Management's Discussion and Analysis

BMO's Chief Executive Officer and its Chief Financial Officer have signed a statement outlining management's responsibility for financial information in the annual consolidated financial statements and Management's Discussion and Analysis (MD&A). The statement, which can be found on page 138, also explains the roles of the Audit and Conduct Review Committee and Board of Directors in respect of that financial information.

The MD&A comments on BMO's operations and financial condition for the years ended October 31, 2020 and 2019. The MD&A should be read in conjunction with the bank's consolidated financial statements for the year ended October 31, 2020. The MD&A commentary is as at December 1, 2020. Unless otherwise indicated, all amounts are stated in Canadian dollars and have been derived from consolidated financial statements prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board. BMO also complies with interpretations of IFRS by its regulator, the Office of the Superintendent of Financial Institutions Canada. References to generally accepted accounting principles (GAAP) mean IFRS.

Effective the first quarter of 2020, the bank adopted IFRS 16, *Leases*, recognizing the cumulative effect of adoption in opening retained earnings with no changes to prior periods. Prior periods have been reclassified for methodology changes and transfers of certain businesses between operating groups. Refer to page 35.

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Regulatory Filings

BMO's continuous disclosure materials, including its interim consolidated financial statements and interim MD&A, audited annual consolidated financial statements and annual MD&A, Annual Information Form and Notice of Annual Meeting of Shareholders and Management Proxy Circular, are available on BMO's website at www.bmo.com/investorrelations, on the Canadian Securities Administrators' website at www.sedar.com and on the EDGAR section of the SEC's website at www.sec.gov. BMO's Chief Executive Officer and its Chief Financial Officer certify the appropriateness and fairness of BMO's annual and interim consolidated financial statements, MD&A and Annual Information Form, the effectiveness of BMO's disclosure controls and procedures and the effectiveness of, and any material weaknesses relating to, BMO's internal control over financial reporting. Information contained in or otherwise accessible through the bank's website (www.bmo.com), or any third party websites mentioned herein, does not form part of this document.

Factors That May Affect Future Results

As noted in the following Caution Regarding Forward-Looking Statements, all forward-looking statements and information, by their nature, are subject to inherent risks and uncertainties, both general and specific, which may cause actual results to differ materially from the expectations expressed in any forward-looking statement. The Enterprise-Wide Risk Management section starting on page 73 describes a number of risks, including credit and counterparty, market, insurance, liquidity and funding, operational, legal and regulatory, strategic, environmental and social, and reputation risk. Should the bank's risk management framework prove ineffective, there could be a material adverse impact on its financial position and results.

Caution Regarding Forward-Looking Statements

Bank of Montreal's public communications often include written or oral forward-looking statements. Statements of this type are included in this document, and may be included in other filings with Canadian securities regulators or the U.S. Securities and Exchange Commission, or in other communications. All such statements are made pursuant to the "safe harbor" provisions of, and are intended to be forward-looking statements under, the United States *Private Securities Litigation Reform Act of 1995* and any applicable Canadian securities legislation. Forward-looking statements in this document may include, but are not limited to, statements with respect to the bank's objectives and priorities for fiscal 2021 and beyond, its strategies or future actions, its targets, expectations for its financial condition or share price, the regulatory environment in which it operates and the results of or outlook for its operations or for the Canadian, U.S. and international economies, its response to the COVID-19 pandemic and its expected impact on the bank's business, operations, earnings, results, and financial performance and condition, as well as its impact on the bank's customers, competitors, reputation and trading exposures, and include statements of the bank's management. Forward-looking statements are typically identified by words such as "will", "would", "should", "believe", "expect", "anticipate", "project", "intend", "estimate", "plan", "goal", "target", "may" and "could."

By their nature, forward-looking statements require the bank to make assumptions and are subject to inherent risks and uncertainties, both general and specific in nature. There is significant risk that predictions, forecasts, conclusions or projections will not prove to be accurate, that assumptions may not be correct, and that actual results may differ materially from such predictions, forecasts, conclusions or projections. The uncertainty created by the COVID-19 pandemic has heightened this risk given the increased challenge in making assumptions, predictions, forecasts, conclusions or projections. The bank cautions readers of this document not to place undue reliance on forward-looking statements, as a number of factors – many of which are beyond its control and the effects of which can be difficult to predict – could cause actual future results, conditions, actions or events to differ materially from the targets, expectations, estimates or intentions expressed in the forward-looking statements.

Future outcomes that relate to forward-looking statements may be influenced by many factors, including but not limited to: the severity, duration and spread of the COVID-19 pandemic, its impact on local, national or international economies, and its heightening of certain risks that may affect the bank's future results; the possible impact on the bank's business and operations of outbreaks of disease or illness that affect local, national or international economies; general economic and market conditions in the countries in which the bank operates; information, privacy and cyber security, including the threat of data breaches, hacking, identity theft and corporate espionage, as well as the possibility of denial of service resulting from efforts targeted at causing system failure and service disruption; changes in monetary, fiscal, or economic policy, and tax legislation and interpretation; interest rate and currency value fluctuations, as well as benchmark interest rate reforms; technological changes and technology resiliency; political conditions, including changes relating to or affecting economic or trade matters; the Canadian housing market and consumer leverage; climate change and other environmental and social risks; weak, volatile or illiquid capital or credit markets; the level of competition in the geographic and business areas in which the bank operates; changes in laws or in supervisory expectations or requirements, including capital, interest rate and liquidity requirements and guidance, and the effect of such changes on funding costs; judicial or regulatory proceedings; the accuracy and completeness of the information the bank obtains with respect to its customers and counterparties; failure of third parties to comply with their obligations to the bank; the bank's ability to execute its strategic plans and to complete proposed acquisitions or dispositions, including obtaining regulatory approvals; critical accounting estimates and the effect of changes to accounting standards, rules and interpretations on these estimates; operational and infrastructure risks, including with respect to reliance on third parties; changes to the bank's credit ratings; global capital markets activities; the possible effects on the bank's business of war or terrorist activities; natural disasters and disruptions to public infrastructure, such as transportation, communications, power or water supply; and the bank's ability to anticipate and effectively manage risks arising from all of the foregoing factors.

The bank cautions that the foregoing list is not exhaustive of all possible factors. Other factors and risks could adversely affect the bank's results. For more information, please refer to the discussion in the Risks That May Affect Future Results section, and the sections related to credit and counterparty, market, insurance, liquidity and funding, operational, legal and regulatory, strategic, environmental and social, and reputation risk, in the Enterprise-Wide Risk Management section that starts on page 73, all of which outline certain key factors and risks that may affect the bank's future results. Investors and others should carefully consider these factors and risks, as well as other uncertainties and potential events, and the inherent uncertainty of forward-looking statements. The bank does not undertake to update any forward-looking statements, whether written or oral, that may be made from time to time by the organization or on its behalf, except as required by law. The forward-looking information contained in this document is presented for the purpose of assisting shareholders in understanding the bank's financial position as at and for the periods ended on the dates presented, as well as its strategic priorities and objectives, and may not be appropriate for other purposes.

Material economic assumptions underlying the forward-looking statements contained in this document are set out in the Economic Developments and Outlook section on page 18, as well as in the Allowance for Credit Losses section on page 114. Assumptions about the performance of the Canadian and U.S. economies, as well as overall market conditions and their combined effect on the bank's business, are material factors the bank considers when determining its strategic priorities, objectives and expectations for its business. In determining expectations for economic growth, the bank primarily considers historical economic data, past relationships between economic and financial variables, changes in government policies, and the risks to the domestic and global economy.

Who We Are

Established in 1817, BMO Financial Group (BMO, Bank of Montreal or the bank) is a highly diversified financial services provider based in North America. BMO has a deep sense of purpose and a clear strategy for long-term growth. It is the eighth largest bank in North America by assets, with total assets of $949 billion, and has an engaged and diverse base of employees. BMO provides a broad range of personal and commercial banking, wealth management, global markets and investment banking products and services, conducting business through three operating groups: Personal and Commercial Banking, BMO Wealth Management and BMO Capital Markets. The bank serves eight million customers across Canada through its Canadian personal and commercial banking arm, BMO Bank of Montreal. In the United States, the bank serves more than two million personal, business and commercial banking customers through BMO Harris Bank, based in the U.S. Midwest. BMO also serves customers through its wealth management businesses – BMO Private Wealth, BMO InvestorLine, BMO Wealth Management U.S., BMO Global Asset Management and BMO Insurance. BMO Capital Markets provides a full suite of financial products and services to North American and international corporate, institutional and government clients, through its Investment and Corporate Banking and Global Markets divisions.

BMO's Financial Objectives

BMO's medium-term financial objectives for certain important performance measures are set out below. These measures establish a range of performance objectives over time. The bank aims to deliver top-tier total shareholder return and achieve its financial objectives by aligning the operations with, and executing on, its strategic priorities. BMO considers top-tier returns to be top-quartile shareholder returns, relative to the Canadian and North American peer groups.

BMO's business planning process is rigorous, sets ambitious goals and considers the prevailing economic conditions, risk appetite, its customers' evolving needs and the opportunities available across the lines of business. It includes clear and direct accountability for annual performance that is measured against both internal and external benchmarks and progress toward the bank's strategic priorities.

The medium-term financial objectives on an adjusted basis are to achieve average annual earnings per share (adjusted EPS) growth of 7% to 10%, earn an average annual return on equity (adjusted ROE) of 15% or more, generate average annual net operating leverage of 2% or more and maintain capital ratios that exceed regulatory requirements. These objectives are guideposts as the bank executes against its strategic priorities. BMO recognizes, in managing its operations and risk, that current profitability and the ability to meet these objectives in a single period must be balanced with the need to invest in the businesses for future long-term health and growth prospects.

The COVID-19 pandemic has had a negative impact on the global economy and there has been a corresponding negative impact on the bank's financial results in 2020. BMO's one-year adjusted EPS of $7.71 in 2020 was down 18.2% from 2019, as the bank appropriately set aside provisions for credit losses. Adjusted net operating leverage in 2020 was positive 2.7%, reflecting the benefits of the bank's diversified business model and continued focus on disciplined expense management. Adjusted net operating leverage has been positive in each of the past five years. The one-year adjusted ROE was 10.3%, down from 13.7% in 2019, and has averaged approximately 13% over the past five years. With interest rates expected to remain low over the medium term and expectations for increased capital requirements, ROE of 15% will be challenging to meet in the near term, although BMO believes it to be an appropriate objective as the bank continues to invest in areas of strategic importance and enhance the efficiency and profitability of its business. BMO is well-capitalized with a Common Equity Tier 1 Ratio of 11.9%.

Key Performance Data

As at and for the periods ended October 31, 2020	1-year	5-year*	10-year*
Average annual total shareholder return	(14.6)	5.1	7.3
Average growth in annual EPS	(12.8)	3.2	5.2
Average growth in annual adjusted EPS	(18.2)	2.6	5.2
Average annual ROE	10.1	12.2	13.4
Average annual adjusted ROE	10.3	13.1	13.9
Compound growth in annual dividends declared per share	4.4	5.5	4.2
Dividend yield**	5.3	4.2	4.3
Price-to-earnings multiple**	10.5	11.7	11.7
Market value/book value ratio**	1.02	1.39	1.46
Common Equity Tier 1 Ratio	11.9	na	na

* 5-year and 10-year growth rates reflect growth based on Canadian GAAP in 2010 and IFRS in 2015 and 2020, respectively. As results for years prior to 2011 have not been restated, certain growth rates and compound annual growth rates (CAGR) may not be meaningful.

** 1-year measure as at October 31, 2020; 5-year and 10-year measures are the average of year-end values.

na – not applicable

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

BMO's Financial Objectives section above and the Economic Developments and Outlook and Enterprise-Wide Strategy sections that follow contain certain forward-looking statements. By their nature, forward-looking statements require the bank to make assumptions and are subject to inherent risks and uncertainties. Refer to the Caution Regarding Forward-Looking Statements on page 14 of this MD&A for a discussion of such risks and uncertainties and the material factors and assumptions related to the statements set forth in such sections.

Financial Highlights

(Canadian $ in millions, except as noted)	2020	2019	2018
Summary Income Statement			
Net interest income (1)	**13,971**	12,888	11,438
Non-interest revenue	**11,215**	12,595	11,467
Revenue	**25,186**	25,483	22,905
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**1,708**	2,709	1,352
Revenue, net of CCPB	**23,478**	22,774	21,553
Provision for (recovery of) credit losses on impaired loans	**1,522**	751	700
Provision for (recovery of) credit losses on performing loans	**1,431**	121	(38)
Total provision for credit losses	**2,953**	872	662
Non-interest expense	**14,177**	14,630	13,477
Provision for income taxes (2)	**1,251**	1,514	1,961
Net income	**5,097**	5,758	5,453
Adjusted net income	**5,201**	6,249	5,982
Common Share Data ($, except as noted)			
Earnings per share	**7.55**	8.66	8.17
Adjusted earnings per share	**7.71**	9.43	8.99
Earnings per share growth (%)	**(12.8)**	6.0	3.3
Adjusted earnings per share growth (%)	**(18.2)**	4.9	10.3
Dividends declared per share	**4.24**	4.06	3.78
Book value per share	**77.40**	71.54	64.73
Closing share price	**79.33**	97.50	98.43
Number of common shares outstanding (in millions)			
End of period	**645.9**	639.2	639.3
Average diluted	**642.1**	640.4	644.9
Total market value of common shares ($ billions)	**51.2**	62.3	62.9
Dividend yield (%)	**5.3**	4.2	3.8
Dividend payout ratio (%)	**56.1**	46.8	46.1
Adjusted dividend payout ratio (%)	**54.9**	43.0	41.9
Financial Measures and Ratios (%)			
Return on equity	**10.1**	12.6	13.3
Adjusted return on equity	**10.3**	13.7	14.6
Return on tangible common equity	**11.9**	15.1	16.2
Adjusted return on tangible common equity	**11.9**	16.1	17.5
Net income growth	**(11.5)**	5.6	2.1
Adjusted net income growth	**(16.8)**	4.5	8.8
Revenue growth	**(1.2)**	11.3	3.6
Revenue growth, net of CCPB	**3.1**	5.7	4.8
Non-interest expense growth	**(3.1)**	8.6	2.2
Adjusted non-interest expense growth	**0.3**	5.0	3.5
Efficiency ratio, net of CCPB	**60.4**	64.2	62.5
Adjusted efficiency ratio, net of CCPB	**59.8**	61.4	61.9
Operating leverage, net of CCPB	**6.2**	(2.9)	2.6
Adjusted operating leverage, net of CCPB	**2.7**	0.8	1.3
Net interest margin on average earning assets	**1.64**	1.70	1.67
Effective tax rate (2)	**19.7**	20.8	26.5
Adjusted effective tax rate	**19.8**	21.1	20.7
Total PCL-to-average net loans and acceptances (annualized)	**0.63**	0.20	0.17
PCL on impaired loans-to-average net loans and acceptances (annualized)	**0.33**	0.17	0.18
Balance Sheet (as at $ millions, except as noted)			
Assets	**949,261**	852,195	773,293
Gross loans and acceptances	**461,800**	451,537	404,215
Net loans and acceptances	**458,497**	449,687	402,576
Deposits	**659,034**	568,143	520,928
Common shareholders' equity	**49,995**	45,728	41,381
Cash and securities-to-total assets ratio (%)	**31.7**	28.9	29.9
Capital Ratios (%)			
Common Equity Tier 1 Ratio	**11.9**	11.4	11.3
Tier 1 Capital Ratio	**13.6**	13.0	12.9
Total Capital Ratio	**16.2**	15.2	15.2
Leverage Ratio	**4.8**	4.3	4.2
Foreign Exchange Rates ($)			
As at Canadian/U.S. dollar	**1.3319**	1.3165	1.3169
Average Canadian/U.S. dollar	**1.3441**	1.3290	1.2878

(1) Effective the first quarter of 2020, the bank adopted IFRS 16, *Leases* (IFRS 16), recognizing the cumulative effect of adoption in opening retained earnings with no changes to prior periods. Under IFRS 16, the bank as lessee is required to recognize a right-of-use asset and a corresponding lease liability for most leases. BMO recognized $360 million of depreciation on the right-of-use assets recorded in non-interest expense and $53 million of interest on the lease liability recorded in interest expense. Refer to the Changes in Accounting Policies in 2020 section on page 118 for further details.

(2) Fiscal 2018 reported net income included a $425 million (US$339 million) charge related to the revaluation of the bank's U.S. net deferred tax asset as a result of the enactment of the U.S. *Tax Cuts and Jobs Act*. For more information, refer to the Critical Accounting Estimates – Income Taxes and Deferred Tax Assets section on page 116.

Adjusted results in this table are non-GAAP amounts or non-GAAP measures. Please refer to the Non-GAAP Measures section on page 17.

Non-GAAP Measures

Results and measures in this document are presented on a GAAP basis. Unless otherwise indicated, all amounts are in Canadian dollars and have been derived from consolidated financial statements prepared in accordance with International Financial Reporting Standards (IFRS). References to GAAP mean IFRS. They are also presented on an adjusted basis that excludes the impact of certain items, as set out in the table below. Results and measures that exclude the impact of Canadian/U.S. dollar exchange rate movements on BMO's U.S. segment are non-GAAP measures. Refer to the Foreign Exchange section on page 23 for a discussion of the effects of changes in exchange rates on BMO's results. Management assesses performance on a reported basis and on an adjusted basis, and considers both to be useful in assessing underlying ongoing business performance. Presenting results on both bases provides readers with a better understanding of how management assesses results. It also permits readers to assess the impact of certain specified items on results for the periods presented, and to better assess results excluding those items that may not be reflective of ongoing results. As such, the presentation may facilitate readers' analysis of trends. Except as otherwise noted, management's discussion of changes in reported results in this document applies equally to changes in the corresponding adjusted results. Adjusted results and measures are non-GAAP and as such do not have standardized meanings under GAAP. They are unlikely to be comparable to similar measures presented by other companies and should not be viewed in isolation from, or as a substitute for, GAAP results.

(Canadian $ in millions, except as noted)	**2020**	2019	2018
Reported Results			
Revenue	**25,186**	25,483	22,905
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**(1,708)**	(2,709)	(1,352)
Revenue, net of CCPB	**23,478**	22,774	21,553
Provision for credit losses	**(2,953)**	(872)	(662)
Non-interest expense	**(14,177)**	(14,630)	(13,477)
Income before income taxes	**6,348**	7,272	7,414
Provision for income taxes	**(1,251)**	(1,514)	(1,961)
Net Income	**5,097**	5,758	5,453
Diluted EPS ($)	**7.55**	8.66	8.17
Adjusting Items (Pre-tax) (1)			
Acquisition integration costs (2)	**(14)**	(13)	(34)
Amortization of acquisition-related intangible assets (3)	**(121)**	(128)	(116)
Restructuring costs (4)	**–**	(484)	(260)
Reinsurance adjustment (5)	**–**	(25)	–
Benefit from the remeasurement of an employee benefit liability (6)	**–**	–	277
Adjusting items included in reported pre-tax income	**(135)**	(650)	(133)
Adjusting Items (After tax) (1)			
Acquisition integration costs (2)	**(11)**	(10)	(25)
Amortization of acquisition-related intangible assets (3)	**(93)**	(99)	(90)
Restructuring costs (4)	**–**	(357)	(192)
Reinsurance adjustment (5)	**–**	(25)	–
Benefit from the remeasurement of an employee benefit liability (6)	**–**	–	203
U.S. net deferred tax asset revaluation (7)	**–**	–	(425)
Adjusting items included in reported net income after tax	**(104)**	(491)	(529)
Impact on diluted EPS ($)	**(0.16)**	(0.77)	(0.82)
Adjusted Results			
Revenue	**25,186**	25,483	22,905
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**(1,708)**	(2,684)	(1,352)
Revenue, net of CCPB	**23,478**	22,799	21,553
Provision for credit losses	**(2,953)**	(872)	(662)
Non-interest expense	**(14,042)**	(14,005)	(13,344)
Income before income taxes	**6,483**	7,922	7,547
Provision for income taxes	**(1,282)**	(1,673)	(1,565)
Net Income	**5,201**	6,249	5,982
Diluted EPS ($)	**7.71**	9.43	8.99

(1) Adjusting items are generally included in Corporate Services, with the exception of the amortization of acquisition-related intangible assets and certain acquisition integration costs, which are charged to the operating groups, and the reinsurance adjustment, which is included in BMO Wealth Management.

(2) Acquisition integration costs related to the acquired BMO Transportation Finance business are charged to Corporate Services, since the acquisition impacts both Canadian and U.S. P&C businesses. KGS-Alpha and Clearpool acquisition integration costs are reported in BMO Capital Markets. Acquisition integration costs are recorded in non-interest expense.

(3) These amounts are charged to the non-interest expense of the operating groups. Before-tax and after-tax amounts for each operating group are provided on pages 35, 38, 42, 46 and 50.

(4) Fiscal 2019 reported net income included a restructuring charge of $357 million after-tax ($484 million pre-tax), related to severance and a small amount of real estate-related costs, to continue to improve efficiency, including accelerating delivery against key bank-wide initiatives focused on digitization, organizational redesign and simplification of the way BMO does business. The restructuring charges in 2018 were a result of similar bank-wide programs. Restructuring costs are included in non-interest expense in Corporate Services.

(5) Fiscal 2019 reported net income included a reinsurance adjustment of $25 million (pre-tax and after-tax) in claims, commissions and changes in policy benefit liabilities for the net impact of major reinsurance claims from Japanese typhoons incurred after the announced wind-down of the reinsurance business. This reinsurance adjustment is included in BMO Wealth Management.

(6) Fiscal 2018 reported net income included a benefit of $203 million after-tax ($277 million pre-tax) from the remeasurement of an employee benefit liability as a result of an amendment to the other employee future benefits plan for certain employees that was announced in the fourth quarter of 2018. This amount has been included in non-interest expense in Corporate Services.

(7) Fiscal 2018 reported net income included a $425 million (US$339 million) charge related to the revaluation of a U.S. net deferred tax asset as a result of the enactment of the U.S. *Tax Cuts and Jobs Act*. For more information, refer to the Critical Accounting Estimates – Income Taxes and Deferred Tax Assets section on page 116.

Certain comparative figures have been reclassified to conform with the current year's presentation.

Adjusted results in this table are non-GAAP amounts or non-GAAP measures. Please refer to the Non-GAAP Measures section on page 17.

Economic Developments and Outlook

Economic Developments in 2020 and Outlook for 2021

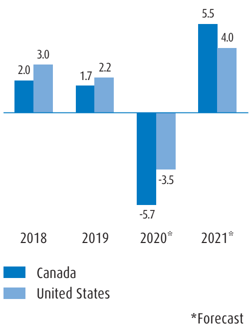
The Canadian economy experienced an historic contraction in the first half of 2020 in response to business closures and precautionary measures implemented to contain the spread of COVID-19. The subsequent reopening of certain non-essential businesses, as well as a rebound in energy and other resource prices, led to a partial recovery in economic activity that was greatly assisted by substantial government income-support measures. Consumer spending and housing markets also benefitted from very low interest rates. However, the permanent closure of some businesses, along with increased caution on the part of consumers and businesses and renewed restrictions on some activities in the face of a recent increase in virus infections, suggests the economy will not return to pre-virus levels of activity until at least the second half of 2021. Real GDP is estimated to contract 5.7% in 2020, before rebounding an expected 5.5% in 2021 if the pandemic is contained. The unemployment rate, which rose to a postwar high of 13.7% during the shutdowns, subsequently declined to 8.9% in October and is projected to average a still-elevated 7.5% in 2021. Low inflation should encourage the Bank of Canada to hold the overnight policy rate near zero for several years to support economic expansion and reduce unemployment. The Canadian dollar is projected to strengthen modestly in 2021 amid firmer resource prices and diminished safe-haven demand for U.S. dollars as the global economy recovers. Industry-wide consumer credit balances (excluding mortgages) have declined due to earlier weakness in consumer spending and significant government income-support measures. Consumer credit demand is anticipated to remain subdued in 2021 due to elevated unemployment levels and heightened economic uncertainty. Residential mortgage balances have risen in response to low mortgage rates, pent-up housing demand, and a shift toward the purchase of larger homes as a result of more remote working, but growth is expected to moderate alongside more muted housing market activity in 2021. Though moderating recently, industry-wide business credit has been supported by government assistance programs that were facilitated through banks. Demand for commercial loans is anticipated to increase further in 2021 as business confidence and spending improve.

After contracting sharply in the first half of 2020, the U.S. economy has partially recovered its losses. Consumer spending is driving the recovery amid extraordinary fiscal policy support and record-low interest rates, which have also led to a strong rebound in housing market activity. However, a recent upturn in COVID-19 cases has led to some reversal of reopening plans and slower activity in some states. The U.S. economy is estimated to contract 3.5% in 2020, but is projected to rebound 4.0% in 2021, as the pandemic is eventually brought under control. While there is considerable ongoing political uncertainty in the U.S., it appears that only moderate additional pandemic relief measures will be forthcoming. After reaching a postwar high of 14.7% in April, the unemployment rate fell to 6.9% in October and is likely to average 6.0% in 2021. The Federal Reserve is expected to keep policy rates close to zero until 2024, as it aims to lift inflation above the 2% target for some time. After slowing in 2020, industry-wide consumer credit growth is projected to improve in 2021. Growth in residential mortgages is expected to remain moderate as housing market activity stabilizes. After surging in the first half of 2020, due to the pandemic raising concerns about revenues and liquidity and with assistance from government loan programs, industry-wide commercial credit declined in the second half of 2020. It is projected to increase in 2021 as business investment improves.

The unpredictable course of the coronavirus pandemic subjects the economic outlook to a high degree of uncertainty that is likely to persist until a vaccine becomes available and is widely distributed. Specifically, the possibility of a further escalation in virus cases could lead to renewed widespread shutdowns of non-essential business activity, potentially leading to another economic contraction. Other risks to the economic outlook include strained U.S./China trade relations, reduced fiscal policy support in the face of rising budget deficits, and other possible geopolitical events.

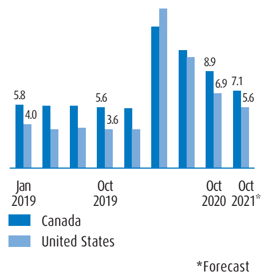
This Economic Developments and Outlook section contains forward-looking statements. Please see the Caution Regarding Forward-Looking Statements.

Real Growth in Gross Domestic Product (%)



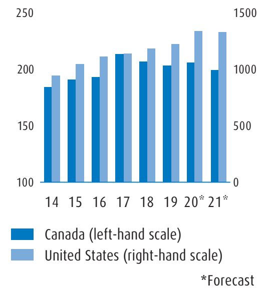
The U.S. and Canadian economies are expected to rebound in 2021 after the historic pandemic-led downturn of 2020.

Canadian and U.S. Unemployment Rates (%)



Unemployment rates are projected to decline further but remain elevated in 2021.

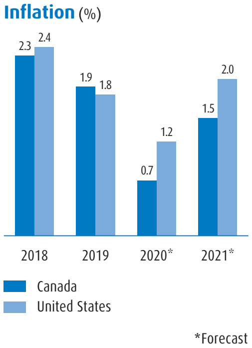
Housing Starts
(in thousands)



Housing market activity should stabilize at high levels in 2021.

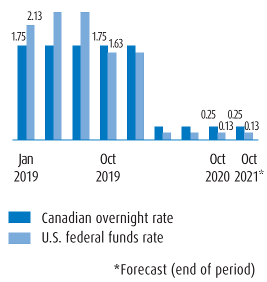
MD&A

Consumer Price Index Inflation (%)



Inflation is expected to increase but remain constrained by high unemployment.

Canadian and U.S. Interest Rates (%)



Central banks are expected to keep rates steady for several years.

Canadian/U.S. Dollar Exchange Rates

The Canadian dollar is expected to strengthen modestly in 2021 due to firmer resource prices.

Data points are averages for the month, quarter or year, as appropriate, except for interest rates, which are for the period-end. References to years are calendar years.

Enterprise-Wide Strategy

BMO's Purpose: Boldly Grow the Good *in business and life*

BMO's Strategic Priorities

- **World-class** client loyalty and growth
- **Winning culture** driven by alignment, empowerment and recognition
- **Digital first** for speed, efficiency and scale
- **Simplify** work and **eliminate complexity**
- **Superior management** of **risk** and **capital** performance

The fundamentals of BMO's strategy remain consistent, and the bank has renewed its priorities for 2021 to reflect its strong momentum and the changing environment. Group strategic priorities align with and support the enterprise-wide strategy, positioning the bank well to drive competitive performance.

Operating group strategies are outlined in the 2020 Operating Groups Performance Review, which starts on page 34.

BMO's Values

Integrity

Do what's right

Empathy

Put others first

Diversity

Learn from difference

Responsibility

Make tomorrow better

BMO's Sustainability Strategy

The bank's commitment to sustainability is fundamental to its purpose. As outlined in BMO's Sustainability Report, BMO applies industry-leading approaches to capture opportunities and manage risks in key areas such as sustainable finance, climate change, human rights, and diversity and inclusion. With a Bold Commitment to a Sustainable Future and strong principles of ethical governance, BMO builds trust with its stakeholders. The bank's sustainability strategy enables positive impacts, including:

- Delivering long-term value for shareholders by strengthening the bank's resilience against sustainability risks
- Building stronger communities through inclusive relationships with customers, suppliers and partners that address economic disparity
- Promoting zero barriers to inclusion across the organization by prioritizing diversity and inclusion for all
- Contributing to global climate goals and facilitating a just transition to a lower-carbon and resource-efficient economy that takes social and economic well-being into account

BMO is committed to driving positive change, and it is through its evolving sustainability strategy that the bank takes on tomorrow's challenges and opportunities.

Value Measures

Total Shareholder Return

The average annual total shareholder return (TSR) is a key measure of shareholder value, and over time, confirms that BMO's strategic priorities drive value creation for its shareholders. The five-year average annual TSR was positive 5.1%. The one-year and three-year average annual TSRs were negative 14.6% and negative 3.1%, respectively, and underperformed the overall market in Canada.

The table below summarizes dividends paid on BMO common shares over the past five years and the movements in BMO's share price. An investment of $1,000 in BMO common shares made at the beginning of fiscal 2016 would have been worth $1,281 as at October 31, 2020, assuming reinvestment of dividends, for a total return of 28.1%.

Dividends declared per common share in fiscal 2020 totalled $4.24, an increase of approximately 4% from the prior year. In line with the Office of the Superintendent of Financial Institutions' announcement on March 13, 2020 that it expected federally regulated financial institutions (FRFIs) to halt dividend increases for the time being, BMO did not increase the quarterly dividend declared in fiscal 2020. Dividends paid over a five-year period have increased at an average annual compound rate of approximately 6%.

The **average annual total shareholder return (TSR)** represents the average annual total return earned on an investment in BMO common shares made at the beginning of a fixed period. The return includes the change in share price and assumes dividends received were reinvested in additional common shares.

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Total Shareholder Return

For the year ended October 31	**2020**	2019	2018	2017	2016	**3-year CAGR** (1)	**5-year CAGR** (1)
Closing market price per common share ($)	**79.33**	97.50	98.43	98.83	85.36	**(7.1)**	**0.9**
Dividends paid ($ per share)	**4.21**	3.99	3.72	3.52	3.36	**6.1**	**5.6**
Dividend yield (%)	**5.3**	4.2	3.8	3.6	4.0	**nm**	**nm**
Increase (decrease) in share price (%)	**(18.6)**	(0.9)	(0.4)	15.8	12.3	**nm**	**nm**
Total annual shareholder return (%) (2)	**(14.6)**	3.2	3.3	20.2	17.0	**(3.1)**	**5.1**

(1) Compound annual growth rate (CAGR) expressed as a percentage.

(2) Total annual shareholder return assumes reinvestment of quarterly dividends and therefore does not equal the sum of dividend and share price returns in the table.

nm – not meaningful

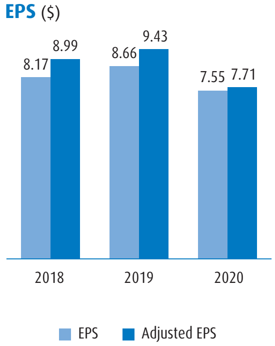
Earnings per Share Growth

The year-over-year percentage changes in earnings per share (EPS) and in adjusted EPS are the bank's key measures for analyzing earnings growth. All references to EPS are to diluted EPS, unless otherwise indicated.

EPS was $7.55, down $1.11 or 13% from $8.66 in 2019. Adjusted EPS was $7.71, down $1.72 or 18% from $9.43 in 2019. The decrease in EPS primarily reflected lower earnings. Reported net income available to common shareholders was down 13% year-over-year, while the average number of diluted common shares outstanding was relatively unchanged.

Earnings per share (EPS) is calculated by dividing net income, after deducting preferred share dividends and distributions on other equity instruments, by the average number of common shares outstanding. Diluted EPS, which is BMO's basis for measuring performance, adjusts for possible conversions of financial instruments into common shares if those conversions would reduce EPS, and is more fully explained in Note 23 on page 204 of the consolidated financial statements. Adjusted EPS is calculated in the same manner using adjusted net income.

EPS ($)

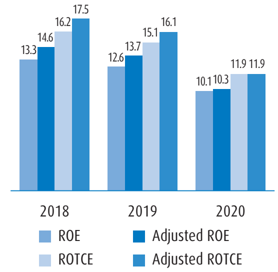


Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

Return on Equity

Reported return on equity (ROE) was 10.1% in 2020 and adjusted ROE was 10.3%, compared with 12.6% and 13.7%, respectively, in 2019. Reported and adjusted ROE decreased in 2020, primarily due to lower net income and higher common equity. There was a decrease of $697 million or 13% in reported net income available to common shareholders and a decrease of $1,084 million or 18% in adjusted net income available to common shareholders in 2020. Average common shareholders' equity increased $4.1 billion or 9% from 2019, primarily due to growth in retained earnings and accumulated other comprehensive income. The reported return on tangible common equity (ROTCE) was 11.9%, compared with 15.1% in 2019, and adjusted ROTCE was 11.9%, compared with 16.1% in 2019. Book value per share increased 8% from the prior year to $77.40, largely reflecting the increase in shareholders' equity.

ROE (%)



Return on common shareholders' equity (ROE) is calculated as net income, less preferred dividends and distributions on other equity instruments as a percentage of average common shareholders' equity. Common shareholders' equity is comprised of common share capital, contributed surplus, accumulated other comprehensive income (loss) and retained earnings. Adjusted ROE is calculated using adjusted net income rather than net income.

Return on tangible common equity (ROTCE) is calculated as net income available to common shareholders adjusted for the amortization of acquisition-related intangible assets as a percentage of average tangible common equity. Tangible common equity is calculated as common shareholders' equity less goodwill and acquisition-related intangible assets, net of related deferred tax liabilities. Adjusted ROTCE is calculated using adjusted net income rather than net income. ROTCE is commonly used in the North American banking industry and is meaningful because it measures the performance of businesses consistently, whether they were acquired or developed organically.

Return on Equity and Return on Tangible Common Equity

(Canadian $ in millions, except as noted) For the year ended October 31	**2020**	2019	2018
Reported net income	**5,097**	5,758	5,453
Dividends on preferred shares and distributions on other equity instruments	**(247)**	(211)	(184)
Net income available to common shareholders (A)	**4,850**	5,547	5,269
After-tax amortization of acquisition-related intangible assets	**93**	99	90
Net income available to common shareholders after adjusting for amortization of acquisition-related intangible assets (B)	**4,943**	5,646	5,359
After-tax impact of other adjusting items (1)	**11**	392	439
Adjusted net income available to common shareholders (C)	**4,954**	6,038	5,798
Average common shareholders' equity (D)	**48,235**	44,170	39,754
Return on equity (%) (= A/D)	**10.1**	12.6	13.3
Adjusted return on equity (%) (= C/D)	**10.3**	13.7	14.6
Average tangible common equity (E)	**41,484**	37,456	33,125
Return on tangible common equity (%) (= B/E)	**11.9**	15.1	16.2
Adjusted return on tangible common equity (%) (= C/E)	**11.9**	16.1	17.5

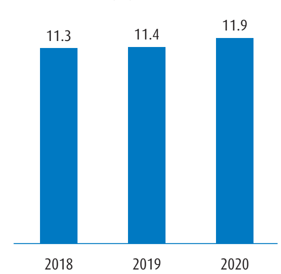
(1) Other adjusting items included the reinsurance adjustment in 2019, a charge related to the revaluation of a U.S. net deferred tax asset and a benefit from the remeasurement of an employee benefit liability in 2018. Acquisition integration costs are included in 2020, 2019 and 2018, and both 2019 and 2018 include restructuring charges.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

Common Equity Tier 1 Ratio

BMO's Common Equity Tier 1 (CET1) Ratio reflects a well-capitalized position relative to the risk in its business. The bank's CET1 Ratio was 11.9% as at October 31, 2020, compared with 11.4% as at October 31, 2019. The CET1 Ratio increased from the end of fiscal 2019, as higher CET1 capital, primarily from retained earnings growth, the adjustment for transitional arrangements for expected credit loss provisioning and the elimination of the provisioning shortfall deduction, common shares issued through the Shareholder Dividend Reinvestment and Share Purchase Plan and other net positive impacts, more than offset higher risk-weighted assets, primarily due to changes in asset quality and increased asset size.

CET1 Ratio (%)



Common Equity Tier 1 (CET1) Ratio is calculated as CET1 capital, which is comprised of common shareholders' equity, net of deductions for goodwill, intangible assets, pension assets, certain deferred tax assets and other items which may include a portion of expected credit loss provisions, divided by risk-weighted assets.

2020 Financial Performance Review

This section provides a review of BMO's enterprise financial performance for 2020 that focuses on the Consolidated Statement of Income in BMO's consolidated financial statements, which start on page 145. A review of the operating groups' strategies and performance follows the enterprise review. A summary of the enterprise financial performance for 2019 starts on page 57.

Foreign Exchange

The Canadian dollar equivalents of BMO's U.S. results that are denominated in U.S. dollars increased relative to 2019 due to the stronger U.S. dollar. The table below indicates the relevant average Canadian/U.S. dollar exchange rates and the impact of changes in those rates on BMO's U.S. segment results. References in this document to the impact of the U.S. dollar do not include U.S. dollar-denominated amounts recorded outside of BMO's U.S. segment.

Changes in the exchange rate will affect future results measured in Canadian dollars, and the impact on those results is a function of the periods in which revenue, expenses, provisions for (recoveries of) credit losses and income taxes arise. If future results are consistent with results in 2020, each one cent increase (decrease) in the Canadian/U.S. dollar exchange rate, expressed in terms of how many Canadian dollars one U.S. dollar buys, would be expected to increase (decrease) the Canadian dollar equivalent of BMO's U.S. segment net income before income taxes for the year by $15 million, in the absence of hedging transactions.

Economically, the bank's U.S. dollar income stream was unhedged to changes in foreign exchange rates during 2020, 2019 and 2018. BMO regularly determines whether to enter into hedging transactions in order to mitigate the impact of foreign exchange rate movements on net income.

Refer to the Enterprise-Wide Capital Management section on page 63 for a discussion of the impact that changes in foreign exchange rates can have on the bank's capital position.

Changes in foreign exchange rates will also affect accumulated other comprehensive income, primarily as a result of the translation of investment in foreign operations and the carrying value of assets and liabilities on the balance sheet. Each one cent increase (decrease) in the Canadian/U.S. dollar exchange rate, expressed in terms of how many Canadian dollars one U.S. dollar buys, would be expected to increase (decrease) the translation of BMO's investment in foreign operations by $161 million.

Effects of Changes in Exchange Rates on BMO's U.S. Segment Reported and Adjusted Results

(Canadian $ in millions, except as noted)	**2020 vs. 2019**	2019 vs. 2018
Canadian/U.S. dollar exchange rate (average)		
2020	**1.3441**	
2019	**1.3290**	1.3290
2018		1.2878
Effects on U.S. segment reported results		
Increased (Decreased) net interest income	**68**	141
Increased (Decreased) non-interest revenue	**30**	94
Increased (Decreased) revenue	**98**	235
Decreased (Increased) provision for credit losses	**(30)**	(7)
Decreased (Increased) expenses	**(58)**	(166)
Decreased (Increased) income taxes	**(1)**	(34)
Increased (Decreased) reported net income	**9**	28
Effects on U.S. segment adjusted results		
Increased (Decreased) net interest income	**68**	141
Increased (Decreased) non-interest revenue	**30**	94
Increased (Decreased) revenue	**98**	235
Decreased (Increased) provision for credit losses	**(30)**	(7)
Decreased (Increased) expenses	**(57)**	(161)
Decreased (Increased) income taxes	**(2)**	(13)
Increased (Decreased) adjusted net income	**9**	54

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

Caution
This Foreign Exchange section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

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Impact of COVID-19

The World Health Organization declared COVID-19 a global pandemic on March 11, 2020. The emergence and spread of the COVID-19 pandemic dealt a major shock to the North American and global economies in 2020. During the first half of the year, widespread lockdown measures resulted in the steepest and most synchronized global recession on record. Extraordinary policy support on the part of governments and central banks has helped to cushion the impact, but continuing economic impacts and rising caseloads are constraining the recovery. The impact that the pandemic will have on the economy, markets and the bank's business remains uncertain. For additional information, please refer to the Economic Developments and Outlook section on page 18 and the Risks That May Affect Future Results section on page 73.

BMO responded quickly to COVID-19 challenges, with the first priority being to ensure the safety and well-being of employees and customers. The bank is working closely with relevant public health authorities to monitor the situation and will continue to follow their guidance to make informed decisions. Health and safety measures were implemented during the year, including plexiglass shields and physical distancing markers in branches, and enhanced cleaning protocols. BMO maintained strong operational resilience throughout the COVID-19 pandemic, including access to call centres, ATMs and retail branches, and enabled remote working capabilities for its non-branch workforce. The bank launched additional innovative technology and tools across the enterprise to foster effective virtual collaboration for employees and customers. While at the onset of the pandemic branch operations were reduced, by summer almost all BMO branches in Canada and the United States were open. In March, over 90% of BMO's non-branch workforce quickly shifted to working remotely due to the pandemic. BMO applied new ways of connecting for its employees and with its customers, such as increased use of virtual communication tools, electronic signatures and digital processing capabilities. The bank is committed to fostering a supportive work environment to help employees manage increased responsibilities and multiple commitments during these unique times. To support the health and wellness of its employees, BMO launched a virtual healthcare service that enables employees to have access to physicians and nurse practitioners through text and video chat. BMO has taken steps to assess and mitigate internal control risks created by the shift in the work environment.

Given the pandemic's impact on the global economy, there has been a corresponding negative impact on the bank's financial results. Impacts on the bank's financial results include higher provisions for credit losses, lower loan growth, strong deposit growth, a negative impact on revenue from lower interest rates, a positive impact on trading revenue due to client activity and low expense growth. There was good revenue performance in market sensitive businesses in the second half of the year, following a volatile second quarter, while revenue in the Canadian and U.S. P&C businesses was impacted by the environment, including lower interest rates, reflecting the 150 basis points of interest rate cuts implemented by the Bank of Canada and the Federal Reserve during the second quarter of 2020, and lower loan growth. Loan balances were elevated in the second quarter, largely driven by increased client utilizations in wholesale portfolios, and moderated in the second half of the year. Deposit growth was strong throughout the year, in part reflecting the higher amount of liquidity retained by the bank's customers due to the impact of the pandemic. The provision for credit losses was $2,953 million in 2020, up significantly from $872 million in 2019, primarily due to COVID-19. The provision for credit losses on impaired loans was $1,522 million and the provision for credit losses on performing loans was $1,431 million. For further information, refer to Critical Accounting Estimates – Allowance for Credit Losses on page 114. The bank maintained a disciplined approach to expense management throughout the year, with adjusted expenses relatively unchanged from the prior year. During the year, the bank incurred incremental costs as a result of COVID-19, including a stipend for front-line employees, cleaning costs and personal protective equipment costs to ensure the safety of its customers and employees. Certain expenses were also lower due to the pandemic, including lower travel and business development costs.

For additional information on COVID-19 pandemic-related risks, please refer to the Risks That May Affect Future Results section on page 73.

BMO prudently managed liquidity and funding throughout the year. The bank entered the second quarter with a strong liquidity position and acted early and throughout the COVID-19 market disruption. The bank accessed the wholesale term markets in the second quarter to raise long-term funding and increased liquid assets, including central bank cash deposits and sovereign bonds, to meet potential future funding needs. BMO experienced strong customer deposit flows throughout the year while loans first increased in the second quarter before declining in the second half of the year, as customers decreased borrowing activity. In addition, given market disruption and volatility, central banks around the world announced a number of programs that were targeted to support the financial and funding markets and the provision of support to customers affected by the pandemic. BMO used these programs in the second quarter in a manner consistent with other banks, given market disruptions. The bank's borrowings under these central bank programs were largely repaid by the end of the second quarter, with the exception of certain borrowings under the Bank of Canada term repo facility that mature through the second quarter of 2021. Through the second half of the year, the bank maintained more liquidity than it would normally target to hold, in part due to strong customer deposit growth. For additional information, please refer to the Liquidity and Funding Risk section on page 97.

As part of a coordinated effort by federal agencies to address the market disruption posed by the COVID-19 pandemic, the Office of the Superintendent of Financial Institutions (OSFI) announced a suite of modifications to capital requirements, effective from the second quarter of 2020, to afford institutions further flexibility in addressing the conditions, while promoting financial resilience and stability. With the exception of the special capital treatment for loan payment deferrals, which OSFI announced in August 2020 is gradually being phased out, the modifications introduced in the second quarter remained in effect in the fourth quarter. On November 5, 2020, OSFI announced an extension from April 30, 2021 to December 31, 2021 of the temporary exclusion of leverage exposures related to central bank reserves and sovereign-issued securities that qualify as High Quality Liquid Assets under the Liquidity Adequacy Requirements Guideline. For those other modifications that are temporary in nature, OSFI has advised that it will provide guidance on the unwinding of the changes at the appropriate time. This includes the expectation, which OSFI set effective March 13, 2020, that dividend increases and share buybacks for all FRFIs should be halted for the time being. BMO's capital position reflected elevated lending utilization in the second quarter and strengthened in the second half of the year. For additional information, please refer to the Enterprise-Wide Capital Management section on page 63.

BMO continues to support its customers in this challenging environment by taking decisive steps to bring customers innovative solutions and easy access to the core financial services they depend on, and worked closely with governments and agencies to implement programs to reduce the financial hardship caused by COVID-19, including payment deferrals and lending facilities designed to help individuals and businesses to withstand stress and recover financially.

The following table shows the uptake of payment deferral programs by geography and product type. Numbers represent active deferrals outstanding at the end of the period. Since March, the bank granted payment deferrals to over 256,000 retail accounts in Canada and the United States. Requests for payment deferrals peaked in the second quarter and declined significantly thereafter. Deferrals continued to decline in the fourth quarter, with the large majority of clients resuming payments after exiting the deferral program. The maturities are being closely monitored and actively managed. As of October 31, 2020, the bank had approximately $3.8 billion of balances under payment deferral programs in Canada, and US$0.69 billion in the United States.

Payment Deferrals

	As at October 31, 2020			As at July 31, 2020			As at April 30, 2020		
Canada (1)	**Number of accounts (in thousands)** (3)	**Outstanding Balances* (Canadian $ in billions)**	**% of portfolio**	Number of accounts (in thousands) (3)	Outstanding Balances* (Canadian $ in billions)	% of portfolio	Number of accounts (in thousands) (3)	Outstanding Balances* (Canadian $ in billions)	% of portfolio
Mortgages (including amortizing HELOC)	**7.7**	**2.66**	**2%**	52.3	17.25	14%	55.0	17.16	14%
Credit Cards	**4.0**	**0.04**	**1%**	38.5	0.34	5%	37.3	0.33	5%
All other personal lending	**7.3**	**0.26**	**1%**	84.8	2.37	7%	89.1	2.43	7%
Total Retail – Canada	**19.0**	**2.96**	**2%**	175.6	19.96	12%	181.4	19.92	13%
Commercial Banking	**0.4**	**0.85**	**1%**	7.2	9.40	11%	7.4	15.08	17%
United States (2)	**(US$ in billions)**			(US$ in billions)			(US$ in billions)		
Mortgages	**0.4**	**0.11**	**1%**	1.5	0.45	8%	2.0	0.57	10%
Indirect Auto	**3.5**	**0.08**	**2%**	8.0	0.21	4%	14.2	0.32	6%
All other personal lending	**1.7**	**0.05**	**1%**	4.0	0.14	3%	5.2	0.15	3%
Total Retail – United States	**5.6**	**0.24**	**1%**	13.5	0.80	5%	21.4	1.04	6%
Commercial Banking	**0.7**	**0.45**	**1%**	1.4	0.90	1%	1.1	3.62	4%

* Outstanding balances for accounts/clients with payments deferred. Numbers are approximate.

(1) In Canada, mortgage deferrals were available for one to six months. Canadian personal mortgages exclude balances related to non-proprietary mortgages, consistent with an industry reporting definition established by the Canadian Bankers Association; there were approximately $56 million in balances outstanding related to non-proprietary mortgages in deferral as at October 31, 2020, and approximately $2 billion as at July 31, 2020 and April 30, 2020. For other retail loans and cards, the deferral offer was one to six months. Commercial deferrals were granted for three to six months.

(2) In the United States, deferrals on consumer products were available for up to six months. Commercial deferrals were granted for three months.

(3) Represents number of clients for Commercial Banking.

During 2020, the Canadian and U.S. governments offered programs in response to the COVID-19 pandemic to support businesses facing economic hardship, including the Canada Emergency Business Account (CEBA) program, the Government of Canada's Business Credit Availability Program (BCAP), which includes the Business Development Bank of Canada (BDC) Co-Lending program and the Export Development Canada (EDC) BCAP Guarantee, and the U.S. Small Business Administration (SBA) Paycheck Protection Program. Under the CEBA program BMO issues loans funded by the government. The bank assessed whether substantially all the risks and rewards of the loans under this program were transferred to the government and determined they qualify for derecognition; therefore, the bank does not record these loans on the Consolidated Balance Sheet. Under the BDC Co-Lending program, the loans are in part funded by the BDC with the remaining portion funded by BMO and recognized on the Consolidated Balance Sheet. The SBA Paycheck Protection Program was designed by the U.S. federal government to provide small businesses with a direct incentive to keep their workers on payroll, with the SBA forgiving the loans if all employee retention criteria are met and the funds are used for eligible expenses. The bank will be paid by the SBA for any portion of the loan that is forgiven.

In Canada, the bank facilitated $2.9 billion in funding for over 72,000 business banking accounts under the CEBA program. In the United States, BMO had more than US$4.7 billion in total loans outstanding to approximately 22,000 businesses under the SBA's Paycheck Protection Program. The bank has taken a personal and relationship-based approach that considers the unique needs of each customer and leverages its long history and experience through many economic cycles.

In addition to offering financial relief measures to its customers, and guided by its Purpose, to Boldly Grow the Good *in business and life*, the bank also donated to community relief efforts. In Canada, BMO donated $1 million to the United Way Community Fund to support gaps in community services due to COVID-19. In the United States, BMO donated US$500,000 to support crisis relief efforts in areas of immediate community need.

The COVID-19 pandemic has heightened exposure in the cyber threat landscape, including a significant increase in phishing campaigns, which were successfully blocked. The bank has further invested in its technological infrastructure and is enhancing processes to maintain resilience, while improving the ability to prevent, detect and recover from cyber security threats, keeping customers and employees safe. Despite concerns related to heightened cyber threats throughout the crisis, the impacts to BMO have been minimal. BMO's Financial Crimes Unit (FCU) remains fully engaged across a number of security pillars (cyber, fraud, physical security and crisis management) and has been pivotal in implementing risk mitigation strategies in response to the increase in cyber threats during the pandemic.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

Caution

The extent to which the COVID-19 pandemic impacts the bank's business, results of operations, reputation and financial performance and condition, including its regulatory capital and liquidity ratios, and credit ratings, as well as its impact on the bank's customers, competitors and trading exposures, and the potential loss from higher credit, counterparty and mark-to-market losses, will depend on future developments, which are highly uncertain and cannot be predicted, including the scope, severity and duration of the pandemic and actions taken by governments and governmental and regulatory authorities, which could vary by country and region, and other third parties in response to the pandemic. The COVID-19 pandemic may also impact the bank's ability to achieve, or the timing to achieve, certain previously announced targets, goals and objectives. For additional information, please refer to the Risks That May Affect Future Results section on page 73.

This Impact of COVID-19 section contains forward-looking statements. Please see the Caution Regarding Forward-Looking Statements on page 14.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

Net Income

Reported net income was $5,097 million, or 11% lower than $5,758 million in the prior year. Adjusted net income was $5,201 million, or 17% lower than $6,249 million in the prior year. Adjusted net income in the current and prior year excludes the amortization of acquisition-related intangible assets and acquisition-related costs. The prior year also excludes a restructuring charge and the net impact of major reinsurance claims incurred after the announced wind-down of the reinsurance business. For more information, refer to the Non-GAAP Measures table on page 17.

The decline in adjusted net income reflects the impact of higher provisions for credit losses, which increased $2,081 million pre-tax or $1,531 million after tax, partially offset by higher revenue. Decreases in adjusted net income were recorded in the P&C businesses, while BMO Capital Markets and BMO Wealth Management were largely unchanged from the prior year. In Corporate Services, the reported net loss decreased, while the adjusted net loss increased.

Canadian P&C reported net income was $2,028 million, or 23% lower than $2,624 million in the prior year, and adjusted net income was $2,030 million, also 23% lower from $2,626 million in the prior year, largely due to higher provisions for credit losses, with higher revenue offset by higher expenses. Adjusted net income excludes the amortization of acquisition-related intangible assets.

U.S. P&C reported net income was $1,277 million, or 21% lower than $1,611 million in the prior year, and adjusted net income was $1,316 million, or 20% lower than $1,654 million in the prior year. Adjusted net income excludes the amortization of acquisition-related intangible assets. On a U.S. dollar basis, reported net income was $950 million, or 22% lower than $1,212 million in the prior year, and adjusted net income was $980 million, or 21% lower than $1,244 million in the prior year, due to higher provisions for credit losses, partially offset by lower expenses and higher revenue.

BMO Wealth Management reported net income was $1,096 million, an increase of $37 million or 3% from the prior year, and adjusted net income was $1,130 million, an increase of $9 million or 1%. Adjusted net income excludes the net impact of major reinsurance claims incurred in the prior year after the announced wind-down of the reinsurance business and the amortization of acquisition-related intangible assets in both years. Traditional Wealth reported net income was $893 million, an increase of $32 million or 4% from the prior year, and adjusted net income was $927 million, an increase of $29 million or 3%, primarily due to higher revenue and lower expenses, including the benefits from focused expense management. Insurance net income was $203 million, an increase of $5 million on a reported basis and a decrease of $20 million on an adjusted basis from the prior year, primarily due to higher creditor insurance claims.

BMO Capital Markets reported net income was $1,087 million and adjusted net income was $1,116 million, both relatively unchanged from the prior year. Adjusted net income excludes the amortization of acquisition-related intangible assets and acquisition integration costs. Higher revenue and lower expenses were offset by higher provisions for credit losses.

Corporate Services reported and adjusted net loss was $391 million, compared with a reported net loss of $627 million and an adjusted net loss of $270 million in the prior year. Adjusted results in the prior year exclude a restructuring charge. The adjusted net loss increased, primarily due to higher expenses, lower treasury-related revenue reflecting the impact of higher levels of excess customer deposits, and higher provisions for credit losses.

Further discussion is provided in the 2020 Operating Groups Performance Review section on pages 34 to 53.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

Revenue [1][2]

Reported revenue was $25,186 million, compared with $25,483 million in the prior year. On a basis that nets insurance claims, commissions and changes in policy benefit liabilities (CCPB) against insurance revenue (net revenue), revenue was $23,478 million, an increase of $704 million or 3%. Revenue net of adjusted CCPB increased $679 million or 3% from the prior year, and excludes the net impact of major reinsurance claims incurred after the announced wind-down of the reinsurance business in 2019. The increase in revenue was largely driven by strong performance in BMO Capital Markets, primarily due to increased trading revenue, and increases in the P&C businesses and BMO Wealth Management, partially offset by a decrease in Corporate Services revenue.

BMO analyzes revenue at the consolidated level based on GAAP revenue as reported in the consolidated financial statements, and on an adjusted basis. Consistent with the Canadian peer group, the bank analyzes revenue on a taxable equivalent basis (teb) at the operating group level. The teb adjustments for 2020 totalled $335 million, an increase from $296 million in 2019.

Canadian P&C revenue increased $51 million or 1% from the prior year, due to higher average balances across most products, partially offset by lower margins reflecting the low interest rate environment, and lower non-interest revenue, largely due to lower credit card fee revenue and deposit fee revenue.

U.S. P&C revenue increased $153 million or 3% from the prior year on a Canadian dollar basis**.** On a U.S. dollar basis, revenue was $4,113 million, an increase of $65 million or 2%, primarily due to growth in average deposit and loan balances, higher loan margins, as well as higher non-interest revenue, partially offset by lower deposit product margins, reflecting the impact of lower rates.

BMO Wealth Management revenue, net of reported and adjusted CCPB, was $5,000 million, an increase of $47 million or 1% on a reported basis, and an increase of $22 million on an adjusted basis from the prior year. Revenue in Traditional Wealth was $4,593 million, an increase of $38 million, primarily due to elevated online brokerage revenue and growth in client assets, net of fee pressure, partially offset by a legal provision in the current year and lower net interest income, as the benefits from strong loan and deposit growth were more than offset by lower margins. Insurance revenue, net of reported and adjusted CCPB, was $407 million, an increase of $9 million on a reported basis, and a decrease of $16 million on an adjusted basis, primarily due to higher creditor insurance claims.

BMO Capital Markets revenue was $5,326 million, an increase of $567 million or 12% from the prior year, or 11% excluding the impact of the stronger U.S. dollar. Global Markets revenue increased, primarily due to higher interest rate trading, commodities trading and foreign exchange trading revenue, partially offset by lower equities trading revenue. Investment and Corporate Banking revenue increased, primarily due to higher corporate banking-related revenue and equity underwriting revenue, partially offset by lower net securities gains, advisory revenue and markdowns on the held-for-sale loan portfolio.

Corporate Services revenue decreased $114 million from the prior year, primarily due to lower treasury-related revenue, reflecting the impact of higher levels of excess customer deposits.

Further discussion is provided in the 2020 Operating Groups Performance Review section on pages 34 to 53.

(1) Insurance revenue can experience variability arising from fluctuations in the fair value of insurance assets, caused by movements in interest rates and equities markets. The investments which support policy benefit liabilities are predominantly fixed income assets recorded at fair value, with changes in fair value recorded in insurance revenue in the Consolidated Statement of Income. These fair value changes are largely offset by changes in the fair value of policy benefit liabilities, the impact of which is reflected in insurance claims, commissions and changes in policy benefit liabilities. The discussion of revenue on a net basis reduces this variability in results, which allows for a better discussion of operating results. For additional discussion of insurance claims, commissions and changes in policy benefit liabilities, refer to page 30.

(2) Effective the first quarter of 2020, the bank adopted IFRS 16, *Leases* (IFRS 16), recognizing the cumulative effect of adoption in opening retained earnings with no changes to prior periods. Under IFRS 16, the bank as lessee is required to recognize a right-of-use asset and a corresponding lease liability for most leases. For the twelve months ended October 31, 2020, it recognized $360 million of depreciation on the right-of-use assets recorded in non-interest expense and $53 million of interest on the lease liability recorded in interest expense.

Taxable equivalent basis (teb) Revenues of operating groups are presented in the MD&A on a taxable equivalent basis (teb). Revenue and the provision for income taxes are increased on tax-exempt securities to an equivalent before-tax basis to facilitate comparisons of income between taxable and tax-exempt sources. This adjustment is offset in Corporate Services.

Revenue

(Canadian $ in millions, except as noted) For the year ended October 31	**2020**	2019	2018	**Change from 2019 (%)**
Net interest income	**13,971**	12,888	11,438	**8**
Non-interest revenue	**11,215**	12,595	11,467	**(11)**
Total revenue	**25,186**	25,483	22,905	**(1)**
Total revenue, net of CCPB	**23,478**	22,774	21,553	**3**
Total revenue, net of adjusted CCPB	**23,478**	22,799	21,553	**3**

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

Net Interest Income

Net interest income was $13,971 million, an increase of $1,083 million or 8%.

On a basis that excludes trading revenue, net interest income was $12,040 million, an increase of $375 million or 3%, largely due to higher net interest income in the P&C businesses, with higher average balances more than offsetting lower margins, and BMO Capital Markets, partially offset by decreases in Corporate Services and BMO Wealth Management.

Average earning assets were $851.7 billion, an increase of $92.9 billion or 12%, due to loan growth, higher securities, and higher cash resources.

BMO's overall net interest margin decreased 6 basis points, primarily driven by a higher volume of assets in Corporate Services and BMO Capital Markets, which have a lower spread than the bank, and also by a lower margin in Corporate Services, and lower margins in BMO Wealth Management and U.S. P&C, which were impacted by the lower interest rate environment, partially offset by significantly higher trading net interest income. On a basis that excludes trading revenue, BMO's net interest margin decreased 19 basis points, due to the drivers noted above.

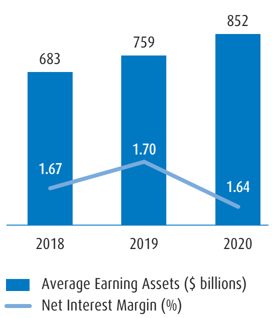
Table 3 on page 126 provides further details on net interest income and net interest margin.

Net interest income is comprised of earnings on assets, such as loans and securities, including interest and certain dividend income, less interest expense paid on liabilities, such as deposits.

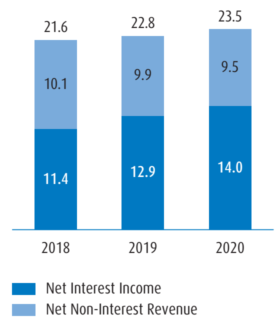
Net interest margin is the ratio of net interest income to average earning assets, expressed as a percentage or in basis points.

Net non-interest revenue is non-interest revenue, net of insurance claims, commissions and changes in policy benefit liabilities (CCPB).

Average Earning Assets and Net Interest Margin



Net Revenue*
($ billions)



*Numbers may not add due to rounding.

Change in Net Interest Income, Average Earning Assets and Net Interest Margin

(Canadian $ in millions, except as noted) For the year ended October 31	Net interest income (teb)			Average earning assets			Net interest margin (in basis points)		
	2020	2019	Change %	**2020**	2019	Change %	**2020**	2019	Change
Canadian P&C	**6,105**	5,885	**4**	**234,953**	222,260	**6**	**260**	265	**(5)**
U.S. P&C	**4,345**	4,216	**3**	**130,190**	119,640	**9**	**334**	352	**(18)**
Personal and Commercial Banking (P&C)	**10,450**	10,101	**3**	**365,143**	341,900	**7**	**286**	295	**(9)**
All other operating groups and Corporate Services	**3,521**	2,787	**26**	**486,583**	416,963	**17**	**72**	67	**5**
Total BMO reported	**13,971**	12,888	**8**	**851,726**	758,863	**12**	**164**	170	**(6)**
U.S. P&C (US$ in millions)	**3,231**	3,173	**2**	**96,810**	90,035	**8**	**334**	353	**(19)**

Certain comparative figures have been reclassified to conform with the current year's presentation.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

Non-Interest Revenue

Non-interest revenue, which comprises all revenues other than net interest income, was $11,215 million, or 11% lower than $12,595 million in the prior year. Non-interest revenue, net of insurance claims, commissions and changes in policy benefit liabilities (CCPB), was $9,507 million, or 4% lower than $9,886 million in the prior year.

Non-interest revenue, net of CCPB, decreased as higher lending fee revenue, underwriting and advisory fee revenue, and investment management and custodial fee revenue were more than offset by lower trading revenue and other non-interest revenue, lower securities gains other than trading, and lower other non-interest card fee revenue. Trading revenue is discussed in the Trading-Related Revenue section that follows. On a basis that excludes trading revenue, non-interest revenue, net of CCPB, decreased $96 million or 1%.

Gross insurance revenue decreased from the prior year, primarily due to smaller increases in the fair value of investments in the current year, due to smaller decreases in long-term interest rates compared with the prior year, lower annuity sales, the impact of weaker equity markets and lower underlying business growth. Insurance revenue can experience variability arising from fluctuations in the fair value of insurance assets, caused by movements in interest rates and equity markets. The investments that support policy benefit liabilities are predominantly fixed income and equity assets recorded at fair value, with changes in fair value recorded in insurance revenue in the Consolidated Statement of Income. The impact of these fair value changes was largely offset by changes in the fair value of policy benefit liabilities, which is reflected in CCPB, as discussed on page 30.

The bank generally focuses on analyzing revenue net of CCPB, given the extent to which insurance revenue can vary and that this variability is largely offset in CCPB.

Table 3 on page 126 provides further details on revenue and revenue growth.

Non-Interest Revenue

(Canadian $ in millions) For the year ended October 31	**2020**	2019	2018	**Change from 2019 (%)**
Securities commissions and fees	**1,036**	1,023	1,025	**1**
Deposit and payment service charges	**1,221**	1,204	1,134	**1**
Trading revenue	**15**	298	705	**(95)**
Lending fees	**1,295**	1,192	997	**9**
Card fees	**358**	437	428	**(18)**
Investment management and custodial fees	**1,807**	1,747	1,749	**3**
Mutual fund revenue	**1,417**	1,419	1,473	**–**
Underwriting and advisory fees	**1,070**	975	943	**10**
Securities gains, other than trading	**124**	249	239	**(50)**
Foreign exchange, other than trading	**127**	166	182	**(24)**
Insurance revenue	**2,178**	3,183	1,879	**(32)**
Investments in associates and joint ventures	**161**	151	167	**6**
Other	**406**	551	546	**(26)**
Total reported	**11,215**	12,595	11,467	**(11)**
Reported, net of CCPB	**9,507**	9,886	10,115	**(4)**
Insurance revenue, net of CCPB	**470**	474	527	**(1)**
Insurance revenue, net of adjusted CCPB	**470**	499	527	**(6)**

Certain comparative figures have been reclassified to conform with the current year's presentation.

Trading-Related Revenue

Trading-related revenue is dependent on, among other things, the volume of activities undertaken for clients who enter into transactions with BMO to mitigate their risks or to invest, and market conditions. BMO earns a spread or profit on the net sum of its client positions by profitably managing, within prescribed limits, the overall risk of its net positions. On a limited basis, BMO also earns revenue from principal trading positions.

Interest and non-interest trading-related revenue on a teb basis increased $474 million or 27% to $2,252 million. Trading-related revenue benefitted from higher levels of client activity given the reaction of market participants to the global pandemic. Interest rate trading-related revenue increased $499 million or 71% and foreign exchange trading-related revenue increased $73 million or 18%, both driven by increased client activity. Equities trading-related revenue decreased $252 million or 48%, as the current year included negative impacts related to equity linked notes-related businesses in the volatile second quarter of 2020. Commodities trading-related revenue increased $126 million or 87%, due to increased client hedging activity and an expansion of the business. Other trading-related revenue increased $28 million, primarily due to higher fair value gains associated with hedging exposures on the structural balance sheet in the current year.

The Market Risk section on page 92 provides more information on trading-related revenue.

Trading-related revenue includes net interest income and non-interest revenue earned from on-balance sheet and off-balance sheet positions undertaken for trading purposes. The management of these positions typically includes marking them to market on a daily basis. Trading-related revenue also includes income (expense) and gains (losses) from both on-balance sheet instruments and interest rate, foreign exchange (including spot positions), equity, commodity and credit contracts.

