expense includes:						
Depreciation and amortization	\$ 233	\$ 274	\$ 15	\$ 126	\$ 2	\$ 650

(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) Amounts have been revised from those previously presented to conform to our new basis of segment presentation.

Total assets and total liabilities by business segment

(Millions of Canadian dollars)	As at January 31, 2023					
	Personal & Commercial Banking	Wealth Management	Insurance	Capital Markets	Corporate Support	Total
Total assets	\$ 605,870	\$ 209,759	\$ 23,421	\$ 1,035,486	\$ 58,483	\$ 1,933,019
Total liabilities	605,798	206,943	23,994	1,038,579	(50,094)	1,825,220

(Millions of Canadian dollars)	As at October 31, 2022					
	Personal & Commercial Banking	Wealth Management (1)	Insurance	Capital Markets (1)	Corporate Support	Total
Total assets	\$ 602,824	\$ 206,466	\$ 21,918	\$ 1,025,892	\$ 60,119	\$ 1,917,219
Total liabilities	602,741	206,415	22,588	1,025,603	(48,303)	1,809,044

(1) Amounts have been revised from those previously presented to conform to our new basis of segment presentation.

Note 14 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 2023, we complied with all applicable capital, leverage and TLAC requirements, including the Domestic Stability Buffer, imposed by OSFI.

	As at	
	January 31 2023	October 31 2022
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)		
Capital ⁽¹⁾		
CET1 capital	\$ 78,055	\$ 76,945
Tier 1 capital	85,357	84,242
Total capital	96,438	93,850
Risk-weighted assets (RWA) used in calculation of capital ratios ⁽¹⁾		
Credit risk	\$ 502,807	\$ 496,898
Market risk	32,635	35,342
Operational risk	78,808	77,639
Total RWA	\$ 614,250	\$ 609,879
Capital ratios and Leverage ratio ⁽¹⁾		
CET1 ratio	12.7%	12.6%
Tier 1 capital ratio	13.9%	13.8%
Total capital ratio	15.7%	15.4%
Leverage ratio	4.4%	4.4%
Leverage ratio exposure (billions)	\$ 1,921	\$ 1,898
TLAC available and ratios ⁽²⁾		
TLAC available	\$ 173,179	\$ 160,961
TLAC ratio	28.2%	26.4%
TLAC leverage ratio	9.0%	8.5%

(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) TLAC available and TLAC ratios are calculated using OSFI's TLAC guideline. 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. The TLAC ratio and TLAC leverage ratio are calculated using the TLAC available as percentage of total RWA and leverage exposure, respectively.

Shareholder Information

Corporate headquarters

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

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

Transfer Agent and Registrar

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

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

Co-Transfer Agent (U.K.):
Computershare Investor
Services PLC
Securities Services – Registrars
P.O. Box 82, The Pavilions,
Bridgewater 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 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.

International shareholders (other
than holders in the U.S. or
Canada) may be able to receive
their dividend and/or distribution
payments in the currency of their
choice. Computershare offers an
International Currency Exchange
service that enables RBC's
international shareholders to
receive their dividend and/or
distribution payments in the
currency of their choice. Please
refer to investorcentre.com/rbc.

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

As at January 31, 2023, we did
not have an active normal
course issuer bid (NCIB). For
further details, refer to the
Capital management section.

Dividend dates for 2023

Subject to approval by the Board of Directors

	Record dates	Payment dates
Common and preferred shares series AZ, BB, BD, BF, BH, BI and BO	January 26 April 25 July 26 October 26	February 24 May 24 August 24 November 24
Preferred shares series C-2 (US\$)	January 27 April 28 July 28 October 27	February 7 May 8 August 8 November 7
Preferred shares series BT	February 15 August 17	February 24 August 24

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.

2023 Quarterly earnings release dates

First quarter	March 1
Second quarter	May 25
Third quarter	August 24
Fourth quarter	November 30

2023 Annual and Special Meeting of Common Shareholders

The Annual and Special
Meeting of Common
Shareholders will be held on
Wednesday, April 5, 2023.

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

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