

A close-up, profile view of a woman's face, looking towards the right. The lighting is soft and warm, highlighting her features. The background is a blurred blue and red.

Forward

BMO  200

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**BMO Financial Group**  
Annual Report 2016



#### Business Review

- 2 Who We Are/Financial Snapshot
- 3 Reasons to Invest in BMO
- 4 Moving Forward
- 10 Priorities and Principles
- 12 Chairman's Message
- 13 Chief Executive Officer's Message
- 18 Executive Committee
- 19 Our Strategic Footprint
- 20 Corporate Governance
- 22 Board of Directors

#### Financial Review

- 24 Financial Performance and Condition at a Glance
- 26 Management's Discussion and Analysis
- 122 Supplemental Information
- 136 Statement of Management's Responsibility for Financial Information
- 137 Independent Auditors' Report of Registered Public Accounting Firm
- 138 Report of Independent Registered Public Accounting Firm
- 139 Consolidated Financial Statements
- 144 Notes to Consolidated Financial Statements

#### Resources and Directories

- 206 Glossary of Financial Terms
- 208 Where to Find More Information
- IBC Shareholder Information

When you've been around a while, you know the value of staying agile.

Strategically focused.

Always ready for what comes next.

Because life only moves in one direction.

Forward.

#### Davin Tiwari

As Director & Operational Risk Officer, Technology Risk Management Execution, Davin plays an integral role in cybersecurity at BMO, helping to uphold what is unequivocally our first responsibility as a bank: protecting our customers.




# Who We Are

Established in 1817, BMO Financial Group is a highly diversified financial services provider based in North America. With total assets of **\$688 billion** and more than **45,000 employees**, BMO provides a broad range of personal and commercial banking, wealth management and investment banking products and services to more than **12 million customers** and conducts business through three operating groups: Personal and Commercial Banking, Wealth Management and BMO Capital Markets.

## 200 Years of Change

As we mark BMO's bicentennial, it's an opportunity to reflect on a 200-year legacy of consistently anticipating customers' expectations while helping them achieve their financial goals. But this milestone is even more about continuing to move forward, as we constantly learn from all of our stakeholders, innovate to keep pace with their changing needs and refine our strategy to meet the challenges of tomorrow.

 [history.bmo.com](http://history.bmo.com)  
[bmo200.com](http://bmo200.com)  
[#bmo200](https://twitter.com/bmo200)

## Reporting Excellence

In 2016, for the second year in a row, BMO received the **Chartered Professional Accountants of Canada's Award of Excellence in Corporate Reporting** for the financial services industry.

# Financial Snapshot

As at or for the year ended October 31 (Canadian \$ in millions, except as noted)	Reported		Adjusted <sup>1</sup>	
	2016	2015	2016	2015
Revenue, net of CCPB <sup>2</sup> (p 38)	<b>19,544</b>	18,135	<b>19,628</b>	18,137
Provision for credit losses (p 42)	<b>815</b>	612	<b>815</b>	612
Non-interest expense (p 43)	<b>12,997</b>	12,182	<b>12,544</b>	11,819
Net income (p 34)	<b>4,631</b>	4,405	<b>5,020</b>	4,681
Earnings per share –				
diluted (\$) (p 34)	<b>6.92</b>	6.57	<b>7.52</b>	7.00
Return on equity (p 35)	<b>12.1%</b>	12.5%	<b>13.1%</b>	13.3%
Operating leverage, net of CCPB <sup>2</sup> (p 43)	<b>1.1%</b>	(3.0)%	<b>2.1%</b>	(1.3)%
Common Equity Tier 1 Ratio (p 35)	<b>10.1%</b>	10.7%	<b>na</b>	na
<b>Net Income by Segment<sup>3</sup></b>				
Canadian P&C (p 48)	<b>2,207</b>	2,105	<b>2,209</b>	2,109
U.S. P&C (p 51)	<b>1,081</b>	829	<b>1,131</b>	882
Wealth Management (p 55)	<b>762</b>	850	<b>863</b>	955
BMO Capital Markets (p 58)	<b>1,268</b>	1,029	<b>1,269</b>	1,031
Corporate Services <sup>4</sup> (p 62)	<b>(687)</b>	(408)	<b>(452)</b>	(296)
Net income (p 34)	<b>4,631</b>	4,405	<b>5,020</b>	4,681
U.S. P&C (US\$ in millions) (p 51)	<b>817</b>	661	<b>854</b>	703

<sup>1</sup>Adjusted results are non-GAAP and are discussed in the Non-GAAP Measures section on page 33. 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.

<sup>2</sup>Net of insurance claims, commissions and changes in policy benefit liabilities (CCPB).

<sup>3</sup>Certain comparative figures have been reclassified to conform with the current year's presentation. See pages 45 and 46.

<sup>4</sup>Corporate Services, including Technology & Operations.

na – not applicable

Bank of Montreal brands the organization's member companies as BMO Financial Group. Note 27 on page 200 of the financial statements lists the intercorporate relationships among Bank of Montreal and its significant subsidiaries.

# Reasons to Invest in BMO

- ✔ Strong, diversified businesses that continue to deliver robust earnings growth and long-term value for shareholders.
  - Large North American commercial banking business with advantaged market share.
  - Well-established, highly profitable core banking business in Canada.
  - Diversified U.S. banking operations well-positioned to benefit from growth opportunities.
  - Award-winning wealth franchise with an active presence in markets across Canada, the United States, Europe and Asia.
  - Competitively advantaged Canadian and growing mid-cap focused U.S. capital markets business.
- ✔ Well-capitalized with an attractive dividend yield.
  - ✔ Committed to customer experience, measured through a disciplined loyalty program.
  - ✔ Focus on efficiency through technology innovation, process enhancement and increased digitalization across channels.
  - ✔ Adherence to strong business ethics and corporate governance standards, including sustainability principles that ensure we consider social, economic and environmental impacts as we pursue sustainable growth.

## Our Dividend Record

BMO Financial Group has the longest-running dividend payout record of any company in Canada, at 188 years. BMO common shares had an annual dividend yield of 4.0% at October 31, 2016.

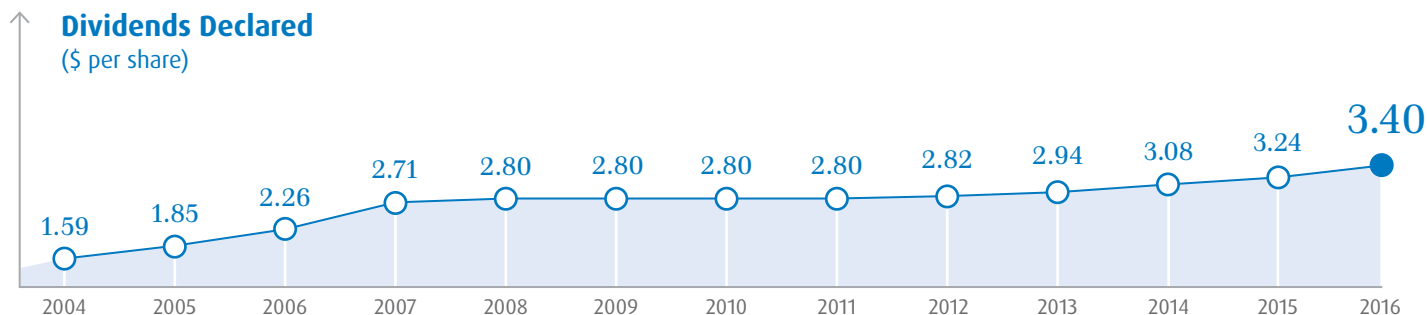
Compound annual growth rate:

**7.7%**

BMO 15-year

**4.0%**

BMO 5-year







Adapting. Innovating.  
Renewing. Transforming.

This is how we've sustained  
our bank's progress.

For 200 years and counting...

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To mark our bicentennial, BMO commissioned business historian Dr. Laurence B. Mussio to write a comprehensive history of the bank. The following is adapted from the introduction to the first volume, *A Vision Greater Than Themselves: The Making of the Bank of Montreal, 1817-2017*, published by McGill-Queen's University Press.

"The Bank of Montreal's history shows us what happens when ten generations of individual and collective vision, strategy, energy and performance are released, channelled and put to work for people and communities.

Time and again, the leadership and people of the bank have risen to meet an astonishing variety of economic, financial, social, political and technological challenges and opportunities.

Time and again, BMO bankers have confronted and tamed those challenges and taken advantage of those opportunities... Their gaze was firmly fixed on the future, but they never forgot the history and the achievements that bound them to the tradition of their forebears.

While past performance is never a guarantee of future results (to borrow a familiar phrase from banking), the history of BMO shows that hard work, the right leadership and vision, and the best team can make all the difference."

- Dr. Laurence B. Mussio



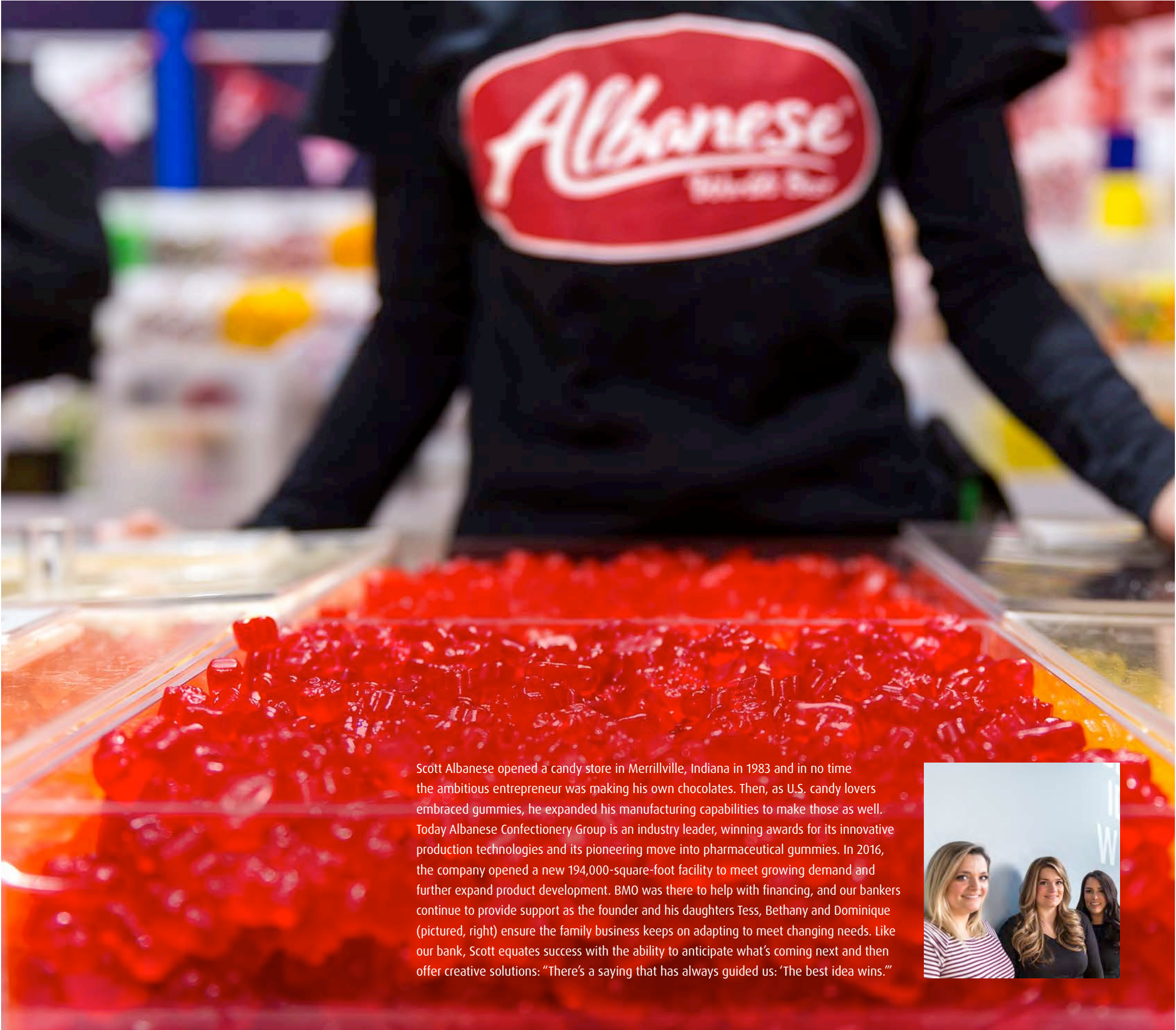
We're creating a banking experience that is distinctly BMO.

And we're making it easier for our customers to stay on top of change.

We're here to help.

It starts with listening closely, making sure we understand how customers think and trying to see things from their perspective. We focus on thousands of critical details, from the design of a branch or a mobile app to the way we chat online or across a desk. And working to make every interaction easy and satisfying as we help people manage their financial lives and plan for the future.

By investing strategically in advanced digital technology, we can deliver faster, simpler transactions; higher-quality information; more personalized offers; and consistent, streamlined communications. At the same time, we're changing how we work – redefining roles, introducing new training and support systems – to ensure everyone across the bank is empowered to create maximum positive impact while delivering on our vision: to be the bank that defines great customer experience.



Scott Albanese opened a candy store in Merrillville, Indiana in 1983 and in no time the ambitious entrepreneur was making his own chocolates. Then, as U.S. candy lovers embraced gummies, he expanded his manufacturing capabilities to make those as well. Today Albanese Confectionery Group is an industry leader, winning awards for its innovative production technologies and its pioneering move into pharmaceutical gummies. In 2016, the company opened a new 194,000-square-foot facility to meet growing demand and further expand product development. BMO was there to help with financing, and our bankers continue to provide support as the founder and his daughters Tess, Bethany and Dominique (pictured, right) ensure the family business keeps on adapting to meet changing needs. Like our bank, Scott equates success with the ability to anticipate what's coming next and then offer creative solutions: "There's a saying that has always guided us: 'The best idea wins.'"







**Riham Reza**

As a Technology Support and Management Analyst, Procurement, Riham is part of the team behind the 2016 launch of BMO SmartProcure, a powerful spend management tool that enables us to work more cost-efficiently with vendors while continuing to meet strict regulatory standards for risk assessment and mitigation: "Our goal is to help BMO employees and our business partners succeed in a work environment driven by technology and analytics."

Next week. Next year.

The next big idea that changes everything.

We're building on what works to create a future that works even better.

Banks change because that's the nature of our business: meeting the needs of a changing world. A few factors in particular are shaping the future of our industry:

- **Customers feel empowered by technology.** They expect instant, secure transactions, personalized service whenever they want it, control over their choices – and the freedom to change their minds.
- **The competitive landscape is shifting.** We're constantly adjusting and reinventing, replacing outdated models and rethinking practices to ensure their relevance – especially in an uncertain geopolitical climate, where markets can be volatile.
- **Innovation means rethinking.** New and emerging capabilities – mobile, social media, big data, cloud computing – inspire us to challenge old assumptions, even as we demonstrate the value of grounding creativity in experience.

We're facing the future with confidence. Partway through a multi-year transformation, our bank is more productive, more effectively enabled by technology and more closely attuned to customers' goals and aspirations. We have a clear plan, aligned with our vision and anchored in our strategic priorities. And it's yielding tangible, sustainable results.

# Sustainability is not an add-on. It's core to our strategy.

"The bank's activities are guided by our strategic priorities, which frame our decision-making and help us gauge progress over the long term. While these priorities may evolve to reflect the changing business environment, they are anchored by a commitment to create lasting value for all of our stakeholders.

Over the past year, we've expressed that commitment more formally through a set of sustainability principles focusing on social change, financial resilience, community-building and environmental responsibility. Extending and complementing our promise to customers, these principles reinforce the deeper sense of responsibility that informs all aspects of our business strategy.

Our bank has always tried to lead by example. By giving our sustainability principles due prominence, positioned right alongside the strategic priorities that communicate how we intend to grow, we confirm that sustainability is incorporated into how we do business, manage risk and create value."

– William A. Downe, Chief Executive Officer, BMO Financial Group



BMO's Lisa Brodtrick, Director of Aboriginal Banking, Alberta and Northwest Territories, with Chief Stanley Grier of the Piikani Nation.



# Vision

To be the bank that defines great customer experience.

## Strategic Priorities

The clearly defined statements of purpose that guide the bank's long-term decision-making as we deliver on our vision.

Achieve industry-leading **customer loyalty** by delivering on our brand promise.

Enhance **productivity** to drive performance and shareholder value.

Accelerate deployment of **digital technology** to transform our business.

Leverage our consolidated **North American platform** and expand strategically in select global markets to deliver growth.

Ensure our strength in **risk management** underpins everything we do for our customers.

## Sustainability Principles

The guidelines we follow as a responsibly managed bank consider social, economic and environmental impacts as we pursue sustainable growth.

### Social change

Helping people adapt and thrive as society evolves – tailoring our products and services to reflect changing expectations, and embracing diversity and inclusion in our workplace and the communities where we do business.

### Financial resilience

Supporting customers' needs and goals, while gauging appropriate levels of risk, as they shape their financial futures. And providing members of underserved communities with access to guidance and support that helps them and enables them to do better.

### Community-building

Fostering social and economic well-being in the communities where we live and work by financing new enterprises, facilitating public investment, paying our fair share of taxes and, together with our employees, providing support through charitable donations, sponsorships and volunteer activities.

### Environmental impact

Reducing our environmental footprint while considering the impacts of our business activities as we work with stakeholders who share our commitment to sustainability.

We balance our commitments to all stakeholders as we pursue our business strategy and strive to fulfill our broader social responsibilities.

## A Foundation of Trust

To continue earning the trust of our stakeholders, we act with integrity, communicate with transparency and uphold the highest standards of sound, ethical governance.

# Future Focused

**J. Robert S. Prichard**  
Chairman of the Board



As the bank starts its 200th year in business, it is gratifying indeed for the Board of Directors that a new high-water mark has just been attained. The bank's financial performance over the past 12 months has been excellent – all the more so knowing the uncertain conditions under which those results were achieved. The bank delivered record revenues and earnings and made significant progress in both Canada and the United States.

Economically, 2016 was a challenging year, with sluggish growth in most developed economies. We experienced major political developments, such as the Brexit vote, that went counter to the projections of most pundits and caught many by surprise. And here in North America, as in most parts of the world, attention was riveted on political events in the United States, as one of the most hotly contested presidential campaigns in memory finally ended. We also endured the effects of devastating natural disasters, such as Hurricane Matthew and the wildfires that levelled wide swaths of Fort McMurray and surrounding areas.

Such challenges bring out the best in people, and the Board of Directors was proud to see how everyone, including the bank and our employees, pitched in to help our neighbours when the need arose.

In the course of our 200 years in business, it is that tradition of being there to help that has set us apart. By being there for our customers, we were able to reach this bicentennial milestone filled with pride, and looking forward to the future with optimism.

The record financial performance we achieved in 2016 was the direct result of continuing to put customers first, which is at the core of the business strategy led by our Chief Executive Officer, Bill Downe, and his leadership team.

On your behalf, we thank Bill and all the bank's employees for delivering the results they promised. It requires a delicate balance to control expenses while investing heavily in the technology and programs that are going to produce future results. The management team achieved that balance impressively in 2016, with an improved efficiency ratio and major investments to position the bank for the future.

One risk attendant with attaining any goal or milestone can be complacency. Despite the excellent results in 2016, we are keenly aware that the job is not done. We are on a continuous journey of improvement and change. The investments we are making are part of a multi-year transformation to enhance our capabilities and continue to improve the banking experience we deliver. We are fortunate to have a globally respected banker leading this transformation and providing indispensable continuity as we develop the next generation of leaders. On behalf of the Board of Directors, I am proud to acknowledge Bill Downe's unique abilities as a leader. He has strengthened the bank in every dimension and mentored the bank's next generation in an exemplary way.

Bill and the team have a full agenda. They also have the full support of the Board of Directors. We look forward to working closely with them, as they capitalize on new opportunities and ensure the bank remains well-positioned for the future.

We all take great pride in being associated with BMO, which ranks among Canada's most respected and long-lived institutions, and the world's most respected banks. As we begin this bicentennial year, we thank all of our shareholders for your continuing confidence in BMO. For us, as your representatives on the board, it is a privilege to serve you.

**J. Robert S. Prichard**



# Look Forward

**William A. Downe**  
Chief Executive Officer



“The strategic actions our bank has taken, with discipline and over time, create the prerequisites of sustainable growth. The pieces are in place – and there’s more to come.”

BMO Financial Group is now in its 200th year of business – moving forward, confident in a clearly defined strategy. We’ve been putting the pieces in place to continuously deliver greater value to each of our stakeholders. And we’re seeing concrete, measurable proof that it’s paying off.

## The numbers add up: our strategy is working.

The actions we’ve taken to advance the bank’s strategic priorities over a number of years have been consistent, effective and on target. The result is our record performance in 2016.

Adjusted net revenue growth was strong at 8% and adjusted net income exceeded \$5 billion for the first time, delivering earnings per share of \$7.52 – an increase of 7% over the previous year. And we’ve achieved this level of profitability in an environment where more optimistic business scenarios had to be set aside: interest rates remained at all-time lows, with economic growth only picking up in the latter part of the year. What’s more, it was a year of extraordinary political change, from the arrival of a new federal government in Ottawa to the referendum deciding the United Kingdom’s withdrawal

from the European Union to a landmark U.S. presidential election that defied expert predictions. Through all of these changes, and often despite them, our bank achieved robust growth against the key metrics of progress.

Building momentum was evident in each of our operating groups, and their individual performance measures confirm that our overall strategic focus is delivering sustainable value. Canadian Personal and Commercial Banking saw net income grow by a healthy 5% year over year, even as we anticipated significant slowing in economic growth as the result of lower commodity prices.

## Adjusted Net Income – 2016

**7%**  
Increase



“The success we’ve built over two centuries is proof of our fundamental business agility. Insight forged by experience enables us to manage change, to drive and shape it – and to help our customers do the same.”

U.S. Personal and Commercial Banking performed very well, with adjusted net income up 22% on a U.S. dollar basis, with continued strong growth in deposits and commercial loans, as well as the impact of our BMO Transportation Finance business (whose acquisition was completed in the first quarter). BMO Capital Markets had a record year, with revenue consistently exceeding \$1 billion per quarter and earnings growth of 23% backed by strong performance in Canada and the United States. And in BMO Wealth Management, where results reflected weaker equity markets in the first half of 2016, underlying solid growth across a number of businesses created good momentum going into 2017.

These results underscore the strength of our business model. They also reflect the impact of sustained investment in a technology infrastructure, which enhances customer experience while allowing us to do more – quickly and efficiently – to generate steadily increasing value. In every part of the bank, we’re balancing decisions to improve

operating efficiencies with those that benefit customers and enable future growth.

We’re doing what we set out to do, confident that we can build on this momentum. And our confidence is more than a feeling – it’s the ability to act.

### We’ve reshaped the bank while reinforcing our core strengths.

In 2010, we recognized that there would never be a better opportunity to change our market position, and we acted. Our acquisition in the United States, and others that have followed, have been part of a broader commitment to transform BMO’s banking footprint. The positive impacts of that transformation are evident today across all of our operating groups.

The bank is ideally positioned for further growth, thanks to a unique set of advantages: a robust and diversified



business mix; diversification in key geographies and customer segments; a strong balance sheet and capital position; a consistent and disciplined approach to managing risk; an unwavering commitment to regulatory compliance; industry-leading employee engagement; a long-standing investment in recruiting, developing and retaining talented people; and a trusted brand that anchors everything we do.

These interrelated strengths are the preconditions of sustainable growth. And underpinning them all is the disciplined way in which we deploy technology, something we elevated in 2016 to be a strategic priority of the bank. In every area of our business, customers are benefiting from the enhanced capabilities of our technology platform. Our re-engineered IT architecture allows us to work more flexibly and cost-efficiently. The capabilities we're enabling – from mobile account opening to streamlined commercial lending systems to investment tools like BMO SmartFolio and adviceDirect – make doing business with our bank faster and easier. But the ultimate goal remains the same: to forge deep, mutually rewarding relationships with customers.

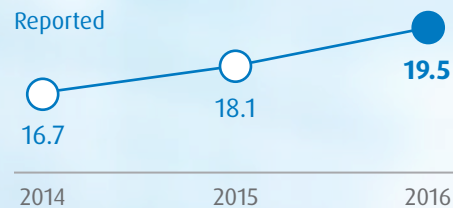
Our customers need to know that if a question comes up in the moment, they can count on quick access to a BMO banker who will provide the right answer. Or if they need help in resolving a complex issue or pursuing long-term goals, they can connect with a dedicated relationship manager. And as we work with them to evaluate options, the wealth of data we all have at our fingertips yields deeper insights and fuels more productive conversations. Uncertainty is replaced by clarity, and competing possibilities coalesce into well-defined plans.

BMO's technology and data capabilities are transforming the experience of customers to be intuitive, personalized and relationship-focused – and this is what distinguishes our bank. It's what we mean when we say we're creating a more personal bank for a digital world.

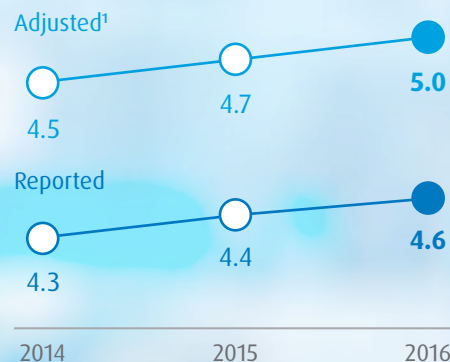
Our overarching aim is to deepen customer loyalty, and to grow share as a result. In all of these efforts, we're

## 2016 Performance

### Net Revenue (C\$ billions)



### Net Income (C\$ billions)



### Common Equity Tier 1 Ratio (%)



<sup>1</sup>Adjusted results are non-GAAP and are discussed in the Non-GAAP Measures section on page 33.



judged – and we judge ourselves – against a standard set by the best banks, while the presence we’re building across BMO’s footprint is distinctly our own.

Our business model works.

### We’ve shown the value of staying agile – for 200 years.

The final dimension that distinguishes our bank is perspective. The challenges we face today are not so different, at their core, from those we’ve tackled in the past. And yet we know our thinking must constantly evolve as market conditions and the broader social context change.

In marking our 200-year milestone, we’re focused on the bank’s proven ability to adapt and innovate as we refine our strategy to meet the challenges of tomorrow.

The success we’ve built over two centuries is proof of our fundamental business agility. In booms and recessions, through dramatic shifts in culture and technology, we’ve found that the insight forged by experience enables us to manage change, to drive and shape it – and to help our customers do the same.

### We’re paying close attention to what people want.

During the past year, markets worldwide grappled with uncertainty in the face of rapid, sometimes uncomfortable change. Traditional politics has been disrupted, and public discourse, fractious and polarized. This sense of widespread discontent, often expressed through populism, suggests a deep dissatisfaction with institutions that have failed to respond adequately to the needs of the people they’re meant to serve.

# “Confidence is the ability to act.”

Our bank does not stand outside these currents of social change. Through 200 years in business, we’ve seen that keeping pace with expectations is a perpetual challenge. An enterprise that is inattentive to what people want, or that tries to impose or constrain choice, quickly becomes irrelevant.

Ensuring BMO’s relevance starts with the fundamentals of how we do business: customers expect us to provide an evolving array of products and services, readily accessible and at a reasonable cost. Even more importantly, we’re expected to do business in a responsible manner.

In order to earn and maintain trust, institutions must address people’s expectations fully and responsibly. The leaders of institutions must be equally accountable for their actions – and our bank is no exception.

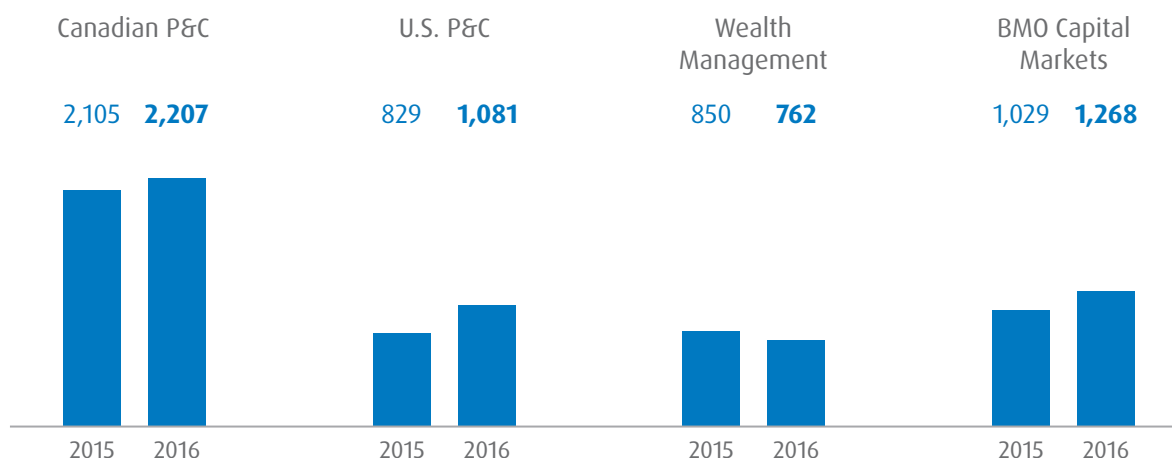
## Sustainability is not an add-on. It’s core to our strategy.

The bank’s activities are guided by our strategic priorities, which frame our decision-making and help us gauge progress over the long term. While these priorities may evolve to reflect the changing business environment, they are anchored by a commitment to create lasting value for all of our stakeholders.

Over the past year, we’ve expressed that commitment more formally through a set of sustainability principles focusing on social change, financial resilience, community-building and environmental responsibility (see page 11). Extending and complementing our promise to customers, these principles reinforce the deeper sense of responsibility that informs all aspects of our business strategy.

## Operating Group Performance

### Reported Net Income (C\$ millions)





Our bank has always tried to lead by example. By giving our sustainability principles due prominence, positioned right alongside the strategic priorities that communicate how we intend to grow, we confirm that sustainability is incorporated into how we do business, manage risk and create value.

## We have one simple rule: look forward.

The strategic actions our bank has taken, with discipline and over time, are the prerequisites of sustainable growth: people, capital, reputation and track record. The pieces are in place – our 2016 results confirm it. And there's more to come.

Building customer loyalty remains our first priority, because it's the key to sustainable growth. This is something BMO has understood from its earliest days – in a journey not simply of endurance, but of enduring relevance to our customers. We have a deep sense of continuity that gives us confidence as we deliver on our promise to customers, and as their success continues to drive our own.

And yes, we're looking forward to the future.



**William A. Downe**

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## Executive Committee\*

**William A. Downe, C.M.**

Chief Executive Officer,  
BMO Financial Group

**Darryl White**

Chief Operating Officer,  
BMO Financial Group

**Frank Techar**

Vice-Chair,  
BMO Financial Group

**Jean-Michel Arès**

Chief Technology  
& Operations Officer,  
BMO Financial Group

**Christopher Begy**

U.S. Country Head and  
Chief Executive Officer,  
BMO Financial Corp.

**David R. Casper**

President & Chief Executive  
Officer, BMO Harris Bank N.A.  
and Group Head,  
Commercial Banking

**Patrick Cronin**

Group Head,  
BMO Capital Markets

**Alexandra Dousmanis-Curtis**

Group Head,  
U.S. Retail and Business Banking,  
BMO Harris Bank

**Simon A. Fish**

General Counsel,  
BMO Financial Group

**Thomas E. Flynn**

Chief Financial Officer,  
BMO Financial Group

**Cameron Fowler**

Group Head,  
Canadian Personal and  
Commercial Banking,  
BMO Financial Group

**Gilles G. Ouellette**

Group Head, BMO Asset  
Management and  
Vice-Chair, International,  
BMO Financial Group

**Surjit Rajpal**

Chief Risk Officer,  
BMO Financial Group

**Catherine Roche**

Head, Office of Strategic  
Management,  
BMO Financial Group

**Lynn Roger**

Chief Transformation Officer,  
BMO Financial Group

**Joanna Rotenberg**

Group Head,  
BMO Wealth Management,  
BMO Financial Group

**Richard Rudderham**

Chief Human Resources Officer,  
BMO Financial Group

**Connie Stefankiewicz**

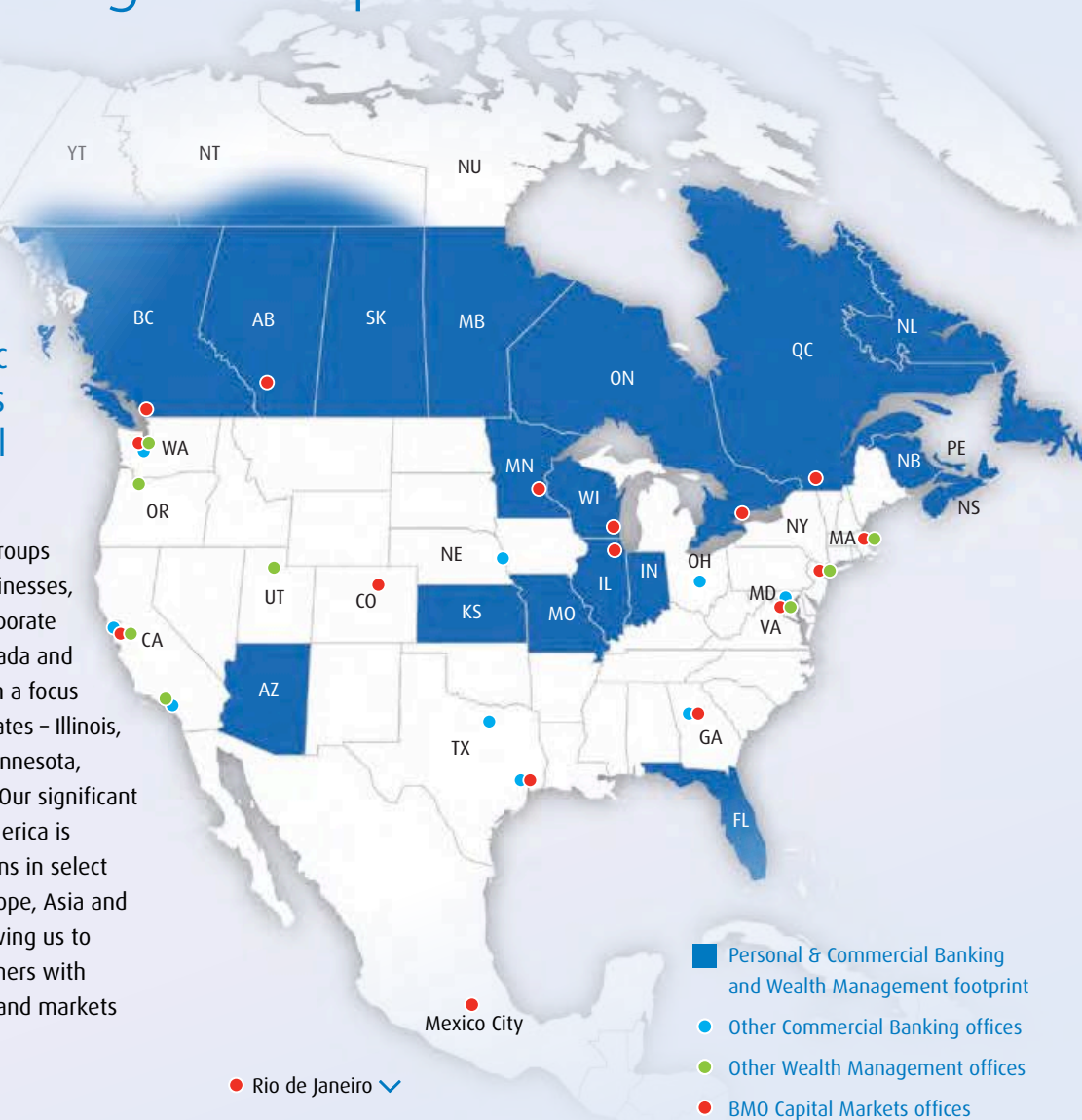
Chief Marketing Officer,  
BMO Financial Group

\* As at November 1, 2016.