Interest and Non-Interest Trading-Related Revenue (1)

(Canadian $ in millions) (taxable equivalent basis) For the year ended October 31	**2020**	2019	2018	**Change from 2019 (%)**
Interest rates	**1,199**	700	437	**71**
Foreign exchange	**474**	401	377	**18**
Equities	**274**	526	709	**(48)**
Commodities	**271**	145	63	**87**
Other	**34**	6	95	**+100**
Total (teb)	**2,252**	1,778	1,681	**27**
Teb offset	**306**	257	260	**19**
Reported total	**1,946**	1,521	1,421	**28**
Reported as:				
Net interest income	**2,237**	1,480	976	**51**
Non-interest revenue – trading revenue	**15**	298	705	**(95)**
Total (teb)	**2,252**	1,778	1,681	**27**
Teb offset	**306**	257	260	**19**
Reported total, net of teb offset	**1,946**	1,521	1,421	**28**

(1) Trading-related revenue is presented on a taxable equivalent basis.

Insurance Claims, Commissions and Changes in Policy Benefit Liabilities

Reported and adjusted insurance claims, commissions and changes in policy benefit liabilities (CCPB) were $1,708 million in 2020, compared with reported $2,709 million and adjusted $2,684 million in the prior year. Adjusted CCPB excludes a $25 million net impact of major reinsurance claims from Japanese typhoons incurred after the announced wind-down of the reinsurance business in the prior year. CCPB decreased, primarily due to lower increases in the fair value of policy benefit liabilities in the current year, resulting from a smaller decrease in long-term interest rates compared with the prior year, lower annuity sales, lower underlying business growth and weaker equity markets. The decrease related to the fair value of policy benefit liabilities was largely offset in revenue, as discussed on page 29.

Provision for Credit Losses

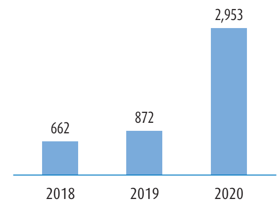
The total provision for credit losses (PCL) was $2,953 million, compared with $872 million in the prior year. Total PCL as a percentage of average net loans and acceptances was 63 basis points in 2020, compared with 20 basis points in the prior year. The PCL on impaired loans was $1,522 million, compared with $751 million in the prior year, reflecting higher provisions in all of the bank's businesses, primarily due to the economic impact of COVID-19. PCL on impaired loans as a percentage of average net loans and acceptances was 33 basis points in 2020, compared with 17 basis points in the prior year. There was a $1,431 million PCL on performing loans in the current year. In the prior year, there was a $121 million PCL on performing loans. The increase in the PCL on performing loans in the current year largely reflected the impact of COVID-19 on the macroeconomic outlook and the impact of a more difficult and uncertain environment on credit conditions, as well as a more severe adverse scenario and increased adverse scenario weight.

Total PCL in Canadian P&C was $1,410 million, an increase of $803 million from the prior year, largely due to a $560 million higher PCL on performing loans, as well as higher commercial provisions on impaired loans. Total PCL in U.S. P&C was $859 million, an increase of $662 million from the prior year, largely due to a $404 million higher PCL on performing loans, as well as higher commercial and consumer provisions on impaired loans, partially as a result of higher recoveries in the prior year. BMO Capital Markets PCL was $659 million, an increase of $579 million from the prior year, reflecting an increase in PCL on performing loans of $321 million and an increase in PCL on impaired loans of $258 million, in part reflecting higher oil and gas provisions. Total PCL in BMO Wealth Management was $22 million, compared with no provision in the prior year, reflecting a higher PCL on both performing loans and impaired loans. Corporate Services PCL was $3 million, compared with recoveries of credit losses of $12 million in the prior year.

On a geographic basis, more than half of the bank's provisions relate to the Canadian loan portfolio, reflecting the larger size of this portfolio, compared with the loan portfolios in the United States and other countries. Total PCL in Canada was $1,493 million, an increase of $929 million from the prior year, and total PCL in the United States was $1,429 million, an increase of $1,129 million from the prior year. Total PCL in other countries was $31 million, an increase of $23 million from the prior year. Note 4 on page 159 of the consolidated financial statements provides information on PCL on a geographic basis. Table 15 on page 136 provides further segmented PCL information.

For additional information, please refer to the Allowance for Credit Losses section on page 114.

Provision for Credit Losses
($ millions)



Provision for Credit Losses by Operating Group

(Canadian $ in millions)	Canadian P&C	U.S. P&C	Total P&C	BMO Wealth Management	BMO Capital Markets	Corporate Services	Total Bank
2020							
Provision for (recovery of) credit losses on impaired loans	**787**	**418**	**1,205**	**4**	**310**	**3**	**1,522**
Provision for (recovery of) credit losses on performing loans	**623**	**441**	**1,064**	**18**	**349**	**–**	**1,431**
Total provision for (recovery of) credit losses	**1,410**	**859**	**2,269**	**22**	**659**	**3**	**2,953**
2019							
Provision for (recovery of) credit losses on impaired loans	544	160	704	2	52	(7)	751
Provision for (recovery of) credit losses on performing loans	63	37	100	(2)	28	(5)	121
Total provision for (recovery of) credit losses	607	197	804	–	80	(12)	872
2018							
Provision for (recovery of) credit losses on impaired loans	466	258	724	6	(17)	(13)	700
Provision for (recovery of) credit losses on performing loans	3	(38)	(35)	–	(1)	(2)	(38)
Total provision for (recovery of) credit losses	469	220	689	6	(18)	(15)	662

Provision for Credit Losses Performance Ratios

	2020	2019	2018
Total PCL-to-average net loans and acceptances (annualized) (%)	**0.63**	0.20	0.17
PCL on impaired loans to average net loans and acceptances (annualized) (%)	**0.33**	0.17	0.18

Non-Interest Expense (1)

Non-interest expense was $14,177 million in 2020, compared with $14,630 million in the prior year.

Adjusted non-interest expense was $14,042 million, relatively unchanged from the prior year, with benefits from a disciplined approach to expense management, including the net impact of the pandemic on expenses, and lower employee-related expenses largely offsetting higher premises and equipment costs. Reported non-interest expense was $14,177 million, compared with $14,630 million in the prior year, primarily due to a restructuring charge in the prior year.

Adjusted non-interest expense in both years excludes the amortization of acquisition-related intangible assets and acquisition integration costs. The prior year also excludes restructuring costs, primarily related to severance. The amortization of acquisition-related intangible assets was $121 million and $128 million in 2020 and 2019, respectively. Acquisition integration costs were $14 million and $13 million in 2020 and 2019, respectively.

The dollar and percentage changes in expense by category are outlined in the Non-Interest Expense and Adjusted Non-Interest Expense tables below. Table 4 on page 127 provides more detail on expenses.

Performance-based compensation on a reported and adjusted basis increased $22 million or 1%, primarily due to a pandemic-related stipend for front-line employees. On a reported basis, other employee compensation, which includes salaries, benefits and severance, decreased $501 million or 9%, reflecting restructuring costs in the prior year. On an adjusted basis, other employee compensation decreased $55 million or 1%, primarily due to higher severance expense in BMO Capital Markets in the prior year, partially offset by higher pension expense in the current year.

Premises and equipment costs on a reported basis increased $214 million or 7%, and on an adjusted basis, increased $255 million or 9%, or 8% excluding the impact of the stronger U.S. dollar, primarily due to higher real estate costs, largely due to gains on real estate in the prior year, and higher technology costs. Amortization of intangible assets on a reported basis increased $66 million or 12%, and on an adjusted basis increased $73 million or 17%, reflecting an increase in software amortization. Reported other expenses decreased $254 million or 10%, and adjusted other expenses decreased $258 million or 10%, reflecting a disciplined approach to expense management and the impact of the pandemic, including lower travel and business development costs, and lower professional fees and lower training costs.

BMO's reported efficiency ratio was 56.3%, compared with 57.4% and the adjusted efficiency ratio was 55.8% in 2020, compared with 55.0% in the prior year. On a net revenue basis (2)(3), the reported efficiency ratio improved 380 basis points to 60.4%, and the adjusted efficiency ratio improved 160 basis points to 59.8% in 2020.

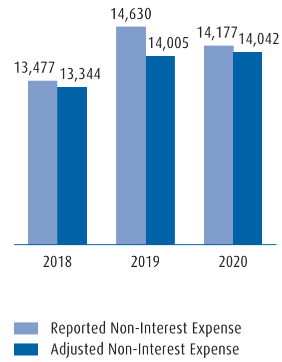
On a net revenue basis (2)(3), reported operating leverage was positive 6.2%, and adjusted operating leverage was positive 2.7%.

(1) Effective the first quarter of 2020, the bank adopted IFRS 16, *Leases* (IFRS 16), recognizing the cumulative effect of adoption in opening retained earnings with no changes to prior periods. Under IFRS 16, the bank as lessee is required to recognize a right-of-use asset and a corresponding lease liability for most leases. For the twelve months ended October 31, 2020, it recognized $360 million of depreciation on the right-of-use assets recorded in non-interest expense and $53 million of interest on the lease liability recorded in interest expense.

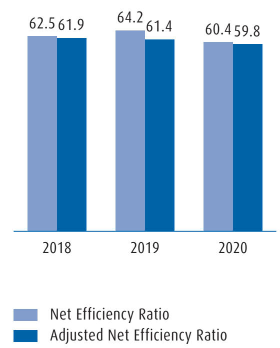
(2) This ratio is calculated excluding insurance claims, commissions and changes in policy benefit liabilities (CCPB). For more information, refer to the Insurance Claims, Commissions and Changes in Policy Benefit Liabilities section on page 30. The bank evaluates performance using adjusted revenue, net of CCPB.

(3) Management assesses performance on a reported basis and an adjusted basis, and considers both to be useful in assessing underlying business performance. Presenting non-interest expenses on an adjusted basis permits readers to better assess results excluding those items that may not be reflective of ongoing results. Refer to the Non-GAAP Measures section on page 17 for further details.

Non-Interest Expense
($ millions)



Net Efficiency Ratio (%)



The **efficiency ratio** (or **expense-to-revenue ratio**) is a measure of productivity. It is calculated as non-interest expense divided by total revenue (on a taxable equivalent basis in the operating groups), expressed as a percentage. The **adjusted efficiency ratio** is calculated in the same manner, utilizing adjusted revenue and adjusted non-interest expense.

Operating leverage is the difference between revenue and expense growth rates. **Adjusted operating leverage** is the difference between adjusted revenue and adjusted expense growth rates.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

Non-Interest Expense

(Canadian $ in millions) For the year ended October 31	2020	2019	2018	Change from 2019 (%)
Performance-based compensation	**2,632**	2,610	2,510	**1**
Other employee compensation	**5,312**	5,813	4,951	**(9)**
Total employee compensation	**7,944**	8,423	7,461	**(6)**
Premises and equipment	**3,202**	2,988	2,753	**7**
Other	**2,411**	2,665	2,760	**(10)**
Amortization of intangible assets	**620**	554	503	**12**
Total non-interest expense	**14,177**	14,630	13,477	**(3)**

Adjusted Non-Interest Expense (1)

(Canadian $ in millions) For the year ended October 31	2020	2019	2018	Change from 2019 (%)
Performance-based compensation	**2,629**	2,607	2,508	**1**
Other employee compensation	**5,306**	5,361	4,996	**(1)**
Total employee compensation	**7,935**	7,968	7,504	**–**
Premises and equipment	**3,202**	2,947	2,738	**9**
Other	**2,406**	2,664	2,715	**(10)**
Amortization of intangible assets	**499**	426	387	**17**
Total adjusted non-interest expense	**14,042**	14,005	13,344	**–**

(1) Adjusted non-interest expense excludes restructuring costs, the amortization of acquisition-related intangible assets, acquisition integration costs, and a benefit from the remeasurement of an employee future benefit liability.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

Provision for Income Taxes

The provision for income taxes reflected in the Consolidated Statement of Income is based upon transactions recorded in income, regardless of when such transactions are subject to taxation by tax authorities, with the exception of the repatriation of retained earnings from subsidiaries, as outlined in Note 22 on page 201 of the consolidated financial statements.

Management assesses BMO's consolidated results and associated provision for income taxes on a GAAP basis. The bank assesses the performance of the operating groups and associated income taxes on a taxable equivalent basis and reports accordingly.

The provision for income taxes was $1,251 million in 2020, compared with $1,514 million in 2019. The reported effective tax rate in 2020 was 19.7%, compared with 20.8% in 2019. The adjusted provision for income taxes [1] was $1,282 million in 2020, compared with $1,673 million in 2019. The adjusted effective tax rate in 2020 was 19.8%, compared with 21.1% in 2019. The lower reported and adjusted effective tax rates in the current year were due to earnings mix, including the lower pre-tax income.

BMO partially hedges, for accounting purposes, the foreign exchange risk arising from its foreign operations by funding the investments in the corresponding foreign currency. A gain or loss on hedging and an unrealized gain or loss on translation of foreign operations are charged or credited to other comprehensive income. For income tax purposes, a gain or loss on hedging activities results in an income tax charge or credit in the current period that is charged or credited to other comprehensive income, while the associated unrealized gain or loss on the foreign operations does not incur income taxes until the investments are liquidated. The income tax charge/benefit arising from a hedging gain/loss is a function of the fluctuations in exchange rates from period to period. Hedging of foreign operations has given rise to an income tax recovery in other comprehensive income of $35 million in the current year, compared with a recovery of $4 million in 2019. Refer to Note 22 on page 201 of the consolidated financial statements for further details.

Legislative changes and changes in tax policy, including their interpretation by tax authorities and the courts, may impact the bank's earnings. Refer to the discussion in the Critical Accounting Estimates section on page 114 for additional details.

Table 4 on page 127 details the $2,095 million of total government levies and taxes incurred by BMO in 2020. Of this amount, $1,383 million was incurred in Canada, with $767 million recorded in the provision for income taxes, while the remaining $616 million was recorded in total government levies other than income taxes. The decrease from $2,334 million in 2019 was primarily due to a lower provision for income taxes.

(1) The adjusted rate is computed using adjusted net income rather than reported net income in the determination of income subject to tax.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

2020 Operating Groups Performance Review

Summary

This section includes an analysis of the financial results of BMO's operating groups and descriptions of their operating segments, businesses, strategies, challenges, achievements and outlooks.

BMO Financial Group

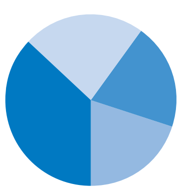
Operating Groups	Personal and Commercial (P&C) Banking		BMO Wealth Management	BMO Capital Markets
Operating Segments	Canadian P&C	U.S. P&C		
Lines of Business	• Personal Banking • Commercial Banking	• Personal Banking • Commercial Banking	• BMO Private Wealth • BMO InvestorLine • BMO Wealth Management U.S. • BMO Global Asset Management • BMO Insurance	• Investment and Corporate Banking • Global Markets

Corporate Services, including Technology and Operations

BMO's business mix is well diversified by operating segment and by geography, comprising the key geographies and customer segments that are critical to its strategic plans for sustaining growth and delivering value to its shareholders.

Reported Net Income by Operating Group*

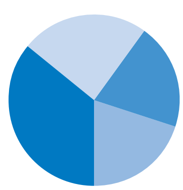
2020



- Canadian P&C 37%
- U.S. P&C 23%
- BMO Wealth Management 20%
- BMO Capital Markets 20%

Adjusted Net Income by Operating Group*

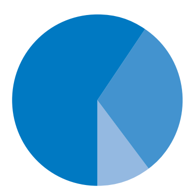
2020



- Canadian P&C 36%
- U.S. P&C 24%
- BMO Wealth Management 20%
- BMO Capital Markets 20%

Reported Net Income by Geography

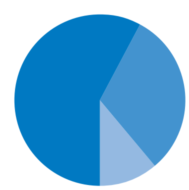
2020



- Canada 59%
- United States 30%
- Other Countries 10%

Adjusted Net Income by Geography

2020



- Canada 58%
- United States 31%
- Other Countries 11%

Numbers may not add due to rounding.
* Percentages determined excluding results in Corporate Services.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

How BMO Reports Operating Group Results

Periodically, certain business lines and units within the business lines are transferred between client and corporate support groups to more closely align BMO's organizational structure with its strategic priorities. In addition, allocations of revenue, provisions for credit losses and expenses are updated to better align with current experience.

The bank adopted IFRS 16, *Leases* (IFRS 16), effective the first quarter of 2020, and recognized the cumulative effect of adoption in opening retained earnings with no changes to prior periods. Under IFRS 16, the bank as lessee is required to recognize a right-of-use asset and a corresponding lease liability for most leases. Depreciation on the right-of-use assets has been recorded in non-interest expense and interest on the lease liability in interest expense. Refer to the Changes in Accounting Policies in 2020 section on page 118 for further details.

BMO analyzes revenue at the consolidated level based on GAAP revenue as reported in the consolidated financial statements rather than on a taxable equivalent basis (teb), which is consistent with the Canadian peer group. Like many banks, BMO analyzes revenue on a teb basis at the operating group level. Revenue and the provision for income taxes are increased on tax-exempt securities to an equivalent before-tax basis to facilitate comparisons of income between taxable and tax-exempt sources. The offset to the group teb adjustments is reflected in Corporate Services revenue and provision for income taxes.

Personal and Commercial Banking

(Canadian $ in millions, except as noted)	Canadian P&C			U.S. P&C			Total P&C		
As at or for the year ended October 31	**2020**	2019	2018	**2020**	2019	2018	**2020**	2019	2018
Net interest income (teb)	**6,105**	5,885	5,546	**4,345**	4,216	3,844	**10,450**	10,101	9,390
Non-interest revenue	**1,930**	2,099	2,040	**1,186**	1,162	1,096	**3,116**	3,261	3,136
Total revenue (teb)	**8,035**	7,984	7,586	**5,531**	5,378	4,940	**13,566**	13,362	12,526
Provision for (recovery of) credit losses on impaired loans	**787**	544	466	**418**	160	258	**1,205**	704	724
Provision for (recovery of) credit losses on performing loans	**623**	63	3	**441**	37	(38)	**1,064**	100	(35)
Total provision for credit losses	**1,410**	607	469	**859**	197	220	**2,269**	804	689
Non-interest expense	**3,890**	3,836	3,681	**3,075**	3,136	2,964	**6,965**	6,972	6,645
Income before income taxes	**2,735**	3,541	3,436	**1,597**	2,045	1,756	**4,332**	5,586	5,192
Provision for income taxes (teb)	**707**	917	882	**320**	434	359	**1,027**	1,351	1,241
Reported net income	**2,028**	2,624	2,554	**1,277**	1,611	1,397	**3,305**	4,235	3,951
Amortization of acquisition-related intangible assets (1)	**2**	2	2	**39**	43	45	**41**	45	47
Adjusted net income	**2,030**	2,626	2,556	**1,316**	1,654	1,442	**3,346**	4,280	3,998
Key Performance Metrics and Drivers									
Net income growth (%)	**(22.7)**	2.7	1.9	**(20.7)**	15.3	37.1	**(21.9)**	7.2	12.1
Adjusted net income growth (%)	**(22.7)**	2.7	1.9	**(20.4)**	14.7	35.3	**(21.8)**	7.1	11.8
Revenue growth (%)	**0.6**	5.2	3.7	**2.8**	8.9	8.4	**1.5**	6.7	5.5
Non-interest expense growth (%)	**1.4**	4.2	5.2	**(1.9)**	5.8	2.6	**(0.1)**	4.9	4.0
Adjusted non-interest expense growth (%)	**1.4**	4.2	5.2	**(1.9)**	6.0	2.8	**–**	5.0	4.1
Return on equity (%)	**18.1**	27.3	30.6	**8.3**	11.0	10.8	**12.5**	17.5	18.6
Adjusted return on equity (%)	**18.1**	27.3	30.6	**8.5**	11.3	11.2	**12.6**	17.7	18.8
Operating leverage (teb) (%)	**(0.8)**	1.0	(1.5)	**4.7**	3.1	5.8	**1.6**	1.8	1.5
Adjusted operating leverage (teb) (%)	**(0.8)**	1.0	(1.5)	**4.7**	2.9	5.6	**1.5**	1.7	1.4
Efficiency ratio (teb) (%)	**48.4**	48.1	48.5	**55.6**	58.3	60.0	**51.3**	52.2	53.0
Adjusted efficiency ratio (teb) (%)	**48.4**	48.0	48.5	**54.6**	57.3	58.8	**50.9**	51.7	52.6
Net interest margin on average earning assets (teb) (%)	**2.60**	2.65	2.61	**3.34**	3.52	3.72	**2.86**	2.95	2.97
Average common equity	**10,963**	9,545	8,222	**14,895**	14,418	12,692	**25,858**	23,963	20,914
Average earning assets	**234,953**	222,260	212,721	**130,190**	119,640	103,393	**365,143**	341,900	316,114
Average gross loans and acceptances	**250,223**	236,889	223,292	**123,953**	113,620	98,000	**374,176**	350,509	321,292
Average net loans and acceptances	**248,972**	236,000	222,429	**123,002**	112,904	97,345	**371,974**	348,904	319,774
Average deposits	**204,942**	175,125	159,483	**132,041**	106,733	90,738	**336,983**	281,858	250,221
Full-time equivalent employees	**13,883**	14,638	14,704	**6,415**	6,828	7,219	**20,298**	21,466	21,923

(1) Total P&C before tax amounts of $55 million in 2020, $59 million in 2019 and $61 million in 2018 are included in non-interest expense.

Adjusted results in this table are non-GAAP amounts or non-GAAP measures. Please refer to the Non-GAAP Measures section on page 17.

The Personal and Commercial Banking (P&C) operating group represents the sum of the bank's two retail and commercial banking operating segments, Canadian Personal and Commercial Banking (Canadian P&C) and U.S. Personal and Commercial Banking (U.S. P&C). Given the pandemic's impact on the global economy, there has been a corresponding negative impact on the financial results in the P&C businesses, due to higher credit provisions and the lower interest rate environment, including rate cuts implemented by the Bank of Canada and the Federal Reserve during the second quarter of 2020 and lower non-interest revenue. The combined P&C banking business net income was $3,305 million, compared with $4,235 million in the prior year. Adjusted net income, which excludes the amortization of acquisition-related intangible assets, was $3,346 million, compared with $4,280 million in the prior year. Reported and adjusted net income were impacted by higher provisions for credit losses, which increased $1,465 million pre-tax, or $1,079 million after tax from the prior year, primarily due to the impact of COVID-19. These operating segments are reviewed separately in the sections that follow.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

Canadian Personal and Commercial Banking

Canadian Personal and Commercial Banking provides financial products and services to eight million customers. Personal Banking helps customers make real financial progress through a network of almost 900 branches, contact centres, digital banking platforms and over 3,200 automated teller machines. Commercial Banking serves clients across Canada and commercial bankers are trusted advisors and partners to their clients, delivering sector and industry expertise, local presence and a full suite of commercial products and services.

Lines of Business

Personal Banking provides customers with a wide range of products and services, including chequing and savings accounts, credit cards, mortgages, personal loans and everyday financial and investment advice, with an overall focus on providing customers with an exceptional experience in every interaction, and helping them make real financial progress.

Commercial Banking provides clients with a comprehensive range of commercial products and services, including multiple financing options and treasury and payment solutions, as well as risk management products. Commercial bankers partner with clients, anticipating their financial needs, and sharing expertise and knowledge to help them grow and manage their businesses.

Strategy and Key Priorities

2020 Priorities and Achievements

Key Priority: In Personal Banking, deepen primary relationships, enhance digital capabilities and deliver a leading customer experience

Achievements

- Continued to strengthen customer loyalty, with an 18% increase in Net Promoter Score during the year. Ranked first in the J.D. Power 2020 Canada Retail Banking Advice Satisfaction Study, with top marks in several categories, including concern for customer needs, clarity of advice and quality of advice
- Gained market share in key focus areas, including personal loans, deposits and credit cards
- Renewed the partnership with the Canadian Forces Morale and Welfare Services (CFMWS) as their official bank, continuing to serve as the exclusive provider of banking services and financial products to members of the Canadian defence community
- Strengthened top-tier digital sales capability, resulting in digital sales growth of 9%, driven by growth across personal lending and deposit products
- Received the Gartner Eye on Innovation Award and the Banking Technology Award for BMO QuickPay, an automated bill payment solution, which is a first for a Canadian financial institution
- Recognized by Business Intelligence Group with the 2020 Artificial Intelligence Excellence Award for AI-based cash flow prediction solution for everyday banking customers, with BMO the first bank ever to receive this award
- Launched BMO Insights, a mobile tool that helps customers improve their financial lives via in-context advice and guidance

Key Priority: In Commercial Banking, focus on maintaining core strengths, target opportunities for growth and diversification across high-value sectors and businesses, invest in digital and payment capabilities, and continue to leverage cross-bank collaboration

Achievements

- Gained market share in both commercial loans and deposits, maintaining growth momentum, while managing risk effectively
- Continued to maintain best-in-class customer loyalty, as measured by Net Promoter Score
- Named the Best Commercial Bank in Canada for the sixth consecutive year by *World Finance Magazine* at its 2020 Banking Awards, in recognition of a strong regional and industry focus, as well as commitment to building customer relationships and providing innovative solutions
- Introduced a dedicated agriculture banking team that will provide customized and comprehensive banking solutions for agriculture and agribusiness clients across Canada
- Rolled out enhanced analytics for increased efficiency and effectiveness in portfolio risk monitoring and identifying emerging client needs
- Improved processes and increased efficiencies in the Business Banking Express (BBX) platform, allowing the bankers to spend more time engaging directly with customers; expanded the platform to agriculture customers, allowing them to secure loans of up to $1 million within a day
- Provided clients with faster payment options while making it easier for them to monitor payments with near real-time tracking
- Digitized and streamlined commercial account opening process through an electronic portal with e-signatures
- Continued to strengthen cross-border capabilities to improve efficiencies and customer experience through technology platform changes related to wire transfers, receivables and billing

Key Priority: Support customers, employees and the broader community to alleviate the adverse impact of the COVID-19 pandemic

Achievements

- Supported customers experiencing financial stress by implementing internal financial relief programs and partnering with the Government of Canada on various financial assistance programs:
  - For Personal Banking customers, provided financial relief to over 225,000 customers through various internal support measures, including payment deferrals and interest rate reductions; launched an inbound calling program to support BMO's customer contact centre, with more than 225 bankers fielding over 65,000 customer calls during the peak of the first wave of the pandemic; and created a direct deposit enrollment capability to allow impacted personal banking customers to seamlessly receive the Canada Emergency Response Benefit (CERB)
  - For Commercial Banking customers, proactively engaged with and guided over 70,000 clients to the appropriate BMO or government assistance programs, with over $2.5 billion in loans approved through the Canada Emergency Business Account (CEBA) program and over $15 billion in outstanding balances deferred through internal BMO programs at the peak of the first wave of the pandemic
- Implemented initiatives to support employees in promoting safe operations during the pandemic, including changes to the branch operating model, support for remote delivery of services, enhanced safety protocols, stipends for front-line employees, virtual tools and information sessions, and an Employee Assistance Program
- Created a dedicated Online Resource Hub featuring specialized content and resources to help Canadians navigate COVID-19 and better position them for long-term growth
- Released multiple straight-through, self-serve digital capabilities to aid customers, including credit card PIN reset, credit card lock and unlock, and a seamless digital enrollment experience

2021 Focus

- Continue to improve customer loyalty by deepening primary relationships, provide necessary support to customers and employees in the new operating environment, and drive an inclusive and high-performance work culture
- Leverage the full suite of products, solutions and capabilities, and the unique cross-border advantage to offer a compelling value proposition to customers
  - In Personal Banking, drive top-tier customer acquisition, build leading share of wallet, and enhance the digital experience
  - In Commercial Banking, strengthen core market presence and continue to build share of wallet, strengthen digitization and digital capabilities, drive growth and enhance return on equity, while continuing to manage risk effectively, and leverage cross-bank collaboration
- Drive efficiencies by simplifying and streamlining operations, investing in digital capabilities and through cross-bank collaboration

MD&A

Canadian P&C

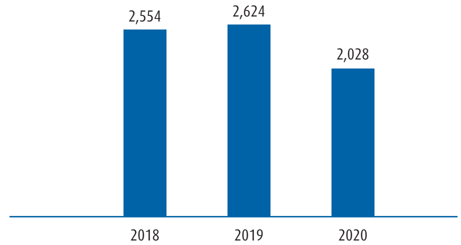
(Canadian $ in millions, except as noted) As at or for the year ended October 31	**2020**	2019	2018
Net interest income	**6,105**	5,885	5,546
Non-interest revenue	**1,930**	2,099	2,040
Total revenue (teb)	**8,035**	7,984	7,586
Provision for (recovery of) credit losses on impaired loans	**787**	544	466
Provision for (recovery of) credit losses on performing loans	**623**	63	3
Total provision for credit losses	**1,410**	607	469
Non-interest expense	**3,890**	3,836	3,681
Income before income taxes	**2,735**	3,541	3,436
Provision for income taxes	**707**	917	882
Reported net income	**2,028**	2,624	2,554
Amortization of acquisition-related intangible assets (1)	**2**	2	2
Adjusted net income	**2,030**	2,626	2,556
Key Performance Metrics and Drivers			
Personal revenue	**4,968**	4,994	4,921
Commercial revenue	**3,067**	2,990	2,665
Net income growth (%)	**(22.7)**	2.7	1.9
Revenue growth (%)	**0.6**	5.2	3.7
Non-interest expense growth (%)	**1.4**	4.2	5.2
Adjusted non-interest expense growth (%)	**1.4**	4.2	5.2
Return on equity (%)	**18.1**	27.3	30.6
Adjusted return on equity (%)	**18.1**	27.3	30.6
Operating leverage (%)	**(0.8)**	1.0	(1.5)
Adjusted operating leverage (%)	**(0.8)**	1.0	(1.5)
Efficiency ratio (%)	**48.4**	48.1	48.5
Net interest margin on average earning assets (%)	**2.60**	2.65	2.61
Average earning assets	**234,953**	222,260	212,721
Average gross loans and acceptances	**250,223**	236,889	223,292
Average net loans and acceptances	**248,972**	236,000	222,429
Average deposits	**204,942**	175,125	159,483
Full-time equivalent employees	**13,883**	14,638	14,704

(1) Before tax amounts of $2 million in each of 2020, 2019 and 2018 are included in non-interest expense.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

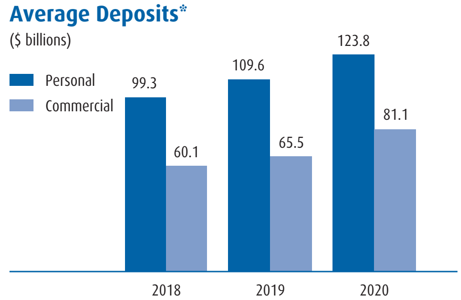
Reported Net Income

($ millions)



Average Deposits*

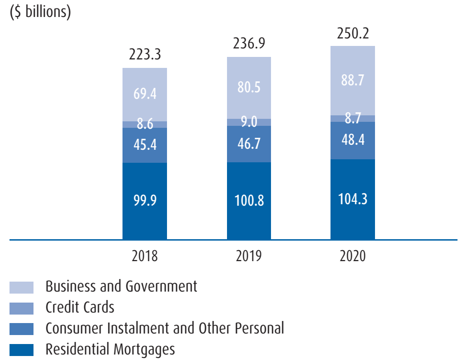
($ billions)



*Numbers may not add due to rounding.

Average Gross Loans and Acceptances*

($ billions)



*Numbers may not add due to rounding.

Financial Review

Canadian P&C reported net income was $2,028 million, or 23% lower than $2,624 million in the prior year, and adjusted net income was $2,030 million, also 23% lower than $2,626 million in the prior year. Adjusted net income excludes the amortization of acquisition-related intangible assets. The decrease largely reflects higher provisions for credit losses, with higher revenue offset by higher expenses.

Revenue was $8,035 million, an increase of $51 million or 1% from the prior year, due to higher average balances across most products, partially offset by lower margins and lower non-interest revenue. Revenue was negatively impacted by the COVID-19 pandemic with pressure on margins from the record-low interest rate environment, and lower credit card fee revenue and deposit fee revenue. Personal revenue decreased $26 million, due to lower margins and lower non-interest revenue, largely offset by higher balances across most products. Commercial revenue increased $77 million or 3%, due to higher balances across most products, partially offset by lower margins and lower non-interest revenue.

Net interest margin of 2.60% decreased 5 basis points from the prior year, driven by deposit and loan margin compression, partially offset by deposits growing faster than loans.

The total provision for credit losses was $1,410 million, an increase of $803 million from the prior year, reflecting the impact of the pandemic. The provision for credit losses on impaired loans of $787 million increased $243 million, due to higher commercial provisions in the current year. There was a $623 million provision for credit losses on performing loans in the current year, compared with a $63 million provision for credit losses on performing loans in the prior year. For additional information, please refer to the Provision for Credit Losses section on page 31.

Non-interest expense was $3,890 million, an increase of $54 million or 1% from the prior year, primarily due to higher technology and pension costs, partially offset by lower employee-related costs.

Average gross loans and acceptances increased $13.3 billion or 6% from the prior year to $250.2 billion. Personal lending balances (excluding retail cards) increased 4%, including 7% growth in proprietary mortgages and amortizing home equity line of credit loans. Commercial loan balances (excluding corporate cards) increased 10%, with growth across a number of industry sectors. Average deposits increased $29.8 billion or 17% to $204.9 billion, with 13% growth in personal balances and 24% growth in commercial balances, reflecting higher liquidity retained by customers, due to the impact of COVID-19.

Gross loans and acceptances as at October 31, 2020, increased $6.7 billion or 3% from the prior year to $253.0 billion, with growth in personal loans (excluding retail cards) of 4% and growth in commercial loans (excluding corporate cards) of 2%. Deposits as at October 31, 2020, increased $32.1 billion or 17% to $220.6 billion, with growth in personal deposit balances of 10% and in commercial deposit balances of 28%.

Business Environment, Outlook and Challenges

The COVID-19 pandemic has dealt a major shock to the economy that has added significant challenges to the personal and commercial businesses, in an already highly competitive and rapidly changing environment. Traditional competitors continue to invest in innovative technologies that allow them to serve customers in new ways and focus more effectively on the customer experience. Non-traditional competitors have continued to gain momentum and are deepening their connections with banks in order to enhance their products and build customer relationships.

The Canadian economy contracted in the first half of 2020, due to business shutdowns aimed at limiting the spread of COVID-19, resulting in a high unemployment rate, lower consumer spending and a decline in business profits and investments. The economy improved as businesses reopened, the Bank of Canada maintained record-low policy rates and the federal government continued its extraordinary fiscal policy support. The housing market remains strong, supported by the low interest rate environment and the growth of work-from-home arrangements. The economic recovery is expected to take an extended period of time, in part due to the increased restrictions on activity introduced to slow down the spread of the virus, as the employment rate gradually improves and the low interest rate environment persists, encouraging higher consumer spending and business investment.

During this unprecedented time, Canadian P&C remained dedicated to standing by its customers and collaborated with the federal government to implement financial relief measures, such as payment deferrals and lending facilities, to help individuals and businesses. The bank also worked to ensure that customers have access to government assistance programs, such as the Canada Emergency Business Account (CEBA) program and Business Credit Availability Program (BCAP).

Canadian P&C remains resilient, with a continued focus on improving customer loyalty, enhancing efficiencies and expense management, to support customers and deliver value to shareholders, notwithstanding the pressure of the low interest rate environment on revenue and a gradual economic recovery.

Personal banking continues to deepen primary customer relationships, while leveraging digital capabilities through investment in new technologies and enhanced networks. Commercial banking is committed to building its business by targeting commercial opportunities across geographic regions, market segments and industry sectors, especially in high-value sectors and businesses.

Technology will continue to play a leading role in delivering exceptional experiences for the bank's customers, while enhancing the efficiency of its operations.

The Canadian economic environment in 2020 and the outlook for 2021 are discussed in more detail in the Economic Developments and Outlook section on page 18.

Caution
This Canadian Personal and Commercial Banking section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

U.S. Personal and Commercial Banking

U.S. Personal and Commercial Banking serves more than two million customers by providing a banking experience with a human touch, while delivering a broad range of financial services. Personal Banking serves customers seamlessly across an extensive network of more than 525 branches, dedicated contact centres, digital banking platforms, and nationwide access to more than 40,000 automated teller machines. Commercial Banking serves clients across the United States and commercial bankers are trusted advisors and partners to their clients, delivering sector and industry expertise, local presence and a full suite of commercial products and services.

Lines of Business

Personal Banking offers a variety of products and services, including deposits, home lending, consumer credit, small business lending, credit cards and other banking services; with an overall focus on providing customers with an exceptional experience in every interaction and helping them make real financial progress.

Commercial Banking provides clients with a comprehensive range of commercial products and services, including multiple financing options and treasury and payment solutions, as well as risk management products. Commercial bankers partner with clients, anticipating their financial needs and sharing expertise and knowledge to help them grow and manage their businesses.

Strategy and Key Priorities

2020 Priorities and Achievements

Key Priority: Deliver a great experience for customers and employees, and continue to strengthen competitive position by investing in key capabilities, while leveraging BMO's full suite of products, solutions and capabilities, and unique cross-border advantage

Achievements

- Continued to strengthen customer loyalty in Personal Banking, as measured by Net Promoter Score, and maintained best-in-class Net Promoter Score in Commercial Banking
- Reinforced second-place ranking in deposit market share in the core Chicago and Wisconsin markets, with a top three position across the Midwest footprint
- Recognized on *Forbes Magazine's* World's Best Banks 2020 list, based on a survey of consumers on key attributes, including trust, fees, digital services and financial advice
- Ranked third among customers on overall reputation among the 40 leading banks in the 2020 *American Banker/RepTrak* Survey of Bank Reputations, which assesses financial institutions for their products and services, innovation, leadership, performance, citizenship and governance
- Partnered with Chicago-based fintech private business incubator 1871 for a third successive year, with a dedicated focus on mentoring women-led start-ups in 2020, reflecting the bank's commitment to support the entrepreneurial and innovation ecosystem
- Named a top U.S. regional bank by *Bankrate,* recognizing product features such as fee waivers and low opening minimum balances that help customers make real financial progress
- Named one of the Best Places to Work for Disability Inclusion for the fifth consecutive year, achieving a maximum score of 100 on the Disability Equality Index (DEI)
- Recognized by *Forbes Magazine* as one of the Best Employers for Diversity for the second consecutive year, based on an independent survey of more than 50,000 U.S.-based employees
- Ranked first for Best Workplace Culture in Banking/Finance for the second consecutive year in Ranking Arizona, the largest business opinion poll in Arizona, with more than 15,000 companies participating and over one million respondents
- Rated Outstanding by the Office of the Comptroller of the Currency on *Community Reinvestment Act* performance, recognizing the commitment to help support low and moderate-income communities

Key Priority: In Personal Banking, drive strong deposit growth, new customer acquisition, and a larger share of wallet through more holistic customer conversations and digital engagement

Achievements

- Continued to enhance digital capabilities and new online banking features through the launch of Business Banking Express (BBX) in U.S. branches, significantly reducing application time
- Delivered strong deposit growth of 8%, enabled by a robust product offering and pricing optimization, while managing changes in external market conditions
- Leveraged expanded digital deposit gathering capabilities to drive digital deposits across 50 states
- One among eleven select U.S. banks chosen to offer Plex Accounts in Google Pay, mobile-first chequing accounts, launching in 2021, an acknowledgement of BMO's proven ability to deliver innovative and customer-centric digital financial services
- Introduced digital capabilities in branches to facilitate consistent customer-centric needs-based conversations and recommendations

Key Priority: In Commercial Banking, build a national presence through growth in high-potential geographies and specialty businesses, invest in digital and payment capabilities, and continue to leverage cross-bank collaboration

Achievements

- Extended geographic footprint by opening a new office in Los Angeles to grow BMO's presence in Southern California, providing businesses with access to the full array of industry expertise, financial solutions and capabilities, complemented by local market knowledge
- Broadened the national franchise with new specialty businesses, including expanded coverage of the Technology and Innovation Banking Group in the United States
- Continued to deliver peer-leading deposit growth supported by sales initiatives, external market conditions and further differentiating the product and service offering
- Provided clients with faster payment options while making it easier for them to monitor payments with near real-time tracking
- Digitized and streamlined commercial account opening process through an electronic portal with e-signatures
- Continued to strengthen cross-border capabilities to improve efficiencies and customer experience through technology platform changes related to wire transfers, receivables and billing

Key Priority: Support customers, employees and the broader community to alleviate the adverse impact of the COVID-19 pandemic

Achievements

- Supported customers experiencing financial stress by implementing internal and government relief measures, and providing hardship assistance:
  - For business customers, BMO secured more than US$5 billion in total funding for more than 20,000 businesses through the Small Business Administration's Paycheck Protection Program (PPP), with a dedicated team of 500 members working toward meeting customer needs
  - For Personal Banking customers, bankers proactively spoke to over 200,000 customers to offer a wellness check, and extended hardship relief to over 13,000 consumers
  - For Commercial Banking customers, swiftly implemented internal relief programs to address clients' liquidity concerns, and proactively engaged with clients with strategic advice and thought leadership
  - Implemented initiatives to support employees delivering essential services, including changes to the branch operating model, support for remote delivery of services, enhanced safety protocols, financial assistance in recognition of service, virtual tools and information sessions, and an Employee Assistance Program
- Contributed US$10 million in support of the Chicago Mayor's Economic Development Plan with United Way's Neighborhood Network, which primarily serves Black and Latino communities; additionally, pledged up to US$500,000 to support crisis relief efforts in areas of immediate community need
- Donated 23,000 N95 masks to hospitals and first responders in the Chicago area, an initiative led by branch staff
- Committed to Chicago homeowners by signing the Mayor's Chicago Housing Solidarity Pledge, an initiative designed to address the unprecedented housing challenge resulting from the COVID-19 pandemic through hardship relief measures for eligible mortgage borrowers
- Launched the BMORE technical hiring program in Chicago's Austin and Little Village neighbourhoods to remove barriers to banking careers for individuals who might otherwise not consider a career in financial services

2021 Focus

- Deliver a great experience for customers and employees, while adapting to the new operating environment, and continue to build a base of loyal customers and drive an inclusive and high-performance work culture
- Leverage the full suite of products, solutions and capabilities, and the unique cross-border advantage to offer a compelling value proposition to customers
  - In Personal Banking, continue to drive new customer acquisition, maintain robust deposit growth, improve profitability in consumer lending, build a flagship franchise in Small Business Banking and increase digital engagement
  - In Commercial Banking, strengthen core market presence and continue to build share of wallet, strengthen digitization and digital capabilities, drive growth and enhance return on equity, while continuing to manage risk prudently, and leverage cross-bank collaboration
- Drive efficiencies by simplifying and streamlining operations, investing in digital capabilities and through cross-bank collaboration

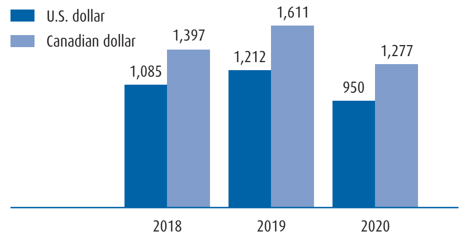
U.S. P&C

(Canadian $ equivalent in millions, except as noted) As at or for the year ended October 31	**2020**	2019	2018
Reported net income	**1,277**	1,611	1,397
Adjusted net income	**1,316**	1,654	1,442
Net income growth (%)	**(20.7)**	15.3	37.1
Adjusted net income growth (%)	**(20.4)**	14.7	35.3
(US$ in millions, except as noted)			
Net interest income (teb)	**3,231**	3,173	2,984
Non-interest revenue	**882**	875	851
Total revenue (teb)	**4,113**	4,048	3,835
Provision for (recovery of) credit losses on impaired loans	**310**	121	201
Provision for (recovery of) credit losses on performing loans	**328**	28	(31)
Total provision for credit losses	**638**	149	170
Non-interest expense	**2,287**	2,360	2,301
Income before income taxes	**1,188**	1,539	1,364
Provision for income taxes (teb)	**238**	327	279
Reported net income	**950**	1,212	1,085
Amortization of acquisition-related intangible assets (1)	**30**	32	35
Adjusted net income	**980**	1,244	1,120
Key Performance Metrics and Drivers (US$ basis)			
Personal revenue	**1,293**	1,359	1,257
Commercial revenue	**2,820**	2,689	2,578
Net income growth (%)	**(21.6)**	11.7	38.9
Adjusted net income growth (%)	**(21.2)**	11.1	37.1
Revenue growth (%)	**1.6**	5.6	9.9
Non-interest expense growth (%)	**(3.1)**	2.6	4.0
Adjusted non-interest expense growth (%)	**(3.0)**	2.8	4.3
Return on equity (%)	**8.3**	11.0	10.8
Adjusted return on equity (%)	**8.5**	11.3	11.2
Operating leverage (teb) (%)	**4.7**	3.0	5.9
Adjusted operating leverage (teb) (%)	**4.6**	2.8	5.6
Efficiency ratio (teb) (%)	**55.6**	58.3	60.0
Adjusted efficiency ratio (teb) (%)	**54.6**	57.3	58.8
Net interest margin on average earning assets (teb) (%)	**3.34**	3.53	3.72
Average earning assets	**96,810**	90,035	80,254
Average gross loans and acceptances	**92,170**	85,505	76,066
Average net loans and acceptances	**91,462**	84,966	75,557
Average deposits	**98,203**	80,316	70,431
Full-time equivalent employees	**6,415**	6,828	7,219

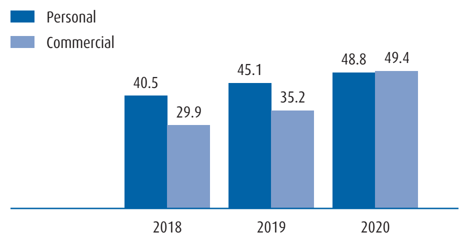
(1) Before tax amounts of US$39 million in 2020, US$43 million in 2019 and US$45 million in 2018 are included in non-interest expense.

Adjusted results in this table are non-GAAP amounts or non-GAAP measures. Please refer to the Non-GAAP Measures section on page 17.

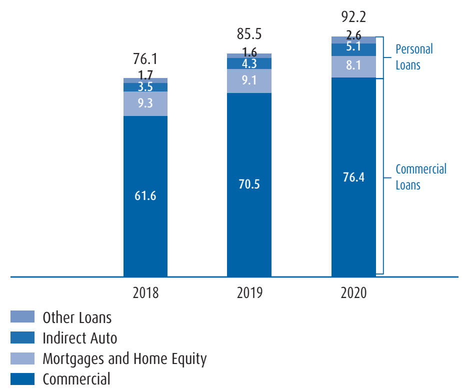
Reported Net Income
($ millions)



Average Deposits
(US$ billions)



Average Gross Loans and Acceptances
(US$ billions)



Financial Review

U.S. P&C reported net income was $1,277 million, or 21% lower than $1,611 million in the prior year, and adjusted net income was $1,316 million, or 20% lower than $1,654 million. Adjusted net income excludes the amortization of acquisition-related intangible assets. All amounts in the remainder of this section are on a U.S. dollar basis.

Reported net income was $950 million, or 22% lower than $1,212 million in the prior year, and adjusted net income was $980 million, or 21% lower than $1,244 million, due to higher provisions for credit losses, partially offset by lower expenses and higher revenue.

Revenue was $4,113 million, an increase of $65 million or 2%, primarily due to growth in deposits and higher average loan balances, higher loan margins, as well as higher non-interest revenue, partially offset by lower deposit product margins, reflecting the impact of lower rates. Revenue was negatively impacted by the COVID-19 pandemic, as the record-low interest rate environment led to pressure on margins. Personal revenue decreased $66 million or 5%, largely due to lower deposit revenue, partially offset by higher loan revenue. Commercial revenue increased $131 million or 5%, due to higher loan and deposit balances, increased loan margins, as well as improved non-interest revenue, partially offset by lower margins on deposits.

Net interest margin of 3.34% decreased 19 basis points from the prior year, primarily due to lower deposit product margins, partially offset by higher loan margins and deposits growing faster than loans.

The total provision for credit losses was $638 million, an increase of $489 million from the prior year, reflecting the impact of the pandemic. The provision for credit losses on impaired loans increased $189 million, largely due to higher commercial and consumer provisions in the current year, partly as a result of higher recoveries in the prior year. There was a $328 million provision for credit losses on performing loans in the current year, compared with a $28 million provision for credit losses on performing loans in the prior year. For additional information, please refer to the Provision for Credit Losses section on page 31.

Non-interest expense was $2,287 million, a decrease of $73 million or 3%, and adjusted non-interest expense was $2,248 million, a decrease of $69 million or 3%, primarily due to lower employee-related costs and other discretionary spending, including travel and business development costs, reflective of the continued focus on expense management.

Average gross loans and acceptances increased $6.7 billion or 8% from a year ago to $92.2 billion, driven by commercial loan growth of 8% and higher personal loan balances of 5%, including growth in government lending loan programs related to COVID-19. Average deposits increased $17.9 billion or 22% to $98.2 billion, with 41% growth in commercial balances and 8% growth in personal balances, reflecting the higher liquidity retained by customers due to the impact of COVID-19.

Gross loans and acceptances as at October 31, 2020, decreased $2.1 billion or 2% from the prior year to $88.7 billion, driven by a decline of 5% in personal loan balances and 2% in commercial loan balances. Deposits as at October 31, 2020, increased $18.4 billion or 21% to $104.6 billion, with growth in commercial deposit balances of 42% and in personal deposit balances of 4%.

Business Environment, Outlook and Challenges

The U.S. P&C business is primarily based in eight states (Illinois, Wisconsin, Missouri, Indiana, Minnesota, Kansas, Arizona and Florida). In addition, the commercial business provides targeted nationwide coverage for key specialty sectors and has offices in select regional markets.

The COVID-19 pandemic continues to have a series of intense impacts on the economy and society. The financial effect of the pandemic led to a severe contraction of the U.S. economy and steep job losses in the first half of 2020, in part due to decreased consumer demand and business spending. The economy is now undergoing a recovery, supported by extraordinary U.S. fiscal policy stimulus, record-low Federal Reserve policy rates and the re-opening of non-essential businesses. These efforts have lowered the unemployment rate and lifted the housing market. In 2021, uncertain U.S. fiscal policies and U.S./China trade relations are expected to impact the economy, while the still-high level of new infections in the United States will cause further uncertainty and the potential for new restrictions on activity until a vaccine becomes available and is widely distributed.

During this period of extraordinary disruption, U.S. P&C remained committed to its customers and employees, as well as the bank's shareholders, and took an active role in restoring local communities. The bank also worked closely with governments and agencies to implement the Payment Protection Program (PPP) to reduce the financial hardship caused by the COVID-19 pandemic, including payment deferrals and lending facilities designed to help individuals and businesses to withstand stress and recover financially.

U.S. P&C is currently operating in a challenging environment, with lower interest rates adding pressure on both margins and customer acquisition. The bank will continue to monitor the competitive landscape in order to effectively price its products and services, while maintaining a prudent risk profile and a disciplined approach to expense management.

The commercial banking business continues to be high-performing, providing expert-level advice that is timely, impactful and within its risk appetite. The personal banking business continues to contribute to growth by enabling frictionless digital experiences, designing valuable products and features and offering the right product at the right time.

The personal and commercial businesses have a clear focus on executing the bank's strategy and are well equipped to withstand the current economic environment and Boldly Grow the Good *in business and life*.

The U.S. economic environment in 2020 and the outlook for 2021 are discussed in more detail in the Economic Developments and Outlook section on page 18.

Caution

This U.S. Personal and Commercial Banking section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

BMO Wealth Management

BMO Wealth Management serves a full range of clients from individuals and families to business owners and institutions. It offers a wide spectrum of asset, wealth management and insurance products and services aimed at helping clients plan, grow, protect and transition their wealth. The asset management business is focused on making a positive impact and delivering innovative client solutions.

Lines of Business

BMO Private Wealth provides full-service investing and wealth advisory services to high net worth and ultra-high net worth clients, leveraging strong financial planning and advice-based solutions such as investment management, business succession planning, trust and estate services, and philanthropy.

BMO InvestorLine is a digital investing service that offers clients three ways to invest: a top-ranked self-directed online trading platform, which allows clients to take control of their investments; adviceDirect™, which combines the freedom of self-directed investing with personalized advice and support; and SmartFolio™, a digital solution that matches a portfolio to the client's goals while a professional investment team handles day-to-day investment management.

BMO Wealth Management U.S. offers financial solutions to mass affluent, high net worth and ultra-high net worth families and businesses.

BMO Global Asset Management provides investment management and trust and custody services to institutional, retail and high net worth investors around the world. BMO Mutual Funds and BMO Exchange Traded Funds offer clients innovative investment solutions across a range of channels.

BMO Insurance is a diversified insurance and wealth solutions provider and a leader in pension de-risking solutions. It manufactures individual life, critical illness and annuity products as well as segregated funds. It also offers group creditor and travel insurance to bank customers in Canada.

Strategy and Key Priorities

2020 Priorities and Achievements

Key Priority: Deliver a differentiated client experience, providing outstanding support and working together to plan, grow, protect and transition their wealth with confidence

Achievements

- Continued to support clients' evolving needs during this challenging time, including providing expert advice and help in accessing financial relief measures, extending the grace period for most insurance premiums, digitizing processes and enabling call centres to support a significant increase in online brokerage transaction volumes and new accounts. Proactive client support continues to strengthen customer loyalty, with a 22% increase in Net Promoter Score over the past three years
- Created the Wealth Insights Hub to help clients navigate the financial challenges and opportunities brought on by the COVID-19 pandemic, delivering research, information and advice to clients virtually, in one easy-to-navigate central location
- BMO Private Banking was named Best Private Bank in Canada by *World Finance* magazine for the tenth consecutive year, in recognition of its client-centric approach and ability to understand and adapt to evolving trends. In addition, U.S. Private Bank was recognized by *Global Finance Magazine* as Best Private Bank for Entrepreneurs
- Transformed the digital investing experience for clients, launching enhanced InvestorLine and adviceDirect websites that offer new features and provide a more intuitive way to invest
- Continued to expand capabilities for serving ultra-high net worth clients with bespoke Family Office offerings designed for their unique needs

Key Priority: Extend advantage as a solutions provider, delivering innovative asset management and insurance offerings that anticipate clients' evolving needs and exceed their expectations

Achievements

- Building on a leadership position in responsible investing, BMO Asset Management launched a suite of indexed Environmental, Social and Governance (ESG) exchange traded funds (ETFs) and raised over $1 billion for the Sustainable Development Goals (SDG) Engagement Global Equity Fund, supporting clients' increasing preference to align financial and social goals. BMO was also recognized by *Investment Week's* Sustainable and ESG Investment Awards, winning Best ESG Research Team for the second consecutive year and Best ESG Investment Fund for its BMO Responsible Global Equity Fund
- Selected as asset manager for the Bank of Canada's Provincial Bond Purchase Program, which aims to support the liquidity and efficiency of provincial government funding markets and will hold up to $50 billion of assets
- Maintained leadership position in Canadian ETFs, ranking #1 in net new asset growth for the tenth consecutive year and #2 in market share
- BMO Insurance continued to enhance its products to meet clients' evolving needs, including expanding its Whole Life Insurance portfolio with the introduction of a new Wealth Accelerator plan option and the launch of the North American Equity Enhanced Market Indexed Account (EMIA), a new investment option available exclusively on its Universal Life insurance policies

MD&A

Key Priority: Build on a strong foundation and continue to evolve, simplify and streamline businesses to drive value, efficiency and returns

Achievements

- Accelerated digital capabilities in response to the COVID-19 pandemic, including transitioning over 90% of the global workforce to work remotely, implementing consistent team and client collaboration tools, and re-engineering relevant processes to be fully digital
- Introduced and enhanced digital solutions that make it easier for clients to do business with us, including scanning and e-signature capabilities
- Introduced new, interactive client features to BMO WealthPath, a digital, goal-based financial planning platform, enabling clients to explore different planning scenarios and navigate changes
- Enhanced the online application journey, doubling application completion rates and enabling InvestorLine to successfully navigate more than a 30% increase in new account openings
- Launched an Automated Underwriting Rules Engine, in partnership with one of North America's largest reinsurers, to enhance data analytic capabilities for predictive modelling and straight-through processing

Key Priority: Continue to strengthen collaboration across BMO Wealth Management, the enterprise and borders to bring the best of BMO to all clients

Achievements

- Continued to grow a world-class partnership for business owner clients with Business and Commercial Banking, including increased referral participation and new joint offices in Atlanta and Dallas, which has led to significant new client opportunities and deeper relationships with existing clients
- Introduced dedicated, specialized teams to support women entrepreneurs, bringing together Private Wealth, Business Banking and Financial Planning to provide a holistic support model designed for the unique needs of women business owners
- Assisted large cross-border wealth clients to secure government business relief loans, demonstrating capabilities to fully serve clients on both sides of the border

2021 Focus

- Deliver a differentiated client experience, providing outstanding support and working together to plan, grow, protect and transition their wealth with confidence
- Extend advantage as a solutions provider, delivering innovative asset management and insurance offerings that anticipate clients' evolving needs and exceed their expectations
- Build on strong foundation and continue to evolve, simplify and streamline businesses to drive value, enhance efficiency and return on equity
- Activate and drive an inclusive, high-performance culture, focused on strong collaboration and alignment across the enterprise and a commitment to building diverse and inclusive teams to bring the best of BMO to all clients

BMO Wealth Management

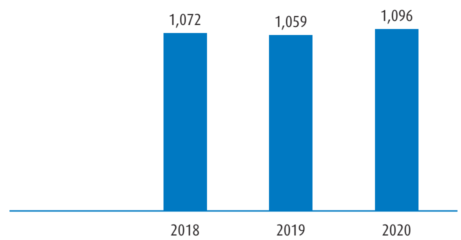
(Canadian $ in millions, except as noted) As at or for the year ended October 31	**2020**	2019	2018
Net interest income	**900**	935	826
Non-interest revenue	**5,808**	6,727	5,475
Total revenue	**6,708**	7,662	6,301
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**1,708**	2,709	1,352
Revenue, net of CCPB	**5,000**	4,953	4,949
Provision for (recovery of) credit losses on impaired loans	**4**	2	6
Provision for (recovery of) credit losses on performing loans	**18**	(2)	–
Total provision for credit losses	**22**	–	6
Non-interest expense	**3,519**	3,523	3,517
Income before income taxes	**1,459**	1,430	1,426
Provision for income taxes	**363**	371	354
Reported net income	**1,096**	1,059	1,072
Amortization of acquisition-related intangible assets (1)	**34**	37	41
Reinsurance adjustment (2)	**–**	25	–
Adjusted net income	**1,130**	1,121	1,113
Key Performance Metrics and Drivers			
Traditional Wealth businesses net income	**893**	861	805
Traditional Wealth businesses adjusted net income	**927**	898	846
Insurance net income	**203**	198	267
Insurance adjusted net income	**203**	223	267
Net income growth (%)	**3.5**	(1.1)	11.0
Adjusted net income growth (%)	**0.8**	0.8	8.0
Revenue growth (%)	**(12.4)**	21.6	1.3
Revenue growth, net of CCPB (%)	**1.0**	0.1	5.7
Adjusted CCPB	**1,708**	2,684	1,352
Revenue growth, net of adjusted CCPB (%)	**0.5**	0.6	5.7
Non-interest expense growth (%)	**(0.1)**	0.2	4.8
Adjusted non-interest expense growth (%)	**–**	0.3	5.8
Return on equity (%)	**17.1**	16.7	17.8
Adjusted return on equity (%)	**17.7**	17.7	18.5
Operating leverage, net of CCPB (%)	**1.1**	(0.1)	0.9
Adjusted operating leverage, net of CCPB (%)	**0.5**	0.3	(0.1)
Efficiency ratio, net of CCPB (%)	**70.4**	71.1	71.1
Adjusted efficiency ratio (%)	**51.8**	45.4	55.0
Adjusted efficiency ratio, net of CCPB (%)	**69.5**	69.8	70.0
Average common equity	**6,364**	6,321	5,989
Average assets	**45,573**	40,951	35,913
Average gross loans and acceptances	**26,585**	23,519	20,290
Average net loans and acceptances	**26,547**	23,487	20,260
Average deposits	**43,660**	36,419	34,251
Assets under administration (3)	**411,959**	393,576	382,839
Assets under management	**482,554**	471,160	438,274
Full-time equivalent employees	**6,206**	6,374	6,452
U.S. Business Select Financial Data (US$ in millions)			
Total revenue	**583**	613	600
Non-interest expense	**504**	512	532
Reported net income	**61**	77	50
Adjusted net income	**68**	85	60
Average net loans and acceptances	**4,540**	4,156	3,619
Average deposits	**6,471**	5,794	5,748

(1) Before tax amounts of $43 million in 2020, $47 million in 2019 and $52 million in 2018 are included in non-interest expense.
(2) Fiscal 2019 reported net income included a reinsurance adjustment of $25 million (pre-tax and after-tax) for the net impact of major reinsurance claims incurred after the announced wind-down of the reinsurance business. This reinsurance adjustment is included in CCPB.
(3) Certain assets under management that are also administered by the bank are included in assets under administration.

Adjusted results in this table are non-GAAP amounts or non-GAAP measures. Please refer to the Non-GAAP Measures section on page 17.

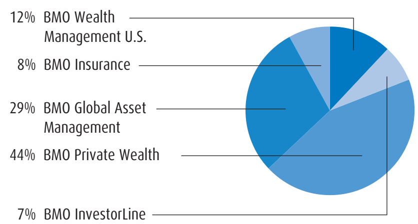
Reported Net Income

($ millions)



2020 Net Revenue by Line of Business

(%)



Financial Review

BMO Wealth Management reported net income was $1,096 million, an increase of $37 million or 3% from the prior year, and adjusted net income was $1,130 million, an increase of $9 million or 1%. Adjusted net income excludes the net impact of major reinsurance claims incurred in the prior year after the announced wind-down of the reinsurance business and the amortization of acquisition-related intangible assets in both years.

Traditional Wealth reported net income was $893 million, an increase of $32 million or 4% from the prior year, and adjusted net income was $927 million, an increase of $29 million or 3%, primarily due to higher revenue and lower expenses, including the benefits from focused expense management. Insurance net income was $203 million, an increase of $5 million on a reported basis and a decrease of $20 million on an adjusted basis from the prior year, due to higher creditor insurance claims.

Revenue was $6,708 million, compared with $7,662 million in the prior year. Revenue, net of reported and adjusted CCPB, was $5,000 million, an increase of $47 million or 1% on a reported basis from the prior year, and an increase of $22 million on an adjusted basis. Performance in the current year was negatively impacted by the COVID-19 pandemic, primarily due to lower net interest income earned on deposits, net of the benefit from higher deposit balances held by clients. Revenue in Traditional Wealth was $4,593 million, an increase of $38 million, primarily due to elevated online brokerage revenue and growth in client assets, net of fee pressure, partially offset by a legal provision in the current year and lower net interest income, as the benefits from strong loan and deposit growth were more than offset by lower margins. Insurance revenue, net of reported and adjusted CCPB, was $407 million, an increase of $9 million on a reported basis, and a decrease of $16 million on an adjusted basis, primarily due to the driver noted above.

The total provision for credit losses was $22 million, compared with no provision recorded in the prior year. The provision for credit losses on impaired loans increased $2 million, reflecting higher consumer provisions in the current year. There was an $18 million provision for credit losses on performing loans in the current year, compared with a $2 million recovery of credit losses in the prior year. For additional information, please refer to the Provision for Credit Losses section on page 31.

Non-interest expense was $3,519 million, a decrease of $4 million, and adjusted non-interest expense was $3,476 million, unchanged from the prior year, as benefits from focused expense management were offset by higher revenue-based costs and higher technology-related costs.

Assets under management increased $11.4 billion or 2% from the prior year to $482.6 billion, primarily driven by stronger global markets and favourable foreign exchange. Assets under administration increased $18.4 billion or 5% from the prior year to $412.0 billion, primarily driven by growth in client assets and stronger global markets. Average gross loans and average deposits increased 13% and 20%, respectively.

Business Environment, Outlook and Challenges

BMO Wealth Management is a global financial services provider operating in a highly competitive environment. The COVID-19 pandemic has accelerated existing industry trends, including digital adoption across customer segments, a growing need for product innovation and downward pressure on fees.

BMO Wealth Management continues to provide clients with expert advice and assist them in navigating through the challenges of market volatility and uncertainty, and to introduce new and differentiated products, as well as enhancing its digital advice capabilities, all of which has led to strong growth in net new assets, deposits, loans and online brokerage volumes.

While equity markets recovered from their 2020 lows, the outlook remains uncertain and could pivot quickly with the unknown path of the COVID-19 pandemic, U.S. congressional power, U.S./China trade relations, and future fiscal policy support in the face of rising budget deficits. Long-term interest rates in Canada and the United States are expected to rise slowly from recent historical lows, and short-term interest rates are expected to remain historically low for the foreseeable future; this will continue to exert pressure on net interest income.

Despite the uncertain market outlook, the wealth management industry remains attractive with good growth expected over the long term, as high net worth and retirement segments become increasingly significant. BMO Wealth Management will continue to deepen its existing client relationships and attract new clients with its personalized and differentiated approach to serving individuals, families and business owners. BMO Wealth Management will extend its advantage as a solutions provider, delivering innovative asset management and insurance offerings that anticipate clients' evolving needs and at the same time, maintain its disciplined expense management approach.

The Canadian and U.S. economic environment in 2020 and the outlook for 2021 are discussed in more detail in the Economic Developments and Outlook section on page 18.

Caution

This BMO Wealth Management section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

BMO Capital Markets

BMO Capital Markets is a North American-based financial services provider offering a complete range of products and services to corporate, institutional and government clients. BMO Capital Markets has approximately 2,700 professionals in 35 locations around the world, including 22 offices in North America.

Lines of Business

Investment and Corporate Banking offers debt and equity capital-raising services to clients, as well as loan origination and syndication, balance sheet management solutions and treasury management services. The division also provides strategic advice on mergers and acquisitions (M&A), restructurings and recapitalizations, as well as valuation and fairness opinions. Investment and Corporate Banking also offers trade finance and risk mitigation services to support the international business activities of clients, and provides a wide range of banking and other operating services tailored to North American and international financial institutions.

Global Markets offers research and access to financial markets for institutional, corporate and retail clients through an integrated suite of sales and trading solutions that include debt, foreign exchange, interest rate, credit, equity, securitization and commodities. New product development and origination services are also offered, as well as risk management advice and services to hedge against fluctuations in a variety of key inputs, including interest rates and commodities prices. In addition, Global Markets provides funding and liquidity management to clients.

Strategy and Key Priorities

2020 Priorities and Achievements

Key Priority: Deliver value-added solutions to meet client needs, and win opportunities through expertise, knowledge and insight

Achievements

- Continued momentum in delivering solutions to clients, including: up-tiered leadership in Leveraged Finance, with bookrunner roles up 25%; increased IPO mandates where BMO was bookrunner by 78%; monetized investments in U.S. Debt Capital Markets, driving a 77% increase in joint bookrunner roles; and upsized M&A deals with important wins in large transactions
- Supported clients with deep industry expertise and insight, and notable wins across different sectors: advised Detour Gold Corporation in its $5 billion sale to Kirkland Lake Gold Ltd. in a stock-for-stock exchange, reflecting a long-term relationship through numerous assignments, and resulting in a pro-forma entity with a combined market capitalization of $17 billion; acted as a joint bookrunner for GFL Environmental Inc. on their US$2.2 billion IPO – the largest in Canadian history – by leveraging collaboration across multiple cross-border industry and product groups in BMO Capital Markets; acted as exclusive financial advisor and left lead arranger, joint bookrunner, and administrative agent on the $450 million comprehensive refinancing for AgroFresh, Inc., which exemplifies a highly-coordinated cross-product, cross-industry effort to execute a complex and successful transaction in a difficult pandemic environment; and acted as joint lead arranger/joint bookrunner for Ryan Specialty Group, LLC's US$1.95 billion credit facility, which partially funded its acquisition of All Risks Ltd., the result of a long-standing relationship with U.S. Commercial Banking and a "One Bank" approach to supporting the client
- Maintained a long-standing global leadership position in the Metals & Mining sector, earning recognition as the Best Metals & Mining Investment Bank by *Global Finance* magazine, for the 11th consecutive year. Hosted the 29th Global Metals & Mining Conference with over 1,200 clients, creating over 6,000 touchpoints
- Named Best Bank for the Canadian Dollar by *FX Week*, for the ninth consecutive year
- Following the launch of a Sustainable Finance focus in 2019, continued to establish a strong presence in this key area by underwriting $43 billion of sustainable bonds in 2020, representing a 483% year-over-year increase in sustainable bond underwriting, and aligning with BMO's Purpose. Notable sustainable finance transactions included: acting as joint lead manager on the World Bank's US$8 billion sustainable development bond, the largest U.S.-dollar-denominated bond issued by a supranational organization, with proceeds from the bond supporting projects in developing countries, such as addressing the impacts of COVID-19, and acting as sustainability structuring agent and sole bookrunner on the $1.92 billion sustainability linked loan (SLL) to Maple Leaf Foods, Inc., a first in Canadian history
- Continued to drive strong client loyalty scores across the Corporate Banking business, with an increase over last year's score, and expanded BMO's loan book and deposits to support clients' goals

Key Priority: Work smarter, simplify and digitize

Achievements

- Invested strategically in electronic trading capabilities by successfully completing the acquisition of Clearpool Group, Inc., a state-of-the-art electronic trading platform in April 2020. The transaction enables BMO Capital Markets to provide clients with customizable algorithmic trading strategies and to compete with the top players in the North American electronic trading business
- The U.S. Rates team successfully partnered with a liquidity provider in U.S. Treasuries. This strategic partnership provides clients with better pricing and deeper liquidity, and benefits BMO by reducing balance sheet costs and minimizing its inventory of less liquid securities
- Launched a new partnership with Canadian Commercial Banking and U.S. Commercial Banking to align the respective technology lending and cash management capabilities within the Technology and Innovation Banking Group, to better serve the needs of clients in the technology sector from an enterprise perspective
- Maintained seamless support through the pandemic by connecting with clients through innovative digital strategies and tools, including successfully converting in-person roadshows, analyst marketing events and investor conferences to completely virtual events. BMO Capital Markets successfully held ten virtual conferences, including a Global Farm-to-Market Conference with overall client attendance of 1,030, representing an increase of 25% from 2019
- Demonstrated agility, with virtually 100% of BMO Capital Markets employees working productively from home during the pandemic, initiating faster technology tool roll-outs than ever
- Continued to enhance internal cost discipline and consider ways to work smarter. Initiatives included the Million Hour Challenge, in which employees were asked to improve productivity, simplify work processes and collectively save one million hours

MD&A

2021 Focus

- Continue to invest where BMO Capital Markets has the strengths and capabilities to deliver value-added solutions and meet client needs
- Build on a foundation to work smarter and simplify how BMO Capital Markets does business, to enhance efficiency and return on equity with a particular focus on digitization
- Activate and drive an inclusive, high-performance culture – focused on urgency and accountability to clients, strong partnership and alignment across the enterprise, and a commitment to eliminate the barriers to diversity and inclusion
- Continue to be prudent managers of time, capital and risk for clients, employees and shareholders

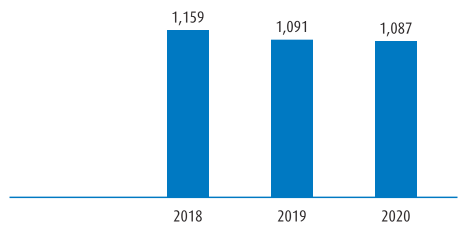
BMO Capital Markets

(Canadian $ in millions, except as noted) As at or for the year ended October 31	**2020**	2019	2018
Net interest income (teb)	**3,320**	2,390	1,780
Non-interest revenue	**2,006**	2,369	2,608
Total revenue (teb)	**5,326**	4,759	4,388
Provision for (recovery of) credit losses on impaired loans	**310**	52	(17)
Provision for (recovery of) credit losses on performing loans	**349**	28	(1)
Total provision for (recovery of) credit losses	**659**	80	(18)
Non-interest expense	**3,236**	3,279	2,879
Income before income taxes	**1,431**	1,400	1,527
Provision for income taxes (teb)	**344**	309	368
Reported net income	**1,087**	1,091	1,159
Acquisition integration costs (1)	**11**	10	11
Amortization of acquisition-related intangible assets (2)	**18**	17	2
Adjusted net income	**1,116**	1,118	1,172
Key Performance Metrics and Drivers			
Global Markets revenue	**3,222**	2,704	2,542
Investment and Corporate Banking revenue	**2,104**	2,055	1,846
Net income growth (%)	**(0.4)**	(5.9)	(9.4)
Adjusted net income growth (%)	**(0.2)**	(4.7)	(8.5)
Revenue growth (%)	**11.9**	8.5	(4.7)
Non-interest expense growth (%)	**(1.3)**	13.9	2.5
Adjusted non-interest expense growth (%)	**(1.4)**	13.4	2.0
Return on equity (%)	**9.2**	9.9	12.9
Adjusted return on equity (%)	**9.5**	10.1	13.0
Operating leverage (teb) (%)	**13.2**	(5.4)	(7.2)
Adjusted operating leverage (teb) (%)	**13.3**	(4.9)	(6.7)
Efficiency ratio (teb) (%)	**60.8**	68.9	65.6
Adjusted efficiency ratio (teb) (%)	**60.1**	68.2	65.2
Average common equity	**11,353**	10,430	8,464
Average assets	**369,518**	342,626	307,357
Average gross loans and acceptances	**67,088**	60,287	46,968
Average net loans and acceptances	**66,693**	60,199	46,902
Full-time equivalent employees	**2,686**	2,772	2,714
U.S. Business Select Financial Data (US$ in millions)			
Total revenue (teb)	**1,865**	1,609	1,252
Non-interest expense	**1,152**	1,197	987
Reported net income	**279**	292	196
Adjusted net income	**299**	312	205
Average assets	**116,307**	107,185	98,265
Average net loans and acceptances	**24,961**	21,260	15,249

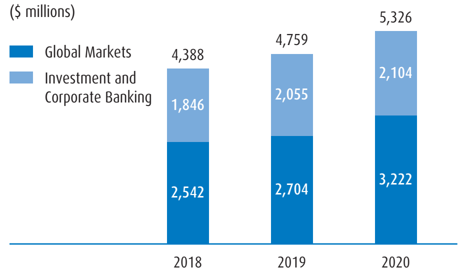
(1) KGS-Alpha and Clearpool acquisition integration costs before tax amounts of $14 million in 2020, $13 million in 2019 and $14 million in 2018 are included in non-interest expense.
(2) Before tax amounts of $23 million in 2020, $22 million in 2019 and $3 million in 2018 are included in non-interest expense.

Adjusted results in this table are non-GAAP amounts or non-GAAP measures. Please refer to the Non-GAAP Measures section on page 17.

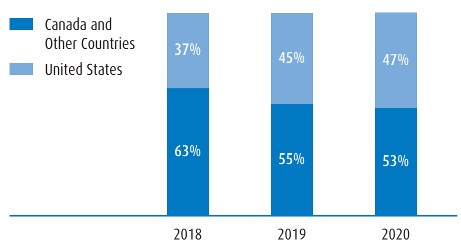
Reported Net Income
($ millions)



Revenue by Line of Business
($ millions)



Revenue by Geography
(%)



Financial Review

BMO Capital Markets reported net income was $1,087 million and adjusted net income was $1,116 million, both relatively unchanged from the prior year. Adjusted net income excludes the amortization of acquisition-related intangible assets and acquisition integration costs. Higher revenue and lower expenses were offset by higher provisions for credit losses.

Revenue was $5,326 million, an increase of $567 million or 12% from the prior year, or 11% excluding the impact of the stronger U.S. dollar. Global Markets revenue increased $518 million or 19%, primarily due to higher interest rate trading, commodities trading and foreign exchange trading revenue, partially offset by lower equities trading revenue. Trading-related revenue benefitted from higher levels of client activity, given the reaction of market participants to the COVID-19 pandemic, while experiencing negative impacts related to equity linked notes-related businesses in the volatile second quarter. Investment and Corporate Banking revenue increased $49 million or 2%, primarily due to higher corporate banking-related revenue and equity underwriting revenue, partially offset by lower net securities gains, lower advisory revenue and markdowns on the held-for-sale loan portfolio.

The total provision for credit losses was $659 million, compared with $80 million in the prior year, reflecting the impact of the pandemic and higher oil and gas provisions. The provision for credit losses on impaired loans was $310 million, compared with $52 million in the prior year. There was a $349 million provision for credit losses on performing loans in the current year, compared with $28 million in the prior year. For additional information, please refer to the Provision for Credit Losses section on page 31.

Non-interest expense was $3,236 million, a decrease of $43 million or 1%, and adjusted non-interest expense was $3,199 million, a decrease of $45 million or 1%, or 2% excluding the impact of the stronger U.S. dollar. The decrease was largely due to lower severance expense and lower travel and business development costs, reflecting the current environment, partially offset by higher performance-based compensation and technology costs.

Average assets increased $26.9 billion or 8% to $369.5 billion from the prior year, or 7% excluding the impact of the stronger U.S. dollar, primarily due to higher levels of derivatives and net loans and acceptances. Average gross loans and acceptances increased $6.8 billion or 11% from the prior year to $67.1 billion, reflecting higher lending activity and loan utilizations. Gross loans and acceptances as at October 31, 2020, increased $2.2 billion or 4% from the prior year to $62.8 billion, or 3% excluding the impact of the stronger U.S. dollar, reflecting higher lending activity.

Business Environment, Outlook and Challenges

In fiscal 2020, BMO Capital Markets entered the COVID-19 crisis from a position of strength, enabling it to navigate the market volatility and challenging market conditions that ensued. Throughout the year, BMO Capital Markets continued to execute on a strategy which leveraged its balanced, diversified and client-focused business model, while maintaining strong risk management practices.

Despite severe market dislocation and volatility caused by the pandemic, as well as a low interest rate environment, the business continued to provide liquidity to clients and experienced particularly favourable conditions for trading activity.

Looking ahead to fiscal 2021, the course of the pandemic and path to recovery remain unknown, with vaccine development progress, potential for new restrictions on activity, trade tensions, and future fiscal policy all contributing to heightened uncertainty in the macroeconomic environment. However, business investment is expected to improve and market volatility is also expected to normalize. BMO Capital Markets' strategy remains unchanged: a sharp focus on clients, aiming to be their valued financial partner – leveraging people, innovative solutions and capital to help them achieve their goals. With a leading position in Canada and strong momentum in the United States, it is expected that further investing in product offerings and capabilities to serve clients, particularly where the bank has core strengths and opportunity, and choosing where to increase or reduce focus will provide a strong foundation for profitable growth and returns. In addition, BMO Capital Markets' disciplined and integrated approach to risk management, along with continued investments in regulatory technology infrastructure, will enable the business to meet risk management requirements in the coming years. Assuming markets remain constructive and there is limited further deterioration in the macroeconomic environment, BMO Capital Markets is confident of its ability to maintain a strong market position and achieve its strategic objectives.

The Canadian and U.S. economic environment in 2020 and the outlook for 2021 are discussed in more detail in the Economic Developments and Outlook section on page 18.

Caution

This BMO Capital Markets section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

Corporate Services, including Technology and Operations

Corporate Services consists of Corporate Units and Technology and Operations (T&O). Corporate Units provide enterprise-wide expertise, governance and support in a variety of areas, including strategic planning, risk management, finance, legal and regulatory compliance, human resources, communications, marketing, real estate and procurement. T&O develops, monitors, manages and maintains governance of information technology including data and analytics, and also provides cyber security and operations services.

The costs of Corporate Units and T&O services are largely transferred to the three operating groups (Personal and Commercial Banking, BMO Wealth Management and BMO Capital Markets), with any remaining amounts retained in Corporate Services' results. As such, Corporate Services results largely reflect the impact of residual treasury-related activities, the elimination of taxable equivalent adjustments, and residual unallocated expenses.

Corporate Services focuses on enterprise-wide priorities related to maintaining a sound risk and control environment and efficiency, while supporting the businesses in meeting their customer experience objectives. Notable achievements during the year included:

- Provided strong operational resilience throughout the COVID-19 pandemic, by enabling remote working capabilities for non-branch workforce and launching additional innovative technology and tools across the enterprise to foster effective virtual collaboration for employees and customers.
- Corporate Units continued to operate effectively in a volatile environment, supporting execution of business strategies and implementation and operation of hardship and government relief programs to meet customer needs, while ensuring a prudent risk management posture in response to market developments.
- Scaled and accelerated the Chief Information and Operations Officer operating model established last year, to support Business to Customer and Business to Business strategies, aligning technology and operations with business groups across the enterprise. This structure allows for end-to-end accountability to ensure integrated business technology solutions, which are facilitated by integrated teams. The operating model has been instrumental in accelerating the bank's digital agenda.
- Evolved the Financial Crimes Unit (FCU) launched last year to enhance security capabilities across the bank. The FCU represents evolving best practices globally, bringing together cyber, fraud and physical security functions, as well as subject matter experts across the lines of business and business functional groups. FCU capabilities are complemented by advanced analytics and methodologies, including artificial intelligence (AI), to enable accelerated detection, prevention, response and recovery capabilities to safeguard customer, employee and bank data. The FCU has been pivotal in implementing risk mitigation strategies in response to the increase in cyber threats during the pandemic.
- Continued to accelerate the deployment of digital technology to transform the business, including further implementation of BMO Digital Banking for the Personal and Business Banking business, BMO Wealth Management's operations digitization, expansion of BMO Capital Markets' international capabilities and digitization of Corporate and Commercial Banking operations, in line with the bank's stated priorities.
- Advanced the data and analytics platform to build out analytics and robotics capabilities, supporting business initiatives and enabling further gains in efficiency. Heightened use of AI to enable the bank in the new remote environment resulting from the pandemic. Strengthened cloud partnerships, driving innovative technology capabilities in the areas of robotics and AI, and continued to explore opportunities to leverage quantum computing through the execution of proofs of concept with third-party providers and research institutions.
- Continued to deliver a technology critical service focus across the enterprise, to ensure resilience, scale and integration capabilities to reduce risk and costs, and enhance technology-enabled experiences for customers and employees.

Corporate Services, including Technology and Operations

(Canadian $ in millions, except as noted) As at or for the year ended October 31	**2020**	2019	2018
Net interest income before group teb offset	**(364)**	(242)	(245)
Group teb offset	**(335)**	(296)	(313)
Net interest income (teb)	**(699)**	(538)	(558)
Non-interest revenue	**285**	238	248
Total revenue (teb)	**(414)**	(300)	(310)
Provision for (recovery of) credit losses on impaired loans	**3**	(7)	(13)
Provision for (recovery of) credit losses on performing loans	**–**	(5)	(2)
Total provision for (recovery of) credit losses	**3**	(12)	(15)
Non-interest expense	**457**	856	436
Income (loss) before income taxes	**(874)**	(1,144)	(731)
Recovery of income taxes (teb)	**(483)**	(517)	(2)
Reported net loss	**(391)**	(627)	(729)
Acquisition integration costs (1)	**–**	–	14
Restructuring costs (2)	**–**	357	192
U.S. net deferred tax asset revaluation (3)	**–**	–	425
Benefit from the remeasurement of an employee benefit liability (4)	**–**	–	(203)
Adjusted net loss	**(391)**	(270)	(301)
Adjusted total revenue (teb)	**(414)**	(300)	(310)
Total adjusted provision for (recovery of) credit losses	**3**	(12)	(15)
Adjusted non-interest expense	**457**	372	433
Adjusted net loss	**(391)**	(270)	(301)
Full-time equivalent employees	**14,170**	14,901	14,365
U.S. Business Select Financial Data (US$ in millions)			
Total revenue (teb)	**(116)**	(37)	(41)
Provision for (recovery of) credit losses	**3**	(4)	(12)
Non-interest expense	**97**	192	195
Provision for (recovery of) income taxes (teb)	**(89)**	(76)	263
Reported net loss	**(127)**	(149)	(487)
Adjusted total revenue (teb)	**(116)**	(37)	(41)
Adjusted provision for (recovery of) credit losses	**3**	(4)	(12)
Adjusted non-interest expense	**97**	76	140
Adjusted net loss	**(127)**	(63)	(107)

(1) Acquisition integration costs related to the acquired BMO Transportation Finance business are included in non-interest expense.
(2) Restructuring charges before tax amounts of $484 million in 2019 and $260 million in 2018. Restructuring costs are included in non-interest expense.
(3) Charge due to the revaluation of the U.S. net deferred tax asset as a result of the enactment of the U.S. *Tax Cuts and Jobs Act*. For more information, refer to the Critical Accounting Estimates – Income Taxes and Deferred Tax Assets section on page 116.
(4) A benefit of $203 million after tax ($277 million pre-tax) from the remeasurement of an employee benefit liability as a result of an amendment to the other employee future benefits plan for certain employees that was announced in the fourth quarter of 2018. This amount has been included in Corporate Services in non-interest expense.

Adjusted results in this section are non-GAAP amounts or non-GAAP measures. Please refer to the Non-GAAP Measures section on page 17.

Financial Review

Corporate Services reported and adjusted net loss was $391 million, compared with a reported net loss of $627 million and an adjusted net loss of $270 million in the prior year. Adjusted results in the prior year exclude the restructuring charge. The adjusted net loss increased, primarily due to higher employee-related costs and real estate expenses, lower treasury-related revenue reflecting the impact of higher levels of excess customer deposits, and higher provisions for credit losses.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

Summary Quarterly Earnings Trends

BMO's results in the most recent three quarters of 2020 reflect the impact of the COVID-19 pandemic and the steepest and most synchronized global recession on record. Canadian and global economies experienced an historic contraction from the second to the fourth quarter of 2020, in response to business closures and precautionary measures implemented to contain the spread of COVID-19. In 2020, the bank recorded higher provisions for credit losses in all its businesses, primarily due to the impact of the pandemic. Revenue performance in the bank's market-sensitive businesses was negatively impacted by volatile market conditions in the second quarter of 2020, but improved in the second half of the year. The P&C businesses recorded good year-over-year average balance growth, but revenue growth in recent quarters was negatively impacted by COVID-19, the lower interest rate environment and changes in client activity. Prior to the pandemic, BMO's underlying results generally trended upwards.

Reported results over the past eight quarters were impacted by a restructuring charge and a reinsurance adjustment, both in the fourth quarter of 2019.

Canadian P&C delivered year-over-year loan and deposit growth, and benefitted from focused expense management. Revenue growth in the second, third and fourth quarters of 2020 was negatively impacted by COVID-19, including the impact of lower interest rates on net interest income and lower non-interest revenue. U.S. P&C net income reflects increased provisions for credit losses during 2020. Revenue growth in recent quarters was impacted by COVID-19, including the lower rate environment and changes in customer activity. Results reflect the continued focus on expense management. Traditional Wealth Management results in BMO Wealth Management have generally seen moderate increases. The current quarter results reflect the impact of improved global equity markets, while the second quarter of 2020 was impacted by weaker markets and a legal provision. Insurance results are subject to variability resulting from changes in interest rates, equity markets and reinsurance claims. BMO Capital Markets generally reflects good revenue performance, with year-over-year growth in seven of the past eight quarters, including strong U.S. segment performance and benefits from the bank's diversified businesses. The second quarter of 2020 was negatively impacted by volatile market conditions resulting from the COVID-19 pandemic. Results in the second quarter of 2019 included a severance expense. Corporate Services results can vary from quarter to quarter, in large part due to the inclusion of adjusting items, which are largely recorded in Corporate Services. There were no Corporate Services adjusting items in fiscal 2020.

BMO's total provision for credit losses measured as a percentage of net loans and acceptances ranged between 13 basis points and 31 basis points between the fourth quarter of 2018 and first quarter of 2020. The bank recognized elevated credit losses since the World Health Organization declared COVID-19 a global pandemic on March 11, 2020. The total provision for credit losses was 94 basis points in the second quarter of 2020, 89 basis points in the third quarter of 2020 and 38 basis points in the fourth quarter of 2020.

The effective tax rate has varied with legislative changes; changes in tax policy, including their interpretation by tax authorities and the courts; earnings mix, including the relative proportion of earnings attributable to the different jurisdictions in which the bank operates, the level of pre-tax income, and the level of tax-exempt income from securities.

The bank's results reflect the impact of IFRS 16, *Leases* (IFRS 16), which was adopted in the first quarter of 2020, recognizing the cumulative effect of adoption in opening retained earnings with no changes to prior periods. Under IFRS 16, the bank as lessee is required to recognize a right-of-use asset and a corresponding lease liability for most leases. Refer to the Changes in Accounting Policies in 2020 section on page 118 for further details.

Adjusted results in this Summary Quarterly Earnings Trends section are non-GAAP amounts or non-GAAP measures. Please refer to the Non-GAAP Measures section on page 17. See also the Impact of COVID-19 section on page 24 and the Enterprise-Wide Risk Management section on page 73.

Summarized Statement of Income and Quarterly Financial Measures

(Canadian $ in millions, except as noted)	**Q4-2020**	**Q3-2020**	**Q2-2020**	**Q1-2020**	Q4-2019	Q3-2019	Q2-2019	Q1-2019
Net interest income (1)	**3,530**	**3,535**	**3,518**	**3,388**	3,364	3,217	3,135	3,172
Non-interest revenue	**2,456**	**3,654**	**1,746**	**3,359**	2,723	3,449	3,078	3,345
Revenue (1)	**5,986**	**7,189**	**5,264**	**6,747**	6,087	6,666	6,213	6,517
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**–**	**1,189**	**(197)**	**716**	335	887	561	926
Revenue, net of CCPB (1)	**5,986**	**6,000**	**5,461**	**6,031**	5,752	5,779	5,652	5,591
Provision for (recovery of) credit losses on impaired loans	**339**	**446**	**413**	**324**	231	243	150	127
Provision for (recovery of) credit losses on performing loans	**93**	**608**	**705**	**25**	22	63	26	10
Total provision for credit losses	**432**	**1,054**	**1,118**	**349**	253	306	176	137
Non-interest expense (1)	**3,548**	**3,444**	**3,516**	**3,669**	3,987	3,491	3,595	3,557
Income before provision for income taxes	**2,006**	**1,502**	**827**	**2,013**	1,512	1,982	1,881	1,897
Provision for income taxes	**422**	**270**	**138**	**421**	318	425	384	387
Reported net income (see below)	**1,584**	**1,232**	**689**	**1,592**	1,194	1,557	1,497	1,510
Acquisition integration costs (2)	**3**	**4**	**2**	**2**	2	2	2	4
Amortization of acquisition-related intangible assets (3)	**23**	**23**	**24**	**23**	29	23	23	24
Restructuring costs (4)	**–**	**–**	**–**	**–**	357	–	–	–
Reinsurance adjustment (5)	**–**	**–**	**–**	**–**	25	–	–	–
Adjusted net income (see below)	**1,610**	**1,259**	**715**	**1,617**	1,607	1,582	1,522	1,538
Operating group reported net income								
Canadian P&C reported net income	**647**	**320**	**361**	**700**	710	650	616	648
Amortization of acquisition-related intangible assets (3)	**1**	**–**	**1**	**–**	–	1	–	1
Canadian P&C adjusted net income	**648**	**320**	**362**	**700**	710	651	616	649
U.S. P&C reported net income	**324**	**263**	**339**	**351**	393	368	406	444
Amortization of acquisition-related intangible assets (3)	**9**	**10**	**10**	**10**	11	11	11	10
U.S. P&C adjusted net income	**333**	**273**	**349**	**361**	404	379	417	454
BMO Wealth Management reported net income	**320**	**341**	**144**	**291**	266	250	305	238
Amortization of acquisition-related intangible assets (3)	**8**	**8**	**9**	**9**	9	8	10	10
Reinsurance adjustment (5)	**–**	**–**	**–**	**–**	25	–	–	–
BMO Wealth Management adjusted net income	**328**	**349**	**153**	**300**	300	258	315	248
BMO Capital Markets reported net income	**379**	**426**	**(74)**	**356**	271	314	250	256
Acquisition integration costs (2)	**3**	**4**	**2**	**2**	2	2	2	4
Amortization of acquisition-related intangible assets (3)	**5**	**5**	**4**	**4**	9	3	2	3
BMO Capital Markets adjusted net income	**387**	**435**	**(68)**	**362**	282	319	254	263
Corporate Services reported net income	**(86)**	**(118)**	**(81)**	**(106)**	(446)	(25)	(80)	(76)
Restructuring costs (4)	**–**	**–**	**–**	**–**	357	–	–	–
Corporate Services adjusted net income	**(86)**	**(118)**	**(81)**	**(106)**	(89)	(25)	(80)	(76)
Basic earnings per share ($) (6)	**2.37**	**1.81**	**1.00**	**2.38**	1.79	2.34	2.27	2.28
Diluted earnings per share ($) (6)	**2.37**	**1.81**	**1.00**	**2.37**	1.78	2.34	2.26	2.28
Adjusted diluted earnings per share ($) (6)	**2.41**	**1.85**	**1.04**	**2.41**	2.43	2.38	2.30	2.32
Net interest margin on average earning assets (%)	**1.61**	**1.59**	**1.70**	**1.68**	1.71	1.67	1.72	1.69
PCL-to-average net loans and acceptances (annualized) (%)	**0.38**	**0.89**	**0.94**	**0.31**	0.23	0.28	0.16	0.13
PCL on impaired loans to average net loans and acceptances (annualized) (%)	**0.30**	**0.38**	**0.35**	**0.29**	0.21	0.22	0.14	0.12
Effective tax rate (%)	**21.1**	**18.0**	**16.6**	**20.9**	21.0	21.5	20.4	20.4
Adjusted effective tax rate (%)	**21.1**	**18.2**	**16.7**	**21.0**	22.0	21.5	20.5	20.4
Canadian/U.S. dollar average exchange rate ($)	**1.3217**	**1.3584**	**1.3811**	**1.3161**	1.3240	1.3270	1.3299	1.3351

(1) Effective the first quarter of 2020, the bank adopted IFRS 16, *Leases* (IFRS 16), recognizing the cumulative effect of adoption in opening retained earnings with no changes to prior periods. Under IFRS 16, the bank as lessee is required to recognize a right-of-use asset and a corresponding lease liability for most leases. BMO recognized $90 million in Q4-2020, $91 million in Q3-2020, $90 million in Q2-2020 and $89 million in Q1-2020 of depreciation on the right-of-use assets recorded in non-interest expense. BMO recognized $13 million in each of Q4-2020, Q3-2020 and Q2-2020, and $14 million in Q1-2020 of interest on the lease liability recorded in interest expense. For more information, refer to the Changes in Accounting Policies in 2020 section on page 118.

(2) Acquisition integration costs before tax are included in non-interest expense. BMO Capital Markets amounts of $3 million in Q4-2020, $5 million in Q3-2020, $3 million in both Q2-2020 and Q1-2020, $2 million in Q4-2019, $3 million in Q3-2019, $2 million in Q2-2019, and $6 million in Q1-2019.

(3) Amortization of acquisition-related intangible assets before tax is charged to the non-interest expense of the operating groups. Canadian P&C amounts of $1 million in Q4-2020, $nil in Q3-2020, $1 million in Q2-2020, $nil in both Q1-2020 and Q4-2019, $1 million in Q3-2019, $nil in Q2-2019, and $1 million in Q1-2019. U.S. P&C amounts of $13 million in both Q4-2020 and Q3-2020, $14 million in Q2-2020, $13 million in Q1-2020, $15 million in Q4-2019, and $14 million in each of Q3-2019, Q2-2019 and Q1-2019. BMO Wealth Management amounts of $10 million in Q4-2020, $11 million in each of Q3-2020, Q2-2020, Q1-2020, Q4-2019, and Q3-2019, $12 million in Q2-2019, and $13 million in Q1-2019. BMO Capital Markets amounts of $6 million in Q4-2020, $8 million in Q3-2020, $4 million in Q2-2020, $5 million in Q1-2020, $12 million in Q4-2019, $3 million in Q3-2019, $4 million in Q2-2019, and $3 million in Q1-2019.

(4) Q4-2019 reported net income included a $357 million after-tax ($484 million pre-tax) restructuring charge, related to severance and a small amount of real estate-related costs, to improve efficiency, including accelerating delivery against key bank-wide initiatives focused on digitization, organizational redesign and simplification of the way the bank does business. Restructuring charges are included in non-interest expense in Corporate Services.

(5) Q4-2019 reported net income included a reinsurance adjustment of $25 million (pre-tax and after-tax) in CCPB, related to the net impact of major reinsurance claims from Japanese typhoons incurred after the announced wind-down of the reinsurance business. This reinsurance adjustment is included in CCPB in BMO Wealth Management.

(6) Earnings per share (EPS) is calculated using net income after deducting total dividends on preferred shares and distributions on other equity instruments. For more information on EPS, refer to Note 23 on page 204 of the consolidated financial statements.

Certain comparative figures have been reclassified to conform with the current period's presentation.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

Caution

In the opinion of Bank of Montreal management, information that is derived from unaudited financial information, including information as at and for the interim periods, includes all adjustments necessary for a fair presentation of such information. All such adjustments are of a normal and recurring nature. Financial ratios for interim periods are stated on an annualized basis, where appropriate, and the ratios, as well as interim operating results, are not necessarily indicative of actual results for the full fiscal year.

Review of Fourth Quarter 2020 Performance

Reported net income was $1,584 million, an increase of $390 million or 33% from the prior year, and adjusted net income was $1,610 million, an increase of $3 million. Adjusted net income excludes the amortization of acquisition-related intangible assets and acquisition integration costs in both periods. The prior year adjusted net income also excludes a $357 million restructuring charge, primarily related to severance, as well as a $25 million reinsurance adjustment for the net impact of major reinsurance claims that were incurred after the announced decision to wind down the reinsurance business. Adjusted results primarily reflect the impact of higher provisions for credit losses, which increased $179 million pre-tax or $131 million after tax, which largely offset the benefit from higher revenue, net of modestly higher expenses. Adjusted net income increased in BMO Capital Markets and BMO Wealth Management, partially offset by a decrease in the P&C businesses. Corporate Services adjusted net loss was relatively unchanged from the prior year. A full list of adjusting items is disclosed in the Non-GAAP Measures section on page 17.

Reported EPS was $2.37, an increase of $0.59 or 33% from the prior year, and adjusted EPS was $2.41, a decrease of $0.02 or 1%.

Summary income statements and data for the quarter and comparative quarters are outlined on page 55.

The combined Personal and Commercial Banking business reported net income was $971 million, compared with $1,103 million in the fourth quarter of the prior year, and adjusted net income was $981 million, compared with $1,114 million. Reported and adjusted net income were impacted by higher provisions for credit losses, which increased $155 million pre-tax, or $115 million after tax from the fourth quarter in the prior year. Canadian P&C reported net income was $647 million and adjusted net income was $648 million, or 9% lower than the reported and adjusted net income of $710 million in the prior year. Net income decreased due to lower revenue and higher provisions for credit losses, partially offset by lower expenses. On a Canadian dollar basis, U.S. P&C reported net income was $324 million, or 17% lower than $393 million in the prior year, and adjusted net income was $333 million, or 17% lower than $404 million. On a U.S. dollar basis, U.S. P&C reported net income was US$245 million, or 17% lower than US$297 million in the prior year, and adjusted net income was US$253 million, or 17% lower than US$305 million, due to higher provisions for credit losses on performing loans, with lower revenue more than offset by lower expenses. BMO Wealth Management reported net income was $320 million, an increase of $54 million or 20% from the prior year, and adjusted net income was $328 million, an increase of $28 million or 9%. Adjusted net income in the prior year excludes the net impact of major reinsurance claims. Traditional Wealth reported net income was $253 million, an increase of $17 million or 7%, and adjusted net income was $261 million, an increase of $16 million or 6%, primarily driven by higher revenue, partially offset by higher expenses. Insurance net income was $67 million, an increase of $37 million on a reported basis and $12 million on an adjusted basis, primarily reflecting unfavourable market movements in the prior year. BMO Capital Markets reported net income was $379 million, an increase of $108 million or 40% from the prior year, and adjusted net income was $387 million, an increase of $105 million or 38%. Strong revenue performance was partially offset by higher provisions for credit losses and higher expenses. Corporate Services reported and adjusted net loss for the quarter was $86 million, compared with a reported net loss of $446 million and an adjusted net loss of $89 million in the prior year. Adjusted results in the fourth quarter of the prior year exclude the restructuring charge. Adjusted results are relatively unchanged, primarily due to higher revenue and the impact of a favourable tax rate in the current quarter, offset by higher expenses.

Total revenue was $5,986 million, a decrease of $101 million or 2% from the prior year. On a basis that nets insurance claims, commissions and changes in policy benefit liabilities (CCPB) against insurance revenue (net revenue), revenue increased $234 million, or 4% from $5,752 million in the fourth quarter of the prior year. Revenue net of adjusted CCPB, which excludes the reinsurance adjustment in the prior year, increased $209 million or 4%. Canadian P&C revenue decreased 2%, primarily due to lower non-interest revenue, including lower credit card fee revenue and deposit fee revenue, with net interest income relatively unchanged, as higher balances across most products were offset by lower margins. Revenue was negatively impacted by the COVID-19 pandemic with pressure on margins from the record-low interest rate environment, and lower credit card fee revenue and deposit fee revenue. U.S. P&C revenue decreased 2% on both a Canadian dollar basis and a U.S. dollar basis, due to lower non-interest revenue across most categories with net interest income relatively unchanged, with higher deposit balances and loan margins largely offset by lower deposit product margins. Revenue was negatively impacted by the COVID-19 pandemic, as a record-low interest rate environment resulted in pressure on deposit margins. BMO Wealth Management revenue decreased 16%. Revenue, net of reported and adjusted CCPB, increased 6% on a reported basis and 4% on an adjusted basis. Revenue in Traditional Wealth increased 2%, primarily due to higher online brokerage revenues and the benefit from higher global markets, partially offset by lower net interest income, as the benefit from strong loan and deposit growth was more than offset by lower margins. Insurance revenue, net of CCPB, increased $50 million on a reported basis, and $25 million on an adjusted basis, due to unfavourable market movements in the prior year. BMO Capital Markets revenue increased 17%. Global Markets revenue increased, driven by strong client activity across interest rates, equities and commodities trading. Investment and Corporate Banking revenue increased, primarily driven by higher corporate banking-related revenue, as well as underwriting and advisory revenue. Corporate Services revenue increased $33 million, primarily due to below-trend revenue, excluding teb adjustments in the prior year.

Net interest income was $3,530 million, an increase of $166 million or 5%. On an excluding trading basis, net interest income was $3,018 million, an increase of $39 million or 1% from the prior year, largely due to higher net interest income in Corporate Services with net interest income in the businesses relatively unchanged.

Average earning assets were $873.9 billion, an increase of $95.5 billion or 12%, due to higher securities, higher cash resources, and loan growth, as well as higher securities borrowed or purchased under resale agreements. BMO's overall net interest margin decreased 10 basis points from the fourth quarter in the prior year, primarily driven by a higher volume of assets in Corporate Services as a result of high liquidity levels, which have a lower spread than the bank, and lower margins in Canadian P&C and BMO Wealth Management due to lower interest rates, partially offset by higher trading net interest income. On an excluding trading basis, net interest margin decreased 18 basis points, due to the drivers noted above.

Non-interest revenue, net of CCPB, was $2,456 million, an increase of $68 million or 3%. Non-interest revenue, net of adjusted CCPB, increased $43 million or 2%. The increase was primarily driven by higher trading, underwriting and advisory, and lending revenue and higher insurance revenue, net of adjusted CCPB, partially offset by lower other non-interest revenue, lower securities gains other than trading and lower securities commissions and fees. On an excluding trading basis, net of adjusted CCPB, non-interest revenue was $2,433 million, relatively unchanged from the prior year.

Gross insurance revenue decreased $292 million from the fourth quarter in the prior year, primarily due to a decrease in the fair value of investments in the current quarter from increases in interest rates, compared with relatively unchanged interest rates in the prior year, partially offset by higher annuity sales in the current quarter. These changes related to the fair value of investments were largely offset by changes in policy benefit liabilities, the impact of which is reflected in CCPB, as discussed below.

The total provision for credit losses was $432 million, an increase of $179 million from the fourth quarter in the prior year, primarily due to the impact of COVID-19. The total provision for credit losses ratio was 38 basis points, compared with 23 basis points in the prior year. The provision for credit losses on impaired loans was $339 million, an increase of $108 million from $231 million in the prior year, primarily due to higher provisions in the Canadian P&C and BMO Capital Markets businesses. The provision for credit losses on impaired loans ratio was 30 basis points, compared with 21 basis points in the prior year. There was a $93 million provision for credit losses on performing loans in the current quarter, compared with $22 million in the prior year. The $22 million provision for credit losses on performing loans in the prior year was largely due to portfolio growth, negative migration and scenario weight change, partially offset by changes in economic outlook, while the $93 million provision for credit losses on performing loans in the current quarter reflects a more severe adverse scenario, partially offset by an improving economic outlook and reduced balances.

Reported and adjusted CCPB were $nil in the current quarter, a decrease of $335 million on a reported basis and $310 million on an adjusted basis from the fourth quarter in the prior year. Adjusted CCPB in the prior year excludes the $25 million reinsurance adjustment. In the current quarter, the $nil CCPB reflects payments related to claims and policy benefits that fully offset changes in policyholder liabilities. Results decreased, primarily due to a decrease in the fair value of policy benefit liabilities in the current year resulting from increases in interest rates, compared with relatively unchanged interest rates in the prior year, partially offset by higher annuity sales.

Reported non-interest expense was $3,548 million, a decrease of $439 million or 11% from the fourth quarter in the prior year, and adjusted non-interest expense was $3,515 million, an increase of $52 million or 1%, or 2% excluding the impact of the weaker U.S. dollar. Adjusted non-interest expense excludes the amortization of acquisition-related intangible assets and acquisition integration costs in both periods and the restructuring charge in the prior year. The increase was largely due to higher premises and equipment costs and amortization of intangibles, partially offset by a continued focus on expense management, with lower expense across a number of categories, including lower travel and business development costs.

The provision for income taxes was $422 million, an increase of $104 million from the fourth quarter of the prior year. The effective tax rate for the current quarter was 21.1%, relatively unchanged from 21.0% in the fourth quarter of 2019. The adjusted provision for income taxes was $429 million, a decrease of $25 million from the fourth quarter of the prior year. The adjusted effective tax rate was 21.1% in the current quarter, compared with 22.0% in the fourth quarter of 2019.

Adjusted results in this Review of Fourth Quarter 2020 Performance section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

2019 Financial Performance Review

The preceding discussions in the MD&A focused on BMO's performance in fiscal 2020. This section summarizes BMO's performance in fiscal 2019, relative to fiscal 2018. As noted on page 13, certain prior-year data has been reclassified to conform with the presentation in 2020, including changes resulting from transfers between operating groups. Further information on these reclassifications is provided on page 35.

Net Income

Reported net income was $5,758 million in 2019, an increase of $305 million or 6% from 2018, and adjusted net income was $6,249 million, an increase of $267 million or 4% from the prior year. Adjusted net income in both periods excludes restructuring charges, amortization of acquisition-related intangible assets and acquisition-related costs. Adjusted net income in 2019 also excludes the net impact of major reinsurance claims from Japanese typhoons incurred after the announced wind-down of the reinsurance business, and adjusted net income in 2018 also excludes a one-time non-cash charge related to the revaluation of a U.S. net deferred tax asset due to U.S. tax reform and a benefit from the remeasurement of an employee benefit liability. The impact of the stronger U.S. dollar on net income was not significant. Reported and adjusted net income growth largely reflects good performance in the P&C businesses and an increase in Corporate Services, partially offset by a decrease in BMO Capital Markets. Reported net income in BMO Wealth Management decreased, while adjusted net income increased.

Return on Equity

Reported return on equity (ROE) was 12.6% and adjusted ROE was 13.7% in 2019, compared with 13.3% and 14.6%, respectively, in 2018. Reported and adjusted ROE decreased, primarily due to growth in common equity exceeding growth in net income. Reported results in both periods included restructuring charges, and reported results in 2018 also included the impact of the one-time non-cash charge related to the revaluation of a U.S. net deferred tax asset on net income and a benefit from the remeasurement of an employee future benefit liability. There was an increase of $278 million or 5% in net income available to common shareholders in 2019 and an increase of $240 million or 4% in adjusted net income available to common shareholders. Average common shareholders' equity increased $4.4 billion or 11% from 2018, primarily due to growth in retained earnings and accumulated other comprehensive income. The reported return on tangible common equity (ROTCE) in 2019 was 15.1%, compared with 16.2% in 2018, and adjusted ROTCE was 16.1% in 2019, compared with 17.5% in the prior year. Book value per share increased 11% from 2018 to $71.54, largely reflecting the increase in shareholders' equity.

Revenue

Reported revenue was $25,483 million in 2019, an increase of $2,578 million or 11% from 2018, or 10% excluding the impact of the stronger U.S. dollar. On a basis that nets insurance claims, commissions and changes in policy benefit liabilities against insurance revenue (net revenue), revenue was $22,774 million, an increase of $1,221 million or 6% from the prior year, or 5% excluding the impact of the stronger U.S. dollar, driven by good performance in the P&C businesses and BMO Capital Markets, including the impact of the acquisition of KGS-Alpha. BMO Wealth Management and Corporate Services revenue also increased.

Insurance Claims, Commissions and Changes in Policy Benefit Liabilities

Reported insurance claims, commissions and changes in policy benefit liabilities (CCPB) were $2,709 million in 2019, an increase of $1,357 million from 2018, and adjusted CCPB, which excludes the net impact of major reinsurance claims that were incurred after the bank's announced decision to wind down the reinsurance business, was $2,684 million, an increase of $1,332 million from the prior year. CCPB increased due to the impact of decreases in long-term interest rates that increased the fair value of policy benefit liabilities in 2019, compared with increases in long-term interest rates that decreased the fair value of policy benefit liabilities in 2018, underlying business growth and stronger equity markets, which increased the fair value of policy benefit liabilities. The increase in the fair value of policy benefit liabilities was largely offset in revenue.

Provision for Credit Losses

The total provision for credit losses (PCL) was $872 million in 2019, compared with $662 million in 2018. Total PCL as a percentage of average net loans and acceptances was 20 basis points in 2019, compared with 17 basis points in the prior year. The PCL on impaired loans was $751 million in 2019, compared with $700 million in 2018, reflecting higher provisions in Canadian P&C, BMO Capital Markets and Corporate Services, partially offset by lower provisions in U.S. P&C, which had higher recoveries compared with the prior year. Total PCL on impaired loans as a percentage of average net loans and acceptances was 17 basis points in 2019, compared with 18 basis points in 2018. There was a $121 million provision for credit losses on performing loans in 2019. In 2018, there was a $38 million recovery of credit losses on performing loans. A provision was recorded for performing loans in 2019, compared with a recovery in the prior year, reflecting higher loan growth in 2019, as well as higher provisions resulting from portfolio migration and changes in the economic outlook and scenario weights during 2019.

Non-Interest Expense

Non-interest expense was $14,630 million in 2019, an increase of $1,153 million or 9% from 2018, and adjusted non-interest expense was $14,005 million, an increase of $661 million or 5% from the prior year, or 4% excluding the impact of the stronger U.S. dollar.

Adjusted non-interest expense in both 2019 and 2018 excludes restructuring costs, the amortization of acquisition-related intangible assets and acquisition integration costs. The prior year also excludes a $277 million benefit from the remeasurement of an employee benefit liability. Restructuring costs were $484 million in 2019 and $260 million in 2018, related to bank-wide initiatives to improve efficiency. The amortization of acquisition-related intangible assets was $128 million and $116 million in 2019 and 2018, respectively, and acquisition integration costs were $13 million and $34 million in 2019 and 2018, respectively.

Adjusted non-interest expense increased from the prior year, largely reflecting higher employee-related costs, including severance expense in BMO Capital Markets in the second quarter of 2019 and the impact of the acquisition of KGS-Alpha, as well as higher technology costs, partially offset by lower other expenses. Reported non-interest expense was $14,630 million, an increase of $1,153 million or 9% from 2018, due to the drivers and adjusting items noted above.

Provision for Income Taxes

The provision for income taxes was $1,514 million in 2019, compared with $1,961 million in 2018. The reported effective tax rate in 2019 was 20.8%, compared with 26.5% in the prior year. The higher reported effective tax rate in 2018 was due to the $425 million charge related to the revaluation of the U.S. net deferred tax asset as a result of U.S. tax reform. The adjusted provision for income taxes was $1,673 million in 2019, compared with $1,565 million in 2018. The adjusted effective tax rate in 2019 was 21.1%, compared with 20.7% in the prior year.

Canadian P&C

Reported net income was $2,624 million in 2019 and adjusted net income was $2,626 million, an increase of $70 million or 3% from 2018 for both reported and adjusted net income, due to higher revenue, partially offset by higher expenses and higher provisions for credit losses. Adjusted net income excludes the amortization of acquisition-related intangible assets. Revenue was $7,984 million, an increase of $398 million or 5% from the prior year. In personal banking, revenue increased $73 million or 2% from 2018, due to higher balances across most products and higher margins, partially offset by lower non-interest revenue. The prior year included a $39 million gain related to the restructuring of Interac Corporation, which reduced personal banking revenue growth by 1%. In commercial banking, revenue increased $325 million or 12% from 2018, due to higher balances across most products, increased non-interest revenue and higher margins. The total provision for credit losses was $607 million, an increase of $138 million from the prior year. The provision for credit losses on impaired loans increased $78 million in 2019, due to higher consumer and commercial provisions. There was a $63 million provision for credit losses on performing loans in 2019, compared with a $3 million provision for credit losses on performing loans in 2018. Non-interest expense was $3,836 million in 2019, an increase of $155 million or 4% from the prior year, largely reflecting continued investment in the business, including higher technology and sales force investments.

U.S. P&C

Reported net income was $1,611 million in 2019, an increase of $214 million or 15% from 2018, and adjusted net income was $1,654 million, an increase of $212 million or 15% from the prior year. Adjusted net income excludes the amortization of acquisition-related intangible assets. All amounts in the remainder of this section are on a U.S. dollar basis.

Reported net income was $1,212 million in 2019, an increase of $127 million or 12% from 2018, and adjusted net income was $1,244 million, an increase of $124 million or 11% from the prior year, primarily due to good revenue performance and lower provision for credit losses, partially offset by higher expenses. Revenue was $4,048 million, an increase of $213 million or 6% from the prior year, primarily reflecting higher balances across most products and increased non-interest revenue, partially offset by a lower net interest margin. In personal banking, revenue increased $102 million or 8% from 2018, largely due to higher deposit revenue. In commercial banking, revenue increased $111 million or 4% from 2018, primarily due to higher loan balances and deposit revenue, net of loan margin compression. The total provision for credit losses was $149 million, a decrease of $21 million from the prior year. The provision for credit losses on impaired loans decreased $80 million, largely due to higher consumer and commercial recoveries in 2019. There was a $28 million provision for credit losses on performing loans in 2019, compared with a $31 million recovery of credit losses on performing loans in 2018. Non-interest expense was $2,360 million in 2019, an increase of $59 million or 3% from 2018, and adjusted non-interest expense was $2,317 million, an increase of $61 million or 3% from the prior year, primarily due to continued investment in the business, including higher technology and employee-related costs, partially offset by lower Federal Deposit Insurance Corporation insurance expense and the impact of non-recurring items in both 2019 and 2018.

BMO Wealth Management

Reported net income was $1,059 million in 2019, compared with $1,072 million in 2018. Adjusted net income was $1,121 million, an increase of $8 million or 1% from the prior year, and excludes the net impact of major reinsurance claims from Japanese typhoons that were incurred after the bank's announced decision to wind down the reinsurance business in 2019 and the amortization of acquisition-related intangible assets in both 2019 and 2018. As the performance of the reinsurance business did not meet risk and return expectations, BMO made the strategic decision to wind down the business during 2019. Traditional Wealth reported net income was $861 million in 2019, an increase of $56 million or 7% from 2018, and adjusted net income was $898 million, an increase of $52 million or 6% from the prior year, primarily driven by higher deposit and loan revenue and the impact of a legal provision in 2018, partially offset by lower fee-based revenue and higher expenses. Insurance reported net income was $198 million in 2019, compared with $267 million in 2018, and adjusted net income was $223 million, compared with $267 million in the prior year, primarily due to lower reinsurance revenue. Revenue was $7,662 million, an increase of $1,361 million or 22% from 2018. Revenue, net of reported CCPB, was $4,953 million, relatively unchanged from the prior year. Revenue, net of adjusted CCPB, was $4,978 million, an increase of $29 million or 1%. Revenue in Traditional Wealth was $4,555 million, an increase of $85 million or 2% from 2018, primarily due to higher deposit and loan revenue and the impact of a legal provision in 2018, partially offset by lower fee-based revenue, including lower performance fees from the asset management business. Insurance revenue, net of reported CCPB, was $398 million in 2019, compared with $479 million in 2018. Insurance revenue, net of adjusted CCPB, was $423 million in 2019, compared with $479 million in the prior year, primarily due to lower reinsurance revenue. There was a decrease of $6 million from 2018 in the total provision for credit losses. The provision for credit losses on impaired loans decreased $4 million, reflecting lower consumer provisions. There was a $2 million recovery of credit losses on performing loans in 2019. Non-interest expense was $3,523 million in 2019, an increase of $6 million from 2018, and adjusted non-interest expense was $3,476 million, an increase of $11 million from the prior year, mainly due to select investments in the business.

BMO Capital Markets

Reported net income was $1,091 million in 2019, compared with $1,159 million in 2018, and adjusted net income was $1,118 million, compared with $1,172 million in the prior year. Adjusted net income excludes the amortization of acquisition-related intangible assets and acquisition integration costs. Higher revenue was more than offset by higher expenses, including a severance expense of $120 million in the second quarter of 2019, and higher provisions for credit losses. Revenue was $4,759 million, an increase of $371 million or 8% from the prior year, or 7% excluding the impact of the stronger U.S. dollar. Investment and Corporate Banking revenue increased $209 million to $2,055 million or 11% from 2018, primarily due to higher corporate banking-related revenue and higher underwriting and advisory revenue. Global Markets revenue increased $162 million to $2,704 million or 6% from 2018, primarily due to higher interest rate trading revenue and higher commodities trading revenue, partially offset by lower equities trading revenue. Global Markets revenue growth in 2019 benefitted from a contribution from the acquisition of KGS-Alpha and a fair value gain. The total provision for credit losses was $80 million in 2019, compared with an $18 million recovery of credit losses in 2018. The provision for credit losses on impaired loans was $52 million, compared with a $17 million recovery on impaired loans in the prior year. There was a $28 million provision for credit losses on performing loans in 2019, compared with a $1 million recovery of credit losses on performing loans in 2018. Non-interest expense was $3,279 million in 2019, an increase of $400 million or 14% from 2018, and adjusted non-interest expense was $3,244 million, an increase of $382 million or 13% from the prior year, or 12% excluding the impact of the stronger U.S. dollar, largely due to higher employee-related costs, including the impact of a severance expense in the second quarter of 2019 and the acquisition of KGS-Alpha. The severance expense and the KGS-Alpha acquisition accounted for approximately two-thirds of the full-year increase.

Corporate Services

Reported net loss in 2019 was $627 million, compared with a reported net loss of $729 million in 2018. Adjusted net loss was $270 million, compared with an adjusted net loss of $301 million in the prior year. Adjusted results in both the current and prior year exclude restructuring charges of $357 million in 2019 and $192 million in 2018. The prior year also excludes a $425 million one-time non-cash charge due to a revaluation of the U.S. net deferred tax asset, a $203 million benefit from the remeasurement of an employee benefit liability and acquisition integration costs of $14 million. The adjusted net loss improved, primarily due to lower expenses, while revenue excluding tax equivalent basis was relatively unchanged. Reported results increased, primarily due to the impact of the adjusting items noted above.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 17.

Financial Condition Review

Summary Balance Sheet

(Canadian $ in millions) As at October 31	**2020**	2019	2018
Assets			
Cash and interest bearing deposits with banks	**66,443**	56,790	50,447
Securities	**234,260**	189,438	180,935
Securities borrowed or purchased under resale agreements	**111,878**	104,004	85,051
Net loans	**445,004**	426,094	383,991
Derivative instruments	**36,815**	22,144	25,422
Other assets	**54,861**	53,725	47,447
Total assets	**949,261**	852,195	773,293
Liabilities and Equity			
Deposits	**659,034**	568,143	520,928
Derivative instruments	**30,375**	23,598	23,629
Securities lent or sold under repurchase agreements	**88,658**	86,656	66,684
Other liabilities	**106,185**	115,727	109,549
Subordinated debt	**8,416**	6,995	6,782
Equity	**56,593**	51,076	45,721
Total liabilities and equity	**949,261**	852,195	773,293

Overview

Total assets of $949.3 billion increased $97.1 billion from October 31, 2019. The stronger U.S. dollar increased assets by $4.8 billion, excluding the impact on derivative assets. Total liabilities of $892.7 billion increased $91.6 billion from the prior year. The stronger U.S. dollar increased liabilities by $4.3 billion, excluding the impact on derivative liabilities. Total equity of $56.6 billion increased $5.5 billion from October 31, 2019.

Cash and Interest Bearing Deposits with Banks

Cash and interest bearing deposits with banks increased $9.7 billion, or $9.0 billion, excluding the impact of the stronger U.S. dollar, due to higher balances held with central banks, primarily as a result of strong customer deposit growth in excess of loan growth.

Securities

(Canadian $ in millions) As at October 31	**2020**	2019	2018
Trading	**97,834**	85,903	99,697
Fair value through profit or loss (1)	**13,568**	13,704	11,611
Fair value through other comprehensive income – Debt and equity (2)	**73,407**	64,515	62,440
Amortized cost (3)	**48,466**	24,472	6,485
Investments in associates and joint ventures	**985**	844	702
Total securities	**234,260**	189,438	180,935

(1) Comprised of $2,420 million mandatorily measured at fair value and $11,148 million designated at fair value.
(2) Includes allowances for credit losses on fair value through other comprehensive income debt securities of $4 million as at October 31, 2020 ($2 million for both as at October 31, 2019 and October 31, 2018).
(3) Net of allowances for credit losses of $1 million ($1 million for both as at October 31, 2019 and October 31, 2018).

Securities increased $44.8 billion, or $43.6 billion excluding the impact of the stronger U.S. dollar, primarily due to strong customer deposit growth in excess of loan growth and higher client activity in BMO Capital Markets.

Securities Borrowed or Purchased Under Resale Agreements

Securities borrowed or purchased under resale agreements increased $7.9 billion, or $7.2 billion excluding the impact of the stronger U.S. dollar, driven primarily by strong customer deposit growth in excess of loan growth, partially offset by lower balances in BMO Capital Markets due to lower client activity.

Net Loans

(Canadian $ in millions) As at October 31	2020	2019	2018
Residential mortgages	**127,024**	123,740	119,620
Non-residential mortgages	**16,741**	15,731	14,017
Consumer instalment and other personal	**70,148**	67,736	63,225
Credit cards	**7,889**	8,859	8,329
Business and government	**226,505**	211,878	180,439
Gross loans	**448,307**	427,944	385,630
Allowance for credit losses	**(3,303)**	(1,850)	(1,639)
Total net loans	**445,004**	426,094	383,991

Commercial and BMO Capital Markets loan balances increased moderately from the prior year, as growth was affected by the impact of COVID-19. Increases in Canadian commercial and BMO Capital Markets loan balances were partially offset by lower U.S. commercial balances. Personal loans increased in Canada, primarily due to higher residential mortgage balances driven by an active housing market, while U.S. personal loans decreased.

Net loans increased $18.9 billion, or $16.9 billion or 4% excluding the impact of the stronger U.S. dollar. Business and government loans increased $13.0 billion excluding the impact of the stronger U.S. dollar, primarily due to lower levels of bankers' acceptances being issued into the market, resulting in higher loan balances with a corresponding decrease in bankers' acceptances in other assets, and also due to the impact of government assistance programs related to COVID-19 in U.S. P&C and growth in Canadian P&C, BMO Wealth Management and BMO Capital Markets. Residential mortgages increased $3.3 billion, due to growth in Canadian P&C, partially offset by lower balances in U.S. P&C. Consumer instalment and other personal loans increased $2.4 billion, due to growth in the P&C businesses and BMO Wealth Management. Non-residential mortgages increased $1.0 billion, primarily due to growth in U.S. P&C. Credit cards decreased $1.0 billion, primarily in Canadian P&C.

Table 7 on page 130 of the Supplemental Information section provides a comparative summary of loans by geographic location and product. Table 9 on page 131 provides a comparative summary of net loans in Canada by province and industry. Loan quality is discussed on page 87, and further details on loans are provided in Notes 4, 6 and 24 on pages 159, 165 and 204 of the consolidated financial statements.

Derivative Financial Assets

Derivative financial assets increased $14.7 billion, primarily driven by higher volumes of equity derivatives, lower interest rates, strengthening of the U.S. dollar, and higher client-driven commodity derivative transaction volumes.

Other Assets

Other assets includes customers' liability under acceptances, goodwill and intangible assets, precious metals, premises and equipment, current and deferred tax assets, accounts receivable and prepaid expenses. Other assets increased $1.1 billion, primarily due to higher precious metals balances driven by client activity in BMO Capital Markets, higher cash collateral requirements on over-the-counter derivative transactions and the adoption of IFRS 16, *Leases*, which resulted in the recording of a right-of-use asset and lease liability on the balance sheet, largely offset by lower customers' liability under acceptances, due to lower levels of acceptances being issued into the market, which was largely offset by higher loan balances.

Deposits

(Canadian $ in millions) As at October 31	2020	2019	2018
Banks	**38,825**	23,816	27,907
Business and government	**400,679**	343,157	312,177
Individuals	**219,530**	201,170	180,844
Total deposits	**659,034**	568,143	520,928

Deposits increased $90.9 billion, or $87.6 billion excluding the impact of the stronger U.S. dollar. The following discussion excludes the impact of changes in the U.S. dollar. Business and government deposits increased $55.3 billion, due to growth in customer balances across the operating groups, which in part reflects the higher amount of liquidity retained by the bank's customers due to the impact of COVID-19, partially offset by lower balances in Corporate Services due to lower wholesale funding requirements, as a result of strong customer deposit growth. Deposits by individuals increased $18.4 billion, due to growth in the P&C businesses and BMO Wealth Management. Deposits by banks increased $14.8 billion, primarily due to participation in the Bank of Canada's term repo facility.

Further details on the composition of deposits are provided in Note 13 on page 180 of the consolidated financial statements and in the Liquidity and Funding Risk section on page 97.

Derivative Financial Liabilities

Derivative financial liabilities increased $6.8 billion, primarily driven by higher volumes of equity derivatives, lower interest rates, and higher client-driven commodity derivative transaction volumes, partially offset by the impact of the strengthening U.S. dollar.

Securities Lent or Sold Under Repurchase Agreements

Securities lent or sold under repurchase agreements increased $2.0 billion, or $1.3 billion excluding the impact of the stronger U.S. dollar, driven by participation in the Bank of Canada's term repo facility, partially offset by lower balances in BMO Capital Markets due to lower client activity.

Other Liabilities

Other liabilities primarily include securities sold but not yet purchased, securitization and structured entities liabilities, acceptances, insurance-related liabilities and Federal Home Loan Bank (FHLB) advances. Other liabilities decreased $9.5 billion, or $9.9 billion excluding the impact of the stronger U.S. dollar, reflecting a decrease in acceptances as a result of lower levels of acceptances being issued into the market and lower secured funding, partially offset by an increase in securities sold but not yet purchased, due to higher client activity in BMO Capital Markets, the impact of the adoption of IFRS 16, *Leases*, and an increase in insurance-related liabilities, primarily due to annuity sales and the impact of lower interest rates.

Further details on the composition of other liabilities are provided in Note 14 on page 181 of the consolidated financial statements.

Subordinated Debt

Subordinated debt increased $1.4 billion from the prior year, due to a new issuance. Further details on the composition of subordinated debt are provided in Note 15 on page 183 of the consolidated financial statements.

Equity

(Canadian $ in millions) As at October 31	**2020**	2019	2018
Share capital			
Preferred shares and other equity instruments	**6,598**	5,348	4,340
Common shares	**13,430**	12,971	12,929
Contributed surplus	**302**	303	300
Retained earnings	**30,745**	28,725	25,850
Accumulated other comprehensive income	**5,518**	3,729	2,302
Total equity	**56,593**	51,076	45,721

Total equity increased $5.5 billion, due to a $2.0 billion increase in retained earnings, a $1.8 billion increase in accumulated other comprehensive income, a $1.3 billion increase in preferred shares and other equity instruments, and a $0.5 billion increase in common shares. Retained earnings increased as a result of net income earned in the year, partially offset by dividends and distributions on other equity instruments. Accumulated other comprehensive income increased, primarily due to the impact of lower interest rates on cash flow hedges and fair value through other comprehensive income debt securities, net of a decrease in accumulated other comprehensive income on pension and other employee future benefit plans, and the impact of the stronger U.S. dollar on the translation of net foreign operations. Preferred shares and other equity instruments increased, due to the issuance of Limited Recourse Capital Notes. Common shares increased, due to shares issued under the Shareholder Dividend Reinvestment and Share Purchase Plan and under the Stock Option Plan.

The Consolidated Statement of Changes in Equity on page 148 of the consolidated financial statements provides a summary of items that increase or reduce total equity, while Note 16 on page 184 of the consolidated financial statements provides details on the components of, and changes in, share capital. Details on the bank's enterprise-wide capital management practices and strategies can be found on the following page.

Enterprise-Wide Capital Management

Capital Management

Objective

BMO is committed to a disciplined approach to capital management that balances the interests and requirements of shareholders, regulators, depositors, fixed income investors and rating agencies. BMO's objective is to maintain a strong capital position in a cost-effective structure that:

- is appropriate given BMO's target regulatory capital ratios and internal assessment of required economic capital;
- underpins BMO's operating groups' business strategies;
- supports depositor, investor and regulator confidence, while building long-term shareholder value; and
- is consistent with BMO's target credit ratings.

Framework

The principles and key elements of BMO's capital management framework are outlined in BMO's Capital Management Corporate Policy and in the annual capital plan, which includes the results of its comprehensive Internal Capital Adequacy Assessment Process (ICAAP).

ICAAP is an integrated process that involves the application of stress testing and other tools to evaluate capital adequacy on both a regulatory and an economic capital basis. The results of this process are used in the establishment of capital targets and the implementation of capital strategies that take into consideration the strategic direction and risk appetite of the enterprise. The capital plan is developed considering the results of ICAAP and in conjunction with the annual business plan, promoting alignment between business and risk strategies, regulatory and economic capital requirements and the availability of capital. Enterprise-wide stress testing and scenario analysis are conducted in order to assess the impact of various stress conditions on BMO's risk profile and capital requirements. The capital management framework seeks to ensure that the bank is adequately capitalized given the risks it takes in the normal course of business, as well as under stress, and it supports the determination of limits, targets and performance measures that are used to manage balance sheet positions, risk levels and capital requirements at both the consolidated entity and operating group levels. BMO evaluates assessments of actual and forecast capital adequacy against the capital plan throughout the year, and updates the plan to reflect changes in business activities, risk profile, operating environment or regulatory expectations.

BMO uses regulatory and economic capital to evaluate business performance and considers capital implications in its strategic, tactical and transactional decision-making. By allocating capital to operating groups, setting and monitoring capital limits and metrics, and measuring the groups' performance against these limits and metrics, the bank seeks to optimize risk-adjusted return to shareholders, while maintaining a well-capitalized position. This approach aims to protect BMO's stakeholders from the risks inherent in its various businesses, while still allowing the flexibility to deploy resources in support of the strategic growth activities of the operating groups.

Refer to the Enterprise-Wide Risk Management section on page 73 for further discussion of the risks underlying BMO's business activities.

Governance

The Board of Directors, either directly or in conjunction with its Risk Review Committee, provides ultimate oversight and approval of capital management, including BMO's Capital Management Corporate Policy framework, capital plan and capital adequacy assessments. The Board regularly reviews BMO's capital position and key capital management activities, and the Risk Review Committee reviews the ICAAP-determined capital adequacy assessment results. The Balance Sheet and Capital Management Committee provides senior management oversight, including the review of significant capital management policies, issues and activities and, along with the Risk Management Committee, the capital required to support the execution of BMO's enterprise-wide strategy. Finance and Risk Management are responsible for the design and implementation of the corporate policies and frameworks related to capital and risk management, as well as the ICAAP. The Corporate Audit Division, as the third line of defence, verifies adherence to controls and identifies opportunities to strengthen BMO's processes.

Regulatory Capital Requirements

Regulatory capital requirements for BMO are determined in accordance with guidelines issued by the Office of the Superintendent of Financial Institutions Canada (OSFI), which are based on the Basel III framework developed by the Basel Committee on Banking Supervision (BCBS). The minimum risk-based capital ratios set out in OSFI's Capital Adequacy Requirements (CAR) Guideline are a 4.5% Common Equity Tier 1 (CET1) Ratio, 6% Tier 1 Capital Ratio and 8% Total Capital Ratio. In addition to the minimum capital requirements, OSFI also expects domestic systemically important banks (D-SIBs), including BMO, to hold Pillar 1 and Pillar 2 buffers, which are meant to be used as a normal first step in periods of stress. The Pillar 1 buffers include a Capital Conservation Buffer of 2.5%, a D-SIB Common Equity Tier 1 surcharge of 1%, and the Countercyclical Buffer (which can range from 0% to 2.5%, depending on the bank's exposure to jurisdictions that have activated the buffer). The Domestic Stability Buffer (DSB), which is a Pillar 2 buffer that can range from 0% to 2.5%, was reduced during the year and remains at 1.0% as of the fourth quarter of fiscal 2020. OSFI committed that any increases to the DSB would not take effect for at least 18 months from March 2020. The minimum leverage ratio set out in OSFI's Leverage Requirements Guideline is 3%. OSFI's capital requirements are summarized in the following table.

(% of risk-weighted assets or leverage exposures)	Minimum capital requirements	Pillar 1 Capital Buffers (1)	Domestic Stability Buffer (2)	OSFI capital requirements including capital buffers	BMO Capital and Leverage Ratios as at October 31, 2020
Common Equity Tier 1 Ratio	4.5%	3.5%	1.0%	9.0%	11.9%
Tier 1 Capital Ratio	6.0%	3.5%	1.0%	10.5%	13.6%
Total Capital Ratio	8.0%	3.5%	1.0%	12.5%	16.2%
Leverage Ratio	3.0%	na	na	3.0%	4.8%

(1) The minimum 4.5% CET1 Ratio requirement is augmented by 3.5% in Pillar 1 Capital Buffers, which can absorb losses during periods of stress. The Pillar 1 Capital Buffers include a 2.5% Capital Conservation Buffer, a 1.0% Common Equity Tier 1 Surcharge for D-SIBs and a Countercyclical Buffer, as prescribed by OSFI (immaterial for the fourth quarter of 2020). If a bank's capital ratios fall within the range of this combined buffer, restrictions on discretionary distributions of earnings (such as dividends, share repurchases and discretionary compensation) would ensue, with the degree of such restrictions varying according to the position of the bank's ratios within the buffer range.

(2) OSFI requires all D-SIBs to maintain a DSB against Pillar 2 risks associated with systemic vulnerabilities. The DSB can range from 0% to 2.5% of total RWA and is set at 1.0% at October 31, 2020. Breaches of the DSB will not result in a bank being subject to automatic constraints on capital distributions.

na – not applicable

Regulatory Capital and Total Loss Absorbing Capacity Ratios

The **Common Equity Tier 1 Ratio** reflects CET1 capital divided by Risk-Weighted Assets (RWA).

The **Tier 1 Capital Ratio** reflects Tier 1 capital divided by RWA.

The **Total Capital Ratio** reflects Total capital divided by RWA.

The **Leverage Ratio** reflects Tier 1 capital divided by leverage exposures (LE), which consist of on-balance sheet items and specified off-balance sheet items, net of specified adjustments.