# Our Strategic Footprint

BMO's strategic footprint spans strong regional economies.

Our three operating groups serve individuals, businesses, governments and corporate customers across Canada and the United States with a focus in six U.S. Midwest states – Illinois, Indiana, Wisconsin, Minnesota, Missouri and Kansas. Our significant presence in North America is bolstered by operations in select global markets in Europe, Asia and the Middle East, allowing us to provide all our customers with access to economies and markets around the world.



## Europe and Middle East presence



## Asia-Pacific presence



# Corporate Governance

When we measure BMO's performance, shareholder return is an important metric – but only as it reflects a more fundamental commitment to earning the trust of all stakeholders. We have a responsibility not simply to meet regulatory requirements, but to act in accordance with our stated values. And the cornerstone of our efforts is sound corporate governance. We've changed successfully over the past 200 years because of good governance, keeping an eye on the long term, and focusing on what is right for our customers.





## Our board oversees our business.

Our Board of Directors provides stewardship, including direction-setting and general oversight of our management and operations. Its members have sophisticated expertise and a range of perspectives. The board approves the bank's overall strategy and makes decisions based on BMO's values, emphasizing long-term performance over short-term gain.

## The board operates independently of management.

The Chairman of the Board and our directors, other than the Chief Executive Officer, operate independently of management. Board meetings include time for the independent directors to meet without management or non-independent directors present.

## Our focus on diversity reflects our values.

The diverse backgrounds of our directors help us connect with our customers, our markets and our employees. A diverse board also helps us make better decisions. Our Board Diversity Policy facilitates effective governance by positioning the board to be made up of highly-qualified directors. The policy includes the goal that each gender comprise at least one-third of the independent directors. We are proud to report that more than one-third of BMO's independent directors are women.

In addition, the board oversees the development of the next generation of leaders at BMO, ensuring the bank has a solid, diverse team of executives to keep BMO strong and growing in the years to come.

## We compensate our directors and executives in ways that encourage good decisions.

Our model for compensating directors and executives follows best practices for good governance. We use a pay-for-performance model for executives that includes clawbacks and discourages unreasonable risk-taking. Directors and executives must own shares, in order to align their interests with those of other shareholders. We do not allow directors and employees to hedge their investments in our shares, securities or related financial instruments.

## We maintain a strong focus on ethical conduct.

Our culture is open, fair and transparent. We have a non-negotiable commitment to doing what's right, supported by our Code of Conduct, a board-approved set of principles that is based on our values of integrity, empathy, diversity and responsibility – and is applicable to our Board of Directors and everyone who works at BMO.

## Our board and management stay connected with our shareholders.

Transparency is key, and communication is essential. We engage and inform our shareholders through our annual meeting of shareholders, annual report, management proxy circular, annual information form, sustainability report, corporate responsibility report, quarterly reports, news releases, earnings conference calls, industry conferences and other ad hoc meetings of shareholders with members of management and our Board of Directors. Our website provides extensive information about the board, its mandate, the board committees and their charters, and our directors.

# Board of Directors<sup>1</sup>

To promote alignment of our strategic goals across all our businesses, each director serves on at least one board committee and the Chief Executive Officer is invited to all committee meetings. We review the membership of all committees annually. [www.bmo.com/corporategovernance](http://www.bmo.com/corporategovernance)



Janice M. Babiak



Sophie Brochu



George A. Cope



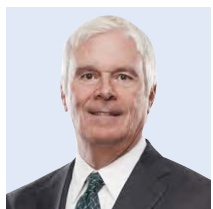
William A. Downe



Christine A. Edwards



Dr. Martin S. Eichenbaum



Ronald H. Farmer



Eric R. La Flèche



Lorraine Mitchelmore



Philip S. Orsino



J. Robert S. Prichard



Don M. Wilson III

## Janice M. Babiak, CPA (US), CA (UK), CISM, CISA

Corporate Director

**Board/Committees:** Audit and Conduct Review, Risk Review  
**Other public boards:** Walgreens Boots Alliance, Inc.  
**Director since:** 2012

## Sophie Brochu, C.M.

President and Chief Executive Officer, Gaz Métro

**Board/Committees:** Audit and Conduct Review  
**Other public boards:** BCE Inc., Bell Canada, Valener Inc.  
**Director since:** 2011

## George A. Cope, C.M.

President and Chief Executive Officer, Bell Canada and BCE Inc.

**Board/Committees:** Governance and Nominating, Human Resources  
**Other public boards:** BCE Inc., Bell Canada  
**Director since:** 2006

## William A. Downe, C.M.

Chief Executive Officer, BMO Financial Group

**Board/Committees:** Attends all committee meetings as an invitee  
**Other public boards:** ManpowerGroup  
**Director since:** 2007

## Christine A. Edwards

Capital Partner, Winston & Strawn

**Board/Committees:** Governance and Nominating (Chair), Human Resources, Risk Review  
**Director since:** 2010

## Dr. Martin S. Eichenbaum

Charles Moskos Professor of Economics, Northwestern University

**Board/Committees:** Audit and Conduct Review, Risk Review  
**Director since:** 2015

## Ronald H. Farmer

Managing Director, Mosaic Capital Partners

**Board/Committees:** Audit and Conduct Review, Governance and Nominating, Human Resources (Chair)  
**Director since:** 2003

## Eric R. La Flèche

President and Chief Executive Officer, Metro Inc.

**Board/Committees:** Risk Review  
**Other public boards:** Metro Inc.  
**Director since:** 2012

## Lorraine Mitchelmore

Corporate Director

**Board/Committees:** Human Resources, Risk Review  
**Director since:** 2015

## Philip S. Orsino, O.C., F.C.P.A., F.C.A.

President and Chief Executive Officer, Brightwaters Strategic Solutions, Inc.

**Board/Committees:** Audit and Conduct Review (Chair), Governance and Nominating  
**Other public boards:** Hydro One Inc., Hydro One Limited  
**Director since:** 1999

## J. Robert S. Prichard, O.C., O.Ont., FRSC, F.ICD

Chairman of the Board, BMO Financial Group, and Chair of Torgys LLP

**Board/Committees:** Governance and Nominating, Human Resources, Risk Review  
**Other public boards:** Barrick Gold Corporation, George Weston Limited, Onex Corporation  
**Director since:** 2000

## Don M. Wilson III

Corporate Director

**Board/Committees:** Governance and Nominating, Human Resources, Risk Review (Chair)  
**Director since:** 2008

# Honorary Directors

Robert M. Astley, FCIA, F.ICD, LL.D., Waterloo, ON  
 Stephen E. Bachand, Ponte Vedra Beach, FL, USA  
 Ralph M. Barford, C.M., M.B.A., LL.D., F.ICD, Toronto, ON  
 Matthew W. Barrett, O.C., LL.D., Oakville, ON  
 David R. Beatty, C.M., O.B.E., F.ICD, Toronto, ON  
 Peter J.G. Bentley, O.C., O.B.C., LL.D., Vancouver, BC  
 Robert Chevrier, F.C.A., Montreal, QC  
 Tony Comper, C.M., LL.D., Toronto, ON  
 C. William Daniel, O.C., LL.D., Toronto, ON

A. John Ellis, O.C., LL.D., O.R.S., Vancouver, BC  
 John F. Fraser, O.C., LL.D., O.R.S., Winnipeg, MB  
 David A. Galloway, Toronto, ON  
 Richard M. Ivey, C.C., Q.C., Toronto, ON  
 Betty Kennedy, O.C., LL.D., Campbellville, ON  
 Harold N. Kvisle, Calgary, AB  
 Eva Lee Kwok, Vancouver, BC  
 J. Blair MacAulay, Oakville, ON  
 Ronald N. Mannix, O.C., LL.D., Calgary, AB

Robert H. Mc Kercher, Q.C., Saskatoon, SK  
 Bruce H. Mitchell, Toronto, ON  
 Eric H. Molson, Montreal, QC  
 Jerry E.A. Nickerson, North Sydney, NS  
 Dr. Martha C. Piper, O.C., O.B.C., FRSC, Vancouver, BC  
 Jeremy H. Reitman, Montreal, QC  
 Lucien G. Rolland, O.C., Montreal, QC  
 Guylaine Saucier, F.C.P.A., F.C.A., C.M., F.ICD, Montreal, QC  
 Nancy C. Southern, Calgary, AB

<sup>1</sup> As at October 31, 2016.

# Financial Review

- 24 Financial Performance and Condition at a Glance
- 26 Management's Discussion and Analysis
- 122 Supplemental Information
- 136 Statement of Management's Responsibility  
for Financial Information
- 137 Independent Auditors' Report of Registered Public  
Accounting Firm
- 138 Report of Independent Registered Public  
Accounting Firm
- 139 Consolidated Financial Statements
- 144 Notes to Consolidated Financial Statements

## **Resources and Directories**

- 206 Glossary of Financial Terms
- 208 Where to Find More Information
- IBC Shareholder Information



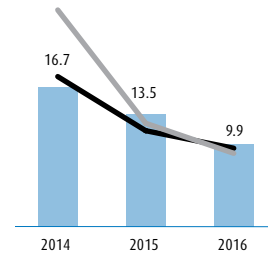
# Financial Performance and Condition at a Glance

## Our Performance (Note 1)

### Total Shareholder Return (TSR)

Q P 32

- BMO shareholders have earned a strong average annual return of 9.9% over the past three years, which outperformed our Canadian bank peer group average and was above the 6.6% return on the S&P/TSX Composite Index.
- The one-year TSR of 17.0% and the five-year average annual return of 12.5% both outperformed the S&P/TSX Composite Index, and the one-year TSR also outperformed our Canadian bank peer group average.

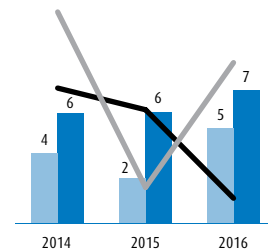


Graph shows average annual three-year TSR.

### Earnings per Share (EPS) Growth

Q P 34

- Reported EPS grew \$0.35 or 5% to \$6.92. Adjusted EPS grew \$0.52 or 7% to \$7.52, primarily reflecting higher earnings.
- On a reported and adjusted basis, higher revenue exceeded incremental costs, contributing to growth in net income. There were higher provisions for credit losses and a higher effective income tax rate.

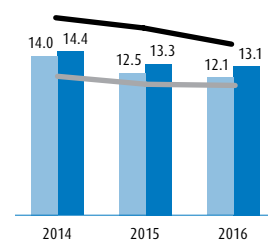


All EPS measures are stated on a diluted basis.

### Return on Equity (ROE)

Q P 35

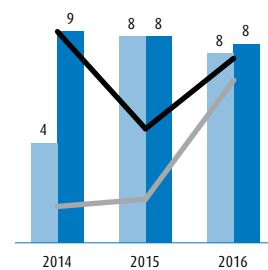
- Reported ROE was 12.1% and adjusted ROE was 13.1% in 2016, compared with 12.5% and 13.3%, respectively, in 2015. ROE declined in 2016 primarily due to growth in common equity exceeding growth in income. There was growth in both earnings and adjusted earnings available to common shareholders. Average common shareholders' equity increased, primarily due to increased retained earnings and the impact of the stronger U.S. dollar on our investments in foreign operations.



### Revenue Growth

Q P 38

- On a net revenue basis\*, revenue increased \$1,409 million or 8% to \$19,544 million, and adjusted revenue increased \$1,491 million or 8% to \$19,628 million, including a \$345 million or 2% impact of the stronger U.S. dollar. Reported and adjusted revenue increased due to revenue growth in the P&C businesses, which benefited from the acquired BMO Transportation Finance business and organic growth, and in BMO Capital Markets, with a decrease in Wealth Management and Corporate Services. Total revenue increased \$1,698 million or 9% to \$21,087 million in 2016.

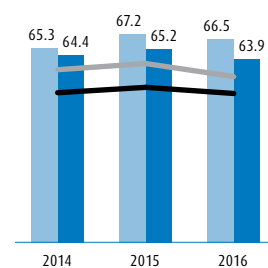


\*Graph shows net revenue growth, calculated using total revenue net of insurance claims, commissions and changes in policy benefit liabilities.

### Efficiency Ratio (Expense-to-Revenue Ratio)

Q P 43

- The reported efficiency ratio was 61.6% and the adjusted efficiency ratio was 59.2% in 2016. On a net revenue basis\*, the reported efficiency ratio improved 70 basis points to 66.5% and the adjusted efficiency ratio improved 130 basis points to 63.9% in 2016. All operating groups had improved efficiency ratios, with the exception of Wealth Management.



\*Graph shows the efficiency ratio on a net revenue basis, calculated using revenue net of insurance claims, commissions and changes in policy benefit liabilities.

Note 1: Adjusted results in this section are non-GAAP. Please see the Non-GAAP Measures section on page 33.

## Peer Group Performance

### TSR (%)

- The Canadian peer group three-year average annual TSR was 9.4%. The one-year TSR was 15.7% and the five-year average annual TSR was 12.6%.
- The North American peer group three-year average annual TSR was 8.8% and the one-year TSR was 10.3%, both below the corresponding Canadian peer group averages. The five-year average annual TSR of 16.8% was above the Canadian peer group average.

### EPS Growth (%)

- The Canadian peer group average EPS growth was 1%, with significant variability among our Canadian peer banks.
- Average EPS growth for the North American peer group was 9%, with increases in EPS for all but two banks in our North American peer group.

### ROE (%)

- The Canadian peer group average ROE of 15.0% was lower than the average return of 16.4% in 2015, as ROE declined for all but one bank in our Canadian peer group.
- Average ROE for the North American peer group was 11.4%, relatively unchanged from 2015.

### Revenue Growth (%)

- Revenue growth for the Canadian peer group averaged 8%, higher than the average growth of 5% in the prior year.
- Average revenue growth for the North American peer group of 7% was significantly higher than the average growth of 2% in 2015, with all but one of our U.S. peer banks reporting higher revenues.

### Efficiency Ratio (%)

- The Canadian peer group average efficiency ratio was 59.4%, an improvement from 60.2% in 2015.
- The average efficiency ratio for the North American peer group of 61.6% improved from 63.3% in 2015.

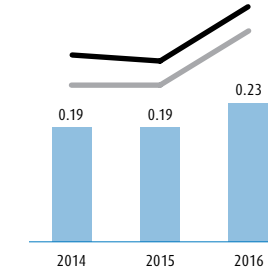
■ BMO reported  
■ BMO adjusted  
— Canadian peer group average  
— North American peer group average

## Our Performance (Note 1)

### Credit Losses

Q P 42, 91

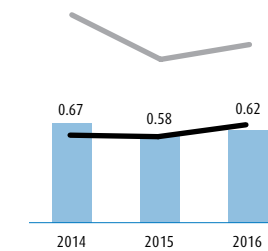
- Provisions for credit losses (PCL) totalled \$815 million, up from \$612 million in 2015 due to higher provisions in the P&C businesses and BMO Capital Markets, partially offset by higher net recoveries in Corporate Services.
- PCL as a percentage of average net loans and acceptances was 0.23% in 2016, up from 0.19% in 2015.



### Impaired Loans

Q P 91

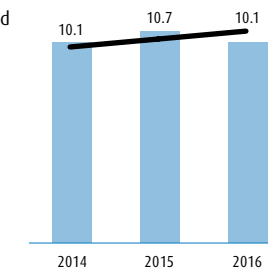
- Gross impaired loans and acceptances (GIL) increased to \$2,332 million from \$1,959 million in 2015, and represented 0.62% of gross loans and acceptances, compared with 0.58% a year ago.
- Formations of new impaired loans and acceptances totalled \$2,512 million, up from \$1,921 million in 2015, in part due to an increase in oil and gas impaired formations.



### Capital Adequacy

Q P 35, 70

- BMO's Common Equity Tier 1 (CET1) Ratio reflects a well-capitalized position.
- Our CET1 Ratio of 10.1% decreased by 60 basis points from 10.7% in 2015, due to increased risk-weighted assets, largely from the Basel I Capital floor and business growth, and the acquisition of the BMO Transportation Finance business in the first quarter of 2016, which reduced the ratio by approximately 60 basis points, partially offset by capital growth.



### Credit Rating

Q P 105

- Credit ratings for BMO's senior long-term debt, as assessed by the four major rating agencies, are listed below and all four ratings are considered to indicate high-grade, high-quality issues. Standard & Poor's (S&P) and Fitch have a stable outlook. Moody's and DBRS have a negative outlook pending further details on the government's approach to implementing a bail-in regime for Canada's domestic systemically important banks.

### Credit Rating

- The Canadian peer group median credit ratings were unchanged from 2015.
- The North American peer group median credit ratings were unchanged from 2015, and remain slightly lower than the median of the Canadian peer group for three of the ratings.

	BMO Financial Group			Canadian peer group median*			North American peer group median*		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
DBRS	AA	AA	AA	AA	AA	AA	AAL	AAL	AAL
Fitch	AA-	AA-	AA-	AA-	AA-	AA-	AA-	AA-	AA-
Moody's	Aa3	Aa3	Aa3	Aa3	Aa3	Aa3	A1	A1	A1
S&P	A+	A+	A+	A+	A+	A+	A	A	A

\*Data for all years reflects the peer group composition in the most recent year.

The Canadian peer group averages exclude BMO and are based on the performance of Canada's five other largest banks: Canadian Imperial Bank of Commerce, National Bank of Canada, Royal Bank of Canada, Scotiabank and TD Bank Group. The North American peer group averages are based on the performance of 12 of the largest banks in North America. These include the Canadian peer group, except National Bank of Canada, as well as BB&T Corporation, Bank of New York Mellon Corporation, Fifth Third Bancorp, KeyCorp, The PNC Financial Services Group Inc., Regions Financial Corporation, SunTrust Banks Inc. and U.S. Bancorp.

Results are as at or for the years ended October 31 for Canadian banks and as at or for the years ended September 30 for U.S. banks.

■ BMO reported  
■ BMO adjusted  
— Canadian peer group average  
— North American peer group average

# 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 136, 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, 2016 and 2015. The MD&A should be read in conjunction with our consolidated financial statements for the year ended October 31, 2016. The MD&A commentary is as of December 6, 2016. Unless otherwise indicated, all amounts are stated in Canadian dollars and have been derived from financial statements prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board. References to generally accepted accounting principles (GAAP) mean IFRS.

Since November 1, 2011, BMO's financial results have been reported in accordance with IFRS. Results for years prior to 2011 have not been restated and are presented in accordance with Canadian GAAP as defined at that time (CGAAP). As such, certain growth rates and compound annual growth rates (CAGR) may not be meaningful. On November 1, 2013, BMO adopted several new and amended accounting pronouncements issued by the International Accounting Standards Board. The consolidated financial statements for comparative periods in the fiscal years 2013 and 2012 have been restated. Certain other prior year data has been reclassified to conform with the current year's presentation. The adoption of new IFRS standards in 2015 only impacted our results prospectively. Prior periods have been reclassified for methodology changes and transfers of certain businesses between operating groups. See pages 45 and 46.

## Index

27	<b>Who We Are</b> provides an overview of BMO Financial Group, explains the links between our financial objectives and our overall vision, and outlines "Reasons to Invest in BMO" along with relevant key performance data.	68	<b>Financial Condition Review</b> comments on our assets and liabilities by major balance sheet category. It includes a review of our capital adequacy and our approach to optimizing our capital position to support our business strategies and maximize returns to our shareholders. It also includes a review of off-balance sheet arrangements and certain select financial instruments.
28	<b>Enterprise-Wide Strategy</b> outlines our enterprise-wide strategy and the context in which it is developed, as well as our progress in relation to our priorities.	68	Summary Balance Sheet
30	<b>Caution Regarding Forward-Looking Statements</b> advises readers about the limitations and inherent risks and uncertainties of forward-looking statements.	70	Enterprise-Wide Capital Management
30	<b>Economic Developments and Outlook</b> includes commentary on the Canadian, U.S. and international economies in 2016 and our expectations for 2017.	77	Select Financial Instruments
32	<b>Value Measures</b> reviews financial performance on the four key measures that assess or most directly influence shareholder return. It also includes explanations of non-GAAP measures, a reconciliation to their GAAP counterparts for the fiscal year, and a summary of adjusting items that are excluded from results to assist in the review of key measures and adjusted results.	78	Off-Balance Sheet Arrangements
32	Total Shareholder Return	79	<b>Enterprise-Wide Risk Management</b> outlines our approach to managing key financial risks and other related risks we face.
33	Non-GAAP Measures	80	Overview
34	Summary Financial Results and Earnings per Share Growth	80	Risks That May Affect Future Results
35	Return on Equity	83	Framework and Risks
35	Common Equity Tier 1 Ratio	88	Credit and Counterparty Risk
36	<b>2016 Financial Performance Review</b> provides a detailed review of BMO's consolidated financial performance by major income statement category. It also includes a summary of the impact of changes in foreign exchange rates.	95	Market Risk
45	<b>2016 Operating Groups Performance Review</b> outlines the strategies and key priorities of our operating groups and the challenges they face, along with their strengths and value drivers. It also includes a summary of their achievements in 2016, their focus for 2017, and a review of their financial performance for the year and the business environment in which they operate.	100	Liquidity and Funding Risk
46	Summary	106	Operational Risk
47	Personal and Commercial Banking	107	Model Risk
48	Canadian Personal and Commercial Banking	109	Insurance Risk
51	U.S. Personal and Commercial Banking	110	Legal and Regulatory Risk
55	BMO Wealth Management	111	Business Risk
58	BMO Capital Markets	111	Strategic Risk
62	Corporate Services, including Technology and Operations	112	Environmental and Social Risk
63	<b>Review of Fourth Quarter 2016 Performance, 2015 Financial Performance Review</b> and <b>Summary Quarterly Earnings Trends</b> provide commentary on results for relevant periods other than fiscal 2016.	112	Reputation Risk
		113	<b>Accounting Matters and Disclosure and Internal Control</b> reviews critical accounting estimates and changes in accounting policies in 2016 and for future periods. It also outlines our evaluation of disclosure controls and procedures and internal control over financial reporting, and provides an index of disclosures recommended by the Enhanced Disclosure Task Force.
		113	Critical Accounting Estimates
		115	Changes in Accounting Policies in 2016
		115	Future Changes in Accounting Policies
		117	Transactions with Related Parties
		118	Shareholders' Auditors' Services and Fees
		119	Management's Annual Report on Disclosure Controls and Procedures and Internal Control over Financial Reporting
		120	Enhanced Disclosure Task Force
		122	<b>Supplemental Information</b> presents other useful financial tables and more historical detail.

## Regulatory Filings

Our continuous disclosure materials, including our interim financial statements and interim MD&A, annual audited consolidated financial statements and annual MD&A, Annual Information Form and Notice of Annual Meeting of Shareholders and Management Proxy Circular, are available on our website at [www.bmo.com/investorrelations](http://www.bmo.com/investorrelations), on the Canadian Securities Administrators' website at [www.sedar.com](http://www.sedar.com) and on the EDGAR section of the SEC's website at [www.sec.gov](http://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.

# Who We Are

Established in 1817, BMO Financial Group is a highly diversified financial services provider based in North America. With total assets of \$688 billion and more than 45,000 employees, BMO provides a broad range of personal and commercial banking, wealth management and investment banking products and services to more than 12 million customers. We serve eight million customers across Canada through our Canadian personal and commercial arm, BMO Bank of Montreal. We also serve customers through our wealth management businesses: BMO Asset Management, BMO Nesbitt Burns, BMO Private Banking, BMO Insurance and BMO InvestorLine. BMO Capital Markets, our investment and corporate banking and trading products division, provides a full suite of financial products and services to North American and international clients. In the United States, BMO serves customers through BMO Harris Bank, based in the U.S. Midwest with more than two million retail, small business and commercial customers. BMO Financial Group conducts business through three operating groups: Personal and Commercial Banking, Wealth Management and BMO Capital Markets.

## Our Financial Objectives

BMO's medium-term financial objectives for certain important performance measures are set out below. We believe that we will deliver top-tier total shareholder return and meet our medium-term financial objectives by aligning our operations with, and executing on, our strategic priorities, along with our vision, as outlined on the following page. We consider top-tier returns to be top-quartile shareholder returns relative to our Canadian and North American peer group.

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

Over the medium term, our 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 adjusted net operating leverage of 2% or more and maintain capital ratios that exceed regulatory requirements. These objectives are guideposts as we execute against our strategic priorities. In managing our operations and risk, we recognize that current profitability and the ability to meet these objectives in a single period must be balanced with the need to invest in our businesses for their future long-term health and growth prospects.

Our one-year adjusted EPS growth rate was 7.4% and our five-year average annual adjusted EPS growth rate was 8.2%, in line with our target growth range of 7% to 10%. Our annual adjusted operating leverage on a net revenue basis was 2.1%, in line with our target of 2% or more, reflecting our focus on improving efficiency. Our five-year average annual adjusted ROE of 14.3% was below our target of 15% or more. Higher capital requirements negatively impact ROE and as a result, our 15% ROE objective is ambitious and will take time to attain. BMO is well-capitalized with a Common Equity Tier 1 Ratio of 10.1%.

## Reasons to Invest in BMO

- Strong, diversified businesses that continue to deliver robust earnings growth and long-term value for shareholders.
  - Large North American commercial banking business with advantaged market share.
  - Well-established, highly profitable core banking business in Canada.
  - Diversified U.S. banking operations well-positioned to benefit from growth opportunities.
  - Award-winning wealth franchise with an active presence in markets across Canada, the United States, Europe and Asia.
  - Competitively advantaged Canadian and growing mid-cap focused U.S. capital markets business.
- Well-capitalized with an attractive dividend yield.
- Committed to customer experience, measured through a disciplined loyalty program.
- Focus on efficiency through technology innovation, process enhancement and increased digitalization across channels.
- Adherence to strong business ethics and corporate governance standards, including sustainability principles that ensure we consider social, economic and environmental impacts as we pursue sustainable growth.

As at and for the periods ended October 31, 2016 (% except as noted)	1-year	5-year*	10-year*
Average annual total shareholder return	17.0	12.5	7.1
Average growth in annual EPS	5.3	7.8	4.8
Average growth in annual adjusted EPS	7.4	8.2	4.3
Average annual ROE	12.1	13.9	13.7
Average annual adjusted ROE	13.1	14.3	15.0
Compound growth in annual dividends declared per share	4.9	4.0	6.3
Dividend yield**	4.0	4.2	4.7
Price-to-earnings multiple**	12.3	11.6	12.6
Market value/book value ratio**	1.43	1.52	1.60
Common Equity Tier 1 Ratio	10.1	na	na

\* 5-year and 10-year growth rates reflect growth based on CGAAP in 2006 and IFRS in 2011 and 2016, respectively.

\*\* 1-year measure as at October 31, 2016. 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 33.

The Our Financial Objectives section above and the Enterprise-Wide Strategy and Economic Developments and Outlook sections that follow contain certain forward-looking statements. By their nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties. Please refer to the Caution Regarding Forward-Looking Statements on page 30 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.



# Enterprise-Wide Strategy

## Our Vision

To be the bank that defines great customer experience.

## Our Strategy in Context

We aim to deliver top-tier total shareholder return and balance our commitments to financial performance, our customers and employees, the environment and the communities where we live and work.

Continually focused on our future, with 200 years of experience that helps us chart the course, we continue to navigate an increasingly complex world characterized by: mixed macroeconomic performance, evolving customer needs, rapid technology advances, competitive intensity and a dynamic regulatory environment. In the face of these shifts, our commitment to our customers is unwavering. Our brand promise – *We're here to help* – and our vision inspire and guide what we do every day. We aim to help our customers feel valued, understood and confident in the financial decisions they make.

We are well positioned and feel confident about the future. We have a strong balance sheet and are well-capitalized. Our disciplined approach to risk is backed by a solid record of regulatory compliance. We have a diversified business mix that extends to key geographies and customer segments. Our employees are highly skilled and engaged. These elements are foundational to our sustained growth and help us deliver on our vision and brand promise.

Our commitment to stakeholders is evident in our focus on delivering an industry-leading customer experience, managing revenues and expenses to achieve our financial goals, and maintaining a prudent approach to risk management. We have made clear progress against our priorities with the foundation of a strong brand, more flexible technology platform, improved processes and transformed cost base.

We have a clear plan, aligned with our vision and anchored in five strategic priorities. We have made good progress on these priorities with select accomplishments outlined below, as well as in our group strategic priorities, detailed in the 2016 Operating Groups Performance Review, which starts on page 45.

## Our 2016 Priorities and Progress

### 1. Achieve industry-leading customer loyalty by delivering on our brand promise.

- Applied a focused approach to identifying and improving the experiences most important to our customers, recognizing changing customer behaviours and preferences:
  - Leveraged new data analytics capabilities to enhance and streamline customers' experiences when interacting with us digitally. Improvements delivered to date created capacity across our sales force for additional advice-based conversations resulting in higher customer loyalty.
  - Introduced a new service to allow prospective customers to open a BMO bank account in under seven minutes using their smartphone. This first-of-its-kind in Canada account opening capability allows customers to quickly search, select and open an account with BMO using an intuitive, conversational interface.
- Completed a refresh of automated banking machines in Canada to improve digital functionality, including: intelligent touch screens; the ability to make multi-deposit transactions; envelope-free deposits with straight-through processing; and an instant on-screen view of scanned cheques and cash.
- In the United States, introduced two new Smart Branch locations, providing customers with the best of our innovative technologies in a unique, smaller format tailored to their needs.
- Received awards across our groups recognizing our commitment to customers and progress in delivering against our priorities, including: Best Commercial Bank in Canada (*World Finance Magazine*), Best Domestic Private Bank, U.S. (*Global Financial Market Review*), Best Trade Bank in Canada (*Trade Finance Magazine*), and for the seventh consecutive year, World's Best Metals & Mining Investment Bank (*Global Finance*).
- Recognized as one of Canada's Best Brands 2017 by *Canadian Business*.

### 2. Enhance productivity to drive performance and shareholder value.

- Aligned our physical, digital and telephone channels via a North American channels strategy to deliver a customer experience to meet our loyalty and efficiency objectives:
  - Continued to invest in capabilities to support increasing customer preference of completing transactions through digital channels, which now represent approximately 40% of total service transaction volume.
  - Enhanced our digital sales capabilities. Digital retail banking sales volumes in Canada are now equivalent to sales at over 115 branches.
  - Continued to roll out new branch formats offering smaller, more flexible and more cost-effective points of distribution across North America with a branch staffing mix strategy that supports and emphasizes the branch as a critical point for complex advice-based sales such as mortgages and investments.
- Disciplined expense management control in place, with positive operating leverage in 2016.

### 3. Accelerate deployment of digital technology to transform our business.

- Delivered new digital capabilities and offerings across businesses, demonstrating BMO's commitment to leadership in digital banking:
  - Continued to make progress in re-engineering our technology architecture to be more customer-centric, faster, and more cost-effective.
  - Created personalized, intuitive applications for our customers, with increased speed-to-market, while enhancing risk management and boosting productivity.
  - Extended Apple Pay to our Canadian customers, allowing them to make secure purchases with their BMO credit and debit cards while using their iPhones.
  - In Canada, launched biometric security enhancements to select corporate card customers with MasterCard Identity Check™. Using the application, customers can verify their identity using facial recognition and fingerprints when making mobile and online purchases.
  - Launched a BMO debit card in Canada, enabling customers to make safe and secure contactless payments using Interac Flash.

- In partnership with Ryerson University's DMZ, announced the launch of BMO Presents: The Next Big Idea in Fintech – a program to help discover Canada's most innovative fintech companies with the idea of giving them market exposure and a chance to ultimately test their service through BMO.
- Leveraged our enhanced technology capabilities to change how work is completed, allowing us to improve pace and reduce delivery cost. For example, in six months we launched BMO SmartFolio®, an easy, affordable digital portfolio management service that aligns to individual investment objectives and provides clients with online access to investment solutions.

#### **4. Leverage our consolidated North American platform and expand strategically in select global markets to deliver growth.**

- Expanded our leading North American commercial banking franchise to better serve customers in Canada and the United States:
  - In Canada, maintained #2 market share for business loans up to \$25 million with lending and deposit growth of 10% and 6%, respectively, in our commercial banking business.
  - Improved our processes and increased platform efficiency, enabling our sales force to spend more time with customers, while streamlining our product portfolio to support growing customer preference for digital banking.
  - On December 1, 2015, completed the acquisition of General Electric Capital Corporation's Transportation Finance business, the largest provider of financing for the truck and trailer segment in North America, and rebranded it BMO Transportation Finance.
- Acquired Greene Holcomb Fisher, a boutique M&A advisory business based in Minneapolis.
- Extended our exchange traded fund (ETF) offering to clients in Europe and Asia, building on our #2 position in Canada in ETFs.
- Reorganized BMO's Asset Management business to fully leverage the global reach and competitiveness of the business.

#### **5. Ensure our strength in risk management underpins everything we do for our customers.**

- Improved risk data and risk reporting through significant investment in streamlined data collection, more timely data, greater data coverage, report automation and heightened governance.
- Further enhanced stress testing and other data analysis and modelling.
- Maintained our risk culture through enhanced assessment and learning tools and communication processes.
- Responded to rising regulatory expectations, evidenced by improvements in stress testing, market risk measurement, anti-money laundering tools and processes and foundational risk management.
- Continued to develop the next generation of our risk infrastructure by integrating, automating and upgrading foundational capabilities for risk and data analysis and modelling of market, credit and operational risks.



### 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 79 describes a number of risks, including credit and counterparty, market, liquidity and funding, operational, model, insurance, legal and regulatory, business, strategic, environmental and social, and reputation risk. Should our risk management framework prove ineffective, there could be a material adverse impact on our financial position.

#### 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 may involve, but are not limited to, comments with respect to our objectives and priorities for fiscal 2017 and beyond, our strategies or future actions, our targets, expectations for our financial condition or share price, and the results of or outlook for our operations or for the Canadian, U.S. and international economies.

By their nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties. There is significant risk that predictions, forecasts, conclusions or projections will not prove to be accurate, that our assumptions may not be correct, and that actual results may differ materially from such predictions, forecasts, conclusions or projections. We caution readers of this document not to place undue reliance on our forward-looking statements, as a number of factors 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.

The future outcomes that relate to forward-looking statements may be influenced by many factors, including but not limited to: general economic and market conditions in the countries in which we operate; weak, volatile or illiquid capital and/or credit markets; interest rate and currency value fluctuations; changes in monetary, fiscal, tax or economic policy; the level of competition in the geographic and business areas in which we operate; changes in laws or in supervisory expectations or requirements, including capital, interest rate and liquidity requirements and guidance; judicial or regulatory proceedings; the accuracy and completeness of the information we obtain with respect to our customers and counterparties; our ability to execute our strategic plans and to complete and integrate acquisitions, 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; changes to our credit ratings; political conditions, including changes relating to or affecting economic or trade matters; global capital markets activities; the possible effects on our business of war or terrorist activities; outbreaks of disease or illness that affect local, national or international economies; natural disasters and disruptions to public infrastructure, such as transportation, communications, power or water supply; technological changes; information and cyber security; and our ability to anticipate and effectively manage risks arising from all of the foregoing factors.