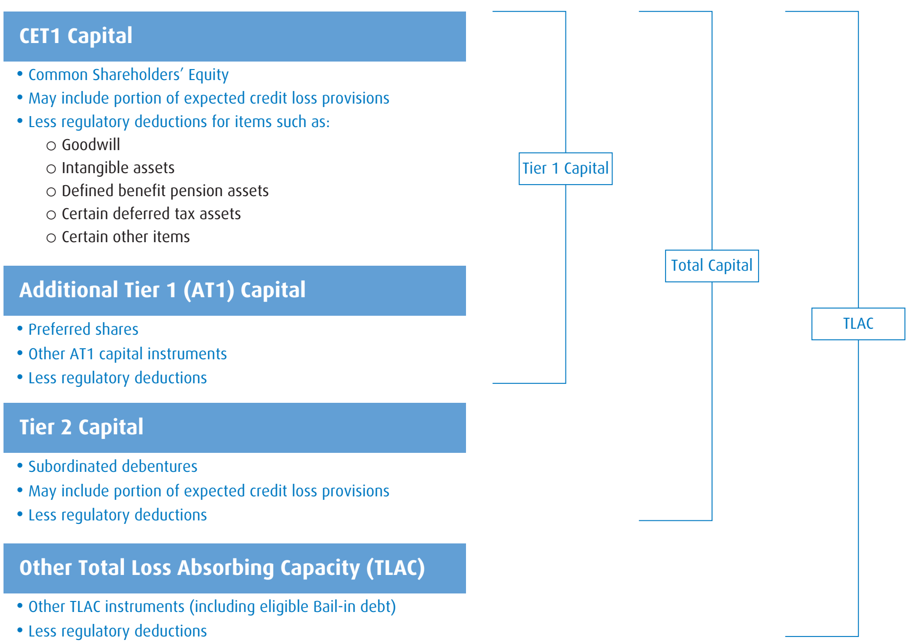
The **Total Loss Absorbing Capacity (TLAC) Ratio** reflects TLAC divided by RWA.

The **TLAC Leverage Ratio** reflects TLAC divided by LE.

Refer to the Glossary of Financial Terms for definitions of ratios and their components.

Regulatory Capital and Total Loss Absorbing Capacity Elements

BMO maintains a capital structure that is diversified across instruments and tiers to ensure an appropriate mix of loss absorbency. The major components of regulatory capital and total loss absorbing capacity are summarized as follows:



OSFI's CAR Guideline implemented the non-viability contingent capital (NVCC) provisions set out by the BCBS, which require the conversion of certain capital instruments into a variable number of common shares in the event that OSFI announces that a bank is, or is about to become, non-viable, or if a federal or provincial government in Canada publicly announces that the bank has accepted, or agreed to accept, a capital injection, or equivalent support, to avoid non-viability.

Under OSFI's CAR Guideline, non-common share capital instruments that do not meet Basel III requirements, including NVCC requirements, will be fully phased out by 2022. The impact on the bank will be nominal.

Under Canada's Bank Recapitalization (Bail-In) Regime, eligible senior debt issued on or after September 23, 2018 is subject to statutory conversion requirements. Canada Deposit Insurance Corporation has the power to trigger the conversion of bail-in debt into common shares. This statutory conversion supplements NVCC securities, which must be converted, in full, prior to the conversion of bail-in debt. As of the fourth quarter of fiscal 2020, the prospective minimum requirements for Total Loss Absorbing Capacity (TLAC) were set at a risk-based TLAC ratio of 22.5% of RWA, including a 1.0% DSB, and a TLAC leverage ratio of 6.75%, and the bank expects to meet the minimum requirements when they come into effect on November 1, 2021. As at October 31, 2020, BMO's TLAC ratio was 23.1% and its TLAC leverage ratio was 8.2%.

Risk-Weighted Assets

Risk-Weighted Assets (RWA) measure a bank's exposures, weighted for their relative risk and calculated in accordance with OSFI's regulatory capital rules. RWA are calculated for credit, market and operational risks based on OSFI's prescribed rules.

BMO primarily uses the Advanced Internal Ratings Based (AIRB) Approach to determine credit RWA in its portfolio. The AIRB Approach utilizes sophisticated techniques to measure RWA at the exposure level based on sound risk management principles, including estimates of the probability of default, the downturn loss given default and exposure at default risk parameters, term to maturity and asset class type, as prescribed by the OSFI rules. These risk parameters are determined using historical portfolio data supplemented by benchmarking and are updated periodically. Validation procedures related to these parameters are in place and are enhanced periodically in order to quantify and differentiate risks appropriately, so that they reflect changes in economic and credit conditions. Credit RWA related to certain Canadian and U.S. portfolios are determined under the Standardized Approach using prescribed risk weights based on external ratings, counterparty type or product type.

BMO's market risk RWA are primarily determined using the more advanced Internal Models Approach, but the Standardized Approach is used for some exposures.

Beginning in fiscal 2020, OSFI required BMO, along with the other banks that have been approved to use the Advanced Measurement Approach, to change to the Basel II Standardized Approach for determining enterprise operational risk regulatory capital requirements in the interim period prior to implementation of the new Standardized Measurement Approach, as part of the final Basel III reforms. It is expected that BMO will transition to using the new Basel III Standardized Measurement Approach for regulatory capital reporting beginning in fiscal 2023.

For institutions using the advanced approach for credit risk, there is a capital floor as prescribed in OSFI's CAR Guideline. In calculating regulatory capital ratios, there is a requirement to increase RWA when an amount calculated under the Standardized Approach (covering RWA and allowances) is higher than the result of a similar calculation under the more risk-sensitive modelled approach. The capital floor was not operative for the bank in fiscal 2020.

Regulatory Capital Developments

COVID-19 Related Developments

As part of a coordinated effort by federal agencies to address the market disruption posed by the COVID-19 pandemic, OSFI announced a suite of modifications to capital requirements, effective from the second quarter of 2020, to afford institutions further flexibility in addressing the conditions, while promoting financial resilience and economic stability. The modifications are summarized below. For those that are temporary in nature, OSFI has been monitoring economic and financial conditions and providing updates on the unwinding of the changes where appropriate. OSFI will continue to closely monitor the economic and financial outlook and provide guidance accordingly.

Domestic Stability Buffer

On March 13, 2020, OSFI lowered the DSB from 2.25% to 1.0%, decreasing OSFI's minimum CET1 ratio expectation from 10.25% to 9.0%, effective immediately. The target TLAC ratio was lowered to 22.5% of RWA. The target TLAC leverage ratio remains at 6.75%. OSFI continues to expect D-SIBs to fully meet the target TLAC requirements by November 1, 2021. The DSB, which is met with CET1 capital, can be set between 0% and 2.5% of total RWA. OSFI's action was taken in order to support D-SIBs' ability to supply credit to the economy during an expected period of disruption related to COVID-19 and market conditions. OSFI expected D-SIBs to use the additional lending capacity generated to support Canadian businesses and households, and not use this measure to increase distributions to shareholders or employees, or to undertake share buybacks. Consistent with this, OSFI set the expectation for all federally regulated financial institutions (FRFIs) that dividend increases and share buybacks should be halted for the time being. OSFI committed that any increases to the DSB would not take effect for at least 18 months from March 2020.

On June 23, 2020, OSFI announced that the DSB would remain at 1.0%, unchanged from the level set on March 13, 2020. This decision reflects OSFI's assessment that the current DSB level remains effective in supporting the resilience of the Canadian banking system and the overall economy.

On July 15, 2020, OSFI affirmed its support for the statements issued by the BCBS and the Financial Stability Board reinforcing the usability of banks' capital buffers. OSFI requires banks to build up capital buffers in good times so that they are available for use during periods of stress. Capital buffers allow banks to absorb losses, while also encouraging them to continue to provide loans and financial services during times of economic stress. Using capital buffers to absorb losses and support lending is consistent with a well-functioning capital regime and with the design and intended functioning of the Basel III framework, an international agreement to strengthen the regulation, supervision and risk management of banks.

Loan Payment Deferrals

On March 27, 2020, OSFI announced that in situations where loan payment deferrals are granted by deposit-taking institutions (DTIs), the loans will continue to be treated as performing loans under the CAR Guideline. This means that these loans will not be subject to a different risk weight under the Standardized Approach (SA) to credit risk and will not be considered delinquent when determining the probability of default under the Internal Rating Based (IRB) Approach, as a result of these payment deferrals. Banks should continue to assess the credit quality of these borrowers and follow sound credit risk management practices. After the payment deferral period ends (up to a maximum of six months), the usual rules for designating a loan as non-performing would apply.

On August 31, 2020, OSFI announced it is gradually phasing out the special capital treatment for loan payment deferrals. Loans granted payment deferrals before August 31, 2020 will continue to be treated as performing loans under the CAR Guideline for the duration of the deferral, up to a maximum of six calendar months from the effective date of the deferral. Loans granted payment deferrals after August 30, 2020 and on or before September 30, 2020 will be treated as performing loans under the CAR Guideline for the duration of the deferral, up to a maximum of three calendar months from the approval date of the deferral. Loans granted payment deferrals after September 30, 2020 are not eligible for the special capital treatment.

Transitional Arrangements for Capital Treatment of Expected Loss Provisioning

On March 27, 2020, in line with other jurisdictions, OSFI introduced transitional arrangements for expected credit loss provisioning that are available under the Basel Framework.

This will result in a portion of the increase in allowances, relative to the baseline level, that would otherwise be included in Tier 2 capital, to instead be included in CET1 capital. The baseline level is the amount of Stage 1 and Stage 2 allowances as at January 31, 2020, for October year-end DTIs. This increased amount is adjusted for tax effects and subject to a scaling factor, which is set at 70% in fiscal 2020, 50% in fiscal 2021 and 25% in fiscal 2022.

For exposures treated under the SA, DTIs should compare Stage 1 and Stage 2 allowances allocated to the SA at the end of that quarter with the baseline amount and multiply the increase in allowances by 100% less the DTI's tax rate, and multiply the result by the scaling factor for the reporting period (70% in fiscal 2020). The resulting amount should be added to CET1 capital.

For exposures treated under the IRB Approach, each quarter, DTIs should compare Stage 1 and Stage 2 allowances allocated to IRB portfolios at the end of that quarter with the baseline amount. The increase should be multiplied by 100% less the DTI's tax rate and then multiplied by the applicable scaling factor for the reporting period (70% in fiscal 2020). DTIs should then take the lower of (i) this result and (ii) excess allowances eligible for inclusion in Tier 2 capital, and add this amount to CET1 capital.

Reduction of Stressed Value-at-Risk (VaR) Multipliers under Market Risk

On March 27, 2020, OSFI announced that, on a temporary basis, it had reduced the Stressed VaR (SVaR) multipliers under market risk. Institutions subject to market risk capital requirements and using internal models were allowed to reduce the SVaR multiplier they were subject to at the end of the first quarter of fiscal 2020, down from a minimum value of three to one. OSFI will continue to monitor institutions' VaR and SVaR reports and will consider removing the temporary reduction in SVaR multipliers when it deems that prevalent market conditions have returned back to normal levels and the heightened volatility present in historical minimum observation periods used for calculating regulatory VaR has subsided, which is not expected to be earlier than April 2021.

Removal of Funding Valuation Adjustment (FVA) Hedges in Market Risk

On March 27, 2020, OSFI advised institutions to remove hedges of FVA from the calculation of market risk capital to address the asymmetry in the existing rule where these hedges of FVA are included while the underlying exposures of FVA are not.

Domestic Implementation of the Basel III Reforms

Consistent with the decision of the Group of Central Bank Governors and Heads of Supervision, the Basel Committee's oversight body, on March 27, 2020, OSFI announced the delay of the domestic implementation of the remaining measures of the Basel III international capital standard to provide additional operational capacity for banks to respond to the immediate financial stability priorities resulting from COVID-19. The implementation date for the revisions to the Standardized Approach and IRB Approach to credit risk, the operational risk framework, the leverage ratio framework, as well as the introduction of a more risk sensitive capital floor, has been delayed from Q1 2022 until Q1 2023. The implementation date of the final set of revisions to the market risk framework (known as the "fundamental review of the trading book" or FRTB) published in January 2019, has been delayed from Q1 2022 until Q1 2024. OSFI's implementation date of the revised credit valuation adjustment risk framework has also been delayed from Q1 2022 until Q1 2024.

On September 28, 2020, OSFI announced its plan to restart the development of prudential policy, which had been temporarily paused to allow conditions to stabilize. The policy development will focus on elements of risk management and compliance, capital and accounting for the next few quarters. OSFI will move forward with finalizing the requirements for domestic implementation of the Basel III Reform Package, including Pillar 3 disclosure expectations. OSFI has stated that it will seek input from the sectors under its supervision in making the necessary adjustments.

Leverage Ratio

Similar to the risk-based capital ratios, DTIs are expected to hold operating buffers above the regulatory minimum leverage ratio. These buffers are held in normal times to help ensure that an institution has additional flexibility in times of stress. In its announcement on March 27, 2020, OSFI encouraged DTIs to use operating buffers that are held above the authorized leverage ratio of the institution.

On April 9, 2020, OSFI announced the temporary exclusion of certain exposures from the DTI's leverage ratio exposure measure, effective immediately until April 30, 2021. The exclusions include exposures related to central bank reserves and sovereign-issued securities that qualify as High Quality Liquid Assets under the Liquidity Adequacy Requirements Guideline. On November 5, 2020, OSFI announced an eight-month extension of this treatment which will remain in place until December 31, 2021.

Capital Floor

To support DTIs' ability to continue to provide lending in the current environment, on April 9, 2020, OSFI lowered the capital floor factor used in the capital floor calculation under the current regime, which applies to institutions using the IRB Approach to calculate credit risk, from 75% to 70%, effective immediately. The 70% floor factor will remain in place until the domestic implementation of the capital floor under the Basel III reforms in Q1 2023.

Regulatory Capital Review

BMO is well capitalized, with capital ratios that exceed OSFI's published requirements for large Canadian banks, including the 1.0% DSB. BMO's CET1 Ratio was 11.9% as at October 31, 2020, compared with 11.4% as at October 31, 2019. The CET1 Ratio increased from the end of fiscal 2019, as higher CET1 capital from retained earnings growth, the adjustment for transitional arrangements for expected credit loss provisioning and the elimination of the provisioning shortfall deduction, issuance of common shares through the Shareholder Dividend Reinvestment and Share Purchase Plan (DRIP), and other net positive impacts, more than offset higher RWA, primarily due to changes in asset quality and increased asset size.

BMO's Tier 1 Capital and Total Capital Ratios were 13.6% and 16.2%, respectively, as at October 31, 2020, compared with 13.0% and 15.2%, respectively, as at October 31, 2019. The Tier 1 Capital Ratio was higher, primarily due to the factors impacting the CET1 Ratio and the issuance of the $1,250 million Limited Recourse Capital Notes, Series 1 (LRCN), partially offset by the announced preferred share redemptions. The Total Capital Ratio was higher than the prior year, primarily due to the factors impacting the Tier 1 Ratio and the issuance of subordinated notes.

The impact of foreign exchange rate movements on capital ratios was largely offset. BMO's investments in foreign operations are primarily denominated in U.S. dollars, and the foreign exchange impact of U.S.-dollar-denominated RWA and capital deductions may result in variability in the bank's capital ratios. BMO may manage the impact of foreign exchange rate movements on its capital ratios, and did so during fiscal 2020. Any such activities could also impact the bank's book value and return on equity.

BMO's Leverage Ratio was 4.8% as at October 31, 2020, up from 4.3% as at October 31, 2019, primarily driven by higher Tier 1 capital. Leverage exposures were relatively consistent with the prior year, as increased leverage exposures were offset by the temporary exclusion of central bank reserves and sovereign-issued securities that qualify as High Quality Liquid Assets under OSFI's Liquidity Adequacy Requirements Guideline.

While the ratios discussed above reflect the bank's consolidated capital base, BMO conducts business through a variety of corporate structures, including subsidiaries. A framework is in place such that capital and funding are managed appropriately at the subsidiary level.

As a U.S. bank holding company with total consolidated assets less than US$250 billion, the bank's subsidiary BMO Financial Corp. (BFC) continues to be subject to the Federal Reserve Board's (FRB) Comprehensive Capital Analysis and Review (CCAR) and Dodd-Frank Act Stress Test (DFAST) requirements on a biennial basis, beginning with CCAR 2020. CCAR is an exercise conducted by the FRB to assess whether the largest bank holding companies and foreign banking organizations operating in the United States have sufficient capital to support their operations throughout periods of economic and financial stress and have robust, forward-looking capital planning processes that address their unique risks. DFAST is a forward-looking exercise complementary to CCAR and conducted by the FRB to assess whether the financial companies that it supervises have sufficient capital to absorb losses and support operations during adverse economic conditions.

On June 25, 2020, the FRB released its 2020 CCAR and DFAST results, and on August 10, 2020, announced individual large bank capital requirements, which will be effective October 1, 2020. BFC's CET1 capital requirement assigned by the FRB is 10.5%, including the 4.5% minimum CET1 ratio and a 6% stress capital buffer (SCB). BFC, along with several other banks, requested a reconsideration of its assigned SCB, but the FRB declined any adjustments. BFC is well capitalized, with a strong CET1 ratio of 12.4% as at September 30, 2020.

In response to the disruption caused by the COVID-19 pandemic, the FRB required all of the large banks to develop and resubmit a Capital Plan in November 2020. BFC completed its submission on November 2, 2020. Results are expected to be published by December 31, 2020.

Regulatory Capital (1)

(Canadian $ in millions) As at October 31	2020	2019
Common Equity Tier 1 capital: instruments and reserves		
Directly issued qualifying common share capital plus related stock surplus	**13,732**	13,274
Retained earnings	**30,745**	28,725
Accumulated other comprehensive income (and other reserves)	**5,518**	3,729
Goodwill and other intangibles (net of related tax liability)	**(8,402)**	(8,331)
Other common equity Tier 1 capital deductions	**(1,516)**	(1,326)
Common Equity Tier 1 capital (CET1)	**40,077**	36,071
Additional Tier 1 capital: instruments		
Directly issued qualifying Additional Tier 1 instruments plus related stock surplus	**5,558**	5,058
Directly issued capital instruments subject to phase-out from Additional Tier 1	**290**	290
Additional Tier 1 instruments (and CET1 instruments not otherwise included) issued by subsidiaries and held by third parties (amount allowed in group AT1)	**–**	–
of which: instruments issued by subsidiaries subject to phase-out	**–**	–
Total regulatory adjustments applied to Additional Tier 1 capital	**(85)**	(218)
Additional Tier 1 capital (AT1)	**5,763**	5,130
Tier 1 capital (T1 = CET1 + AT1)	**45,840**	41,201
Tier 2 capital: instruments and provisions		
Directly issued qualifying Tier 2 instruments plus related stock surplus	**8,270**	6,850
Directly issued capital instruments subject to phase-out from Tier 2 capital	**146**	145
Tier 2 instruments (and CET1 and AT1 instruments not included) issued by subsidiaries and held by third parties (amount allowed in group Tier 2)	**–**	–
of which: instruments issued by subsidiaries subject to phase-out	**–**	–
General allowance	**458**	194
Total regulatory adjustments to Tier 2 capital	**(53)**	(50)
Tier 2 capital (T2)	**8,821**	7,139
Total capital (TC = T1 + T2)	**54,661**	48,340
Risk-Weighted Assets and Leverage Ratio Exposures		
Risk-Weighted Assets	**336,607**	317,029
Leverage Ratio Exposures	**953,640**	956,493
Capital ratios (%)		
Common Equity Tier 1 Ratio	**11.9**	11.4
Tier 1 Capital	**13.6**	13.0
Total Capital Ratio	**16.2**	15.2
Leverage Ratio	**4.8**	4.3

(1) Non-qualifying Additional Tier 1 and Tier 2 capital instruments are being phased out at a rate of 10% per year from January 1, 2013 to January 1, 2022.

BMO's CET1 capital and Tier 1 capital levels were $40.1 billion and $45.8 billion, respectively, as at October 31, 2020, up from $36.1 billion and $41.2 billion, respectively, as at October 31, 2019. CET1 capital increased, primarily driven by retained earnings growth, the adjustment for transitional arrangements for expected credit loss provisioning and the elimination of the provisioning shortfall deduction, the issuance of common shares through the DRIP, and other net positive impacts. The increase in Tier 1 capital was primarily due to the factors impacting CET1 capital and the $1,250 million LRCN issuance, partially offset by announced preferred share redemptions.

Total capital was $54.7 billion as at October 31, 2020, up from $48.3 billion as at October 31, 2019, primarily due to the factors impacting Tier 1 capital and the issuance of subordinated notes.

Risk-Weighted Assets

RWA were $336.6 billion as at October 31, 2020, up from $317.0 billion as at October 31, 2019. Credit Risk RWA were $289.0 billion as at October 31, 2020, up from $269.3 billion as at October 31, 2019, primarily due to changes in asset quality driven by negative credit migration and increased asset size. As noted above, the impact of foreign exchange rate movements is largely offset in the CET1 Ratio. Market Risk RWA were $9.3 billion as at October 31, 2020, down from $11.2 billion as at October 31, 2019, primarily attributable to the impact of OSFI's regulatory measures and portfolio positioning, both to offset the impact of higher market volatility associated with the COVID-19 pandemic. Operational Risk RWA were $38.3 billion as at October 31, 2020, up from $36.6 billion as at October 31, 2019, primarily due to growth in the bank's average gross income. There was no capital floor RWA adjustment as at October 31, 2020, and October 31, 2019.

(Canadian $ in millions) As at October 31	**2020**	2019
Credit Risk		
Wholesale		
Corporate, including specialized lending	**131,396**	127,355
Corporate small and medium-sized enterprises	**45,121**	42,981
Sovereign	**6,259**	4,552
Bank	**4,264**	3,928
Retail		
Residential mortgages, excluding home equity line of credit	**9,275**	9,512
Home equity line of credit	**5,430**	5,605
Qualifying revolving retail	**5,917**	6,482
Other retail, excluding small and medium-sized enterprises	**14,507**	14,163
Retail small and medium-sized enterprises	**9,689**	8,063
Equity	**2,773**	2,407
Trading book	**15,567**	12,410
Securitization	**5,761**	2,722
Other credit risk assets – non-counterparty managed assets	**20,050**	17,210
Scaling factor for credit risk assets under AIRB Approach (1)	**12,908**	11,891
Total Credit Risk	**288,917**	269,281
Market Risk	**9,348**	11,183
Operational Risk	**38,342**	36,565
Risk-Weighted Assets	**336,607**	317,029

(1) The scaling factor is applied to RWA amounts for credit risk under the Advanced Internal Ratings Based (AIRB) Approach.

Economic Capital

Economic capital is an expression of the enterprise's capital demand requirement relative to its view of the economic risks in its underlying business activities. It represents management's estimation of the likely magnitude of economic losses that could occur should severely adverse situations arise, and allows returns to be measured on a consistent basis across such risks. Economic loss is the loss in economic or market value incurred over a specified time horizon at a defined confidence level, relative to the expected loss over the same time horizon. Economic capital is calculated for various types of risk, including credit, market (trading and non-trading), operational, business and insurance, based on a one-year time horizon using a defined confidence level.

Economic Capital and RWA by Operating Group and Risk Type

(As at October 31, 2020)

BMO Financial Group

Operating Groups	**Personal and Commercial Banking**	**BMO Wealth Management**	**BMO Capital Markets**	**Corporate Services**
Economic Capital by Risk Type (%)				
Credit	78%	36%	58%	74%
Market	7%	23%	28%	15%
Operational/Other	15%	41%	14%	11%
RWA by Risk Type (Canadian $ in millions)				
Credit	180,626	16,938	77,233	14,120
Market	–	32	9,316	–
Operational	21,300	6,534	10,508	–

Capital Management Activities

BMO's previous normal course issuer bid (NCIB) expired on June 2, 2020. On February 25, 2020, the bank announced its intention, subject to the approval of OSFI and the Toronto Stock Exchange, to establish a new NCIB that would permit the bank to purchase for cancellation up to 12 million common shares over a 12-month period, commencing on or about June 3, 2020. As previously noted and in light of OSFI's announcement on March 13, 2020, that all share buybacks by FRFIs should be halted for the time being, the bank put the renewal process on hold. During fiscal 2020, BMO did not purchase any of its common shares under the NCIB. During fiscal 2019, BMO repurchased and cancelled 1 million of its common shares as part of the NCIB at an average cost of $90.00 per share, totalling $90 million.

During fiscal 2020, BMO issued approximately 7.3 million common shares through the exercise of stock options and the Shareholder Dividend Reinvestment and Share Purchase Plan (DRIP).

On September 16, 2020, BMO issued $1,250 million 4.3% Limited Recourse Capital Notes, Series 1 (LRCN) (NVCC), which are classified as equity and form part of the Additional Tier 1 capital. Upon the occurrence of a recourse event, the noteholders will have recourse to assets held in a consolidated trust managed by a third party trustee. The trust assets are currently comprised of $1,250 million of BMO issued Non-Cumulative 5-year Rate Reset Class B Preferred Shares, Series 48 (NVCC) (Preferred Shares Series 48) issued concurrently with the LRCN. As the Preferred Shares Series 48 eliminate on consolidation, they do not currently form part of the bank's Additional Tier 1 capital.

During fiscal 2020, BMO completed Tier 1 and Tier 2 capital instrument issuances, redemptions and resets, as outlined in the table below.

MD&A

Share Issuances, Redemptions, Resets and Conversions

(in millions) As at October 31, 2020	Issuance, redemption or reset date	Number of shares	Amount
Common shares issued			
Stock options exercised		0.6	$ 40
DRIP issuance		6.7	471
Tier 1 Capital			
Rate reset of Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 31	November 25, 2019	12.0	$ 300
Rate reset of Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 33	August 25, 2020	8.0	$ 200
Issuance of 4.3% Limited Recourse Capital Notes, Series 1	September 16, 2020		$1,250
Tier 2 Capital			
Issuance of Series J Medium-Term Notes, Second Tranche	June 17, 2020		$1,250

If an NVCC trigger event were to occur, NVCC capital instruments would be converted into BMO common shares pursuant to automatic conversion formulas, with a conversion price based on the greater of: (i) a floor price of $5.00; and (ii) the current market price of BMO's common shares at the time of the trigger event (calculated using a 10-day weighted average). Based on a floor price of $5.00, these NVCC capital instruments would be converted into approximately 3.6 billion BMO common shares, assuming no accrued interest and no declared and unpaid dividends.

On November 2, 2020, BMO announced the intention to redeem all of its $1,000 million 3.34% Series H Medium-Term Notes, Second Tranche (NVCC) on December 8, 2020.

On November 25, 2020, BMO redeemed all of its 6 million issued and outstanding Non-Cumulative Perpetual Class B Preferred Shares, Series 35 (NVCC) for an aggregate total of $156 million and all of its 600,000 issued and outstanding Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 36 (NVCC) for an aggregate total of $600 million.

Further details on subordinated debt and share capital are provided in Notes 15 and 16, on pages 183 and 184, respectively, of the consolidated financial statements.

Outstanding Shares and NVCC Capital Instruments

As at October 31, 2020	Number of shares or dollar amount (in millions)	Dividends declared per share		
		2020	2019	2018
Common shares	646	**$ 4.24**	$ 4.06	$ 3.78
Class B Preferred shares				
Series 16 (1)	–	**–**	–	$ 0.64
Series 17 (1)	–	**–**	–	$ 0.52
Series 25 (2)	$ 236	**$ 0.45**	$ 0.45	$ 0.45
Series 26 (2)	$ 54	**$ 0.52**	$ 0.70	$ 0.59
Series 27*	$ 500	**$ 0.96**	$ 0.98	$ 1.00
Series 29*	$ 400	**$ 0.91**	$ 0.96	$ 0.98
Series 31*	$ 300	**$ 0.96**	$ 0.95	$ 0.95
Series 33*	$ 200	**$ 0.90**	$ 0.95	$ 0.95
Series 35* (3)	$ 150	**$ 1.25**	$ 1.25	$ 1.25
Series 36* (3)	$ 600	**$58.50**	$58.50	$58.50
Series 38*	$ 600	**$ 1.21**	$ 1.21	$ 1.21
Series 40*	$ 500	**$ 1.13**	$ 1.13	$ 1.13
Series 42*	$ 400	**$ 1.10**	$ 1.10	$ 1.10
Series 44*	$ 400	**$ 1.21**	$ 1.44	–
Series 46*	$ 350	**$ 1.28**	$ 0.77	–
Additional Tier 1 Capital Notes*				
4.8% Additional Tier 1 Capital Notes	US$ 500	**na**	na	na
4.3% Limited Recourse Capital Notes, Series 1 (4)	$1,250	**na**	na	na
Medium-Term Notes* (5)				
Series H – Second Tranche	$1,000	**na**	na	na
Series I – First Tranche	$1,250	**na**	na	na
Series I – Second Tranche	$ 850	**na**	na	na
3.803% Subordinated Notes	US$1,250	**na**	na	na
4.338% Subordinated Notes	US$ 850	**na**	na	na
Series J – First Tranche	$1,000	**na**	na	na
Series J – Second Tranche	$1,250	**na**	na	na
Stock options				
Vested	3.6			
Non-vested	2.9			

* Convertible into common shares

(1) Redeemed in August 2018.

(2) In August 2016, approximately 2.2 million Series 25 Preferred Shares were converted into Series 26 Preferred Shares on a one-for-one basis.

(3) Redeemed in November 2020.

(4) Convertible into common shares by virtue of recourse to the Preferred Shares Series 48. Refer to Note 16 on page 184 of the consolidated financial statements for conversion details.

(5) Note 15 of the consolidated financial statements includes details on the Series H Medium-Term Notes, Second Tranche, Series I Medium-Term Notes, First Tranche and Second Tranche, USD 3.803% Subordinated Notes, USD 4.338% Subordinated Notes and Series J Medium-Term Notes, First Tranche and Second Tranche.

na – not applicable

Note 16 on page 184 of the consolidated financial statements includes details on share capital and other equity instruments.

Dividends

Dividends declared per common share in fiscal 2020 totalled $4.24, up 4% from the prior year. Annual dividends declared represented 56.1% of reported net income and 54.9% of adjusted net income available to common shareholders on a last twelve months basis.

BMO's target dividend payout range (common share dividends as a percentage of net income available to shareholders, less preferred share dividends and distributions on other equity instruments, based on earnings over the last twelve months) is 40% to 50%, providing shareholders with a competitive dividend yield. BMO's target dividend payout range seeks to provide shareholders with stable income while ensuring sufficient earnings are retained to support anticipated business growth, fund strategic investments and support capital adequacy. The dividend payout temporarily exceeded the target range in 2020, primarily reflecting the increase in loan provisions and income volatility due to the impact of COVID-19.

At year end, BMO's common shares provided a 5.3% annualized dividend yield based on the year-end closing share price. On December 1, 2020, BMO announced that the Board of Directors had declared a quarterly dividend on common shares of $1.06 per share, unchanged from the prior quarter and prior year. The dividend is payable on February 26, 2021 to shareholders of record on February 1, 2021.

Effective March 13, 2020, OSFI prohibited FRFIs from increasing their common share dividend. OSFI will advise at the appropriate time on the unwinding of this guidance.

Shareholder Dividend Reinvestment and Share Purchase Plan

Common shareholders may elect to have their cash dividends reinvested in common shares of BMO in accordance with the Shareholder Dividend Reinvestment and Share Purchase Plan (DRIP).

In the first and second quarters of fiscal 2020, common shares to supply the DRIP were purchased on the open market. In the third and fourth quarters of fiscal 2020, common shares to supply the dividend reinvestment feature of the DRIP were issued from treasury at a 2% discount from their then-current market price. On August 25, 2020, BMO announced that for the common share dividend payable in the first quarter of fiscal 2021, and subsequently until further notice, common shares to supply the DRIP will be purchased on the open market without a discount. During fiscal 2019, common shares to supply the DRIP were purchased on the open market.

Eligible Dividends Designation

For the purposes of the *Income Tax Act (Canada)* and any similar provincial and territorial legislation, BMO designates all dividends paid or deemed to be paid on both its common and preferred shares as "eligible dividends", unless indicated otherwise.

Caution

This Enterprise-Wide Capital Management section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Off-Balance Sheet Arrangements

BMO enters into a number of off-balance sheet arrangements in the normal course of operations, which include Structured Entities, Credit Instruments and Guarantees.

Structured Entities (SEs) and Securitization

BMO carries out certain business activities through arrangements involving SEs, using them to obtain sources of liquidity by securitizing certain of its financial assets, secure customer transactions, or pass its credit risk to securities holders of the vehicles. For example, the bank enters into transactions with SEs in which it transfers assets, including mortgage loans, mortgage-backed securities, credit card loans, real estate lines of credit, auto loans and equipment loans in order to obtain alternate sources of funding, or as part of the bank's trading activities. Note 6 on page 165 of the consolidated financial statements describes the loan securitization activities carried out through third-party programs such as the Canada Mortgage Bond Program. Note 7 on page 166 of the consolidated financial statements provides further details of the bank's interests in both consolidated and unconsolidated SEs. Under IFRS, BMO consolidates SEs if it controls the entity. The bank consolidates its own securitization vehicles, the U.S. customer securitization vehicle, and certain capital and funding vehicles. BMO does not consolidate Canadian customer securitization vehicles, certain capital vehicles, various BMO-managed funds or various other structured entities where investments are held. Further details on U.S. and Canadian customer securitization vehicles are provided below.

BMO-Sponsored Securitization Vehicles

BMO sponsors various vehicles that fund assets originated by either BMO (which are then securitized through a bank securitization vehicle) or its customers (which are then securitized through three Canadian customer securitization vehicles and one U.S. customer securitization vehicle). The bank earns fees for providing services related to these customer securitization vehicles, including liquidity, distribution and financial arrangement fees for supporting the ongoing operations of the vehicles. These fees totalled approximately $117 million in 2020 ($113 million in 2019).

Canadian Customer Securitization Vehicles

The customer securitization vehicles BMO sponsors in Canada provide customers with access to financing either from the bank or in the asset-backed commercial paper (ABCP) markets. Customers sell their assets either directly into these vehicles, or indirectly by selling an interest in the securitized assets into these vehicles, which then issue ABCP to either investors or BMO in order to fund the purchases. In all cases, the sellers remain responsible for servicing the transferred assets and are first to absorb any losses realized on those assets. None of the sellers are affiliated with BMO.

BMO's exposure to potential losses arises from the purchase of ABCP issued by the vehicles, any related derivative contracts entered into with the vehicles, and the liquidity support provided to the market-funded vehicles. BMO uses the credit adjudication process in deciding whether to enter into these arrangements, just as when extending credit in the form of a loan.

Two of these customer securitization vehicles are market-funded, while the third is funded directly by BMO. BMO does not control these entities and therefore they are not consolidated. Further information on the consolidation of customer securitization vehicles is provided in Note 7 on page 166 of the consolidated financial statements. No losses were recorded on any of BMO's exposures to these vehicles in 2020 and 2019.

The market-funded vehicles had a total of $4.7 billion of ABCP outstanding as at October 31, 2020 ($3.5 billion in 2019). The ABCP issued by the market-funded vehicles is rated R-1(high) by DBRS and P1 by Moody's. BMO's purchases of ABCP, as distributing agent of ABCP issued by the market-funded vehicles, totalled $75 million as at October 31, 2020 ($8 million in 2019).

BMO provides committed liquidity support facilities for the market-funded vehicles totalling $5.6 billion as at October 31, 2020 ($5.5 billion in 2019). This amount comprised part of the commitments outlined in Note 24 on page 204 of the consolidated financial statements. All of these facilities remain undrawn. The assets of each of these market-funded vehicles consist primarily of exposure to diversified pools of Canadian automobile-related receivables and Canadian insured and conventional residential mortgages. These two asset classes represent 76% (79% in 2019) of the aggregate assets of these vehicles.

U.S. Customer Securitization Vehicle

BMO sponsors one customer securitization vehicle in the U.S. that it consolidates under IFRS. Further information on the consolidation of this customer securitization vehicle is provided in Note 7 on page 166 of the consolidated financial statements. This market-funded customer securitization vehicle provides customers, the sellers of the assets, with access to financing in the U.S. ABCP markets. The sellers remain responsible for servicing the assets involved in the related financing and are first to absorb any losses realized on those assets. None of the sellers are affiliated with BMO.

BMO's exposure to potential losses arises from its purchase of ABCP issued by the vehicle, any related derivative contracts BMO has entered into with the vehicle, and the liquidity support provided to the vehicle. The bank uses the credit adjudication process in deciding whether to enter into these arrangements, just as when extending credit in the form of a loan. No losses were recorded on any of BMO's exposures to the vehicle in 2020 and 2019.

The vehicle had US$2.5 billion of ABCP outstanding as at October 31, 2020 (US$2.6 billion in 2019). The ABCP issued by the vehicle is rated A1 by S&P and P1 by Moody's. In order to comply with U.S. risk retention rules that came into effect in 2017, BMO held US$140 million of the vehicle's ABCP as at October 31, 2020 (US$145 million in 2019).

BMO provides a committed liquidity support facility to the vehicle, with the undrawn amount totalling US$5.5 billion as at October 31, 2020 (US$5.1 billion in 2019). The assets of this customer securitization vehicle consist primarily of exposure to diversified pools of U.S. automobile-related receivables and student loans. These two asset classes represent 81% (74% in 2019) of the aggregate assets of the vehicle.

Credit Instruments

In order to meet the financial needs of BMO's clients, a variety of off-balance sheet credit instruments are used. These include guarantees and standby letters of credit, which represent the bank's obligation to make payments to third parties on behalf of a customer if the customer is unable to make the required payments or meet other contractual requirements. BMO also writes documentary and commercial letters of credit, which represent agreement to honour drafts presented by a third party upon completion of specified activities. Commitments to extend credit are off-balance sheet arrangements that represent the bank's commitment to customers to grant them credit in the form of loans or other financings for specific amounts and maturities, subject to meeting certain conditions.

There are a large number of credit instruments outstanding at any time. BMO's customers are broadly diversified, and the bank does not anticipate events or conditions that would cause a significant number of customers to fail to perform in accordance with the terms of their contracts. BMO uses the credit adjudication process in deciding whether to enter into these arrangements, just as when extending credit in the form of a loan. The bank monitors off-balance sheet credit instruments in order to avoid undue concentrations in any geographic region or industry.

The maximum amount payable by BMO in relation to these credit instruments was approximately $204 billion as at October 31, 2020 ($185 billion in 2019). However, this amount is not representative of the bank's likely credit exposure or the liquidity requirements for these instruments, as it does not take into account customer behaviour, which suggests that only a portion of customers would utilize the facilities related to these instruments, nor does it take into account any amounts that could be recovered under recourse and collateral provisions.

For the credit commitments outlined in the preceding paragraphs, in the absence of an event that triggers a default, early termination by BMO may result in a breach of contract.

Further information on these instruments can be found in Note 24 on page 204 of the consolidated financial statements.

Guarantees

Guarantees include contracts under which BMO may be required to make payments to a counterparty based on changes in the value of an asset, liability or equity security that the counterparty holds. Contracts under which the bank may be required to make payments if a third party does not perform according to the terms of a contract, and contracts under which it provides indirect guarantees of indebtedness, are also considered guarantees. In the normal course of business, BMO enters into a variety of guarantees, including standby letters of credit, backstop and other liquidity facilities, and derivatives contracts or instruments (including, but not limited to, credit default swaps), as well as indemnification agreements.

The maximum amount payable by BMO in relation to these guarantees was approximately $31 billion as at October 31, 2020 ($29 billion in 2019). However, this amount is not representative of the likely exposure, as it does not take into account customer behaviour, which suggests that only a portion of the guarantees would require BMO to make any payments, nor does it take into account any amounts that could be recovered under recourse and collateral provisions.

For a more detailed discussion of these arrangements, refer to Note 24 on page 204 of the consolidated financial statements.

Caution

This Off-Balance Sheet Arrangements section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Enterprise-Wide Risk Management

As a diversified financial services company providing banking, wealth management, capital markets and insurance services, BMO is exposed to a variety of risks that are inherent in its business activities. A disciplined and integrated approach to managing risk is fundamental to the success of its operations. BMO's risk management framework provides independent risk oversight across the enterprise and is integral to building competitive advantage.

Enterprise-Wide Risk Management outlines BMO's approach to managing the key financial risks and other related risks that it faces, as discussed in the following sections:

Text and tables presented in a blue-tinted font in the Enterprise-Wide Risk Management section of the MD&A form an integral part of the 2020 audited annual consolidated financial statements. They present required disclosures as set out by the International Accounting Standards Board in IFRS 7, *Financial Instruments – Disclosures*, which permits cross-referencing between the notes to the consolidated financial statements and the MD&A. Refer to Note 1 on page 150 and Note 5 on page 164 of the consolidated financial statements.

Risks That May Affect Future Results

Top and Emerging Risks That May Affect Future Results

BMO is exposed to a variety of evolving risks that have the potential to affect its business, the results of its operations and its financial condition. The integral tasks in the risk management process are to proactively identify, assess, monitor and manage a broad spectrum of top and emerging risks. The top and emerging risk identification process involves several forums for discussion with the Board, senior management and business thought leaders, and combines both bottom-up and top-down approaches in considering risk. The assessment of top and emerging risks informs the development of action plans and stress tests related to BMO's exposure to certain events.

Particular attention has been given to the following:

General Economic Conditions and COVID-19 Pandemic Related Risks

BMO's earnings are affected by the general economic conditions prevailing in Canada, the United States and other jurisdictions in which it conducts business. The World Health Organization declared COVID-19 a global pandemic on March 11, 2020. The pandemic has had, and will likely continue to have a negative impact on the global economy and economic outlook, including with respect to the jurisdictions in which the bank operates, resulting in lower economic output, elevated unemployment levels and sustained low interest rates. Government and regulatory measures, such as temporary closures of businesses, the institution of social distancing and other measures have been relaxed in certain of these jurisdictions. However, other jurisdictions have reinstated measures due to subsequent spikes in infections. Actions taken by governments, monetary authorities and regulators to support the economy and financial system, including fiscal and monetary measures to increase liquidity and support incomes, as well as regulatory actions in respect of financial institutions, generally remained in place, though there is uncertainty regarding how much longer these actions and measures will stay in effect.

The pandemic has had a negative impact on the bank's earnings, including increased provisions for credit loan losses on both impaired and performing loans, and impacts from market volatility in the second quarter. Lower interest rates reduced the bank's net interest margin in the current year, and if rates do not increase, will likely result in future pressure on margins as assets renew at lower yields. The pandemic has also lowered loan growth and increased deposit growth. BMO continues to monitor the impacts of the pandemic on its credit portfolio. The pandemic has resulted in negative migration across the credit portfolio, particularly in certain sectors that are considered more vulnerable to the pandemic. In order to assist clients, the bank worked with governments and agencies to implement programs to reduce the financial hardship caused by the pandemic, including offering payment deferrals and lending facilities designed to help individuals and businesses to withstand stress and recover financially. Requests for payment deferrals have declined significantly since peaking in the second quarter. Deferrals continued to decline in the fourth quarter, with the large majority of clients resuming payments after exiting the deferral program. The maturities are being closely monitored and actively managed.

If the pandemic is prolonged, the negative impact on the global economy could deepen from what is currently expected. It could continue to disrupt global supply chains, lower equity market valuations and interest rates, create significant volatility and disrupt financial markets, and further increase unemployment and business bankruptcies. The bank's net interest income would likely be impacted further should interest rates decrease from current low levels and the demand for products and services may be significantly reduced. The bank would expect to continue to recognize elevated credit losses in its loan portfolios, including in those industries directly impacted by the pandemic, and in retail portfolios given higher unemployment. The bank could also experience losses in its trading business for several reasons, including heightened market volatility and a deterioration in the financial condition of counterparties, and other parties relevant to its business.

As a result of changing economic and market conditions, BMO may be required to recognize impairments in future periods on the securities or other assets it holds, as well as reductions in other comprehensive income. In addition, in certain businesses, including equity linked notes-related businesses where the bank sells investment products that have returns tied to equity securities, it has exposure to the dividend policies of the companies that issue those underlying equity securities. Business operations may also be disrupted if key suppliers of goods and services are adversely impacted or a significant portion of the workforce is unable to work effectively, including because of illness, quarantines, government actions, or other restrictions in connection with the pandemic. The pandemic may also impact the bank's ability to access capital markets, its liquidity and capital position. The pandemic has resulted in an increase, and may result in further increases, in certain of the bank's risks, including its top and emerging, credit and counterparty, market, insurance, liquidity and funding, operational, including technology and cyber-related, legal and regulatory, strategic, environmental and social, and reputation risks. BMO may also face increased risk of litigation and governmental and regulatory scrutiny, as a result of the effects of the pandemic on market and economic conditions and actions, governments, and governmental and regulatory authorities take in response to those conditions.

The extent to which the pandemic continues to impact the bank's operations and financial performance and condition will depend on future developments, which are highly uncertain and cannot be predicted, including the scope, severity and duration of the pandemic and actions taken by governments, and governmental and regulatory authorities, which could vary by country, and other third parties in response to the pandemic.

Cyber Security, Information Security and Privacy Risk

The pandemic has heightened the bank's exposure in the threat landscape, including a significant increase in phishing campaigns, which to date have been successfully blocked. The new distributed work-from-home environment increases the bank's risk of data loss and potential breaches of privacy. Reliance on suppliers whose work environments have also changed, along with the increasing frequency of industry-reported data breaches and the sophisticated exploitation of zero-day and other vulnerabilities, exposes BMO to heightened risk of data loss.

Information security is integral to BMO's business activities, brand and reputation. BMO faces common banking security risks, given its ever-increasing reliance on the internet, coupled with the remote work environment and extensive dependence on advanced digital technologies to process data. These risks include the threat of potential data loss; hacking; exposure of customer or employee information; identity theft and fraud; social media, brand and reputational damage; as well as the possibility of denial of service resulting in system failure and service disruption. To meet these threats, the bank continues to evolve its capabilities and increase investment in the Financial Crimes Unit, demonstrating its commitment to bringing together cyber defences, fraud and physical security functions, as well as subject matter experts across business groups. The bank has invested in its technological infrastructure including a state-of-the-art security hub and a "follow the sun" operating model, enabling teams to work globally across North America, Europe and Asia to detect, prevent, respond to and recover from security threats. In addition, it is enhancing processes and improving the ability to prevent, detect and recover from cyber security threats, keeping customers and employees safe. BMO continues to benchmark and review best practices across peer companies and other industries, conduct third-party assessments of controls, evaluate the effectiveness of key controls, develop new controls, and invest in both technology and human resources. It also works with various security and software suppliers to bolster its internal resources and technology capabilities, in order to respond to a rapidly evolving threat landscape.

Lower or Negative Interest Rates

In light of the economic dislocations that have resulted from efforts to curb the spread of COVID-19, both the Bank of Canada and the U.S. Federal Reserve have lowered their policy interest rates effectively to zero. Both central banks have also instituted programs of quantitative easing, under which they are purchasing a variety of bonds in order to apply downward pressure across a broad spectrum of market interest rates and support the continued smooth functioning of debt capital markets and stimulate the economy. The Bank of Canada and the Federal Reserve have each indicated that they do not anticipate using negative interest rate policy to stimulate economic growth, but sustained or deepening economic weakness could potentially cause policymakers to reconsider this position. Sustained low interest rates, or negative interest rates, could expose the bank to a number of financial, operational and technology risks. The most significant financial impact would result from compression of the bank's net interest margin and likely lower its net interest income, as existing assets mature and are renewed at lower interest rates. In terms of operational and technology risks in a negative interest rate environment, the bank may need to adapt its operations to fully accommodate the assessment of negative rates on its loans and deposits.

In the event of lower or negative interest rates, the bank would look to other sources of income in order to offset the likely decrease in net interest income.

Benchmark Interest Rate Reform
Interbank offered rates (IBORs) have been the subject of numerous global regulatory proposals and reforms over the past few years. Most significantly, the U.K. Financial Conduct Authority (FCA) has announced that it will no longer compel banks to submit to the London Interbank Offered Rate (LIBOR) after 2021. As a result, the industry must transition from LIBOR and other IBORs to alternative reference rates (ARRs) in multiple jurisdictions, a shift that will impact financial market participants globally, across many products and asset classes.

Transition efforts in connection with these reforms are complex, with significant risks and challenges that could result in increased volatility, pricing changes or illiquidity in markets for instruments that currently rely on IBORs. The transition could have adverse consequences for all market participants, including BMO, as both a holder and an issuer of IBOR-based instruments, such as the potential for increased financial, operational, legal and regulatory, and reputational risks.

BMO has established an enterprise IBOR Transition Office (ITO) to coordinate and oversee the transition from IBORs to ARRs, with a focus on managing and mitigating internal risks, while ensuring a positive client experience. The ITO, sponsored and supported by senior management, is responsible for running the enterprise-wide program, covering all of BMO's lines of business and corporate function areas. The ITO has a global mandate to ensure that BMO properly anticipates the discontinuation or unavailability of LIBOR and other IBORs. As part of its mandate, the ITO continues to address BMO's industry and regulatory engagement, client and financial contract changes, internal and external communications, technology and operations modifications, introduction of new products, migration of existing clients, and program strategy and governance. In addition, the ITO continues to monitor the development and usage of ARRs across the industry, including the Secured Overnight Financing Rate (SOFR). As the market has developed, the bank has begun to add ARR-based products to its suite of offerings.

Globally, regulators and industry working groups continue to take actions to facilitate a timely transition. The U.K. government, for instance, has stated its intention to give the FCA enhanced powers to manage and conduct an orderly wind-down of LIBOR. While regulators acknowledge the challenges market participants are facing due to the pandemic, they continue to expect the industry to transition away from LIBOR and other IBORs by the end of 2021. Both the FCA and the ICE Benchmark Association have recently initiated industry consultations regarding the process and timing for the orderly wind-down of LIBOR, including the conditions under which LIBOR with respect to certain currencies and tenors may be continued beyond December 31, 2021. In light of this, industry working groups continue to publish guidance and recommended transition timelines to help the industry meet the expected deadline. BMO's ITO is incorporating the guidance and timelines into project plans and continues to monitor for changes and updates from regulators and industry working groups in order to facilitate a smooth and timely transition for BMO and its clients.

Oil and Gas Industry Outlook
Oil prices decreased significantly during the year, in part due to increases in oil supply from OPEC+ countries, followed by decreases in oil demand tied to the pandemic. Although prices did rebound moderately later in the year, they remain at low levels compared with production costs and 2019 levels. These conditions posed challenges for both exploration and development and oil and gas services companies.

The bank remains focused on taking risks in the oil and gas industry, within its approved risk appetite, while seeking appropriate returns on those risks. In the exploration and production sector, the bank is working with existing borrowers to maintain loan exposures, in line with changing estimates of oil and gas reserve values. BMO maintains an internal limit that caps its exposure to this sector. In the oil and gas services sector, BMO is focused on Canadian borrowers with a strong capital base and diversified operations that are heavily weighted to providing maintenance and servicing to large producers.

Technology Resiliency
Given the extent to which BMO's operations rely on technology and technology vendors, it is important to maintain a technology platform that provides a high level of operational reliability and resilience. Processes and initiatives are in place to ensure an appropriate level of resiliency in the technology platform, particularly with respect to critical systems.

Geopolitical Risk and Escalating Trade Disputes
Geopolitical risk remains elevated as a result of strained relations among many countries, including between the United States and China and Iran. Heightened geopolitical risk can give rise to shifts in global capital flows, which may lead to market disruptions and a decrease in investment, trade and global economic growth. BMO's core banking portfolio has limited direct exposure outside North America; however, its core customers and international strategy depend on sustained growth and trade. To mitigate the exposure to geopolitical risk, BMO maintains a diversified portfolio that is continually monitored and tested, in addition to contingency plans that it may establish to address any possible adverse developments.

Rising protectionism and anti-globalization sentiment in the United States and other countries may hinder global growth. In particular, despite the Phase One trade agreement reached between the United States and China earlier this year, trade tensions between the two countries have remained elevated, which could adversely affect business investment and could prove especially problematic for commodity-producing countries, such as Canada. Trade disputes have also arisen between Canada and China over the past year. Within North America, the Canada-United States-Mexico Agreement (CUSMA) took effect on July 1, 2020, and has reduced uncertainty about continental trading arrangements.

Although it is difficult to predict and mitigate the potential economic and financial consequences of trade-related events on the Canadian and U.S. economies, BMO actively monitors global and North American trends and continually assesses its businesses in the context of these trends. BMO stress-tests its portfolios, business plans and capital adequacy against severely adverse scenarios arising from trade-related shocks, and establishes contingency plans and mitigation strategies to address and offset the consequences of possible adverse political and economic developments.

BMO's credit exposure by geographic region is set out in Tables 7, 8 and 11 to 13 on pages 130 and 132 to 135 and in Note 4 on page 159 of the consolidated financial statements.

Material presented in a blue-tinted font above is an integral part of the 2020 audited annual consolidated financial statements (refer to page 73).

Other Factors That May Affect Future Results

Canadian Housing Market and Consumer Leverage

Restrictions on economic activity aimed at curbing the pandemic resulted in a steep decline in housing market activity in March and April of 2020. However, the housing market has since rebounded strongly, with home sales surpassing pre-pandemic levels and prices rising sharply. The lower interest rate environment should underpin strength in housing markets. However, several factors, such as high unemployment and lower immigration, could potentially weigh on sales activity and home prices in the future. In addition, the pandemic has the potential to drive permanent changes in consumer behaviours and preferences, as well as changes in how and where work is performed, including more widespread adoption of remote work. Such changes have the potential to cause structural shifts in demand for housing stock based on geographic and other characteristics, as well as affecting the viability of income-generating investment properties, in particular condos in downtown urban markets. These changes could dampen sales activity, home prices and property values within the existing portfolio.

Although household debt levels have risen only modestly this year due to weaker consumer spending and increased income support from government programs, they remain historically elevated, which could impede new mortgage borrowing. In addition, housing affordability remains weak in the Greater Toronto Area (GTA), Greater Vancouver Area (GVA), and their surrounding regions, which represents an ongoing barrier to entry for potential first-time home buyers. High levels of unemployment will also weigh on household incomes, especially if current government support programs begin to be scaled back or are eliminated, which will reduce household purchasing power. The heightened level of economic uncertainty could also cause households to continue to focus on deleveraging.

Potential reductions in home sales activity, particularly in the GTA and GVA, would impact mortgage origination volumes and, if property values were to decline, reduce the value of collateral backing of loans and could result in higher provisions for credit losses. It is not possible to accurately predict the full impact of recent economic and policy changes or any potential future changes, but BMO's prudent lending practices, which include the application of additional underwriting scrutiny on higher-value and higher loan-to-value transactions and the setting and close monitoring of regional, property type and customer segment concentration limits, support the soundness of the bank's Canadian real estate lending portfolio. Further, stress test analysis suggests that even significant price declines and extremely challenging economic conditions would result in manageable losses, mainly due to insurance coverage and the significant level of equity built up in seasoned loans.

Fiscal and Monetary Policies and Other Economic Conditions in the Countries in which BMO Conducts Business

BMO's earnings are affected by the fiscal and monetary policies and other economic conditions prevailing in Canada, the United States and other jurisdictions in which it conducts business. These policies and conditions may have the effect of reducing profitability and certainty in some specific businesses and markets, which may affect customers and counterparties, potentially contributing to a greater risk of default. Changes in fiscal and monetary policies are difficult to anticipate. Higher levels of government debt resulting from the pandemic have the potential to create future vulnerabilities that could impact the bank's business and markets. Fluctuations in interest rates can have an impact on earnings, the value of investments, the credit quality of lending to customers and counterparty exposure, and the capital markets that BMO accesses.

Changes in the value of the Canadian dollar relative to the U.S. dollar have affected, and could in future continue to affect, the results of clients with significant foreign earnings or input costs. BMO's investments in foreign operations are primarily denominated in U.S. dollars, and the foreign exchange impact of U.S.-dollar-denominated risk-weighted assets and capital deductions may result in variability in the bank's capital ratios. BMO may take actions to manage the impact of foreign exchange rate movements on its capital ratios, and did so during 2020. Refer to the Enterprise-Wide Capital Management section on page 63. The value of the Canadian dollar relative to the U.S. dollar will also affect the contribution of U.S. operations to the bank's Canadian-dollar profitability.

Hedging positions may be taken to manage interest rate exposures and partially offset the effects of Canadian dollar/U.S. dollar exchange rate fluctuations on the bank's financial results. Refer to the Foreign Exchange section on page 23 and the Market Risk section on page 92 for a more complete discussion of foreign exchange and interest rate risk exposures.

Climate Change and Other Environmental and Social Risks

BMO faces risks arising from environmental events, such as drought, floods, wildfires, earthquakes, and hurricanes and other storms. These events could potentially disrupt the bank's operations, impact customers and counterparties, and result in lower earnings and higher losses. Factors contributing to heightened environmental risks include the impacts of climate change and the continued intensification of development in areas of greater environmental sensitivity. BMO's business continuity management preparations provide it with the capability to restore, maintain and manage critical operations and processes in the event of a business disruption.

BMO also faces risks in relation to borrowers that experience losses or increases in their operating costs as a result of climate-related policies, such as carbon emissions pricing, or that experience lower revenue as new and emerging technologies displace or disrupt demand for certain commodities, products and services.

Legal and regulatory, business or reputation risks could arise from BMO's actual or perceived actions, or inaction, in relation to climate change and other environmental and social risk issues, or its disclosures on these matters. Legal and regulatory or reputation risks related to such matters could also impact customers, suppliers or other stakeholders, giving rise to business or reputation risks. BMO monitors developments in these areas on an ongoing basis as part of its overall assessment of operational, business and reputation risks.

BMO supports the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD), and employs the TCFD framework to enhance its understanding and disclosure of the evolving impact of risks associated with climate change, together with possible mitigation strategies. BMO continues to build its internal capacity to conduct climate change scenario analysis, in line with the TCFD recommendations, and is expanding this program to evaluate both physical and transition risks across a selection of climate-sensitive portfolios. These efforts will help the bank identify potential material financial risks and will inform its business strategy in relation to climate change going forward.

Refer to the Environmental and Social Risk section on page 112 for further discussion of these risks.

Regulatory Requirements

The financial services industry is highly regulated, and BMO has experienced changes and increasing complexity in regulatory requirements, as governments and regulators around the world continue to pursue major reforms intended to strengthen the stability of the financial system and protect key markets and participants. As a result, there is the potential for higher capital requirements and additional regulatory compliance costs, which could lower returns and affect growth. These reforms could also affect the cost and availability of funding and the extent of the bank's market-making activities. Regulatory reforms may also impact fees and other revenues for certain operating groups. In addition, differences in laws and regulations enacted by various national regulatory authorities may provide advantages to international competitors that could affect BMO's ability to compete, and lead to loss of market share. BMO monitors such developments, and other potential changes, so that it is well-positioned to respond and implement any necessary changes.

Failure to comply with applicable legal and regulatory requirements could result in legal proceedings, financial losses, regulatory sanctions, enforcement actions, an inability to execute business strategies, a decline in investor and customer confidence, and damage to the bank's reputation. Refer to the Legal and Regulatory Risk and Enterprise-Wide Capital Management sections on pages 110 and 63, respectively, for a more complete discussion of BMO's exposure to legal and regulatory risk.

Tax Legislation and Interpretations

Legislative changes and changes in tax policy, including their interpretation by tax authorities and the courts, may impact BMO's earnings. Tax laws, as well as interpretations of tax laws and policy by tax authorities, may change as a result of efforts by the G20 and the Organisation for Economic Co-operation and Development to broaden the tax base globally and improve tax-related reporting. Refer to the Critical Accounting Estimates section on page 114 for further discussion of income taxes and deferred taxes.

Changes to Business Portfolio

The bank may, from time to time, acquire companies, businesses and assets as part of its overall business strategy. The bank will conduct thorough due diligence before completing such acquisitions. However, some of the acquisitions may not perform in line with the bank's financial or strategic objectives or expectations. The bank's ability to successfully complete an acquisition may be subject to regulatory and shareholder approvals, and it may not be able to determine when, if or on what terms the necessary approvals will be granted. Changes in the competitive and economic environment, as well as other factors, may result in reductions in revenue or profitability, while higher than anticipated integration costs and failure to realize expected cost savings after an acquisition could also adversely affect the bank's earnings. Integration costs may increase as a result of regulatory costs related to an acquisition, other unanticipated costs that were not identified in the due diligence process or demands on management time that are more significant than anticipated, as well as unexpected delays in implementing certain plans that in turn lead to delays in achieving full integration. Successful post-acquisition performance depends on retaining the clients and key employees of acquired companies and businesses and on integrating key systems and processes without disruption, and there can be no assurance that the bank will always succeed in doing so.

The bank also evaluates potential dispositions of assets and businesses that may no longer meet the bank's strategic objectives. When the bank sells assets or withdraws from a business, the bank may encounter difficulty in finding buyers or alternative exit strategies on acceptable terms or in a timely manner, which could delay the achievement of its strategic objectives. The bank may also dispose of assets or a business on terms that are less desirable than anticipated or result in adverse operational or financial impacts, experience greater dis-synergies than expected, and the impact of the divestiture on revenue growth may be larger than projected. Dispositions may be subject to satisfaction of conditions and required governmental approvals on acceptable terms, which, if not satisfied or obtained, may prevent the bank from completing the dispositions as intended, or at all.

Critical Accounting Estimates and Accounting Standards

BMO prepares its consolidated financial statements in accordance with IFRS. Changes that the International Accounting Standards Board makes from time to time to these standards can be difficult to anticipate and may materially affect how BMO records and reports its financial results. Significant accounting policies and future changes in accounting policies are discussed on pages 118 and 119, as well as in Note 1 on page 150 of the consolidated financial statements.

The application of IFRS requires management to make significant judgments and estimates that affect the carrying amounts of certain assets and liabilities, certain amounts reported in net income, and other related disclosures. In making these judgments and estimates, BMO relies on the best information available at the time. However, it is possible that circumstances may change, that new information may become available or that the bank's models may prove to be imprecise.

BMO's financial results could be affected for the period during which any such new information or change in circumstances becomes apparent, and the extent of the impact could be significant. More information is included in the Critical Accounting Estimates section on page 114.

Caution

The Risks That May Affect Future Results section and the remainder of this Enterprise-Wide Risk Management section contain forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Other factors beyond BMO's control that may affect its future results are noted in the Caution Regarding Forward-Looking Statements on page 14. BMO cautions that the preceding discussion of risks that may affect future results is not exhaustive.

Risk Management Overview

BMO believes that risk management is every employee's responsibility and is guided by five key principles on risk that drive its approach to managing risk across the enterprise and comprise its Risk Appetite Statement.

Understand and Manage

- The bank will only take those risks that are transparent and understood, and can be measured, monitored and managed, supported by effective information systems, processes, governance and controls
- The bank will embrace a culture of constructive challenge, personal accountability, and timely and transparent information-sharing at all levels of the enterprise, with rapid escalation of threats and concerns
- The bank will incorporate risk measures into its performance management system and compensation decisions will include performance assessment against risk appetite
- The bank will protect customer and enterprise assets, including data and systems, and manage any exposures by maintaining an effective system of limits and controls to manage all risks

Protect BMO's Reputation

- Everything the bank does will be guided by principles of honesty, integrity, respect and high ethical standards in alignment with its Code of Conduct
- The bank will protect its reputation, and strive to adhere to all regulatory and legal obligations, by maintaining effective policies, procedures, guidelines, compliance standards and controls, and by providing training and management to guide business practices and risk-taking activities of all employees
- The bank will identify, assess and manage the potential loss or damage resulting from environmental and social issues, including climate change

Diversify. Limit Tail Risk.

- The bank will target a business mix that limits earnings volatility to acceptable levels throughout the business cycle, and limits exposure to low-probability, high-impact events that could jeopardize its debt rating, capital position or reputation
- The bank will use risk measurement and stress testing methodologies in the assessment of risk, risk-taking capacity and sustainable risk-adjusted returns to guide management action and to prepare for extreme events

Maintain Strong Capital and Liquidity

- The bank will maintain a strong capital position and sound liquidity and funding position which meet, or exceed, regulatory requirements and the expectations of the market (rating agencies, investors, and depositors)
- The bank will maintain an investment grade debt rating at a level that allows competitive access to funding
- The bank will maintain a robust recovery and resolution framework that enables an effective and efficient response in an extreme crisis

Optimize Risk Return

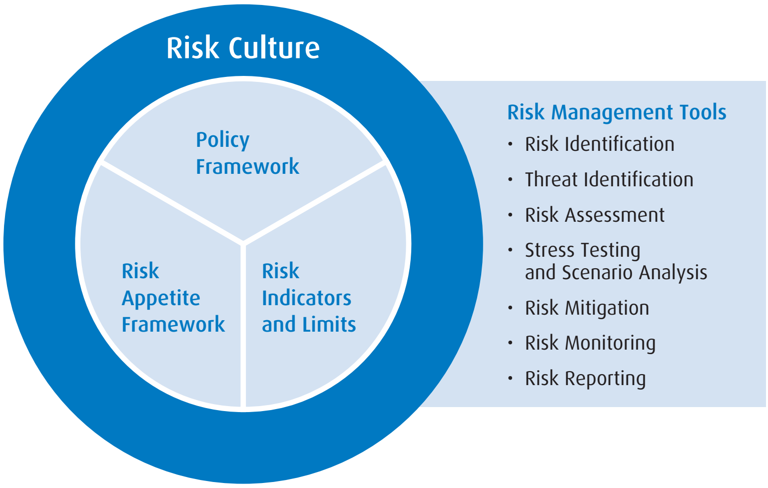
- The bank will set capital limits and manage its exposures based on risk appetite and strategy and require its businesses to optimize risk-adjusted returns
- The bank will target new products, initiatives and acquisition opportunities that provide a good strategic and cultural fit, and a high likelihood of creating value for its shareholders

BMO's integrated and disciplined approach to risk management is fundamental to the success of its business. All elements of the risk management framework function together in support of prudent and measured risk-taking, while striking an appropriate balance between risk and return. BMO's Enterprise Risk and Portfolio Management (ERPM) group oversees the implementation and operation of risk appetite, risk policies and limits, and provides independent review and oversight across the enterprise on risk-related issues, in order to achieve prudent and measured risk-taking that is integrated with its business strategy.

Framework and Risks

Enterprise-Wide Risk Management Framework

BMO's Risk Management Framework (RMF) guides its risk-taking activities in order to align them with its risk appetite, client needs, shareholder expectations and regulatory requirements. The RMF provides for the direct management of each individual risk type, as well as the management of risks on an integrated basis, with three lines of defence in the management of risk.



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Risk Culture

Risk culture is the set of shared norms, attitudes and behaviours related to risk awareness, risk-taking and risk management at BMO. Sound risk culture consistently supports appropriate risk behaviours and judgments about risk-taking and promotes effective risk management and alignment of risk-taking activities with the bank's Risk Appetite. BMO's risk culture informs and supports its overall culture. BMO has a long tradition of commitment to high ethical standards, grounded in values of integrity, empathy, diversity and responsibility. BMO's Purpose – to Boldly Grow the Good *in business and life* – is underpinned by its values. The Purpose defines BMO as an organization and is the foundation of how the bank works. ERPM is responsible for the development and promotion of a healthy, strong risk culture across the enterprise. In pursuing this mandate, ERPM works closely with Legal & Regulatory Compliance's Ethics & Conduct Office, and People & Culture.

BMO's risk culture is founded on four guiding principles that together reinforce its effectiveness across the bank: Tone from the Top, Accountability, Effective Communication and Challenge, and Incentives:

- **Tone from the Top:** BMO's risk culture is grounded in an approach to risk management that encourages openness, constructive challenge and personal accountability. Each member of senior management plays a critical role in fostering this strong risk culture among all employees, by effectively communicating this responsibility and by the example of their own actions. The Board of Directors oversees the bank's corporate objectives, and seeks to ensure they are supported by a sound risk strategy and an effective RMF that is appropriate to the nature, scale, complexity and risk profile of the bank's activities. The Board also has overall responsibility for the bank's governance framework and corporate culture, and approves its Risk Appetite Statement and Risk Appetite Framework.
- **Accountability:** BMO's RMF is anchored in the three-lines-of-defence approach to managing risk. The bank's risk culture also encourages the escalation of concerns associated with potential or emerging risks to senior management, so that they can be evaluated and appropriately addressed. The bank prides itself on providing an environment where concerns can be raised without retaliation.
- **Effective Communication and Challenge:** Timely and transparent sharing of information is integral to engaging stakeholders in key decisions and strategy discussions, bringing added rigour and discipline to BMO's decision-making. This not only leads to the timely identification, escalation and resolution of issues, but also encourages open communication, independent challenge and an understanding of the key risks faced by the organization, so that employees are equipped and empowered to make decisions and take action in a coordinated and consistent manner, supported by a strong monitoring and control framework.
- **Incentives:** Compensation is aligned with prudent risk-taking, so that compensation and other incentives reward the appropriate use of capital and respect for the rules and principles of the RMF and do not encourage excessive risk-taking. Risk managers have input into the design of incentive programs that may have an effect on risk-taking. The bank also maintains training programs that are designed to foster a deep understanding of BMO's capital and risk management frameworks across the enterprise, providing employees and management with the tools and awareness they need to fulfill their responsibilities for independent oversight, regardless of their role in the organization.

Risk Appetite Framework

BMO's Risk Appetite Framework consists of its Risk Appetite Statement and key risk metrics, and is supported by corporate policies, standards and guidelines, including the related limits, concentration levels and controls defined therein. Risk appetite defines the amount of risk that the bank is willing to assume given its guiding principles and capital capacity, thereby supporting sound business initiatives, appropriate returns and targeted growth. The risk appetite is integrated into the strategic and capital planning processes and performance management system. On an annual basis, the Risk Management Committee (RMC) submits the Risk Appetite Statement and key risk metrics to the Risk Review Committee of the Board of Directors (RRC), which in turn reviews and recommends it to the Board of Directors for approval. The Risk Appetite Statement is articulated and applied consistently across the enterprise, with key businesses and entities developing their own respective risk appetite statements within this framework.

Risk Governance

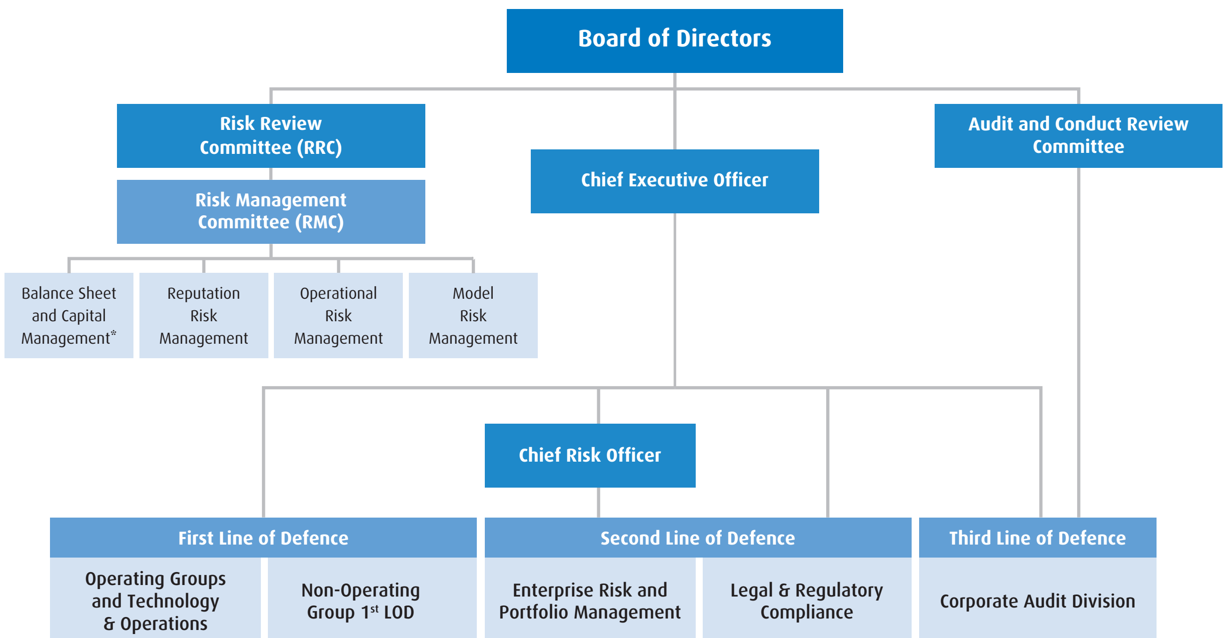
BMO's enterprise-wide RMF is founded on a governance approach that includes a robust committee structure and a comprehensive set of corporate policies and limits, each of which is approved by the Board of Directors or its committees, as well as specific corporate standards approved by senior management. The bank's corporate policies outline frameworks and objectives for each significant risk type, so that risks to which the enterprise is exposed are appropriately identified, measured, managed, monitored, mitigated and reported. A Risk Taxonomy is maintained to comprehensively identify and manage key risks. The Risk Taxonomy reflects the bank's Tier 1 risks, as set out in the diagram below.

Specific Board-approved policies govern BMO's approach to key risks, such as credit and counterparty, market, liquidity and funding, and operational risks. This enterprise-wide RMF is overseen at all levels through a hierarchy of committees and individual responsibilities, as outlined in the following diagram. The Board seeks to ensure that the bank's corporate objectives are supported by a sound risk strategy and an effective RMF that is appropriate to the nature, scale, complexity and risk profile of the bank's activities. The Board also has overall responsibility for the bank's governance framework and corporate culture.

BMO's RMF is reviewed on a regular basis by the RRC, in order to provide oversight and guide its risk-taking activities. In each of the operating groups, management, as the first line of defence, is responsible for governance activities and controls, and the implementation and operation of risk management processes and procedures that provide effective risk management. ERPM, as the primary second line of defence, oversees the implementation and operation of risk management processes and procedures, and aligns, monitors and tests risk outcomes against risk appetite and management expectations, ensuring that risk outcomes are consistent with return expectations. Individual governance committees establish and monitor further risk limits, consistent with Board-approved limits.

The diagram below outlines BMO's risk governance framework, including both the direct and administrative reporting lines.

Risk Governance Framework



* With respect to Structural Market Risk, Liquidity Risk, and Internal Capital Adequacy Assessment Process (ICAAP) related matters, Balance Sheet and Capital Management Committee (BSCMC) reports into Risk Management Committee (RMC).

In addition to the enterprise-level risk governance framework, appropriate risk governance frameworks, supported by the three lines of defence, are in place in all material businesses and entities.

Board of Directors is responsible for supervising the management of the business and affairs of BMO. The Board, either directly or through its committees, is responsible for oversight in the following areas: strategic planning; defining risk appetite; the identification and management of risk; capital management; fostering a culture of integrity; internal controls; succession planning and evaluation of senior management; communication; public disclosure; and corporate governance.

Risk Review Committee of the Board of Directors (RRC) assists the Board in fulfilling its risk management oversight responsibilities. This includes overseeing the identification and management of BMO's risks, leading its risk culture; adherence by operating groups to risk management corporate policies and standards; compliance with risk-related regulatory requirements; and evaluating the Chief Risk Officer (CRO), including input into succession planning for the CRO. RMF is reviewed on a regular basis by the RRC in order to provide guidance for the governance of risk-taking activities.

Audit and Conduct Review Committee of the Board of Directors assists the Board in fulfilling its oversight responsibilities for the integrity of BMO's financial reporting; the effectiveness of BMO's internal controls; the independent auditors' qualifications, independence and performance; BMO's compliance with laws and regulations; transactions involving related parties; conflicts of interest and confidential information; and standards of business conduct and ethics.

Chief Executive Officer (CEO) is directly accountable to the Board for all of BMO's risk-taking activities. The CEO is supported by the CRO and the ERPM group.

Chief Risk Officer (CRO) reports directly to the CEO and is head of ERPM and chair of RMC. The CRO is responsible for providing independent review and oversight of enterprise-wide risks and leadership on risk issues, developing and maintaining the RMF and fostering a strong risk culture across the enterprise.

Risk Management Committee (RMC) is BMO management's senior risk committee. RMC reviews and discusses significant risk issues and action plans that arise in executing the enterprise-wide strategy. RMC provides risk oversight and governance at the highest levels of management. This committee is chaired by the CRO and its members include the heads of operating groups, the CEO and the Chief Financial Officer (CFO).

RMC Sub-Committees have oversight responsibility for the risk implications and balance sheet impacts of management strategies, governance practices, risk measurement, model risk management and contingency planning. RMC and its sub-committees provide oversight of the risks taken across the enterprise and the process through which such risks are identified, measured, managed, monitored, mitigated and reported in accordance with policies, and are held within limits and risk tolerances.

Enterprise Risk and Portfolio Management (ERPM), as the risk management second line of defence, provides comprehensive risk management oversight, effective challenge and independent assessment of risk and risk-taking activities. ERPM supports a disciplined approach to risk-taking in fulfilling its responsibilities for independent transactional approval and portfolio management, policy formulation, risk reporting, stress testing, modelling and risk education. This approach promotes consistency in risk management practices and standards across the enterprise, and verifies that any accepted risks are consistent with BMO's risk appetite.

Operating Groups are responsible for effectively managing risks by identifying, measuring, managing, monitoring, mitigating and reporting risk within their respective lines of business in accordance with risk appetite. They exercise business judgment and seek to ensure that effective policies, processes and internal controls are in place and that significant risk issues are reviewed with ERPM. Individual governance committees and ERPM establish and monitor further risk limits that are consistent with and subordinate to the Board-approved limits.

Three-Lines-of-Defence Operating Model

BMO's RMF is anchored in the three-lines-of-defence approach to managing risk, as described below:

- Operating groups are the bank's **first line of defence**. They are accountable for the risks arising from their businesses, activities and exposures. They are expected to pursue business opportunities within the established risk appetite and to identify, measure, manage, monitor, mitigate and report all risks in or arising from their businesses, activities and exposures. The first line discharges its responsibilities by using risk management and reporting methodologies and processes developed by the business, ERPM, and other areas, and may call on these resources to help discharge these responsibilities. Businesses are responsible for establishing appropriate internal controls in accordance with the RMF and for monitoring the effectiveness of such controls. These processes and controls help ensure businesses act within their delegated risk-taking authority and risk limits as set out in corporate policies and the Risk Appetite Framework.
- The **second line of defence** is comprised of ERPM and Legal & Regulatory Compliance. The second line provides independent oversight, effective challenge and independent assessment of risks and risk management practices, including transaction, product and portfolio risk management decisions, processes and controls in the first line of defence. The second line establishes enterprise-wide risk management policies, infrastructure, processes, methodologies and practices that the first and second lines use to identify, assess, manage, monitor, mitigate and report risks across the enterprise.
- Corporate Audit Division is the **third line of defence**. It provides an independent assessment of the effectiveness of internal controls across the enterprise, including controls that support the risk management and governance processes.

Enterprise Culture and Conduct Framework

The Enterprise Culture and Conduct Framework sets out BMO's approach to managing and mitigating potential misconduct. Misconduct is behaviour that falls short of legal, professional, internal conduct and ethical standards. Similar to BMO's approach to other non-financial risks, this framework is supported by the enterprise-wide RMF and a focus on maintaining a strong risk culture. BMO reports on various metrics related to culture and conduct, and engages with other control frameworks across the enterprise and in all of the jurisdictions in which it operates.

Risk Limits

The bank sets risk limits so that risk-taking activities remain within the risk appetite, and these limits inform business strategies and decisions. In particular, BMO considers risk diversification, exposure to loss and risk-adjusted returns when setting limits. These limits are reviewed and approved by the Board of Directors or management committees, as appropriate, based on the level and granularity of the limits, and include:

- Credit and Counterparty Risk – limits on group and single-name exposures and material country, industry and portfolio/product segments
- Market Risk – limits on economic value and earnings exposures to stress scenarios and significant movements, as well as limits on value at risk and stress related to trading and underwriting activities
- Insurance Risk – limits on policy exposures and reinsurance arrangements
- Liquidity and Funding Risk – minimum limits on governing internal liquidity stress testing scenario, minimum regulatory liquidity ratio requirements, and maximum levels of asset pledging and wholesale funding, as well as limits related to liability diversification and credit and liquidity facility exposures
- Operational Risk – limits on specific operational risks and key risk metrics for measuring operational risks

The Board of Directors, after considering recommendations from the RRC and the RMC, annually reviews and approves key risk limits and then delegates overall authority for these limits to the CEO. The CEO in turn delegates more specific authorities to the senior executives of the operating groups (first line of defence), who are responsible for the management of risk in their respective areas, and to the CRO (second line of defence). These delegated authorities allow risk officers to set risk tolerances, approve geographic and industry sector exposure limits within defined parameters, and establish underwriting and inventory limits for trading and investment banking activities. The criteria under which more specific authorities may be delegated across the organization, as well as the requirements relating to documentation, communication and monitoring of those specific delegated authorities, are set out in corporate policies and standards.

Risk Identification, Review and Approval

Risk identification is an integral step in recognizing the key inherent risks that BMO faces, understanding the potential for loss and then acting to mitigate this potential. As noted above, a Risk Taxonomy is maintained to comprehensively identify and manage key risks, supporting the implementation of the bank's Risk Appetite Framework and assisting in identifying the primary risk categories for which stress capital consumption is estimated. The enterprise-wide and targeted (industry/portfolio-specific or ad hoc) stress testing processes have been developed to assist in identifying and evaluating these risks. Risk review and approval processes are established based on the nature, size and complexity of the risks involved. Generally, this involves a formal review and approval by either an individual or a committee that is independent of the originator. Delegated authorities and approvals by category are outlined below.

- **Portfolio transactions** – transactions are approved through risk assessment processes for all types of transactions at all levels of the enterprise, and include operating group recommendations and ERPM approval of credit risk, and transactional and position limits for market risk.
- **Structured transactions** – new structured products and transactions with significant legal and regulatory, accounting, or tax implications are reviewed by the Global Markets Risk Committee, as appropriate, and are also reviewed through the operational risk management process if they involve structural or operational complexity that may give rise to operational risk. Transactions that may give rise to reputation risk are reviewed by the Reputation Risk Management Committee.
- **Investment initiatives** – documentation of risk assessments is formalized through the investment spending approval process, and is reviewed and approved by Corporate Services based on the initiative's investment spend and inherent risk.
- **New products and services** – policies and procedures for the approval of new or modified products and services offered to customers are the responsibility of the first line of defence, including appropriate senior business leaders, and are reviewed and approved by subject matter experts and senior managers in Corporate Services, as well as by other senior management committees.

Risk Monitoring

Enterprise-level risk transparency and monitoring and associated reporting are critical components of BMO's RMF and corporate culture that allow senior management, committees and the Board of Directors to exercise their business management, risk management and oversight responsibilities at the enterprise, operating group and key legal entity levels. Internal reporting includes a synthesis of the key risks that the enterprise currently faces, along with associated metrics. BMO's reporting highlights the most significant risks, including assessments of top and emerging risks, to provide the Board of Directors, its committees and any other appropriate executive and senior management committees with timely, actionable and forward-looking risk reporting. This reporting includes supporting metrics and materials to facilitate assessment of these risks relative to risk appetite and the relevant limits established within the Risk Appetite Framework.

Risk-Based Capital Assessment

Two measures of risk-based capital are used by BMO: economic capital and advanced-approach regulatory capital. Both are aggregate measures of the risk that the bank takes on in pursuit of its financial objectives, and they enable the evaluation of returns on a risk-adjusted basis. BMO's operating model provides for the direct management of each type of risk, as well as the management of all material risks on an integrated basis. Measuring the economic profitability of transactions or portfolios involves a combination of both expected and unexpected losses to assess the extent and correlation of risk before authorizing new exposures. Both expected and unexpected loss measures for a transaction or a portfolio reflect current market conditions, the inherent risk in the position and, as appropriate, its credit quality. Risk-based capital methods and material models are reviewed at least annually and, if appropriate, are recalibrated or revalidated. The risk-based capital models provide a forward-looking estimate of the difference between the maximum potential loss in economic (or market) value and expected loss, measured over a specified time interval and using a defined confidence level.

Stress Testing

Stress testing is a key element of BMO's risk and capital management frameworks. It is integrated into the bank's enterprise and group risk appetite statements and embedded in its management processes. To evaluate risks, BMO regularly tests a range of scenarios, which vary in frequency, severity and complexity, in portfolios and businesses and across the enterprise. In addition, BMO participates in regulatory stress tests in multiple jurisdictions. Governance of the stress testing framework resides with senior management, including the Enterprise Stress Testing Committee. This committee is comprised of business, risk and finance executives, and is accountable for reviewing and challenging enterprise-wide scenarios and stress test results. Stress testing and enterprise-wide scenarios associated with the Internal Capital Adequacy Assessment Process (ICAAP), including recommendations for actions that the enterprise could take in order to manage the impact of a stress event, are established by senior management and presented to the Board of Directors. Stress testing associated with the Comprehensive Capital Analysis and Review (CCAR), which is a U.S. regulatory requirement for BMO's subsidiary BMO Financial Corp. (BFC), is similarly governed at the BFC level. Refer to the Regulatory Capital Review under Enterprise-Wide Capital Management on page 63 for a discussion of CCAR and Dodd-Frank Act Stress Test and the CET 1 capital requirement assigned to BFC by the Federal Reserve Board.

Quantitative models and qualitative approaches are utilized to assess the impact of changes in the macroeconomic environment on the income statement and balance sheet and the resilience of the bank's capital over a forecast horizon. Models utilized for stress testing are approved and governed under the Model Risk Management Framework, and are used to establish a better understanding of BMO's risks and to test its capital adequacy.

Enterprise Stress Testing

Enterprise stress testing supports BMO's ICAAP and target-setting through analysis of the potential effects of low-frequency, high-severity events on the balance sheet, earnings, and liquidity and capital positions. Scenario selection is a multi-step process that considers the enterprise's material and idiosyncratic risks and the potential impact of new or emerging risks on BMO's risk profile, as well as the macroeconomic environment. Scenarios may be defined by senior management or regulators. The economic impacts are determined by the Economics group. The Economics group does this by translating the scenarios into macroeconomic and market variables that include, but are not limited to, GDP growth, yield curve estimates, unemployment rates, real estate prices, stock index growth and changes in corporate profits. These macroeconomic variables drive stress loss models and the qualitative assessments that determine estimated stress impacts. The scenarios are used by BMO's operating, risk and finance groups to assess a broad range of financial impacts that could arise under a specific stress and the ordinary course and extraordinary actions that would be anticipated in response to that stress.

Stress test results, including mitigating actions, are benchmarked and challenged by relevant business units and senior management, including the Enterprise Stress Testing Committee.

Since the onset of the COVID-19 pandemic and the resulting uncertainty regarding the future economic outlook, BMO expanded scenario analysis to support timely evaluation of the capital forecasts generated under a range of possible pandemic scenarios of varying severity and duration in order to understand the range of potential impacts.

Targeted Portfolio and Ad Hoc Stress Testing

BMO's stress testing framework integrates stress testing at the line of business, portfolio, industry, geographic and product level and embeds it in strategy, business planning and decision-making. Targeted portfolio, industry and geographic analysis is conducted by risk management and by the lines of business to test risk appetite, limits, concentration and strategy. Ad hoc stress testing is conducted in response to changing economic or market conditions and to assess business strategies, and this year has included pandemic-related portfolio stress tests.

Climate-Related Scenario Analysis

The bank has established a climate change scenario analysis program in line with the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) recommendations. In the past year, BMO has applied scenario analysis to parts of its portfolios to study the potential impacts of physical and transition risks. BMO is also participating in Phase II of the United Nations Environment Programme Finance Initiative (UNEP-FI) to evaluate and test climate scenario analysis methodologies.

Credit and Counterparty Risk

Credit and counterparty risk is the potential for loss due to the failure of a borrower, endorser, guarantor or counterparty to repay a loan or honour another predetermined financial obligation.

Credit and counterparty risk underlies every lending activity that BMO enters into, and also arises in the holding of investment securities, transactions related to trading and other capital markets products and activities related to securitization. Credit risk is the most significant measurable risk BMO faces. Proper management of credit risk is integral to BMO's success, since failure to effectively manage credit risk could have an immediate and significant impact on earnings, financial condition and reputation.

Credit and Counterparty Risk Governance

The objective of the Credit Risk Management Framework is to ensure that all material credit risks to which the enterprise is exposed are identified, measured, managed, monitored and reported. The Risk Review Committee (RRC) has oversight of the management of all material risks that BMO faces, including the Credit Risk Management Framework. The Credit Risk Management Framework incorporates governing principles that are defined in a series of corporate policies and standards and are applied to specific operating procedures. These policies and standards are reviewed on a regular basis and modified when necessary to keep them current and consistent with BMO's risk appetite. The structure, limits (both notional and capital-based), collateral requirements, monitoring, reporting and ongoing management of credit exposures are all governed by these credit risk management principles.

Lending officers in the operating groups are responsible for recommending credit decisions based on the completion of appropriate due diligence, and they assume accountability for the related risks. With limited exceptions, credit officers in Enterprise Risk Portfolio Management (ERPM) approve all credit transactions and are accountable for providing an objective independent assessment of the lending recommendations and risks assumed by the lending officers. All of these skilled and experienced individuals in the first and second lines of defence are subject to a rigorous lending qualification process and operate in a disciplined environment with clear delegation of decision-making authority, including individually delegated lending limits, which are reviewed annually, or more frequently as needed. The Board annually reviews the Credit Risk Management Policy and delegates to the CEO discretionary lending limits for further specific delegation to senior officers. Credit decision-making is conducted at the management level appropriate to the size and risk of each transaction, in accordance with comprehensive corporate policies, standards and procedures governing the conduct of activities in which credit risk arises. Corporate Audit Division reviews and tests management processes and controls and samples credit transactions in order to assess adherence to acceptable lending standards as set out in the bank's risk appetite, as well as compliance with all applicable governing policies, standards and procedures.

For corporate and commercial obligors presenting a higher than normal risk of default, BMO has in place formal policies that outline the framework for managing such accounts and the specialized groups that manage them. BMO strives to identify borrowers in financial difficulty early, and every effort is made to bring such accounts back to an acceptable level of risk through the exercise of good business judgment and the implementation of sound and constructive workout solutions. Obligors are managed on a case-by-case basis, which involves the use of judgment by the specialized groups.

All credit risk exposures are subject to regular monitoring. Performing corporate and commercial accounts are reviewed on a regular basis, no less frequently than annually, with most subject to a set of internal monitoring triggers that, if breached, results in an interim review. The frequency of review increases in accordance with the likelihood and size of potential credit losses and deteriorating higher-risk situations are referred to specialized account management groups for closer attention, when appropriate. In addition, regular portfolio and sector reviews are carried out, including stress testing and scenario analysis based on current, emerging or prospective risks, such as the COVID-19 pandemic. Reporting is provided at least quarterly, and more frequently where appropriate, to RRC and senior management committees in order to keep them informed of credit risk developments in the bank's portfolios, including changes in credit risk concentrations, watchlist accounts, impaired loans, provisions for credit losses, negative credit migration and significant emerging credit risk issues. This supports RRC and senior management committees in giving effect to any measures they may decide to take.

Counterparty Credit Risk (CCR) creates a bilateral risk of loss because the market value of a transaction can be positive or negative for either counterparty. CCR exposures are subject to the credit oversight, limit framework and approval process outlined above. However, given the nature of the risk, CCR exposures are monitored under the market risk framework. In order to reduce BMO's exposure to CCR, exposures are often collateralized, and trades may be cleared through a regulated central counterparty (CCP), which reduces overall systemic risk by standing between counterparties, maximizing netting across trades and insulating counterparties from each other's defaults. CCPs mitigate default risk of any member through the use of margin requirements (both initial and variation) and a default management process, including a default fund and other resources. BMO's exposures to CCPs are subject to the same credit risk governance, monitoring and rating framework it applies to all other corporate accounts.

Credit and Counterparty Risk Management

Collateral Management

Collateral is used for credit risk mitigation purposes to minimize losses that would otherwise be incurred in the event of a default. Depending on the type of borrower or counterparty, the assets available and the structure and term of the credit obligations, collateral can take various forms. For corporate and commercial borrowers, collateral can take the form of pledges of the assets of a business, such as accounts receivable, inventory, machinery or real estate, or personal assets pledged in support of guarantees. For trading counterparties, BMO may enter into legally enforceable netting agreements for on-balance sheet credit exposures, when possible. In the securities financing transaction business (including repurchase agreements and securities lending), the bank takes eligible financial collateral that it controls and can readily liquidate.

Collateral for BMO's derivatives trading counterparty exposures is primarily comprised of cash and eligible liquid securities that are monitored and revalued on a daily basis. Collateral is obtained under the contractual terms of standardized industry documentation. With limited exceptions, the bank utilizes the International Swaps and Derivatives Association Inc. Master Agreement, frequently with a Credit Support Annex, to document its collateralized trading relationships with counterparties for over-the-counter (OTC) derivatives that are not centrally cleared.

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Credit Support Annexes entitle a party to demand a transfer of collateral (or other credit support) when its OTC derivatives exposure to the other party exceeds an agreed threshold. Collateral transferred can include variation margin or initial and variation margin. Credit Support Annexes contain, among other measures, provisions setting out acceptable types of collateral and a method for their valuation (discounts are often applied to the market values), as well as thresholds, whether or not the collateral can be re-pledged by the recipient and how interest is to be calculated.

Many G20 jurisdictions continue to implement new regulations that require certain counterparties with significant OTC derivatives exposures to post or collect prescribed types and amounts of collateral for uncleared OTC derivatives transactions. For additional discussion, refer to Derivatives Reform on page 111.

To document the bank's contractual securities financing relationships with its counterparties, BMO utilizes master repurchase agreements for repurchase transactions, and master securities lending agreements for securities lending transactions.

On a periodic basis, collateral is subject to revaluation specific to asset type. For loans, the value of collateral is initially established at the time of origination, and the frequency of revaluation is dependent on the type of collateral. For commercial real estate collateral, a full external appraisal of the property is typically obtained at the time of loan origination, unless the exposure is below a specified threshold amount, in which case an internal evaluation and a site inspection are conducted. Internal evaluations may consider property tax assessments, purchase prices, real estate listings or realtor opinions. The case for an updated appraisal is reviewed annually, with consideration given to the borrower risk rating, existing tenants and lease contracts, as well as current market conditions.

In the event a loan is classified as impaired, and depending on its size, a current external appraisal, evaluation or restricted use appraisal is obtained and updated every twelve months while the loan is classified as impaired. In Canada, for residential real estate that has a loan-to-value (LTV) ratio of less than 80%, an external property appraisal is routinely obtained at the time of loan origination. BMO may use an external service provided by Canada Mortgage and Housing Corporation or an automated valuation model provided by a third-party appraisal management company to assist with determining either the current value of a property or the need for a full property appraisal.

For insured mortgages in Canada with a high LTV ratio (greater than 80%), the default insurer is responsible for confirming the lending value.

Portfolio Management and Concentrations of Credit and Counterparty Risk

BMO's credit risk governance policies require an acceptable level of diversification to help ensure it avoids undue concentrations of credit risk. Concentrations of credit risk may exist if a number of clients are engaged in similar activities, are located in the same geographic region or have similar economic characteristics such that their ability to meet contractual obligations could be similarly affected by changes in economic, political or other conditions. Limits may be specified for several portfolio dimensions, including industry, specialty segment (e.g., hedge funds and leveraged lending), country, product and single-name concentrations. The diversification of the bank's credit exposure may be supplemented by the purchase or sale of credit protection through guarantees, insurance or credit default swaps.

BMO's credit assets consist of a well-diversified portfolio representing millions of clients, the majority of them individual consumers and small to medium-sized businesses. From an industry viewpoint, on a drawn loans and commitments basis, the bank's most significant exposure as at October 31, 2020, was to individual consumers, comprising $259,289 million ($249,731 million in 2019).

Wrong-Way Risk

Wrong-way risk occurs when BMO's exposure to a counterparty or the magnitude of its potential loss is highly correlated with the counterparty's probability of default. Specific wrong-way risk arises when the credit quality of the counterparty and the market risk factors affecting collateral or other risk mitigants display a high correlation, and general wrong-way risk arises when the credit quality of the counterparty, for non-specific reasons, is highly correlated with macroeconomic or other factors that affect the value of the risk mitigant. BMO's procedures require that specific wrong-way risk be identified in transactions and accounted for in the assessment of risk, including any elevated measure of exposure.

Credit and Counterparty Risk Measurement

BMO quantifies credit risk at both the individual borrower or counterparty level and the portfolio level. In order to limit earnings volatility, manage expected credit losses and minimize unexpected losses, credit risk is assessed and measured using the following risk-based parameters:

- **Exposure at Default (EAD)** represents an estimate of the outstanding amount of a credit exposure at the time a default may occur.
- **Loss Given Default (LGD)** is a measure of BMO's economic loss, such as the amount that may not be recovered in the event of a default, presented as a proportion of the exposure at default.
- **Probability of Default (PD)** represents the likelihood that a borrower or counterparty will go into default over a one-year time horizon.
- **Expected Loss (EL)** is a measure representing the loss that is expected to occur in the normal course of business in a given period of time. EL is calculated as a function of EAD, LGD and PD.

Under Basel III, OSFI permits three approaches for the measurement of credit risk: Standardized, Foundation Internal Ratings Based and Advanced Internal Ratings Based (AIRB). BMO primarily uses the AIRB Approach to determine credit RWA in its portfolios, including portfolios of the bank's subsidiary BMO Financial Corp. Exposures under AIRB capital treatment account for 94% of total EAD of its Wholesale and Retail portfolios, and the remaining exposures are under the Standardized Approach. Waivers and exemptions to existing AIRB models are subject to OSFI's approval. The Standardized Approach is currently being used for regulatory capital calculations related to the acquired Marshall & Isley Corporation and BMO Transportation Finance portfolios, and for certain other exposures that are considered to be immaterial. BMO continues to transition all material exposures in these portfolios to the AIRB Approach. For securitization exposures, the bank applies the Basel hierarchy of approaches, including the Securitization Internal Ratings-based Approach and the External Ratings-based Approach, as well as the Standardized Approach.

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BMO's regulatory capital and economic capital frameworks both use EAD to assess credit and counterparty risk. Exposures are classified as follows:

- Drawn exposures include loans, acceptances, deposits with regulated financial institutions, and certain securities. For off-balance sheet amounts and undrawn amounts, EAD includes an estimate of any further amounts that may be drawn at the time of default.
- Undrawn commitments cover all unutilized authorizations associated with the drawn loans noted above, including those which are unconditionally cancellable. EAD for undrawn commitments is model-generated, based on internal empirical data.
- OTC derivatives are those in proprietary accounts that attract credit risk in addition to market risk. EAD for OTC derivatives is calculated inclusive of collateral.
- Other off-balance sheet exposures include items such as guarantees, standby letters of credit and documentary credits. EAD for other off-balance sheet items is based on management's best estimate.
- Repo-style transactions include repos, reverse repos and securities lending transactions, which represent both asset and liability exposures. EAD for repo-style transactions is the calculated exposure, net of collateral.
- Capital is calculated based on exposures that, where applicable, have been redistributed to a more favourable PD band or LGD measure, or a different Basel asset class, as a result of the application of credit risk mitigation and a consideration of credit risk mitigants, including collateral and netting.

Total credit exposures at default by industry sector, as at October 31, 2020 and 2019, based on the Basel III classifications, are as follows:

(Canadian $ in millions)	Drawn (3)		Commitments (undrawn) (3)		OTC derivatives (4)		Other off-balance sheet items (3)		Repo-style transactions (4)(5)		Total (1)	
	2020	2019	**2020**	2019	**2020**	2019	**2020**	2019	**2020**	2019	**2020**	2019
Financial institutions	**142,254**	117,959	**24,302**	24,010	**19,611**	14,849	**6,520**	6,400	**22,866**	17,486	**215,553**	180,704
Governments	**78,506**	58,050	**1,579**	1,665	**4,892**	4,357	**590**	894	**2,624**	1,254	**88,191**	66,220
Manufacturing	**27,789**	26,265	**16,696**	16,581	**1,741**	1,340	**1,714**	1,494	**–**	–	**47,940**	45,680
Real estate	**40,202**	37,146	**9,735**	8,948	**1,383**	845	**973**	861	**–**	–	**52,293**	47,800
Retail trade	**19,835**	22,529	**4,809**	3,974	**487**	239	**604**	601	**–**	–	**25,735**	27,343
Service industries	**47,468**	46,610	**15,443**	13,304	**2,033**	1,252	**3,116**	2,996	**–**	–	**68,060**	64,162
Wholesale trade	**15,295**	16,822	**5,455**	5,273	**423**	281	**600**	564	**–**	–	**21,773**	22,940
Oil and gas	**12,990**	13,406	**11,675**	11,302	**6,099**	3,637	**1,900**	1,802	**–**	–	**32,664**	30,147
Individual	**206,370**	198,205	**52,829**	51,432	**–**	–	**90**	94	**–**	–	**259,289**	249,731
Others (2)	**41,984**	40,551	**22,216**	19,814	**1,914**	1,335	**7,992**	6,866	**–**	–	**74,106**	68,566
Total exposure at default	**632,693**	577,543	**164,739**	156,303	**38,583**	28,135	**24,099**	22,572	**25,490**	18,740	**885,604**	803,293

(1) Credit exposure excluding equity, securitization and other assets such as non-significant investments, goodwill, deferred tax asset and intangibles.
(2) Includes industries having a total exposure of less than 2%.
(3) Represents gross credit exposures without taking into account any collateral.
(4) Credit exposure at default is inclusive of collateral.
(5) Impact of collateral on the credit exposure for repo-style transactions is $205,212 million ($192,796 million in 2019).

Certain comparative figures have been reclassified to conform with the current year's presentation.

Risk Rating Systems

BMO's risk rating systems are designed to assess and measure the risk of any exposure.

Credit risk-based parameters are reviewed, validated and monitored regularly. The monitoring is on a quarterly basis for both the wholesale and retail models. Refer to page 109 for a discussion of model risk mitigation processes.

Retail (Consumer and Small Business)

The retail portfolios are comprised of a diversified group of individual customer accounts and include residential mortgages, personal loans, credit cards, auto loans and small business loans. These loans are managed in pools of homogeneous risk exposures for risk rating purposes. Decision support systems are developed using established statistical techniques and expert systems for underwriting and monitoring purposes. Adjudication models, behavioural scorecards, decision trees and expert knowledge are combined to generate optimal credit decisions in a centralized and automated environment.

The retail risk rating system assesses risk based on individual loan characteristics. BMO has a range of internally developed PD, LGD and EAD models for each of the major retail portfolios. The major product lines within each of the retail risk areas are modelled separately, so that the risk-based parameters capture the distinct nature of each product. The models, in general, are designed based on internal data recorded over a period of more than seven years, and adjustments are made at the parameter level to account for any uncertainty. The retail parameters are tested and calibrated on an annual basis, if required, to incorporate additional data points in the parameter estimation process, ensuring that the most recent experience is incorporated. BMO's largest retail portfolios are the Canadian mortgage, Canadian home equity line of credit and Canadian retail credit card portfolios.

A PD estimate is assigned to each homogeneous pool to reflect the long-run average of one-year default rates over the economic cycle.

An LGD estimate is calculated by discounting future recovery payments to the time of default, including collection costs.

An EAD estimate is calculated as the balance at default divided by the credit limit at the beginning of the year. For non-revolving products, such as mortgages, EAD is equal to 100% of the current outstanding balance and has no undrawn component.

For capital purposes, the LGD and EAD estimates are calibrated to reflect a downturn scenario. The PD, LGD and EAD estimates are updated annually and recalibrated as required, by comparing the estimates to observed historical experience.

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Retail Credit Probability of Default Bands by Risk Rating

Risk profile	Probability of default band
Exceptionally low	≤ 0.05%
Very low	> 0.05% to 0.20%
Low	> 0.20% to 0.75%
Medium	> 0.75% to 7.00%
High	> 7.00% to 99.99%
Default	100%

Wholesale (Corporate, Commercial, Bank and Sovereign)

Within BMO's wholesale portfolios, an enterprise-wide risk rating framework is utilized that is applied to all sovereign, bank, corporate and commercial counterparties. One key element of this framework is the assignment of appropriate borrower or counterparty risk ratings (BRRs). BMO has a range of internally designed general and sector-specific BRR models, as well as portfolio-level LGD and EAD models for each of the corporate, commercial, bank and sovereign portfolios.

The BRR models capture the key financial and non-financial characteristics of the borrowers and generate a borrower-level rating that reflects the rank ordering of the default risk. The models are primarily designed by using internal data, supplemented with judgment as necessary, for low default portfolios.

BRRs are assessed and assigned at the time of loan origination, and reassessed when borrowers request changes to credit facilities or when events trigger a review, such as an external rating change or covenant breach. BRRs are reviewed no less frequently than annually, and more frequent reviews are conducted for borrowers with less acceptable risk ratings. The bank also performed proactive rating reviews to assess the impact of the COVID-19 pandemic on identified risk sectors and its borrowers. The assigned ratings are mapped to a PD over a one-year time horizon. As a borrower migrates between risk ratings, the PD associated with the borrower changes.

BMO employs a master scale with 14 BRRs above default, and PDs are assigned to each rating within an asset class to reflect the long-run average of one-year default rates over the economic cycle, supplemented by external benchmarking, as necessary.

An LGD estimate captures the priority of claim, collateral, product and sector characteristics of the credit facility extended to a borrower. LGD estimates are at the facility level.

An EAD estimate captures the facility type, sector and facility utilization rate characteristics of the credit facility extended to a borrower. EAD estimates are at the facility level. The EAD credit conversion factor is calculated for eligible facilities by comparing usage amounts at the time of default and one year prior to default. The authorization and the drawn amount, one year prior to default, are used to split each facility into its respective drawn and undrawn portion, where applicable.

LGD and EAD models have been developed for each asset class using internal data recorded over a period of more than seven years, which includes at least one full economic cycle, and results are benchmarked using external data, when necessary. For capital purposes, the parameters are calibrated to reflect a downturn scenario. The PD, LGD and EAD estimates are updated annually and recalibrated as required, by comparing the estimates to observed historical experience.

As demonstrated in the table below, BMO's internal risk rating system corresponds in a logical manner to those of external rating agencies.

Wholesale Borrower Risk Rating Scale

BMO rating	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent
Acceptable		
I-1 to I-7	Aaa to Baa3	AAA to BBB-
S-1 to S-4	Ba1 to B1	BB+ to B+
Watchlist		
P-1 to P-3	B2 to Ca	B to CC
Default / Impaired		
T1, D-1 to D-4	C	C to D

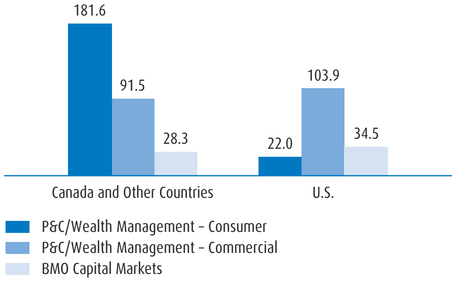
Credit Quality Information

Portfolio Review

Total enterprise-wide outstanding credit risk exposures were $885.6 billion as at October 31, 2020, comprised of $474.3 billion in Canada, $354.2 billion in the United States and $57.1 billion in other jurisdictions. This represents an increase of $82.3 billion or 10% from the prior year (1).

BMO's loan book continues to be well-diversified by industry and geographic region. Gross loans and acceptances increased $10.3 billion or 2% from the prior year to $461.8 billion as at October 31, 2020. The geographic mix of BMO's Canadian and U.S. portfolios represented 62.9% and 34.7% of total loans, respectively, compared with 62.4% and 35.2% in 2019. The loan portfolio is well-diversified, with the consumer loan portfolio representing 44.4% of the total portfolio, the same as in 2019, and business and government loans representing 55.6% of the total portfolio, the same as in 2019.

Loans by Geography and Operating Group
($ billions)



(1) Certain comparative figures have been reclassified to conform with the current year's presentation.

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Loan Maturities and Interest Rate Sensitivity

The following table presents gross loans and acceptances by contractual maturity and by country of ultimate risk:

(Canadian $ in millions)	1 year or less		Over 1 year to 5 years		Over 5 years		Total	
	2020	2019	**2020**	2019	**2020**	2019	**2020**	2019
Canada								
Consumer	**52,771**	58,580	**125,492**	113,162	**4,402**	4,432	**182,665**	176,174
Commercial and corporate (excluding real estate)	**68,130**	65,534	**18,254**	16,591	**2,306**	1,973	**88,690**	84,098
Commercial real estate	**7,397**	7,928	**10,142**	11,647	**1,275**	2,298	**18,814**	21,873
United States	**31,587**	37,867	**81,717**	87,443	**47,052**	33,423	**160,356**	158,733
Other countries	**10,264**	9,214	**631**	996	**380**	449	**11,275**	10,659
Total	**170,149**	179,123	**236,236**	229,839	**55,415**	42,575	**461,800**	451,537

The following table presents net loans and acceptances by interest rate sensitivity:

(Canadian $ in millions)	**2020**	2019
Fixed rate	**237,596**	217,002
Floating rate	**207,408**	209,092
Non-interest sensitive (1)	**13,493**	23,593
Total	**458,497**	449,687

(1) Non-interest sensitive is comprised of customers' liability under acceptances.

Further details on BMO's loan book, including detailed breakdowns by industry and geographic region, can be found in Tables 7 to 15 on pages 130 to 136. Details of the bank's credit exposures are presented in Note 4 on page 159 of the consolidated financial statements.

Impact of COVID-19 on Credit Portfolios

The COVID-19 pandemic has had a significant impact on the economy and the bank's consumer and wholesale clients, and has resulted in higher provisions for credit losses in the fiscal year. In the wholesale portfolio specifically, certain industries have been more directly impacted by the pandemic.

Throughout the year, the bank continued to support its customers through this challenging environment, working closely with governments and agencies to implement programs to reduce the financial hardship caused by the pandemic, including payment deferrals and lending facilities designed to help individuals and businesses to withstand stress and recover financially. Details on the payment deferral programs can be found on page 25.

Real Estate Secured Lending

Residential mortgage and home equity line of credit (HELOC) exposures continue to be of interest in the current environment. BMO regularly performs stress testing on its residential mortgage and HELOC portfolios to evaluate the potential effects of high-impact events. These stress tests incorporate scenarios ranging from moderately to severely adverse. The credit losses forecast in these tests vary with the severity of the scenario and are considered to be manageable.

Leveraged Finance

Leveraged finance loans are defined by BMO as loans and mezzanine financing provided to private equity-owned businesses for which its assessment indicates a higher level of credit risk. BMO has some exposure to leveraged finance loans, which represented 1.7% of total assets, with $16.4 billion outstanding as at October 31, 2020 (1.8% and $15.1 billion, respectively, in 2019). Of this amount, 26% of leveraged finance loans, with $4.3 billion outstanding as at October 31, 2020 (27% and $4.1 billion, respectively, in 2019), are well secured by high-quality assets. In addition, $786 million or 4.8% of all leveraged finance loans were classified as impaired as at October 31, 2020 ($207 million or 1.4% in 2019).

Provision for Credit Losses (PCL)

Total PCL was $2,953 million in 2020, compared with $872 million in 2019, reflecting the impact of the pandemic. Detailed discussions of PCL, including historical PCL trends, are provided on page 31, in Table 15 on page 136 and in Note 4 on page 159 of the consolidated financial statements.

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Gross Impaired Loans (GIL)

Total GIL was $3,638 million in 2020, an increase of 38% from $2,629 million in 2019. The largest increases in impaired loans were recorded in retail trade and service industries. GIL as a percentage of gross loans and acceptances was 0.79% in 2020, compared with 0.58% in the prior year.

Factors contributing to the change in GIL are outlined in the table below. Loans classified as impaired during the year increased to $4,649 million from $2,686 million in 2019, reflecting higher impaired loan formations in the retail trade, service, oil and gas and manufacturing industries. On a geographic basis, the U.S. accounted for more than half of impaired loan formations, comprising 59% of total formations in 2020, compared with 55% in 2019. Detailed breakdowns of impaired loans by geographic region and industry can be found in Table 11 on page 132 and in Note 4 on page 159 of the consolidated financial statements.

Changes in Gross Impaired Loans (1) and Acceptances

(Canadian $ in millions, except as noted) For the year ended October 31	**2020**	2019	2018
GIL, beginning of year	**2,629**	1,936	2,220
Classified as impaired during the year	**4,649**	2,686	2,078
Transferred to not impaired during the year	**(719)**	(604)	(708)
Net repayments	**(1,728)**	(800)	(1,051)
Amounts written off	**(1,047)**	(528)	(618)
Recoveries of loans and advances previously written off	**–**	–	–
Disposals of loans	**(147)**	(57)	(11)
Foreign exchange and other movements	**1**	(4)	26
GIL, end of year	**3,638**	2,629	1,936
GIL as a % of gross loans and acceptances	**0.79**	0.58	0.48

(1) GIL excludes purchased credit impaired loans.

Allowance for Credit Losses

BMO employs a disciplined approach to provisioning and loan loss evaluation across all loan portfolios, with the prompt identification of problem loans being a key risk management objective. BMO maintains both an allowance on impaired loans and an allowance on performing loans, in accordance with IFRS. An allowance on performing loans is maintained to cover impairment in the existing portfolio for loans that have not yet been individually identified as impaired. The bank's approach to establishing and maintaining the allowance on performing loans is based on the requirements of IFRS, considering the guideline issued by its regulator, OSFI. Under IFRS 9 expected credit loss (ECL) methodology, an allowance is recorded for ECL on financial assets regardless of whether there has been an actual loss event. The bank recognizes a loss allowance at an amount generally based on 12 months of ECL, if the credit risk at the reporting date has not increased significantly since initial recognition (Stage 1). BMO will record ECL over the remaining life of performing financial assets that are considered to have experienced a significant increase in credit risk (Stage 2).

ECL is calculated on a probability-weighted basis, based on three different economic scenarios, and is a function of PD, EAD and LGD. The timing of the loss is also considered, and ECL is estimated by incorporating forward-looking economic information and by using experienced credit judgment to reflect factors not captured in ECL models. An allowance on impaired loans is maintained to reduce the carrying value of individually identified impaired loans (Stage 3) to the expected recoverable amount.

BMO maintains an allowance for credit losses (ACL) at a level that it considers appropriate to absorb credit-related losses. As at October 31, 2020, the ACL was $3,814 million, an increase of $1,720 million from the prior year, reflecting higher allowances on both performing loans and impaired loans. The allowance on impaired loans was $739 million as at October 31, 2020, and the allowance on performing loans was $3,075 million. These amounts include an allowance on impaired loans of $12 million and an allowance on performing loans of $499 million related to undrawn commitments and letters of credit that are considered other credit instruments and recorded in other liabilities. The allowance on impaired loans increased $254 million from $485 million in the prior year. BMO's coverage ratio remains adequate, with ACL on impaired loans as a percentage of GIL of 20.0%, compared with 17.6% in 2019. This ratio can change quarter-over-quarter due to variability in the write-down of loans and the related allowance. The allowance on performing loans increased $1,466 million to $3,075 million from $1,609 million in the prior year, primarily driven by the impact of COVID-19 on the macroeconomic outlook, and the impact of a more difficult and uncertain environment on credit conditions, as well as a more severe adverse scenario and increased adverse scenario weight.

Further details on the continuity in ACL by each product type can be found in Tables 12 and 13 on pages 134 and 135, and in Note 4 on page 159 of the consolidated financial statements.

European Exposures

BMO's geographic exposures are subject to a country risk management framework that incorporates economic and political assessments and management of exposures within limits based on product, entity and country of ultimate risk. The bank's exposure to European countries as at October 31, 2020, including Greece, Ireland, Italy, Portugal and Spain (GIIPS), is set out in the tables that follow.

The table below outlines total net portfolio exposures for funded lending, securities (including credit default swap (CDS) activity), repo-style transactions and derivatives. Funded lending is detailed by counterparty type, as well as by total commitments compared with the funded amount, in the table on page 91.

European Exposure by Country and Counterparty (1)

(Canadian $ in millions) As at October 31, 2020	Funded lending (2)	Securities (3)(4)				Repo-style transactions and derivatives (5)(6)				Total net exposure
Country	Total	Bank	Corporate	Sovereign	Total	Bank	Corporate	Sovereign	Total	
GIIPS										
Greece	–	–	–	–	–	–	–	–	–	–
Ireland (7)	474	–	–	–	–	–	225	–	225	699
Italy	15	–	–	–	–	–	–	–	–	15
Portugal	–	–	–	–	–	–	–	–	–	–
Spain	122	53	1	–	54	8	–	3	11	187
Total – GIIPS	**611**	**53**	**1**	**–**	**54**	**8**	**225**	**3**	**236**	**901**
Eurozone (excluding GIIPS)										
France	240	21	–	500	521	20	20	5	45	806
Germany	391	433	75	326	834	75	5	–	80	1,305
Netherlands	374	490	–	–	490	13	217	–	230	1,094
Other (8)	324	–	2	212	214	3	64	5	72	610
Total – Eurozone (excluding GIIPS)	**1,329**	**944**	**77**	**1,038**	**2,059**	**111**	**306**	**10**	**427**	**3,815**
Rest of Europe										
Norway	638	142	–	–	142	–	12	12	24	804
Sweden	16	280	–	323	603	5	–	–	5	624
Switzerland	505	–	–	–	–	189	37	–	226	731
United Kingdom	1,959	85	710	6,747	7,542	566	543	46	1,155	10,656
Other (8)	67	115	–	142	257	19	1	–	20	344
Total – Rest of Europe	**3,185**	**622**	**710**	**7,212**	**8,544**	**779**	**593**	**58**	**1,430**	**13,159**
Total – All of Europe (9)	**5,125**	**1,619**	**788**	**8,250**	**10,657**	**898**	**1,124**	**71**	**2,093**	**17,875**

As at October 31, 2019	Funded lending (2)	Securities (3)				Repo-style transactions and derivatives (5)(6)				Total net exposure
Country	Total	Bank	Corporate	Sovereign	Total	Bank	Corporate	Sovereign	Total	
Total – GIIPS	499	–	–	–	–	7	240	–	247	746
Total – Eurozone (excluding GIIPS)	1,346	1,528	52	1,032	2,612	45	175	4	224	4,182
Total – Rest of Europe	2,513	671	401	7,877	8,949	147	260	35	442	11,904
Total – All of Europe (9)	4,358	2,199	453	8,909	11,561	199	675	39	913	16,832

(1) BMO has the following indirect exposures to Europe as at October 31, 2020:
- Collateral of €936 million to support trading activity in securities (€40 million from GIIPS) and €82 million of cash collateral held.
- Guarantees of $13.8 billion ($221 million to GIIPS).

(2) Funded lending includes loans.
(3) Securities include cash products, insurance investments and traded credit.
(4) BMO's total net notional CDS exposure (embedded as part of the securities exposure in this table) to Europe was $147 million, with no net single-name* CDS exposure to GIIPS countries as at October 31, 2020 (*includes a net position of $108 million (bought protection) on a CDS Index, of which 13% is comprised of GIIPS domiciled entities).
(5) Repo-style transactions are primarily with bank counterparties for which BMO holds collateral ($37.6 billion for Europe as at October 31, 2020).
(6) Derivatives amounts are marked-to-market, incorporating transaction netting where master netting agreements with counterparties have been entered into, and collateral offsets for counterparties where a Credit Support Annex is in effect.
(7) Does not include Irish subsidiary reserves the bank is required to maintain with the Irish Central Bank of $129 million as at October 31, 2020.
(8) Other Eurozone exposure includes 5 countries with less than $300 million net exposure. Other European exposure is distributed across 3 countries as at October 31, 2020.
(9) Of BMO's total net direct exposure to Europe, approximately 95% was to counterparties in countries with a rating of Aa2/AAA from at least one of Moody's or S&P.

European Lending Exposure by Country and Counterparty (9)

(Canadian $ in millions) Country	Funded lending as at October 31, 2020			Lending (2) As at October 31, 2020		As at October 31, 2019	
	Bank	Corporate	Sovereign	Commitments	Funded	Commitments	Funded
GIIPS							
Greece	–	–	–	–	–	–	–
Ireland (7)	2	472	–	531	474	343	323
Italy	15	–	–	15	15	14	14
Portugal	–	–	–	–	–	–	–
Spain	122	–	–	206	122	237	162
Total – GIIPS	**139**	**472**	**–**	**752**	**611**	**594**	**499**
Eurozone (excluding GIIPS)							
France	186	54	–	386	240	376	244
Germany	176	215	–	607	391	707	515
Netherlands	88	286	–	397	374	377	354
Other (8)	106	218	–	403	324	396	233
Total – Eurozone (excluding GIIPS)	**556**	**773**	**–**	**1,793**	**1,329**	**1,856**	**1,346**
Rest of Europe							
Norway	34	604	–	1,158	638	1,100	581
Sweden	8	8	–	117	16	69	–
Switzerland	12	493	–	602	505	–	–
United Kingdom	5	1,954	–	4,809	1,959	2,671	1,677
Other (8)	–	67	–	100	67	475	255
Total – Rest of Europe	**59**	**3,126**	**–**	**6,786**	**3,185**	**4,315**	**2,513**
Total – All of Europe (9)	**754**	**4,371**	**–**	**9,331**	**5,125**	**6,765**	**4,358**

Refer to footnotes in the table on page 90.

Derivative Transactions

The following table presents the notional amounts of BMO's over-the-counter (OTC) derivative contracts, comprised of those which are centrally cleared and settled through a designated clearing house or central counterparty (CCP) and those which are non-centrally cleared.

CCPs are established under the supervision of central banks or other similar regulatory authorities and, as financial market infrastructure, must satisfy certain financial resilience requirements. Generally speaking, to centrally clear, BMO acquires a membership in the CCP and, in addition to providing collateral to protect the CCP against risk related to BMO, the bank is exposed to risk as a member for BMO's contribution to a default fund, and may be called on to make additional contributions, or to provide other support in the event another member defaults.

The notional amounts of BMO's derivatives represent the amount to which a rate or price is applied in order to calculate the amount of cash that must be exchanged under each contract. Notional amounts do not represent assets or liabilities and therefore are not recorded in the Consolidated Balance Sheet. The fair values of OTC derivative contracts are recorded in the Consolidated Balance Sheet.

Over-the-Counter Derivative Contracts (Notional amounts)

(Canadian $ in millions)	Non-centrally cleared		Centrally cleared		Total	
As at October 31	**2020**	2019	**2020**	2019	**2020**	2019
Interest Rate Contracts						
Swaps	**442,727**	467,428	**3,892,564**	3,928,844	**4,335,291**	4,396,272
Forward rate agreements	**2,890**	7,106	**514,442**	484,331	**517,332**	491,437
Purchased options	**57,833**	42,084	**–**	–	**57,833**	42,084
Written options	**64,728**	49,487	**–**	–	**64,728**	49,487
Total interest rate contracts	**568,178**	566,105	**4,407,006**	4,413,175	**4,975,184**	4,979,280
Foreign Exchange Contracts						
Cross-currency swaps	**96,813**	97,507	**–**	–	**96,813**	97,507
Cross-currency interest rate swaps	**540,688**	507,221	**–**	–	**540,688**	507,221
Forward foreign exchange contracts	**449,701**	415,367	**44,939**	38,344	**494,640**	453,711
Purchased options	**38,985**	37,306	**82**	92	**39,067**	37,398
Written options	**41,286**	42,035	**41**	39	**41,327**	42,074
Total foreign exchange contracts	**1,167,473**	1,099,436	**45,062**	38,475	**1,212,535**	1,137,911
Commodity Contracts						
Swaps	**30,613**	24,722	**–**	–	**30,613**	24,722
Purchased options	**5,728**	6,608	**–**	–	**5,728**	6,608
Written options	**3,704**	4,371	**–**	–	**3,704**	4,371
Total commodity contracts	**40,045**	35,701	**–**	–	**40,045**	35,701
Equity Contracts	**60,502**	51,226	**2**	–	**60,504**	51,226
Credit Default Swaps						
Purchased	**1,386**	973	**6,021**	4,388	**7,407**	5,361
Written	**510**	129	**1,285**	1,939	**1,795**	2,068
Total credit default swaps	**1,896**	1,102	**7,306**	6,327	**9,202**	7,429
Total	**1,838,094**	1,753,570	**4,459,376**	4,457,977	**6,297,470**	6,211,547

Market Risk

Market risk is the potential for adverse changes in the value of BMO's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity and commodity prices and their implied volatilities, and credit spreads, and includes the risk of credit migration and default in BMO's trading book.

Market risk arises from BMO's trading and underwriting activities, as well as its structural banking activities. The magnitude and importance of these activities to the enterprise, along with the potential volatility of market variables, call for diligent governance and a robust market risk management framework that ensures effective identification, measurement, reporting and control of market risk exposures.

Trading and Underwriting Market Risk Governance

BMO's market risk-taking activities are subject to a comprehensive governance framework. The RRC provides oversight of the management of market risk on behalf of the Board of Directors and approves limits governing market risk exposures that are consistent with BMO's risk appetite. The RMC regularly reviews and discusses significant market risk exposures and positions, and provides ongoing senior management oversight of BMO's risk-taking activities. Both of these committees are kept apprised of specific market risk exposures and other factors that could expose BMO to unusual, unexpected or unquantified risks associated with market exposures, as well as other current and emerging market risks. In addition, all businesses and individuals authorized to conduct trading and underwriting activities on behalf of BMO are required to work within BMO's risk governance framework and, as part of their first-line-of-defence responsibilities, they must adhere to all relevant corporate policies, standards and procedures and maintain and manage market risk exposures within specified limits and risk tolerances. In support of BMO's risk governance framework, the market risk management framework is comprised of the processes, infrastructure and supporting documentation which, together, ensure that the bank's market risk exposures are appropriately identified, accurately measured, and independently monitored and controlled on an ongoing basis.

Trading and Underwriting Market Risk

BMO's trading and underwriting businesses give rise to market risk associated with buying and selling financial products in the course of meeting customer requirements, including market making and related financing activities, and assisting clients to raise funds by way of securities issuance.

Identification and Measurement of Trading and Underwriting Market Risk

As the first step in the management of market risk, thorough assessment processes are in place to identify market risk exposures associated with both new products and the evolving risk profile of existing products, including on- and off-balance sheet positions, trading and non-trading positions, and market risk exposures arising from the domestic and foreign operations of the operating groups.

Reflecting the multi-dimensional nature of market risk, various metrics and techniques are then employed to measure identified market risk exposures. These metrics primarily include Value at Risk, Stressed Value at Risk, and regulatory and economic capital attribution, as well as stress testing. Other techniques include the analysis of the sensitivity of the trading and underwriting portfolios to various market risk factors and the review of position concentrations, notional values and trading losses.

Value at Risk (VaR) measures the maximum loss likely to be experienced in the trading and underwriting portfolios, measured at a 99% confidence level over a one-day holding period. VaR is calculated for specific classes of risk in BMO's trading and underwriting activities related to interest rates, foreign exchange rates, credit spreads, equity and commodity prices and their implied volatilities.

Stressed Value at Risk (SVaR) measures the maximum loss likely to be experienced in the trading and underwriting portfolios, measured at a 99% confidence level over a one-day holding period, with model inputs calibrated to historical data from a period of significant financial stress. SVaR is calculated for specific classes of risk in BMO's trading and underwriting activities related to interest rates, foreign exchange rates, credit spreads, equity and commodity prices and their implied volatilities.

Incremental Risk Charge (IRC) complements the VaR and SVaR metrics and represents an estimate of the default and migration risks of non-securitization products held in the trading book with exposure to interest rate risk, measured over a one-year horizon at a 99.9% confidence level.

A consistent set of VaR and SVaR models is used for both management and regulatory purposes across all BMO Financial Group legal entities in which trading or underwriting activities are conducted.

BMO uses a variety of methods to verify the integrity of its risk models, including the application of back-testing against hypothetical losses and approval by an independent model validation team. This testing is aligned with defined regulatory expectations, and its results confirm the reliability of the models. The volatility data and correlations that underpin the models are updated frequently, so that risk metrics reflect current conditions. Selection of the period of significant financial stress for SVaR incorporates historical periods, inclusive of the 2020 COVID-19 pandemic.

Probabilistic stress testing and scenario analysis are used daily to determine the potential impact of plausible but severe market changes on the bank's portfolios. In addition, historical event stresses are tested on a weekly basis, including tests of scenarios such as the stock market crash of 1987 and the collapse of Lehman Brothers in 2008. Targeted analyses of risks and portfolios, along with other ad hoc analyses, are also conducted to determine sensitivity to hypothetical, low-frequency, high-severity scenarios. Scenarios are amended, added or removed to evolve the bank's stress testing, such as the volatility in 2020 from COVID-19, and the results are reported to the lines of business, the RMC and the RRC on a regular basis.

VaR, SVaR, IRC and stress testing should not be viewed as definitive predictors of the maximum amount of losses that could occur in any one day, as their results are based on models and estimates and are subject to confidence levels, and the estimates could be exceeded under unforeseen market conditions.

Material presented in a blue-tinted font above is an integral part of the 2020 audited annual consolidated financial statements (refer to page 73).

Back-testing assumes there are no changes in the previous day's closing positions and then isolates the effects of each day's price movements against those closing positions. The bank's VaR model is back-tested daily, and the one-day 99% confidence level VaR at the local and consolidated BMO levels is compared with the estimated daily profit and loss (P&L) that would be recorded if the portfolio composition remained unchanged. If this P&L result is negative and its absolute value is greater than the previous day's VaR, a back-testing exception occurs. Each exception is investigated, explained and documented, and the back-testing results are reviewed by senior management and reported to regulators.

Although it is a valuable indicator of risk, as with any model-driven metric, VaR has limitations, among which is the assumption that all positions can be liquidated within the assumed one-day holding period, which may not be the case under illiquid market conditions. Generally, market liquidity horizons are reviewed for suitability and updated where appropriate for relevant risk metrics. Further limitations of the VaR metric include the assumption that historical data can be used as a proxy to forecast future market events, and the fact that VaR calculations are based upon portfolio positions at the close of business and do not reflect the impact of intra-day trading activity.

Monitoring and Control of Trading and Underwriting Market Risk

A comprehensive set of limits is applied to these metrics, and these limits are subject to regular monitoring and reporting, with any breach of the limits escalated to the appropriate level of management. Risk profiles of trading and underwriting activities are maintained within the bank's risk appetite and supporting limits, and are monitored and reported to traders, management, senior executives and Board committees. Other significant controls include the independent valuation of financial assets and liabilities, as well as compliance with BMO's Model Risk Management Framework to mitigate model risk.

Trading Market Risk Measures

Trading VaR and SVaR

Average Total Trading VaR increased year-over-year, driven by sharply higher market volatility due to the COVID-19 pandemic. The impact was most pronounced on equity VaR, but there was also a significant impact on interest rate VaR and debt-specific risk. After a significant increase in the second quarter of 2020, VaR declined due to portfolio positioning and lower implied volatilities. Average Total SVaR also increased year-over-year, due to an amendment to the Total Trading VaR and SVaR calculation to no longer recognize the diversification benefits from debt-specific risk. BMO changed the period of financial stress used to compute SVaR from the 2008 financial crisis to the 2020 COVID-19 pandemic in the third quarter of 2020.

Total Trading Value at Risk (VaR) Summary (1) (2) (3)

As at or for the year ended October 31	2020				2019			
(pre-tax Canadian $ equivalent in millions)	**Year-end**	**Average**	**High**	**Low**	Year-end	Average	High	Low
Commodity VaR	**5.5**	**2.5**	**5.8**	**0.6**	1.0	1.4	4.9	0.6
Equity VaR	**16.4**	**16.0**	**37.2**	**4.2**	3.0	4.6	12.6	2.5
Foreign exchange VaR	**4.2**	**3.4**	**6.8**	**0.8**	0.5	0.5	1.4	0.2
Interest rate VaR (4)	**40.7**	**23.1**	**42.0**	**5.4**	10.8	8.5	14.3	6.0
Debt-specific risk	**3.9**	**3.8**	**7.6**	**1.6**	2.4	2.0	4.2	1.2
Diversification	**(25.5)**	**(20.3)**	**nm**	**nm**	(9.1)	(8.0)	nm	nm
Total Trading VaR	**45.2**	**28.5**	**53.4**	**8.1**	8.6	9.0	17.2	5.8
Total Trading SVaR	**45.2**	**50.8**	**87.1**	**29.2**	19.2	31.7	69.6	16.5

(1) One-day measure using a 99% confidence interval. Gains are presented in brackets and losses are presented as positive numbers.
(2) Stressed VaR is produced weekly.
(3) In Q1-2020, a new measurement approach was introduced for VaR and SVaR, which separated the previously reported credit VaR into interest rate VaR for general credit spread risk and for debt-specific risk. Results in prior quarters have been provided for comparability. In addition, the Total Trading VaR and SVaR no longer recognize diversification benefits from debt-specific risk.
(4) Interest rate VaR includes general credit spread risk.
nm – not meaningful

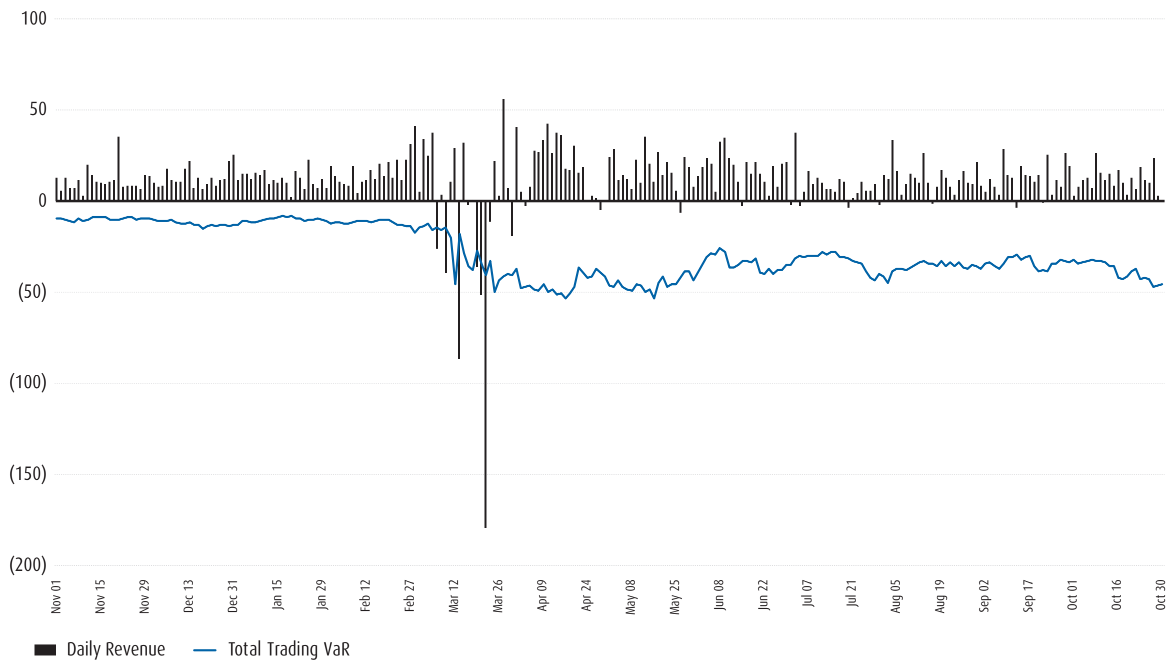
Material presented in a blue-tinted font above is an integral part of the 2020 audited annual consolidated financial statements (refer to page 73).

Trading Net Revenue

The charts below present daily net revenues plotted against Total Trading VaR, along with a representation of daily net revenue distribution. In 2020, net trading losses were incurred on 20 days. In March 2020, markets experienced unprecedented asset price declines, record volatility, extreme liquidity challenges and dislocations, and significant widening of corporate bond spreads. Given certain trading activities and positions, the bank experienced negative trading revenue during the most volatile days with the largest loss occurring on March 23, 2020.