We caution that the foregoing list is not exhaustive of all possible factors. Other factors and risks could adversely affect our results. For more information, please see the discussion in the Risks That May Affect Future Results section on page 80, and the sections related to credit and counterparty, market, liquidity and funding, operational, model, insurance, legal and regulatory, business, strategic, environmental and social, and reputation risk, which begin on page 88 and outline certain key factors and risks that may affect Bank of Montreal'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. Bank of Montreal 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 our shareholders in understanding our financial position as at and for the periods ended on the dates presented, as well as our strategic priorities and objectives, and may not be appropriate for other purposes.

Assumptions about the performance of the Canadian and U.S. economies, as well as overall market conditions and their combined effect on our business, are material factors we consider when determining our strategic priorities, objectives and expectations for our business. In determining our expectations for economic growth, both broadly and in the financial services sector, we primarily consider historical economic data provided by the Canadian and U.S. governments and their agencies. See the Economic Developments and Outlook section of this document.

## Economic Developments and Outlook

### Economic Developments in 2016 and Outlook for 2017

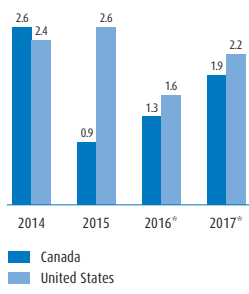
Looking back to 2016, the Canadian economy grew slowly, impacted by lower levels of investment in the oil industry and a temporary disruption in output from the Alberta oil sands, caused by wildfires. Slower job growth kept the unemployment rate near 7% this year. The uneven global expansion has dampened business confidence and spending. There was weaker momentum in the United States, China, the Eurozone and the United Kingdom, with the potential fallout from the Brexit referendum threatening to upset business confidence in the latter two regions. Consequently, exports, Canada's major engine of growth in the past two years, shifted into a lower gear in 2016. However, this was partially offset by growth in consumer spending, an increase in infrastructure spending by the federal government, and further expansion in housing markets. Record home sales and accelerating prices in Vancouver pushed the government of British Columbia to impose a property transfer tax on purchases by foreign buyers to prevent further overheating, while the federal government announced measures to curb mortgage lending, as well as foreign investment in residential real estate. Looking forward to 2017, our current prediction is for Canadian real GDP growth to improve from an estimated 1.3% in 2016 to 1.9% in 2017. We expect that economic recovery will be driven by expansionary federal fiscal policy, an expected increase in oil prices, and a pickup in exports in response to firmer U.S. demand and a still-low Canadian dollar. Growth in residential mortgages is expected to slow to around 5% in 2017, while consumer credit should continue to expand by close to 3%. Growth in business loans is projected to moderate to around 6% next year, given the decline in capital expenditures in the resource sector. Long-term interest rates fell in 2016 in response to steady policies by the Bank of Canada, modest economic growth and low inflation. The yield on 10-year government notes reached record lows below 1% in the summer of 2016, before turning up in anticipation of tighter Federal Reserve policy. The Bank of Canada is expected to keep its policy rate unchanged at 0.5% in 2017.

Growth in the U.S. economy slowed in 2016, reflecting low levels of exports, a reduction in oil production and a decrease in spending in the agriculture sector prompted by low crop prices. Investment was dampened by uncertainty related to slowing growth in the global economy, the Brexit referendum and the U.S. presidential election. Although job growth moderated this year, the unemployment rate has fallen to pre-recession levels. Rising household wealth and incomes supported consumer spending, while record-low mortgage rates and less restrictive lending standards encouraged a recovery in housing markets. Real growth in U.S. GDP is currently projected to improve from an estimated 1.6% in 2016 to 2.2% in 2017. An upturn in business spending, notably in the energy industry, should complement continued strength in consumer spending and housing markets. Fiscal policy should also turn more expansionary in response to the president-elect's proposals to reduce personal income and business taxes, and to increase infrastructure spending. Growth in consumer credit and residential mortgages is currently expected to remain healthy in 2017, supported by rising consumer confidence and continued low interest rates, and business loan growth is also expected to hold firm. The Federal Reserve will likely raise its policy rates minimally in 2017, as inflation pressures are expected to remain moderate.

Following modest economic growth in recent years, the pace of expansion in the U.S. Midwest region, which includes the six contiguous states within the BMO footprint, is expected to improve from an estimated 1.6% in 2016 to 1.8% in 2017 in response to increases in agricultural production, a recovering housing market and generally expansionary fiscal policies. However, the region will likely see lower growth than the national economy as a result of slower population growth, low levels of exports due to the strength of the U.S. dollar, and a levelling off in automotive production after several years of rapid growth.

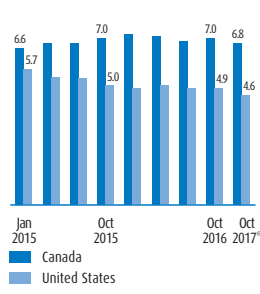
This Economic Developments and Outlook section contains forward-looking statements. Please see the Caution Regarding Forward-Looking Statements.

**Real Growth in Gross Domestic Product (%)**



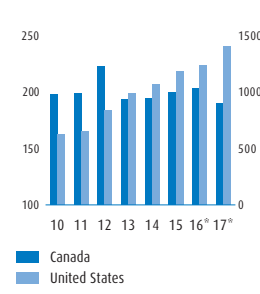
The Canadian and U.S. economies are expected to grow moderately in 2017.

**Canadian and U.S. Unemployment Rates (%)**



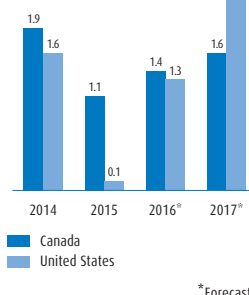
Unemployment rates in Canada and the United States are projected to decline slightly.

**Housing Starts (in thousands)**



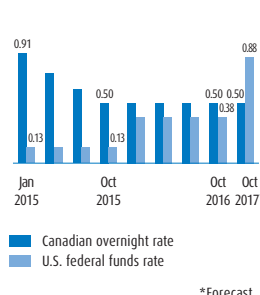
Housing market activity should moderate in response to new mortgage rules in Canada but strengthen in the United States.

**Consumer Price Index Inflation (%)**



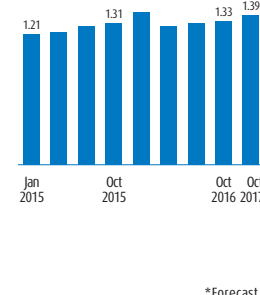
Inflation is expected to increase modestly but remain low.

**Canadian and U.S. Interest Rates (%)**



The Federal Reserve will likely raise interest rates minimally in 2017, while the Bank of Canada remains on the sidelines.

**Canadian/U.S. Dollar Exchange Rates**



The Canadian dollar is expected to weaken against the U.S. dollar in 2017 in response to higher U.S. interest rates.

Note: Data points are averages for the month, quarter or year, as appropriate. References to years are calendar years.

# Value Measures

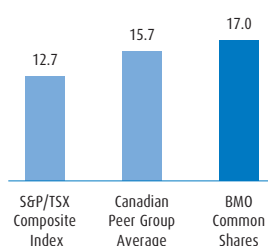
## Total Shareholder Return

The average annual total shareholder return (TSR) is a key measure of shareholder value, and confirms that our strategic priorities drive value creation for our shareholders. Our one-year TSR of 17.0% and our three-year average annual TSR of 9.9% were strong, and both outperformed the corresponding averages of our Canadian bank peer group and the overall market return in Canada. Our five-year average annual TSR of 12.5% also outperformed the overall market return in Canada, and was consistent with our Canadian bank peer group.

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 2012 would have been worth \$1,802 at October 31, 2016, assuming reinvestment of dividends, for a total return of 80.2%.

On December 6, 2016, BMO announced that the Board of Directors had declared a quarterly dividend on common shares of \$0.88 per share, up \$0.02 per share or 2% from the prior quarter and up \$0.04 per share or 5% from a year ago. The dividend is payable on February 28, 2017 to shareholders of record on February 1, 2017. We have increased our quarterly dividend declared four times over the past two years from \$0.80 per common share for the first quarter of 2015. Dividends paid over a ten-year period have increased at an average annual compound rate of 4.7%.

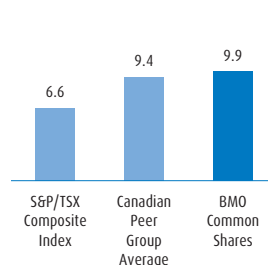
**One-Year Total Shareholder Return (%)**



All returns represent total returns.

BMO's one-year TSR outperformed the average of our Canadian bank peer group and the overall market return in Canada.

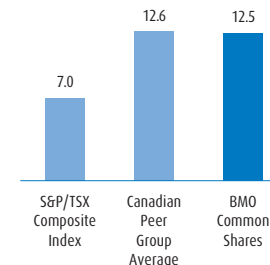
**Three-Year Average Annual Total Shareholder Return (%)**



All returns represent total returns.

BMO's three-year average annual return outperformed the average of our Canadian bank peer group and the overall market return in Canada.

**Five-Year Average Annual Total Shareholder Return (%)**



All returns represent total returns.

BMO's five-year average annual return outperformed the overall market return in Canada and was consistent with our Canadian bank peer group.

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 that dividends received were reinvested in additional common shares.

## Total Shareholder Return

For the year ended October 31	2016	2015	2014	2013	2012	3-year CAGR (1)	5-year CAGR (1)
Closing market price per common share (\$)	<b>85.36</b>	76.04	81.73	72.62	59.02	<b>5.5</b>	<b>7.7</b>
Dividends paid (\$ per share)	<b>3.36</b>	3.20	3.04	2.92	2.80	<b>4.8</b>	<b>3.7</b>
Dividend yield (%)	<b>4.0</b>	4.3	3.8	4.0	4.8	<b>nm</b>	<b>nm</b>
Increase (decrease) in share price (%)	<b>12.3</b>	(7.0)	12.5	23.0	0.2	<b>nm</b>	<b>nm</b>
Total annual shareholder return (%) (2)	<b>17.0</b>	(3.0)	17.1	28.8	5.2	<b>9.9</b>	<b>12.5</b>

(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



## Non-GAAP Measures

Results and measures in this MD&A are presented on a GAAP basis. They are also presented on an adjusted basis that excludes the impact of certain items as set out in the following table. Results and measures that exclude the impact of Canadian/U.S. dollar exchange rate movements on our U.S. segment are non-GAAP measures (please see the Foreign Exchange section on page 37 for a discussion of the effects of changes in exchange rates on our 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 if they consider the items not to be reflective of ongoing results. As such, the presentation may facilitate readers' analysis of trends, as well as comparisons with our competitors. Except as otherwise noted, management's discussion of changes in adjusted results in this MD&A applies equally to changes in the corresponding reported results. Adjusted results and measures are non-GAAP and as such do not have standardized meaning 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)	2016	2015	2014
<b>Reported Results</b>			
Revenue (1)	21,087	19,389	18,223
Insurance claims, commissions and changes in policy benefit liabilities (CCPB) (1)	(1,543)	(1,254)	(1,505)
Revenue, net of CCPB	19,544	18,135	16,718
Provision for credit losses	(815)	(612)	(561)
Non-interest expense	(12,997)	(12,182)	(10,921)
Income before income taxes	5,732	5,341	5,236
Provision for income taxes	(1,101)	(936)	(903)
Net Income	4,631	4,405	4,333
Diluted EPS (\$)	6.92	6.57	6.41
<b>Adjusting Items (Pre-tax) (2)</b>			
Acquisition integration costs (3)	(104)	(53)	(20)
Amortization of acquisition-related intangible assets (4)	(160)	(163)	(140)
Cumulative accounting adjustment (5)	(85)	-	-
Restructuring costs (6)	(188)	(149)	-
Adjusting items included in reported pre-tax income	(537)	(365)	(160)
<b>Adjusting Items (After tax) (2)</b>			
Acquisition integration costs (3)	(71)	(43)	(16)
Amortization of acquisition-related intangible assets (4)	(124)	(127)	(104)
Cumulative accounting adjustment (5)	(62)	-	-
Restructuring costs (6)	(132)	(106)	-
Adjusting items included in reported net income after tax	(389)	(276)	(120)
Impact on diluted EPS (\$)	(0.60)	(0.43)	(0.18)
<b>Adjusted Results</b>			
Revenue (1)	21,171	19,391	18,223
Insurance claims, commissions and changes in policy benefit liabilities (CCPB) (1)	(1,543)	(1,254)	(1,505)
Revenue, net of CCPB	19,628	18,137	16,718
Provision for credit losses	(815)	(612)	(561)
Non-interest expense	(12,544)	(11,819)	(10,761)
Income before income taxes	6,269	5,706	5,396
Provision for income taxes	(1,249)	(1,025)	(943)
Net Income	5,020	4,681	4,453
Diluted EPS (\$)	7.52	7.00	6.59

Adjusted results and measures in this table are non-GAAP amounts or non-GAAP measures.

- (1) Effective the first quarter of 2015, insurance claims, commissions and changes in policy benefit liabilities (CCPB) are reported separately. They were previously reported as a reduction in insurance revenue in non-interest revenue. Prior period amounts and ratios have been reclassified.
- (2) Adjusting items are included in Corporate Services with the exception of the amortization of acquisition-related intangible assets, which is charged to the operating groups, and acquisition integration costs related to F&C Asset Management plc (F&C), which are charged to Wealth Management.
- (3) Acquisition integration costs related to F&C are charged to Wealth Management. Acquisition integration costs related to BMO Transportation Finance are charged to Corporate Services, since the acquisition impacts both Canadian and U.S. P&C businesses. Acquisition integration costs are primarily recorded in non-interest expense.
- (4) These expenses are included in the non-interest expense of the operating groups. Before and after-tax amounts for each operating group are provided on pages 47, 49, 53, 56 and 60.
- (5) Cumulative accounting adjustment recognized in other non-interest revenue related to foreign currency translation that largely impacted prior periods.
- (6) Restructuring charge in 2016, as we accelerate the use of technology to enhance customer experience and focus on driving operational efficiencies. Restructuring charge in 2015, primarily due to restructuring to drive operational efficiencies. Restructuring costs are recorded in non-interest expense.

## Summary Financial Results and Earnings per Share Growth

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

EPS was \$6.92, up \$0.35 or 5% from \$6.57 in 2015. Adjusted EPS was \$7.52, up \$0.52 or 7% from \$7.00 in 2015. Our five-year average annual adjusted EPS growth rate was 8.2%, in line with our current medium-term objective of achieving average annual adjusted EPS growth of 7% to 10%. EPS growth primarily reflected increased earnings. Reported net income available to common shareholders was 5% higher over the one-year period and 54% higher over the five-year period, while the average number of diluted common shares outstanding was relatively unchanged over the one-year period and increased 6% over the five-year period.

Net income was \$4,631 million in 2016, up \$226 million or 5% from the previous year. Adjusted net income excludes restructuring costs, the amortization of acquisition-related intangible assets, acquisition integration costs and a cumulative accounting adjustment related to foreign currency translation that largely impacted prior periods. Adjusted net income was \$5,020 million, up \$339 million or 7%. Reported and adjusted net income growth reflects the benefit of strong BMO Capital Markets results, the BMO Transportation Finance acquisition, solid organic business growth in the P&C businesses and operating leverage. Results were lower in Wealth Management largely due to the prior year benefit of a gain on sale, as well as a write-down of an equity investment net of a gain on its subsequent sale in 2016, and lower insurance results. Corporate Services results were also lower. The impact of the stronger U.S. dollar increased adjusted net income by \$60 million or 1%.

On a reported and adjusted basis, there was good revenue growth in 2016. Higher revenue exceeded incremental costs, contributing to growth in net income. In 2016, provisions for credit losses increased by \$203 million to \$815 million and the effective income tax rate increased from 17.5% to 19.2%.

Canadian P&C reported net income increased \$102 million or 5% to \$2,207 million, due to continued revenue growth as a result of higher balances and increased non-interest revenue, partially offset by higher expenses and provisions for credit losses. Expenses increased primarily due to continued investment in the business, net of disciplined expense management. Canadian P&C results are discussed in the operating group review on page 48.

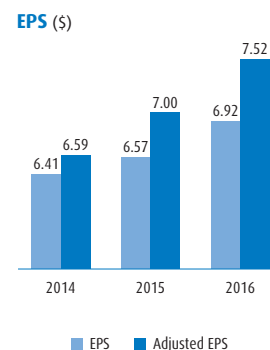
U.S. P&C reported net income increased \$252 million or 30% to \$1,081 million and adjusted net income, which excludes the amortization of acquisition-related intangible assets, increased \$249 million or 28% to \$1,131 million. On a U.S. dollar basis, reported net income increased \$156 million or 24% to \$817 million and adjusted net income increased \$151 million or 22% to \$854 million primarily due to the acquired BMO Transportation Finance business, which contributed approximately 14% to both revenue and expenses in the year, and organic growth. U.S. P&C results are discussed in the operating group review on page 51.

Wealth Management reported net income was \$762 million, compared to \$850 million a year ago and adjusted net income, which excludes the amortization of acquisition-related intangible assets and acquisition integration costs, was \$863 million, compared to \$955 million a year ago. Reported net income in traditional wealth was \$540 million, compared to \$610 million a year ago and adjusted net income in traditional wealth was \$641 million compared to \$715 million a year ago, as solid underlying growth was more than offset by the prior year benefits of a gain on the sale of BMO's U.S. retirement services business, as well as a write-down of an equity investment net of a gain on its subsequent sale in 2016. Net income in insurance was \$222 million, compared to \$240 million a year ago, primarily due to higher benefits from actuarial assumptions and asset-liability management changes in the prior year, partially offset by growth in the underlying businesses. Wealth Management results are discussed in the operating group review on page 55.

BMO Capital Markets reported net income increased \$239 million or 23% to \$1,268 million, reflecting improved trading revenue performance, strong mergers and acquisitions advisory activity and higher lending revenues, partially offset by lower net securities gains. Higher revenue was partially offset by higher expenses and loan loss provisions. Operating leverage was positive 9.0% year over year. BMO Capital Markets results are discussed in the operating group review on page 58.

Corporate Services reported net loss for the year was \$687 million, compared to a reported net loss of \$408 million a year ago. Reported results in both years include a restructuring charge and acquisition integration costs. The adjusted net loss for the year was \$452 million, compared to an adjusted net loss of \$296 million a year ago. Both reported and adjusted results declined due to lower revenue driven by a recovery under a legal settlement in the prior year, lower impaired real estate gains and lower purchase accounting revenue, partially offset by higher credit recoveries in the current year. Reported expenses increased primarily due to higher acquisition integration costs related to the acquired BMO Transportation Finance business and higher restructuring costs in the current year, and reported revenue was lower due to a cumulative accounting adjustment related to foreign currency translation that largely impacted prior periods. Corporate Services results are discussed in the operating group review on page 62.

Changes to reported and adjusted net income for each of our operating groups are discussed in more detail in the 2016 Operating Groups Performance Review, which starts on page 45.



Growth demonstrates the benefits of our diversified business mix.

**Earnings per share (EPS)** is calculated by dividing net income attributable to bank shareholders, after the deduction of preferred dividends, by the average number of common shares outstanding. Diluted EPS, which is our 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 24 on page 194 of the financial statements. Adjusted EPS is calculated in the same manner using adjusted net income.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 33.

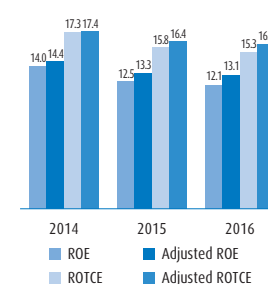
## Return on Equity

Increased capital expectations for banks internationally have resulted in increased levels of common shareholders' equity over the last several years which, all else being equal, negatively impacts return on equity (ROE). ROE was 12.1% in 2016 and adjusted ROE was 13.1%, compared with 12.5% and 13.3%, respectively, in 2015. ROE declined in 2016 primarily due to growth in common equity exceeding growth in income. There was an increase of \$219 million or 5% in net income available to common shareholders and \$332 million or 7% in adjusted net income available to common shareholders in 2016. Average common shareholders' equity increased \$2.9 billion or 8% from 2015, primarily due to increased retained earnings and the impact of the stronger U.S. dollar on our investments in foreign operations. The reported return on tangible common equity (ROTCE) was 15.3%, compared with 15.8% in 2015 and adjusted ROTCE was 16.1%, compared with 16.4% in 2015. Book value per share increased 6% from the prior year to \$59.56, given the increase in shareholders' equity.

**Return on common shareholders' equity (ROE)** is calculated as net income, less non-controlling interest in subsidiaries and preferred dividends, 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 amortization of intangibles 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.

ROE (%)



ROE and ROTCE declined slightly in 2016.

## Return on Equity and Return on Tangible Common Equity <sup>(1)</sup>

(Canadian \$ in millions, except as noted)  
For the year ended October 31

	2016	2015	2014	2013	2012
Reported net income	4,631	4,405	4,333	4,195	4,156
Attributable to non-controlling interest in subsidiaries	(9)	(35)	(56)	(65)	(74)
Preferred dividends	(150)	(117)	(120)	(120)	(136)
Net income available to common shareholders (A)	4,472	4,253	4,157	4,010	3,946
After-tax amortization of acquisition-related intangibles	124	127	104	89	96
Net income available to common shareholders after adjusting for amortization of acquisition-related intangible assets (B)	4,596	4,380	4,261	4,099	4,042
After-tax impact of other adjusting items	265	149	16	(61)	(193)
Adjusted net income available to common shareholders (C)	4,861	4,529	4,277	4,038	3,849
Average common shareholders' equity (D)	36,997	34,135	29,680	26,956	24,863
Return on equity (%) (= A/D)	12.1	12.5	14.0	14.9	15.9
Adjusted return on equity (%) (= C/D)	13.1	13.3	14.4	15.0	15.5
Average tangible common equity (E)	30,101	27,666	24,595	22,860	20,798
Return on tangible common equity (%) (= B/E)	15.3	15.8	17.3	17.9	19.4
Adjusted return on tangible common equity (%) (= C/E)	16.1	16.4	17.4	17.7	18.5

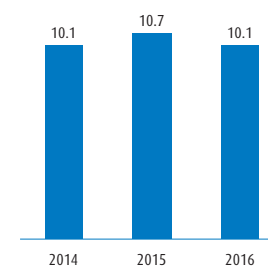
(1) Certain comparative figures have been reclassified to conform with the current year's presentation. Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 33.

## Common Equity Tier 1 Ratio

BMO's Common Equity Tier 1 (CET1) Ratio reflects a well-capitalized position relative to the risk in our business. Our CET1 Ratio was 10.1% at October 31, 2016, compared to 10.7% at October 31, 2015. The CET1 Ratio decreased by 60 basis points from the end of fiscal 2015 due to increased risk-weighted assets (RWA), largely from the Basel I Capital floor and business growth, and the acquisition of the BMO Transportation Finance business in the first quarter, which reduced the ratio by approximately 60 basis points, partially offset by capital growth.

**Common Equity Tier 1 (CET1) Ratio** is calculated as CET1 capital, which is comprised of common shareholders' equity less deductions for goodwill, intangible assets, pension assets, certain deferred tax assets and other items, divided by risk-weighted assets for CET1.

CET1 Ratio (%)



BMO's CET1 Ratio change reflects an acquisition and higher RWA, net of higher capital.



# 2016 Financial Performance Review

This section provides a review of our enterprise financial performance for 2016 that focuses on the Consolidated Statement of Income included in our consolidated financial statements, which begin on page 139. A review of our operating groups' strategies and performance follows the enterprise review. A summary of the enterprise financial performance for 2015 appears on page 64.

## Highlights

- Net income was \$4,631 million in 2016, up \$226 million or 5% from the previous year. Adjusted net income was \$5,020 million, up \$339 million or 7%. Reported and adjusted net income growth reflects the benefit of strong BMO Capital Markets results, the BMO Transportation Finance acquisition, solid organic business growth in the P&C businesses and operating leverage. Results were lower in Wealth Management, largely due to the prior year benefit of a gain on sale, as well as the write-down of an equity investment net of a gain on its subsequent sale in 2016, and lower insurance results. Corporate Services results were also lower. The impact of the stronger U.S. dollar increased adjusted net income by \$60 million or 1%.
- On a net revenue basis<sup>(1)</sup>, revenue increased \$1,409 million or 8% in 2016 to \$19,544 million, and adjusted revenue increased \$1,491 million or 8% to \$19,628 million. Adjusted revenue excludes a cumulative accounting adjustment in the amount of \$85 million recognized in 2016. Revenue growth reflects the benefits of our diversified business mix and successful execution against our strategic priorities. The increase was mainly due to revenue growth in the P&C businesses, which benefited from the acquired BMO Transportation Finance business and organic growth, and in BMO Capital Markets, with a decrease in Wealth Management and Corporate Services. The impact of the stronger U.S. dollar increased adjusted net revenue by \$345 million or 2%.
- Reported non-interest expense increased \$815 million or 7% to \$12,997 million in 2016. Adjusted non-interest expense increased \$725 million or 6% to \$12,544 million. Adjusted non-interest expense excludes acquisition integration costs, the amortization of acquisition-related intangible assets and restructuring costs. Reported and adjusted expenses increased primarily due to the impact of the acquired BMO Transportation Finance business, business growth and investment and the stronger U.S. dollar, partially offset by the benefits of divestitures.
- Provisions for credit losses totalled \$815 million in the current year, up from \$612 million in 2015, as higher provisions in the P&C businesses and BMO Capital Markets were partially offset by higher net recoveries in Corporate Services.
- The effective income tax rate in 2016 was 19.2%, compared with 17.5% in 2015. The adjusted effective income tax rate<sup>(2)</sup> was 19.9%, compared with 18.0% in 2015. The higher reported and adjusted effective tax rate was attributable to a higher proportion of income from higher tax rate jurisdictions and lower tax-exempt income from securities.

(1) See page 38 for a description of net revenue.

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

## Foreign Exchange

The U.S. dollar was stronger compared to the Canadian dollar at October 31, 2016 than it was at October 31, 2015. At October 31, 2016, the Canadian dollar traded at \$1.3411 per U.S. dollar, compared to \$1.3075 per U.S. dollar at October 31, 2015. BMO's U.S.-dollar-denominated assets and liabilities are translated at year-end rates. The average exchange rate over the course of 2016, which is used in the translation of BMO's U.S.-dollar-denominated revenues and expenses, was higher in 2016 than in 2015. Consequently, the Canadian dollar equivalents of BMO's U.S.-dollar-denominated net income, revenues, expenses, recovery of (provision for) credit losses and income taxes in 2016 increased relative to the preceding year. The table below indicates average Canadian/U.S. dollar exchange rates in 2016, 2015 and 2014 and the impact of changes in the average rates on our U.S. segment results.

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 revenues, expenses and provisions for (recoveries of) credit losses arise. If future results are consistent with results in 2016, 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 our U.S. segment net income before income taxes for the year by \$11 million in the absence of hedging transactions. References in this MD&A to the impact of the U.S. dollar do not include the U.S.-dollar-denominated amounts recorded outside of BMO's U.S. segment.

Economically, our U.S. dollar income stream was largely unhedged to changes in foreign exchange rates during the year. During 2016, we hedged a portion of the forecasted BMO Capital Markets U.S. dollar net income. These hedges are subject to mark-to-market accounting, which resulted in a \$3 million after tax loss in 2016 that was recorded in our BMO Capital Markets business. We regularly determine whether to execute hedging transactions to mitigate the impact of foreign exchange rate movements on net income.

See the Enterprise-Wide Capital Management section on page 70 for a discussion of the impact that changes in foreign exchange rates can have on our capital position.

Changes in foreign exchange rates will also affect accumulated other comprehensive income primarily from the translation of our investment in foreign operations. 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 the unhedged portion of our investment in foreign operations by \$150 million.

### Effects of Changes in Exchange Rates on BMO's Reported and Adjusted Results

(Canadian \$ in millions, except as noted)	2016 vs. 2015	2015 vs. 2014
Canadian/U.S. dollar exchange rate (average)		
2016	<b>1.3251</b>	
2015	<b>1.2550</b>	1.2550
2014		1.0937
<b>Effects on reported results</b>		
Increased net interest income	<b>204</b>	409
Increased non-interest revenue	<b>144</b>	351
Increased revenues	<b>348</b>	760
Increased provision for credit losses	<b>(3)</b>	(5)
Increased expenses	<b>(265)</b>	(598)
Increased income taxes	<b>(20)</b>	(33)
Increased reported net income before impact of hedges	<b>60</b>	124
Hedging losses in current year after tax	<b>(3)</b>	(21)
Increased reported net income	<b>57</b>	103
<b>Effects on adjusted results</b>		
Increased net interest income	<b>204</b>	409
Increased non-interest revenue	<b>144</b>	351
Increased revenues	<b>348</b>	760
Increased provision for credit losses	<b>(11)</b>	(15)
Increased expenses	<b>(253)</b>	(578)
Increased income taxes	<b>(21)</b>	(34)
Increased adjusted net income before impact of hedges	<b>63</b>	133
Hedging losses in current year after tax	<b>(3)</b>	(21)
Increased adjusted net income	<b>60</b>	112

#### Caution

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

## Revenue<sup>(1)</sup>

Revenue increased \$1,698 million or 9% in 2016 to \$21,087 million. On a basis that nets insurance claims, commissions and changes in policy benefit liabilities (CCPB) against insurance revenue (net revenue), reported revenue increased \$1,409 million or 8% to \$19,544 million.

Adjusted revenue differs from reported revenue largely due to a cumulative accounting adjustment in the amount of \$85 million recognized in 2016 in other non-interest revenue, related to foreign currency translation, largely impacting prior periods. Adjusted revenue, net of CCPB, increased \$1,491 million or 8% to \$19,628 million, including a \$345 million or 2% impact of the stronger U.S. dollar. Reported and adjusted revenue increased due to revenue growth in the P&C businesses, which benefited from the acquired BMO Transportation Finance business and organic growth, and in BMO Capital Markets, with a decrease in Wealth Management and Corporate Services.

BMO analyzes revenue at the consolidated level based on GAAP revenues as reported in the consolidated financial statements, and on an adjusted basis. Consistent with our Canadian peer group, we analyze revenue on a taxable equivalent basis (teb) at the operating group level. The teb adjustments for 2016 totalled \$510 million, down from \$524 million in 2015.

Canadian P&C revenue increased \$328 million or 5% to \$6,968 million as a result of higher balances and increased non-interest revenue.

U.S. P&C revenue increased \$1,033 million or 29% on a Canadian dollar basis and increased \$628 million or 22% on a U.S. dollar basis, primarily due to the benefit of the acquired BMO Transportation Finance business, as well as organic loan and deposit growth.

Wealth Management revenue, net of CCPB, was \$4,345 million, compared to \$4,509 million in the prior year. Revenue in traditional wealth was \$3,923 million, compared to \$4,057 million a year ago, as solid underlying growth in our spread-based and fee-based revenue was more than offset by the prior year benefits of a gain on the sale of BMO's U.S. retirement services business, the impact of divestitures and the write-down of an equity investment net of a gain on its subsequent sale in 2016. There was underlying growth in our insurance businesses, although net insurance revenue decreased, primarily due to higher beneficial actuarial assumptions and asset-liability management changes in the prior year.

BMO Capital Markets revenue increased \$495 million or 13% to \$4,362 million, reflecting improved trading revenue performance, strong mergers and acquisitions advisory activity, higher lending revenues and the impact of the stronger U.S. dollar, partially offset by lower net securities gains.

Corporate Services reported revenue declined \$283 million and adjusted revenue declined \$201 million. Both reported and adjusted revenue declined due to above-trend revenue in the prior year, which included a recovery under a legal settlement, as well as lower impaired real estate gains and lower purchase accounting revenue in the current year.

(1) Commencing in 2015, insurance claims, commissions and changes in policy benefit liabilities are reported separately. They were previously reported as a reduction in insurance revenue in non-interest revenue. Prior period amounts and ratios have been reclassified. Insurance can experience variability arising from fluctuations in the fair value of insurance assets and the related liabilities. The investments which support actuarial liabilities are predominantly fixed income assets recorded at fair value with changes in the fair values 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 the results, which allows for a better discussion of operating results. For additional discussion of insurance claims, commissions and changes in policy benefit liabilities, see page 41.

**Taxable equivalent basis (teb)** Revenues of operating groups are presented in our 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 and Adjusted Revenue <sup>(1)</sup>

(Canadian \$ in millions, except as noted)

For the year ended October 31

	2016	2015	2014	2013	2012
Net interest income	9,872	8,763	8,292	8,487	8,749
Year-over-year growth (%)	13	6	(2)	(3)	17
Non-interest revenue	11,215	10,626	9,931	8,343	8,354
Year-over-year growth (%)	6	7	19	-	10
Total revenue	21,087	19,389	18,223	16,830	17,103
Cdn./U.S. dollar translation effect	345	732	320	87	99
Year-over-year growth (%)	9	6	8	(2)	14
Impact of Cdn./U.S. dollar translation effect (%)	2	4	2	1	1
Adjusted net interest income	9,872	8,764	8,292	7,830	7,970
Year-over-year growth (%)	13	6	6	(2)	10
Adjusted non-interest revenue	11,299	10,627	9,931	8,309	8,070
Year-over-year growth (%)	6	7	20	3	6
Total adjusted revenue <sup>(2)</sup>	21,171	19,391	18,223	16,139	16,040
Year-over-year growth (%)	9	6	13	1	8
Total adjusted revenue, net of CCPB <sup>(2)</sup>	19,628	18,137	16,718	15,372	14,866
Cdn./U.S. dollar translation effect	345	732	320	78	85
Year-over-year growth (%)	8	8	9	3	8
Impact of Cdn./U.S. dollar translation effect (%)	2	4	2	1	1

(1) Commencing in the first quarter of 2015, insurance claims, commissions and changes in policy benefit liabilities (CCPB) are reported separately. They were previously reported as a reduction in insurance revenue in non-interest revenue. Prior period amounts and ratios have been reclassified.

(2) Adjusted revenue for 2012 and 2013 excludes the portion of the credit mark recorded in net interest income on the purchased performing loan portfolio and income or losses from run-off structured credit activities recorded in non-interest revenue, which are recorded in Corporate Services.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 33.



### Net Interest Income

Net interest income increased \$1,109 million or 13% to \$9,872 million in 2016. Net interest income increased 10%, excluding the impact of the stronger U.S. dollar, due to the acquired BMO Transportation Finance business and organic volume growth.

BMO's overall net interest margin increased 8 basis points to 1.59%. Net interest margin excluding trading increased 3 basis points from the prior year. Higher net interest margin was primarily due to the acquired BMO Transportation Finance business.

Average earning assets increased by \$43.3 billion or 7% to \$622.7 billion, or increased \$30.8 billion or 5%, excluding the impact of the stronger U.S. dollar, due to organic loan growth and the acquired BMO Transportation Finance business.