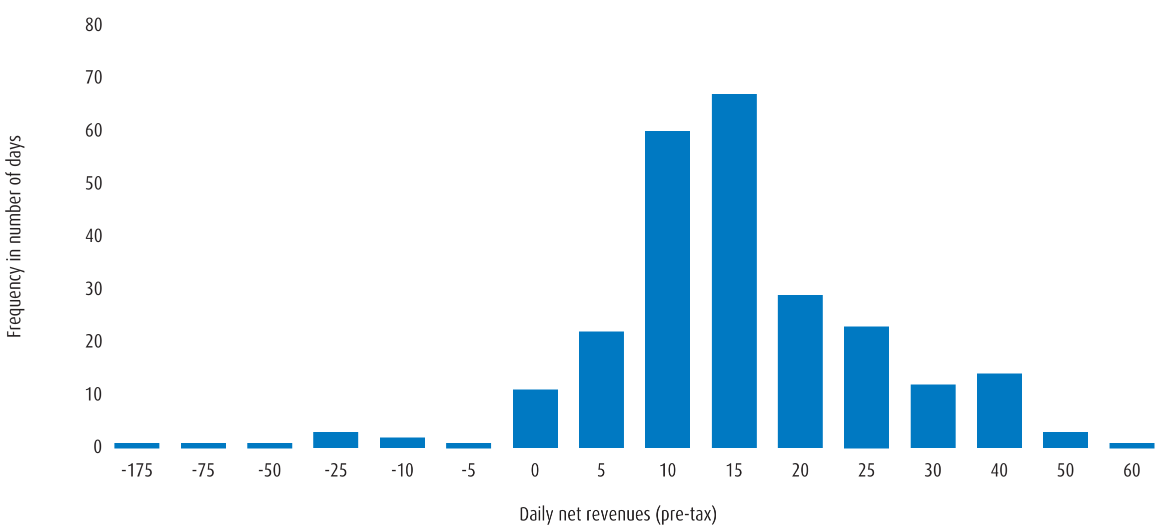
Trading Net Revenues versus Value at Risk

(pre-tax basis and in millions of Canadian dollars)
November 1, 2019 to October 31, 2020 ($ millions)



Frequency Distribution of Daily Net Revenues

November 1, 2019 to October 31, 2020 ($ millions)



Structural (Non-Trading) Market Risk

Structural market risk is comprised of interest rate risk arising from BMO's banking activities (such as loans and deposits) and foreign exchange risk arising from foreign currency operations and exposures.

Structural Market Risk Governance

BMO's Corporate Treasury group is responsible for the ongoing management of structural market risk across the enterprise, with independent oversight provided by the Market Risk group. In addition to Board-approved limits on earnings at risk and economic value sensitivities to changes in interest rates, more granular management limits are in place to guide the daily management of this risk.

The RRC has oversight of the management of structural market risk, annually approves the structural market risk plan and limits, and regularly reviews structural market risk positions. The RMC and Balance Sheet and Capital Management Committee regularly review structural market risk positions and provide senior management oversight.

Structural Market Risk Measurement

Interest Rate Risk

Structural interest rate risk arises when changes in interest rates affect the market value, cash flows and earnings of assets and liabilities related to BMO's banking activities. The objective of structural interest rate risk management is to maintain high-quality earnings and maximize sustainable product spreads, while managing the risk to the economic value of BMO's assets arising from changes in interest rates.

Structural interest rate risk is primarily comprised of interest rate mismatch risk and product embedded option risk.

Interest rate mismatch risk arises when there are differences in the scheduled maturities, repricing dates or reference rates of assets, liabilities and derivatives. The net interest rate mismatch, representing residual assets funded by common shareholders' equity, is managed to a target profile through interest rate swaps and securities.

Product embedded option risk arises when product features allow customers to alter cash flows, such as scheduled maturity or repricing dates, usually in response to changes in market conditions. Product embedded options include loan prepayments, deposit redemption privileges and committed rates on unadvanced mortgages. Product embedded options and associated customer behaviours are captured in risk modelling, and hedging programs may be used to manage this risk to low levels.

Structural interest rate risk is measured using simulations, earnings sensitivity and economic value sensitivity analysis, stress testing and gap analysis, in addition to other treasury risk metrics.

Earnings Sensitivity is a measure of the impact of potential changes in interest rates on the projected 12-month pre-tax net income of a portfolio of assets, liabilities and off-balance sheet positions in response to prescribed parallel interest rate movements, with interest rates floored at zero.

Economic Value Sensitivity is a measure of the impact of potential changes in interest rates on the market value of a portfolio of assets, liabilities and off-balance sheet positions in response to prescribed parallel interest rate movements, with interest rates floored at zero.

The models that measure structural interest rate risk incorporate projected changes in interest rates and predict how customers would likely react to these changes. For customer loans and deposits with scheduled maturity and repricing dates (such as mortgages and term deposits), the models measure the extent to which customers are likely to use embedded options to alter those scheduled terms. For customer loans and deposits without scheduled maturity and repricing dates (such as credit card loans and chequing accounts), exposure is measured using models that adjust for elasticity in product pricing and reflect historical and forecasted trends in balances. The results of these structural market risk models, by their nature, have inherent uncertainty, as they reflect potential anticipated pricing and customer behaviours, which may differ from actual experience. These models have been developed using statistical analysis and are independently validated and periodically updated through regular model performance assessment, back-testing processes and ongoing dialogue with the lines of business. Models developed to predict customer behaviour are also used to support product pricing. All models are subject to BMO's Model Risk Management Framework, which is described in more detail on page 109.

Structural interest rate earnings and economic value sensitivity to an immediate parallel increase or decrease in the yield curve are disclosed in the table below. As a result of the low interest rate environment, earnings and economic value sensitivity to declining interest rates commencing as at April 30, 2020, are measured using a 25 basis point decline, while prior periods reflected a 100 basis point decline.

There were no significant changes in the structural market risk management framework during the year.

Structural economic value exposure to rising interest rates primarily reflects a lower market value for fixed rate loans. Structural economic value sensitivity to falling interest rates primarily reflects the impact of a higher market value for fixed rate loans and minimum modelled client deposit rates. Structural economic value exposure to rising interest rates increased relative to October 31, 2019, primarily due to an increase in fixed rate assets. The structural economic value benefit to falling interest rates decreased relative to October 31, 2019, primarily due to the reduced extent interest rates can now fall following the decline in rates during the year. Structural earnings sensitivity quantifies the potential impact of interest rate changes on structural balance sheet pre-tax net income over the next 12 months. Structural earnings exposure to falling interest rates primarily reflects the risk of fixed and floating rate loans repricing at lower rates and the more limited ability to reduce deposit pricing as rates fall. The structural earnings exposure to falling interest rates decreased relative to October 31, 2019, due to the reduced extent interest rates can now fall, as noted above. The structural earnings benefit to rising interest rates primarily reflects the benefit of widening deposit margins as interest rates rise. This measure increased relative to October 31, 2019, due to the higher modelled benefit to widening deposit margins if short-term interest rates increase from current low levels.

Material presented in a blue-tinted font above is an integral part of the 2020 audited annual consolidated financial statements (refer to page 73).

Structural Interest Rate Sensitivity (1)

(Pre-tax Canadian $ equivalent in millions)	As at October 31, 2020 Economic value sensitivity	As at October 31, 2020 Earnings sensitivity over the next 12 months	As at October 31, 2019 Economic value sensitivity	As at October 31, 2019 Earnings sensitivity over the next 12 months
100 basis point increase	**(1,275.1)**	**152.8**	(883.4)	46.6
25 or 100 basis point decrease (2)	**175.0**	**(62.2)**	215.6	(80.3)

(1) Losses are presented in brackets and gains are presented as positive numbers.

(2) Due to the low interest rate environment, starting April 30, 2020, economic value sensitivity and earnings sensitivity to declining interest rates are measured using a 25 basis point decline.

Insurance Market Risk

Insurance market risk includes interest rate and equity market risk arising from BMO's insurance business activities. A 100 basis point increase in interest rates as at October 31, 2020 would result in an increase in earnings before tax of $39 million ($27 million as at October 31, 2019). A 25 basis point decrease in interest rates as at October 31, 2020 would result in a decrease in earnings before tax of $9 million ($25 million as at October 31, 2019 under a 100 basis point decrease). A 10% increase in equity market values as at October 31, 2020 would result in an increase in earnings before tax of $51 million ($54 million as at October 31, 2019). A 10% decrease in equity market values as at October 31, 2020 would result in a decrease in earnings before tax of $53 million ($57 million as at October 31, 2019). BMO may enter into hedging arrangements to offset the impact of changes in equity market values on its earnings, and did so during the 2020 fiscal year. The impact of insurance market risk on earnings is reflected in insurance claims, commissions and changes in policy benefit liabilities on the Consolidated Statement of Income, and the corresponding change in the fair value of the bank's policy benefit liabilities is reflected in other liabilities on the Consolidated Balance Sheet. The impact of insurance market risk is not reflected in the table above.

Foreign Exchange Risk

Structural foreign exchange risk arises primarily from translation risk related to the net investment in U.S. operations and from transaction risk associated with U.S.-dollar-denominated net income.

Translation risk represents the impact that changes in foreign exchange rates could have on BMO's reported shareholders' equity and capital ratios. BMO may enter into arrangements to offset the impact of foreign exchange rate movements on its capital ratios, and did so during the 2020 fiscal year. Refer to the Enterprise-Wide Capital Management section on page 63 for further discussion.

Transaction risk represents the impact that fluctuations in the Canadian/U.S. dollar exchange rate could have on the Canadian dollar equivalent of BMO's U.S.-dollar-denominated financial results. Exchange rate fluctuations will affect future results measured in Canadian dollars and the impact on those results is a function of the periods during which revenues, expenses and provisions for credit losses arise. Hedging positions may be taken to partially offset the pre-tax effects of Canadian/U.S. dollar exchange rate fluctuations on financial results, although no hedges were executed in the current or prior year. If future results are consistent with results in 2020, each one cent increase (decrease) in the Canadian/U.S. dollar exchange rate would be expected to increase (decrease) the Canadian dollar equivalent of U.S. segment net income before income taxes for the year by $15 million, in the absence of hedging transactions. Refer to the Foreign Exchange section on page 23 for a more complete discussion of the effects of changes in exchange rates on the bank's results.

Linkages between Balance Sheet Items and Market Risk Disclosures

The table below presents items reported on the Consolidated Balance Sheet that are subject to market risk, comprised of balances that are subject to either traded risk or non-traded risk measurement techniques.

	As at October 31, 2020				As at October 31, 2019				
		Subject to market risk				Subject to market risk			
(Canadian $ in millions)	Consolidated Balance Sheet	Traded risk (1)	Non-traded risk (2)	Not subject to market risk	Consolidated Balance Sheet	Traded risk (1)	Non-traded risk (2)	Not subject to market risk	Primary risk factors for non-traded risk balances
Assets Subject to Market Risk									
Cash and cash equivalents	**57,408**	**–**	**57,408**	**–**	48,803	–	48,803	–	Interest rate
Interest bearing deposits with banks	**9,035**	**217**	**8,818**	**–**	7,987	242	7,745	–	Interest rate
Securities	**234,260**	**97,723**	**136,537**	**–**	189,438	85,739	103,699	–	Interest rate, credit spread, equity
Securities borrowed or purchased under resale agreements	**111,878**	**–**	**111,878**	**–**	104,004	–	104,004	–	Interest rate
Loans (net of allowance for credit losses)	**445,004**	**–**	**445,004**	**–**	426,094	–	426,094	–	Interest rate, foreign exchange
Derivative instruments	**36,815**	**32,457**	**4,358**	**–**	22,144	19,508	2,636	–	Interest rate, foreign exchange
Customers' liability under acceptances	**13,493**	**–**	**13,493**	**–**	23,593	–	23,593	–	Interest rate
Other assets (3)	**41,368**	**7,744**	**16,223**	**17,401**	30,132	1,719	13,698	14,715	Interest rate
Total Assets	**949,261**	**138,141**	**793,719**	**17,401**	852,195	107,208	730,272	14,715	
Liabilities Subject to Market Risk									
Deposits	**659,034**	**18,073**	**640,961**	**–**	568,143	15,829	552,314	–	Interest rate, foreign exchange
Derivative instruments	**30,375**	**26,355**	**4,020**	**–**	23,598	20,094	3,504	–	Interest rate, foreign exchange
Acceptances	**13,493**	**–**	**13,493**	**–**	23,593	–	23,593	–	Interest rate
Securities sold but not yet purchased	**29,376**	**29,376**	**–**	**–**	26,253	26,253	–	–	
Securities lent or sold under repurchase agreements	**88,658**	**–**	**88,658**	**–**	86,656	–	86,656	–	Interest rate
Other liabilities (3)	**63,316**	**–**	**63,082**	**234**	65,881	–	65,766	115	Interest rate
Subordinated debt	**8,416**	**–**	**8,416**	**–**	6,995	–	6,995	–	Interest rate
Total Liabilities	**892,668**	**73,804**	**818,630**	**234**	801,119	62,176	738,828	115	

(1) Primarily comprised of balance sheet items that are subject to the trading and underwriting risk management framework and recorded at fair value through profit or loss.

(2) Primarily comprised of balance sheet items that are subject to the structural balance sheet and insurance risk management framework.

(3) Effective the first quarter of 2020, the bank adopted IFRS 16, *Leases* (IFRS 16). As at October 31, 2020, the bank recognized a total right-of-use asset in other assets of $2,217 million (net of depreciation), with a corresponding lease liability of $2,409 million in other liabilities. Refer to the Changes in Accounting Policies in 2020 section on page 118 for further details.

Certain comparative figures have been reclassified to conform with the current year's presentation.

Material presented in a blue-tinted font above is an integral part of the 2020 audited annual consolidated financial statements (refer to page 73).

Insurance Risk

Insurance risk is the potential for loss as a result of actual experience differing from that assumed when an insurance product was designed and priced. It generally entails the inherent unpredictability that can arise from assuming long-term policy liabilities or from the uncertainty of future events. Insurance provides protection against the financial consequences of insured risks by transferring those risks to the insurer (under specific terms and conditions) in exchange for premiums. Insurance risk is inherent in all of BMO's insurance products, comprised of life insurance, annuities, which includes the pension risk transfer business, accident and sickness, and creditor insurance, as well as in the reinsurance business.

Insurance risk consists of:
- Claims risk – the risk that the actual magnitude or frequency of claims will differ from those assumed in the pricing or underwriting process, including mortality risk, morbidity risk, longevity risk and catastrophe risk;
- Policyholder behaviour risk – the risk that the behaviour of policyholders in regard to premium payments, withdrawals or loans, policy lapses and surrenders, and other voluntary terminations will differ from the behaviour assumed in the pricing process; and
- Expense risk – the risk that actual expenses arising from acquiring and administering policies and processing claims will exceed the expenses assumed in the pricing process.

BMO's risk governance practices provide effective independent oversight and control of risk within BMO Insurance. BMO Insurance's risk management framework addresses the identification, assessment, management and reporting of risks. The framework includes: the Risk Appetite Statement and key risk metrics; insurance risk policies and processes, including limits; capital requirements; stress testing; risk reports; Own Risk and Solvency Assessment; and ongoing monitoring of experience. Senior management within the various lines of business uses this framework as the first line of defence, and has the primary responsibility for managing insurance risk. Second-line-of-defence oversight is provided by the CRO, BMO Insurance, who reports to the Head of Market Risk and CRO, BMO Capital Markets. Internal risk committees, the boards of directors of the BMO Insurance subsidiaries and senior management provide senior governance and review. In particular, the Risk Committee, BMO Insurance, oversees and reports on risk management activities on a quarterly basis to the insurance companies' boards of directors. In addition, the Audit and Conduct Review Committee of the Board acts as the Audit and Conduct Review Committee for BMO Life Insurance Company.

A robust product approval process is a cornerstone of the BMO Insurance risk management framework, as it identifies, assesses and mitigates risks associated with new insurance products or changes to existing products. This process, along with guidelines and practices for underwriting and claims management, promotes the effective identification, measurement and management of insurance risk. Reinsurance transactions that transfer insurance risk from BMO Insurance to independent reinsurance companies are also used to mitigate exposure to insurance risk by diversifying risk and limiting claims. BMO Insurance has exited the Property & Casualty Reinsurance market, with the remaining treaty terminating by March 2021, which has significantly reduced exposure to catastrophic claims. However, a certain amount of exposure to catastrophic claims occurring prior to the treaties terminating remains as the portfolio runs off and until all outstanding claims that were made prior to the treaty termination dates are settled and paid.

In addition to a well-balanced portfolio of life insurance and annuities, which forms a natural hedge for insurance risk, to date, claims related to the COVID-19 pandemic have not had a material impact on BMO Insurance's financial results. As part of the overall Risk Management Framework, COVID-19 claims are tracked separately and stress tests specific to the pandemic are being performed.

Caution

This Insurance Risk section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Liquidity and Funding Risk

Liquidity and funding risk is the potential for loss if BMO is unable to meet financial commitments in a timely manner at reasonable prices as they become due. Financial commitments include liabilities to depositors and suppliers, and lending, investment and pledging commitments.

Managing liquidity and funding risk is integral to maintaining enterprise soundness and safety, depositor confidence and earnings stability. It is BMO's policy to ensure that sufficient liquid assets and funding capacity are available to meet financial commitments, even in times of stress.

Liquidity and Funding Risk Governance

The Corporate Treasury group and the operating groups, as the first line of defence, are responsible for the ongoing identification, assessment, and management of liquidity and funding risk. The Corporate Treasury group is responsible for monitoring and reporting liquidity and funding risks across the enterprise and develops and recommends for approval the Liquidity and Funding Risk Management Framework and the related risk appetite and limits, monitors compliance with the relevant corporate policies, and assesses the impact of market events on liquidity and funding requirements on an ongoing basis.

Enterprise Risk and Portfolio Management, as the second line of defence, provides oversight, independent risk assessment and effective challenge of liquidity and funding management frameworks, policies, limits, monitoring and reporting across the enterprise.

The Risk Management Committee (RMC) and Balance Sheet and Capital Management Committee (BSCMC) provide senior management oversight and also review and discuss significant liquidity and funding policies, issues and developments that arise in the pursuit of its strategic priorities. The Risk Review Committee (RRC) provides oversight of the management of liquidity and funding risk, annually approves applicable policies, limits and the contingency plan, and regularly reviews liquidity and funding positions.

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Liquidity and Funding Risk Management

BMO's Liquidity and Funding Risk Management Framework is defined and authorized under Board-approved corporate policies and management-approved standards. These policies and standards outline key management principles, liquidity and funding metrics and related limits, as well as roles and responsibilities for the management of liquidity and funding risk across the enterprise.

BMO has a robust limit structure in place in order to manage liquidity and funding risk. Limits define the risk appetite for the key Stress Net Liquidity Position (Stress NLP) measure, regulatory liquidity ratios, secured and unsecured funding appetite (for both trading and structural activities), and enterprise collateral pledging. Limits also establish the tolerance for concentrations of maturities, requirements for counterparty liability diversification, business pledging activity, and the size and type of uncommitted and committed credit and liquidity facilities that may be outstanding.

Operating within these limits helps to confirm that liquidity and funding risk is appropriately managed. An enterprise-wide contingency plan designed to facilitate effective management in the event of a disruption is also in place. Early warning indicators identified in the contingency plan are regularly monitored in order to detect any signs of growing liquidity or funding risk in the market, or other risks specific to BMO.

BMO legal entities include regulated and foreign subsidiaries and branches, and as a result, movements of funds between entities in the corporate group are subject to, among other things, the liquidity, funding and capital adequacy requirements of these entities. As such, liquidity and funding positions are managed on both a consolidated and key legal entity basis. Liquidity and funding risk management policies and limits, which are informed by the laws and regulations that apply to each entity, are in place for key legal entities, and positions are regularly reviewed at the key legal entity level to confirm compliance with applicable laws and regulations.

BMO employs practices related to funds transfer pricing and liquidity transfer pricing in order to ensure that appropriate economic signals for the pricing of products for customers are provided to the lines of business, and to assess the performance of each business. These practices capture both the cost of funding assets and the value of deposits under normal operating conditions, as well as the cost of holding supplemental liquid assets to meet contingent liquidity requirements.

BMO prudently managed liquidity and funding throughout the year. The bank entered the second quarter with a strong liquidity position and acted early and throughout the COVID-19 market disruption. The bank accessed the wholesale term markets in the second quarter to raise long-term funding and increased liquid assets, including central bank cash deposits and sovereign bonds, to meet potential future funding needs. BMO experienced strong customer deposit flows throughout the year while loans first increased in the second quarter, before declining in the second half of the year as customers decreased borrowing activity. In addition, given market disruption and volatility, central banks around the world announced a number of programs that were targeted to support the financial and funding markets and the provision of funding to customers affected by the pandemic. BMO used these programs in the second quarter in a manner consistent with other banks, given market disruptions. The bank's borrowings under the central bank programs were largely repaid by the end of the second quarter, with the exception of certain borrowings under the Bank of Canada term repo facility that mature through to the second quarter of 2021. Through the second half of the year, the bank maintained more liquidity than it would normally target to hold. BMO's liquidity metrics, including the Liquidity Coverage Ratio (LCR), exceeded internal and regulatory requirements throughout the year.

Liquidity and Funding Risk Measurement

A key component of liquidity risk management is the measurement of liquidity risk under stress. BMO uses Stress NLP as a key measure of liquidity risk. Stress NLP represents the amount by which liquid assets exceed potential funding needs under a severe combined enterprise-specific and systemic stress scenario. Potential funding needs may arise from obligations to repay retail, commercial and wholesale deposits that are withdrawn or not renewed or to fund drawdowns on available credit and liquidity lines, obligations to pledge collateral due to ratings downgrades or market volatility, and the continuing need to fund new assets or strategic investments. Potential funding needs are quantified by applying factors to various business activities based on management's view of the relative level of liquidity risk related to each activity. These factors vary by depositor classification (e.g., retail, small business, non-financial corporate or wholesale counterparties) and deposit type (e.g., insured, uninsured, operational or non-operational deposits), as well as by commitment type (e.g., uncommitted or committed credit or liquidity facilities by counterparty type). The stress scenario also considers the time horizon over which liquid assets can be monetized and management's assessment of the liquidity value of those assets under conditions of market stress. These funding needs are assessed under severe systemic and enterprise-specific stress scenarios, and a combination thereof.

Stress testing results are evaluated against BMO's stated risk tolerance and are considered in management decisions on setting limits and internal liquidity transfer pricing, and they also help to inform and shape the design of business plans and contingency plans. The Liquidity and Funding Risk Management Framework is integrated with enterprise-wide stress testing.

In addition to Stress NLP, BMO regularly monitors positions in relation to the limits and liquidity ratios noted in the Liquidity and Funding Risk Management section above. These include regulatory metrics such as the LCR, Net Cumulative Cash Flow and Net Stable Funding Ratio (NSFR).

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Unencumbered Liquid Assets

Unencumbered liquid assets include high-quality assets that are marketable, can be pledged as security for borrowings, and can be converted to cash in a time frame that meets liquidity and funding requirements. Liquid assets are primarily held in trading businesses, as well as in supplemental liquidity pools that are maintained for contingent liquidity risk management purposes. The liquidity value recognized for different asset classes under the bank's management framework reflects management's assessment of the liquidity value of those assets under a severe stress scenario. Liquid assets held in the trading businesses include cash on deposit with central banks, short-term deposits with other financial institutions, highly-rated debt securities, equity securities, and short-term reverse repurchase agreements. Supplemental liquidity pool assets are predominantly comprised of cash on deposit with central banks, securities, and short-term reverse repurchase agreements of highly-rated Canadian federal and provincial government debt and U.S. federal government and agency debt**.** Substantially all supplemental liquidity pool assets meet the definition of high-quality liquid assets under Basel III. Approximately 75% of the supplemental liquidity pool is held at the parent bank level in Canadian-dollar- and U.S.-dollar-denominated assets, with the majority of the remaining supplemental liquidity pool held at BMO Harris Bank in U.S.-dollar-denominated assets. The size of the supplemental liquidity pool is integrated with BMO's measurement of liquidity risk. To meet local regulatory requirements, certain legal entities maintain their own minimum liquidity positions.

There may be legal and regulatory restrictions on the bank's ability to use liquid assets held at one legal entity to support the liquidity requirements of another legal entity.

In the ordinary course of business, BMO may encumber a portion of cash and securities holdings as collateral in support of trading activities and participation in clearing and payment systems in Canada and abroad. In addition, BMO may receive liquid assets as collateral and may re-pledge these assets in exchange for cash or as collateral in support of trading activities. Net unencumbered liquid assets, defined as on-balance sheet assets, such as BMO-owned cash and securities and securities borrowed or purchased under resale agreements, plus other off-balance sheet eligible collateral received, less collateral encumbered, totalled $306.1 billion at October 31, 2020, compared with $249.7 billion at October 31, 2019. The increase in unencumbered liquid assets was mainly due to higher cash and securities balances as a result of net customer deposit growth and actions taken by BMO to maintain a strong liquidity position in the current market environment. Net unencumbered liquid assets are primarily held at the parent bank level, at BMO's U.S. bank entity BMO Harris Bank, and in its broker/dealer operations. In addition to liquid assets, BMO has access to the Bank of Canada's lending assistance programs, the Federal Reserve Bank discount window in the United States and European Central Bank standby liquidity facilities. BMO does not rely on central bank facilities as a source of available liquidity when assessing the soundness of BMO's liquidity position.

In addition to cash and securities holdings, BMO may also pledge other assets, including mortgages and loans, to raise long-term secured funding. As part of the Liquidity and Funding Risk Management Framework, a Pledging of Assets Corporate Policy sets out the framework and pledging limits for financial and non-financial assets.

BMO's total encumbered assets and unencumbered liquid assets are summarized in the table below. Refer to Note 24 on page 204 of the consolidated financial statements for further information on pledged assets.

Liquid Assets

(Canadian $ in millions)	As at October 31, 2020 Bank-owned assets	Other cash and securities received	Total gross assets (1)	Encumbered assets	Net unencumbered assets (2)	As at October 31, 2019 Net unencumbered assets (2)
Cash and cash equivalents	**57,408**	**–**	**57,408**	**111**	**57,297**	46,908
Deposits with other banks	**9,035**	**–**	**9,035**	**–**	**9,035**	7,987
Securities and securities borrowed or purchased under resale agreements						
Sovereigns / Central banks / Multilateral development banks	**112,174**	**98,104**	**210,278**	**104,983**	**105,295**	90,363
NHA mortgage-backed securities and U.S. agency mortgage-backed securities and collateralized mortgage obligations	**49,274**	**8,196**	**57,470**	**20,626**	**36,844**	21,406
Corporate and other debt	**23,007**	**18,175**	**41,182**	**7,197**	**33,985**	32,112
Corporate equity	**49,805**	**44,722**	**94,527**	**47,062**	**47,465**	28,436
Total securities and securities borrowed or purchased under resale agreements	**234,260**	**169,197**	**403,457**	**179,868**	**223,589**	172,317
NHA mortgage-backed securities (reported as loans at amortized cost) (3)	**22,320**	**–**	**22,320**	**6,121**	**16,199**	22,438
Total liquid assets	**323,023**	**169,197**	**492,220**	**186,100**	**306,120**	249,650
Other eligible assets at central banks (not included above) (4)	**139,102**	**–**	**139,102**	**806**	**138,296**	68,246
Total liquid assets and other sources	**462,125**	**169,197**	**631,322**	**186,906**	**444,416**	317,896

(1) Gross assets include bank-owned assets and cash and securities received from third parties.
(2) Net unencumbered liquid assets are defined as total gross assets less encumbered assets.
(3) Under IFRS, National Housing Act (NHA) mortgage-backed securities that include mortgages owned by BMO as the underlying collateral are classified as loans. Unencumbered NHA mortgage-backed securities have liquidity value and are included as liquid assets under BMO's Liquidity and Funding Management Framework. This amount is shown as a separate line item, NHA mortgage-backed securities.
(4) Represents loans currently lodged at central banks that could potentially be used to access central bank funding. Loans available for pledging as collateral do not include other sources of additional liquidity that may be realized from the bank's loan portfolio, including incremental securitization, covered bond issuances and Federal Home Loan Bank (FHLB) advances.

MD&A

Material presented in a blue-tinted font above is an integral part of the 2020 audited annual consolidated financial statements (refer to page 73).

Asset Encumbrance

(Canadian $ in millions) As at October 31, 2020	Total gross assets (1)	Encumbered (2) Pledged as collateral	Encumbered (2) Other encumbered	Net unencumbered Other unencumbered (3)	Net unencumbered Available as collateral (4)
Cash and deposits with other banks	66,443	–	111	–	66,332
Securities (5)	425,777	149,955	36,034	12,766	227,022
Loans and acceptances	422,684	58,168	806	225,414	138,296
Other assets					
Derivative instruments	36,815	–	–	36,815	–
Customers' liability under acceptances	13,493	–	–	13,493	–
Premises and equipment	4,183	–	–	4,183	–
Goodwill	6,535	–	–	6,535	–
Intangible assets	2,442	–	–	2,442	–
Current tax assets	1,260	–	–	1,260	–
Deferred tax asset	1,473	–	–	1,473	–
Other assets	25,475	6,344	–	19,131	–
Total other assets	91,676	6,344	–	85,332	–
Total assets	1,006,580	214,467	36,951	323,512	431,650

(Canadian $ in millions) As at October 31, 2019	Total gross assets (1)	Encumbered (2) Pledged as collateral	Encumbered (2) Other encumbered	Net unencumbered Other unencumbered (3)	Net unencumbered Available as collateral (4)
Cash and deposits with other banks	56,790	–	1,895	–	54,895
Securities (5)	378,443	153,269	30,419	12,107	182,648
Loans and acceptances	399,968	73,073	765	257,884	68,246
Other assets					
Derivative instruments	22,144	–	–	22,144	–
Customers' liability under acceptances	23,593	–	–	23,593	–
Premises and equipment	2,055	–	–	2,055	–
Goodwill	6,340	–	–	6,340	–
Intangible assets	2,424	–	–	2,424	–
Current tax assets	1,165	–	–	1,165	–
Deferred tax asset	1,568	–	–	1,568	–
Other assets	16,580	3,722	–	12,858	–
Total other assets	75,869	3,722	–	72,147	–
Total assets	911,070	230,064	33,079	342,138	305,789

(1) Gross assets include on-balance sheet and off-balance sheet assets.
(2) Pledged as collateral refers to the portion of on-balance sheet assets and other cash and securities that is pledged through repurchase agreements, securities lending, derivative contracts, minimum required deposits at central banks, and requirements associated with participation in clearing houses and payment systems. Other encumbered assets include assets that are restricted for legal or other reasons, such as restricted cash and short sales.
(3) Other unencumbered assets include select liquid asset holdings that management believes are not readily available to support BMO's liquidity requirements. These include cash and securities of $12.8 billion as at October 31, 2020, which include securities held at BMO's insurance subsidiary, significant equity investments, and certain investments held at BMO's merchant banking business. Other unencumbered assets also include mortgages and loans that may be securitized to access secured funding.
(4) Loans included in available as collateral represent loans currently lodged at central banks that could potentially be used to access central bank funding. Loans available for pledging as collateral do not include other sources of additional liquidity that may be realized from the bank's loan portfolio, such as incremental securitization, covered bond issuances and FHLB advances.
(5) Includes securities, securities borrowed or purchased under resale agreements and NHA mortgage-backed securities (reported as loans at amortized cost).

Certain comparative figures have been reclassified to conform with the current year's presentation.

BMO's LCR is summarized in the following table. The average daily LCR for the quarter ended October 31, 2020 was 131%. The LCR is calculated on a daily basis as the ratio of the stock of High-Quality Liquid Assets (HQLA) held to total net stressed cash outflows over the next 30 calendar days. The average LCR was down from 138% last year. HQLA and net cash outflows both increased; however, the ratio between them changed year-over-year. While banks are required to maintain an LCR greater than 100% in normal conditions, banks are also expected to be able to utilize HQLA during a period of stress, which may result in an LCR of less than 100% during such a period. BMO's HQLA are primarily comprised of cash, highly-rated debt issued or backed by governments, highly-rated covered bonds and non-financial corporate debt, and non-financial equities that are part of a major stock index. Net cash flows include outflows from deposits, secured and unsecured wholesale funding, commitments and potential collateral requirements, offset by permitted inflows from loans, securities lending activities and other non-HQLA debt maturing over a 30-day horizon. OSFI-prescribed weights are applied to cash flows and HQLA to arrive at the weighted values and the LCR. The LCR is only one measure of a bank's liquidity position and does not fully capture all of the bank's liquid assets or the funding alternatives that may be available during a period of stress. BMO's total liquid assets are shown in the Liquid Assets table on page 99.

Liquidity Coverage Ratio

(Canadian $ in billions, except as noted)	For the quarter ended October 31, 2020 Total unweighted value (average) (1) (2)	Total weighted value (average) (2) (3)
High-Quality Liquid Assets		
Total high-quality liquid assets (HQLA)	*	**197.5**
Cash Outflows		
Retail deposits and deposits from small business customers, of which:	**220.3**	**15.7**
Stable deposits	**107.3**	**3.2**
Less stable deposits	**113.0**	**12.5**
Unsecured wholesale funding, of which:	**228.0**	**112.4**
Operational deposits (all counterparties) and deposits in networks of cooperative banks	**107.3**	**26.9**
Non-operational deposits (all counterparties)	**93.7**	**58.5**
Unsecured debt	**27.0**	**27.0**
Secured wholesale funding	*	**26.1**
Additional requirements, of which:	**170.1**	**32.7**
Outflows related to derivatives exposures and other collateral requirements	**14.1**	**4.4**
Outflows related to loss of funding on debt products	**1.9**	**1.9**
Credit and liquidity facilities	**154.1**	**26.4**
Other contractual funding obligations	**0.9**	**–**
Other contingent funding obligations	**419.8**	**8.1**
Total cash outflows	*	**195.0**
Cash Inflows		
Secured lending (e.g., reverse repos)	**144.8**	**32.7**
Inflows from fully performing exposures	**9.3**	**4.8**
Other cash inflows	**6.8**	**6.8**
Total cash inflows	**160.9**	**44.3**

	Total adjusted value (4)
Total HQLA	**197.5**
Total net cash outflows	**150.7**
Liquidity Coverage Ratio (%) (2)	**131**

For the quarter ended October 31, 2019	Total adjusted value (4)
Total HQLA	163.2
Total net cash outflows	118.1
Liquidity Coverage Ratio (%)	138

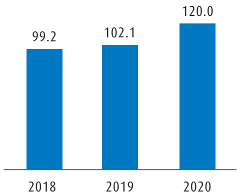
* Disclosure is not required under the LCR disclosure standard.
(1) Unweighted values are calculated at market value (for HQLA) or as outstanding balances maturing or callable within 30 days (for inflows and outflows).
(2) Values are calculated based on the simple average of the daily LCR over 62 business days in the fourth quarter of 2020.
(3) Weighted values are calculated after the application of the weightings prescribed under the OSFI Liquidity Adequacy Requirements (LAR) Guideline for HQLA and cash inflows and outflows.
(4) Adjusted values are calculated based on total weighted values after applicable caps, as defined in the LAR Guideline.

Funding Strategy

BMO's funding strategy requires that secured and unsecured wholesale funding used to support loans and less liquid assets must have a term (typically maturing in two to ten years) that will support the effective term to maturity of these assets. Secured and unsecured wholesale funding for liquid trading assets is largely shorter term (maturing in one year or less), is aligned with the liquidity of the assets being funded, and is subject to limits on aggregate maturities that are permitted across different periods. Supplemental liquidity pools are funded largely with wholesale term funding.

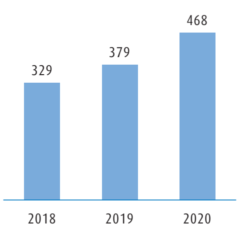
BMO maintains a large and stable base of customer deposits that, in combination with its strong capital base, is a source of strength. It supports the maintenance of a sound liquidity position and reduces reliance on wholesale funding. Customer deposits totalled $468.0 billion as at October 31, 2020, increasing from $378.8 billion in 2019. Both commercial and retail deposits grew significantly, as customers conserved liquidity to meet potential funding needs in the current economic environment. BMO also receives non-marketable deposits from corporate and institutional customers in support of certain trading activities. These deposits totalled $22.8 billion as at October 31, 2020, up from $22.1 billion as at October 31, 2019.

Customer Deposits and Capital-to-Customer Loans Ratio (%)



BMO's large customer base and strong capital position reduce the bank's reliance on wholesale funding.

Customer Deposits
($ billions)



Customer deposits provide a strong funding base.

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Total unsecured and secured wholesale funding outstanding, which largely consists of negotiable marketable securities, was $191.1 billion as at October 31, 2020, with $54.4 billion sourced as secured funding and $136.7 billion sourced as unsecured funding. Wholesale funding outstanding decreased from $207.6 billion as at October 31, 2019, primarily due to net wholesale funding maturities. The mix and maturities of BMO's wholesale term funding are outlined later in this section. Additional information on deposit maturities can be found on page 104. BMO maintains a sizeable portfolio of unencumbered liquid assets, totalling $306.1 billion as at October 31, 2020 and $249.7 billion as at October 31, 2019, that can be monetized to meet potential funding requirements, as described in the Unencumbered Liquid Assets section on page 99.

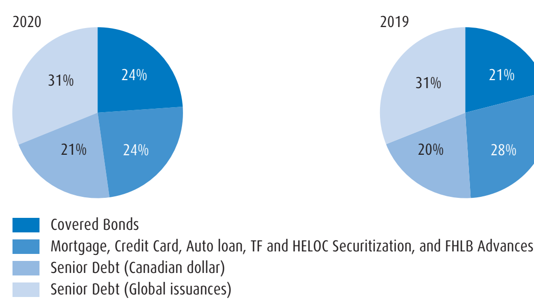
Wholesale Funding Maturities (1)

	As at October 31, 2020								As at October 31, 2019
(Canadian $ in millions)	Less than 1 month	1 to 3 months	3 to 6 months	6 to 12 months	Subtotal less than 1 year	1 to 2 years	Over 2 years	Total	Total
Deposits from banks	**6,096**	**336**	**298**	**30**	**6,760**	**–**	**–**	**6,760**	4,312
Certificates of deposit and commercial paper	**13,238**	**15,224**	**18,703**	**12,133**	**59,298**	**–**	**–**	**59,298**	64,490
Bearer deposit notes	**1,873**	**593**	**36**	**–**	**2,502**	**–**	**–**	**2,502**	117
Asset-backed commercial paper (ABCP)	**799**	**1,075**	**1,293**	**–**	**3,167**	**–**	**–**	**3,167**	3,276
Senior unsecured medium-term notes	**–**	**693**	**6,290**	**9,164**	**16,147**	**12,631**	**27,702**	**56,480**	63,789
Senior unsecured structured notes (2)	**54**	**–**	**–**	**–**	**54**	**22**	**3,145**	**3,221**	3,807
Covered bonds and securitizations									
Mortgage and HELOC securitizations	**–**	**717**	**250**	**2,487**	**3,454**	**2,524**	**14,416**	**20,394**	19,602
Covered bonds	**–**	**–**	**2,327**	**1,998**	**4,325**	**4,661**	**15,646**	**24,632**	25,497
Other asset-backed securitizations (3)	**–**	**96**	**–**	**15**	**111**	**2,355**	**3,789**	**6,255**	7,628
Subordinated debt	**–**	**–**	**–**	**–**	**–**	**–**	**8,416**	**8,416**	7,189
Other (4)	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	7,866
Total	**22,060**	**18,734**	**29,197**	**25,827**	**95,818**	**22,193**	**73,114**	**191,125**	207,573
Of which:									
Secured	**799**	**1,888**	**3,870**	**4,500**	**11,057**	**9,540**	**33,851**	**54,448**	63,869
Unsecured	**21,261**	**16,846**	**25,327**	**21,327**	**84,761**	**12,653**	**39,263**	**136,677**	143,704
Total (5)	**22,060**	**18,734**	**29,197**	**25,827**	**95,818**	**22,193**	**73,114**	**191,125**	207,573

(1) Wholesale unsecured funding primarily includes funding raised through the issuance of marketable, negotiable instruments. Wholesale funding excludes deposits and covered bonds issued to access central bank programs, repo transactions and bankers' acceptances, which are disclosed in the contractual maturity table on page 104, and also excludes ABCP issued by certain ABCP conduits that are not consolidated for financial reporting purposes.
(2) Primarily issued to institutional investors.
(3) Includes credit card, auto and transportation finance loan securitizations.
(4) Refers to FHLB advances.
(5) Total wholesale funding consists of Canadian-dollar-denominated funding totalling $52.6 billion and U.S.-dollar-denominated and other foreign-currency-denominated funding totalling $138.5 billion as at October 31, 2020.

Diversification of BMO's wholesale term funding sources is an important part of the bank's overall liquidity management strategy. BMO's wholesale term funding activities are well-diversified by jurisdiction, currency, investor segment, instrument type and maturity profile. BMO maintains ready access to long-term wholesale funding through various borrowing programs, including a European Note Issuance Program, Canadian, Australian and U.S. Medium-Term Note programs, Canadian and U.S. mortgage securitizations, Canadian credit card loans, auto loans and home equity line of credit (HELOC) securitizations, U.S. transportation finance (TF) loans, covered bonds, and Canadian and U.S. senior unsecured deposits.

Wholesale Capital Market Term Funding Composition (%)



BMO's wholesale term funding plan seeks to ensure sufficient funding capacity is available to execute business strategies. The funding plan considers expected maturities, as well as asset and liability growth projected for businesses in its forecasting and planning processes, and assesses funding needs in relation to the sources available. The funding plan is reviewed annually by the BSCMC and RMC and approved by the RRC, and is regularly updated to reflect actual results and incorporate updated forecast information.

In April 2018, the Government of Canada published the final regulations on Canada's Bank Recapitalization (Bail-In) Regime, which became effective on September 23, 2018. Bail-in debt includes senior unsecured debt issued directly 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. BMO is required to meet minimum Total Loss Absorbing Capacity (TLAC) ratio requirements by November 1, 2021. The bank continues to be well-positioned to meet TLAC requirements when they come into effect. For more information on Canada's Bail-In Regime and TLAC requirements, refer to Regulatory Capital Developments under Enterprise-Wide Capital Management on page 63.

Regulatory Developments

During the current fiscal year, the Bank of Canada finalized its Standing Term Liquidity Facility (STLF). The STLF is intended to provide confidence that an eligible Canadian financial institution facing temporary liquidity stress will have access to central bank liquidity on terms that are known in advance. An institution is eligible to draw on the facility if the Bank of Canada has no concerns about its financial soundness. STLF advances are at the discretion of the Bank of Canada. BMO, along with a number of other Canadian financial institutions, took a modest advance under the program in April 2020 to demonstrate its capabilities. BMO's borrowing was repaid before the end of the second quarter of 2020.

The Net Stable Funding Ratio (NSFR) is a regulatory liquidity metric that assesses the stability of a bank's funding profile in relation to the liquidity value of a bank's assets. OSFI finalized the domestic implementation of the NSFR in the second quarter of 2019. Canadian D-SIBs, including BMO, are required to maintain a minimum NSFR of 100%, effective January 1, 2020, and to publicly disclose their NSFR, effective for the quarter ending January 31, 2021. BMO's NSFR exceeds the regulatory minimum as at October 31, 2020. In addition, in April 2019, OSFI finalized revisions to the LCR and other liquidity metrics under the Liquidity Adequacy Requirements Guideline, which came into effect on January 1, 2020. There was no material impact on the bank's liquidity and funding management approach as a result of these changes.

Credit Ratings

The credit ratings assigned to BMO's short-term and senior long-term debt securities by external rating agencies are important for the bank in raising both capital and funding to support its business operations. Maintaining strong credit ratings allows the bank to access the wholesale markets at competitive pricing levels. Should the bank's credit ratings experience a downgrade, cost of funding would likely increase and access to funding and capital through the wholesale markets could be reduced. A material downgrade of its ratings could also have other consequences, including those set out in Note 8 starting on page 168 of the consolidated financial statements.

The credit ratings assigned to BMO's senior debt by rating agencies are indicative of high-grade, high-quality issues. Moody's, Standard & Poor's (S&P) and DBRS have a stable outlook on BMO and Fitch has a negative outlook.

On January 17, 2020, Fitch upgraded BMO's legacy senior debt and long-term deposit ratings to "AA" from "AA-", recognizing BMO's build-up of TLAC to a level that is close to the bank's minimum TLAC requirement.

On April 3, 2020, Fitch revised the rating outlook on BMO and other Canadian banks to Negative from Stable due to the disruption of economic activity and financial markets caused by the COVID-19 pandemic. To reflect changes to its rating criteria, Fitch downgraded BMO's subordinated debt rating to "A" from "A+".

As at October 31, 2020

Rating agency	Short-term debt	Senior debt (1)	Long-term deposits / Legacy senior debt (2)	Subordinated debt (NVCC)	Outlook
Moody's	P-1	A2	Aa2	Baa1(hyb)	Stable
S&P	A-1	A-	A+	BBB+	Stable
Fitch	F1+	AA-	AA	A	Negative
DBRS	R-1 (high)	AA (low)	AA	A (low)	Stable

(1) Subject to conversion under the Bank Recapitalization (Bail-In) Regime.

(2) Long-term deposits / Legacy senior debt includes senior debt issued prior to September 23, 2018 and senior debt issued on or after September 23, 2018 that is excluded from the Bank Recapitalization (Bail-In) Regime.

BMO is required to deliver collateral to certain counterparties in the event of a downgrade of its current credit rating. The incremental collateral required is based on mark-to-market exposure, collateral valuations and collateral threshold arrangements, as applicable. As at October 31, 2020, the bank would be required to provide additional collateral to counterparties totalling $152 million, $423 million and $654 million as a result of a one-notch, two-notch and three-notch downgrade, respectively.

Contractual Maturities of Assets and Liabilities and Off-Balance Sheet Commitments

The tables below show the remaining contractual maturities of on-balance sheet assets and liabilities and off-balance sheet commitments. The contractual maturity of financial assets and liabilities is an input to, but is not necessarily consistent with, the expected maturity of assets and liabilities that is used in the management of liquidity and funding risk. BMO forecasts asset and liability cash flows, under both normal market conditions and a number of stress scenarios, to manage liquidity and funding risk. Stress scenarios include assumptions for loan repayments, deposit withdrawals, and credit commitment and liquidity facility drawdowns by counterparty and product type. Stress scenarios also consider the time horizon over which liquid assets can be monetized and the related haircuts and potential collateral requirements that may result from both market volatility and credit rating downgrades, among other assumptions.

										2020
(Canadian $ in millions)	0 to 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 2 years	2 to 5 years	Over 5 years	No maturity	Total
On-Balance Sheet Financial Instruments										
Assets										
Cash and cash equivalents	56,434	–	–	–	–	–	–	–	974	57,408
Interest bearing deposits with banks	3,901	1,673	1,266	1,204	991	–	–	–	–	9,035
Securities	4,838	5,804	7,817	6,263	4,678	15,730	54,846	85,949	48,335	234,260
Securities borrowed or purchased under resale agreements	79,354	17,030	12,111	2,172	708	503	–	–	–	111,878
Loans										
Residential mortgages	2,077	2,110	4,627	5,795	4,928	19,551	80,480	7,456	–	127,024
Consumer instalment and other personal	677	690	1,229	1,223	1,217	5,229	25,243	12,135	22,505	70,148
Credit cards	–	–	–	–	–	–	–	–	7,889	7,889
Business and government	22,883	5,170	7,409	7,166	6,795	27,816	77,917	35,824	52,266	243,246
Allowance for credit losses	–	–	–	–	–	–	–	–	(3,303)	(3,303)
Total loans, net of allowance	25,637	7,970	13,265	14,184	12,940	52,596	183,640	55,415	79,357	445,004
Other Assets										
Derivative instruments	3,400	5,472	2,111	1,140	915	4,369	9,393	10,015	–	36,815
Customers' liability under acceptances	9,609	3,633	251	–	–	–	–	–	–	13,493
Other	1,873	580	188	20	13	16	4	4,530	34,144	41,368
Total other assets	14,882	9,685	2,550	1,160	928	4,385	9,397	14,545	34,144	91,676
Total Assets	185,046	42,162	37,009	24,983	20,245	73,214	247,883	155,909	162,810	949,261

										2020
(Canadian $ in millions)	0 to 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 2 years	2 to 5 years	Over 5 years	No maturity	Total
Liabilities and Equity										
Deposits (1)(2)										
Banks	13,499	3,982	13,106	455	463	7	–	28	7,285	38,825
Business and government	24,056	21,813	33,713	13,862	17,567	20,070	45,287	11,129	213,182	400,679
Individuals	4,295	11,509	13,019	11,086	10,192	7,778	12,709	2,007	146,935	219,530
Total deposits	41,850	37,304	59,838	25,403	28,222	27,855	57,996	13,164	367,402	659,034
Other liabilities										
Derivative instruments	1,374	4,499	1,684	1,171	1,088	3,911	8,588	8,060	–	30,375
Acceptances	9,609	3,633	251	–	–	–	–	–	–	13,493
Securities sold but not yet purchased (3)	29,376	–	–	–	–	–	–	–	–	29,376
Securities lent or sold under repurchase agreements (3)	69,142	10,747	7,439	878	–	452	–	–	–	88,658
Securitization and structured entities' liabilities	30	1,656	334	2,810	1,169	4,946	12,577	3,367	–	26,889
Other	10,301	804	102	109	181	798	1,326	3,706	19,100	36,427
Total other liabilities	119,832	21,339	9,810	4,968	2,438	10,107	22,491	15,133	19,100	225,218
Subordinated debt	–	–	–	–	–	–	–	8,416	–	8,416
Total Equity	–	–	–	–	–	–	–	–	56,593	56,593
Total Liabilities and Equity	161,682	58,643	69,648	30,371	30,660	37,962	80,487	36,713	443,095	949,261

(1) Deposits payable on demand and payable after notice have been included under no maturity.

(2) Deposits totalling $27,353 million as at October 31, 2020 have a fixed maturity date; however, they can be early redeemed (either fully or partially) by customers without penalty. These are classified as payable on a fixed date due to their stated contractual maturity date. BMO does not expect a significant amount to be redeemed before maturity.

(3) Presented based on their earliest maturity date.

										2020
(Canadian $ in millions)	0 to 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 2 years	2 to 5 years	Over 5 years	No maturity	Total
Off-Balance Sheet Commitments										
Commitments to extend credit (1)	1,789	5,617	11,163	12,287	14,289	31,607	95,881	6,595	–	179,228
Backstop liquidity facilities	–	–	–	–	–	5,601	–	–	–	5,601
Leases	–	–	3	3	3	38	158	786	–	991
Securities lending	4,349	–	–	–	–	–	–	–	–	4,349
Purchase obligations	14	27	38	38	56	162	179	62	–	576

(1) Commitments to extend credit exclude personal lines of credit and credit cards that are unconditionally cancellable at BMO's discretion. A large majority of these commitments expire without being drawn upon. As a result, the total contractual amounts may not be representative of the funding likely to be required for these commitments.

Material presented in a blue-tinted font above is an integral part of the 2020 audited annual consolidated financial statements (refer to page 73).

(Canadian $ in millions)	0 to 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 2 years	2 to 5 years	Over 5 years	No maturity	Total 2019
On-Balance Sheet Financial Instruments										
Assets										
Cash and cash equivalents	47,844	–	–	–	–	–	–	–	959	48,803
Interest bearing deposits with banks	4,088	1,893	1,081	714	211	–	–	–	–	7,987
Securities	2,680	3,420	2,797	3,508	4,670	15,001	46,687	66,005	44,670	189,438
Securities borrowed or purchased under resale agreements	74,972	22,091	5,254	859	518	–	310	–	–	104,004
Loans										
Residential mortgages	1,691	2,059	5,285	6,818	7,138	22,309	68,143	10,297	-	123,740
Consumer instalment and other personal	645	519	991	1,272	1,502	4,823	22,391	11,947	23,646	67,736
Credit cards	–	–	–	–	–	–	–	–	8,859	8,859
Business and government	12,490	7,072	6,168	7,760	6,547	24,687	87,486	20,331	55,068	227,609
Allowance for credit losses	–	–	–	–	–	–	–	–	(1,850)	(1,850)
Total loans, net of allowance	14,826	9,650	12,444	15,850	15,187	51,819	178,020	42,575	85,723	426,094
Other Assets										
Derivative instruments	1,209	1,867	877	830	911	2,375	5,095	8,980	–	22,144
Customers' liability under acceptances	20,694	2,562	173	159	5	–	–	–	–	23,593
Other	1,951	593	245	12	5	7	5	4,475	22,839	30,132
Total other assets	23,854	5,022	1,295	1,001	921	2,382	5,100	13,455	22,839	75,869
Total Assets	168,264	42,076	22,871	21,932	21,507	69,202	230,117	122,035	154,191	852,195

(Canadian $ in millions)	0 to 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 2 years	2 to 5 years	Over 5 years	No maturity	Total 2019
Liabilities and Equity										
Deposits (1)(2)										
Banks	12,177	4,187	1,215	319	1,174	-	-	201	4,543	23,816
Business and government	21,088	28,511	21,209	22,334	18,023	22,983	49,292	11,759	147,958	343,157
Individuals	3,607	8,932	12,080	13,390	15,706	11,418	13,257	2,031	120,749	201,170
Total deposits	36,872	41,630	34,504	36,043	34,903	34,401	62,549	13,991	273,250	568,143
Other liabilities										
Derivative instruments	1,329	2,574	1,240	970	1,032	2,985	6,798	6,670	–	23,598
Acceptances	20,694	2,562	173	159	5	–	–	–	–	23,593
Securities sold but not yet purchased (3)	26,253	–	–	–	–	–	–	–	–	26,253
Securities lent or sold under repurchase agreements (3)	74,501	7,697	760	1,107	–	2,285	306	–	–	86,656
Securitization and structured entities' liabilities	1	1,655	1,340	1,033	1,038	5,350	13,779	2,963	–	27,159
Other	12,325	3,188	33	29	74	537	3,596	2,406	16,534	38,722
Total other liabilities	135,103	17,676	3,546	3,298	2,149	11,157	24,479	12,039	16,534	225,981
Subordinated debt	–	–	–	–	–	–	–	6,995	–	6,995
Total Equity	–	–	–	–	–	–	–	–	51,076	51,076
Total Liabilities and Equity	171,975	59,306	38,050	39,341	37,052	45,558	87,028	33,025	340,860	852,195

(1) Deposits payable on demand and payable after notice have been included under no maturity.
(2) Deposits totalling $30,051 million as at October 31, 2019 have a fixed maturity date; however, they can be early redeemed (either fully or partially) by customers without penalty. These are classified as payable on a fixed date due to their stated contractual maturity date. BMO does not expect a significant amount to be redeemed before maturity.
(3) Presented based on their earliest maturity date.

Certain comparative figures have been reclassified to conform with the current year's presentation.

(Canadian $ in millions)	0 to 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 2 years	2 to 5 years	Over 5 years	No maturity	Total 2019
Off-Balance Sheet Commitments										
Commitments to extend credit (1)	1,868	3,777	5,698	8,832	12,511	21,574	102,113	5,643	–	162,016
Backstop liquidity facilities	–	–	–	–	–	–	5,550	–	–	5,550
Leases	32	66	98	97	96	361	931	2,119	–	3,800
Securities lending	4,102	–	–	–	–	–	–	–	–	4,102
Purchase obligations	53	98	138	133	137	111	187	69	–	926

(1) Commitments to extend credit exclude personal lines of credit and credit cards that are unconditionally cancellable at BMO's discretion. A large majority of these commitments expire without being drawn upon. As a result, the total contractual amounts may not be representative of the funding likely to be required for these commitments.

Caution

This Liquidity and Funding Risk section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Material presented in a blue-tinted font above is an integral part of the 2020 audited annual consolidated financial statements (refer to page 73).

Operational Risk

Operational risk is the potential for loss or harm resulting from inadequate or failed internal processes or systems, human errors or conduct or external events, but excludes business risk, credit risk, market risk, liquidity risk and other financial risk.

Operational risk is inherent in all of BMO's business and banking activities and can lead to significant impacts on its business and financial results, including financial loss, restatements and damage to BMO's reputation. Like other financial services organizations that operate in multiple jurisdictions, the bank is exposed to a variety of operational risks arising from the potential for failures of its internal processes, employees and technology systems, as well as from external threats. Potential losses may result from process and control failures, theft and fraud, unauthorized transactions by employees, regulatory non-compliance, business disruption, information security breaches, cyber security threats, exposure to risks related to third-party relationships, and damage to physical assets. Given the large volume of transactions the bank processes on a daily basis, and the complexity and speed of its business operations, there is a possibility that certain operational or human errors may be repeated or compounded before they are discovered and rectified.

Operational risk is not only inherent in the bank's business and banking activities, it is also inherent in the processes and controls used to manage the risks. There is the possibility that errors will occur, as well as the possibility of a failure in the bank's internal processes or systems, which could lead to financial loss and reputational harm. Shortcomings or failures of internal processes, employees or systems, or of services and products provided by third parties, including any of BMO's financial, accounting or other data processing systems, could lead to financial loss or restatements and damage its reputation.

The nature of the business also exposes the bank to the risk of theft and fraud when it enters into credit transactions with customers or counterparties. In extending credit, BMO relies on the accuracy and completeness of any information provided by, and any other representations made by, customers and counterparties. While the bank conducts appropriate due diligence on such customer information and, where practicable and economically feasible, engages valuation experts and other experts or sources of information to assist in assessing the value of collateral and other customer risks, its financial results may be adversely impacted if the information provided by customers or counterparties is materially misleading and this is not discovered during the due diligence process.

BMO applies various risk management frameworks to manage and mitigate all of these risks, including internal controls, limits and governance processes. However, despite the contingency plans the bank has in place to maintain the ability to serve its clients and minimize disruptions and adverse impacts, and the contingency plans its third-party service providers have in place, the ability to conduct business may be adversely affected by a disruption to the infrastructure that supports both the operations and the communities in which the bank does business, including but not limited to disruption caused by public health emergencies or terrorist acts.

BMO regularly reviews its top and emerging risks, and assesses its preparedness to proactively manage the risks that the bank faces or could face in the future. For more information on these and other factors that may affect future results, please refer to the discussion on page 73.

Consistent with the management of risk across the enterprise, BMO employs a three-lines-of-defence approach in managing operational risk. Operational risk is managed by the operating groups, including Technology & Operations, and Corporate Services as the first line of defence. These groups are accountable for the risks arising from their businesses, activities and exposures. The first line is overseen by ERPM and Legal & Regulatory Compliance as the second line of defence, which is governed by a robust committee structure and supported by a comprehensive Operational Risk Management Framework (ORMF). The Corporate Audit Division, as the third line of defence, assesses BMO's adherence to internal controls and limits, and identifies opportunities to strengthen its processes.

Operational Risk Governance

The Operational Risk Committee (ORC), a sub-committee of the RMC, is the primary governance committee exercising oversight of all operational risk management matters. As part of its governance responsibilities, the ORC provides effective challenge to the corporate policies, standards, directives, operating guidelines, methodologies and tools that comprise the governing principles of the ORMF. The documentation that gives effect to these governing principles is reviewed on a regular basis to ensure it incorporates sound practices and is consistent with BMO's risk appetite. Regular analysis and reporting of its enterprise operational risk profile to the various committees (ORC, RMC and RRC) are important elements of the bank's risk governance framework. Enterprise reporting provides an integrated view of top and emerging risks, trends in loss data, capital consumption, key risk indicators and operating group profiles. BMO continues to invest in its reporting platforms and supports timely and comprehensive reporting capabilities in order to enhance risk transparency and facilitate the proactive management of operational risk exposures.

Operational Risk Management

The operating groups, as the first line of defence, are accountable for the day-to-day management of operational risk, including the CROs of businesses, who provide governance and oversight for their respective business units, and Corporate Services, which provides additional governance and oversight in certain targeted areas. Independent risk management oversight is provided by the Operational Risk Management (ORM) team, which is responsible for operational risk strategy, tools and policies, and for second-line oversight, effective challenge and governance. ORM establishes and maintains the ORMF, which defines the processes to be used by the first line of defence to identify, measure, manage, mitigate, monitor and report on key operational risk exposures, losses and near-miss operational risk events with significant potential impact. In addition, the ORMF defines the processes by which ORM, as the second line of defence, guides, supports, monitors, assesses and communicates with the first line in its management of operational risk. Operational Risk Officers (OROs) within ORM independently assess group operational risk profiles, identify material exposures and potential weaknesses in processes and controls, and recommend appropriate mitigation strategies and actions. Executing BMO's ORMF strategy also involves continuing to strengthen its risk culture by promoting greater awareness and understanding of operational risk across all three lines of defence, learning from loss events and near-misses, and providing other training and communication, as well as day-to-day execution and oversight of the ORMF. The bank also continues to strengthen its second-line-of-defence support and oversight with an enhanced Operational Risk Operating Model that takes a differentiated approach based on the nature of the underlying risk and existing BMO structures.

The following are the key programs, methodologies and processes set out in the ORMF that assist BMO in the ongoing review of its operational risk profile:

- **Risk Control Self-Assessment (RCSA)** is an established process used by the bank's operating groups to identify the key risks associated with their businesses and the controls required for risk mitigation. The RCSA process provides a forward-looking view of the impact of the business environment and internal controls on operating group risk profiles, enabling the proactive prevention, mitigation and management of risk. The RCSA process incorporates Process Risk and Control Assessments (PRCAs), when applicable. PRCAs take a deeper view by identifying key risks and controls of critical business processes in order to enable a greater understanding of issues and risk mitigation activities, which facilitates more effective oversight and appropriate risk management.
- **ORM Reviews** take a risk-based approach, aligned with ORM strategic objectives, in selecting topics to focus on the root causes of control challenges, the applicability of remediation activities and the application of lessons learned across the organization. This approach drives action, as well as validates and effectively challenges selected events/issues, while being mindful of other risk assessments and oversight being conducted by ORM and other groups.
- **ORM** provides an independent enterprise-level view of operational risk relative to the bank's **risk appetite**, so that key risks can be appropriately identified, documented, managed and mitigated.
- BMO's **Initiative Assessment and Approval Process (IAAP)** is used to assess, document and approve qualifying initiatives when a new business, service or product is developed or existing services and products are enhanced. The process seeks to ensure that due diligence, approval, monitoring and reporting requirements are appropriately addressed at all levels of the organization.
- **Key Risk Indicators (KRIs)** provide an early indication of any adverse changes in risk exposure. Operating groups and Corporate Services identify specific metrics related to their material operational risks. KRIs are used in monitoring operational risk profiles and their overall relation to the bank's risk appetite, are subject to review and challenge by ORM, and are linked to thresholds that trigger management intervention.
- **Operational Risk Issues Management** identifies and proactively manages and mitigates issues that may prevent the bank from meeting its objectives, and is an indicator of a mature risk culture. Issue severity assessments provide management with the information necessary to prioritize resources in a risk-based manner. Issues can be identified by management, as well as by other risk frameworks, Corporate Audit or external regulators.
- **Internal loss data** serves as an important means of assessing the bank's operational risk exposure and identifying opportunities for future risk prevention. In these assessments, internal loss data is analyzed and benchmarked against available external data. Material trends are regularly reported to the ORC, RMC and RRC so that preventative or corrective action can be taken where appropriate. BMO is a member of the Operational Risk Data Exchange Association, the American Bankers Association and other national and international associations of banks that share loss data information anonymously to assist in risk identification, assessment and modelling.
- BMO's **Top and Emerging Operational Risks** program identifies the internal and external operational risks for the bank, informed by both bottom-up and top-down inputs. The program provides a baseline for discussion that complements knowledge and discussion at the senior leader level, allowing actions to be determined by an alignment of strategic direction and prioritized top and emerging risks.
- **Scenario analysis** assesses how severe negative events may impact key risks and critical business processes in order to inform risk management. Scenarios help management identify and understand the impact of large-scale events, including events that have a low frequency of occurrence but a high severity of impact, as well as environmental stresses on the business, and identify any mitigation actions or controls that will help manage tail risks.
- BMO's **operational risk management training** seeks to ensure that its employees are qualified and equipped to execute the ORMF consistently, effectively and efficiently.
- Effective **business continuity management** prepares the bank to maintain, manage and recover critical operations and processes in the event of a business disruption, thereby minimizing any adverse effects on the bank's customers and other stakeholders.
- BMO's **Corporate Risk & Insurance team** provides a second level of mitigation for certain operational risk exposures. The bank purchases insurance when required by law, regulation or contractual agreement, and when it is economically attractive and practicable to mitigate its risks, in order to provide adequate protection against unexpected material loss.

A primary objective of the ORMF, and BMO's implementation and oversight of this framework and its provisions, is to ensure that its operational risk profile is consistent with its risk appetite and supported by adequate capital, while continuing to adapt to ongoing changes by focusing on enhanced operational resilience. Operational resilience is more than recovery from a disaster, it is the ability to identify and monitor risks in order to either prevent any related incidents or minimize their impact. It involves the capability of the bank to deal with unpredictable events and adapt to changes to external circumstances. Operational resilience is not a defensive strategy, but a positive, forward-looking strategic enabler, which allows the bank to take measured risks with confidence. Robust, resilient organizations are flexible and proactive. Operational resilience is intended to "harden" the bank, so it can withstand challenges in the market arising from both expected and unexpected events, and is the increasing focus of regulatory attention.

The following are examples of operational risks which may adversely affect BMO's business and financial results. As a result of COVID-19, and the rapid migration to working-from-home for both the bank's employees and third parties, a number of risks have been amplified, such as cyber security, information security and privacy risks. For more information, refer to the Top and Emerging Risks That May Affect Future Results section on page 73.

Cyber Security Risk

Information security is integral to BMO's business activities, brand and reputation. BMO faces common banking security risks, given the ever increasing reliance on the internet, coupled with the remote work environment and extensive dependence on advanced digital technologies to process data. These include the threat of potential data loss, hacking, exposure of customer or employee information, identity theft and fraud, as well as the possibility of denial of service resulting in system failure and service disruption. The bank continues to evolve its capabilities and increase its ongoing investments in the Financial Crimes Unit, demonstrating the commitment to bringing together cyber defences, fraud and physical security functions, as well as subject matter experts across business groups. In addition, it is enhancing processes to make them more resilient, while improving the ability to prevent, detect and recover from cyber security threats, keeping the bank's customers and employees safe. BMO continues to benchmark and review best practices across peer companies and other industries, conduct third-party assessments of its controls, evaluate the effectiveness of its key controls, develop new controls, and invest in both technology and human resources. It also works with various third-party security and software suppliers to bolster internal resources and technology capabilities in order to strengthen BMO's resilience in a rapidly evolving threat landscape.

Technology Disruption and Resiliency

Technology is the backbone of BMO's operations, and the bank continues to innovate and invest in enhancing its technical capabilities in order to keep customers safe and to match and surpass their expectations, as digital banking becomes the new normal. In addition to existing technology risks, the COVID-19 pandemic has introduced unprecedented challenges and emerging risks as the bank's clients, employees and suppliers increasingly rely on technology platforms and the Internet of Things (IoT) to manage and support their personal, business and investment banking activities. Given the extent to which the bank's operations rely on technology, its objective is to maintain platforms that provide high levels of operational reliability and resilience, particularly with respect to business-critical systems. Technology innovations, such as advanced data, analytical tools and artificial intelligence are being developed and leveraged to provide insights that improve the way that BMO does business and serves its customers.

Third-Party Risk

BMO continues to strategically expand the use of third parties to gain rapid access to new technologies, increase efficiencies, and improve competitiveness and performance. This increases the reliance on the bank's third parties and sub-contractors to effectively deliver products and services to its customers, and exposes it to the risk of business disruption and financial loss stemming from the breakdown of processes and controls at its third parties and their sub-contractors. To manage this risk, BMO has an enterprise-wide risk management program that is designed to identify, assess, manage and report risks stemming from the use of third parties through all stages of the third-party life cycle. This program is underpinned by a robust Third-Party Risk Management Framework that establishes minimum requirements for management of this risk, in line with BMO's organizational strategy and risk appetite. The bank continues to enhance its third-party risk management capabilities to ensure robust risk management, operational resilience, and compliance with relevant regulatory requirements.

Anti-Money Laundering

Compliance with all Anti-Money Laundering, Anti-Terrorist Financing (AML/ATF) and Sanctions Measures is an integral part of safeguarding BMO, its customers and the communities in which the bank operates. BMO is committed to managing AML/ATF and sanctions risks prudently, and complying with all laws and regulations. Risks related to non-compliance with these requirements can include enforcement action, legal action and damage to the bank's reputation. Under the direction of the Chief Anti-Money Laundering Officer (CAMLO), BMO's AML/ATF and sanctions compliance program promotes effective governance and oversight across all BMO businesses, ensuring that appropriate policies, risk assessments and training are in place, including mandatory annual training for all employees. BMO's AML compliance program applies analytics, technology and professional expertise in order to deter, detect and report suspicious activity. The CAMLO regularly reports to the Audit and Conduct Review Committee (ACRC) of the Board and to senior management on the effectiveness of the AML compliance program. Recent amendments to Canada's AML/ATF regime that come into effect in June 2021 are intended to improve the regime's effectiveness and further align it with international standards. These amendments increase the amount of data required to be collected and expand mandatory reporting, which requires modifications to customer, transaction and record management systems and processes. BMO is committed to making the changes necessary to comply with these new laws and regulations.