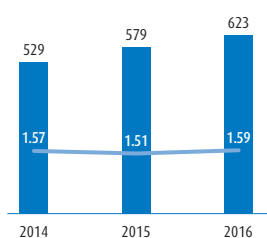
The main drivers of BMO's overall net interest margin are the individual group margins, changes in the magnitude of each operating group's average earning assets and changes in net interest income in Corporate Services. Changes are discussed in the 2016 Operating Groups Performance Review section starting on page 45.

Table 5 on page 126 and Table 6 on page 127 provide 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 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.

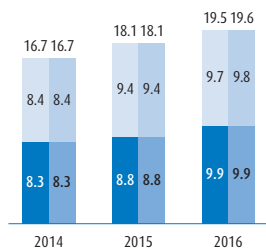
**Average Earning Assets and Net Interest Margin**



■ Average earning assets (\$ billions)  
— Net interest margin (%)

Average earning assets increased 7%. Higher net interest margin was primarily due to the acquired BMO Transportation Finance business.

**Net Interest Income and Net Non-Interest Revenue\***  
(\$ billions)

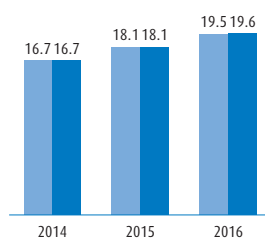


■ Net interest income  
■ Net non-interest revenue  
■ Adjusted net interest income  
■ Adjusted net non-interest revenue

Net non-interest revenue and net interest income growth reflects growth in the P&C businesses, including the acquired BMO Transportation Finance business, and in BMO Capital Markets.

\*Numbers may not add due to rounding.

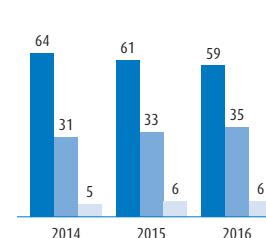
**Net Revenue**  
(\$ billions)



■ Total net revenue  
■ Total net adjusted revenue

The P&C businesses and BMO Capital Markets drove net revenue growth.

**Net Revenue by Country (%)**



■ Canada  
■ United States  
■ Other countries

Net revenue in the United States increased primarily due to the acquired BMO Transportation Finance business.

### 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)		
	2016	2015	Change %	2016	2015	Change %	2016	2015	Change
Canadian P&C	5,060	4,806	5	199,526	189,505	5	254	254	-
U.S. P&C	3,528	2,836	24	97,447	81,965	19	362	346	16
Personal and Commercial Banking (P&C)	8,588	7,642	12	296,973	271,470	9	289	282	7
Wealth Management	614	565	9	25,898	23,784	9	237	238	(1)
BMO Capital Markets	1,509	1,332	13	254,461	238,916	7	59	56	3
Corporate Services	(839)	(776)	(8)	45,400	45,301	-	nm	nm	nm
<b>Total BMO reported</b>	<b>9,872</b>	<b>8,763</b>	<b>13</b>	<b>622,732</b>	<b>579,471</b>	<b>7</b>	<b>159</b>	<b>151</b>	<b>8</b>
U.S P&C (US\$ in millions)	2,663	2,260	18	73,569	65,319	13	362	346	16

nm - not meaningful

## Non-Interest Revenue

Non-interest revenue, which comprises all revenue other than net interest income, increased \$589 million or 6% to \$11,215 million in 2016. On a basis that is net of CCPB, non-interest revenue increased \$300 million or 3% to \$9,672 million. Excluding the impact of the stronger U.S. dollar, non-interest revenue net of CCPB increased \$159 million or 2%.

Adjusted non-interest revenue largely excludes a cumulative accounting adjustment in the amount of \$85 million pre-tax recognized in 2016 in other non-interest revenue, related to foreign currency translation, largely impacting prior periods. Adjusted non-interest revenue, net of CCPB, increased \$383 million or 4% to \$9,756 million. Reported and adjusted non-interest revenue increased due to good performance in the P&C businesses, including the benefit of the acquired BMO Transportation Finance business, and in BMO Capital Markets, as well as the impact of the stronger U.S. dollar.

Trading revenues increased \$205 million and are discussed in the Trading-Related Revenues section that follows.

Lending fees increased \$122 million, due to growth in the P&C businesses loan portfolio, lending activity in BMO Capital Markets and the impact of the stronger U.S. dollar.

Underwriting and advisory fees increased \$114 million, due to growth in activity levels, primarily in mergers and acquisitions and equity underwriting, and the impact of the stronger U.S. dollar. Deposit and payment service charges increased \$64 million, due to growth in both Canadian and U.S. P&C and the impact of the stronger U.S. dollar.

Securities commissions and fees increased \$23 million. These revenues consist largely of brokerage commissions within Wealth Management, which account for about two-thirds of the total, and institutional equity trading commissions within BMO Capital Markets. The increase is due to higher client activity in BMO Capital Markets and the stronger U.S. dollar, partially offset by lower securities commissions in Wealth Management.

Investment management and custodial fees remained essentially unchanged from last year, as business growth and the impact of the stronger U.S. dollar were offset by the impact of divestitures. Mutual fund revenue decreased \$13 million from strong results a year ago. Both investment management and custodial fees and mutual fund revenue were also negatively impacted by the lower Canadian equity markets on average and the impact of the weaker British pound compared to the prior year.

Insurance revenue increased \$261 million from a year ago, largely due to lower long-term interest rates increasing the fair value of insurance investments and underlying business growth, partially offset by lower reinsurance premiums. The increase in insurance revenue was largely offset by higher insurance claims, commissions and changes in policy benefit liabilities, as discussed on page 41. Given the extent to which insurance revenue can vary and that this variability is largely offset in CCPB, we generally focus on analyzing revenue net of CCPB. Insurance revenue, net of CCPB, decreased \$28 million as growth in the underlying business was more than offset by prior year benefits from higher actuarial assumption changes and above-trend changes in our investment portfolio to improve asset-liability management.

Securities gains, other than trading, decreased \$87 million due to lower net securities gains in BMO Capital Markets and Corporate Services.

Investments in associates and joint ventures decreased \$67 million primarily due to the write-down of an equity investment net of a gain on its subsequent sale in 2016.

Other non-interest revenue, which includes various sundry amounts, decreased \$28 million due to the prior year gain on sale of BMO's U.S. retirement services business, the cumulative accounting adjustment related to foreign currency translation and a recovery under a legal settlement in the prior year, largely offset by lease revenue from the acquired BMO Transportation Finance business.

Card fees and Foreign exchange, other than trading were relatively consistent year over year.

Table 3 on page 124 provides further details on revenue and revenue growth.

## Non-Interest Revenue <sup>(1)</sup>

(Canadian \$ in millions) For the year ended October 31	2016	2015	2014	Change from 2015 (%)
Securities commissions and fees	924	901	894	3
Deposit and payment service charges	1,141	1,077	1,002	6
Trading revenues	1,192	987	949	21
Lending fees	859	737	680	17
Card fees	461	460	462	-
Investment management and custodial fees	1,556	1,552	1,286	-
Mutual fund revenues	1,364	1,377	1,065	(1)
Underwriting and advisory fees	820	706	744	16
Securities gains, other than trading	84	171	162	(51)
Foreign exchange, other than trading	162	172	179	(6)
Insurance revenue <sup>(1)</sup>	2,023	1,762	2,008	15
Investments in associates and joint ventures	140	207	169	(32)
Other	489	517	331	(5)
Total BMO reported <sup>(1)</sup>	11,215	10,626	9,931	6
BMO reported, net of CCPB	9,672	9,372	8,426	3
Total BMO adjusted <sup>(1)</sup>	11,299	10,627	9,931	6
BMO adjusted, net of CCPB	9,756	9,373	8,426	4
Insurance revenue, net of CCPB	480	508	503	(6)

(1) Commencing in the first quarter of 2015, insurance claims, commissions and changes in policy benefit liabilities (CCPB) are reported separately. They were previously reported as a reduction in insurance revenue in non-interest revenue. Prior period amounts and ratios have been reclassified.

## Trading-Related Revenues

Trading-related revenues are 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. BMO earns a spread or profit on the net sum of its client positions by profitably managing, within prescribed limits, the overall risk of the net positions. On a limited basis, BMO also earns revenue from principal trading positions.

Interest and non-interest trading-related revenues increased \$272 million or 27%. Excluding the impact of the stronger U.S. dollar and the result of hedging a portion of U.S. net income, trading-related revenues increased \$258 million or 25%. The following amounts exclude the impact of the stronger U.S. dollar. Interest rate trading-related revenues increased \$234 million or 55%, primarily due to increased client activity across most businesses, partially offset by the impact of the disposition of our municipal bond trading business in October 2015. Foreign exchange trading-related revenues were down \$15 million or 4%, driven by decreased client activity. Equities trading-related revenues decreased \$12 million or 2%, reflecting modestly lower activity with corporate and investor clients. Commodities trading-related revenues increased \$7 million or 12% due to increased client hedging activity in energy products.

The Market Risk section on page 95 provides more information on trading-related revenues.

**Trading-related revenues** include net interest income and non-interest revenue earned from on 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 revenues also include 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 Revenues <sup>(1)</sup>

(Canadian \$ in millions) (taxable equivalent basis) For the year ended October 31	2016	2015	2014	Change from 2015 (%)
Interest rates	663	422	325	57
Foreign exchange	349	364	356	(4)
Equities	629	638	626	(1)
Commodities	66	56	46	17
Other (2)	25	6	13	+100
Total (teb)	1,732	1,486	1,366	17
Teb offset	441	467	433	(6)
Reported total	1,291	1,019	933	27
Reported as:				
Net interest income	540	499	417	8
Non-interest revenue - trading revenues	1,192	987	949	21
Total (teb)	1,732	1,486	1,366	17
Teb offset	441	467	433	(6)
Reported total, net of teb offset	1,291	1,019	933	27
Adjusted net interest income, net of teb offset	99	32	(16)	+100
Adjusted non-interest revenue - trading revenues	1,192	987	949	21
Adjusted total, net of teb offset	1,291	1,019	933	27

(1) Trading-related revenues are presented on a taxable equivalent basis.

(2) Includes nominal revenues from run-off structured credit activities and hedging exposures in BMO's structural balance sheet.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 33.

## Insurance Claims, Commissions and Changes in Policy Benefit Liabilities

Insurance claims, commissions and changes in policy benefit liabilities (CCPB) were \$1,543 million in 2016, up \$289 million from \$1,254 million in 2015 due to lower long-term interest rates increasing the fair value of policy benefit liabilities and the impact of growth in the underlying business, partially offset by decreased reinsurance liabilities. The increase was largely offset in revenue, as discussed on page 38. Given the extent to which insurance revenue can vary and that this variability is largely offset in CCPB, we generally focus on analyzing revenue net of CCPB.



## Provision for Credit Losses

The provision for credit losses (PCL) was \$815 million in the current year, up from \$612 million in 2015. There was no net change to the collective allowance in the year. The increase in PCL was due to higher provisions in the P&C businesses and BMO Capital Markets, partially offset by higher net recoveries in Corporate Services.

PCL as a percentage of average net loans and acceptances was 0.23% in 2016, up from 0.19% in 2015.

On an operating group basis, most of our provisions relate to Personal and Commercial Banking. In Canadian P&C, PCL increased by \$46 million to \$542 million in 2016, reflecting higher provisions in both the consumer and commercial portfolios. U.S. P&C PCL was \$257 million, up \$138 million from 2015, largely reflecting higher commercial provisions, mainly due to the acquired BMO Transportation Finance business. BMO Capital Markets recorded provisions of \$81 million, an increase of \$55 million from the prior year, mainly due to higher oil and gas provisions. Corporate Services net recoveries of \$74 million increased \$38 million from the prior year.

On a geographic basis, the majority of our provisions relate to our Canadian loan portfolio. Specific PCL in Canada and other countries (excluding the United States) was \$547 million, compared to \$498 million in 2015. Specific PCL in the United States was \$268 million, up from \$114 million in 2015. Note 4 on page 153 of the consolidated financial statements provides PCL information on a geographic basis. Table 15 on page 134 provides further PCL segmentation information.

### Provision for Credit Losses

(Canadian \$ in millions, except as noted) For the year ended October 31	2016	2015	2014
New specific provisions	1,386	1,278	1,413
Reversals of previously established allowances	(228)	(210)	(228)
Recoveries of loans previously written off	(343)	(456)	(624)
Provision for credit losses (PCL)	815	612	561
PCL as a % of average net loans and acceptances (annualized)	0.23	0.19	0.19

### Provision for Credit Losses by Operating Group

(Canadian \$ in millions) For the year ended October 31	2016	2015	2014
Canadian P&C	542	496	528
U.S. P&C (1)	257	119	177
Personal and Commercial Banking	799	615	705
Wealth Management	9	7	(3)
BMO Capital Markets	81	26	(18)
Corporate Services, including T&O (1)			
Impaired real estate loans	(16)	28	21
Interest on impaired loans	-	17	26
Purchased credit impaired loans	(58)	(86)	(252)
Purchased performing loans (1)	-	5	82
Provision for credit losses	815	612	561

(1) Beginning in the first quarter of 2016, the reduction in the credit mark that is reflected in net interest income and the provision for credit losses on the purchased performing portfolio are being recognized in U.S. P&C, consistent with the accounting for the acquisition of BMO Transportation Finance, and given that these amounts have reduced substantially in size. Results for prior periods have not been reclassified.

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

## Non-Interest Expense

Non-interest expense increased \$815 million or 7% to \$12,997 million in 2016.

Adjusted non-interest expense excludes restructuring costs, the amortization of acquisition-related intangible assets and acquisition integration costs. Restructuring costs were \$188 million in 2016 as we accelerate the use of technology to enhance customer experience and focus on achieving operational efficiencies. Restructuring costs were \$149 million in 2015 primarily due to restructuring to achieve operational efficiencies. The amortization of acquisition-related intangible assets was \$160 million, \$163 million and \$140 million in 2016, 2015 and 2014, respectively. Acquisition integration costs were \$104 million, \$53 million and \$20 million in 2016, 2015 and 2014, respectively.

Adjusted non-interest expense increased \$725 million or 6% to \$12,544 million or 4% excluding the impact of the stronger U.S. dollar. Reported and adjusted expenses increased primarily due to the impact of the acquired BMO Transportation Finance business and business growth and investment, partially offset by the benefits of divestitures and our focus on disciplined expense management.

The dollar and percentage changes in expense by category are outlined in the Non-Interest Expense and Adjusted Non-Interest Expense table. Table 4 on page 125 provides more detail on expenses and expense growth.

Performance-based compensation on a reported basis increased \$176 million or 8%, and on an adjusted basis increased \$161 million or 8%, due to improved performance across most operating groups, the impact of the stronger U.S. dollar and the acquired BMO Transportation Finance business. Other employee compensation, which includes salaries, benefits and severance, on a reported basis increased \$125 million or 3% and on an adjusted basis increased \$59 million or 1%, due to the impact of the acquired BMO Transportation Finance business, partially offset by divestitures.

Premises and equipment costs on a reported basis increased \$256 million or 12% and on an adjusted basis increased \$227 million or 11%, primarily due to higher costs related to technology investments, as well as higher real estate-related costs and the impact of the stronger U.S. dollar. Other expenses on a reported basis increased \$258 million or 9% and other expenses on an adjusted basis increased \$278 million or 10%, primarily due to the acquired BMO Transportation Finance business and the impact of the stronger U.S. dollar.

BMO's reported efficiency ratio improved 120 basis points to 61.6% and the adjusted efficiency ratio improved 170 basis points to 59.2% in 2016. On a net revenue basis, the reported efficiency ratio improved 70 basis points to 66.5% and the adjusted efficiency ratio improved 130 basis points to 63.9% in 2016. All operating groups have shown improvements in efficiency and operating leverage, with the exception of Wealth Management.

Canadian P&C, BMO's largest operating segment, improved its reported efficiency ratio by 70 basis points to 49.6%, resulting from revenue growth and disciplined expense management.

U.S. P&C's reported efficiency ratio improved 360 basis points to 62.5% and its adjusted efficiency ratio improved 320 basis points to 61.0%, due to organic revenue growth and disciplined expense management, as well as the acquired BMO Transportation Finance business.

Wealth Management's reported efficiency ratio, on a net revenue basis, increased 230 basis points to 76.8%. The adjusted efficiency ratio, on a net revenue basis, increased 240 basis points to 73.9%, primarily due to the prior year benefits of a gain on sale of BMO's U.S. retirement services business in 2015 and the write-down of an equity investment net of a gain on its subsequent sale in 2016.

BMO Capital Markets reported efficiency ratio improved 510 basis points to 59.1%, due to strong revenue growth and disciplined expense management.

On a net revenue basis<sup>(1)</sup>, reported operating leverage was positive 1.1% and adjusted operating leverage was positive 2.1% year over year, in line with our medium-term objective of generating above 2% average annual adjusted net operating leverage and our ongoing focus on improving efficiency by driving revenue growth and maintaining disciplined cost management.

(1) This ratio is calculated excluding insurance claims, commissions and changes in policy benefit liabilities (CCPB).

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 expense.

### Contribution to Growth in Non-Interest Expense and Adjusted Non-Interest Expense (%)

For the year ended October 31	2016	2015	2014
Significant businesses acquired	3.2	2.3	1.5
Canadian/U.S. dollar translation effect, excluding acquisitions	2.1	5.4	2.5
Other	0.8	2.1	6.3
Total adjusted non-interest expense growth	6.1	9.8	10.3
Impact of adjusting items	0.6	1.7	(3.5)
Total non-interest expense growth	6.7	11.5	6.8

## Non-Interest Expense and Adjusted Non-Interest Expense

(Canadian \$ in millions, except as noted) For the year ended October 31	2016	2015	2014	Change from 2015 (%)
Performance-based compensation	2,248	2,087	1,939	8
Other employee compensation (1)	4,894	4,835	4,294	1
Total employee compensation	7,142	6,922	6,233	3
Premises and equipment	2,357	2,130	1,908	11
Other	2,761	2,519	2,378	10
Amortization of intangible assets	284	248	242	15
Total adjusted non-interest expense	12,544	11,819	10,761	6
Adjusting items	453	363	160	24
Total non-interest expense	12,997	12,182	10,921	7
Non-interest expense growth (%)	6.7	11.5	6.8	na
Adjusted non-interest expense growth (%)	6.1	9.8	10.3	na

(1) Includes restructuring costs in 2016 and 2015.  
na - not applicable

## Efficiency Ratio by Group (teb) (%)

For the year ended October 31	2016	2015	2014
<b>Efficiency Ratio</b>			
Canadian P&C	49.6	50.3	49.7
U.S. P&C	62.5	66.1	65.9
Wealth Management	56.6	58.3	53.2
BMO Capital Markets	59.1	64.2	63.3
Total BMO	61.6	62.8	59.9
Total BMO, net of CCPB	66.5	67.2	65.3
<b>Adjusted Efficiency Ratio</b>			
Canadian P&C	49.6	50.2	49.6
U.S. P&C	61.0	64.2	63.6
Wealth Management	54.5	55.9	51.7
Wealth Management, net of CCPB	73.9	71.5	71.9
BMO Capital Markets	59.0	64.2	63.2
Total BMO	59.2	60.9	59.1
Total BMO, net of CCPB	63.9	65.2	64.4

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 33.

## 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 foreign subsidiaries, as outlined in Note 23 on page 192 of the consolidated financial statements.

Management assesses BMO's consolidated results and associated provisions for income taxes on a GAAP basis. We assess the performance of the operating groups and associated income taxes on a taxable equivalent basis and report accordingly.

The provision for income taxes was \$1,101 million in 2016, compared with \$936 million in 2015. The reported effective tax rate in 2016 was 19.2%, compared with 17.5% in 2015. The adjusted provision for income taxes<sup>(1)</sup> was \$1,249 million in 2016, compared with \$1,025 million in 2015. The adjusted effective tax rate in 2016 was 19.9%, compared with 18.0% in 2015. The change in the reported and adjusted tax rates from year to year was attributable to a higher proportion of income from higher tax rate jurisdictions and lower tax-exempt income from securities. On a teb basis, the reported effective tax rate for the year was 25.8%, compared with 24.9% a year ago. On a teb basis, the adjusted effective tax rate for the year was 25.9%, compared with 24.9% a year ago.

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 is charged or credited to shareholders' equity. For income tax purposes, a gain or loss on the hedging activities results in an income tax charge or credit in the current period that is charged or credited to shareholders' equity, 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 expense in shareholders' equity of \$10 million for the year, compared with an income tax recovery of \$167 million in 2015. Refer to the Consolidated Statement of Changes in Equity on page 142 of the consolidated financial statements for further details.

Changes in tax rates and tax policy can have an impact on our earnings. See the discussion in the Critical Accounting Estimates section on page 113 of the impact that a reduction in U.S. income tax rates would have on our net deferred tax asset, income and the CET1 Ratio.

Table 4 on page 125 details the \$1,864 million of total government levies and taxes incurred by BMO in 2016. The increase from \$1,651 million in 2015 was primarily due to a higher 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 33.



# 2016 Operating Groups Performance Review

This section includes an analysis of the financial results of our operating groups and descriptions of their businesses, strategies, strengths, challenges, key value drivers, achievements and outlooks.

## Canadian Personal and Commercial Banking (Canadian P&C) (pages 48 to 50)

Reported net income was \$2,207 million in 2016, an increase of \$102 million or 5% from 2015. Adjusted net income was \$2,209 million, an increase of \$100 million or 5%.

## U.S. Personal and Commercial Banking (U.S. P&C) (pages 51 to 54)

Reported net income was \$1,081 million in 2016, an increase of \$252 million or 30% from 2015. Adjusted net income was \$1,131 million, an increase of \$249 million or 28%. On a U.S. dollar basis, reported net income increased \$156 million or 24% to \$817 million and adjusted net income increased \$151 million or 22% to \$854 million from 2015.

## Wealth Management (pages 55 to 57)

Reported net income was \$762 million in 2016, a decrease of \$88 million or 10% from 2015. Adjusted net income was \$863 million, a decrease of \$92 million or 10%.

## BMO Capital Markets (BMO CM) (pages 58 to 61)

Reported net income was \$1,268 million in 2016, an increase of \$239 million or 23% from 2015. Adjusted net income was \$1,269 million, an increase of \$238 million or 23%.

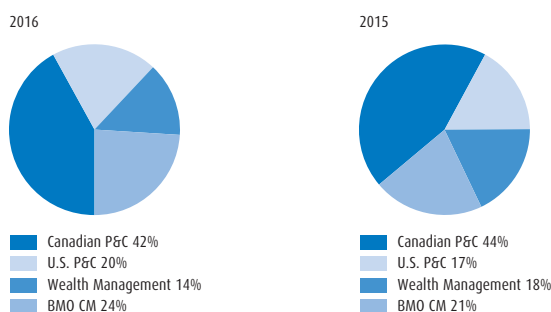
## Corporate Services, including Technology and Operations (page 62 to 63)

Reported net loss was \$687 million in 2016, compared with a net loss of \$408 million in 2015. Adjusted net loss was \$452 million, compared with an adjusted net loss of \$296 million in 2015.

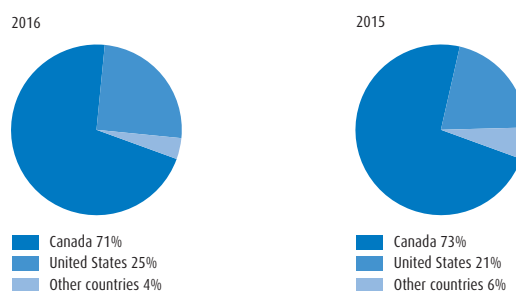
## Allocation of Results

The basis for the allocation of results geographically and among operating groups is outlined in Note 26 on page 197 of the financial statements. Certain prior year data has been restated, as explained on the following page, which also provides further information on the allocation of results.

### Reported Net Income by Operating Segment\*



### Reported Net Income by Country



\* Percentages determined excluding results in Corporate Services.

## Contributions to Revenue, Expenses, Net Income and Average Assets by Operating Group and by Location

(Canadian \$ in millions, except as noted)  
For the year ended October 31

	Personal and Commercial Banking			Wealth Management			BMO Capital Markets			Corporate Services			Total Consolidated		
	2016	2015	2014	2016	2015	2014	2016	2015	2014	2016	2015	2014	2016	2015	2014
<b>Operating Groups Relative Contribution to BMO's Performance (%)</b>															
Revenue	55.1	52.9	52.5	27.9	29.7	29.3	20.7	19.9	20.4	(3.7)	(2.5)	(2.2)	100	100	100
Expenses	48.9	47.0	48.2	25.7	27.6	26.0	19.8	20.4	21.5	5.6	5.0	4.3	100	100	100
Net income	71.0	66.6	61.6	16.5	19.3	18.0	27.4	23.4	24.8	(14.9)	(9.3)	(4.4)	100	100	100
Adjusted net income	66.5	63.9	61.2	17.2	20.4	18.9	25.3	22.0	24.1	(9.0)	(6.3)	(4.2)	100	100	100
Average assets	44.4	43.1	44.6	4.3	4.4	4.2	42.9	43.6	43.7	8.4	8.9	7.5	100	100	100
<b>Total Revenue</b>															
Canada	6,967	6,640	6,404	4,009	3,279	3,739	2,624	2,292	2,243	(752)	(447)	(374)	12,848	11,764	12,012
United States	4,649	3,615	3,157	840	1,016	788	1,539	1,379	1,261	(181)	(108)	(39)	6,847	5,902	5,167
Other countries	1	1	2	1,039	1,468	811	199	196	210	153	58	21	1,392	1,723	1,044
	11,617	10,256	9,563	5,888	5,763	5,338	4,362	3,867	3,714	(780)	(497)	(392)	21,087	19,389	18,223
<b>Total Net Revenue</b>															
Canada	6,967	6,640	6,404	2,721	2,655	2,509	2,624	2,292	2,243	(752)	(447)	(374)	11,560	11,140	10,782
United States	4,649	3,615	3,157	840	1,016	788	1,539	1,379	1,261	(181)	(108)	(39)	6,847	5,902	5,167
Other countries	1	1	2	784	838	536	199	196	210	153	58	21	1,137	1,093	769
	11,617	10,256	9,563	4,345	4,509	3,833	4,362	3,867	3,714	(780)	(497)	(392)	19,544	18,135	16,718
<b>Total Expenses</b>															
Canada	3,459	3,339	3,187	2,000	1,970	1,824	1,225	1,168	1,184	383	251	97	7,067	6,728	6,292
United States	2,903	2,390	2,075	762	818	721	1,141	1,116	970	287	336	325	5,093	4,660	4,091
Other countries	-	-	-	573	569	295	210	199	195	54	26	48	837	794	538
	6,362	5,729	5,262	3,335	3,357	2,840	2,576	2,483	2,349	724	613	470	12,997	12,182	10,921
<b>Net Income</b>															
Canada	2,206	2,104	2,011	555	497	498	1,016	848	812	(498)	(249)	(44)	3,279	3,200	3,277
United States	1,081	829	659	56	127	58	259	178	235	(255)	(184)	(119)	1,141	950	833
Other countries	1	1	1	151	226	224	(7)	3	27	66	25	(29)	211	255	223
	3,288	2,934	2,671	762	850	780	1,268	1,029	1,074	(687)	(408)	(192)	4,631	4,405	4,333
<b>Adjusted Net Income</b>															
Canada	2,208	2,108	2,015	545	512	508	1,016	848	811	(333)	(143)	(44)	3,436	3,325	3,290
United States	1,131	882	711	75	150	80	260	180	237	(198)	(186)	(119)	1,268	1,026	909
Other countries	1	1	1	243	293	255	(7)	3	27	79	33	(29)	316	330	254
	3,340	2,991	2,727	863	955	843	1,269	1,031	1,075	(452)	(296)	(192)	5,020	4,681	4,453
<b>Average Assets</b>															
Canada	207,965	197,160	190,490	21,367	19,907	18,368	167,035	160,158	142,437	23,788	24,974	19,406	420,155	402,199	370,701
United States	105,907	88,873	74,357	5,340	4,888	4,055	113,472	106,540	97,228	35,299	34,174	25,261	260,018	234,475	200,901
Other countries	52	49	39	3,935	4,352	2,557	22,766	23,238	19,659	196	78	71	26,949	27,717	22,326
	313,924	286,082	264,886	30,642	29,147	24,980	303,273	289,936	259,324	59,283	59,226	44,738	707,122	664,391	593,928

## 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, revenue and expense allocations are updated to better align with current experience. Results for prior periods are restated to conform to the current presentation.

Corporate Services results prior to 2016 reflected certain items in respect of the 2011 purchased loan portfolio, including recognition of the reduction in the credit mark that is reflected in net interest income over the term of the purchased loans and provisions and recoveries of credit losses on the purchased portfolio. Beginning in the first quarter of 2016, the reduction in the credit mark that is reflected in net interest income and the provision for credit losses on the purchased performing portfolio are being recognized in U.S. P&C, consistent with the accounting for the acquisition of BMO Transportation Finance, and given that these amounts have reduced substantially in size. Results for prior periods have not been reclassified. Recoveries or provisions on the 2011 purchased credit impaired portfolio continue to be recognized in Corporate Services. Purchased loan accounting impacts related to BMO Transportation Finance are recognized in U.S. P&C.

Also effective in the first quarter of 2016, income from equity investments has been reclassified from net interest income to non-interest revenue in Canadian P&C, Wealth Management and Corporate Services. Results for prior periods have been reclassified. Restructuring costs and acquisition and integration costs that impact more than one operating group are also included in Corporate Services.

Starting in the first quarter of 2015, insurance claims, commissions and changes in policy benefit liabilities (CCPB) are reported separately. They were previously reported as a reduction in insurance revenue in non-interest revenue. Prior period amounts and ratios have been reclassified.

BMO analyzes revenue at the consolidated level based on GAAP revenue reflected in the consolidated financial statements rather than on a taxable equivalent basis (teb), which is consistent with our Canadian peer group. Like many banks, we analyze 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 income tax provisions.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 33.

# Personal and Commercial Banking

(Canadian \$ in millions, except as noted) As at or for the year ended October 31	Canadian P&C			U.S. P&C			Total P&C		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
Net interest income (teb)	<b>5,060</b>	4,806	4,654	<b>3,528</b>	2,836	2,484	<b>8,588</b>	7,642	7,138
Non-interest revenue	<b>1,908</b>	1,834	1,752	<b>1,121</b>	780	673	<b>3,029</b>	2,614	2,425
Total revenue (teb)	<b>6,968</b>	6,640	6,406	<b>4,649</b>	3,616	3,157	<b>11,617</b>	10,256	9,563
Provision for credit losses	<b>542</b>	496	528	<b>257</b>	119	177	<b>799</b>	615	705
Non-interest expense	<b>3,459</b>	3,339	3,181	<b>2,903</b>	2,390	2,081	<b>6,362</b>	5,729	5,262
Income before income taxes	<b>2,967</b>	2,805	2,697	<b>1,489</b>	1,107	899	<b>4,456</b>	3,912	3,596
Provision for income taxes (teb)	<b>760</b>	700	682	<b>408</b>	278	243	<b>1,168</b>	978	925
Reported net income	<b>2,207</b>	2,105	2,015	<b>1,081</b>	829	656	<b>3,288</b>	2,934	2,671
Amortization of acquisition-related intangible assets (1)	<b>2</b>	4	4	<b>50</b>	53	52	<b>52</b>	57	56
Adjusted net income	<b>2,209</b>	2,109	2,019	<b>1,131</b>	882	708	<b>3,340</b>	2,991	2,727
<b>Key Performance Metrics and Drivers</b>									
Net income growth (%)	<b>4.9</b>	4.4	11.2	<b>30.4</b>	26.5	11.1	<b>12.1</b>	9.8	11.2
Adjusted net income growth (%)	<b>4.8</b>	4.4	11.2	<b>28.2</b>	24.7	9.5	<b>11.7</b>	9.7	10.8
Revenue growth (%)	<b>5.0</b>	3.7	6.4	<b>28.6</b>	14.5	5.3	<b>13.3</b>	7.3	6.0
Non-interest expense growth (%)	<b>3.5</b>	5.0	4.2	<b>21.5</b>	14.8	7.5	<b>11.0</b>	8.9	5.5
Adjusted non-interest expense growth (%)	<b>3.6</b>	4.9	4.2	<b>22.2</b>	15.5	8.3	<b>11.2</b>	9.0	5.7
Return on equity (%)							<b>15.9</b>	16.1	16.7
Adjusted return on equity (%)							<b>16.2</b>	16.5	17.1
Operating leverage (teb) (%)	<b>1.5</b>	(1.3)	2.2	<b>7.1</b>	(0.3)	(2.2)	<b>2.3</b>	(1.6)	0.5
Adjusted operating leverage (teb) (%)	<b>1.4</b>	(1.2)	2.2	<b>6.4</b>	(1.0)	(3.0)	<b>2.1</b>	(1.7)	0.3
Efficiency ratio (teb) (%)	<b>49.6</b>	50.3	49.7	<b>62.5</b>	66.1	65.9	<b>54.8</b>	55.9	55.0
Adjusted efficiency ratio (teb) (%)	<b>49.6</b>	50.2	49.6	<b>61.0</b>	64.2	63.6	<b>54.1</b>	55.2	54.2
Net interest margin on average earning assets (teb) (%)	<b>2.54</b>	2.54	2.54	<b>3.62</b>	3.46	3.64	<b>2.89</b>	2.82	2.84
Average common equity							<b>20,221</b>	17,848	15,410
Average earning assets	<b>199,526</b>	189,505	183,406	<b>97,447</b>	81,965	68,312	<b>296,973</b>	271,470	251,718
Average net loans and acceptances	<b>205,813</b>	195,183	188,796	<b>90,752</b>	74,500	61,646	<b>296,565</b>	269,683	250,442
Average deposits	<b>142,132</b>	132,767	124,926	<b>87,881</b>	78,032	65,635	<b>230,013</b>	210,799	190,561
Assets under administration	<b>25,439</b>	22,848	24,150	<b>159,448</b>	126,513	123,082	<b>184,887</b>	149,361	147,232
Full-time equivalent employees	<b>14,776</b>	15,697	15,795	<b>7,503</b>	7,606	7,835	<b>22,279</b>	23,303	23,630

(1) Before tax amounts of \$71 million in 2016, \$73 million in 2015 and \$75 million in 2014 are included in non-interest expense.

The Personal and Commercial Banking (P&C) operating group represents the sum of our two retail and business banking operating segments, Canadian Personal and Commercial Banking (Canadian P&C) and U.S. Personal and Commercial Banking (U.S. P&C). The combined P&C banking business net income of \$3,288 million and adjusted net income of \$3,340 million were both up 12% from the prior year. These operating segments are reviewed separately in the sections that follow.



# Canadian Personal and Commercial Banking

Canadian Personal and Commercial Banking provides a full range of financial products and services to eight million customers. We're here to help our customers make the right financial decisions as they do business with us seamlessly across our channels: getting advice from our bankers at their places of business or ours, in over 900 branches, on their mobile devices, online, over the telephone, and at nearly 3,300 automated banking machines across the country.



## Cameron Fowler

Group Head  
Canadian Personal and Commercial Banking, BMO Financial Group

## Lines of Business

**Personal Banking** provides customers with a wide range of products and services, including chequing and savings accounts, credit cards, mortgages, creditor insurance and everyday financial and investment advice. Our employees are focused on providing all of our customers with an exceptional experience every time they interact with us.

**Commercial Banking** provides small business and commercial banking customers with a broad suite of commercial products and services, including business deposit accounts, commercial credit cards, business loans and commercial mortgages, cash management solutions, foreign exchange and specialized banking programs. Our Commercial bankers partner with our customers to help them grow and manage their business.

## Strengths and Value Drivers

- Highly engaged team of dedicated employees focused on providing a personalized banking experience, anticipating customers' needs and finding new ways to help.
- Strong commercial banking business, as evidenced by BMO's number two ranking in Canadian market share for business loans up to \$25 million.
- Largest MasterCard card issuer in Canada for both retail and commercial cards.
- Strong cards rewards program with World Elite Travel and World Elite CashBack, also Canada's leading issuer of AIR MILES®.
- Consistently applied credit risk management practices that provide customers with reliable access to appropriate financing solutions.
- Proud to be the official bank of the Canadian defence community, serving the unique needs of Canadian military members and their families since 2008.

## Strategy and Key Priorities

Our strategy is focused on capturing key growth and loyalty opportunities while capitalizing on the shift to digital channels to achieve greater efficiency.

### Continue our focus on customer loyalty and growth

#### 2016 Achievements

- Achieved strong employee engagement survey results, particularly around customer focus, demonstrating our employees' commitment to continuing to deliver a great customer experience.
- Developed analytics capabilities to pinpoint and quickly solve customer irritants, improving the interaction experience of our customers.
- Launched a data platform to help our front-line sales team make better personal connections through relevant, needs-based customer conversations.
- Continued to enhance our fraud recovery and personal estate processes, making our customers' involvement easier for them in the moments that really matter.

#### Personal banking

- Achieved personal lending and deposit growth of 4% and 8%, respectively.
- Increased our share of wallet with products that continue to meet the needs of our customers.
- Ran effective campaigns on key offerings ranging from home financing to Everyday Banking, helping to increase our new-to-BMO customer base by 7%.
- Completed the upgrade of automated banking machines that offer enhanced functionality, including intelligent touch screens and envelope-free deposits.
- Grew our mix of advice-based roles, strengthening our ability to engage with customers on the financial issues important to them, when and how they choose to interact.

#### Commercial banking

- Achieved commercial lending and deposit growth of 10% and 6%, respectively.
- Simplified our product portfolio with the launch of five new Business Banking Plans, all with benefits and features aligned to our customers' growing preference for digital banking.
- Improved our processes and increased platform efficiencies, allowing our sales force to spend more time directly engaged with customers.
- Named as the Best Commercial Bank in Canada for the second consecutive year by *World Finance Magazine* at its 2016 Banking Awards in recognition of our strong regional and industry focus, as well as our commitment to building customer relationships and providing innovative solutions.
- Recently received our fifth consecutive gold-level certification in Progressive Aboriginal Relations from the Canadian Council for Aboriginal Business.

### 2017 Focus

- Continue to focus on improving customer loyalty by deepening relationships. In personal banking, deliver a leading customer experience leveraging new digital channels and existing networks. In commercial banking, target opportunities through diversification and product expansion.

### Accelerate our digital strategy

#### 2016 Achievements

- Continued to grow digital channel sales volume, up almost 11% from the prior year, and now equivalent to the total sales volume in more than 115 branches.
- Introduced a new mobile capability that allows current and prospective customers to open an account in minutes using their smartphones.
- Launched biometric security enhancements for a number of corporate card customers with MasterCard Identity Check, enabling customers to verify their identity using facial recognition and fingerprints when making mobile and online purchases.
- Introduced Apple Pay, allowing customers to make easy and secure purchases with their BMO credit and debit cards.

#### 2017 Focus

- Accelerate our digital capabilities to deliver a seamless customer experience.

### Continued to ensure strong risk leadership and operating discipline

#### 2016 Achievements

- Achieved an average provision for credit losses of 26 basis points (as a percentage of total loans and acceptances), in line with historical trends.
- Grew our well-diversified and geographically dispersed commercial lending book in line with our risk appetite.
- Continued to invest in robust anti-money laundering capabilities to protect customers and address verification/disclosure requirements.
- Enhanced processes, capabilities and systems to help front-line employees make relevant and timely offers to our customers within the limits of our risk appetite.

#### 2017 Focus

- Continue strengthening risk management practices and enhancing automation capabilities while delivering a great customer experience.

## Canadian P&C

(Canadian \$ in millions, except as noted)  
As at or for the year ended October 31

	2016	2015	2014
Net interest income	5,060	4,806	4,654
Non-interest revenue	1,908	1,834	1,752
Total revenue (teb)	6,968	6,640	6,406
Provision for credit losses	542	496	528
Non-interest expense	3,459	3,339	3,181
Income before income taxes	2,967	2,805	2,697
Provision for income taxes	760	700	682
Reported net income	2,207	2,105	2,015
Amortization of acquisition-related intangible assets (1)	2	4	4
Adjusted net income	2,209	2,109	2,019

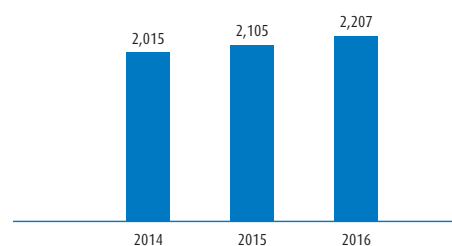
#### Key Performance Metrics and Drivers

Personal revenue	4,553	4,415	4,238
Commercial revenue	2,415	2,225	2,168
Net income growth (%)	4.9	4.4	11.2
Revenue growth (%)	5.0	3.7	6.4
Non-interest expense growth (%)	3.5	5.0	4.2
Adjusted non-interest expense growth (%)	3.6	4.9	4.2
Operating leverage (%)	1.5	(1.3)	2.2
Adjusted operating leverage (%)	1.4	(1.2)	2.2
Efficiency ratio (%)	49.6	50.3	49.7
Net interest margin on average earning assets (%)	2.54	2.54	2.54
Average earning assets	199,526	189,505	183,406
Average net loans and acceptances	205,813	195,183	188,796
Average deposits	142,132	132,767	124,926
Full-time equivalent employees	14,776	15,697	15,795

(1) Before tax amounts of \$3 million in 2016, \$5 million in 2015 and \$4 million in 2014 are included in non-interest expense.

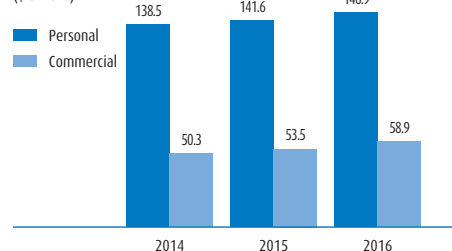
### Reported Net Income

(\$ millions)



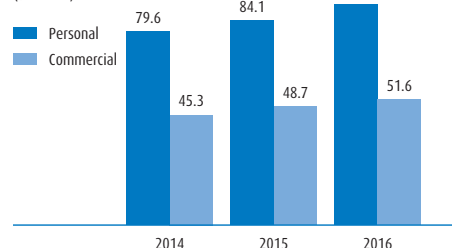
### Average Net Loans and Acceptances

(\$ billions)



### Average Deposits

(\$ billions)



## Financial Review

Canadian P&C reported net income was \$2,207 million, up \$102 million or 5% from a year ago. Adjusted net income, which excludes the amortization of acquisition-related intangible assets, increased \$100 million or 5% to \$2,209 million.

Revenue increased \$328 million or 5% to \$6,968 million. Revenue increased \$138 million or 3% in our personal banking business and \$190 million or 9% in our commercial banking business, mainly driven by higher balances and increased non-interest revenue in both businesses.

Net interest margin was stable at 2.54%.

Provisions for credit losses increased \$46 million or 9% to \$542 million, due to higher provisions in both the consumer and commercial portfolios.

Non-interest expense was \$3,459 million, up \$120 million or 4% from a year ago, primarily due to continued investment in the business, net of disciplined expense management. Adjusted operating leverage was consistently positive throughout the year, demonstrating the benefits of revenue growth and actions we took related to containing expenses.

Average net loans and acceptances increased \$10.6 billion or 5% from a year ago to \$205.8 billion. Total personal lending balances (excluding retail cards) increased 4% year over year, with solid residential mortgage growth partially offset by declines in indirect auto loans. Credit card balances were consistent with the prior year in both retail and corporate cards. Commercial loan balances (excluding corporate cards) increased 10% year over year, with growth across a number of industry sectors.

Average deposits increased \$9.4 billion or 7% to \$142.1 billion. Personal deposit balances increased 8%, driven by strong growth in term and primary chequing accounts. Commercial deposit growth was broad-based, with balances growing 6% year over year.

## Business Environment, Outlook and Challenges

The Canadian economy is expected to improve modestly in 2017, in response to firmer U.S. demand for exports, ongoing low interest rates, the low Canadian dollar, an anticipated increase in oil prices and federal fiscal stimulus. The jobless rate is expected to decline modestly.

In the Canadian personal banking sector, retail operating deposits are projected to grow by approximately 6% in 2017, slightly higher than the rate of growth in personal income. Credit card loan balances are expected to continue to grow around 4%, reflecting the effects of a trend in customer preferences toward prime-based lines of credit. Residential mortgage growth is expected to slow to around 5% in 2017.

In the commercial banking sector, growth in commercial operating deposits and short-term business credit is expected to ease moderately to approximately 6% in 2017, in the context of an expected recovery in resource prices and improving economic conditions.

We expect to generate growth by increasing our customer share of wallet and products per customer while improving sales force productivity and targeting commercial opportunities across geographic regions, market segments and industry sectors. We will continue to operate within the limits of our risk appetite. Our effective governance framework is expected to position us well as information security needs increase and high regulatory expectations continue. Ongoing expansion of digital capabilities will improve efficiency: in 2016, we saw the number of digital transactions overtake branch transactions and this, along with our steadfast commitment to a customer-first approach, is expected to help us reinforce and deepen customer loyalty.

The Canadian economic environment in 2016 and outlook for 2017 are discussed in more detail in the Economic Developments and Outlook section on page 30.

### Caution

This Canadian P&C Banking section contains forward-looking statements. Please see the Caution Regarding Forward-Looking Statements.

# U.S. Personal and Commercial Banking

We're here to help our more than two million customers feel confident in their financial decisions. Our retail and small and mid-sized business banking customers are served through nearly 600 branches, contact centres, online and mobile banking platforms and more than 1,300 automated banking machines across eight states. Our commercial banking customers are offered in-depth specific industry knowledge, as well as strategic capital markets solutions.

## Alexandra Dousmanis-Curtis

Group Head  
U.S. Retail and Business Banking

## David R. Casper

President and Chief Executive Officer  
BMO Harris Bank N.A. and Group Head Commercial Banking



## Lines of Business

**Personal Banking** offers a broad range of products and services to individuals, as well as small and mid-sized business customers, including deposits, mortgages, consumer credit, business lending, credit cards and other banking services.

**Commercial Banking** provides business customers with a broad range of banking products and services, including lending, deposits, treasury management and risk management.

## Strengths and Value Drivers

- Rich heritage of 170 years in the U.S. Midwest, with a deep commitment to our communities and helping our customers succeed.
- Strong, experienced leadership team that knows how to compete and perform in our markets.
- Unique, differentiated platform for profitable growth with attractive branch footprint and top-tier deposit market share in key U.S. Midwest markets.
- Large-scale, relationship-based national commercial banking business centred in the U.S. Midwest, complemented by in-depth industry knowledge in select sectors.
- Comprehensive and integrated risk management and compliance framework to manage within our risk appetite and respond to regulatory expectations. A risk culture that is evident in every aspect of the way we operate across the business.

## Strategy and Key Priorities

We aim to grow our business and be a leader in our markets by creating a differentiated, intuitive customer experience and advising our customers on a wide range of financial topics, leveraging our brand reputation, local presence and high-performance teams.

### Deliver a great customer experience to a loyal, profitable and growing customer base

#### 2016 Achievements

- Further improved customer loyalty as measured by a key industry metric in both our commercial and retail banking segments, by optimizing service delivery, improving our product offering and enhancing our digital solutions.
- Improved retail net customer acquisition by 30% year over year. Retail deposits grew by 9% across all products, while commercial net customer acquisition improved by 3% year over year.
- Increased deposit market share in our core footprint to 6.5%, which includes Illinois, Wisconsin, Missouri, Kansas, Indiana and Minnesota. Maintained second place rankings in the Chicago and Wisconsin areas.

#### 2017 Focus

- Continue to build market share and expand into high opportunity segments, grow customer share of wallet and drive customer acquisition through enhanced value proposition, while focusing on consistent service delivery and developing expert bankers.

### Continue to transform our Personal Banking business by improving our products and channel capabilities to meet our customers' evolving needs

#### 2016 Achievements

- Introduced a new competitive credit card suite, which includes lower interest rates, EMV-enabled (Europay, MasterCard and Visa) chip cards, a refined points program and premium rewards.
- Launched a customer insight tool to generate intuitive and meaningful individualized offers and services to help deepen customer relationships.
- Continued our multi-year strategy to improve efficiency and enhance the digital customer experience, including the launch of our new home equity origination system and investments in Smart Branch technology.

#### 2017 Focus

- Build digital capabilities to align to customer behaviour and market demand, accelerate the modernization of our physical footprint and enhance our product offering.



## **Continue to deliver local access and industry expertise to clients across a broad geographic footprint through a proven and effective commercial operating model**

### **2016 Achievements**

- The acquisition of BMO Transportation Finance added an industry-leading business with an established client base to our already well-diversified and robust commercial business.
- Opened a new commercial office in Dallas, building on the presence of the BMO Transportation Finance team. Expanded into two new high-growth commercial real estate segments – seniors' housing facilities and hotel finance.
- Continued to deepen customer relationships in our treasury management services business, driving a 15% year-over-year increase in fee income, and introduced a new U.S. Enterprise Wire Payment system to deliver a flexible, faster and more efficient platform for our customers.
- Deployed a dedicated cross-border service contact group to improve client relationships and deliver an integrated cross-bank client service experience.

### **2017 Focus**

- Continue to deepen market share in our flagship businesses, grow revenue by investing in higher-growth markets, increase speed of delivery and optimize operational and credit processes, while delivering comprehensive customer solutions.

## **Continue our strong risk leadership and operating discipline**

### **2016 Achievements**

- Achieved good revenue growth while controlling expenses and continuing to operate within our risk appetite and risk culture, all within the context of a low interest rate environment and moderate economic growth.
- Actively managed risks and regulatory compliance by maintaining a solid foundation of effective operational risk controls.
- Maintained robust anti-money laundering capabilities to protect our customers.

### **2017 Focus**

- Focus on effectively controlling potential risks related to new digital capabilities to safeguard customer identity and personal information.

## U.S. P&C

(Canadian \$ equivalent in millions, except as noted)  
As at or for the year ended October 31

	2016	2015	2014
Total revenue (teb) (1)	4,649	3,616	3,157
Reported net income	1,081	829	656
Adjusted net income	1,131	882	708
Net income growth (%)	30.4	26.5	11.1
Adjusted net income growth (%)	28.2	24.7	9.5
Revenue growth (%)	28.6	14.5	5.3
Non-interest expense growth (%)	21.5	14.8	7.5
Adjusted non-interest expense growth (%)	22.2	15.5	8.3
(US\$ in millions, except as noted)			
Net interest income (teb) (1)	2,663	2,260	2,271
Non-interest revenue	846	621	615
Total revenue (teb) (1)	3,509	2,881	2,886
Provision for credit losses (1)	194	95	162
Non-interest expense	2,191	1,904	1,902
Income before income taxes	1,124	882	822
Provision for income taxes (teb)	307	221	223
Reported net income	817	661	599
Amortization of acquisition-related intangible assets (2)	37	42	47
Adjusted net income	854	703	646

### Key Performance Metrics and Drivers (US\$ basis)

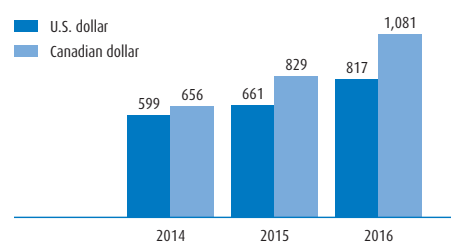
Net income growth (%)	23.6	10.3	3.5
Adjusted net income growth (%)	21.6	8.7	2.1
Revenue growth (%)	21.8	(0.2)	(1.6)
Non-interest expense growth (%)	15.1	0.1	0.6
Adjusted non-interest expense growth (%)	15.7	0.7	1.4
Operating leverage (teb) (%)	6.7	(0.3)	(2.2)
Adjusted operating leverage (teb) (%)	6.1	(0.9)	(3.0)
Efficiency ratio (teb) (%)	62.5	66.1	65.9
Adjusted efficiency ratio (teb) (%)	61.0	64.2	63.6
Net interest margin on average earning assets (teb) (%)	3.62	3.46	3.64
Average earning assets	73,569	65,319	62,443
Average net loans and acceptances	68,514	59,353	56,351
Average deposits	66,343	62,152	60,008
Full-time equivalent employees	7,503	7,606	7,835

(1) Beginning in the first quarter of 2016, the reduction in the credit mark that is reflected in net interest income and the provision for credit losses on the purchased performing loan portfolio are being recognized in U.S. P&C, consistent with the accounting for the acquisition of BMO Transportation Finance, and given that these amounts have reduced substantially in size. Results for prior periods have not been reclassified.

(2) Before tax amounts of \$52 million in 2016, \$55 million in 2015 and \$67 million in 2014 are included in non-interest expense.

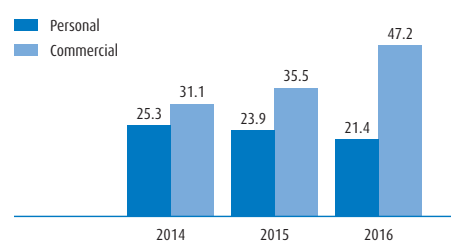
## Reported Net Income

(\$ millions)



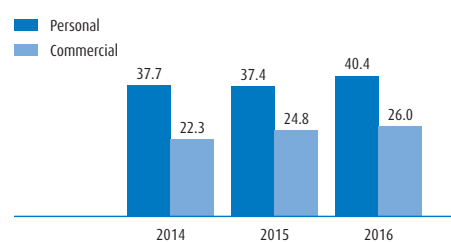
## Average Net Loans and Acceptances

(US\$ billions)



## Average Deposits

(US\$ billions)



## Financial Review

U.S. P&C reported net income of \$1,081 million increased \$252 million or 30% from a year ago. Adjusted net income, which excludes the amortization of acquisition-related intangible assets, was \$1,131 million, up \$249 million or 28%. Revenue grew \$1,033 million or 29% to \$4,649 million. All amounts in the remainder of this section are on a U.S. dollar basis.

Reported net income of \$817 million increased \$156 million or 24% from a year ago. Adjusted net income of \$854 million increased \$151 million or 22% primarily due to the acquired BMO Transportation Finance business, which contributed approximately 14% to both revenue and expenses in the year, and organic growth.

Revenue of \$3,509 million increased \$628 million or 22%, primarily due to the benefit of the acquired BMO Transportation Finance business, as well as organic loan and deposit growth, improvements in deposit spreads and higher commercial lending and treasury management fees, net of loan spread compression and lower mortgage banking revenue.

In our commercial banking business, revenue increased \$623 million or 43% to \$2,085 million, reflecting the acquired BMO Transportation Finance business, strong organic loan and deposit volume growth and higher lending and treasury management fees, net of loan spread compression.

In our personal banking business, revenue increased \$5 million to \$1,424 million, primarily due to increased deposit spreads and volumes, partially offset by declines in loan volumes and spreads, including the planned reduction in the indirect auto portfolio, and lower mortgage banking revenue.

Net interest margin increased by 16 basis points to 3.62%, driven by higher deposit spreads and volumes, the acquired BMO Transportation Finance business, and the recognition of the credit mark on the purchased performing portfolio previously recognized in Corporate Services, net of loan spread compression.

Provisions for credit losses of \$194 million increased \$99 million or 104% from a year ago, largely reflecting higher commercial provisions, mainly due to the acquired BMO Transportation Finance business.

Non-interest expense of \$2,191 million increased \$287 million or 15% and adjusted non-interest expense of \$2,139 million increased \$290 million or 16%, largely due to the acquired BMO Transportation Finance business.

Average net loans and acceptances increased \$9.2 billion or 15% to \$68.5 billion, due to BMO Transportation Finance and organic commercial loan growth, partially offset by declines in personal loan volumes, as noted above.

Average deposits of \$66.3 billion increased \$4.2 billion or 7%, driven by growth in both personal and commercial volumes. Chequing volumes increased \$2.6 billion or 7%.

## Business Environment, Outlook and Challenges

U.S. P&C has a significant footprint in eight states, primarily concentrated in six contiguous states in the U.S. Midwest region (Illinois, Wisconsin, Indiana, Minnesota, Missouri and Kansas).

The U.S. economy is expected to improve moderately in 2017, in response to an upturn in business spending, continued strength in consumer spending and housing markets and expansionary fiscal policy. The pace of expansion in the U.S. Midwest region should remain modest at around 1.6% in 2016 and 1.8% in 2017, compared with 1.9% in 2015, with continuing low levels of exports and manufacturing output due to the strong U.S. dollar and slowing growth in the global economy. Uncertainties related to the Brexit referendum and the U.S. election have dampened business spending. However, under a new administration, fiscal policy looks to become more stimulative in 2017, supporting economic growth. Industry-wide commercial loan growth is expected to improve if business investment picks up in the absence of any meaningful increase in uncertainty related to possible protectionist measures. Resilient consumer demand and steady automobile production is expected to support growth in the region in 2017. A growing number of household formations should prolong the upturn in home sales and residential mortgage demand.

The U.S. Midwest banking environment continues to be highly competitive, with a low interest rate environment, global economic headwinds and moderate economic growth, posing challenges for the banking industry. As a result, we remain committed to a customer-focused growth strategy as we offer new product suites, enhanced digital capabilities and credit processes, while at the same time deepening our relationships with our current customers, expanding into under-served markets and striving to deliver an integrated cross-bank client experience. As we look forward, we expect that the anticipated uptrend in interest rates, improvement in labour markets and positive consumer metrics will help us sustain the organic momentum in our deposit and loan growth. We will continue to actively manage risks and regulatory compliance through a comprehensive and integrated oversight and control structure.

The U.S. economic environment in 2016 and the outlook for 2017 are discussed in more detail in the Economic Developments and Outlook section on page 30.

### Caution

This U.S. P&C Banking section contains forward-looking statements. Please see the Caution Regarding Forward-Looking Statements.

# BMO Wealth Management

BMO's wealth business serves a full range of client segments, from mainstream to ultra-high net worth and institutional, with a broad offering of wealth management products and services including insurance. BMO Wealth Management is a global business with an active presence in markets across Canada, the United States, Europe and Asia.

## Joanna Rotenberg

Group Head  
BMO Wealth Management<sup>(1)</sup>

## Gilles Ouellette

Group Head, BMO Asset Management and  
Vice-Chair, International, BMO Financial Group<sup>(1)</sup>



## Lines of Business

**BMO Nesbitt Burns**, our full-service investing business in Canada, offers comprehensive and client-focused investment, and wealth advisory services that leverage strong financial planning capabilities, as well as Canada's first bank-owned digital portfolio management platform, BMO SmartFolio®.

**BMO InvestorLine** is an online investing service that offers clients two ways to invest: our top-ranked self-directed service, which provides tools to help investors make independent investment decisions; or adviceDirect™, which provides investors with online advice and investment recommendations for their portfolios.

**BMO's Private Banking** businesses operate in Canada, the United States, Hong Kong and Singapore, offering a comprehensive range of financial services and solutions to high net worth and ultra-high net worth clients and, under BMO Harris Financial Advisors, to mass affluent clients in the United States.

**BMO Asset Management** is a globally significant asset management organization that provides investment management, trust and custody services to institutional, retail and high net worth investors around the world.

**BMO Insurance** operates in Canada and internationally. In Canada, we manufacture life insurance, accident and sickness insurance, and annuity products that are marketed both to brokers and directly to individuals. Our creditor insurance division markets group creditor insurance, and internationally, we provide reinsurance solutions.

## Strengths and Value Drivers

- Planning and advice-based approach that integrates investment, insurance, specialized wealth management and core banking solutions.
- Team of highly skilled wealth professionals committed to providing a great client experience.
- Prestigious brand that is broadly recognized and trusted.
- Strong presence in North America, globally in asset management and in private banking in select markets, including Europe and Asia.
- Diversified portfolio of digital investment solution platforms ranging from self-directed investing to professional money management.
- Access to BMO's broad client base and distribution networks.
- Strong risk management framework to enable us to operate within our risk appetite and respond to heightened regulatory expectations.

## Strategy and Key Priorities

We aim to be the wealth management solutions provider that defines great client experience. Our strategy is to deliver on our clients' wealth management needs now and into the future by enhancing the client experience, while focusing on innovation and productivity, increasing collaboration across BMO and maintaining a strong risk management framework.

### Enhance our clients' experience and deliver on their evolving wealth management needs

#### 2016 Achievements

- Launched BMO SmartFolio®, Canada's first bank-owned digital portfolio management platform, to provide an easy and affordable "hands-free" personal investing solution to our clients.
- Improved our financial planning capabilities to better help clients create robust financial plans through enhanced training, the addition of financial planning professionals, as well as enhancements to financial planning software.
- Launched new exchange traded funds (ETFs) in both Europe and Asia, and solidified our position as the #2 ETF provider in Canada.
- Expanded wealth offerings, solutions and programs for targeted growth demographics, such as millennials and women investors.
- Launched the BMO Women in Leadership Fund, the first impact investing mutual fund by a Canadian bank.
- Established a team of specialist professionals focused on providing services for our clients with cross-border financial needs.
- Continued to improve our lending capabilities in the ultra-high net worth segment.
- Received a number of awards, including Best Online Brokerage for BMO InvestorLine (*Morningstar*), Best Private Client Investment Platform for CTC | myCFO (*Private Asset Management Magazine*), Best New ETF Issuer and Best New Fixed Income ETF for BMO Global Asset Management EMEA (*ETF.com*) and Best Domestic Private Bank for BMO Private Banking (*Global Financial Market Review*).

#### 2017 Focus

- Invest in market-leading product innovations and wealth planning solutions tailored to meeting clients' evolving needs.

### Drive productivity and simplify processes to improve the client experience

#### 2016 Achievements

- Improved our data analytics capabilities to increase the capacity and efficiency of our sales force.

(1) Prior to November 1, 2016, Joanna Rotenberg was Head, Personal Wealth and Gilles Ouellette was Group Head, Wealth Management.



- Enhanced the onboarding and online client experience.
- Streamlined our organizational structure to increase collaboration and realize operational efficiencies across and within our businesses.

**2017 Focus**

- Continue to improve productivity through digitalization and process transformation.

**Meet our clients' needs through increased collaboration**

**2016 Achievements**

- Focused on strengthening collaboration across BMO in order to offer our clients holistic solutions that meet their financial needs at every stage of their lives. Clients benefit from access to a broader suite of services, including traditional banking services, through a more efficient operating and client-service model.
- Continued to onboard, train and expand our sales professional teams in strategically important segments.
- Embarked on a multi-year digitalization program.
- Continued to enhance our integrated global Asset Management operating platform to better serve our clients.

**2017 Focus**

- Increase collaboration within BMO Wealth Management and across the bank to deliver exceptional client experience.

**Maintain strong risk management and compliance practices**

**2016 Achievements**

- Effectively managed the risks across our business and responded to heightened regulatory expectations.
- Grew our lending book in line with our risk appetite and our streamlined lending processes.
- Continued to enhance anti-money laundering tools and processes to protect our customers, including the implementation of technology improvements focused on transaction monitoring and "Know your Customer" processes.

**2017 Focus**

- Continue to invest in a strong risk management and compliance framework to operate within our risk appetite and respond to heightened regulatory expectations.

**Wealth Management**

(Canadian \$ in millions, except as noted)  
As at or for the year ended October 31

	2016	2015	2014
Net interest income	614	565	537
Non-interest revenue (1)	5,274	5,198	4,801
Total revenue (1)	5,888	5,763	5,338
Insurance claims, commissions and changes in policy benefit liabilities (CCPB) (1)	1,543	1,254	1,505
Revenue, net of CCPB	4,345	4,509	3,833
Provision for (recovery of) credit losses	9	7	(3)
Non-interest expense	3,335	3,357	2,840
Income before income taxes	1,001	1,145	996
Provision for income taxes	239	295	216
Reported net income	762	850	780
Acquisition integration costs (2)	30	37	16
Amortization of acquisition-related intangible assets (3)	71	68	47
Adjusted net income	863	955	843

**Key Performance Metrics and Drivers**

Traditional Wealth businesses net income	540	610	494
Traditional Wealth businesses adjusted net income	641	715	557
Insurance net income	222	240	286
Net income growth (%)	(10.2)	8.9	(5.7)
Adjusted net income growth (%)	(9.6)	13.3	(1.3)
Revenue growth (%) (1)	2.2	8.0	26.6
Revenue growth, net of CCPB (%) (1)	(3.6)	17.6	11.2
Non-interest expense growth (%)	(0.6)	18.2	20.8
Adjusted non-interest expense growth (%)	(0.4)	16.9	19.1
Return on equity (%)	12.4	14.8	18.4
Adjusted return on equity (%)	14.1	16.6	19.9
Operating leverage, net of CCPB (%) (1)	(3.0)	(0.6)	(9.6)
Adjusted operating leverage, net of CCPB (%)	(3.2)	0.7	(7.9)
Efficiency ratio, net of CCPB (%) (1)	76.8	74.5	74.1
Adjusted efficiency ratio (%)	54.5	55.9	51.7
Adjusted efficiency ratio, net of CCPB (%)	73.9	71.5	71.9
Net interest margin on average earning assets (%)	2.37	2.38	2.54
Average common equity	6,078	5,688	4,181
Average earning assets	25,898	23,784	21,169
Average net loans and acceptances	16,458	14,550	12,943
Average deposits	29,931	27,377	24,912
Assets under administration	469,694	465,742	414,547
Assets under management	405,695	397,959	379,606
Full-time equivalent employees	6,357	6,497	6,649

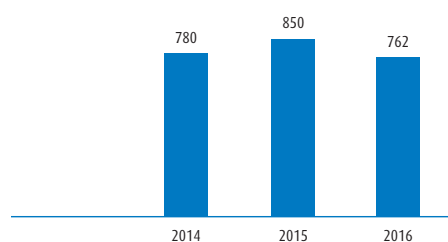
**U.S. Business Select Financial Data** (US\$ in millions)

Total revenue	629	806	720
Non-interest expense	575	652	658
Reported net income	39	99	53
Adjusted net income	54	118	73
Average earning assets	3,446	3,242	3,028
Average net loans and acceptances	3,200	2,965	2,654
Average deposits	5,602	6,010	5,834

- (1) Commencing in the first quarter of 2015, insurance claims, commissions and changes in policy benefit liabilities (CCPB) are reported separately. They were previously reported as a reduction in insurance revenue in non-interest revenue. Prior period amounts and ratios have been reclassified.
- (2) F&C acquisition integration costs before tax amounts of \$38 million in 2016, \$46 million in 2015 and \$20 million in 2014 are included in non-interest expense.
- (3) Before tax amounts of \$88 million in each of 2016 and 2015 and \$62 million in 2014 are included in non-interest expense.

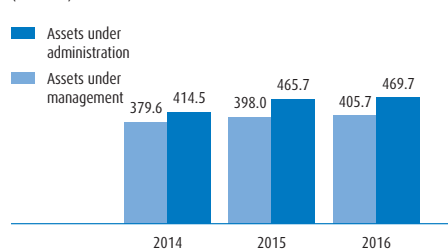
**Reported Net Income**

(\$ millions)



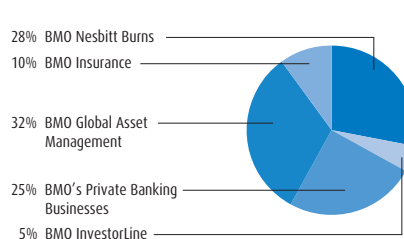
**Assets under Management and Administration**

(\$ billions)



**2016 Net Revenue by Line of Business**

(%)



## Financial Review

Wealth Management reported net income was \$762 million, compared to \$850 million a year ago. Adjusted net income, which excludes the amortization of acquisition-related intangible assets and acquisition integration costs, was \$863 million, compared to \$955 million a year ago.

Traditional wealth reported net income was \$540 million, compared to \$610 million a year ago. Adjusted net income in traditional wealth was \$641 million, compared to \$715 million a year ago, as solid underlying growth was more than offset by the prior year benefits of a gain on the sale of BMO's U.S. retirement services business, as well as a write-down of an equity investment net of a gain on its subsequent sale in 2016. Net income in insurance was \$222 million, compared to \$240 million a year ago, primarily due to higher actuarial benefits in the prior year and above-trend benefits a year ago from changes in our investment portfolio to improve asset-liability management, partially offset by growth in the underlying business.

Revenue was \$5,888 million, up \$125 million or 2% from a year ago. Revenue, net of CCPB, was \$4,345 million, down \$164 million or 4% compared to \$4,509 million a year ago. Revenue in traditional wealth was \$3,923 million, compared to \$4,057 million a year ago, as solid underlying growth in our spread-based and fee-based revenue was more than offset by the prior year benefits of a gain on the sale of BMO's U.S. retirement services business, the impact of divestitures, and a write-down of an equity investment net of a gain on its subsequent sale in 2016. Insurance revenue, net of CCPB, was \$422 million, compared to \$452 million a year ago, due to the factors noted above. The stronger U.S. dollar increased revenue by \$44 million or 1%. The weaker British pound reduced revenue by \$23 million.

The provision for credit losses was \$9 million, compared to \$7 million a year ago.

Non-interest expense was \$3,335 million, down \$22 million or 1%. Adjusted non-interest expense was \$3,209 million, down \$14 million, as the impact of divestitures and the weaker British pound was partially offset by the impact of the stronger U.S. dollar and continued investment in the business. The stronger U.S. dollar increased adjusted non-interest expense by \$40 million or 2%. The weaker British pound reduced non-interest expense by \$21 million.

Assets under management and administration grew by \$12 billion or 1% from a year ago to \$875 billion, primarily driven by market appreciation.

## Business Environment, Outlook and Challenges

Canadian and U.S. stock markets experienced declines in early 2016, resulting in an unfavourable investment climate and low levels of client trading activity, before slowly rebounding in the second half of the year. Financial markets have driven the British pound to a three-decade low due to uncertainty related to the potential fallout from the Brexit referendum, which is impacting our operations in the United Kingdom. Long-term interest rates in the United States and Canada declined in 2016 in response to steady policies by the Federal Reserve and Bank of Canada, modest economic growth and low inflation, putting pressure on our brokerage net interest income. Interest rates subsequently turned up at year end in anticipation of tighter Federal Reserve policy and signs of firmer economic growth.

Canadian economic growth is expected to improve modestly to 1.9% and U.S. economic growth is expected to improve to 2.2% in fiscal 2017, and we anticipate that a sustained level of higher activity in equity markets in 2017 will continue to positively affect both transaction volumes and asset levels. Long-term interest rates in the United States and Canada are expected to rise only moderately, leading to minimal expected impact on our insurance business. We are also anticipating greater fee transparency for mutual funds and investment management and advisory services and that could result in downward fee pressure for these products and services.

We expect that changing demographics, particularly in the retirement, mass affluent and high net worth sectors, will continue to drive the wealth management industry over the longer term. Tailoring our offering for key client segments, enhancing our team-based client service model to provide a holistic approach that supports clients as they move through different life stages and keeping pace with advances in technology, are ways in which we can continue to meet our clients' evolving needs.