Model Risk

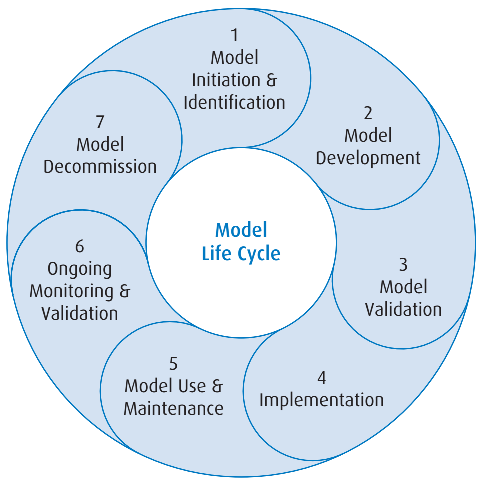
Model risk is the potential for adverse consequences following from decisions that are based on incorrect or misused model results. These adverse consequences can include financial loss, poor business decision-making or damage to reputation.

Model risk arises from the use of quantitative analytical tools that apply statistical, mathematical, economic, algorithmic or other advanced techniques such as artificial intelligence (AI) and machine learning (ML) to process input data and generate quantitative estimates. BMO uses these analytical tools ranging from very simple models that produce straightforward estimates to highly sophisticated models that value complex transactions or generate a broad range of forward-looking estimates. These tools produce results that are used to inform business, risk and capital management decision-making, and to assist in making daily lending, trading, underwriting, funding, investment and operational decisions.

These quantitative analytical tools provide important insights and are effective when used within a framework that identifies key assumptions and limitations, while controlling and mitigating model risk. In addition to applying judgment to evaluate the reliability of model results, BMO mitigates model risk by maintaining strong controls over the development, validation, implementation and use of models across all model categories. BMO also takes steps to ensure that qualitative model overlays and non-statistical approaches to evaluating risks are intuitive, experience-based, well-documented and subject to effective challenge by those with sufficient expertise and knowledge, in order to provide reasonable results.

Model Risk Management Framework

Risk is inherent in models because model results are estimates which rely on statistical, mathematical or other quantitative techniques that approximate reality to transform data into estimates or forecasts of future outcomes. Model risk also arises from the potential for misuse of models or model output. Model risk is governed at BMO by the enterprise-wide Model Risk Management Framework.



This framework sets out an end-to-end approach for model risk governance across the model life cycle and helps to ensure that model risk remains within the limits of the bank's risk appetite. The framework includes BMO's Model Risk Corporate Policy, Model Risk Guidelines and supporting operating procedures, which outline explicit principles for managing model risk, detail model risk management processes, and define the roles and responsibilities of all stakeholders across the model life cycle. Model owners, developers and users are the first line of defence, the Model Risk group is the second line of defence, and the Corporate Audit Division is the third line of defence.

The Model Risk group is responsible for the development and maintenance of a risk-based Model Risk Management Framework and for ensuring that the framework is compliant with regulatory expectations, as well as for oversight of the effectiveness of model processes, model inventory, and the overall aggregation, assessment and reporting of model risk. This framework has been updated with guidance to facilitate the management of risks related to advances in automated decision-making, such as algorithmic trading, as well as AI and ML. The Model Risk Management Committee (MRMC), a sub-committee of the RMC, is a cross-functional group representing all key stakeholders across the enterprise. The MRMC meets regularly to help direct the bank's use of models, to oversee the development, implementation and maintenance of the Model Risk Management Framework, to provide effective challenge and to discuss governance of the enterprise's models.

Outcomes Analysis and Back-Testing

Once models are validated, approved and in use, they are subject to ongoing monitoring, including outcomes analysis, at varying frequencies. As a key component of outcomes analysis, back-testing compares model results against actual observed outcomes. Variances between model forecasts and actual observed outcomes are measured against defined risk materiality thresholds. To ensure that variances remain within the defined tolerance range, actions such as model review and parameter recalibration are taken. Performance is assessed by testing and analyzing performance thresholds, including model overrides, to ensure it remains within an acceptable tolerance range. This analysis serves to confirm the validity of a model's performance over time, which helps to ensure that appropriate controls are in place in order to address identified issues and enhances a model's overall performance.

All models used within BMO are subject to validation and ongoing monitoring to ensure they are used in accordance with its framework. The framework applies to a wide variety of models, ranging from market, credit and operational risk models to stress testing, pricing and valuation, and anti-money laundering models.

Operational Risk Measurement

Beginning in fiscal 2020, OSFI permitted BMO, along with the other AMA-approved banks, to use the Basel II Standardized Approach for determining regulatory capital requirements for enterprise operational risk in the interim period prior to implementation of the new Standardized Measurement Approach, as part of the final Basel III reforms. It is expected that BMO will transition to using the new Basel III Standardized Measurement Approach for regulatory capital reporting beginning in 2023.

Caution

This Operational Risk section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Legal and Regulatory Risk

Legal and regulatory risk is the potential for loss or harm resulting from a failure to comply with laws or satisfy contractual obligations or regulatory requirements. This includes the risks of failure to: comply with the law (in letter or in spirit) or maintain standards of care; implement legislative or regulatory requirements; enforce or comply with contractual terms; assert non-contractual rights; effectively manage disputes; or act in a manner so as to maintain the bank's reputation.

The success of BMO's business relies in part on its ability to manage the exposure to legal and regulatory risk prudently. The financial services industry is highly regulated and subject to strict enforcement of legal and regulatory requirements. Banks globally continue to be subject to fines and penalties for a number of regulatory and conduct issues. As rulemaking and supervisory expectations continue to evolve, the bank monitors developments to enable BMO to respond to and implement any required changes.

Under the direction of BMO's General Counsel, its Legal & Regulatory Compliance group maintains enterprise-wide frameworks that identify, measure, manage, monitor and report on legal and regulatory issues. The bank identifies applicable laws and regulations and potential risks, recommends mitigation strategies and actions, conducts internal investigations, and oversees legal proceedings and enforcement actions. BMO is subject to legal proceedings arising in the ordinary course of business, and the unfavourable resolution of any such legal proceedings could have a material adverse effect on its financial results and damage its reputation. BMO is required to disclose material legal proceedings to which it is a party. Its disclosure controls and procedures are designed to provide reasonable assurance that all relevant information is gathered and reported to senior management on a timely basis so that appropriate decisions can be made regarding public disclosure. In assessing the materiality of legal proceedings, factors considered include a case-by-case assessment of specific facts and circumstances, the bank's past experience and the opinions of legal experts. Another area of focus is the oversight of fiduciary risk related to any of BMO's businesses which provide products or services that give rise to fiduciary duties, as well as policies and practices that address the responsibilities of a business to a customer (including service requirements and expectations, customer suitability determinations, disclosure obligations and communications).

Safeguarding the bank's customers, employees, information and assets from exposure to criminal risk is an important priority. Criminal risk is the potential for loss or harm resulting from a failure to comply with criminal laws and includes acts by employees against BMO, acts by external parties against BMO and acts by external parties using BMO to engage in unlawful conduct, such as fraud, theft, money laundering, violence, cyber-crime, bribery and corruption.

As governments globally seek to curb corruption and counter its negative effects on political stability, sustainable economic development, international trade and investment and other areas, BMO's Anti-Corruption Office, through its global program, has articulated a set of key principles and activities necessary for the effective oversight of compliance with anti-corruption legislation in jurisdictions in which BMO operates. These include guidance on both identifying and avoiding corrupt practices and rigorously investigating allegations of corrupt activity.

Governments and regulators around the world continue to focus on anti-money laundering and related concerns, raising their expectations concerning the quality and efficacy of anti-money laundering programs and penalizing institutions that fail to meet these expectations. Under the direction of the Chief Anti-Money Laundering Officer (CAMLO), BMO's Anti-Money Laundering Office is responsible for the governance, oversight and assessment of principles and procedures designed to help ensure compliance with laws and regulations and internal risk parameters related to anti-money laundering, anti-terrorist financing and sanctions measures. For additional discussion regarding BMO's operational risk management practices with respect to anti-money laundering, refer to the Anti-Money Laundering section on page 108.

All of these frameworks reflect the three-lines-of-defence operating model described previously. The operating groups and Corporate Services manage day-to-day risks by complying with corporate policies and standards, while Legal & Regulatory Compliance units specifically aligned with each of the operating groups provide advice and independent legal and regulatory risk management oversight.

Heightened regulatory and supervisory scrutiny has a significant impact on the way BMO conducts business. Working with the operating groups and Corporate Services, Legal & Regulatory Compliance assesses and analyzes the implications of regulatory and supervisory changes. BMO devotes substantial resources to the implementation of systems and processes required to comply with new regulations, while also helping the bank meet the needs and demands of its customers. Failure to comply with applicable legal and regulatory requirements may result in legal proceedings, financial losses, regulatory sanctions, enforcement actions, an inability to execute the bank's business strategies, a decline in investor and customer confidence, and damage to its reputation.

BMO recognizes that its business is built on the reputation for good conduct. In recognition of this, it has adopted a wide range of practices beyond its Code of Conduct to support the ethical conduct of its employees. The bank strives to deliver positive outcomes for its customers and contributes to the orderly operation of financial markets, while also maintaining a diverse and inclusive environment for its employees. BMO's Enterprise Culture and Conduct Framework sets out its approach to managing and mitigating potential misconduct. Misconduct is behaviour that falls short of legal, professional, internal conduct and ethical standards. Similar to the bank's approach to other non-financial risks, this framework is supported by its enterprise-wide Risk Management Framework and its focus on maintaining a strong risk culture. The bank reports on various metrics related to culture and conduct, and it engages with other control frameworks across the organization and in all of the jurisdictions in which it operates.

The bank continues to respond to other global regulatory developments, including capital and liquidity requirements. Other global regulatory developments include over-the-counter (OTC) derivatives reform, consumer protection measures and specific financial reforms, which are discussed in further detail below. For additional discussion of the regulatory developments relating to capital management and liquidity and funding risk, refer to the Enterprise-Wide Capital Management section starting on page 63 and the Liquidity and Funding Risk section starting on page 97. For a discussion of the impact of certain other regulatory developments, refer to: Critical Accounting Estimates – Income Taxes and Deferred Tax Assets on page 116; Tax Legislation and Interpretations on page 77 and Fiscal and Monetary Policies and Other Economic Conditions in the Countries in which BMO Conducts Business on page 76 regarding certain potential changes in fiscal policy and tax legislation; and Benchmark Interest Rate Reform on page 75 regarding benchmark reform.

Bank Resolution and Bail-In – In June 2016, legislation required to implement a Bank Recapitalization (Bail-In) Regime was passed by the Canadian government in order to enhance Canada's bank resolution capabilities, in line with international efforts in this area. Final regulations implementing the Bail-In Regime took effect in September 2018. The related Total Loss-Absorbing Capacity (TLAC) requirements take effect in November 2021. For additional discussion of the Bail-In Regime and TLAC requirements, refer to the Enterprise-Wide Capital Management section starting on page 63 and the Liquidity and Funding Risk section starting on page 97.

Consumer and Investor Protection – Regulators globally continue to focus on consumer protection measures, including with respect to seniors and other vulnerable customers, interactions with consumers, and conduct standards for individuals in the financial services industry. In Canada, these measures include amending the *Bank Act* to implement the Financial Consumer Protection Framework and amending the *Financial Consumer Agency of Canada Act* to strengthen the mandate and powers of the Financial Consumer Agency of Canada. Additionally, investor protection reforms to Canadian securities regulatory requirements, including the Client Focused Reforms, are also proceeding. In the United States, Regulation Best Interest introduced a new standard of conduct for broker-dealers working with individual clients. Rules in the United Kingdom introducing greater individual accountability and enhanced conduct standards for employees in financial services under the Senior Managers and Certification Regime extended to all of BMO's U.K. operations in December 2019.

U.S. Regulatory Reform – In May 2018, the U.S. Congress passed the *Economic Growth, Regulatory Relief, and Consumer Protection Act* (EGRRCP), which made reforms to the *Dodd-Frank Wall Street Reform and Consumer Protection Act*, including raising the threshold for heightened prudential standards. In October 2019, the U.S. federal banking agencies finalized rules pursuant to EGRRCP that modify capital and liquidity requirements, single counterparty credit limits and enhanced prudential standards for bank holding companies and foreign banking organizations, including BMO. In two separate rulemakings, in November 2019 and June 2020, the U.S. federal banking agencies finalized rules amending the restrictions on proprietary trading and the ownership and sponsorship of private investment funds by banks and their affiliates.

Other Regulatory Initiatives Impacting Financial Services in Canada – The Department of Finance Canada is undertaking a consultation process regarding the merits of open banking, which would allow Canadian consumers and small businesses to direct federally regulated financial institutions to disclose their banking information through a secure mechanism to entities that meet information security and other requirements. In December 2018, the government of Canada passed legislation enacting the *Pay Equity Act* to redress systemic gender-based discrimination by requiring federal public and private-sector employers to establish and maintain a pay equity plan within set time frames (no effective date as yet). Implementing regulations are required for other earlier amendments to the *Bank Act* to allow banks to undertake broader financial technology activities.

Privacy – There is an increasing focus on data privacy regulation related to the use and safeguarding of personal information, and the bank continues to work towards meeting these evolving global principles. In Canada, significant reform to federal privacy laws is expected, although the timing is now uncertain due to the COVID-19 pandemic. In May 2019, the Canadian government released a Digital Charter with principles for data use, along with proposed privacy law reforms to modernize the legislation and provide stronger regulatory enforcement and oversight. The Office of the Privacy Commissioner of Canada continues to request the ability to fine companies that do not comply with privacy laws. Canada's Competition Bureau has signalled its intent to regulate the digital economy and privacy policies and representations. Canadian companies now can expect to face privacy regulatory oversight from the Competition Bureau, not solely from the various privacy commissioners, who do not currently have the same ability to impose monetary penalties. Outside of Canada, large privacy breach fines and settlements have been issued, demonstrating increasing regulatory vigilance and enforcement. The *California Consumer Privacy Act* (CCPA) came into effect on January 1, 2020, and is currently the most comprehensive state privacy law in the United States. The CCPA includes new and expanded privacy rights for California residents, including access and deletion rights with respect to their personal information. The CCPA follows the General Data Protection Regulation in the EU in many aspects. Other states are expected to pass legislation similar to the CCPA, although the timing is also now uncertain. For additional discussion regarding privacy, refer to the Top and Emerging Risks That May Affect Future Results – Cyber Security, Information Security and Privacy Risk section on page 74 and the Operational Risk – Cyber Security Risk section on page 108.

Derivatives Reform – G20 jurisdictions continue to implement new regulations as part of the OTC derivatives regulatory reform program. BMO continues to monitor and prepare for the impact of OTC derivatives regulatory changes relating to margin, clearing, execution and business conduct rules, some of which have been deferred as a result of the COVID-19 pandemic.

COVID-19 Pandemic – The COVID-19 pandemic has caused unprecedented disruption to global economies. There have been wide-ranging responses to support individuals, businesses and the local and national economy through governmental and regulatory actions, emergency orders and regulatory relief. BMO is engaged with its regulators globally on the pandemic response, including through its participation in various relief programs. For additional discussion of the impact of COVID-19, including governmental and regulatory developments, refer to the Impact of COVID-19 section on page 24, the General Economic Conditions and COVID-19 Pandemic Related Risks section on page 73, and the Regulatory Capital Developments – COVID-19 Related Developments section on page 65.

The General Counsel and the Chief Compliance Officer regularly report to the Audit and Conduct Review Committee (ACRC) of the Board and senior management on the effectiveness of BMO's Enterprise Compliance Program. The program uses a risk-based approach to identify, assess and manage compliance with applicable laws and regulations. The program directs operating groups and Corporate Services to maintain policies, procedures and controls that meet these laws and regulations. Under the direction of the Chief Compliance Officer, BMO identifies and reports on gaps and deficiencies, and tracks remedial action plans. The CAMLO also regularly reports to the ACRC.

All BMO employees must regularly complete legal and regulatory training on topics such as anti-corruption, anti-money laundering and privacy policies, standards and procedures. This is done in conjunction with the bank's Code of Conduct training, which tests employees' knowledge and understanding of the behaviour required of employees of BMO.

Caution

This Legal and Regulatory Risk section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Strategic Risk

Strategic risk is the potential for loss or harm due to changes in the external business environment and failure to respond appropriately to these changes as a result of inaction, ineffective strategies or poor implementation of strategies. Strategic risk also includes business risk, which arises from the specific business activities of the enterprise, and the effects these could have on its earnings.

Strategic risk arises from external risks inherent in the business environment within which BMO operates, as well as from the potential for loss if BMO is unable to address those external risks effectively. While external strategic risks – including economic, geopolitical, regulatory, technological, social and competitive risks – cannot be controlled, the likelihood and magnitude of their impact can be limited through an effective strategic management framework, and certain of these risks, including economic, geopolitical and regulatory risks, can be assessed through stress testing.

BMO's Corporate Strategy team oversees the strategic planning process and works with the lines of business, along with ERPM, Finance and Corporate Services, to identify, monitor and mitigate strategic risk across the enterprise. This rigorous strategic management framework encourages a consistent approach to developing strategies and incorporates information related to financial commitments.

The Corporate Strategy team works with the lines of business and key corporate stakeholders during the strategy development process to promote consistency and adherence to strategic management standards, including considering the results of stress testing as an input into strategic decision-making. The potential impacts of changes in the business environment, such as broad industry trends and the actions of competitors, are considered to be part of this process and inform strategic decisions within each of the lines of business. Enterprise and group strategies are reviewed with the Executive Committee and the Board of Directors annually in interactive sessions that challenge assumptions and strategies in the context of both the current and the potential future business environment.

Business risk, as a component of strategic risk, encompasses the potential causes of earnings volatility that are distinct from credit, market or operational risk factors. BMO's profitability, and hence value, may be eroded by changes in the business environment or by failures of strategy or execution due to changing client expectations or relatively ineffective responses to industry changes. Within BMO, each operating group is responsible for controlling its respective business risk by assessing, managing and mitigating the risks arising from changes in business volumes and cost structures, among other factors.

The ability to execute on the strategic plans developed by management influences BMO's financial performance. If these strategic plans do not meet with success or if there is a change in the strategic plans, earnings could grow at a slower pace or decline. Performance objectives established through the strategic management process are monitored regularly and reported on quarterly, using both leading and lagging indicators of performance, so that strategies can be reviewed and adjusted where necessary. Regular strategic and financial updates are also monitored closely in order to identify any significant emerging risk issues.

Environmental and Social Risk

Environmental and social risk is the potential for loss or harm resulting from environmental or social impacts or concerns, including climate change, related to BMO or its customers.

Environmental and social risk involves a broad spectrum of topics and issues, such as: pollution and waste; energy, water and other resource usage; climate change; biodiversity; human rights; labour standards; community health, safety and security; land acquisition and involuntary resettlement; Indigenous peoples' rights and consultation; and cultural heritage.

Governance

BMO's Sustainability Council, chaired by BMO's General Counsel, is comprised of senior leaders from the lines of business and Corporate Services across the organization, and provides oversight and leadership for its sustainability strategy. The Sustainability team is responsible for coordinating the development and maintenance of an enterprise-wide strategy that meets BMO's overarching environmental and social responsibilities. The Sustainability team works in partnership with the lines of business and Corporate Services, including Risk, the Capital Markets Sustainable Finance team, and the BMO Global Asset Management Responsible Investment team, to manage environmental and social risk within the bank's business, and works with external stakeholders to better understand the consequences and impacts of its operations and financing decisions.

To keep informed of emerging issues, BMO participates in global forums with its peers, maintains an open dialogue with its internal and external stakeholders, and monitors and evaluates policy and legislative changes in the jurisdictions in which it operates. BMO is a member of, and actively engaged in, sustainability-focused working groups of the United Nations Environment Programme – Finance Initiative (UNEP-FI), the Equator Principles Association and the Canadian Bankers' Association.

BMO is a signatory to the United Nations Principles for Responsible Investment, a framework that encourages sustainable investing through the integration of environmental, social and governance considerations into investment decision-making and ownership practices.

Risk Management

As part of BMO's Enterprise-wide Risk Management Framework and Credit Risk Management Framework, the bank evaluates the environmental and social risks associated with credit and counterparty transactions and exposures. It has developed and implemented financing guidelines to address environmental and social risks for specific lines of business. The bank applies enhanced due diligence to transactions with clients operating in environmentally sensitive industry sectors, and it avoids doing business with borrowers that have poor track records in environmental and social risk management. Transactions with significant associated environmental or social concerns may be escalated to BMO's Reputation Risk Management Committee for consideration. BMO has been a signatory to the Equator Principles since 2005 and applies its credit risk management framework to identify, assess and manage the environmental and social risk of transactions within its scope. BMO's Sustainability team also partners with the Procurement and Corporate Real Estate groups to establish environmental management processes. These groups are responsible for establishing and maintaining an operational environmental management system that is aligned with the framework set out in ISO 14001, and for setting objectives and targets that are related to aligning the bank's operations with its Environmental Policy.

Codes of Conduct and Statement on Human Rights

BMO's Board-approved Code of Conduct reflects the commitment to manage its business responsibly. The bank expects its suppliers to be aware of, understand and respect the principles of its Supplier Code of Conduct, which outlines its standards for integrity, fair dealing and sustainability. The bank publicly reports under the United Kingdom *Modern Slavery Act 2015*, and its Supplier Code of Conduct reflects this legislation. BMO's Statement on Human Rights outlines the measures it has taken to uphold the bank's human rights commitments.

Climate Change

BMO supports the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD). BMO tracks and analyzes its own Scope 1 and Scope 2 greenhouse gas (GHG) emissions, as well as Scope 3 GHG emissions associated with its waste generation and business travel.

BMO has initiated work on climate change scenario analysis, in line with the TCFD recommendations. The bank continued to expand its climate scenario analysis work, evaluating both physical and transition risks for a selection of climate-sensitive lending portfolios. It plans to continue expanding such analysis to other sectors and risk types. Further information can be found in BMO's Sustainability Report.

Beyond BMO's ongoing GHG emissions quantification and TCFD alignment efforts, the bank is actively integrating emerging methodologies for assessing and quantifying risks and opportunities. In 2020, it began to implement leading methodologies to estimate the GHG emissions associated with its supply chain and lending activity. The bank is monitoring industry developments, including the development of frameworks and consistent methodologies for such analysis. It continues to assess the credibility, reliability, comparability and decision-making usefulness of such approaches, as well as how they could be incorporated into the climate risk management program and associated disclosures.

Reporting

BMO publicly reports on its environmental and social performance and targets in its annual Sustainability Report, and on the website. Its Sustainability Report is prepared in accordance with the Global Reporting Initiative (GRI) Standards (Core option) and the GRI Financial Services Sector Disclosure, and integrates disclosure frameworks of the TCFD and Sustainability Accounting Standards Board (SASB). The content of the Sustainability Report is shaped by the findings of a materiality assessment process, and its priority topics are aligned with specific Sustainable Development Goals (SDGs) and targets. This report includes the Public Accountability Statements for Bank of Montreal, Bank of Montreal Mortgage Corporation, BMO Life Assurance Company and BMO Life Insurance Company, outlining certain aspects of Bank of Montreal's contributions, and the contributions of its affiliates with operations in Canada, to the Canadian economy and society. These disclosures meet the requirements of the federal government's Public Accountability Statement regulations. Selected environmental and social indicators in the Sustainability Report are assured by the shareholders' auditors.

Refer to the Climate Change and Other Environmental and Social Risks section on page 76 for further discussion of these risks.

Caution

This Environmental and Social Risk section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Reputation Risk

Reputation risk is the potential for loss or harm to the BMO brand. It can arise even if other risks are managed effectively.

BMO's reputation is built on its commitment to high standards of business conduct and ethics, and is one of its most valuable assets. By protecting and maintaining its reputation, the bank safeguards its brand, increases shareholder value, reduces its cost of capital, improves employee engagement, and preserves customer loyalty and trust.

The bank manages risks to its reputation by considering the potential reputational impact of all business activities, including strategy development and implementation, transactions and initiatives, product and service offerings, and events or incidents impacting BMO, as well as day-to-day decision-making and conduct. The bank considers its reputation in everything that it does.

BMO's Code of Conduct is the foundation of its ethical culture and it provides employees with guidance on the behaviour that is expected of them, so that they can make the right choice in decisions that affect its customers and stakeholders. Continual reinforcement of the principles set out in the Code of Conduct minimizes risks to the bank's reputation that may result from poor decisions or behaviour. Recognizing that non-financial risks can negatively affect BMO as significantly as financial risks, it actively promotes a culture which encourages employees to raise concerns and supports them in doing so, with zero tolerance for retaliation.

BMO's corporate governance practices and enterprise-wide Risk Management Framework have controls in place to manage risks to its reputation. The bank seeks to identify activities or events that could impact its reputation with customers, regulators or other stakeholders. Where BMO identifies a potential risk to its reputation, it takes steps to assess and manage that risk. Instances of significant or heightened exposure to reputation risk are escalated to BMO's Reputation Risk Management Committee for review. As misconduct can impact the bank's reputation, the Chief Ethics and Conduct Officer, who is responsible for enterprise-wide reporting on corporate culture and employee conduct, escalates instances of misconduct involving significant reputation risk to BMO's Reputation Risk Management Committee, as appropriate.

Accounting Matters and Disclosure and Internal Control

Critical Accounting Estimates

The most significant assets and liabilities for which BMO must make estimates include: allowance for credit losses; financial instruments measured at fair value; pension and other employee future benefits; impairment of securities; income taxes and deferred tax assets; goodwill and intangible assets; insurance-related liabilities; and provisions, including legal provisions. BMO makes judgments in assessing whether substantially all risks and rewards have been transferred in respect of transfers of financial assets and whether it controls structured entities (SEs). These judgments are discussed in Notes 6 and 7 on pages 165 and 166, respectively, of the consolidated financial statements. Note 17 on page 186 of the consolidated financial statements provides further details on the estimates and judgments made in determining the fair value of financial instruments. If actual results were to differ from estimates, the impact would be recorded in future periods.

The full extent of the impact that COVID-19, including government and regulatory responses to the pandemic, will have on the Canadian and U.S. economies and the bank's business remains uncertain and difficult to predict at this time. By their very nature, the judgments and estimates the bank makes for the purposes of preparing financial statements relate to matters that are inherently uncertain. However, BMO has detailed policies and control procedures that are intended to ensure the judgments made in estimating these amounts are well controlled, independently reviewed and consistently applied from period to period. BMO believes that the estimates of the value of its assets and liabilities are appropriate.

For a more detailed discussion of the use of estimates, refer to Note 1 on page 150 of the consolidated financial statements.

Allowance for Credit Losses

The allowance for credit losses (ACL) consists of allowances on impaired loans, which represent estimated losses related to impaired loans in the portfolio provided for but not yet written off, and allowances on performing loans, which is the bank's best estimate of impairment in the existing portfolio for loans that have not yet been individually identified as impaired. BMO's approach to establishing and maintaining the allowance on performing loans is based on the requirements of IFRS, considering the guideline issued by the Office of the Superintendent of Financial Institutions Canada (OSFI). Under the IFRS 9 expected credit loss (ECL) methodology, an allowance is recorded for expected credit losses on financial assets regardless of whether there has been actual impairment. ECL is calculated on a probability-weighted basis, based on the economic scenarios described below, and is calculated for each exposure in the portfolio as a function of the probability of default (PD), exposure at default (EAD) and loss given default (LGD), with the timing of the loss also considered. Where there has been a significant increase in credit risk, lifetime ECL is recorded; otherwise 12 months of ECL is generally recorded. Significant increase in credit risk takes into account many different factors and will vary by product and risk segment. The main factors considered in making this determination are the change in PD since origination and certain other criteria, such as 30-day past due and watchlist status. In cases where borrowers have opted to participate in payment deferral programs the bank offered in response to the COVID-19 pandemic, deferred payments are not considered to be past due and do not on their own indicate a significant increase in credit risk, consistent with OSFI guidance. BMO may apply experienced credit judgment to reflect factors not captured in the results produced by the ECL models, as it deems necessary. During fiscal 2020, the bank has applied experienced credit judgment to reflect the impact of the extraordinary and highly uncertain environment on credit conditions and the economy as a result of the COVID-19 pandemic. The bank has controls and processes in place to govern the ECL process, including judgments and assumptions used in the determination of the allowance on performing loans. These judgments and assumptions will change over time, and the impact of the change will be recorded in future periods.

In establishing the allowance on performing loans, BMO attaches probability weightings to three economic scenarios, which are representative of its view of possible forecast economic conditions – a base case scenario, which in the bank's view represents the most probable outcome, and is described below, as well as benign and adverse scenarios, all developed by the Economics group. The adverse scenario is also described below, with the focus on such a scenario, given current economic uncertainty. The allowance on performing loans is sensitive to changes in economic forecasts and the probability weight assigned to each forecast scenario. When changes in economic performance in the forecasts are measured, the bank uses real GDP as the basis, which acts as the key driver for movements in many of the other economic and market variables used, including the equity volatility index (VIX), corporate BBB credit spreads, unemployment rates, housing price indices and consumer credit. In addition, BMO also considers industry-specific variables, where applicable. Many of the variables have a high degree of interdependency and, as such, there is no one single factor to which loan impairment allowances as a whole are sensitive. Holding all else equal, as economic variables worsen, the allowance on performing loans would increase and conversely, as they improve, the allowance would decrease. In addition, assuming all variables are held constant, an increase in loan balances or a deterioration in the credit quality of the loan portfolio would both drive an increase in the allowance on performing loans.

BMO's total allowance on credit losses as at October 31, 2020 was $3,814 million ($2,094 million as at October 31, 2019), comprised of an allowance on performing loans of $3,075 million and an allowance on impaired loans of $739 million ($1,609 million and $485 million, respectively, as at October 31, 2019). The allowance on performing loans increased $1,466 million year-over-year, primarily driven by the impact of COVID-19 on the macroeconomic outlook, and the impact of a more difficult and uncertain environment on credit conditions, as well as a more severe adverse scenario and increased adverse scenario weight.

As at October 31, 2020, the base case economic forecast used to calculate the allowance depicts a contracting Canadian economy, as the real GDP growth rate in the last calendar quarter of 2020 is forecasted to decline 3.5%, compared with the fourth quarter of 2019, due to the impact of COVID-19 before rebounding 6.0% in 2021, as a result of policy stimulus. Annual real GDP is expected to average 3.0% in 2022, as the economic recovery continues and spending returns to pre-COVID-19 levels. The Canadian unemployment rate is forecasted to decline steadily, but remains elevated, averaging 8.0% in 2021 and 7.1% in 2022. The U.S economy follows a similar trajectory, with U.S. real GDP forecasted to decline 4.5% in the last calendar quarter of 2020, compared with the fourth quarter of 2019, before growing 4.0% in 2021 and 3.0% in 2022. The U.S. unemployment rate is forecasted to fall to an average of 6.8% in 2021 and 5.6% in 2022. This is in contrast to the base case economic forecast as at October 31, 2019, which depicted moderate economic growth in both Canada and the United States over the projection period. If the bank assumes a 100% base case economic forecast and includes the impact of loan migration by restaging, with other assumptions held constant, including the application of experienced credit judgment, the allowance on performing loans would be approximately $2,375 million as at October 31, 2020 ($1,325 million as at October 31, 2019), compared with the reported allowance on performing loans of $3,075 million ($1,609 million as at October 31, 2019). The increase in the 100% base case scenario year-over-year is primarily driven by changes in the macroeconomic environment, as a result of COVID-19 and the resulting impact on credit conditions.

As at October 31, 2020, BMO's adverse case economic forecast depicts a more severe contraction of the Canadian economy for the remainder of 2020, with real GDP then declining by a further 2.1% in 2021, before recovering 0.8% in 2022. In the adverse case scenario, the forecasted impact of COVID-19 is more severe and renewed restrictions on a broad range of activity lead to a sustained steep decline in consumer and business confidence in contrast to the base case forecast. The Canadian unemployment rate averages 12.8% in the fourth calendar quarter of 2020, 13.8% in 2021, and 13.9% in 2022. Real GDP in the U.S. continues to decline in 2020 with a further contraction of 2.9% in 2021, before recovering 0.8% in 2022. The U.S. unemployment rate averages 11.6% in the fourth calendar quarter of 2020, 12.6% in 2021, and 12.7% in 2022. This is in contrast to the adverse scenario forecast as at October 31, 2019, which depicted a more typical recession with the economy contracting 3% over one year, followed by a steady recovery through the end of the projection period. If the bank assumes a 100% adverse economic forecast and includes the impact of loan migration by restaging, with other assumptions held constant, including the application of experienced credit judgment, the allowance on performing loans would be approximately $4,875 million as at October 31, 2020 ($2,800 million as at October 31, 2019), compared with the reported allowance on performing loans of $3,075 million ($1,609 million as at October 31, 2019). The increase in the 100% adverse scenario year-over-year is primarily driven by a more severe downturn than was forecasted as at October 31, 2019, reflecting the potential impact of COVID-19 on the macroeconomic outlook.

Actual results in a recession will differ, as the portfolio will change through time due to migration, growth, risk mitigation actions and other factors. In addition, the allowance will reflect the three economic scenarios used in assessing the allowance, with weightings attached to adverse and benign scenarios that are often unequally weighted, and those weightings will change over time.

The following tables show the key economic variables used to estimate the allowance on performing loans during the forecast period. The values shown represent the national annual average values for calendar 2020 for the base case scenario, and calendar 2021 and 2022 for all scenarios. While the values disclosed below are national variables, the bank uses regional variables in its underlying models and considers factors impacting particular industries where considered appropriate.

	As at October 31, 2020							As at October 31, 2019						
All figures are average annual values	**Benign scenario**		**Base scenario**			**Adverse scenario**		Benign scenario		Base scenario			Adverse scenario	
	2021	**2022**	**2020**	**2021**	**2022**	**2021**	**2022**	2020	2021	2019	2020	2021	2020	2021
Real GDP growth rates (1)														
Canada	**9.0%**	**4.0%**	**(5.5)%**	**6.0%**	**3.0%**	**(2.1)%**	**0.8%**	2.9%	2.5%	1.5%	1.7%	1.6%	(2.3)%	0.5%
United States	**7.0%**	**3.7%**	**(4.5)%**	**4.0%**	**3.0%**	**(2.9)%**	**0.8%**	2.4%	2.4%	2.3%	1.8%	1.9%	(2.0)%	0.6%
Corporate BBB 10-year spread														
Canada	**1.8%**	**2.0%**	**2.3%**	**2.2%**	**2.2%**	**4.5%**	**4.0%**	2.0%	2.1%	2.1%	2.3%	2.3%	4.5%	4.1%
United States	**1.6%**	**1.8%**	**2.2%**	**2.0%**	**2.1%**	**4.4%**	**3.7%**	1.8%	2.0%	1.9%	2.3%	2.4%	4.1%	3.6%
Unemployment rates														
Canada	**6.4%**	**5.9%**	**9.6%**	**8.0%**	**7.1%**	**13.8%**	**13.9%**	5.1%	5.0%	5.7%	5.7%	5.9%	8.5%	9.0%
United States	**5.2%**	**4.6%**	**8.5%**	**6.8%**	**5.6%**	**12.6%**	**12.7%**	3.3%	3.2%	3.7%	3.7%	3.8%	6.1%	6.8%
Housing price index (1)														
Canada (2)	**9.6%**	**5.4%**	**7.2%**	**4.5%**	**2.5%**	**(9.1)%**	**(4.6)%**	3.7%	3.7%	0.5%	2.0%	2.5%	(12.3)%	(4.7)%
United States (3)	**4.7%**	**4.2%**	**3.9%**	**1.4%**	**2.7%**	**(7.3)%**	**(2.2)%**	4.4%	4.2%	3.4%	3.0%	2.7%	(5.7)%	(2.2)%

(1) Real gross domestic product and housing price index are year-over-year growth rates.
(2) In Canada, BMO uses the HPI Benchmark Composite.
(3) In the United States, BMO uses the National Case-Shiller House Price Index.

Real GDP is the basis for measuring changes in BMO's economic forecasts, acting as an important determinant for many of the other key economic and market variables, although the allowance is not sensitive to this variable alone. The table below shows how BMO expects the real GDP year-over-year growth rate for the base case in Canada and the United States to trend by calendar quarter, with negative growth in the fourth calendar quarter of 2020, reflecting the continuing impact of the pandemic and a subsequent recovery. The equivalent year-over-year growth rates for Canada in the fourth quarter of 2020 in the adverse and benign scenarios are declines of 8.2% and 2.4%, respectively. In the United States, the comparable growth rates in the fourth quarter of 2020 in the adverse and benign scenarios are declines of 7.8% and 3.2%, respectively. The table also includes the real GDP level, compared with the fourth quarter of calendar 2019, expressed as a percentage.

Calendar quarter ended	December 31, 2020	March 31, 2021	June 30, 2021	September 30, 2021	December 31, 2021	March 31, 2022	June 30, 2022	September 30, 2022
Real GDP growth rates year-over-year								
Canada	(3.5)%	0.2%	14.7%	5.0%	4.9%	3.8%	3.1%	2.7%
United States	(4.5)%	(1.9)%	9.4%	4.5%	4.7%	3.9%	3.1%	2.6%
Real GDP level compared to calendar Q4 2019								
Canada	96.5%	98.1%	99.4%	100.3%	101.1%	101.8%	102.4%	103.0%
United States	95.5%	96.9%	98.2%	99.2%	100.0%	100.6%	101.2%	101.8%

The ECL approach requires the recognition of credit losses generally based on 12 months of expected losses for performing loans (Stage 1) and the recognition of lifetime expected losses for performing loans that have experienced a significant increase in credit risk since origination (Stage 2). Under the current probability-weighted scenarios and based on the current risk profile of loan exposures, if all performing loans were in Stage 1, the bank's models would generate an allowance on performing loans of approximately $2,300 million ($1,050 million in 2019), compared with the reported allowance on performing loans of $3,075 million ($1,609 million in 2019).

Information on the Provision for Credit Losses for the years ended October 31, 2020 and 2019 can be found on page 31 of this MD&A. Additional information on the process and methodology for determining the allowance on credit losses can be found in the discussion of Credit and Counterparty Risk on page 89, as well as in Note 4 on page 159 of the consolidated financial statements.

Financial Instruments Measured at Fair Value

BMO records assets and liabilities classified as trading, assets and liabilities designated at fair value, derivatives, certain equity and debt securities and securities sold but not yet purchased at fair value. Fair value represents an estimate of the amount it would receive, or would be required to pay in the case of a liability, in an orderly transaction between willing parties at the measurement date. BMO employs a fair value hierarchy to categorize the inputs it uses in valuation techniques to measure fair value. The extent of its use of quoted market prices (Level 1), internal models with observable market information (Level 2) and internal models without observable market information (Level 3) in the valuation of loans, securities, derivative assets and liabilities, and liabilities recorded at fair value as at October 31, 2020, as well as a sensitivity analysis of Level 3 financial instruments, is disclosed in Note 17 on page 186 of the consolidated financial statements. For instruments that are valued using models, BMO considers all reasonable available information and maximizes the use of observable market data.

Valuation Product Control (VPC), a group independent of the trading lines of business, ensures that the fair values at which financial instruments are recorded are materially accurate by:

- Developing and maintaining valuation policies, procedures and methodologies in accordance with regulatory requirements and IFRS
- Establishing official rate sources for valuation data inputs, and
- Providing independent review of portfolios for which prices supplied by traders are used for valuation

When VPC determines that adjustments to valuations are needed to better reflect fair value estimates based on data inputs from its official rate sources, the adjustments are subject to review and approval by the Valuation Steering Committee (VSC).

The VSC is BMO's senior management valuation committee. It meets at least monthly to address the more challenging valuation issues related to BMO's portfolios, approves valuation methodology changes as needed to enhance fair value estimates, and acts as a key forum for the discussion of sources of valuation uncertainty and how these have been addressed by management.

As at October 31, 2020, the total valuation adjustments were a net decrease in value of $117 million for financial instruments carried at fair value on the Consolidated Balance Sheet (a net decrease of $89 million as at October 31, 2019).

Pension and Other Employee Future Benefits

BMO's pension and other employee future benefits expense is calculated by independent actuaries using assumptions determined by management. If actual experience were to differ from the assumptions used, the difference would be recognized in other comprehensive income.

Pension and other employee future benefits expense and the related obligations are sensitive to changes in discount rates. The bank determines discount rates at each year end for all plans using high-quality corporate bonds with terms matching the plans' specific cash flows.

Additional information regarding accounting for pension and other employee future benefits, including a sensitivity analysis for key assumptions, is included in Note 21 on page 197 of the consolidated financial statements.

Impairment of Securities

BMO has investments in associates and joint ventures. The bank reviews these investments at each quarter-end reporting period to identify and evaluate those that show indications of possible impairment.

For these investments, a significant or prolonged decline in the fair value of a security to an amount below its cost is objective evidence of impairment.

Debt securities measured at amortized cost or fair value through other comprehensive income (FVOCI) are assessed for impairment using the expected credit loss model. For securities determined to have low credit risk, the allowance for credit losses is measured at a 12-month expected credit loss.

Additional information regarding accounting for debt securities measured at amortized cost or FVOCI, other securities, allowance for credit losses and the determination of fair value is included in Note 3 on page 155 and Note 17 on page 186 of the consolidated financial statements.

Income Taxes and Deferred Tax Assets

BMO's approach to tax is guided by its Statement on Tax Principles, elements of which are described below, and governed by its tax risk management framework, which is implemented through internal controls and processes. The bank operates with due regard to risks, including tax and reputational risks. It actively seeks to identify, evaluate, monitor, manage and mitigate any tax risks that may arise to ensure financial exposure is well understood and is within a range consistent with the bank's objectives for the management of tax risk, as set out in the tax risk management framework. BMO's intention is to comply fully with tax laws. The bank considers all applicable laws in connection with commercial activities, and where tax laws change in the business or for customers, it adapts and changes accordingly. BMO monitors applicable tax-related developments, including legislative proposals, case law and guidance from tax authorities. When an interpretation or application of tax laws is not clear, the bank takes well-reasoned positions based on available case law and administrative positions of tax authorities, and engages external advisors when necessary. BMO does not engage in tax planning that does not have commercial substance. The bank does not knowingly work with customers it believes use tax strategies to evade taxes. BMO is committed to maintaining productive relationships and cooperating with tax authorities on all tax matters. BMO seeks to resolve disputes in a collaborative manner; however, when the interpretation of tax law differs from that of tax authorities, it is prepared to defend its position.

The provision for income taxes is calculated based on the expected tax treatment of transactions recorded in either the Consolidated Statement of Income or the Consolidated Statement of Changes in Equity. In determining the provision for income taxes, BMO interprets tax legislation, case law and administrative positions in numerous jurisdictions and, based on its judgment, records the estimate of the amount required to settle tax obligations. The bank also makes assumptions about the expected timing of the reversal of deferred tax assets and liabilities. If the interpretations and assumptions differ from those of tax authorities or if the timing of reversals is not as expected, the provision for income taxes could increase or decrease in future periods. The amount of any such increase or decrease cannot be reasonably estimated.

Deferred tax assets are recognized only when it is probable that sufficient taxable profit will be available in future periods against which deductible temporary differences or unused tax losses and tax credits may be utilized. It is required to assess whether it is probable that deferred income tax assets will be realized. Factors used to assess the probability of realization are past experience of income and capital gains, forecasts of future net income before taxes, and the remaining expiration period of tax loss carryforwards and tax credits. Changes in assessment of these factors could increase or decrease the provision for income taxes in future periods.

If income tax rates increase or decrease in future periods in a jurisdiction, the provision for income taxes for future periods will increase or decrease accordingly. Furthermore, deferred tax assets and liabilities will increase or decrease as income tax rates increase or decrease, respectively, and will result in an income tax impact. For example, an increase in the U.S. federal tax rate would increase the bank's net deferred tax asset, which would result in a one-time corresponding tax benefit to its net income. In addition, an increase in the U.S federal tax rate would decrease the bank's annual net income. The size of this annual net income decrease and any impact on the net deferred tax asset is uncertain at this point and will be dependent on many factors, including the tax rate enacted and its timing, phase-in provisions and detail regarding any legislation and its interpretation. In fiscal 2018, the reduction in the U.S. federal tax rate from 35% to 21% as a result of the enactment of the U.S. *Tax Cuts and Jobs Act* resulted in a $425 million one-time non-cash tax charge to net income and a corresponding reduction in net deferred tax assets.

The Canada Revenue Agency (CRA) has reassessed BMO for additional income tax and interest in an amount of approximately $941 million, to date, in respect of certain 2011-2015 Canadian corporate dividends. In its reassessments, the CRA denied dividend deductions on the basis that the dividends were received as part of a "dividend rental arrangement". The tax rules raised by the CRA were prospectively addressed in the 2015 and 2018 Canadian federal budgets. In the future, BMO expects to be reassessed for significant additional income tax for similar activities in subsequent years. BMO remains of the view that its tax filing positions were appropriate and intends to challenge all reassessments. If the challenge is unsuccessful, the additional expense would negatively impact net income.

Additional information regarding accounting for income taxes is included in Note 22 on page 201 of the consolidated financial statements.

Goodwill and Intangible Assets

Goodwill is assessed for impairment at least annually. This assessment includes a comparison of the carrying value and the recoverable amount of each of BMO's cash-generating units (CGUs) in order to verify that the recoverable amount of the CGU is greater than its carrying value. If the carrying value were to exceed the recoverable amount of the CGU, an impairment calculation would be performed. The recoverable amount of a CGU is the higher of its fair value less costs to sell and its value in use.

Fair value less costs to sell was used to perform the impairment test in all periods. In determining fair value less costs to sell, BMO employs a discounted cash flow model, consistent with that used when a business is acquired. This model is dependent on assumptions related to revenue growth, discount rates, synergies achieved on acquisition and the availability of comparable acquisition data. Changes in any of these assumptions would affect the determination of fair value for each of the bank's CGUs in a different manner. Management must exercise judgment and make assumptions in determining fair value. In particular, in the current year, BMO has considered the impact of the COVID-19 pandemic by updating key assumptions accordingly, including the estimated cost of capital, discount rates and actual and future business performance of its CGUs. Differences in judgments and assumptions could affect the determination of fair value and any resulting impairment write-down. As at October 31, 2020, the estimated fair value of each CGU was greater than carrying value.

Intangible assets with definite lives are amortized to income on either a straight-line or an accelerated basis over a period not exceeding 15 years, depending on the nature of the asset. The bank tests intangible assets with definite lives for impairment when circumstances indicate that the carrying value may not be recoverable.

Intangible assets with indefinite lives are tested annually for impairment. If an intangible asset is determined to be impaired, it will be written down to its recoverable amount, the higher of value in use and fair value less costs to sell, when this is less than the carrying value.

Additional information regarding the composition of goodwill and intangible assets is included in Note 11 on page 178 of the consolidated financial statements.

Insurance-Related Liabilities

Insurance claims and policy benefit liabilities represent current claims and estimates of future insurance policy obligation liabilities. Liabilities for life insurance contracts are determined using the Canadian Asset Liability Method, which incorporates best-estimate assumptions for mortality, morbidity, policy lapses, surrenders, future investment yields, policy dividends, administration costs and margins for adverse deviation. These assumptions are reviewed at least annually and updated to reflect actual experience and market conditions. The most significant potential impact on the valuation of these liabilities would be the result of a change in the assumptions for interest rates and equity market values. If the assumed future interest rates were to increase by one percentage point, earnings before tax would increase by approximately $39 million. A reduction of one percentage point would lower earnings before tax by approximately $38 million. If the assumed equity market value increased by 10%, earnings before tax would increase by approximately $51 million. A reduction of 10% would lower earnings before tax by approximately $53 million.

Additional information on insurance-related liabilities is provided in Note 14 on page 181 of the consolidated financial statements, and information on insurance risk is provided in the Insurance Risk section on page 97.

Provisions

The bank and its subsidiaries are involved in various legal actions in the ordinary course of business.

Provisions are recorded at the best estimate of the amount required to settle any obligation related to these legal actions as at the balance sheet date, taking into account the risks and uncertainties surrounding the obligation. Factors considered in making the estimate include a case-by-case assessment of specific facts and circumstances, past experience and the opinions of legal experts. Management and internal and external experts are involved in estimating any amounts that may be required. The actual costs of resolving these claims may be substantially higher or lower than the amounts of the provisions.

Additional information regarding provisions is included in the Legal and Regulatory Risk section on pages 110 to 111 and in Note 24 on page 204 of the consolidated financial statements.

Transfers of Financial Assets and Consolidation of Structured Entities

BMO sells Canadian mortgage loans to third-party Canadian securitization programs, including the Canada Mortgage Bond Program, and directly to third-party investors under the National Housing Act Mortgage-Backed Securities program. Beginning in the second quarter, the bank participated in the Insured Mortgage Purchase Program (IMPP), launched by the government of Canada as part of its response to the COVID-19 pandemic. BMO assesses whether substantially all of the risks and rewards of the loans have been transferred in order to determine if they qualify for derecognition. Since BMO continues to be exposed to substantially all of the prepayment, interest rate and/or credit risk associated with the securitized loans, they do not qualify for derecognition. The bank continues to recognize the loans, and recognizes the related cash proceeds as secured financing on its Consolidated Balance Sheet. Additional information concerning the transfer of financial assets is included on page 71, as well as in Note 6 on page 165 of the consolidated financial statements.

During 2020, the Canadian and U.S. governments offered programs in response to the COVID-19 pandemic to support businesses facing economic hardship, including the Canada Emergency Business Account (CEBA) program and the Business Development Bank of Canada (BDC) Co-Lending program.

Under the CEBA program, BMO issues loans that are funded by the government. BMO conducted an assessment and determined that substantially all of the risks and rewards of the loans were transferred to the government; therefore, the bank does not record these loans on the Consolidated Balance Sheet. In contrast, loans issued as part of the BDC Co-Lending program are funded in part by the BDC, with the remaining portion funded by BMO. BMO concluded that substantially all of the risks and rewards related to the portion funded by the BDC reside with them; therefore, the bank does not record that portion on the balance sheet. The portion funded by BMO is recorded on its Consolidated Balance Sheet.

For more detailed discussion of these government programs, refer to the Impact of COVID-19 on page 24 and Enterprise-Wide Risk Management sections starting on page 73.

In the normal course of business, the bank enters into arrangements with SEs, using them to secure customer transactions, obtain sources of liquidity by securitizing certain of the financial assets, or pass its credit risk to securities holders of the vehicles. For example, BMO enters into transactions with SEs where it transfers assets, including mortgage loans, mortgage-backed securities, credit card loans, real estate lines of credit, auto loans and equipment loans in order to obtain alternate sources of funding, or as part of the bank's trading activities. The bank is required to consolidate an SE if it determines that it controls the SE. BMO controls an SE when it has power over the entity, exposure or rights to variable returns from an investment, and the ability to exercise power to affect the amount of returns.

Additional information concerning interests in SEs is included on page 71, as well as in Note 7 on page 166 of the consolidated financial statements.

Caution

This Critical Accounting Estimates section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Changes in Accounting Policies in 2020

IFRS 16, *Leases* (IFRS 16)

Effective November 1, 2019, BMO adopted IFRS 16, *Leases* (IFRS 16), which provides guidance whereby lessees are required to recognize a liability for the present value of future lease payments and record a corresponding asset on the balance sheet for most leases. The impact on the bank's Equipment Finance and Transportation Finance businesses is minimal. The most significant impact for the bank is the recording of real estate leases on the balance sheet. Previously, most of the real estate leases were classified as operating leases, whereby BMO recorded the lease expense over the lease term with no asset or liability recorded on the balance sheet other than related leasehold improvements. On transition, it chose to recognize the cumulative effect of adoption of IFRS 16 in opening retained earnings with no changes to prior periods.

Interbank Offered Rate (IBOR) Reform — Phase 1 Amendments

Effective November 1, 2019, BMO early adopted the Phase 1 amendments to IAS 39, *Financial Instruments: Recognition and Measurement* (IAS 39) and IFRS 7, *Financial Instruments: Disclosures* (IFRS 7). The amendments provide relief from the uncertainty arising from IBOR reform during the period prior to replacement of IBORs. The amendments modify certain hedge accounting requirements, allowing the bank to assume the interest rate benchmark on which the cash flows of the hedged item and the hedging instrument are based are not altered as a result of IBOR reform, thereby allowing hedge accounting to continue. They also provide an exception from the requirement to discontinue hedge accounting if a hedging relationship does not meet the effectiveness requirements solely as a result of IBOR reform.

Application of these amendments will end at the earlier of the discontinuation of the impacted hedge relationship and when there is no longer uncertainty arising from IBOR reform over the timing and amount of IBOR-based cash flows.

IFRIC 23, *Uncertainty over income tax treatments*

Effective November 1, 2019, BMO adopted IFRS Interpretations Committee Interpretation 23, *Uncertainty over income tax treatments* (IFRIC 23), which had no impact on financial results upon adoption.

Note 1 on page 150 of the consolidated financial statements provides further details on the impact of adoption of IFRIC 23 and the other new standards, including IFRS 16 and IBOR Reform.

Future Changes in Accounting Policies

IFRS 17, *Insurance Contracts* (IFRS 17)

In June 2020, the IASB issued amendments to IFRS 17, *Insurance Contracts* (IFRS 17). The amendments include a deferral for the effective date of IFRS 17, resulting in a new adoption date for the bank of November 1, 2023, instead of November 1, 2022. It also includes amendments to simplify and revise certain requirements, as well as provide additional transition relief. BMO continues to assess the impact of the standard on its future financial results. Further information on these amendments can be found in Note 1 on page 150 of the consolidated financial statements.

IBOR Reform – Phase 2 amendments

In August 2020, the IASB published Phase 2 of its amendments to IFRS 9, *Financial Instruments* (IFRS 9), IAS 39, IFRS 7, IFRS 4, *Insurance Contracts*, as well as IFRS 16. While the Phase 1 amendments addressed the uncertainty that could arise in the period before IBOR transition, the Phase 2 amendments address issues that arise from implementation of IBOR reform, where IBOR are replaced with alternative benchmark rates.

For financial instruments at amortized cost, the amendments introduce a practical expedient such that if a change in the contractual cash flows is as a result of IBOR reform and occurs on an economically equivalent basis, the change will be accounted for by updating the effective interest rate with no immediate gain or loss recognized. The amendments also provide additional temporary relief from applying specific IAS 39 hedge accounting requirements to hedging relationships affected by IBOR reform. For example, there is an exception from the requirement to discontinue hedge accounting as a result of changes to hedge documentation required solely by IBOR reform. The amendments also require additional disclosure that allows users to understand the effect of IBOR reform on the bank's financial instruments and risk management strategy.

The Phase 2 amendments are effective for the fiscal year beginning November 1, 2021, with early adoption permitted. BMO is in the process of assessing the impact of these amendments on contracts in scope, including IBOR-based financial instruments and hedge relationships.

Caution

This Future Changes in Accounting Policies section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Transactions with Related Parties

In the ordinary course of business, BMO provides banking services to key management personnel on the same terms that it offers these services to preferred customers. Key management personnel are defined as those persons having authority and responsibility for planning, directing and/or controlling the activities of an entity, being the directors and the most senior executives of the bank. Banking services are provided to joint ventures and equity-accounted investees on the same terms offered to customers for these services. BMO also offers employees a subsidy on annual credit card fees.

Details of the bank's investments in joint ventures and associates and the compensation of key management personnel are disclosed in Note 27 on page 211 of the consolidated financial statements.

Shareholders' Auditors' Services and Fees

Review of Shareholders' Auditors

The Audit and Conduct Review Committee (ACRC) is responsible for the appointment, compensation and oversight of the shareholders' auditors and conducts an annual assessment of the performance and effectiveness of the shareholders' auditors, considering factors such as: the quality of the services provided by the engagement team of the shareholders' auditors during the audit period; the relevant qualifications, experience and geographical reach to serve BMO Financial Group; the quality of communications received from the shareholders' auditors; and the independence, objectivity and professional skepticism of the shareholders' auditors.

The ACRC believes that it has a robust review process in place to monitor audit quality and oversee the work of the shareholders' auditors, including the lead audit partner, which includes:

- Annually reviewing the audit plan in two separate meetings, including a consideration of the impact of business risks on the audit plan and an assessment of the reasonableness of the audit fee
- Reviewing the qualifications of the senior engagement team members
- Monitoring the execution of the audit plan of the shareholders' auditors, with emphasis on the more complex and risky areas of the audit
- Reviewing and evaluating the audit findings, including in camera sessions
- Evaluating audit quality and performance, including recent Canadian Public Accountability Board (CPAB) and Public Company Accounting Oversight Board (PCAOB) inspection reports on the shareholders' auditors and their peer firms
- At a minimum, holding quarterly meetings with the chair of the ACRC and the lead audit partner to discuss audit-related issues independently of management
- Performing a comprehensive review of the shareholders' auditors every five years, and performing an annual review between these comprehensive reviews, following the guidelines set out by the Chartered Professional Accountants of Canada (CPA of Canada) and the CPAB

The ACRC performs a comprehensive review of the shareholders' auditors every five years, with the most recent comprehensive review completed in 2020. The comprehensive review was based on the latest recommendations of CPA Canada and CPAB focusing on: (i) the independence, objectivity and professional skepticism of the shareholders' auditors; (ii) the quality of the engagement team; and (iii) the quality of communications and interactions with the shareholders' auditors. As a result of the review, the ACRC was satisfied with the performance of the shareholders' auditors.

Independence of the shareholders' auditors is overseen by the ACRC in accordance with BMO's Auditor Independence Standard. The ACRC also ensures that the lead audit partner rotates out of that role after five consecutive years and does not return to that role for a further five years.

Pre-Approval Policies and Procedures

As part of BMO Financial Group's corporate governance practices, the ACRC oversees the application of its policy limiting the services provided by the shareholders' auditors that are not related to their role as auditors. The ACRC pre-approves the types of services (permitted services) that can be provided by the shareholders' auditors, as well as the annual audit plan, which includes fees for specific types of services. For permitted services that are not included in the pre-approved annual audit plan, approval to proceed with the engagement is obtained and the services to be provided are presented to the ACRC for ratification at its next meeting. All services must comply with BMO's Auditor Independence Standard, as well as professional standards and securities regulations governing auditor independence.

Shareholders' Auditors' Fees

(Canadian $ in millions) Fees (1)	**2020**	2019
Audit fees	**21.1**	20.8
Audit-related fees (2)	**2.5**	2.8
Tax services fees (3)	**0.1**	0.1
All other fees (4)	**1.5**	0.6
Total	**25.2**	24.3

(1) The classification of fees is based on applicable Canadian securities laws and U.S. Securities and Exchange Commission definitions.

(2) Includes fees paid for accounting advice, specified procedures on BMO's Proxy Circular and other services, procedures related to IT conversion projects and French translation of financial statements, related continuous disclosures and other public documents containing financial information.

(3) Includes fees paid for tax compliance services provided to various BMO managed investment company complexes.

(4) Includes other fees paid by BMO-managed investment company complexes.

Certain comparative figures have been reclassified to conform with the current year's presentation.

Management’s Annual Report on Disclosure Controls and Procedures and Internal Control over Financial Reporting

Disclosure Controls and Procedures

Disclosure controls and procedures are designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the Chief Executive Officer (CEO) and the Chief Financial Officer (CFO), on a timely basis, so that appropriate decisions can be made regarding public disclosure.

As at October 31, 2020, under the supervision of the CEO and the CFO, BMO Financial Group’s (BMO) management evaluated the effectiveness of the design and operation of its disclosure controls and procedures, as defined in Canada by *National Instrument 52-109, Certification of Disclosure in Issuers’ Annual and Interim Filings*, and in the United States by Rule 13a-15(e) under the *Securities Exchange Act of 1934* (the Exchange Act). Based on this evaluation, the CEO and the CFO have concluded that the bank’s disclosure controls and procedures were effective, as at October 31, 2020.

Internal Control over Financial Reporting

Internal control over financial reporting is a process designed under the supervision of the bank’s CEO and CFO, in order to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements in accordance with IFRS and the requirements of the Securities and Exchange Commission (SEC) in the United States, as applicable. Management is responsible for establishing and maintaining adequate internal control over financial reporting for BMO.

Internal control over financial reporting at BMO includes policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of BMO
- Are designed to provide reasonable assurance that transactions are recorded as necessary to permit preparation of the consolidated financial statements in accordance with IFRS and the requirements of the SEC in the United States, as applicable, and that receipts and expenditures of BMO are being made only in accordance with authorizations by management and directors of BMO, and
- Are designed to provide reasonable assurance that any unauthorized acquisition, use or disposition of BMO’s assets which could have a material effect on the consolidated financial statements is prevented or detected in a timely manner

Because of its inherent limitations, internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements. Furthermore, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the related policies and procedures may deteriorate.

BMO’s management, under the supervision of the CEO and the CFO, has evaluated the effectiveness of internal control over financial reporting using the framework and criteria established in *Internal Control – Integrated Framework*, issued by the Committee of Sponsoring Organizations of the Treadway Commission in May 2013 (2013 COSO Framework). Based on this evaluation, management has concluded that internal control over financial reporting was effective as at October 31, 2020.

At the request of BMO’s Audit and Conduct Review Committee, KPMG LLP (the shareholders’ auditors), an independent registered public accounting firm, has conducted an audit of the effectiveness of BMO’s internal control over financial reporting. The audit report states in its conclusion that, in KPMG’s opinion, BMO maintained, in all material respects, effective internal control over financial reporting as at October 31, 2020, in accordance with the criteria established in the 2013 COSO Framework. This audit report appears on page 144.

Changes in Internal Control over Financial Reporting

There were no changes in BMO’s internal control over financial reporting during the year ended October 31, 2020 that have materially affected, or are reasonably likely to materially affect, the adequacy and effectiveness of the bank’s internal control over financial reporting.

Enhanced Disclosure Task Force

On October 29, 2012, the Enhanced Disclosure Task Force (EDTF) of the Financial Stability Board published its first report, Enhancing the Risk Disclosures of Banks. BMO supports the recommendations issued by EDTF for the provision of high-quality, transparent risk disclosures.

Disclosures related to the EDTF recommendations are detailed below.

General

1 Present all risk-related information in the Annual Report, Supplementary Financial Information and Supplementary Regulatory Capital Disclosure, and provide an index for easy navigation.

Annual Report: Risk-related information is presented in the Enterprise-Wide Risk Management section on pages 73 to 113.

Supplementary Financial Information: A general index is provided in BMO's Supplementary Financial Information.

Regulatory Supplementary Capital Information: A general index is provided in BMO's Supplementary Regulatory Capital Information.

2 Define the bank's risk terminology and risk measures and present key parameters used.

Annual Report: Specific risk definitions and key parameters underpinning BMO's risk reporting are provided on pages 84 to 113.
A glossary of financial terms (including risk terminology) can be found on pages 212 to 213.

3 Discuss top and emerging risks for the bank.

Annual Report: BMO's top and emerging risks are discussed on pages 73 to 75.

4 Outline plans to meet new key regulatory ratios once the applicable rules are finalized.

Annual Report: BMO's plans to meet new regulatory ratios are outlined on pages 64, 67 to 68 and 103.

Risk Governance

5 Summarize the bank's risk management organization, processes, and key functions.

Annual Report: BMO's risk management organization, processes and key functions are summarized on pages 78 to 83.

6 Describe the bank's risk culture and procedures applied to support the culture.

Annual Report: BMO's risk culture is described on page 79.

7 Describe key risks that arise from the bank's business model and activities.

Annual Report: Descriptions of key risks arising from the bank's business models and activities are provided on pages 80 and 82.

8 Describe the use of stress testing within the bank's risk governance and capital frameworks.

Annual Report: BMO's stress testing process is described on page 83.

Capital Adequacy and Risk-Weighted Assets (RWA)

9 Provide minimum Pillar 1 capital requirements.

Annual Report: Pillar 1 capital requirements are described on pages 63 to 66.

Regulatory Supplementary Capital Information: Regulatory capital is disclosed on pages 3 to 4 and 10.

10 Summarize information contained in the composition of capital templates and reconciliation of the accounting balance sheet to the regulatory balance sheet.

Annual Report: An abridged version of the regulatory capital template is provided on page 67.

Regulatory Supplementary Capital Information: Pillar 3 disclosures are provided on pages 3 to 5. A Main Features template can be found on BMO's website at www.bmo.com under Investor Relations and Regulatory Filings.

11 Present a flow statement of movements in regulatory capital, including changes in Common Equity Tier 1, Additional Tier 1, and Tier 2 capital.

Regulatory Supplementary Capital Information: Flow Statement of Basel III Regulatory Capital is provided on page 6.

12 Discuss capital planning within a more general discussion of management's strategic planning.

Annual Report: BMO's capital planning process is discussed under Capital Management Framework on page 63.

13 Provide granular information to explain how RWA relate to business activities.

Annual Report: A diagram of BMO's risk exposure, including RWA by operating group, is provided on page 68.

Regulatory Supplementary Capital Information: RWA by operating group is provided on page 11.

14 Present a table showing the capital requirements for each method used for calculating RWA.

Annual Report: Information for RWA by Basel asset class is included on page 68.
Information about significant models used to determine RWA is provided on pages 85 to 87.

Regulatory Supplementary Capital Information: A table showing RWA by model approach and by risk type is provided on pages 11, 17, 18, 21 to 31 and 38 to 44.

15 Tabulate credit risk in the banking book for Basel asset classes and major portfolios.

Regulatory Supplementary Capital Information: Information on average probability of default (PD) and LGD, as well as exposure at defaults (EAD), total RWAs and RWA density for major Basel asset classes and portfolios is provided on pages 17 to 30 and 38 to 44.

16 Present a flow statement that reconciles movements in RWA by credit risk and market risk.

Regulatory Supplementary Capital Information: RWA flow statement for credit risk is provided on page 32 and market risk RWA movement by key drivers is provided on page 58.

17 Describe the bank's Basel validation and back-testing process.

Annual Report: BMO's Basel validation and back-testing process for credit and market risk is described on page 109.

Regulatory Supplementary Capital Information: Estimated and actual loss parameter information is provided on page 59. Back-testing information is provided on pages 60 to 63.

Liquidity

18 Describe how the bank manages its potential liquidity needs and the liquidity reserve held to meet those needs.

Annual Report: BMO's potential liquidity needs and the liquidity reserve held to meet those needs are described on pages 97 to 103.

Funding

19 Summarize encumbered and unencumbered assets in a table by balance sheet category.

Annual Report: An Asset Encumbrance table is provided on page 100.

Supplementary Financial Information: The Asset Encumbrance table by currency is provided on page 33.

20 Tabulate consolidated total assets, liabilities and off-balance sheet commitments by remaining contractual maturity.

Annual Report: Contractual Maturities information and tables are provided on pages 104 to 105.

21 Discuss the bank's sources of funding and describe the bank's funding strategy.

Annual Report: BMO's sources of funding and funding strategy are described on pages 101 to 102.

A table showing the composition and maturity of wholesale funding is provided on page 102.

Market Risk

22 Provide a breakdown of balance sheet positions into trading and non-trading market risk measures.

Annual Report: A table linking balance sheet items to market risk measures is provided on page 96.

23 Provide qualitative and quantitative breakdowns of significant trading and non-trading market risk measures.

Annual Report: Trading market risk exposures are described and quantified on pages 92 to 94.

Structural (non-trading) market risk exposures are described and quantified on pages 95 to 96.

24 Describe significant market risk measurement model validation procedures and back-testing and how these are used to enhance the parameters of the model.

Annual Report: Market risk measurement model validation procedures and back-testing for trading market risk and structural (non-trading) market risk are described on pages 92, 93, 95 and 109.

25 Describe the primary risk management techniques employed by the bank to measure and assess the risk of loss beyond reported risk measures.