The Canadian and U.S. economic environment in 2016 and the outlook for 2017 are discussed in more detail in the Economic Developments and Outlook section on page 30.

### Caution

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

# 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 2,400 professionals in 30 locations around the world, including 16 offices in North America.

**Patrick Cronin**  
Group Head  
BMO Capital Markets<sup>(1)</sup>

**Darryl White**  
Chief Operating Officer  
BMO Financial Group<sup>(1)</sup>



## Lines of Business

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

**Trading Products** offers research and access to global 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. We also offer new product development and origination services, as well as risk management (derivatives) advice and services to hedge against fluctuations in a variety of key inputs, including interest rates and commodities prices. In addition, we provide funding and liquidity management to our clients.

## Strengths and Value Drivers

- Unified coverage and integrated distribution across our North American platform and complementary global footprint, delivering a seamless and exceptional client experience.
- Innovative ideas and tailored solutions delivered through a comprehensive coverage team, dedicated to anticipating, understanding and meeting client needs.
- Top-ranked Canadian equity and fixed income economic research, sales and trading capabilities with deep expertise in core sectors.
- Strong first-line-of-defence risk management and regulatory and compliance capabilities, enabling effective decision-making in support of our strategic priorities.
- Well-diversified platform and business mix, by sector, geography, product and currency, positioning BMO well in several key markets and over the long term.

## Strategy and Key Priorities

BMO Capital Markets aims to be a lead North American investment bank enabling clients to achieve their goals. We offer an integrated platform, differentiated by innovative ideas and unified coverage.

### Continue to maintain our leadership position in Canada through our top-tier coverage team

#### 2016 Achievements

- Continued to win key mandates in core Canadian industries, including: as sole advisor on a \$1.9 billion disposition by Paramount Resources, the largest non-oil sands upstream energy transaction of 2016; as advisor to Bell Canada Enterprises (BCE) on its pending \$3.9 billion acquisition of Manitoba Telecom Services Inc.; and as lead of the largest unsecured operating line transaction in Canadian REIT history with RioCan.
- Ranked #1 (tied) as a 2016 Greenwich Quality Leader in Overall Canadian Fixed Income, Canadian Fixed Income Sales, Canadian Fixed Income Research and Canadian Fixed Income Trading by Greenwich Associates.
- Ranked #2 as a 2016 Greenwich Share Leader for Canadian Equity Trading Share by Greenwich Associates.
- Ranked #2 (tied) as a 2016 Greenwich Share Leader for Overall Canadian Fixed Income Market Share by Greenwich Associates.
- Ranked #1 (tied) by its clients as a Prime Broker in Canada in the 2016 Global Custodian Prime Brokerage Survey.
- Named Best House in Canada for Structured Products at the 2016 Americas Structured Products & Derivatives Awards.
- Named Bank of the Year at the annual Canadian Dealmakers Awards.

#### 2017 Focus

- Continue to maintain market leadership in Canada by deepening our client relationships and driving incremental market share growth.

(1) Prior to November 1, 2016, Patrick Cronin was Chief Operating Officer, BMO Capital Markets and Darryl White was Group Head, BMO Capital Markets.

## Continue to drive performance in our U.S. platform with a focused strategy and selectively grow our U.S. corporate bank where we are competitively advantaged

### 2016 Achievements

- Continued to leverage our full-service capabilities to gain competitive advantage against our U.S. mid-market and boutique competitors.
- Acquired U.S. boutique M&A advisory business Greene Holcomb Fisher, complementing our existing M&A practice and aligning with our strategy of focusing in the mid-cap market space.
- Ranked #3 by Ivy Exec as Best Large Investment Bank To Work For.
- Continued to expand our lending and advisory mandates, including as financial advisor to Stone Canyon on its \$2.4 billion acquisition of BWAY, as the joint lead arranger, joint bookrunner and administrative agent for Jones Lang LaSalle Incorporated's US\$2.75 billion Senior Credit Facility, and as financial advisor to Inland Real Estate Corporation on its US\$2.3 billion sale to real estate funds managed by DRA Advisors LLC.
- Closed 33 U.S. M&A transactions this year, up 22% from the prior year, with a total deal volume of \$14 billion.
- Continued to win significant cross-border mandates, including acting as financial advisor to Spectra Energy on its combination with Enbridge, the largest M&A deal in Canadian history, creating the largest energy infrastructure company in North America with an enterprise value of \$165 billion.

### 2017 Focus

- Continue to leverage our key strategic investments to increase growth from our U.S. platform, and selectively grow our U.S. corporate bank where we are competitively advantaged.

## Leverage our strong North American capabilities and presence in select international markets

### 2016 Achievements

- Built our presence in the Supranational Sub-sovereign Agency (SSA) market. Named a Coming Force in SSA Banking at the 2016 GlobalCapital Bond Awards and won key mandates, including acting as bookrunner and sole swap provider on a US\$2.5 billion 5-year Fixed Rate Note deal by the International Finance Corporation.
- Continued to expand lending and advisory mandates globally in the metals and mining sector, such as acting as financial advisor to Ivanhoe Mines in partnership with Zijin Mining on the co-development of the Kamao, the world's largest, undeveloped, high-grade copper discovery, in the Democratic Republic of Congo.
- Named World's Best Metals & Mining Investment Bank for the seventh consecutive year by *Global Finance*.
- Issued BMO's first Formosa bond in Taiwan, a \$262 million U.S.-dollar-denominated 30-year structured note.
- Named Best Bank for the Canadian Dollar for the sixth consecutive year by *FX Week* magazine.
- Named Best Trade Bank in Canada at the 2016 *Trade Finance Magazine* Company Awards.
- Named Best Forex Provider in North America for the sixth consecutive year by *Global Banking and Finance Review*.

### 2017 Focus

- Continue to leverage our strong North American and global capabilities to deepen our presence and strategic relationships in select international markets.

## Continue to enhance our first-line-of-defence risk management, regulatory and compliance practices

### 2016 Achievements

- Continued to enhance our supervisory, risk management and regulatory compliance infrastructure and processes to further strengthen our control environment.
- Developed first-line capabilities that provide incremental oversight of key risks across our businesses.
- Further strengthened our first-line capabilities for implementing new regulations, managed our operations effectively during a period of significant changes in the regulatory environment and achieved compliance with key regulations by their effective date.

### 2017 Focus

- Continue to enhance our first-line-of-defence risk management and compliance practices to manage our operations effectively during an ongoing period of significant change in the regulatory environment.



## BMO Capital Markets

(Canadian \$ in millions, except as noted)

As at or for the year ended October 31

	2016	2015	2014
Net interest income (teb)	<b>1,509</b>	1,332	1,175
Non-interest revenue	<b>2,853</b>	2,535	2,539
Total revenue (teb)	<b>4,362</b>	3,867	3,714
Provision for (recovery of) credit losses	<b>81</b>	26	(18)
Non-interest expense	<b>2,576</b>	2,483	2,349
Income before income taxes	<b>1,705</b>	1,358	1,383
Provision for income taxes (teb)	<b>437</b>	329	309
Reported net income	<b>1,268</b>	1,029	1,074
Amortization of acquisition-related intangible assets (1)	<b>1</b>	2	1
Adjusted net income	<b>1,269</b>	1,031	1,075

### Key Performance Metrics and Drivers

Trading Products revenue	<b>2,670</b>	2,412	2,257
Investment and Corporate Banking revenue	<b>1,692</b>	1,455	1,457
Net income growth (%)	<b>23.3</b>	(4.2)	3.5
Revenue growth (%)	<b>12.8</b>	4.1	9.8
Non-interest expense growth (%)	<b>3.8</b>	5.7	12.7
Return on equity (%)	<b>16.2</b>	14.8	19.1
Operating leverage (teb) (%)	<b>9.0</b>	(1.6)	(2.9)
Efficiency ratio (teb) (%)	<b>59.1</b>	64.2	63.3
Net interest margin on average earning assets (teb) (%)	<b>0.59</b>	0.56	0.53
Average common equity	<b>7,394</b>	6,538	5,422
Average earning assets	<b>254,461</b>	238,916	222,471
Average assets	<b>303,273</b>	289,936	259,324
Average net loans and acceptances	<b>46,109</b>	37,113	29,701
Average deposits	<b>150,068</b>	141,038	133,181
Full-time equivalent employees	<b>2,362</b>	2,184	2,267

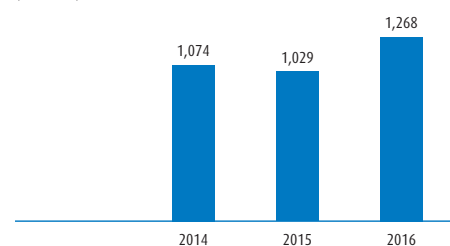
### U.S. Business Select Financial Data (US\$ in millions)

Total revenue (teb)	<b>1,162</b>	1,099	1,154
Non-interest expense	<b>861</b>	890	887
Reported net income	<b>196</b>	142	216
Average earning assets	<b>78,774</b>	76,630	79,958
Average assets	<b>85,651</b>	84,872	88,902
Average net loans and acceptances	<b>15,068</b>	11,034	9,547
Average deposits	<b>52,459</b>	55,942	57,754

(1) Before tax amounts of \$1 million in 2016, \$2 million in 2015 and \$3 million in 2014 are included in non-interest expense.

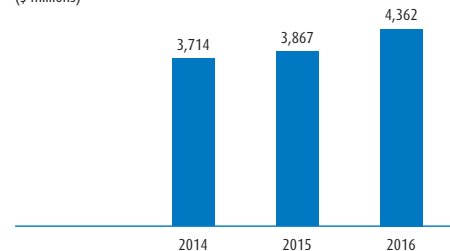
### Reported Net Income

(\$ millions)



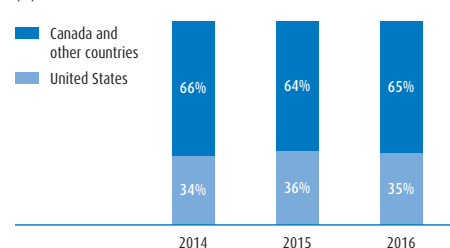
### Revenue

(\$ millions)



### Revenue by Geography

(%)



## Financial Review

BMO Capital Markets reported net income increased \$239 million or 23% to \$1,268 million from the prior year. Adjusted net income, which excludes the amortization of acquisition-related intangible assets, was \$1,269 million, an increase of \$238 million or 23%. Strong revenue performance was partially offset by higher expenses and higher loan loss provisions. Return on equity of 16.2% increased from 14.8% in the prior year due to higher net income, partially offset by higher allocated capital.

Revenue increased \$495 million or 13% to \$4,362 million from the prior year. Excluding the impact of the stronger U.S. dollar, revenue increased \$422 million or 11%, reflecting improved trading revenue performance, strong mergers and acquisitions advisory activity and higher lending revenue, partially offset by lower net securities gains and the sale of our municipal bond trading business.

Trading Products revenue increased \$258 million or 11% from the prior year. Excluding the impact of the stronger U.S. dollar, revenue increased \$218 million or 9%, driven by higher trading revenue from improved client activity, particularly in interest rate trading, and higher securities commissions, partially offset by lower net securities gains.

Investment and Corporate Banking revenue increased \$237 million or 16% from the prior year. Excluding the impact of the stronger U.S. dollar, revenue increased \$204 million or 14%, as higher investment banking revenue, primarily from strong mergers and acquisitions advisory activity, and higher corporate banking revenue driven by loan growth were partially offset by lower net securities gains.

Provision for credit losses was \$55 million higher from the prior year, mainly due to higher oil and gas provisions.

Non-interest expense increased \$93 million or 4% to \$2,576 million. Excluding the impact of the stronger U.S. dollar, non-interest expense increased \$33 million or 1%, reflecting our continued focus on disciplined expense management and the sale of our municipal bond trading business.

Average assets of \$303.3 billion increased \$13.3 billion from the prior year, including an \$8.6 billion increase as a result of the stronger U.S. dollar. Higher levels of reverse repos and net loans and acceptances due to increases in corporate banking activity were partially offset by decreases in securities, cash and derivative financial asset balances.

BMO Capital Markets participated in 1,152 new global issues in 2016, comprised of 577 corporate debt deals, 322 government debt deals and 253 equity transactions, which raised \$4.0 billion.

## Business Environment, Outlook and Challenges

In fiscal 2016, global economic conditions continued to present an uncertain landscape, with volatility related to the Brexit referendum and the U.S. election, interest rates that remain at historically low levels, sharp movements in oil and some commodities prices, and diverging positions among central banks around the world. While challenging market conditions persist, BMO Capital Markets' strategy remains constant and our performance in fiscal 2016 reflected our balanced, diversified and client-focused business model, as well as our disciplined approach to risk management. We continue to concentrate on our strategy, with the United States as our largest market opportunity for growth, and we maintain our focus on enhancing our control environment.

Looking ahead to fiscal 2017, we expect economic growth in the United States to be sustained and healthy. Canadian economic growth is expected to improve modestly, supported by anticipated firming in U.S. demand for exports, higher oil prices and a Canadian dollar that remains weak against the U.S. dollar. We expect continued growth in many of our businesses, in the context of overall growth in the global economy and constructive market conditions, and despite synthetic equity arrangement rules (SEA Rules) that were passed into law in Canada. The effect of the SEA Rules will be to increase our effective tax rate and negatively impact our earnings in fiscal 2017. For additional discussion, see the Legal and Regulatory Risk section on page 110.

The Canadian and U.S. economic environment in 2016 and the outlook for 2017 are discussed in more detail in the Economic Developments and Outlook section on page 30.

### Caution

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

# Corporate Services, including Technology and Operations

Corporate Services consists of Corporate Support Areas (CSAs), including Technology and Operations (T&O). CSAs provide enterprise-wide expertise and governance support in a variety of areas, including strategic planning, risk management, finance, legal and regulatory compliance, marketing, communications and human resources. T&O manages, maintains and provides governance over information technology, operations services, real estate and procurement for BMO Financial Group.

The costs of these CSA services are largely transferred to the three client operating groups (P&C, WM and BMO CM), with remaining amounts retained in Corporate Services results. As such, Corporate Services results largely reflect the impact of residual treasury and asset-liability management activities, the elimination of taxable equivalent adjustments, the results from certain impaired real estate secured assets, certain purchased loan accounting impacts, residual unallocated expenses, certain acquisition integration costs, restructuring costs and adjustments to the collective allowance for credit losses.

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

- Invested in our cyber defence capability and monitoring mechanisms, to respond to and manage cyber security threats.
- Continued to enhance our Risk Management Framework by implementing enhanced procedures that have strengthened our internal governance and controls over key risk processes and improved the monitoring and performance of models.
- Met regulatory expectations: continued delivery of programs such as automating and upgrading foundational capabilities for risk and data analysis; as well as successfully met the requirements of the Comprehensive Capital Analysis and Review and the Heightened Standards guidelines for large banks established by the Office of the Comptroller of the Currency.
- Enhanced Anti-Money Laundering Program: integrating risk assessment team for North America; enhanced quality control and self-testing functions were implemented for regulatory reporting functions; and robotics automation is being piloted to eliminate manual processes for cheque retrievals.
- Leveraged data to better serve our customers: building enterprise-level data solutions to help us intuitively anticipate customer needs, including the launch of a customer insight tool in the United States and the launch of a data platform in Canada to help our front-line sales team make better personal connections with our customers.
- Accelerated the deployment of a unified digital experience across channels and products.

## Financial Review

Corporate Services reported net loss for the year was \$687 million, compared with a reported net loss of \$408 million a year ago. Reported results in both years included a restructuring charge and acquisition integration costs. The adjusted net loss for the year was \$452 million, compared with an adjusted net loss of \$296 million a year ago. Both reported and adjusted results declined due to lower revenue, driven by a recovery under a legal settlement in the prior year, lower impaired real estate gains and lower purchase accounting revenue, partially offset by higher credit recoveries in the current year. Reported expenses increased primarily due to higher acquisition integration costs related to the acquired BMO Transportation Finance business and higher restructuring costs in the current year, and reported revenue was lower due to a cumulative accounting adjustment related to foreign currency translation that largely impacted prior periods.

## Corporate Services, including Technology and Operations

(Canadian \$ in millions, except as noted)  
As at or for the year ended October 31

	2016	2015	2014
Net interest income before group teb offset (1)	(329)	(252)	(82)
Group teb offset	(510)	(524)	(476)
Net interest income (teb) (1)	(839)	(776)	(558)
Non-interest revenue	59	279	166
Total revenue (teb) (1)	(780)	(497)	(392)
Recovery of credit losses (1)	(74)	(36)	(123)
Non-interest expense	724	613	470
Loss before income taxes	(1,430)	(1,074)	(739)
Recovery of income taxes (teb)	(743)	(666)	(547)
Reported net loss	(687)	(408)	(192)
Acquisition integration costs (2)	41	6	-
Cumulative accounting adjustment (3)	62	-	-
Restructuring costs (4)	132	106	-
Adjusted net loss	(452)	(296)	(192)
Adjusted total revenue (teb) (1)	(696)	(495)	(392)
Adjusted recovery of credit losses (1)	(74)	(36)	(123)
Adjusted non-interest expense	469	459	470
Adjusted net loss	(452)	(296)	(192)
Full-time equivalent employees	14,236	14,369	14,232

### U.S. Business Select Financial Data (US\$ in millions)

Total revenue (teb) (1)	(135)	(85)	(32)
Recovery of credit losses (1)	(81)	(79)	(120)
Non-interest expense	219	272	298
Recovery of income taxes (teb) (1)	(77)	(131)	(103)
Reported net loss	(196)	(147)	(107)
Adjusted total revenue (teb) (1)	(135)	(85)	(32)
Adjusted recovery of credit losses (1)	(56)	(30)	(117)
Adjusted non-interest expense	120	228	298
Adjusted net loss	(150)	(148)	(106)

## Corporate Services Provision for Credit Losses

(Canadian \$ in millions) As at or for the year ended October 31	2016	2015	2014
Impaired real estate loans	(16)	28	21
Interest on impaired loans	-	17	26
Purchased credit impaired loans	(58)	(86)	(252)
Purchased performing loans	-	5	82
Recovery of credit losses (1)	(74)	(36)	(123)
Average loans and acceptances	96	242	452
Year-end loans and acceptances	80	182	306

- (1) Beginning in the first quarter of 2016, the reduction in the credit mark that is reflected in net interest income and the provision for credit losses on the purchased performing portfolio are being recognized in U.S. P&C, consistent with the accounting for the acquisition of BMO Transportation Finance, and given that these amounts have reduced substantially in size. Results for prior periods have not been reclassified.
- (2) Acquisition integration costs related to the acquisition of BMO Transportation Finance are primarily included in non-interest expense.
- (3) Cumulative accounting adjustment recognized in other non-interest revenue related to foreign currency translation that largely impacted prior periods.
- (4) Restructuring charges before tax amounts of: \$188 million in 2016 as we accelerate the use of technology to enhance customer experience and focus on driving operational efficiencies; and \$149 million in 2015, primarily due to restructuring to drive operational efficiencies, are included in non-interest expense.

Adjusted results in this table are non-GAAP amounts or non-GAAP measures. Please see the Non-GAAP Measures section.

## Review of Fourth Quarter 2016 Performance

Reported net income was \$1,345 million for the fourth quarter of 2016, up \$131 million or 11% from the prior year. Adjusted net income was \$1,395 million, up \$131 million or 10% from the prior year. Adjusted results for the quarter exclude the amortization of acquisition-related intangible assets of \$37 million (\$29 million after-tax), which were charged to the non-interest expense of the operating groups, and acquisition integration costs of \$31 million (\$21 million after-tax), which were primarily recorded in non-interest expense. Acquisition integration costs related to F&C were charged to Wealth Management and acquisition integration costs related to the acquired BMO Transportation Finance business were charged to Corporate Services.

Reported EPS of \$2.02 was up \$0.19 or 10% and adjusted EPS of \$2.10 was up \$0.20 or 11% from the prior year. Return on equity was 13.8% and adjusted return on equity was 14.4%.

Summary income statements and data for the quarter and comparative quarters are outlined on page 67.

The combined P&C banking business net income of \$878 million and adjusted net income of \$891 million increased 14%. Canadian P&C net income increased 5% reflecting good operating performance with higher balances across most products and increased non-interest revenue, partially offset by higher expenses and higher provisions for credit losses. U.S. P&C reported net income increased 38% on a Canadian dollar basis and 37% on a U.S. dollar basis. U.S. P&C adjusted net income increased 35% on a Canadian dollar basis and 34% on a U.S. dollar basis. Reported and adjusted U.S. P&C net income benefited from the acquired BMO Transportation Finance business and continued good growth in commercial lending. Wealth Management reported net income was \$279 million compared to \$243 million in the prior year. Wealth Management adjusted net income was \$302 million compared to \$271 million, up 11% from the prior year. Traditional wealth reported net income increased 8% and adjusted net income increased 5% largely reflecting improved market conditions and growth across most of our businesses. From a year-over-year growth perspective, a gain on sale of an investment in the fourth quarter of 2016 was offset by a gain on sale net of a legal provision in the prior year. Insurance net income increased primarily due to the impact of business growth and favourable market movements in the fourth quarter of 2016. BMO Capital Markets net income increased 65% driven by strong revenue performance. Corporate Services reported and adjusted results declined primarily due to lower revenue driven by a recovery under a legal settlement in the prior year, above-trend expenses and lower credit recoveries.

Total revenue of \$5,278 million increased \$296 million or 6% from the fourth quarter a year ago. Total revenue, net of CCPB, of \$5,199 million increased \$482 million or 10%. Canadian P&C revenue increased 5% due to higher balances across most products and increased non-interest revenue. U.S. P&C revenue increased 25% on a Canadian dollar and U.S. dollar basis primarily due to the benefit of the acquired BMO Transportation Finance business, as well as higher organic loan and deposit volumes, increased deposit spreads and fee income, net of loan spread compression. Traditional wealth revenue decreased as business growth and improved Canadian and U.S. equity markets were more than offset by the impact of higher gains in the prior year, lower revenue due to divestitures and the impact of the weaker British pound. Net insurance revenue increased mainly due to the impact of favourable market movements in the fourth quarter of 2016 and business growth. BMO Capital Markets revenue increased 27% with higher revenue in Investment and Corporate Banking due to strong merger and acquisition advisory activity, higher revenue from equity and debt underwriting, corporate lending and net securities gains. Trading Products revenue increased due to higher trading revenue from improved client activity, and higher equity issuances. Corporate Services revenue declined from above-trend revenue in the prior year, which included a recovery under a legal settlement.

Net interest income of \$2,498 million increased \$187 million or 8% from a year ago due to the benefits of the acquired BMO Transportation Finance business and organic volume growth. BMO's overall net interest margin increased by 4 basis points to 1.57%. Net interest margin excluding trading increased 7 basis points from the prior year primarily due to the acquired BMO Transportation Finance business, higher deposit balances and in U.S. P&C higher deposit spreads. Average earning assets increased \$33.9 billion or 6% to \$631.4 billion, due to organic loan growth and the acquired BMO Transportation Finance business.

Non-interest revenue increased \$295 million or 12% on a net revenue basis to \$2,701 million, primarily due to higher revenue from underwriting and advisory fees, trading revenue and a gain on sale of an equity investment sold in the fourth quarter, partially offset by lower other non-interest revenue. Other non-interest revenue includes lease revenue from the acquired BMO Transportation Finance business, which was more than offset by the prior year benefits from a gain on sale of BMO's U.S. retirement services business and a recovery under a legal settlement.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 33.



The total provision for credit losses was \$174 million, an increase of \$46 million from the prior year due to higher provisions in Canadian and U.S. P&C and lower net recoveries in Corporate Services. There was no net change to the collective allowance in the quarter.

Insurance claims, commissions and changes in policy benefit liabilities (CCPB) were \$79 million in the fourth quarter of 2016, down \$186 million from \$265 million in the fourth quarter of 2015 due to the impact of lower annuity premiums and reinsurance liabilities, partially offset by lower increases in long-term interest rates which resulted in a smaller decrease in the fair value of policy benefit liabilities compared to the fourth quarter of 2015. The decrease was largely offset in revenue.

Non-interest expense of \$3,323 million increased \$230 million or 7% from the fourth quarter a year ago. Adjusted non-interest expense excludes acquisition integration costs and the amortization of acquisition-related intangible assets. Adjusted non-interest expense increased \$223 million or 7% to \$3,255 million. Reported and adjusted expenses increased largely due to the impact of the acquired BMO Transportation Finance business, increased technology costs and higher employee-related expenses, partially offset by the impact of divestitures.

The provision for income taxes of \$357 million increased \$75 million from the fourth quarter of 2015. The effective tax rate for the quarter was 21.0%, compared with 18.8% a year ago. The adjusted provision for income taxes of \$375 million increased \$80 million from a year ago. The adjusted effective tax rate was 21.2% in the fourth quarter of 2016, compared with 18.9% a year ago. The higher reported and adjusted tax rate in the fourth quarter of 2016 relative to the fourth quarter of 2015 was primarily due to a higher proportion of income from higher tax-rate jurisdictions and lower tax-exempt income from securities. On a teb basis, the reported effective tax rate for the quarter was 26.3%, compared with 24.9% a year ago. On a teb basis, the adjusted effective tax rate for the quarter was 26.3%, compared with 24.7% a year ago.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 33.

## 2015 Financial Performance Review

The preceding discussions in the MD&A focused on our performance in fiscal 2016. This section summarizes our performance in fiscal 2015 relative to fiscal 2014. As noted on page 26, certain prior year data has been reclassified to conform to the presentation in 2016, including restatements arising from transfers between operating groups. Further information on restatements is provided on page 46.

### Net Income

Net income increased \$72 million or 2% to \$4,405 million in 2015 and EPS increased \$0.16 or 2% to \$6.57. Adjusted net income excludes acquisition integration costs, the amortization of acquisition-related intangible assets and restructuring costs. Adjusted net income increased \$228 million or 5% to \$4,681 million and adjusted EPS increased \$0.41 or 6% to \$7.00, reflecting solid revenue growth. Higher net revenue exceeded incremental costs, contributing to growth in net income. There were higher provisions for credit losses and a slightly higher effective income tax rate.

### Return on Equity

Return on equity and adjusted return on equity were 12.5% and 13.3%, respectively, in 2015, compared with 14.0% and 14.4%, respectively, in 2014. ROE declined in 2015 primarily due to growth in common equity exceeding growth in income. There was an increase of \$96 million in earnings (\$252 million in adjusted earnings) available to common shareholders. Average common shareholders' equity increased \$4.5 billion from 2014 primarily due to the impact of the stronger U.S. dollar on our investments in foreign operations and increased retained earnings.

### Revenue

Revenue, net of CCPB, increased \$1,417 million or 8% to \$18,135 million in 2015. Adjusted revenue excludes a minor adjustment related to BMO Transportation Finance acquisition costs. Adjusted net revenue increased \$1,419 million or 8% to \$18,137 million. Revenue growth reflects the benefits of our diversified business mix and successful execution against our strategic priorities. The impact of the stronger U.S. dollar increased adjusted net revenue growth by \$732 million or 4%. The remaining increase was mainly due to revenue growth in Canadian P&C and Wealth Management.

### Insurance Claims, Commissions and Changes in Policy Benefit Liabilities

Insurance claims, commissions and changes in policy benefit liabilities were \$1,254 million in 2015, down \$251 million from \$1,505 million in 2014 when lower long-term interest rates increased the fair value of policy benefit liabilities to a greater extent, partially offset by increased reinsurance liabilities and the impact of growth in the underlying business. The decline was largely offset in revenue.

### Provisions for Credit Losses

The provision for credit losses was \$612 million in 2015, up from \$561 million in 2014, primarily due to lower recoveries in Corporate Services and higher provisions in BMO Capital Markets, partially offset by reduced provisions in the P&C businesses.

### Non-Interest Expense

Non-interest expense increased \$1,261 million or 12% to \$12,182 million in 2015. Adjusted non-interest expense excludes acquisition integration costs, the amortization of acquisition-related intangible assets and restructuring costs. Adjusted non-interest expense increased \$1,058 million or 10% to \$11,819 million, of which approximately 6% was due to the stronger U.S. dollar, 2% was due to the inclusion of F&C results for two additional quarters relative to the prior year, and 2% was due to business growth.

### Provision for Income Taxes

The provision for income taxes was \$936 million in 2015, compared with \$903 million in 2014. The reported effective tax rate in 2015 was 17.5%, compared with 17.2% in 2014. The adjusted provision for income taxes was \$1,025 million in 2015<sup>(1)</sup>, compared with \$943 million in 2014. The adjusted effective tax rate in 2015 was 18.0%, compared with 17.5% in 2014. The change in the tax rate from year to year is attributable to a lower proportion of income from lower tax rate jurisdictions.

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

## Canadian P&C

Reported net income was \$2,105 million in 2015, up \$90 million or 4% from 2014, with improved performance in the second half of the year. Adjusted net income, which excludes the amortization of acquisition-related intangible assets, was \$2,109 million, up \$90 million or 4%. Revenue increased \$234 million or 4% to \$6,640 million as a result of higher balances and increased non-interest revenue, with a stable net interest margin. Revenue increased \$177 million or 4% in our personal banking business as a result of higher balances and increased non-interest revenue. In our commercial banking business, revenue increased \$57 million or 3%, mainly driven by higher balances. Our credit performance improved in 2015, as provisions for credit losses declined \$32 million or 6% to \$496 million, due to lower provisions in both the consumer and commercial portfolios. Non-interest expense was \$3,339 million, up \$158 million or 5% from 2014, primarily due to continued investment in the business, net of expense management, and higher costs associated with a changing business and regulatory environment.

## U.S. P&C

Reported net income of \$829 million increased \$173 million or 26% from 2014. Adjusted net income, which excludes the amortization of acquisition-related intangible assets, was \$882 million, up \$174 million or 25%. Revenue grew \$459 million or 15% to \$3,616 million. All amounts in the remainder of this section are on a U.S. dollar basis.

Reported net income of \$661 million increased \$62 million or 10% from 2014. Adjusted net income, which excludes the amortization of acquisition-related intangible assets, of \$703 million increased \$57 million or 9%. Revenue remained stable at \$2,881 million as higher balances and increased mortgage banking revenue offset the effects of lower net interest margin. In our commercial banking business, revenue increased \$9 million or 1% to \$1,462 million, reflecting strong loan volume growth, primarily in the commercial and industrial loan portfolio, partially offset by the impact of spread compression due to a competitive environment. In our personal banking business, revenue decreased by \$14 million or 1% to \$1,419 million, primarily due to declines in loan balances and spreads and reduced fees from deposits and credit cards, partially offset by increased mortgage banking revenue and chequing balance growth. Provisions for credit losses of \$95 million in 2015 improved by \$67 million or 41%, primarily due to lower provisions in both the consumer and commercial loan portfolios. Non-interest expense of \$1,904 million remained stable. Adjusted non-interest expense of \$1,849 million increased \$14 million, or less than 1%, due to a continued focus on expense management while making selective investments in the business.

## Wealth Management

Reported net income was \$850 million in 2015, up \$70 million or 9% from 2014. Adjusted net income, which excludes the amortization of acquisition-related intangible assets and acquisition integration costs, was \$955 million, up \$112 million or 13%. Traditional wealth reported net income was \$610 million, up \$116 million or 23%. Adjusted net income in traditional wealth was \$715 million, up \$158 million or 28% from a year ago, due to growth from the businesses, a gain on sale of BMO's U.S. retirement services business, as well as the benefit from the full year contribution from the acquired F&C business. Net income in insurance was \$240 million compared to \$286 million a year ago, primarily due to higher taxes in the current year and higher actuarial benefits in the prior year. Revenue, net of CCPB, was \$4,509 million, up \$676 million or 18% from the prior year. Revenue in traditional wealth was \$4,057 million, up \$687 million or 20% primarily due to growth in client assets, including the full year contribution from the acquired F&C business. Insurance revenue, net of CCPB, was \$452 million compared to \$463 million a year ago, due to higher actuarial benefits in the prior year. The stronger U.S. dollar increased revenue, net of CCPB, by \$133 million or 4%. Non-interest expense was \$3,357 million, up \$517 million or 18%. Adjusted non-interest expense was \$3,223 million, up \$465 million or 17%, of which 4% was due to the stronger U.S. dollar, 9% was due to the inclusion of F&C results for two additional quarters and 4% was primarily due to higher revenue-based costs.

## BMO Capital Markets

Reported net income decreased \$45 million or 4% to \$1,029 million in 2015, as the benefit of the stronger U.S. dollar was more than offset by higher provisions compared to net recoveries in the prior year. Adjusted net income, which excludes the amortization of acquisition-related intangible assets, was \$1,031 million, a decrease of \$44 million or 4%. Revenue increased \$153 million or 4% to \$3,867 million. Excluding the impact of the stronger U.S. dollar, revenue was stable year over year as higher trading revenues, including the prior year unfavourable impact of implementing a funding valuation adjustment, and higher lending revenues were offset by lower investment banking fees and reduced securities gains. Trading Products revenue increased \$155 million or 7%, and increased 3% excluding the impact of the stronger U.S. dollar, reflecting higher trading revenues related to client trading activity. Investment and Corporate Banking revenue was consistent with the prior year, and decreased 5% excluding the impact of the stronger U.S. dollar as growth in lending revenue was more than offset by lower investment banking client activity and reduced securities gains. Provision for credit losses was \$44 million higher due to higher provisions compared with net recoveries in the prior year. Non-interest expense increased \$134 million or 6% to \$2,483 million, and decreased \$10 million excluding the impact of the stronger U.S. dollar, primarily due to lower employee-related expenses, partially offset by higher support costs related to a changing business and regulatory environment.

## Corporate Services

Corporate Services reported net loss was \$408 million in 2015, compared with a reported net loss of \$192 million in 2014. Reported results in 2015 included certain acquisition integration costs and a \$106 million charge, primarily due to restructuring. The adjusted net loss was \$296 million, compared with an adjusted net loss of \$192 million in 2014. Excluding the impact of the group debt adjustment on revenue and taxes, results were lower mainly due to lower purchased loan portfolio revenues and lower credit recoveries. Adjusted non-interest expense was down modestly.

## Summary Quarterly Earnings Trends

BMO's results and performance measures for the past eight quarters are outlined on page 67.

Periodically, certain business lines and units within the business lines are transferred between client operating groups to more closely align BMO's organizational structure and its strategic priorities. Comparative figures have been restated to conform to the current presentation.

Over the past two years, we have remained focused on executing our strategic priorities. Economic conditions have remained challenging in Canada, hampered by weak investment in the oil industry and a slower U.S. economy. Growth in the U.S. economy was healthy in 2015 but slowed in 2016, reflecting low levels of exports, a reduction in oil production and decreased agriculture sector spending.

### Seasonality

BMO's quarterly earnings, revenue and expense are modestly affected by seasonal factors. Since our second fiscal quarter has 89 days (90 in a leap year) and other quarters have 92 days, second-quarter results are lower relative to other quarters because there are fewer calendar days, and thus fewer business days. The fourth quarter can have a higher level of expenses. The December holiday season also contributes to a slowdown in some activities.

### Canadian P&C

Canadian P&C delivered solid net income performance in the second half of 2015, continuing into 2016. Despite higher provisions for credit losses in 2016, up from below-trend provisions in the second half of 2015, year-over-year net income growth and operating leverage were both positive in each quarter of 2016. Revenue growth has been driven by higher balances and non-interest revenue, with relatively stable net interest margins. Expenses have grown as a result of continued investment in the business, net of an ongoing focus on expense management.

### U.S. P&C

Results improved in 2015 as a result of balance sheet growth, and disciplined expense management in a challenging interest rate environment. Growth in 2016 largely reflected the results of the acquired BMO Transportation Finance business and also organic revenue growth and good expense management, partially offset by higher credit losses. The U.S. dollar generally has strengthened significantly since the beginning of 2015, contributing to growth in the Canadian dollar equivalents of U.S. P&C's results.

### Wealth Management

Wealth Management's results in 2015 reflected good momentum. Results in 2016 were impacted by lower Canadian equity markets on average in 2016 compared to the prior year, despite markets slowly rebounding in the second half of the year. The fourth quarter of 2015 benefited from a gain on the sale of our U.S. retirement services business, the second quarter of 2016 included an investment write-down and the fourth quarter of 2016 included a gain on sale of an equity investment. Quarterly results in the insurance businesses have been subject to variability, resulting primarily from impacts of interest rates and equity markets, as well as methodology and actuarial assumptions changes.

### BMO Capital Markets

BMO Capital Markets' results have reflected good momentum, from softer results in the first quarter of 2015 to strong results in 2016. Strong overall performance has been driven by steady revenue growth in our Trading Products business, strong growth in the second half of 2016 in our Investment and Corporate Banking business and a tightened expense and efficiency focus, resulting in positive operating leverage in each of the five most recent quarters.

### Provisions for Credit Losses

BMO's PCL measured as a percentage of loans and acceptances has generally been relatively stable, with some quarter-to-quarter variability, and decreased in the fourth quarter of 2016 due to lower new specific provisions and higher reversals and recoveries, after experiencing increases in the second and third quarters of 2016 primarily due to higher oil and gas provisions.

### Corporate Services

Reported and adjusted results can vary from quarter to quarter. Reported results in 2015 and 2016 each included a restructuring charge and acquisition integration costs. The reported results in 2016 also included a cumulative accounting adjustment related to foreign currency translation that largely impacted prior periods. Results are impacted in part by the variability associated with benefits from the purchased loan portfolio. Beginning in the first quarter of 2016, the reduction in the credit mark that is reflected in net interest income and the provision for credit losses on the purchased performing portfolio are being recognized in U.S. P&C, consistent with the accounting for the acquisition of BMO Transportation Finance and given that these amounts have reduced substantially in size. Results for prior periods have not been reclassified.

### Foreign Exchange

The U.S. dollar strengthened significantly in 2015 with further modest strengthening in 2016, despite a slight weakening in the second quarters of 2015 and 2016. A stronger U.S. dollar increases the translated value of our U.S.-dollar-denominated revenues, expenses, provisions for (recoveries of) credit losses, income taxes and net income. It also reduces our return on equity.

### Provision for Income Taxes

The effective income tax rate can vary, as it depends on the timing of resolution of certain tax matters, recoveries of prior periods' income taxes and the relative proportion of earnings attributable to the different jurisdictions in which we operate.

#### Caution

This Summary Quarterly Earnings Trends section contains forward-looking statements. Please see the Caution Regarding Forward-Looking Statements.

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.

Adjusted results in this section are non-GAAP and are discussed in the Non-GAAP Measures section on page 33.

## Summarized Statement of Income and Quarterly Financial Measures

(Canadian \$ in millions, except as noted)	Q4-2016	Q3-2016	Q2-2016	Q1-2016	Q4-2015	Q3-2015	Q2-2015	Q1-2015
Net interest income	2,498	2,474	2,420	2,480	2,311	2,227	2,060	2,165
Non-interest revenue	2,780	3,159	2,681	2,595	2,671	2,599	2,466	2,890
Total revenue	5,278	5,633	5,101	5,075	4,982	4,826	4,526	5,055
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	79	691	407	366	265	218	24	747
Revenue, net of CCPB	5,199	4,942	4,694	4,709	4,717	4,608	4,502	4,308
Provision for credit losses – specific (see below)	174	257	201	183	128	160	161	163
Provision for (recovery of) credit losses – collective	-	-	-	-	-	-	-	-
Non-interest expense	3,323	3,092	3,312	3,270	3,093	2,971	3,112	3,006
Income before provision for income taxes	1,702	1,593	1,181	1,256	1,496	1,477	1,229	1,139
Provision for income taxes	357	348	208	188	282	285	230	139
Reported net income (see below)	1,345	1,245	973	1,068	1,214	1,192	999	1,000
Acquisition integration costs (1)	21	19	16	15	17	6	10	10
Amortization of acquisition-related intangible assets (2)	29	31	31	33	33	32	31	31
Cumulative accounting adjustment (3)	-	-	-	62	-	-	-	-
Restructuring costs (4)	-	-	132	-	-	-	106	-
Adjusted net income (see below)	1,395	1,295	1,152	1,178	1,264	1,230	1,146	1,041
Operating group reported net income								
Canadian P&C reported net income	592	561	525	529	561	556	485	503
Amortization of acquisition-related intangible assets (2)	-	1	-	1	1	1	1	1
Canadian P&C adjusted net income	592	562	525	530	562	557	486	504
U.S. P&C reported net income	286	277	267	251	208	222	207	192
Amortization of acquisition-related intangible assets (2)	13	12	12	13	14	13	13	13
U.S. P&C adjusted net income	299	289	279	264	222	235	220	205
Wealth Management reported net income	279	201	134	148	243	210	238	159
Acquisition integration costs (1)	7	9	5	9	11	6	10	10
Amortization of acquisition-related intangible assets (2)	16	17	19	19	17	17	17	17
Wealth Management adjusted net income	302	227	158	176	271	233	265	186
BMO Capital Markets reported net income	396	321	291	260	241	272	296	220
Amortization of acquisition-related intangible assets (2)	-	1	-	-	1	1	-	-
BMO Capital Markets adjusted net income	396	322	291	260	242	273	296	220
Corporate Services reported net income	(208)	(115)	(244)	(120)	(39)	(68)	(227)	(74)
Acquisition integration costs (1)	14	10	11	6	6	-	-	-
Cumulative accounting adjustment (3)	-	-	-	62	-	-	-	-
Restructuring costs (4)	-	-	132	-	-	-	106	-
Corporate Services adjusted net income	(194)	(105)	(101)	(52)	(33)	(68)	(121)	(74)
<b>Information per Common Share (\$)</b>								
Dividends declared	0.86	0.86	0.84	0.84	0.82	0.82	0.80	0.80
Basic earnings per share	2.03	1.87	1.46	1.59	1.83	1.81	1.49	1.47
Diluted earnings per share	2.02	1.86	1.45	1.58	1.83	1.80	1.49	1.46
Adjusted diluted earnings per share	2.10	1.94	1.73	1.75	1.90	1.86	1.71	1.53
Book value	59.56	58.06	55.57	59.61	56.31	55.36	51.65	52.98
Market price								
High	87.92	85.50	82.56	80.05	78.50	79.43	80.76	84.39
Low	81.62	79.82	68.65	69.39	64.01	71.27	73.12	72.87
Close	85.36	83.70	81.74	75.22	76.04	72.98	78.82	72.93
<b>Financial Measures (%)</b>								
Dividend yield	4.0	4.1	4.1	4.5	4.3	4.5	4.1	4.4
Return on equity	13.8	13.0	10.1	10.9	12.9	13.6	11.4	11.8
Adjusted return on equity	14.4	13.5	12.1	12.1	13.5	14.0	13.2	12.3
Net interest margin on average earning assets	1.57	1.58	1.61	1.58	1.53	1.52	1.48	1.51
Efficiency ratio, net of CCPB	63.9	62.6	70.6	69.4	65.6	64.5	69.1	69.8
Adjusted efficiency ratio	61.7	53.7	60.0	62.1	60.8	60.5	64.3	58.4
Adjusted efficiency ratio, net of CCPB	62.6	61.2	65.2	66.8	64.2	63.4	64.7	68.5
Operating leverage, net of CCPB	2.8	3.2	(2.2)	0.5	1.6	1.5	(8.5)	(7.5)
Adjusted operating leverage, net of CCPB	2.9	3.8	(0.8)	2.8	1.8	1.4	(2.0)	(6.8)
PCL as a % of average net loans and acceptances	0.19	0.29	0.23	0.21	0.15	0.20	0.20	0.21
Effective tax rate	21.0	21.9	17.6	15.0	18.8	19.3	18.8	12.2
Adjusted effective tax rate	21.2	22.0	19.6	16.2	18.9	19.4	19.8	12.6
Canadian/U.S. dollar as at exchange rate (\$)	1.3411	1.3056	1.2548	1.4006	1.3075	1.3080	1.2064	1.2711
Canadian/U.S. dollar average exchange rate (\$)	1.3216	1.3029	1.3016	1.3737	1.3191	1.2671	1.2412	1.1923
Cash and securities-to-total assets	27.1	27.3	26.7	26.4	27.8	29.3	30.0	30.1
<b>Capital Ratios (%) (5)</b>								
Common Equity Tier 1 (CET1) Ratio	10.1	10.0	9.7	10.0	10.7	10.4	10.2	10.1
Tier 1 Capital Ratio	11.6	11.2	11.0	11.3	12.3	11.7	11.4	11.4
Total Capital Ratio	13.6	13.3	13.1	13.4	14.4	13.7	13.5	13.4
Leverage Ratio	4.2	4.0	3.9	4.0	4.2	3.9	3.8	3.8

- (1) Acquisition integration costs before tax are included in non-interest expense. Wealth Management amounts of: \$10 million in Q4-2016; \$10 million in Q3-2016; \$6 million in Q2-2016; \$12 million in Q1-2016; \$13 million in Q4-2015; \$9 million in Q3-2015; \$11 million in Q2-2015 and \$13 million in Q1-2015. Corporate Services amounts of: \$21 million in Q4-2016; \$17 million in Q3-2016; \$18 million in Q2-2016; \$10 million in Q1-2016; \$7 million in Q4-2015, and \$nil in each of Q3-2015, Q2-2015 and Q1-2015.
- (2) Amortization of acquisition-related intangible assets was charged to the non-interest expense of the operating groups. Canadian P&C amounts of: \$1 million in Q4-2016; \$1 million in Q3-2016; \$nil in Q2-2016; \$1 million in Q1-2016 and \$2 million in Q4-2015; and \$1 million in each of Q3-2015, Q2-2015 and Q1-2015. US P&C amounts of: \$17 million in Q4-2016; \$16 million in Q3-2016; \$17 million in Q2-2016; \$18 million in Q1-2016; \$18 million in Q4-2015; \$16 million in Q3-2015; and \$17 million in each of Q2-2015 and Q1-2015. BMO Wealth Management amounts of: \$19 million in Q4-2016; \$22 million in Q3-2016; \$23 million in Q2-2016; \$24 million in Q1-2016; and \$22 million in each of Q4-2015, Q3-2015, Q2-2015 and Q1-2015. BMO Capital Markets amounts of: \$nil in Q4-2016; \$1 million in Q3-2016; \$nil in each of Q2-2016 and Q1-2016; \$1 million in each of Q4-2015 and Q3-2015; and \$nil in each of Q2-2015 and Q1-2015.
- (3) Cumulative accounting adjustment recognized in other non-interest revenue related to foreign currency translation that largely impacted prior periods.
- (4) Restructuring charges before tax amounts included in non-interest expense in Corporate Services of \$188 million in Q2-2016 and \$149 million in Q2-2015.
- (5) Comparative figures are as amended for Q1-2016, Q2-2016 and Q3-2016 capital ratios, other than the Leverage Ratio.

Adjusted results in this table are non-GAAP and are discussed in the Non-GAAP Measures section on page 33.



# Financial Condition Review

## Summary Balance Sheet

(Canadian \$ in millions)  
As at October 31

	2016	2015	2014	2013	2012
<b>Assets</b>					
Cash and interest bearing deposits with banks	36,102	47,677	34,496	32,607	26,256
Securities	149,985	130,918	143,319	135,800	129,441
Securities borrowed or purchased under resale agreements	66,646	68,066	53,555	39,799	47,011
Net loans	358,730	322,717	292,160	270,822	245,827
Other assets	76,472	72,503	65,129	58,016	76,149
<b>Total assets</b>	<b>687,935</b>	641,881	588,659	537,044	524,684
<b>Liabilities and Shareholders' Equity</b>					
Deposits	473,372	438,169	393,088	368,369	325,235
Other liabilities	167,796	159,383	155,254	133,500	165,813
Subordinated debt	4,439	4,416	4,913	3,996	4,093
Shareholders' equity	42,304	39,422	34,313	30,107	28,108
Non-controlling interest in subsidiaries	24	491	1,091	1,072	1,435
<b>Total liabilities and shareholders' equity</b>	<b>687,935</b>	641,881	588,659	537,044	524,684

## Overview

Total assets increased \$46.1 billion from the prior year to \$687.9 billion, including a \$7.3 billion increase due to the stronger U.S. dollar, excluding the impact on derivative financial assets. Total liabilities increased \$43.6 billion from October 31, 2015, including a \$7.0 billion increase due to the stronger U.S. dollar, excluding the impact on derivative financial liabilities. Shareholders' equity increased \$2.9 billion from October 31, 2015.

## Cash and Interest Bearing Deposits with Banks

Cash and interest bearing deposits with banks decreased \$11.6 billion due to reduced balances held with central banks from a high level at the end of the prior year.

## Securities

(Canadian \$ in millions)  
As at October 31

	2016	2015	2014	2013	2012
Trading	84,458	72,460	85,022	75,159	70,109
Available-for-sale	55,663	48,006	46,966	53,710	57,340
Held-to-maturity	8,965	9,432	10,344	6,032	875
Other	899	1,020	987	899	1,117
<b>Total securities</b>	<b>149,985</b>	130,918	143,319	135,800	129,441

Securities increased \$19.1 billion, primarily reflecting increases in trading securities in BMO Capital Markets, higher available-for-sale securities related mainly to treasury activities, and a \$1.5 billion impact from the stronger U.S. dollar.

## Securities Borrowed or Purchased Under Resale Agreements

Securities borrowed or purchased under resale agreements decreased \$1.4 billion, driven by client activities in BMO Capital Markets.

## Net Loans

(Canadian \$ in millions)  
As at October 31

	2016	2015	2014	2013	2012
Residential mortgages	112,277	105,918	101,013	96,392	84,211
Non-residential mortgages	11,376	10,981	10,738	11,745	12,939
Consumer instalment and other personal	64,680	65,598	64,143	63,640	61,436
Credit cards	8,101	7,980	7,972	7,870	7,814
Businesses and governments	164,221	134,095	110,028	92,840	81,133
Gross loans	360,655	324,572	293,894	272,487	247,533
Allowance for credit losses	(1,925)	(1,855)	(1,734)	(1,665)	(1,706)
<b>Total net loans</b>	<b>358,730</b>	322,717	292,160	270,822	245,827

Net loans increased \$36.0 billion, including a \$3.5 billion increase due to the stronger U.S. dollar. The remainder of the increase was primarily due to a \$27.3 billion increase in businesses and governments loans across all operating groups, including the acquired BMO Transportation Finance business, which added \$10.6 billion, as well as a \$6.1 billion increase in residential mortgages, primarily in Canadian P&C.

Table 7 on page 128 provides a comparative summary of loans by geographic location and product. Table 9 on page 129 provides a comparative summary of net loans in Canada by province and industry. Loan quality is discussed on pages 90 and 91 and further details on loans are provided in Notes 4, 6 and 25 on pages 153, 159 and 195 of the consolidated financial statements.

## Other Assets

Other assets includes derivative financial assets, customers' liability under acceptances, premises and equipment, goodwill and intangible assets, current and deferred tax assets, accounts receivable and prepaid expenses. The balance increased \$4.0 billion, primarily due to a \$1.7 billion increase in customers' liability under acceptances and a \$0.9 billion increase in derivative financial assets. Derivative financial assets increased \$0.9 billion, primarily due to an increase in the fair value of foreign exchange contracts and the strengthening U.S. dollar, partially offset by a decrease in the fair value of interest rate contracts. Further details on derivative financial assets are provided in Note 8 on page 161 of the consolidated financial statements.

## Deposits

(Canadian \$ in millions) As at October 31	2016	2015	2014	2013	2012
Banks	<b>34,271</b>	32,609	21,282	20,591	18,102
Businesses and governments	<b>276,214</b>	258,144	236,100	222,346	187,996
Individuals	<b>162,887</b>	147,416	135,706	125,432	119,137
Total deposits	<b>473,372</b>	438,169	393,088	368,369	325,235

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

Deposits increased \$35.2 billion, including an increase of \$5.8 billion due to the stronger U.S. dollar. The remainder of the increase reflects higher levels of wholesale and customer deposits, largely driven by a \$14.2 billion increase in deposits by business and governments, a \$14.1 billion increase in deposits by individuals and a \$1.1 billion increase in deposits by banks. The increase in total deposits of \$35.2 billion is in line with the total loans increase of \$36.0 billion. Further details on the composition of deposits are provided in Note 13 on page 171 of the consolidated financial statements and in the Liquidity and Funding Risk section on page 100.

## Other Liabilities

Other liabilities includes derivative financial liabilities, securities lent or sold under repurchase agreements, securities sold but not yet purchased, acceptances, securitization and structured entities liabilities, accounts payable and other accrued expenses. The balance increased \$8.4 billion, primarily due to a \$3.9 billion increase in securities sold but not yet purchased and a \$3.8 billion increase in treasury-related activities, partially offset by a \$4.4 billion decrease in derivative financial liabilities. Derivative financial liabilities decreased \$4.4 billion due to the decline in the fair value of foreign exchange, commodity and interest rate contracts. Further details on the composition of other liabilities are provided in Note 14 on page 172 of the consolidated financial statements.

## Subordinated Debt

Subordinated debt increased \$23 million. Further details on the composition of subordinated debt are provided in Note 15 on page 173 of the consolidated financial statements.

## Equity

(Canadian \$ in millions) As at October 31	2016	2015	2014	2013	2012
Share capital					
Preferred shares	<b>3,840</b>	3,240	3,040	2,265	2,465
Common shares	<b>12,539</b>	12,313	12,357	12,003	11,957
Contributed surplus	<b>294</b>	299	304	315	213
Retained earnings	<b>21,205</b>	18,930	17,237	15,087	13,456
Accumulated other comprehensive income	<b>4,426</b>	4,640	1,375	437	17
Total shareholders' equity	<b>42,304</b>	39,422	34,313	30,107	28,108
Non-controlling interest in subsidiaries	<b>24</b>	491	1,091	1,072	1,435
Total equity	<b>42,328</b>	39,913	35,404	31,179	29,543

Total equity increased \$2.4 billion. Total shareholders' equity increased \$2.9 billion due to a \$2.3 billion increase in retained earnings and a \$0.6 billion increase in preferred shares. Non-controlling interest in subsidiaries decreased \$0.5 billion due to the redemption of \$450 million of Capital Trust Securities.

The increase in share capital is driven by the issuance of preferred shares, as well as the issuance of common shares under the Shareholder Dividend Reinvestment and Share Purchase Plan (DRIP) and Stock Option Plan. BMO's DRIP is described in the Enterprise-Wide Capital Management section that follows. Our Consolidated Statement of Changes in Equity on page 142 provides a summary of items that increase or reduce shareholders' equity, while Note 16 on page 174 of the consolidated financial statements provides details on the components of and changes in share capital. Details on our enterprise-wide capital management practices and strategies can be found on the following page.

## Enterprise-Wide Capital Management

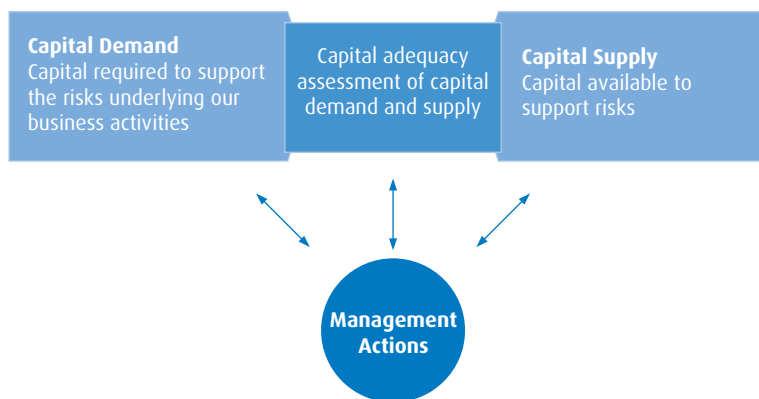
### Capital Management

#### Objective

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

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

#### Capital Management Framework



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

ICAAP is an integrated process that uses stress testing and other tools to evaluate capital adequacy on both a regulatory and an economic capital basis, and is used to establish capital targets and capital strategies that take into consideration the strategic direction and risk appetite of the enterprise. The capital plan is developed considering the results of our ICAAP and in conjunction with our annual business plan, promoting alignment between our business and risk strategies, regulatory and economic capital requirements and the availability of capital. Enterprise-wide stress testing and scenario analysis are used to assess the impact of various stress conditions on BMO's risk profile and capital requirements. The framework seeks to ensure that we are adequately capitalized given the risks we take and under stress, and supports the determination of limits, goals 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. Assessments of actual and forecast capital adequacy are compared to the capital plan throughout the year, and our plans are updated as required, based on changes in our business activities, risk profile or operating environment.

BMO uses a combination of regulatory and economic capital to evaluate business performance and considers capital implications in its strategic, tactical and transactional decision-making. By allocating our capital to operating groups, creating and monitoring capital limits and metrics and measuring their performance in relation to such capital allocations, limits and metrics, we seek to optimize our risk-adjusted return to shareholders, while maintaining a well-capitalized position. This approach aims to protect our stakeholders from the risks inherent in our various businesses, while still allowing the flexibility to deploy resources to support the strategic growth activities of our operating groups.

For further discussion of the risks underlying our business activities, refer to the Enterprise-Wide Risk Management section on page 79.

#### Governance

The Board of Directors, either directly or in conjunction with its Risk Review Committee, provides ultimate oversight and approval of capital management, including our 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 and discussion of significant capital management policies, issues and activities and, along with the Risk Management Committee, the capital required to support the execution of our enterprise-wide strategy. Finance and Risk Management are responsible for the design and implementation of the corporate policies and framework related to capital and risk management and the ICAAP. Corporate Audit Division, as the third line of defence, verifies our adherence to controls and highlights opportunities to strengthen our process.

#### Regulatory Capital Requirements

Regulatory capital requirements for BMO are determined in accordance with the Capital Adequacy Requirements (CAR) Guideline of the Office of the Superintendent of Financial Institutions Canada (OSFI), which includes a Basel I capital floor. The minimum capital ratios contained in the CAR Guideline are a 4.5% Common Equity Tier 1 (CET1) Ratio, 6% Tier 1 Capital Ratio and 8% Total Capital Ratio, which are calculated using a nine-year transitional phase-out of non-qualifying capital instruments ending in 2022. OSFI has expected banks to attain a target CET1 Ratio of at least 8% (4.5% minimum plus 3.5% Capital Conservation Buffer, including a 1% Domestic Systemically Important Bank (D-SIB) Common Equity Surcharge) since January 31, 2016, also referred to as the "all-in" requirements as, except for the Credit Valuation Adjustment (CVA) capital charge mentioned below, there is no five-year transitional phase-in of regulatory adjustments.

The fully implemented 2019 requirements and the OSFI “all-in” capital requirements are summarized in the following table.

(% of risk-weighted assets)	Common Equity Tier 1 Ratio (1)	Tier 1 Capital Ratio	Total Capital Ratio	Leverage Ratio (2)
2019 minimum capital requirements	4.5	6.0	8.0	3.0
Plus: Capital Conservation Buffer, including the D-SIB Common Equity Surcharge (1)	3.5	3.5	3.5	na
<b>OSFI requirements (3)</b>	<b>8.0</b>	<b>9.5</b>	<b>11.5</b>	<b>3.0</b>

- (1) The minimum 4.5% CET1 Ratio requirement is augmented by the 3.5% Capital Conservation Buffer which can absorb losses during periods of stress. The Capital Conservation Buffer for BMO includes the addition of the 1% Common Equity Surcharge for D-SIBs. If a bank’s capital ratios fall within the range of this combined buffer, restrictions on discretionary distributions of earnings (such as dividends, equity 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) A 3% minimum Leverage Ratio has been established by the Basel Committee on Banking Supervision (BCBS). It will be subject to monitoring and analysis during a four-year parallel run test period, which began on January 1, 2013. Depending upon the results of the parallel run testing, there could be subsequent adjustments, which are targeted to be finalized in 2017, with the final Leverage Ratio requirement effective January 1, 2018.
- (3) OSFI’s requirements are the published capital requirements D-SIBs must meet in 2016 to avoid being subject to restrictions on discretionary distributions of earnings.  
na - not applicable

## Regulatory Capital Ratios

The **Common Equity Tier 1 Ratio** reflects CET1 capital divided by CET1 capital RWA.

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

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

The **Leverage Ratio** is defined as Tier 1 capital divided by the sum of on-balance sheet items and specified off-balance sheet items, net of specified adjustments.

## Regulatory Capital Elements

Common equity is the most permanent form of capital. CET1 capital is comprised of common shareholders’ equity less deductions for goodwill, intangible assets, defined benefit pension assets, certain deferred tax assets and certain other items. Additional Tier 1 capital primarily consists of preferred shares and innovative hybrid instruments, less certain regulatory deductions. Tier 1 capital is comprised of CET1 capital and Additional Tier 1 capital. Tier 2 capital is primarily comprised of subordinated debentures and may include a portion of the collective and individual allowances for credit losses, less certain regulatory deductions. Total capital includes Tier 1 and Tier 2 capital.

OSFI’s CAR Guideline also requires the implementation of Basel Committee on Banking Supervision (BCBS) guidance on non-viability contingent capital (NVCC). NVCC provisions require the conversion of the capital instruments into a variable number of common shares in the event that OSFI announces that the 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, are to be grandfathered and phased out over a nine-year period that began on January 1, 2013. OSFI also outlines the requirements for redemption of these regulatory capital instruments due to a regulatory capital event.

## 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 is calculated for credit, market (trading) and operational risk categories based on OSFI’s prescribed rules.

BMO primarily uses the Advanced Internal Ratings Based (AIRB) Approach to determine credit RWA in our portfolio. Credit RWA arising from certain Canadian and U.S. portfolios are determined using the Standardized Approach. 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 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 to appropriately quantify and differentiate risks so they reflect changes in economic and credit conditions.

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

BMO uses the Advanced Measurement Approach (AMA), a risk-sensitive capital model, along with the Standardized Approach under OSFI rules, to determine capital requirements for operational risk.

For institutions using advanced approaches for credit risk or operational 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 Basel I rules (covering both RWA and capital deductions) is higher than a similar calculation under the risk-sensitive Basel III rules. As discussed below, the capital floor was operative for the bank during 2016 and as such, our total RWA reflected its impact.

OSFI advised banks the Credit Valuation Adjustment (CVA) risk capital charge for Canadian banks would be phased in beginning the first quarter of 2014. In 2016, the CVA risk capital charge applicable to CET1 was 64% of the fully implemented charge, and is expected to increase to 72% in 2017.

## Capital Regulatory Developments

### Capital Requirements

There are a number of regulatory capital changes, some finalized and some under development, which will put upward pressure on the amount of capital we are required to hold over time. The nature of these changes is outlined below.

In December 2015, OSFI advised Canadian banks that it will be increasing the regulatory capital requirements for residential mortgages and home equity lines of credit. The update will be tied to increases in local property prices and/or to house prices that are high relative to borrower incomes. Final changes were released in October 2016 and implemented effective November 1, 2016.



In January 2016, the BCBS issued the final framework for market risk capital requirements, which aims to promote consistent implementation of market risk standards across jurisdictions for implementation in 2019.

In December 2015, the BCBS issued an updated proposal on the Standardized Approach for Credit Risk, which is currently in the consultation phase and expected to be finalized by early 2017. In March 2016, the BCBS issued a consultative document on Constraints on the Use of Internal Model Approaches aimed at reducing complexity, improving comparability and addressing variability in capital requirements for credit risk by placing constraints on the use of advanced approach (AIRB) models. This includes removing the option of a models-based approach for certain exposures, use of "input" floors for certain model parameters, and specifying parameters for some models-based approaches. The document also discusses a potential capital "output" floor based on the new Standardized Approach for Credit Risk. We expect the proposals to be finalized by the BCBS in late 2016 or early 2017.

In March 2016, the BCBS proposed a new approach to the calculation of regulatory operational risk capital requirements, known as the Standardized Measurement Approach (SMA), which will replace AMA. The SMA is expected to be finalized in early 2017. It is less risk-sensitive than the AMA, but is intended to promote comparability of risk-based capital measures as well as reduce model complexity.

In April 2016, the BCBS issued the final standard for Interest Rate Risk in the Banking Book, which included a Pillar 2 supervisory approach, enhanced expectations for management and oversight and new disclosure requirements effective the first quarter of fiscal 2018.

In October 2016, the BCBS issued a discussion paper on regulatory treatment of accounting provisions, related to IFRS 9, as well as a consultative document on interim approach and transitional arrangements. As a response to the changes in the accounting standards, the BCBS has set up a task force to analyze the impact of applying the new expected credit loss (ECL) accounting standards on regulatory capital, and consider possible regulatory capital policy options, including whether any transitional arrangement is warranted to allow banks time to adjust to the new accounting provisioning standards. Consultation is currently underway and a quantitative impact study will be conducted.

In October 2016, the BCBS published its final standard on the regulatory capital treatment of banks' investments in Total Loss Absorbing Capacity (TLAC) instruments of Global Systemically Important Banks (G-SIBs). The aim of the standard is to reduce contagion in the banking system. The final standard requires that banks deduct G-SIB TLAC holdings that exceed certain thresholds from their Tier 2 capital.

### Taxpayer Protection and Bank Recapitalization Regime

In June 2016, legislation required to implement a bail-in regime was passed by the Canadian government to enhance Canada's bank resolution capabilities in line with similar international efforts. The Canadian government will be proposing regulations that will outline the detailed approach. OSFI will also issue guidelines that set the minimum Higher Loss Absorbency (HLA) level banks will need to maintain. The Canadian government and OSFI are expected to consult on regulations and minimum HLA level, with implementation of the new regime expected at a later date. The change could increase funding costs depending on the final rules. We expect a suitable transition period to issue sufficient qualifying bail-in debt to comply with bail-in HLA requirements.

### 2016 Regulatory Capital Review

BMO is well-capitalized, with capital ratios that exceed OSFI's published requirements for large Canadian banks, including the 1% D-SIB Common Equity Surcharge implemented in 2016. Our CET1 Ratio was 10.1% at October 31, 2016, compared to 10.7% at October 31, 2015. The CET1 Ratio decreased by 60 basis points from the end of fiscal 2015 due to increased RWA largely from the Basel I Capital floor and business growth, the acquisition of the BMO Transportation Finance business in the first quarter, which reduced the ratio by approximately 60 basis points, partially offset by capital growth.

Our Tier 1 Capital and Total Capital Ratios were 11.6% and 13.6%, respectively, at October 31, 2016, compared to 12.3% and 14.4%, respectively, at October 31, 2015. The decrease in the Tier 1 Capital Ratio was due mainly to the factors impacting the CET1 Ratio discussed above, partially offset by the issuance of preferred shares. The decrease in the Total Capital Ratio was mainly due to the factors impacting the Tier 1 Ratio and the redemptions of non-NVCC-qualifying subordinated notes, partially offset by the issuance of NVCC-qualifying subordinated notes.

BMO's Leverage Ratio was 4.2% at October 31, 2016, unchanged from October 31, 2015, and in excess of the 3% minimum requirement established by OSFI.

BMO's investments in foreign operations are primarily denominated in U.S. dollars. The foreign exchange impact of U.S.-dollar-denominated RWA and U.S.-dollar-denominated capital deductions may result in variability in the bank's capital ratios. BMO may offset the impact of foreign exchange movements on its capital ratios and did so during 2016. Any such activities could also impact our book value and return on equity.

BMO conducts business through a variety of corporate structures, including subsidiaries and joint ventures. A framework is in place for subsidiaries to appropriately manage their funding and capital.

Capital ratios are impacted by deferred tax assets. Given our net U.S. deferred tax asset, a 5% decrease in the U.S. Federal income tax rate (from 35% to 30%) would reduce our net deferred tax asset by approximately \$230 million, which would result in a one-time corresponding income tax charge.

As a bank holding company with total consolidated assets of US\$50 billion or more, our subsidiary BMO Financial Corp. (BFC) is subject to the Federal Reserve Board's (FRB) annual Comprehensive Capital Analysis and Review (CCAR) and Dodd-Frank Act stress testing (DFAST) requirements. The CCAR is an annual exercise by the FRB to assess whether the largest bank holding companies operating in the United States have sufficient capital to continue operations throughout times of economic and financial stress and that they have robust, forward-looking capital-planning processes that account for their unique risks. DFAST (a complementary exercise to CCAR) is a forward-looking component conducted by the FRB and financial companies supervised by the FRB to help assess whether institutions have sufficient capital to absorb losses and support operations during adverse economic conditions. The FRB conducted its CCAR assessment and announced its decision not to object to BFC's capital plan in June 2016. BFC and its bank subsidiary BMO Harris Bank N.A. (BHB) also disclosed their results under the DFAST supervisory severely adverse scenario. Under DFAST, BFC also executes mid-cycle company-run stress tests. BFC submitted its DFAST stress tests to the FRB and disclosed the results in October 2016. BFC's post stress capital ratios were above the applicable regulatory minimum capital ratios.

## Regulatory Capital (All-in basis (1))

(Canadian \$ in millions)

As at October 31

	2016	2015
<b>Common Equity Tier 1 capital: instruments and reserves</b>		
Directly issued qualifying common share capital plus related stock surplus	12,833	12,612
Retained earnings	21,205	18,930
Accumulated other comprehensive income (and other reserves)	4,426	4,640
Goodwill and other intangibles (net of related tax liability)	(8,040)	(7,752)
Other common equity Tier 1 capital deductions	(2,265)	(2,802)
<b>Common Equity Tier 1 capital (CET1)</b>	<b>28,159</b>	<b>25,628</b>
<b>Additional Tier 1 capital: instruments</b>		
Directly issued qualifying Additional Tier 1 instruments plus related stock surplus	2,750	2,150
Directly issued capital instruments subject to phase-out from Additional Tier 1	1,540	1,987
Additional Tier 1 instruments (and CET1 instruments not otherwise included) issued by subsidiaries and held by third parties (amount allowed in group AT1)	-	9
<i>of which: instruments issued by subsidiaries subject to phase-out</i>	-	9
<b>Total regulatory adjustments applied to Additional Tier 1 capital</b>	<b>(213)</b>	<b>(358)</b>
<b>Additional Tier 1 capital (AT1)</b>	<b>4,077</b>	<b>3,788</b>
<b>Tier 1 capital (T1 = CET1 + AT1)</b>	<b>32,236</b>	<b>29,416</b>
<b>Tier 2 capital: instruments and provisions</b>		
Directly issued qualifying Tier 2 instruments plus related stock surplus	3,266	1,034
Directly issued capital instruments subject to phase-out from Tier 2	1,873	3,548
Tier 2 instruments (and CET1 and AT1 instruments not included) issued by subsidiaries and held by third parties (amount allowed in group Tier 2)	-	46
<i>of which: instruments issued by subsidiaries subject to phase-out</i>	-	46
Collective allowances	538	590
<b>Total regulatory adjustments to Tier 2 capital</b>	<b>(51)</b>	<b>(50)</b>
<b>Tier 2 capital (T2)</b>	<b>5,626</b>	<b>5,168</b>
<b>Total capital (TC = T1 + T2)</b>	<b>37,862</b>	<b>34,584</b>

(1) "All-in" regulatory capital assumes that all Basel III regulatory adjustments are applied effective January 1, 2013, and that the capital value of instruments that no longer qualify as regulatory capital under Basel III rules is being phased out at a rate of 10% per year from January 1, 2013 to January 1, 2022.