Annual Report: The use of stress testing, scenario analysis and stressed VaR for market risk management is described on pages 92 to 93.

Credit Risk

26 Provide information about the bank's credit risk profile.

Annual Report: Information about BMO's credit risk profile is provided on pages 84 to 91 and in Note 4 on pages 159 to 164 of the consolidated financial statements.

Supplementary Financial Information: Tables detailing credit risk information are provided on pages 18 to 30.

Regulatory Supplementary Capital Information: Tables detailing credit risk information are provided on pages 11 to 57.

27 Describe the bank's policies related to impaired loans and renegotiated loans.

Annual Report: Impaired loan and renegotiated loan policies are described in Note 4 on pages 159 and 164, respectively, of the consolidated financial statements.

28 Provide reconciliations of impaired loans and the allowance for credit losses.

Annual Report: Continuity schedules for gross impaired loans and acceptances, and allowance for credit losses are provided on page 89 and Note 4 on page 162 of the consolidated financial statements.

29 Provide a quantitative and qualitative analysis of the bank's counterparty credit risk that arises from its derivative transactions.

Annual Report: Quantitative disclosures on collateralization agreements for over-the-counter (OTC) derivatives are provided on page 91 and qualitative disclosures are provided on pages 84 to 85.

Regulatory Supplementary Capital Information: Quantitative disclosures for derivative instruments are provided on pages 36 to 49.

30 Provide a discussion of credit risk mitigation.

Annual Report: A discussion of BMO's credit and counterparty risk management is provided on pages 84 to 85. Collateral management discussions are provided on pages 84 to 85, and in Note 8 on pages 169 and 175 and in Note 24 on page 205 to 206 of the consolidated financial statements.

Regulatory Supplementary Capital Information: Information on credit risk mitigation techniques is provided on pages 16, 31 and 33. Composition of collateral for counterparty credit risk is provided on page 45.

Other Risks

31 Describe other risks and discuss how each is identified, governed, measured and managed.

Annual Report: A diagram illustrating the risk governance process that supports BMO's risk culture is provided on page 80. Other risks are discussed on pages 106 to 113.

32 Discuss publicly known risk events related to other risks, where material or potentially material loss events have occurred.

Annual Report: Other risks are discussed on pages 106 to 113.

Supplemental Information

Certain comparative figures have been reclassified to conform with the current year's presentation and for changes in accounting policies. Refer to Note 1 of the consolidated financial statements.

Adjusted results in this section are non-GAAP measures. Refer to the Non-GAAP Measures section on page 17.

Table 1: Shareholder Value and Other Statistical Information

As at or for the year ended October 31	**2020**	2019	2018	2017	2016	2015	2014	2013	2012	2011
Market Price per Common Share ($)										
High	**104.75**	106.51	109.00	104.15	87.92	84.39	85.71	73.90	61.29	63.94
Low	**55.76**	86.25	93.60	83.58	68.65	64.01	67.04	56.74	53.15	55.02
Close	**79.33**	97.50	98.43	98.83	85.36	76.04	81.73	72.62	59.02	58.89
Common Share Dividends										
Dividends declared per share ($)	**4.24**	4.06	3.78	3.56	3.40	3.24	3.08	2.94	2.82	2.80
Dividend payout ratio (%)	**56.1**	46.8	46.1	44.9	49.0	49.2	47.8	47.5	46.0	57.1
Dividend yield (%)	**5.3**	4.2	3.8	3.6	4.0	4.3	3.8	4.0	4.8	4.8
Dividends on common shares ($ millions)	**2,723**	2,594	2,424	2,312	2,191	2,087	1,991	1,904	1,820	1,690
Total Shareholder Return (%)										
Five-year average annual return	**5.1**	7.8	10.5	15.5	12.5	9.5	15.5	17.0	4.2	1.9
Three-year average annual return	**(3.1)**	8.6	13.3	10.9	9.9	13.5	16.7	11.5	10.8	17.4
One-year return	**(14.6)**	3.2	3.3	20.2	17.0	(3.0)	17.1	28.8	5.2	2.4
Common Share Information										
Number outstanding (in thousands)										
End of year	**645,889**	639,232	639,330	647,816	645,761	642,583	649,050	644,130	650,730	639,000
Average basic	**641,424**	638,881	642,930	649,650	644,049	644,916	645,860	648,476	644,407	591,403
Average diluted	**642,128**	640,360	644,913	651,961	646,126	647,141	648,475	649,806	648,615	607,068
Book value per share ($)	**77.40**	71.54	64.73	61.91	59.57	56.31	48.18	43.22	39.41	36.76
Total market value of shares ($ billions)	**51.2**	62.3	62.9	64.0	55.1	48.9	53.0	46.8	38.4	37.6
Price-to-earnings multiple	**10.5**	11.3	12.0	12.5	12.3	11.6	12.8	11.8	9.7	12.2
Price-to-adjusted earnings multiple	**10.3**	10.3	10.9	12.1	11.4	10.9	12.4	11.7	9.9	11.5
Market-to-book value multiple	**1.02**	1.36	1.52	1.60	1.43	1.35	1.70	1.66	1.47	1.49
Balances ($ millions)										
Total assets	**949,261**	852,195	773,293	709,604	687,960	641,881	588,659	537,044	524,684	500,575
Average assets	**942,450**	833,252	754,295	722,626	707,122	664,391	593,928	555,431	543,931	469,934
Average net loans and acceptances	**465,276**	432,638	386,959	370,899	356,528	318,823	290,621	263,596	246,129	215,414
Return on Equity and Assets										
Return on equity (%)	**10.1**	12.6	13.3	13.2	12.1	12.5	14.0	14.9	15.9	15.1
Adjusted return on equity (%)	**10.3**	13.7	14.6	13.6	13.1	13.3	14.4	15.0	15.5	16.0
Return on tangible common equity (%)	**11.9**	15.1	16.2	16.3	15.3	15.8	17.3	17.9	19.4	17.6
Adjusted return on tangible common equity (%)	**11.9**	16.1	17.5	16.4	16.1	16.4	17.4	17.7	18.5	18.2
Return on average assets (%)	**0.54**	0.69	0.72	0.74	0.65	0.66	0.72	0.74	0.75	0.65
Adjusted return on average assets (%)	**0.55**	0.75	0.79	0.76	0.71	0.70	0.74	0.75	0.73	0.68
Return on average risk-weighted assets (%)	**1.51**	1.86	1.97	1.98	1.71	1.84	1.85	1.93	1.96	1.70
Adjusted return on average risk-weighted assets (%)	**1.54**	2.01	2.16	2.04	1.85	1.96	1.91	1.94	1.92	1.79
Other Statistical Information										
Employees (1)										
Canada	**29,296**	30,438	29,982	29,647	29,643	30,669	30,587	30,303	30,797	31,351
United States	**12,492**	13,487	13,943	14,071	14,147	14,316	14,845	14,694	14,963	15,184
Other	**1,572**	1,588	1,529	1,482	1,444	1,368	1,346	634	512	440
Total	**43,360**	45,513	45,454	45,200	45,234	46,353	46,778	45,631	46,272	46,975
Bank branches										
Canada	**877**	891	908	926	942	939	934	933	930	920
United States	**528**	561	571	573	576	592	615	626	638	688
Other	**4**	4	4	4	4	4	4	4	3	3
Total	**1,409**	1,456	1,483	1,503	1,522	1,535	1,553	1,563	1,571	1,611
Automated banking machines										
Canada	**3,268**	3,370	3,387	3,315	3,285	3,442	3,016	2,900	2,596	2,235
United States	**1,552**	1,597	1,441	1,416	1,314	1,319	1,322	1,325	1,375	1,366
Total	**4,820**	4,967	4,828	4,731	4,599	4,761	4,338	4,225	3,971	3,601

The adoption of new IFRS standards in 2014, 2015, 2018 and 2020 only impacted our results prospectively.

(1) Reflects full-time equivalent number of employees, comprising full-time and part-time employees and adjustments for overtime hours.

Supplemental Information

Table 2: Summary Income Statement and Growth Statistics

($ millions, except as noted) For the year ended October 31	2020	2019	2018	2017	2016	5-year CAGR	10-year CAGR
Income Statement – Reported Results							
Net interest income	**13,971**	12,888	11,438	11,275	10,945	**7.4**	**8.4**
Non-interest revenue	**11,215**	12,595	11,467	10,832	10,015	**3.2**	**4.8**
Revenue	**25,186**	25,483	22,905	22,107	20,960	**5.4**	**6.6**
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**1,708**	2,709	1,352	1,538	1,543	**6.4**	**5.2**
Revenue, net of CCPB	**23,478**	22,774	21,553	20,569	19,417	**5.3**	**6.7**
Provision for credit losses	**2,953**	872	662	746	771	**nm**	**nm**
Non-interest expense	**14,177**	14,630	13,477	13,192	12,916	**3.0**	**6.4**
Income before provision for income taxes	**6,348**	7,272	7,414	6,631	5,730	**3.5**	**5.9**
Provision for income taxes	**1,251**	1,514	1,961	1,292	1,100	**6.0**	**6.2**
Net income	**5,097**	5,758	5,453	5,339	4,630	**3.0**	**5.9**
Attributable to equity holders of the bank	**5,097**	5,758	5,453	5,337	4,621	**3.1**	**6.1**
Attributable to non-controlling interest in subsidiaries	**–**	–	–	2	9	**nm**	**nm**
Net income	**5,097**	5,758	5,453	5,339	4,630	**3.0**	**6.1**
Income Statement – Adjusted Results							
Net interest income	**13,971**	12,888	11,438	11,275	10,945	**7.4**	**8.4**
Non-interest revenue	**11,215**	12,595	11,467	10,832	10,099	**3.2**	**4.8**
Revenue	**25,186**	25,483	22,905	22,107	21,044	**5.4**	**6.6**
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**1,708**	2,684	1,352	1,538	1,543	**6.4**	**5.2**
Revenue, net of CCPB	**23,478**	22,799	21,553	20,569	19,501	**5.3**	**6.7**
Provision for credit losses	**2,953**	872	662	822	771	**nm**	**nm**
Non-interest expense	**14,042**	14,005	13,344	12,897	12,463	**3.4**	**6.4**
Income before provision for income taxes	**6,483**	7,922	7,547	6,850	6,267	**2.6**	**6.0**
Provision for income taxes	**1,282**	1,673	1,565	1,353	1,248	**4.6**	**6.4**
Adjusted net income	**5,201**	6,249	5,982	5,497	5,019	**2.1**	**6.0**
Attributable to equity holders of the bank	**5,201**	6,249	5,982	5,495	5,010	**2.1**	**6.0**
Attributable to non-controlling interest in subsidiaries	**–**	–	–	2	9	**nm**	**nm**
Adjusted net income	**5,201**	6,249	5,982	5,497	5,019	**2.1**	**6.0**
Earnings per Share (EPS) ($)							
Basic	**7.56**	8.68	8.19	7.93	6.94	**2.8**	**4.7**
Diluted	**7.55**	8.66	8.17	7.90	6.92	**2.8**	**4.7**
Adjusted diluted	**7.71**	9.43	8.99	8.15	7.52	**2.0**	**4.8**
Year-over-Year Growth-Based Statistical Information (%)							
Net income growth	**(11.5)**	5.6	2.1	15.3	5.1	**na**	**na**
Adjusted net income growth	**(16.8)**	4.5	8.8	9.5	7.2	**na**	**na**
Diluted EPS growth	**(12.8)**	6.0	3.3	14.3	5.3	**na**	**na**
Adjusted diluted EPS growth	**(18.2)**	4.9	10.3	8.3	7.4	**na**	**na**

Five-year and ten-year CAGR based on CGAAP in 2010 and IFRS in 2015 and 2020.

The adoption of new IFRS standards in 2015, 2018 and 2020 only impacted our results prospectively.

nm – not meaningful

na – not applicable

Table 3: Revenue and Revenue Growth

($ millions, except as noted) For the year ended October 31	2020	2019	2018	2017	2016	5-year CAGR	10-year CAGR
Net Interest Income	**13,971**	12,888	11,438	11,275	10,945	**7.4**	**8.4**
Year-over-year growth (%)	**8.4**	12.7	1.4	3.0	11.7	**na**	**na**
Net Interest Margin (1)							
Average earning assets	**851,726**	758,863	682,945	646,799	622,732	**8.0**	**9.9**
Net interest margin (%)	**1.64**	1.70	1.67	1.74	1.76	**na**	**na**
Non-Interest Revenue							
Securities commissions and fees	**1,036**	1,023	1,025	964	921	**2.8**	**(0.4)**
Deposit and payment service charges	**1,221**	1,204	1,134	1,109	1,069	**4.0**	**4.3**
Trading revenues	**15**	298	705	84	118	**nm**	**nm**
Lending fees	**1,295**	1,192	997	917	859	**11.9**	**8.5**
Card fees	**358**	437	428	329	397	**(7.7)**	**4.4**
Investment management and custodial fees	**1,807**	1,747	1,749	1,627	1,560	**3.1**	**17.7**
Mutual fund revenues	**1,417**	1,419	1,473	1,411	1,364	**0.6**	**9.9**
Underwriting and advisory fees	**1,070**	975	943	1,044	824	**8.7**	**9.2**
Securities gains, other than trading	**124**	249	239	171	84	**(6.3)**	**(1.9)**
Foreign exchange, other than trading	**127**	166	182	191	162	**(5.9)**	**3.1**
Insurance revenue	**2,178**	3,183	1,879	2,070	2,023	**4.3**	**4.9**
Investments in associates and joint ventures	**161**	151	167	386	140	**(4.9)**	**nm**
Other revenues	**406**	551	546	529	494	**(4.7)**	**6.1**
Total Non-Interest Revenue	**11,215**	12,595	11,467	10,832	10,015	**3.2**	**4.8**
Year-over-year non-interest revenue growth (%)	**(11.0)**	9.8	5.9	8.2	4.4	**na**	**na**
Non-interest revenue as a % of total revenue	**44.5**	49.4	50.1	49.0	47.8	**na**	**na**
Adjusted Non-Interest Revenue	**11,215**	12,595	11,467	10,832	10,099	**3.2**	**4.8**
Year-over-year adjusted non-interest revenue growth (%)	**(11.0)**	9.8	5.9	7.3	5.3	**na**	**na**
Adjusted non-interest revenue as a % of total adjusted revenue	**44.5**	49.4	50.1	49.0	48.0	**na**	**na**
Total Revenue	**25,186**	25,483	22,905	22,107	20,960	**5.4**	**6.6**
Year-over-year total revenue growth (%)	**(1.2)**	11.3	3.6	5.5	8.1	**na**	**na**
Total Revenue, net of CCPB	**23,478**	22,774	21,553	20,569	19,417	**5.3**	**6.7**
Year-over-year total revenue growth, net of CCPB (%)	**3.1**	5.7	4.8	5.9	7.1	**na**	**na**
Total Adjusted Revenue	**25,186**	25,483	22,905	22,107	21,044	**5.4**	**6.6**
Year-over-year total adjusted revenue growth (%)	**(1.2)**	11.3	3.6	5.1	8.5	**na**	**na**
Total Adjusted Revenue, net of CCPB	**23,478**	22,799	21,553	20,569	19,501	**5.3**	**6.7**
Year-over-year total adjusted revenue growth, net of CCPB (%)	**3.0**	5.8	4.8	5.5	7.5	**na**	**na**

Five-year and ten-year CAGR based on CGAAP in 2010 and IFRS in 2015 and 2020.

The adoption of new IFRS standards in 2015, 2018 and 2020 only impacted our results prospectively.

(1) Net interest margin is calculated based on average earning assets.

na – not applicable

nm – not meaningful

Table 4: Non-Interest Expense, Expense-to-Revenue Ratio and Government Levies and Taxes

($ millions, except as noted) For the year ended October 31	2020	2019	2018	2017	2016	5-year CAGR	10-year CAGR
Non-Interest Expense (1)							
Employee compensation							
Salaries	**4,163**	4,762	4,176	3,996	4,084	**1.3**	**6.2**
Performance-based compensation	**2,632**	2,610	2,510	2,386	2,278	**4.6**	**6.1**
Employee benefits	**1,149**	1,051	775	1,086	1,022	**1.5**	**6.3**
Total employee compensation	**7,944**	8,423	7,461	7,468	7,384	**2.3**	**6.2**
Premises and equipment (2)							
Rental of real estate	**225**	595	526	494	486	**(13.4)**	**(3.5)**
Premises, furniture and fixtures	**771**	283	345	282	337	**21.9**	**11.1**
Property taxes	**42**	37	38	39	42	**1.9**	**4.1**
Computers and equipment	**2,164**	2,073	1,844	1,676	1,528	**9.9**	**11.5**
Total premises and equipment	**3,202**	2,988	2,753	2,491	2,393	**8.4**	**9.1**
Other expenses							
Travel and business development	**384**	545	519	540	509	**(8.7)**	**1.2**
Communications	**304**	296	282	286	294	**(0.6)**	**2.9**
Professional fees	**555**	568	572	569	528	**(1.4)**	**3.3**
Other	**1,168**	1,256	1,387	1,353	1,364	**1.1**	**4.3**
Total other expenses	**2,411**	2,665	2,760	2,748	2,695	**(1.7)**	**3.3**
Amortization of intangible assets	**620**	554	503	485	444	**8.6**	**11.8**
Total Non-Interest Expense	**14,177**	14,630	13,477	13,192	12,916	**3.0**	**6.4**
Year-over-year total non-interest expense growth (%)	**(3.1)**	8.6	2.2	2.1	5.4	**na**	**na**
Total Adjusted Non-Interest Expense	**14,042**	14,005	13,344	12,897	12,463	**3.4**	**6.4**
Year-over-year total adjusted non-interest expense growth (%)	**0.3**	5.0	3.5	3.5	4.8	**na**	**na**
Non-interest expense-to-revenue ratio (Efficiency ratio) (%)	**56.3**	57.4	58.8	59.7	61.6	**na**	**na**
Adjusted non-interest expense-to-revenue ratio (Adjusted efficiency ratio) (%)	**55.8**	55.0	58.3	58.3	59.2	**na**	**na**
Efficiency ratio, net of CCPB (%)	**60.4**	64.2	62.5	64.1	66.5	**na**	**na**
Adjusted efficiency ratio, net of CCPB (%)	**59.8**	61.4	61.9	62.7	63.9	**na**	**na**
Government Levies and Taxes (1)							
Government levies other than income taxes							
Payroll levies	**362**	354	328	322	324	**3.0**	**7.5**
Property taxes	**42**	37	38	39	42	**1.9**	**4.1**
Provincial capital taxes	**33**	35	29	29	30	**0.3**	**(3.0)**
Business taxes	**9**	9	8	8	9	**(6.3)**	**1.9**
Harmonized sales tax, GST, VAT and other sales taxes	**397**	384	350	330	318	**6.6**	**10.5**
Sundry taxes	**1**	1	1	1	3	**nm**	**nm**
Total government levies other than income taxes	**844**	820	754	729	726	**4.3**	**7.6**
Provision for income taxes	**1,251**	1,514	1,961	1,292	1,100	**6.0**	**6.2**
Total Government Levies and Taxes	**2,095**	2,334	2,715	2,021	1,826	**5.3**	**6.7**
Total government levies and taxes as a % of income before total government levies and taxes	**29.1**	28.8	33.3	27.5	28.3	**na**	**na**
Effective tax rate (%)	**19.7**	20.8	26.5	19.5	19.2	**na**	**na**
Adjusted effective tax rate (%)	**19.8**	21.1	20.7	19.8	19.9	**na**	**na**

Five-year and ten-year CAGR based on CGAAP in 2010 and IFRS in 2015 and 2020.

The adoption of new IFRS standards in 2015, 2018 and 2020 only impacted our results prospectively.

(1) Government levies are included in various non-interest expense categories.

(2) Effective 2020, the bank adopted IFRS 16. Prior periods have not been restated. Depreciation on the right-of-use asset has been recorded in premises, furniture and fixtures. Previously most of our real estate leases were classified as operating leases with rent expense recorded in rental of real estate.

na – not applicable

nm – not meaningful

Table 5: Average Assets, Liabilities and Interest Rates

($ millions, except as noted) For the year ended October 31	2020 Average balances	2020 Average interest rate (%)	2020 Interest income/ expense	2019 Average balances	2019 Average interest rate (%)	2019 Interest income/ expense	2018 Average balances	2018 Average interest rate (%)	2018 Interest income/ expense
Assets									
Canadian Dollar									
Deposits with other banks and other interest bearing assets	**13,605**	**0.33**	**45**	2,972	2.03	60	2,374	1.83	43
Securities	**94,343**	**2.32**	**2,186**	83,042	2.66	2,210	79,187	2.33	1,844
Securities borrowed or purchased under resale agreements	**44,460**	**1.05**	**468**	39,074	2.10	820	36,325	1.56	566
Loans									
Residential mortgages	**114,374**	**2.88**	**3,296**	109,289	3.04	3,317	106,610	2.79	2,973
Non-residential mortgages	**5,556**	**3.38**	**188**	5,637	3.43	194	5,873	3.28	193
Personal and credit cards	**62,920**	**4.95**	**3,116**	60,680	5.49	3,333	58,612	5.15	3,021
Business and government	**73,596**	**3.79**	**2,787**	62,965	4.10	2,580	56,427	3.98	2,248
Total loans	**256,446**	**3.66**	**9,387**	238,571	3.95	9,424	227,522	3.71	8,435
Total Canadian dollar	**408,854**	**2.96**	**12,086**	363,659	3.44	12,514	345,408	3.15	10,888
U.S. Dollar and Other Currencies									
Deposits with other banks and other interest bearing assets	**61,050**	**0.62**	**376**	47,001	1.72	808	46,607	1.40	654
Securities	**124,567**	**2.24**	**2,794**	109,072	3.05	3,331	91,198	2.49	2,275
Securities borrowed or purchased under resale agreements	**66,109**	**0.85**	**560**	65,943	2.11	1,391	55,647	1.81	1,010
Loans									
Residential mortgages	**10,499**	**3.35**	**352**	11,554	3.67	424	11,218	3.60	404
Non-residential mortgages	**10,792**	**3.71**	**401**	9,356	4.75	445	6,652	4.48	298
Personal and credit cards	**13,659**	**4.37**	**597**	11,907	4.91	585	10,799	4.41	476
Business and government	**153,619**	**4.00**	**6,149**	138,660	4.80	6,654	113,772	4.42	5,030
Total loans	**188,569**	**3.98**	**7,499**	171,477	4.73	8,108	142,441	4.36	6,208
Total U.S. dollar and other currencies	**440,295**	**2.55**	**11,229**	393,493	3.47	13,638	335,893	3.02	10,147
Other non-interest bearing assets	**93,301**			76,100			72,994		
Total All Currencies									
Total assets and interest income	**942,450**	**2.47**	**23,315**	833,252	3.14	26,152	754,295	2.79	21,035
Liabilities									
Canadian Dollar									
Deposits									
Banks	**11,715**	**0.68**	**80**	4,905	1.02	50	3,607	0.59	21
Business and government	**136,976**	**1.24**	**1,704**	113,502	1.88	2,133	103,986	1.61	1,673
Individuals	**135,175**	**0.87**	**1,181**	120,852	1.05	1,269	111,081	0.80	891
Total deposits	**283,866**	**1.04**	**2,965**	239,259	1.44	3,452	218,674	1.18	2,585
Securities sold but not yet purchased and securities lent or sold under repurchase agreements (1)	**49,676**	**1.50**	**747**	44,815	2.56	1,146	40,640	2.09	849
Subordinated debt and other interest bearing liabilities	**26,387**	**2.69**	**711**	25,099	2.70	677	25,359	2.48	628
Total Canadian dollar	**359,929**	**1.23**	**4,423**	309,173	1.71	5,275	284,673	1.43	4,062
U.S. Dollar and Other Currencies									
Deposits									
Banks	**22,856**	**1.05**	**241**	24,534	2.41	592	26,282	1.93	506
Business and government	**244,449**	**0.99**	**2,424**	211,970	1.79	3,802	191,739	1.37	2,622
Individuals	**77,930**	**0.78**	**609**	71,005	1.08	770	61,651	0.59	367
Total deposits	**345,235**	**0.95**	**3,274**	307,509	1.68	5,164	279,672	1.25	3,495
Securities sold but not yet purchased and securities lent or sold under repurchase agreements (1)	**80,656**	**1.54**	**1,243**	76,889	2.91	2,235	63,940	2.60	1,661
Subordinated debt and other interest bearing liabilities	**18,207**	**2.22**	**404**	19,896	2.96	590	16,798	2.26	379
Total U.S. dollar and other currencies	**444,098**	**1.11**	**4,921**	404,294	1.98	7,989	360,410	1.54	5,535
Other non-interest bearing liabilities	**84,683**			70,916			65,223		
Total All Currencies									
Total liabilities and interest expense	**888,710**	**1.05**	**9,344**	784,383	1.69	13,264	710,306	1.35	9,597
Shareholders' equity	**53,740**			48,869			43,989		
Total Liabilities, Interest Expense and Shareholders' Equity	**942,450**	**0.99**	**9,344**	833,252	1.59	13,264	754,295	1.27	9,597
Net interest margin									
– based on earning assets		**1.64**			1.70			1.67	
– based on total assets		**1.48**			1.55			1.52	
Net interest income			**13,971**			12,888			11,438

(1) For the years ended October 31, 2020, 2019 and 2018, the maximum amount of securities lent or sold under repurchase agreements at any month end amounted to $106,695 million, $96,399 million and $85,489 million, respectively.

Supplemental Information

Table 6: Volume/Rate Analysis of Changes in Net Interest Income

($ millions) For the year ended October 31	2020/2019 Increase (decrease) due to change in Average balance	 Average rate	 Total	2019/2018 Increase (decrease) due to change in Average balance	 Average rate	 Total
Assets						
Canadian Dollar						
Deposits with other banks and other interest bearing assets	**216**	**(231)**	**(15)**	11	6	17
Securities	**301**	**(325)**	**(24)**	90	276	366
Securities borrowed or purchased under resale agreements	**113**	**(465)**	**(352)**	43	211	254
Loans						
Residential mortgages	**154**	**(175)**	**(21)**	75	269	344
Non-residential mortgages	**(3)**	**(3)**	**(6)**	(8)	9	1
Personal and credit cards	**123**	**(340)**	**(217)**	107	205	312
Business and government	**436**	**(229)**	**207**	260	72	332
Total loans	**710**	**(747)**	**(37)**	434	555	989
Change in Canadian dollar interest income	**1,340**	**(1,768)**	**(428)**	578	1,048	1,626
U.S. Dollar and Other Currencies						
Deposits with other banks and other interest bearing assets	**242**	**(674)**	**(432)**	6	148	154
Securities	**473**	**(1,010)**	**(537)**	445	611	1,056
Securities borrowed or purchased under resale agreements	**3**	**(834)**	**(831)**	186	195	381
Loans						
Residential mortgages	**(39)**	**(33)**	**(72)**	12	8	20
Non-residential mortgages	**68**	**(112)**	**(44)**	121	26	147
Personal and credit cards	**86**	**(74)**	**12**	49	60	109
Business and government	**718**	**(1,223)**	**(505)**	1,101	523	1,624
Total loans	**833**	**(1,442)**	**(609)**	1,283	617	1,900
Change in U.S. dollar and other currencies interest income	**1,551**	**(3,960)**	**(2,409)**	1,920	1,571	3,491
Total All Currencies						
Change in total interest income (a)	**2,891**	**(5,728)**	**(2,837)**	2,498	2,619	5,117
Liabilities						
Canadian Dollar						
Deposits						
Banks	**70**	**(40)**	**30**	8	21	29
Business and government	**441**	**(870)**	**(429)**	153	307	460
Individuals	**150**	**(238)**	**(88)**	78	300	378
Total deposits	**661**	**(1,148)**	**(487)**	239	628	867
Securities sold but not yet purchased and securities lent or sold under repurchase agreements	**125**	**(524)**	**(399)**	87	210	297
Subordinated debt and other interest bearing liabilities	**35**	**(1)**	**34**	(6)	55	49
Change in Canadian dollar interest expense	**821**	**(1,673)**	**(852)**	320	893	1,213
U.S. Dollar and Other Currencies						
Deposits						
Banks	**(40)**	**(311)**	**(351)**	(33)	119	86
Business and government	**582**	**(1,960)**	**(1,378)**	277	903	1,180
Individuals	**75**	**(236)**	**(161)**	55	348	403
Total deposits	**617**	**(2,507)**	**(1,890)**	299	1,370	1,669
Securities sold but not yet purchased and securities lent or sold under repurchase agreements	**109**	**(1,101)**	**(992)**	336	238	574
Subordinated debt and other interest bearing liabilities	**(50)**	**(136)**	**(186)**	70	141	211
Change in U.S. dollar and other currencies interest expense	**676**	**(3,744)**	**(3,068)**	705	1,749	2,454
Total All Currencies						
Change in total interest expense (b)	**1,497**	**(5,417)**	**(3,920)**	1,025	2,642	3,667
Change in total net interest income (a – b)	**1,394**	**(311)**	**1,083**	1,473	(23)	1,450

Table 7: Net Loans and Acceptances – Segmented Information (1) (2)

($ millions)	Canada					United States					Other countries				
As at October 31	**2020**	2019	2018	2017	2016	**2020**	2019	2018	2017	2016	**2020**	2019	2018	2017	2016
Consumer															
Residential mortgages	**117,886**	112,448	107,956	106,647	103,558	**9,122**	11,275	11,645	8,587	8,686	**–**	–	–	–	–
Credit cards	**7,391**	8,289	7,788	7,550	7,541	**498**	570	541	521	560	**–**	–	–	–	–
Consumer instalment and other personal loans	**57,288**	55,311	52,706	51,637	50,368	**12,286**	11,752	9,918	9,798	13,974	**469**	537	458	373	215
Total consumer	**182,565**	176,048	168,450	165,834	161,467	**21,906**	23,597	22,104	18,906	23,220	**469**	537	458	373	215
Total business and government	**107,301**	105,890	92,883	82,632	78,884	**138,040**	134,880	110,828	97,478	98,236	**10,792**	10,122	9,122	11,270	10,037
Total loans and acceptances, net of allowance for credit losses on impaired loans	**289,866**	281,938	261,333	248,466	240,351	**159,946**	158,477	132,932	116,384	121,456	**11,261**	10,659	9,580	11,643	10,252
Allowance for credit losses on performing loans (3)	**(1,323)**	(740)	(689)	(799)	(833)	**(1,225)**	(630)	(574)	(641)	(687)	**(28)**	(17)	(6)	–	–
Total net loans and acceptances	**288,543**	281,198	260,644	247,667	239,518	**158,721**	157,847	132,358	115,743	120,769	**11,233**	10,642	9,574	11,643	10,252

Table 8: Net Impaired Loans and Acceptances (NIL) – Segmented Information (2) (4)

($ millions, except as noted)	Canada					United States					Other countries				
As at October 31	**2020**	2019	2018	2017	2016	**2020**	2019	2018	2017	2016	**2020**	2019	2018	2017	2016
Consumer															
Residential mortgages	**225**	233	185	206	195	**168**	164	171	161	175	**–**	–	–	–	–
Consumer instalment and other personal loans	**89**	138	126	127	121	**146**	194	252	293	345	**–**	–	–	–	–
Total consumer	**314**	371	311	333	316	**314**	358	423	454	520	**–**	–	–	–	–
Business and government	**726**	336	235	248	298	**1,487**	1,101	597	762	843	**70**	–	–	30	1
Total impaired loans and acceptances, net of allowance for credit losses on impaired loans	**1,040**	707	546	581	614	**1,801**	1,459	1,020	1,216	1,363	**70**	–	–	30	1
Condition Ratios (1)															
NIL as a % of net loans and acceptances	**0.36**	0.25	0.21	0.23	0.26	**1.13**	0.92	0.77	1.05	1.13	**0.62**	–	–	0.26	0.01
NIL as a % of net loans and acceptances															
Consumer	**0.17**	0.21	0.18	0.20	0.20	**1.43**	1.52	1.91	2.40	2.24	**–**	–	–	–	–
Business and government	**0.68**	0.32	0.25	0.30	0.38	**1.08**	0.82	0.54	0.78	0.86	**0.65**	–	–	0.27	0.01

(1) Aggregate Net Loans and Acceptances balances are net of allowance for credit losses on performing loans and impaired loans (excluding those related to off-balance sheet instruments and undrawn commitments). The Consumer and Business and government Net Loans and Acceptances balances are net of allowance for credit losses on impaired loans only (excluding those related to off-balance sheet instruments and undrawn commitments).

(2) Segmented credit information by geographic area is based upon the country of ultimate risk.

(3) Prior periods have not been restated to reflect the adoption of IFRS 9 in 2018. The adoption of IFRS 9 has been applied prospectively.

(4) Net Impaired Loans and Acceptances are net of allowance for credit losses on impaired loans (excluding those related to off-balance sheet instruments and undrawn commitments).

Total				
2020	2019	2018	2017	2016
127,008	123,723	119,601	115,234	112,244
7,889	8,859	8,329	8,071	8,101
70,043	67,600	63,082	61,808	64,557
204,940	200,182	191,012	185,113	184,902
256,133	250,892	212,833	191,380	187,157
461,073	451,074	403,845	376,493	372,059
(2,576)	(1,387)	(1,269)	(1,440)	(1,520)
458,497	449,687	402,576	375,053	370,539

Total				
2020	2019	2018	2017	2016
393	397	356	367	370
235	332	378	420	466
628	729	734	787	836
2,283	1,437	832	1,040	1,142
2,911	2,166	1,566	1,827	1,978
0.63	0.48	0.39	0.49	0.53
0.31	0.36	0.38	0.43	0.45
0.89	0.57	0.39	0.54	0.61

Table 9: Net Loans and Acceptances – Segmented Information (1) (2)

($ millions) As at October 31	**2020**	2019	2018	2017	2016
Net Loans and Acceptances by Province					
Atlantic provinces	**15,105**	14,601	13,925	13,686	13,736
Quebec	**43,859**	42,985	40,177	38,802	38,263
Ontario	**124,419**	119,499	109,531	103,152	97,991
Prairie provinces	**50,634**	51,639	48,634	46,853	46,411
British Columbia and territories	**54,526**	52,474	48,377	45,174	43,117
Total net loans and acceptances in Canada	**288,543**	281,198	260,644	247,667	239,518
Net Business and Government Loans by Industry					
Commercial real estate	**39,990**	36,707	31,028	26,479	24,126
Construction (non-real estate)	**4,799**	4,943	3,916	3,916	3,563
Retail trade	**20,480**	23,085	20,403	18,496	16,430
Wholesale trade	**15,444**	16,933	14,814	11,612	12,157
Agriculture	**13,549**	13,268	12,321	11,114	10,951
Communications	**771**	840	729	625	905
Financing products	**3,927**	4,124	4,439	5,060	6,093
Manufacturing	**26,099**	26,541	22,839	19,824	18,587
Mining	**2,433**	2,474	1,916	1,344	1,867
Oil and gas	**12,644**	13,421	9,168	8,167	7,930
Transportation	**12,921**	12,390	10,973	10,496	10,695
Utilities	**5,151**	4,783	3,911	2,776	2,697
Forest products	**1,012**	1,152	840	835	889
Service industries	**47,769**	45,730	38,348	33,705	32,659
Financial	**44,968**	40,839	32,463	32,265	32,076
Government	**2,121**	1,801	1,436	1,470	1,326
Other	**2,055**	1,861	3,289	3,196	4,206
	256,133	250,892	212,833	191,380	187,157

Table 10: Net Impaired Loans and Acceptances – Segmented Information (3)

($ millions) As at October 31	**2020**	2019	2018	2017	2016
Net Impaired Business and Government Loans					
Commercial real estate	**78**	49	45	45	60
Construction (non-real estate)	**86**	21	18	39	45
Retail trade	**407**	56	50	36	13
Wholesale trade	**69**	76	42	97	51
Agriculture	**313**	291	193	238	221
Communications	**9**	6	–	–	1
Financing products	**147**	–	–	–	–
Manufacturing	**225**	191	77	70	106
Mining	**30**	–	1	1	2
Oil and gas	**366**	356	57	145	408
Transportation	**112**	119	90	156	88
Utilities	**1**	2	2	4	12
Forest products	**7**	2	–	2	7
Service industries	**387**	240	191	181	82
Financial	**41**	28	66	2	39
Government	**3**	–	–	3	6
Other	**2**	–	–	21	1
	2,283	1,437	832	1,040	1,142

(1) Aggregate Net Loans and Acceptances are net of allowance for credit losses on performing loans and impaired loans (excluding those related to off-balance sheet instruments and undrawn commitments). The Consumer and Business and government Net Loans and Acceptances balances are net of allowance for credit losses on impaired loans only (excluding those related to off-balance sheet instruments and undrawn commitments).
(2) Segmented credit information by geographic area is based upon the country of ultimate risk.
(3) Net Impaired Loans and Acceptances are net of allowance for credit losses on impaired loans (excluding those related to off-balance sheet instruments and undrawn commitments).

Table 11: Changes in Gross Impaired Loans – Segmented Information (1) (2)

($ millions, except as noted)	Canada					United States					Other countries				
As at October 31	**2020**	2019	2018	2017	2016	**2020**	2019	2018	2017	2016	**2020**	2019	2018	2017	2016
Gross impaired loans and acceptances (GIL), beginning of year															
Consumer	**497**	426	439	407	404	**385**	470	508	585	557	**–**	–	–	–	–
Business and government	**417**	309	354	380	282	**1,330**	731	869	1,009	757	**–**	–	50	2	4
Total GIL, beginning of year	**914**	735	793	787	686	**1,715**	1,201	1,377	1,594	1,314	**–**	–	50	2	4
Additions to impaired loans and acceptances															
Consumer	**723**	895	836	697	631	**165**	244	274	360	473	**–**	–	–	–	–
Business and government	**1,097**	323	321	281	453	**2,571**	1,224	647	799	953	**93**	–	–	56	2
Total additions	**1,820**	1,218	1,157	978	1,084	**2,736**	1,468	921	1,159	1,426	**93**	–	–	56	2
Reductions to impaired loans and acceptances (3)															
Consumer	**(554)**	(586)	(628)	(479)	(446)	**(136)**	(242)	(212)	(301)	(282)	**–**	–	–	–	–
Business and government	**(366)**	(171)	(282)	(259)	(251)	**(1,528)**	(466)	(573)	(692)	(456)	**(9)**	–	(49)	(7)	(4)
Total reductions due to net repayments and other	**(920)**	(757)	(910)	(738)	(697)	**(1,664)**	(708)	(785)	(993)	(738)	**(9)**	–	(49)	(7)	(4)
Write-offs (4)															
Consumer	**(252)**	(238)	(221)	(186)	(182)	**(79)**	(87)	(100)	(136)	(163)	**–**	–	–	–	–
Business and government	**(219)**	(44)	(84)	(48)	(104)	**(497)**	(159)	(212)	(247)	(245)	**–**	–	(1)	(1)	–
Total write-offs	**(471)**	(282)	(305)	(234)	(286)	**(576)**	(246)	(312)	(383)	(408)	**–**	–	(1)	(1)	–
Gross impaired loans and acceptances, end of year															
Consumer	**414**	497	426	439	407	**335**	385	470	508	585	**–**	–	–	–	–
Business and government	**929**	417	309	354	380	**1,876**	1,330	731	869	1,009	**84**	–	–	50	2
Total GIL, end of year	**1,343**	914	735	793	787	**2,211**	1,715	1,201	1,377	1,594	**84**	–	–	50	2
Condition Ratios															
GIL as a % of Gross Loans															
Consumer	**0.23**	0.28	0.25	0.26	0.25	**1.53**	1.63	2.12	2.69	2.52	**–**	–	–	–	–
Business and government	**0.86**	0.39	0.33	0.43	0.48	**1.36**	0.98	0.66	0.89	1.03	**0.78**	–	–	0.44	0.02
Total Loans and Acceptances	**0.46**	0.32	0.28	0.32	0.33	**1.38**	1.08	0.90	1.18	1.31	**0.75**	–	–	0.43	0.02

(1) GIL excludes Purchased Credit Impaired Loans.
(2) Segmented credit information by geographic area is based upon the country of ultimate risk.
(3) Includes amounts returning to performing status, sales, repayments, the impact of foreign exchange, and offsets for consumer write-offs that are not recognized as formations.
(4) Excludes certain loans that are written off directly and not classified as new formations.

Total				
2020	2019	2018	2017	2016
882	896	947	992	961
1,747	1,040	1,273	1,391	1,043
2,629	1,936	2,220	2,383	2,004
888	1,139	1,110	1,057	1,104
3,761	1,547	968	1,136	1,408
4,649	2,686	2,078	2,193	2,512
(690)	(828)	(840)	(780)	(728)
(1,903)	(637)	(904)	(958)	(711)
(2,593)	(1,465)	(1,744)	(1,738)	(1,439)
(331)	(325)	(321)	(322)	(345)
(716)	(203)	(297)	(296)	(349)
(1,047)	(528)	(618)	(618)	(694)
749	882	896	947	992
2,889	1,747	1,040	1,273	1,391
3,638	2,629	1,936	2,220	2,383
0.37	0.44	0.47	0.51	0.54
1.13	0.70	0.49	0.66	0.74
0.79	0.58	0.48	0.59	0.64

Table 12: Changes in Allowance for Credit Losses – Segmented Information (1) (2)

($ millions, except as noted)	Canada					United States					Other countries				
As at October 31	**2020**	2019	2018	2017	2016	**2020**	2019	2018	2017	2016	**2020**	2019	2018	2017	2016
Allowance for credit losses (ACL), beginning of year															
Consumer	**749**	725	705	595	614	**200**	230	301	254	393	**–**	–	–	–	–
Business and government	**303**	255	317	471	388	**821**	648	566	793	657	**21**	12	29	1	–
Total ACL, beginning of year	**1,052**	980	1,022	1,066	1,002	**1,021**	878	867	1,047	1,050	**21**	12	29	1	–
Provision for credit losses (3)															
Consumer	**801**	470	416	394	373	**86**	1	(9)	74	(33)	**–**	–	–	–	–
Business and government	**685**	93	28	37	174	**1,336**	302	243	220	257	**29**	9	(21)	21	–
Total provision for credit losses	**1,486**	563	444	431	547	**1,422**	303	234	294	224	**29**	9	(21)	21	–
Recoveries															
Consumer	**117**	120	127	134	102	**63**	104	75	81	87	**–**	–	–	–	–
Business and government	**20**	4	5	10	14	**52**	62	51	40	140	**–**	–	3	–	–
Total recoveries	**137**	124	132	144	116	**115**	166	126	121	227	**–**	–	3	–	–
Write-offs															
Consumer	**(556)**	(551)	(515)	(501)	(481)	**(108)**	(113)	(125)	(157)	(173)	**–**	–	–	–	–
Business and government	**(219)**	(44)	(84)	(48)	(104)	**(497)**	(159)	(212)	(247)	(245)	**–**	–	(1)	(1)	–
Total write-offs	**(775)**	(595)	(599)	(549)	(585)	**(605)**	(272)	(337)	(404)	(418)	**–**	–	(1)	(1)	–
Other, including foreign exchange rate changes															
Consumer	**(38)**	(15)	(8)	(10)	(13)	**(24)**	(22)	(12)	(23)	(20)	**–**	–	–	–	–
Business and government	**(7)**	(5)	(11)	(27)	(1)	**(16)**	(32)	–	(114)	(16)	**(4)**	–	2	(1)	1
Total Other, including foreign exchange rate changes	**(45)**	(20)	(19)	(37)	(14)	**(40)**	(54)	(12)	(137)	(36)	**(4)**	–	2	(1)	1
ACL, end of year															
Consumer	**1,073**	749	725	612	595	**217**	200	230	229	254	**–**	–	–	–	–
Business and government	**782**	303	255	443	471	**1,696**	821	648	692	793	**46**	21	12	20	1
Total ACL, end of year	**1,855**	1,052	980	1,055	1,066	**1,913**	1,021	878	921	1,047	**46**	21	12	20	1
Net write-offs as a % of average loans and acceptances (4)	**un**	un	un	un	un	**un**	un	un	un	un	**un**	un	un	un	un

Table 13: Allocation of Allowance for Credit Losses – Segmented Information (1) (5)

($ millions, except as noted)	Canada					United States					Other countries				
As at October 31	**2020**	2019	2018	2017	2016	**2020**	2019	2018	2017	2016	**2020**	2019	2018	2017	2016
Consumer															
Residential mortgages	**11**	10	9	12	15	**5**	7	10	12	18	**–**	–	–	–	–
Consumer instalment and other personal loans	**89**	116	106	94	76	**16**	20	37	42	47	**–**	–	–	–	–
Total consumer	**100**	126	115	106	91	**21**	27	47	54	65	**–**	–	–	–	–
Business and government	**203**	81	74	106	82	**389**	229	134	107	166	**14**	–	–	20	1
Total allowance for credit losses on impaired loans	**303**	207	189	212	173	**410**	256	181	161	231	**14**	–	–	20	1
Allowance for credit losses on performing loans (3)	**1,323**	740	689	799	833	**1,225**	630	574	641	687	**28**	17	6	–	–
Allowance for credit losses	**1,626**	947	878	1,011	1,006	**1,635**	886	755	802	918	**42**	17	6	20	1
Coverage Ratios															
Allowance for credit losses on impaired loans as a % of gross impaired loans and acceptances															
Total	**22.6**	22.6	25.7	26.7	22.0	**18.5**	14.9	15.1	11.7	14.5	**16.7**	–	–	40.0	50.0
Consumer	**24.2**	25.4	27.0	24.1	22.4	**6.3**	7.0	10.0	10.6	11.1	**–**	–	–	–	–
Business and government	**21.9**	19.4	23.9	29.9	21.6	**20.7**	17.2	18.3	12.3	16.5	**16.7**	–	–	40.0	50.0

(1) Segmented credit information by geographic area is based upon country of ultimate risk.
(2) Prior periods have not been restated to reflect the adoption of IFRS 9 in 2018. The adoption of IFRS 9 in 2018 has been applied prospectively.
(3) Excludes provision for credit losses on other assets.
(4) Aggregate Net Loans and Acceptances balances are net of allowance for credit losses on performing loans and impaired loans (excluding those related to off-balance sheet instruments).
(5) Amounts exclude allowance for credit losses included in Other Liabilities.

un – unavailable

Total				
2020	2019	2018	2017	2016
949	955	1,006	849	1,007
1,145	915	912	1,265	1,045
2,094	1,870	1,918	2,114	2,052
887	471	407	468	340
2,050	404	250	278	431
2,937	875	657	746	771
180	224	202	215	189
72	66	59	50	154
252	290	261	265	343
(664)	(664)	(640)	(658)	(654)
(716)	(203)	(297)	(296)	(349)
(1,380)	(867)	(937)	(954)	(1,003)
(62)	(37)	(20)	(33)	(33)
(27)	(37)	(9)	(142)	(16)
(89)	(74)	(29)	(175)	(49)
1,290	949	955	841	849
2,524	1,145	915	1,155	1,265
3,814	2,094	1,870	1,996	2,114
0.24	0.13	0.17	0.19	0.19

Supplemental Information

Total				
2020	2019	2018	2017	2016
16	17	19	24	33
105	136	143	136	123
121	153	162	160	156
606	310	208	233	249
727	463	370	393	405
2,576	1,387	1,269	1,440	1,520
3,303	1,850	1,639	1,833	1,925
20.0	17.6	19.1	17.7	17.0
16.2	17.3	18.1	16.9	15.7
21.0	17.7	20.0	18.3	17.9

Table 14: Allowance for Credit Losses on Impaired Loans – Segmented Information

($ millions) As at October 31	2020	2019	2018	2017	2016
Business and Government					
Allowance for Credit Losses on Impaired Loans by Industry					
Commercial real estate	**11**	9	8	15	13
Construction (non-real estate)	**18**	8	16	14	4
Retail trade	**53**	11	17	14	12
Wholesale trade	**35**	52	23	17	31
Agriculture	**36**	22	16	11	19
Communications	**8**	7	–	–	1
Financing products	**–**	–	–	–	–
Manufacturing	**67**	35	20	51	36
Mining	**10**	–	–	–	1
Oil and gas	**184**	48	17	42	45
Transportation	**32**	30	31	13	9
Utilities	**–**	–	–	2	3
Forest products	**5**	–	1	1	1
Service industries	**132**	79	46	51	50
Financial	**7**	3	1	2	10
Government	**1**	1	–	–	–
Other	**7**	5	12	–	14
Total business and government (1)	**606**	310	208	233	249

Table 15: Provision for Credit Losses – Segmented Information

($ millions) For the year ended October 31	2020	2019	2018	2017	2016
Consumer					
Residential mortgages	**17**	16	19	11	24
Cards	**261**	246	216	232	232
Consumer instalment and other personal loans	**226**	201	231	232	246
Total consumer	**504**	463	466	475	502
Business and Government					
Commercial real estate	**6**	5	(2)	(4)	(16)
Construction (non-real estate)	**70**	1	–	25	15
Retail trade	**73**	(2)	10	29	13
Wholesale trade	**22**	54	18	24	11
Agriculture	**30**	27	37	31	56
Communications	**1**	7	–	(1)	2
Financing products	**–**	–	–	–	–
Manufacturing	**128**	25	20	28	29
Mining	**10**	–	–	–	20
Oil and gas	**293**	51	(25)	9	105
Transportation	**116**	67	74	108	56
Utilities	**1**	1	(2)	–	3
Forest products	**6**	–	(1)	–	(1)
Service industries	**243**	68	87	102	21
Financial	**(6)**	(35)	(4)	(3)	(7)
Government	**–**	1	–	–	–
Other	**25**	18	22	(1)	(38)
Total business and government	**1,018**	288	234	347	269
Total provision for credit losses on impaired loans	**1,522**	751	700	822	771
Provision for credit losses on performing loans (2)	**1,431**	121	(38)	(76)	–
	2,953	872	662	746	771
Performance Ratios (%)					
PCL to average net loans and acceptances	**0.63**	0.20	0.17	0.20	0.22
PCL on impaired loans to segmented average net loans and acceptances					
Consumer	**0.25**	0.24	0.25	0.26	0.28
Business and government	**0.39**	0.12	0.12	0.18	0.15
PCL on impaired loans to average net loans and acceptances	**0.33**	0.17	0.18	0.22	0.22

(1) Amounts exclude allowance for credit losses included in Other Liabilities.
(2) Prior periods have not been restated to reflect the adoption of IFRS 9 in 2018. The adoption of IFRS 9 in 2018 has been applied prospectively.

Table 16: Average Deposits

($ millions, except as noted)	2020 Average balance	2020 Average rate paid (%)	2019 Average balance	2019 Average rate paid (%)	2018 Average balance	2018 Average rate paid (%)
Deposits Booked in Canada						
Demand deposits – interest bearing	**35,643**	**0.82**	24,211	1.18	20,874	0.86
Demand deposits – non-interest bearing	**56,936**	**–**	47,849	–	45,967	–
Payable after notice	**101,870**	**0.63**	86,531	1.24	81,941	0.84
Payable on a fixed date	**194,456**	**1.86**	173,337	2.33	150,583	1.97
Total deposits booked in Canada	**388,905**	**1.17**	331,928	1.63	299,365	1.28
Deposits Booked in the United States and Other Countries						
Banks located in the United States and other countries (1)	**20,927**	**1.07**	23,563	2.41	24,596	1.92
Governments and institutions in the United States and other countries	**8,852**	**0.91**	12,253	1.97	10,014	1.49
Other demand deposits	**16,321**	**0.27**	14,484	0.86	13,858	0.30
Other deposits payable after notice or on a fixed date	**194,096**	**0.69**	164,540	1.38	150,513	1.05
Total deposits booked in the United States and other countries	**240,196**	**0.70**	214,840	1.49	198,981	1.13
Total average deposits	**629,101**	**0.99**	546,768	1.58	498,346	1.22

As at October 31, 2020, 2019 and 2018: deposits by foreign depositors in our Canadian bank offices amounted to $52,433 million, $46,766 million and $48,592 million, respectively; total deposits payable after notice included $51,536 million, $39,382 million and $34,754 million, respectively, of chequing accounts that would have been classified as demand deposits under U.S. reporting requirements; and total deposits payable on a fixed date included $26,727 million, $25,098 million and $28,927 million, respectively, of federal funds purchased, commercial paper issued and other deposit liabilities. These amounts would have been classified as short-term borrowings for U.S. reporting purposes.

(1) Includes regulated and central banks.

Glossary of Financial Terms

Adjusted Earnings and Measures present results adjusted to exclude the impact of certain items, as set out in the Non-GAAP Measures section. Management considers both reported and adjusted results to be useful in assessing underlying ongoing business performance.
Page 17

Allowance for Credit Losses represents an amount deemed appropriate by management to absorb credit-related losses on loans and acceptances and other credit instruments, in accordance with applicable accounting standards. *Allowance on Performing Loans* is maintained to cover impairment in the existing portfolio for loans that have not yet been individually identified as impaired. *Allowance on Impaired Loans* is maintained to reduce the carrying value of individually identified impaired loans to the expected recoverable amount.
Pages 89, 114

Assets under Administration and Assets under Management refers to assets administered or managed by a financial institution that are beneficially owned by clients and therefore not reported on the balance sheet of the administering or managing financial institution.

Asset-Backed Commercial Paper (ABCP) is a short-term investment. The commercial paper is backed by assets such as trade receivables, and is generally used for short-term financing needs.
Pages 71, 102

Average Earning Assets represents the daily or monthly average balance of deposits with other banks and loans and securities, over a one-year period.

Bail-In Debt is senior unsecured debt subject to the Canadian Bail-In Regime. Bail-in debt includes senior unsecured debt issued directly by the bank on or after September 23, 2018, which has an original term greater than 400 days and is marketable, subject to certain exceptions. Some or all of this debt may be statutorily converted into common shares of the bank under the Bail-In Regime if the bank enters resolution.
Pages 64, 102

Bankers' Acceptances (BAs) are bills of exchange or negotiable instruments drawn by a borrower for payment at maturity and accepted by a bank. BAs constitute 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.

Basis Point is one one-hundredth of a percentage point.

Common Equity Tier 1 (CET1) capital is comprised of common shareholders' equity less deductions for goodwill, intangible assets, pension assets, certain deferred tax assets and other items which may include a portion of expected credit loss provisions.
Page 67

Common Equity Tier 1 Ratio reflects CET1 capital divided by risk-weighted assets.
Pages 22, 63, 64

Common Shareholders' Equity is the most permanent form of capital. For regulatory capital purposes, common shareholders' equity is comprised of common shareholders' equity, net of capital deductions.

Corporate Services consists of Corporate Units and Technology and Operations (T&O). Corporate Units provide enterprise-wide expertise, governance and support in a variety of areas, including strategic planning, risk management, finance, legal & regulatory compliance, human resources, communications, marketing, real estate, procurement, data and analytics and innovation. T&O develops, monitors, manages and maintains governance of information technology, and also provides cyber security and operations services.
Page 52

Credit and Counterparty Risk is the potential for loss due to the failure of a borrower, endorser, guarantor or counterparty to repay a loan or honour another predetermined financial obligation.
Page 84

Derivatives are contracts with a value that is derived from movements in underlying interest or foreign exchange rates, equity or commodity prices or other indices. Derivatives allow for the transfer, modification or reduction of current or expected risks from changes in rates and prices.

Dividend Payout Ratio represents common share dividends as a percentage of net income available to common shareholders. It is computed by dividing dividends per share by basic earnings per share.

Earnings per Share (EPS) is calculated by dividing net income, after deducting preferred share dividends and distributions on other equity instruments, by the average number of common shares outstanding. Diluted EPS, which is BMO's basis for measuring performance, adjusts for possible conversions of financial instruments into common shares if those conversions would reduce EPS. Adjusted EPS is calculated in the same manner using adjusted net income.
Page 21

Earnings Sensitivity is a measure of the impact of potential changes in interest rates on the projected 12-month pre-tax net income of a portfolio of assets, liabilities and off-balance sheet positions in response to prescribed parallel interest rate movements, with interest rates floored at zero.
Page 95

Economic Capital is an expression of the enterprise's capital demand requirement relative to its view of the economic risks in its underlying business activities. It represents management's estimation of the likely magnitude of economic losses that could occur should severely adverse situations arise, and allows returns to be measured on a consistent basis across such risks. Economic capital is calculated for various types of risk, including credit, market (trading and non-trading), operational, business and insurance, based on a one-year time horizon using a defined confidence level.
Page 68

Economic Value Sensitivity is a measure of the impact of potential changes in interest rates on the market value of a portfolio of assets, liabilities and off-balance sheet positions in response to prescribed parallel interest rate movements, with interest rates floored at zero.
Page 95

Efficiency Ratio (or Expense-to-Revenue Ratio) is a measure of productivity. It is calculated as non-interest expense divided by total revenue, expressed as a percentage. The adjusted efficiency ratio is calculated in the same manner, utilizing adjusted total revenue and non-interest expense.
Page 32

Environmental and Social Risk is the potential for loss or harm resulting from environmental or social impacts or concerns, including climate change, related to BMO or its customers.
Page 112

Fair Value is the amount of consideration that would be agreed upon in an arm's- length transaction between knowledgeable, willing parties who are under no compulsion to act in an orderly market transaction.

Forwards and Futures are contractual agreements to either buy or sell a specified amount of a currency, commodity, interest-rate-sensitive financial instrument or security at a specified price and date in the future. Forwards are customized contracts transacted in the over-the-counter market. Futures are transacted in standardized amounts on regulated exchanges and are subject to daily cash margin requirements.

Hedging is a risk management technique used to neutralize, manage or offset interest rate, foreign currency, equity, commodity or credit risk exposures arising from normal banking activities.

Impaired Loans are loans for which there is no longer reasonable assurance of the timely collection of principal or interest.

Incremental Risk Charge (IRC) complements the VaR and SVaR metrics and represents an estimate of the default and migration risks of non-securitization products held in the trading book with exposure to interest rate risk, measured over a one-year horizon at a 99.9% confidence level.
Page 92

Insurance Risk is the potential for loss as a result of actual experience differing from that assumed when an insurance product was designed and priced. It generally entails the inherent unpredictability that can arise from assuming long-term policy liabilities or from the uncertainty of future events. Insurance provides protection against the financial consequences of insured risks by transferring those risks to the insurer (under specific terms and conditions) in exchange for premiums. Insurance risk is inherent in all of BMO's insurance products, comprised of life insurance, annuities, which includes the pension risk transfer business, accident and sickness, and creditor insurance, as well as in the reinsurance business.
Page 97

Legal and Regulatory Risk is the potential for loss or harm resulting from a failure to comply with laws or satisfy contractual obligations or regulatory requirements. This includes the risks of failure to: comply with the law (in letter or in spirit) or maintain standards of care; implement legislative or regulatory requirements; enforce or comply with contractual terms; assert non-contractual rights; effectively manage disputes; or act in a manner so as to maintain BMO's reputation.
Page 110

Leverage Exposures consist of on-balance sheet items and specified off-balance sheet items, net of specified adjustments.
Page 64

Leverage Ratio reflects Tier 1 capital divided by the leverage exposures.
Page 64

Liquidity and Funding Risk is the potential for loss if BMO is unable to meet financial commitments in a timely manner at reasonable prices as they become due. Financial commitments include liabilities to depositors and suppliers, and lending, investment and pledging commitments.
Page 97

Liquidity Coverage Ratio (LCR) is a Basel III regulatory metric calculated as the ratio of high-quality liquid assets to total net stressed cash outflows over a thirty-day period under a regulatory-prescribed stress scenario.
Page 98

Market Risk is the potential for adverse changes in the value of BMO's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity and commodity prices and their implied volatilities, and credit spreads, and includes the risk of credit migration and default in BMO's trading book.
Page 92

Mark-to-Market represents the valuation of financial instruments at fair value (as defined above) as of the balance sheet date.

Net Interest Income is comprised of earnings on assets, such as loans and securities, including interest and certain dividend income, less interest expense paid on liabilities, such as deposits.
Page 28

Net Interest Margin is the ratio of net interest income to average earning assets, expressed as a percentage or in basis points. Net interest margin is sometimes computed using average total assets.
Page 28

Net Non-Interest Revenue is non-interest revenue, net of insurance claims, commissions and changes in policy benefit liabilities.

Notional Amount refers to the principal amount used to calculate interest and other payments under derivative contracts. The principal amount does not change hands under the terms of a derivative contract, except in the case of cross-currency swaps.

Off-Balance Sheet Financial Instruments consist of a variety of financial arrangements offered to clients, which include credit derivatives, written put options, backstop liquidity facilities, standby letters of credit, performance guarantees, credit enhancements, commitments to extend credit, securities lending, documentary and commercial letters of credit, and other indemnifications.

Office of the Superintendent of Financial Institutions Canada (OSFI) is the government agency responsible for regulating banks, insurance companies, trust companies, loan companies and pension plans in Canada.

Operating Leverage is the difference between revenue and expense growth rates. Adjusted operating leverage is the difference between adjusted revenue and adjusted expense growth rates.
Page 32

Operational Risk is the potential for loss or harm resulting from inadequate or failed internal processes or systems, human errors or misconduct or external events, but excludes business risk, credit risk, market risk, liquidity risk and other financial risk.
Page 106

Options are contractual agreements that convey to the purchaser the right but not the obligation to either buy or sell a specified amount of a currency, commodity, interest-rate-sensitive financial instrument or security at a fixed future date or at any time within a fixed future period.

Provision for Credit Losses (PCL) is a charge to income that represents an amount deemed adequate by management to fully provide for impairment in a portfolio of loans and acceptances and other credit instruments, given the composition of the portfolio, the probability of default, the economic environment and the allowance for credit losses already established. The PCL can be comprised of both a provision for credit losses on impaired loans and a provision for credit losses on performing loans.
Pages 31, 88

Reputation Risk is the potential for loss or harm to the BMO brand. It can arise even if other risks are managed effectively.
Page 113

Return on Equity or Return on Common Shareholders' Equity (ROE) is calculated as net income, less preferred dividends and distributions on other equity instruments as a percentage of average common shareholders' equity. Common shareholders' equity is comprised of common share capital, contributed surplus, accumulated other comprehensive income (loss) and retained earnings. Adjusted ROE is calculated using adjusted net income rather than net income.
Page 22

Return on Tangible Common Equity (ROTCE) is calculated as net income available to common shareholders adjusted for the amortization of acquisition-related intangible assets as a percentage of average tangible common equity. Adjusted ROTCE is calculated using adjusted net income rather than net income.
Page 22

Risk-Weighted Assets (RWA) are defined as on-balance sheet and off-balance sheet exposures that are risk-weighted based on guidelines established by OSFI. The term is used for capital management and regulatory reporting purposes.
Page 65

Securities Borrowed or Purchased under Resale Agreements are low-cost, low-risk instruments, often supported by the pledge of cash collateral, which arise from transactions that involve the borrowing or purchasing of securities.

Securities Lent or Sold under Repurchase Agreements are low-cost, low-risk liabilities, often supported by cash collateral, which arise from transactions that involve the lending or selling of securities.

Securitization is the practice of selling pools of contractual debts, such as residential mortgages, auto loans and credit card debt obligations, to third parties or trusts, which then typically issue a series of asset-backed securities to investors to fund the purchase of the contractual debts.
Page 71

Strategic Risk is the potential for loss or harm due to changes in the external business environment and failure to respond appropriately to these changes as a result of inaction, ineffective strategies or poor implementation of strategies. Strategic risk also includes business risk, which arises from the specific business activities of the enterprise, and the effects these could have on its earnings.
Page 112

Stressed Value at Risk (SVaR) measures the maximum loss likely to be experienced in the trading and underwriting portfolios, measured at a 99% confidence level over a one-day holding period, with model inputs calibrated to historical data from a period of significant financial stress. SVaR is calculated for specific classes of risk in BMO's trading and underwriting activities related to interest rates, foreign exchange rates, credit spreads, equity and commodity prices and their implied volatilities.
Page 92

Structured Entities (SEs) include entities for which voting or similar rights are not the dominant factor in determining control of the entity. The bank is required to consolidate an SE if it controls the entity by having power over the entity, exposure to variable returns as a result of its involvement and the ability to exercise power to affect the amount of BMO's returns.
Page 71

Structural (Non-Trading) Market Risk is comprised of interest rate risk arising from banking activities (loans and deposits) and foreign exchange risk arising from foreign currency operations and exposures.
Page 95

Swaps are contractual agreements between two parties to exchange a series of cash flows. The various swap agreements that BMO enters into are as follows:

- *Commodity swaps* – counterparties generally exchange fixed-rate and floating-rate payments based on a notional value of a single commodity.
- *Credit default swaps* – one counterparty pays the other a fee in exchange for an agreement by the other counterparty to make a payment if a credit event occurs, such as bankruptcy or failure to pay.
- *Cross-currency interest rate swaps* – fixed-rate and floating-rate interest payments and principal amounts are exchanged in different currencies.
- *Cross-currency swaps* – fixed-rate interest payments and principal amounts are exchanged in different currencies.
- *Equity swaps* – counterparties exchange the return on an equity security or a group of equity securities for a return based on a fixed or floating interest rate or the return on another equity security or group of equity securities.
- *Interest rate swaps* – counterparties generally exchange fixed-rate and floating-rate interest payments based on a notional value in a single currency.
- *Total return swaps* – one counterparty agrees to pay or receive from the other cash amounts based on changes in the value of a reference asset or group of assets, including any returns such as interest earned on these assets, in exchange for amounts that are based on prevailing market funding rates.

Tangible Common Equity is calculated as common shareholders' equity less goodwill and acquisition-related intangible assets, net of related deferred tax liabilities.
Page 22

Taxable Equivalent Basis (teb): Revenues of operating groups are presented in BMO's MD&A on a taxable equivalent basis (teb). Revenue and the provision for income taxes are increased on tax-exempt securities to an equivalent before-tax basis to facilitate comparisons of income between taxable and tax-exempt sources.
Page 27

Tier 1 Capital is comprised of CET1 and **Additional Tier 1 (AT1) Capital**. AT1 capital consists of preferred shares and other AT1 capital instruments, less regulatory deductions.
Page 64

Tier 1 Capital Ratio reflects Tier 1 capital divided by risk-weighted assets.
Page 64

Tier 2 capital is comprised of subordinated debentures and may include certain loan loss allowances less regulatory deductions.
Page 66

Total Capital includes Tier 1 and Tier 2 capital.
Page 68

Total Capital Ratio reflects Total capital divided by risk-weighted assets.
Page 64

Total Loss Absorbing Capacity (TLAC) is comprised of total capital and senior unsecured debt subject to the Canadian Bail-In Regime. The largest Canadian banks are required to meet the minimum TLAC Ratio and TLAC Leverage Ratio effective November 1, 2021, as calculated under OSFI's TLAC Guideline.
Page 64

Total Loss Absorbing Capacity (TLAC) Ratio reflects the TLAC measure divided by risk-weighted assets.
Page 64

Total Loss Absorbing Capacity (TLAC) Leverage Ratio reflects TLAC divided by the leverage exposures.
Page 64

Total Shareholder Return: The three-year and five-year average annual total shareholder return (TSR) represents the average annual total return earned on an investment in BMO common shares made at the beginning of a three-year and five-year period, respectively. The return includes the change in share price and assumes dividends received were reinvested in additional common shares. The one-year TSR also assumes that dividends were reinvested in shares.
Page 21

Trading and Underwriting Market Risk gives rise to market risk associated with buying and selling financial products in the course of meeting customer requirements, including market making and related financing activities, and assisting clients to raise funds by way of securities issuance.
Page 92

Trading-Related Revenue includes net interest income and non-interest revenue earned from on-balance sheet and off-balance sheet positions undertaken for trading purposes. The management of these positions typically includes marking them to market on a daily basis. Trading-related revenue includes income (expense) and gains (losses) from both on-balance sheet instruments and interest rate, foreign exchange (including spot positions), equity, commodity and credit contracts.
Page 30

Value-at-Risk (VaR) measures the maximum loss likely to be experienced in the trading and underwriting portfolios, measured at a 99% confidence level over a one-day holding period. VaR is calculated for specific classes of risk in BMO's trading and underwriting activities related to interest rates, foreign exchange rates, credit spreads, equity and commodity prices and their implied volatilities.
Page 92