Our CET1 capital and Tier 1 capital were \$28.2 billion and \$32.2 billion, respectively, at October 31, 2016, up from \$25.6 billion and \$29.4 billion, respectively, at October 31, 2015. CET1 capital increased mainly due to retained earnings growth. The increase in Tier 1 capital since October 31, 2015 was attributable to the growth in CET1 capital and the issuance of preferred shares, partially offset by the Additional Tier 1 instrument redemption, as outlined below in the Capital Management Activities section.

Total capital was \$37.9 billion at October 31, 2016, up from \$34.6 billion at October 31, 2015, attributable to the growth in Tier 1 capital mentioned above and the issuance of NVCC-qualifying subordinated notes, partially offset by the redemptions of non-NVCC-qualifying subordinated notes.

## Changes in Risk-Weighted Assets

Total RWA were \$277.6 billion at October 31, 2016, up from \$239.7 billion at October 31, 2015. Credit Risk RWA (CET1 basis) were \$222.5 billion at October 31, 2016, up from \$200.4 billion at October 31, 2015. The increase was largely due to business growth, the acquisition of the BMO Transportation Finance business and foreign exchange movement, partially offset by model and methodology changes and book quality improvement. Market Risk RWA were \$9.0 billion at October 31, 2016, down from \$10.3 billion at October 31, 2015, attributable to a decrease in risk and changes in methodologies. Operational Risk RWA were \$30.5 billion at October 31, 2016, up from \$28.5 billion at October 31, 2015, largely due to growth in the bank's average gross income. The RWA from the Basel I capital floor were \$15.6 billion at October 31, 2016, up from \$0.5 billion at October 31, 2015, primarily due to changes in methodology and models, and business growth.

### Risk-Weighted Assets

(Canadian \$ in millions) As at October 31	2016	2015
<b>Credit Risk</b>		
Wholesale		
Corporate, including specialized lending	104,488	91,489
Corporate small and medium-sized enterprises	33,755	31,954
Sovereign	1,976	1,765
Bank	4,486	3,902
Retail		
Residential mortgages, excluding home equity line of credit	8,115	8,427
Home equity line of credit	6,135	7,889
Qualifying revolving retail	5,110	4,569
Other retail, excluding small and medium-sized enterprises	11,934	11,053
Retail small and medium-sized enterprises	7,696	1,968
Equity	1,403	1,369
Trading book	9,675	8,415
Securitization	1,878	2,456
Other credit risk assets - non-counterparty managed assets	16,197	16,255
Scaling factor for credit risk assets under AIRB Approach (1)	9,651	8,874
<b>Total Credit Risk</b>	<b>222,499</b>	200,385
<b>Market Risk</b>	<b>8,962</b>	10,262
<b>Operational Risk</b>	<b>30,502</b>	28,538
<b>CET1 Capital Risk-Weighted Assets before Capital Floor</b>	<b>261,963</b>	239,185
<b>Basel I Capital Floor (2)</b>	<b>15,599</b>	504
<b>CET1 Capital Risk-Weighted Assets</b>	<b>277,562</b>	239,689
<b>Tier 1 Capital Risk-Weighted Assets before CVA and Capital Floor</b>	<b>261,963</b>	239,185
<b>Additional CVA adjustment, prescribed by OSFI, for Tier 1 Capital</b>	<b>380</b>	286
<b>Basel I Capital Floor (2)</b>	<b>15,219</b>	218
<b>Tier 1 Capital Risk-Weighted Assets</b>	<b>277,562</b>	239,689
<b>Total Capital Risk-Weighted Assets before CVA and Capital Floor</b>	<b>261,963</b>	239,185
<b>Additional CVA adjustment, prescribed by OSFI, for Total Capital</b>	<b>705</b>	531
<b>Basel I Capital Floor (2)</b>	<b>14,894</b>	-
<b>Total Capital Risk-Weighted Assets</b>	<b>277,562</b>	239,716

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

(2) Comparative figures have been amended.

### Economic Capital

Economic Capital is an expression of the enterprise's capital demand requirement relative to the bank's 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 across several different risk types 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 the 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 and business, 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, 2016)

BMO Financial Group				
Operating Groups	Personal and Commercial Banking	Wealth Management	BMO Capital Markets	Corporate Services
<b>Economic Capital by Risk Type (%)</b>				
Credit	78%	31%	65%	64%
Market	4%	17%	14%	27%
Operational/Other	18%	52%	21%	9%
<b>RWA by Risk Type*</b> (Canadian \$ in millions)				
Credit	149,378	10,277	51,675	26,768
Market	–	65	8,897	–
Operational	16,896	5,393	8,213	–

\*Basel I capital floor RWA are included in Corporate Services.

### Capital Management Activities

On December 1, 2015, we announced our intention, and subsequently obtained the approval of OSFI and the Toronto Stock Exchange (TSX), to initiate a normal course issuer bid (NCIB) to purchase up to 15 million of BMO's common shares on the TSX for the purpose of cancellation. During fiscal 2016, we did not purchase any shares under our NCIB share repurchase program. The current NCIB is set to expire on January 31, 2017.

During 2016, BMO issued 3.2 million common shares through the Shareholder Dividend Reinvestment and Share Purchase Plan (DRIP) and the exercise of stock options.

During 2016, BMO completed the following Tier 1 and Tier 2 capital instrument issuances, redemptions, and conversions.

### Share Issuances, Redemptions and Conversions

As at October 31, 2016 (in millions)	Issuance or redemption date	Number of shares	Amount
<b>Common shares issued</b>			
Stock options exercised		2.1	\$ 136
DRIP issuance		1.1	\$ 90
<b>Tier 1 Capital (1)</b>			
Conversion of Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 25	August 25, 2016	(2.2)	\$ (54)
Issuance of Non-Cumulative 5-Year Floating Rate Class B Preferred Shares, Series 26 (2)	August 25, 2016	2.2	\$ 54
Issuance of Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 38	October 21, 2016	24	\$ 600
Redemption of BMO Capital Trust Securities – Series E	December 31, 2015		\$ (450)
<b>Tier 2 Capital (1)</b>			
Issuance of Series H Medium-Term Notes, Second Tranche	December 8, 2015		\$ 1,000
Issuance of Series I Medium-Term Notes, First Tranche	May 31, 2016		\$ 1,250
Redemption of Series D Medium-Term Notes, First Tranche	April 21, 2016		\$ (700)
Redemption of Series G Medium-Term Notes, First Tranche	July 8, 2016		\$ (1,500)

(1) For further details on subordinated debt and share capital, see Notes 15 and 16 on pages 173 and 174, respectively, of the consolidated financial statements.

(2) Issuance of Non-Cumulative 5-Year Floating Rate Class B Preferred Shares, Series 26 upon conversion of Series 25.

If an NVCC trigger event were to occur, our NVCC capital instruments, Non-Cumulative 5-Year Rate Reset Class B Preferred Shares Series 27, Series 29, Series 31, Series 33, Series 36 and Series 38, Non-Cumulative Perpetual Class B Preferred Shares Series 35, and Medium-Term Notes Series H First Tranche and Second Tranche, and Series I First Tranche, 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 our common shares at the time of the trigger event (10-day weighted average). Based on a floor price of \$5.00, these NVCC capital instruments would convert into approximately \$1.5 billion BMO common shares, assuming no accrued interest and no declared and unpaid dividends.

Further details are provided in Notes 15 and 16 on pages 173 and 174 of the consolidated financial statements.



## Outstanding Shares and Securities Convertible into Common Shares

As at November 30, 2016	Number of shares or dollar amount (in millions)	Dividends declared per share		
		2016	2015	2014
<b>Common shares</b>	648	<b>\$ 3.40</b>	\$3.24	\$3.08
<b>Class B Preferred shares</b>				
Series 13 (1)	–	–	\$0.56	\$1.13
Series 14	\$ 250	<b>\$ 1.31</b>	\$1.31	\$1.31
Series 15	\$ 250	<b>\$ 1.45</b>	\$1.45	\$1.45
Series 16 (2)	\$ 157	<b>\$ 0.85</b>	\$0.85	\$0.85
Series 17 (2)	\$ 143	<b>\$ 0.53</b>	\$0.60	\$0.64
Series 18 (3)	–	–	–	\$0.41
Series 21 (4)	–	–	–	\$0.81
Series 23 (5)	–	–	\$0.34	\$1.35
Series 25 (6)	\$ 236	<b>\$ 0.84</b>	\$0.98	\$0.98
Series 26 (6)	\$ 54	<b>\$ 0.10</b>	–	–
Series 27	\$ 500	<b>\$ 1.00</b>	\$1.00	\$0.59
Series 29	\$ 400	<b>\$ 0.98</b>	\$0.98	\$0.46
Series 31	\$ 300	<b>\$ 0.95</b>	\$0.95	\$0.31
Series 33	\$ 200	<b>\$ 0.95</b>	\$0.45	–
Series 35	\$ 150	<b>\$ 1.25</b>	\$0.41	–
Series 36	\$ 600	<b>\$65.03</b>	–	–
Series 38	\$ 600	–	–	–
<b>Medium-Term Notes</b>				
Series H – First Tranche (7)	\$1,000	na	na	na
Series H – Second Tranche (7)	\$1,000	na	na	na
Series I – First Tranche (7)	\$1,250	na	na	na
<b>Stock options</b>				
Vested	5.5			
Non-vested	4.2			

(1) Redeemed in May 2015.

(2) In August 2013, approximately 5.7 million Series 16 Preferred Shares were converted into Series 17 Preferred Shares on a one-for-one basis.

(3) Redeemed in February 2014.

(4) Redeemed in May 2014.

(5) Redeemed in February 2015.

(6) In August 2016, approximately 2.2 million Series 25 Preferred Shares were converted into Series 26 Preferred Shares.

(7) Note 15 on page 173 of the financial statements includes details on the Series H Medium-Term Notes, First Tranche and Second Tranche, and Series I Medium-Term Notes, First Tranche.

na – not applicable

Note 16 on page 174 of the financial statements includes details on share capital.

### Dividends

Dividends declared per common share in fiscal 2016 totalled \$3.40. Annual dividends declared represented 50.4% of reported net income and 46.3% of adjusted net income available to common shareholders on a last twelve months basis.

Our target dividend payout range (common share dividends as a percentage of net income available to shareholders, less preferred share dividends, 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 provide for a sound capital level.

At year end, BMO's common shares provided a 4.0% annual dividend yield based on the year-end closing share price and dividends declared in the last four quarters. On December 6, 2016, BMO announced that the Board of Directors had declared a quarterly dividend on common shares of \$0.88 per share, up \$0.02 per share or 2% from the prior quarter and up \$0.04 per share or 5% from a year ago. The dividend is payable on February 28, 2017 to shareholders of record on February 1, 2017.

Common shareholders may elect to have their cash dividends reinvested in common shares of BMO in accordance with the DRIP. In the first and second quarters of 2016, common shares to supply the DRIP were purchased on the open market. In the third and fourth quarters of 2016, common shares were issued from treasury without discount. In the first quarter of 2017, 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.

### 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 see the Caution Regarding Forward-Looking Statements.

## Select Financial Instruments

The Financial Stability Board (FSB) issued a report in 2012 encouraging enhanced disclosure related to financial instruments that market participants had come to regard as carrying higher risk. An index of the disclosures recommended by the Enhanced Disclosure Task Force of the FSB and where these disclosures appear in our Annual Report or Supplementary Financial Information is provided on page 120.

### Consumer Loans

In Canada, our Consumer Lending portfolio is comprised of three main asset classes: real estate secured lending (including residential mortgages and home equity products), instalment and other personal loans (including indirect automobile loans) and credit card loans. We do not have any subprime or Alt-A mortgage or home equity loan programs, nor do we purchase subprime or Alt-A loans from third-party lenders.

In the United States, the Consumer Lending portfolio is primarily comprised of three asset classes: residential first mortgages, home equity products and indirect automobile loans. We have a small portfolio of first mortgage and home equity loans outstanding that had subprime or Alt-A characteristics at the date of authorization (e.g., low credit score or limited documentation). These programs have been discontinued. Balances outstanding and amounts in arrears 90 days or more at year end were not significant.

In both Canada and the United States, consumer lending products are underwritten to prudent standards relative to credit scores, loan-to-value ratios and capacity assessment. Our lending practices consider the ability of our borrowers to repay and the underlying collateral value.

Additional discussion on the Consumer Lending portfolio related to the Greater Vancouver Area and Greater Toronto Area housing markets, as well as consumer leverage, is provided in the Top and Emerging Risks That May Affect Future Results section on page 80.

### Leveraged Finance

Leveraged finance loans are defined by BMO as loans to private equity businesses and mezzanine financings where our assessment indicates a higher level of credit risk. BMO has exposure to leveraged finance loans, which represent 1.8% of our total assets, with \$12.5 billion outstanding at October 31, 2016 (1.6% and \$10.4 billion, respectively, in 2015). Of this amount, \$387 million or 3.1% of leveraged finance loans were classified as impaired (\$351 million or 3.4% in 2015).

### 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 several Canadian customer securitization vehicles and one U.S. customer securitization vehicle). We earn fees for providing services related to the customer securitization vehicles, including liquidity, distribution and financial arrangement fees for supporting the ongoing operations of the vehicles. These fees totalled approximately \$92 million in 2016 and \$89 million in 2015.

#### Canadian Customer Securitization Vehicles

The customer securitization vehicles we sponsor in Canada provide our customers with access to financing either directly from BMO or in the asset-backed commercial paper (ABCP) markets. Customers sell their assets into these vehicles, which then issue ABCP to either investors or BMO to fund the purchases. In all cases, the sellers remain responsible for the servicing of the transferred assets and are first to absorb any losses realized on the assets.

Our exposure to potential losses relates to our investment in ABCP issued by the vehicles, derivative contracts we have entered into with the vehicles and the liquidity support we provide to ABCP purchased by investors. We use our credit adjudication process in deciding whether to enter into these arrangements, just as we do when extending credit in the form of a loan.

Two of these customer securitization vehicles are funded in the market, while a 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 159 of the financial statements. No losses were recorded on any of BMO's exposures to these vehicles in 2016 and 2015.

The market-funded vehicles had a total of \$4.4 billion of ABCP outstanding at October 31, 2016 (\$3.7 billion in 2015). The ABCP of the market-funded vehicles is rated R-1(high) by DBRS and P1 by Moody's. BMO's holding of ABCP, as distribution agent, of the market-funded vehicles totalled \$14 million at October 31, 2016 (\$21 million in 2015).

BMO provided liquidity support facilities for the market-funded vehicles totalling \$5.8 billion at October 31, 2016 (\$5.0 billion in 2015). This amount comprised part of our commitments outlined in Note 25 on page 195 of the financial statements. All of these facilities remain undrawn. The assets of each of these market-funded customer securitization vehicles consist primarily of diversified pools of Canadian automobile-related receivables and Canadian insured residential mortgages. These two asset classes represent 87% (86% in 2015) of the aggregate assets of these vehicles.

#### U.S. Customer Securitization Vehicle

We sponsor a U.S. ABCP multi-seller vehicle that we consolidate under IFRS. This customer securitization vehicle assists our customers with the securitization of their assets to provide them with alternative sources of funding. The vehicle provides funding to diversified pools of portfolios through 28 (28 in 2015) individual securitization transactions with an average facility size of US\$105 million (US\$174 million in 2015). The size of the pools ranged from US\$10 million to US\$600 million at October 31, 2016 (US\$1 million to US\$700 million in 2015).

The vehicle holds exposures secured by a variety of asset classes, including mid-market corporate loans, student loans and automobile loans.

The vehicle had US\$2.9 billion of commercial paper outstanding at October 31, 2016 (US\$4.1 billion in 2015). The ABCP of the vehicle is rated A1 by S&P and P1 by Moody's. BMO has not invested in the vehicle's ABCP. BMO provides committed liquidity support facilities to the vehicle, with the undrawn amount totalling US\$4.7 billion at October 31, 2016 (US\$5.4 billion in 2015).

## Sectors of Interest: Oil and Gas, Mining

Our risks related to the oil and gas sector are further outlined in the Top and Emerging Risks That May Affect Future Results section on page 80. As at October 31, 2016, BMO's oil and gas outstanding loans were \$8.0 billion or 2.1% of total loans, up approximately \$1.3 billion from a year ago. Of this amount, \$453 million of oil and gas sector loans were classified as impaired (\$102 million in 2015). The majority of oil and gas lending is to exploration and development companies at 59%, followed by pipelines at 30%, services at 9% and manufacturing and refining at 2%.

As at October 31, 2016, BMO's loans in respect of the mining sectors were \$1.9 billion or 0.5% of total loans, up approximately \$0.6 billion from a year ago. Of this amount, \$3 million of mining sector loans were classified as impaired (\$4 million in 2015).

### Caution

This Select Financial Instruments section contains forward-looking statements. Please see 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.

### Credit Instruments

In order to meet the financial needs of our clients, we use a variety of off-balance sheet credit instruments. These include guarantees and standby letters of credit, which represent our 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. We also write documentary and commercial letters of credit, which represent our 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 our 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. Our customers are broadly diversified and we do not anticipate events or conditions would cause a significant number of our customers to fail to perform in accordance with the terms of their contracts with us. We use our credit adjudication process in deciding whether to enter into these arrangements, just as we do when extending credit in the form of a loan. We monitor off-balance sheet instruments to avoid undue concentrations in any geographic region or industry.

The maximum amount payable by BMO in relation to these credit instruments was approximately \$146 billion at October 31, 2016 (\$124 billion in 2015). However, this amount is not representative of our likely credit exposure or liquidity requirements for these instruments, as it does not take into account customer behaviour, which suggests that only a portion of our customers will utilize the facilities related to these instruments. It also does not take into account any amounts that could be recovered under recourse and collateral provisions. Further information on these instruments can be found in Note 25 on page 195 of the financial statements.

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.

### Structured Entities (SEs)

Our interests in SEs are discussed primarily on page 77 in the BMO-Sponsored Securitization Vehicles section and in Note 7 on page 159 of the financial statements. Under IFRS, we consolidate our bank securitization vehicles, U.S. customer securitization vehicle, and certain capital and funding vehicles. We do not consolidate our Canadian customer securitization vehicles, structured finance vehicles, certain capital and funding vehicles, and various BMO managed and non-BMO managed investment funds.

### Guarantees

Guarantees include contracts under which we 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 we may be required to make payments if a third party does not perform according to the terms of a contract and contracts under which we provide indirect guarantees of indebtedness are also considered guarantees. In the normal course of business, we enter 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 \$24 billion at October 31, 2016 (\$30 billion in 2015). However, this amount is not representative of our likely exposure, as it does not take into account customer behaviour, which suggests that only a portion of the guarantees will require us to make any payments. It also does not take into account any amounts that could be recovered under recourse and collateral provisions.

For a more detailed discussion of these arrangements, please see Note 25 on page 195 of the financial statements.

### Caution

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

# Enterprise-Wide Risk Management

As a diversified financial services company actively providing banking, wealth management, capital market and insurance services, we are exposed to a variety of risks that are inherent in carrying out our business activities. A disciplined and integrated approach to managing risk is therefore fundamental to the success of our operations. Our risk management framework provides independent risk oversight across the enterprise and is essential to building competitive advantage.

**Surjit Rajpal**  
Chief Risk Officer  
BMO Financial Group



## Strengths and Value Drivers

- Disciplined approach to risk-taking.
- Comprehensive and consistent risk frameworks to address all material risk types.
- Risk appetite and metrics integrated into strategic planning and the ongoing management of businesses and risks.
- Sustained mindset of continuous improvement to drive consistency and efficiency in the management of risk.

## Challenges

- The heightened pace, volume and complexity of regulatory requirements.
- Balancing risk and return in an uncertain economic and geopolitical environment.
- The evolving technology improvements required to meet customer expectations and the need to anticipate and respond to cyber and competitive threats.

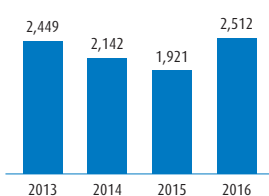
## Priorities

- Address increased complexity by streamlining risk management activities and by simplifying processes and implementing consistent practices across different business lines.
- Support greater integration of risk considerations in business processes and decisions, while managing change and complexity through more dynamic assessment and monitoring of the risks.
- Continue to enhance our risk management infrastructure through greater integration of our systems, data models and business and risk management processes to enhance the ongoing alignment of critical elements.

## 2016 Achievements

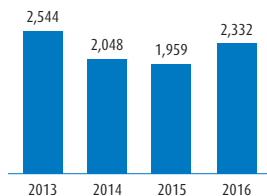
- Improved risk data and risk reporting through significant investment in streamlined data collection, more timely data, greater data coverage, report automation and heightened governance.
- Further enhanced stress testing and other data analysis and modelling.
- Maintained our risk culture through enhanced assessment and learning tools and communication processes.
- Responded to rising regulatory expectations, evidenced by improvements in stress testing, market risk measurement, anti-money laundering tools and processes and foundational risk management.
- Continued to develop the next generation of our risk infrastructure by integrating, automating and upgrading foundational capabilities for risk and data analysis and modelling of market, credit and operational risks.

**Gross Impaired Loan Formations** (\$ millions)



Level of new impaired loan formations was higher year over year, with all of the increase in corporate and commercial loans, particularly in the oil and gas industry.

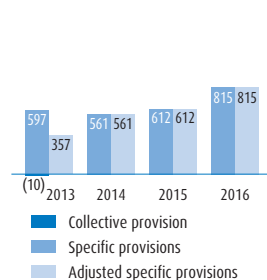
**Gross Impaired Loan Balances\*** (\$ millions)



Gross impaired loans increased by 19% in 2016, due to an increase in oil and gas impaired loans and the impact of the stronger U.S. dollar.

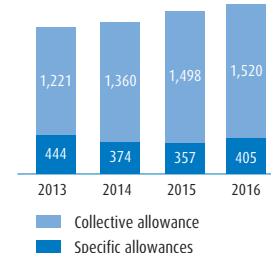
\* Excludes purchased credit impaired loans.

**Provision for Credit Losses** (\$ millions)



The total provision for credit losses was higher primarily due to higher provisions in the P&C businesses and BMO Capital Markets, partially offset by higher net recoveries in Corporate Services.

**Total Allowance for Credit Losses\*** (\$ millions)



The total allowance for credit losses increased 4% year over year, and remains adequate.

\* Excludes allowances related to Other Credit Instruments.

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 2016 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 financial statements and the MD&A. See Note 1 on page 144 and Note 5 on page 156 of the financial statements.

## Overview

At BMO, we believe that risk management is every employee's responsibility. We are guided by five key perspectives on risk that drive our approach to managing risk across the enterprise.

### Our Approach to Risk Management

- Understand and manage
- Protect our reputation
- Diversify. Limit tail risk
- Maintain strong capital and liquidity
- Optimize risk return

Our integrated and disciplined approach to risk management is fundamental to the success of our operations. All elements of our risk management framework work together in support of prudent and measured risk-taking, while striking an appropriate balance between risk and return.

Our Enterprise Risk and Portfolio Management (ERPM) group develops our risk appetite, risk policies and limits, and provides independent review and oversight across the enterprise on risk-related issues to achieve prudent and measured risk-taking that is integrated with our business strategy.

## Risks That May Affect Future Results

### Top and Emerging Risks That May Affect Future Results

We are exposed to a variety of continually changing risks that have the potential to affect our business and financial condition. An essential mandate of our risk management process is to proactively identify, assess, monitor and manage a broad spectrum of top and emerging risks. Our top and emerging risk identification process consists of several forums for discussion with the Board, senior management and business thought leaders, combining both bottom-up and top-down approaches to considering risk. Our assessment of top and emerging risks is used to develop action plans and stress tests of our exposure to certain events.

In 2016, particular attention was given to the following top and emerging risks:

#### Weakening Global Trade

Global trade is at risk due to anti-globalization sentiment undermining the multilateral open trading world that has supported Western growth in recent decades. Weak global growth, previously at risk due to concerns outside of North America, such as European debt, China's economic transition and regional conflicts, is now at additional risk due to widespread anti-globalization sentiment and the resultant political uncertainty and threat to trade. The Brexit vote, the rise of European nationalist parties and the support for protectionism in the 2016 U.S. election have in common the trend to populist and closed nationalism/regionalism that may harm world trade and thus growth. The short-term impact is through volatility spikes in capital markets – the longer-term effect may be to further reduce North American growth and weaken credit quality in exposed sectors.

BMO benefits from an integrated North American strategy in diverse industries and geographies, with limited direct lending exposure outside the region and with a footprint that partially acts as a natural hedge to commodity price and foreign exchange movements, wherein price declines/rises often have offsetting impacts across different North American regions and industries. While we are primarily a North American bank, our core customers and our international strategy depend on trade and growth. We actively monitor sources of global growth and continually assess our portfolio and business strategies against developments. We stress test our portfolios, business plans and capital adequacy against severely adverse scenarios arising from shocks inside and outside North America and develop contingency plans and mitigation strategies to react to and offset such possible adverse political and/or economic developments. It is, however, difficult to successfully anticipate and mitigate the potential economic and financial consequences of such unprecedented events which could adversely affect economic growth.

Further information on our direct and indirect European exposures is provided in the European Exposures section on page 93.

#### Information and Cyber Security Risk

Information security is integral to BMO's business activities, brand and reputation. BMO faces heightened information security risks given our significant use of the internet and reliance on advanced digital technologies, particularly the mobile and online banking platforms that serve our customers. The risks we face include the threat of 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. In order to better protect our customers, BMO and its service providers proactively invest in people and technology to improve our capabilities to prevent, detect, respond to and manage cyber security threats. To remain resilient in the face of cyber-attacks in a rapidly evolving threat landscape, we evaluate the effectiveness of our key controls through testing, reviewing best practices and benchmarking externally, and we work with cyber security experts and suppliers to improve our controls, bolster our internal resources and enhance our technological capabilities.

#### Greater Vancouver Area and Greater Toronto Area Housing Markets and Consumer Leverage

Rapid price increases have occurred over a sustained period of time in the Greater Vancouver Area (GVA) and the Greater Toronto Area (GTA). In addition, overall household debt levels in Canada are elevated, raising concerns that the rapid price increases in the GVA and GTA could lead to higher delinquencies if economic conditions deteriorated or interest rates rose sharply. Moreover, if indebted households are forced to sell their home during an economic downturn, housing prices could correct lower, further weakening the economy and putting additional strain on household finances. While recent government and regulatory actions on real estate transactions and financing are expected to reduce pricing pressure, they have raised concerns about a correction in housing prices and construction. It is still too early to gauge the interaction and impact of the recent changes, but the strong economic growth in these regions supports the current and expected low delinquency rates for real estate loans in both regions and may lead to a more balanced supply/demand situation and more measured price changes. Our prudent lending practices give us confidence in our portfolio. Further, our stress tests analysis suggests that even significant price declines and recessionary economic conditions would still lead to manageable losses.



### Protracted Low Oil Prices

Sustained low oil and gas prices have challenged many companies in the sector and have resulted in wide-ranging actions by affected companies to reinforce operational efficiency and balance-sheet strength by reducing costs, pacing capital expenditures, improving productivity, limiting capital outflows, selling non-core assets and raising equity. The industry continues to work through changes required to operate in a new regime of lower oil prices, but as significant adjustment has already occurred and oil prices have returned from extreme lows, the stress has reduced. In Alberta, there continues to be a consumer impact from higher unemployment, which will take longer to recover from and will continue to weigh on the province.

Within the BMO footprint, low oil prices have resulted in quite different outcomes for other sectors and regions by reducing the Canadian dollar and input costs for many consumers and businesses. Benefits of the lower oil price and Canadian dollar had earlier shown through in an upturn of Canadian manufacturing output and non-oil exports. While there was some softening in these areas during the first half of 2016, we expect those positive trends to reassert themselves into 2017. Overall, lower oil prices are a net positive for global and U.S. demand, and for Canadian non-energy exports.

### Business Disruptors

The financial services industry is undergoing rapid change, as technology enables non-traditional new entrants to compete in certain segments of the banking market, in some cases with reduced regulation. New entrants may use new technologies, advanced data and analytic tools, lower cost to serve, reduced regulatory burden and/or faster processes to challenge traditional banks. For example, new business models have been observed in retail payments, consumer and commercial lending, foreign exchange and low-cost investment advisory services. While we closely monitor business disruptors, we also continue to adapt by making investments, including improving our mobile banking capabilities, building new branch formats, and refining our decisioning and analytic tools and partnering, where appropriate, to bring customer solutions to market. We further mitigate this risk by providing our customers with access to banking services across different channels, focusing on improving customer loyalty and trust, using our own advanced data and analytical tools and leveraging current and future partnerships. However, matching the pace of innovation exhibited by new and differently-situated competitors may require us and policy-makers to adapt at a greater pace.

### Other Factors That May Affect Future Results

#### General Economic and Market Conditions in the Countries in which We Conduct Business

We conduct business in Canada, the United States and a number of other countries. Factors such as the general health of capital and/or credit markets, including liquidity, level of business activity, volatility and stability, could have a material impact on our business. As well, interest rates, foreign exchange rates, consumer saving and spending, housing prices, consumer borrowing and repayment, business investment, trade policies and agreements, government spending and the rate of inflation affect the business and economic environments in which we operate. Therefore, the amount of business we conduct in a specific geographic region and its local economic and business conditions may have an effect on our overall revenue and earnings. For example, elevated consumer debt and housing price appreciation in some Canadian regions could create a vulnerability to higher credit losses for the bank in the event of a general economic downturn or other negative catalyst.

#### Regulatory Requirements

The financial services industry is highly regulated, and we have experienced changes and increased complexity in regulatory requirements as governments and regulators around the world continue 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 increased regulatory and compliance costs, which could lower our returns and affect our growth. We monitor such developments, and other potential changes such as reforms of the U.S. financial regulatory system or the potential impacts of a United Kingdom withdrawal from the European Union, so that BMO is well-positioned to respond to and implement any required changes. We continue to strive to put our customers first as a mitigant to compliance and consumer protection issues. Failure to comply with applicable legal and regulatory requirements may result in litigation, financial losses, regulatory sanctions, enforcement actions, an inability to execute our business strategies, a decline in investor and customer confidence and harm to our reputation. Refer to the Legal and Regulatory Risk and Enterprise-Wide Capital Management sections on pages 110 and 70 for a more complete discussion of our legal and regulatory risk.

#### Fiscal, Tax, Monetary, Trade and Interest Rate Policies

Our earnings are affected by fiscal, tax, monetary, trade, regulatory and other economic policies in Canada, the United States and other jurisdictions. Such policies may have the effect of increasing or reducing competition, profitability and uncertainty in the markets. Such policies may also adversely or positively affect our customers and counterparties in the countries in which we operate, contributing to a greater risk of default by these customers and counterparties. As well, expectations in the bond and money markets related to inflation and central bank monetary policy have an effect on the level of interest rates. Changes in market expectations and monetary policy are difficult to anticipate and predict. Fluctuations in interest rates and exchange rates that result from these changes can have an impact on our earnings and valuation. Refer to the Market Risk section on page 95 for a more complete discussion of our interest rate risk exposures and page 99 for a discussion of our foreign exchange risk. Changes in tax rates and tax policy can also have an impact on our earnings and, as discussed in the Critical Accounting Estimates section on page 113, a reduction in income tax rates could lower the value of our net deferred tax asset. A 5% decrease in the U.S. Federal tax rate (from 35% to 30%) would reduce our net deferred tax asset by approximately \$230 million, which would result in a one-time corresponding income tax charge. In addition, however, each 5% decrease in the U.S. Federal tax rate would also increase our annual net income by approximately \$75 million. Tax laws may change as a result of efforts by Canadian and foreign governments to address tax positions taken by multinational enterprises, and taxing authorities have committed more resources to the auditing of multinational enterprises, contributing to the potential for variability in our effective tax rate. Our ability to do business in multiple countries and the ability of our customers to do business in and trade between multiple countries are both important to our profitability; diversification and restrictions that lessen these abilities could have adverse effects.

### Acquisitions and Strategic Plans

We conduct thorough due diligence before completing an acquisition. However, it is possible that we could make an acquisition that subsequently does not perform in line with our financial or strategic objectives or expectations. Our ability to successfully complete an acquisition may be subject to regulatory and shareholder approvals and we 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 lower revenue, while higher than anticipated integration costs and failure to realize expected cost savings after an acquisition could also adversely affect our earnings. Integration costs may increase as a result of higher regulatory costs related to an acquisition, 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. Our post-acquisition performance is also contingent on retaining the clients and key employees of acquired companies and on integrating key systems and processes without disruption, and there can be no assurance that we will always succeed in doing so.

Our financial performance is influenced by our ability to execute strategic plans developed by management. If these strategic plans are not met with success or if there is a change in these strategic plans, our earnings could grow at a slower pace or decline. In addition, our ability to execute our strategic plans is dependent to a large extent on our ability to attract, develop and retain key executives, and there is no assurance we will continue to be able to do so.

### Level of Competition

The level of competition among financial services companies is high and is increasingly not based on price. Non-financial companies have increasingly been offering products and services traditionally provided by banks. Customer loyalty and retention can be influenced by a number of factors, including service levels, prices for products and services, delivery platforms, ease of product and services availability, a positive customer experience, our reputation and the actions of our competitors. International differences in laws and regulations enacted by regulatory authorities may provide advantages to our international competitors that could affect our ability to compete. Changes in these factors or any subsequent loss of market share could adversely affect our earnings.

### Currency Rates

The Canadian dollar equivalents of our revenues, expenses, assets and liabilities denominated in currencies other than the Canadian dollar are subject to fluctuations in the value of the Canadian dollar relative to those currencies. Changes in the value of the Canadian dollar relative to the U.S. dollar could affect the earnings of our small business, corporate and commercial clients in Canada. A strengthening of the U.S. dollar could increase the value of our U.S.-dollar-denominated RWA and capital deductions, lowering our capital ratios. A decline in the U.S. dollar reduces the strength of our U.S. operation's contribution to BMO's Canadian dollar profitability. Refer to the Foreign Exchange section on page 37, the Enterprise-Wide Capital Management section on page 70 and the Market Risk section on page 95 for a more complete discussion of our foreign exchange risk exposures.

### Changes to Our Credit Ratings, Capital and Funding Markets

Credit ratings are important to our ability to raise both capital and funding in order to support our business operations. Maintaining strong credit ratings allows us to access capital markets at competitive pricing. Should our credit ratings experience a material downgrade, our cost of funding would likely increase significantly and our access to funding and capital through capital markets could be reduced. The potential risks to which wholesale creditors are exposed due to bail-in proposals in Canada and subsequent legislation may also affect the cost and availability of funding. Market-making activities have also been reduced globally in response to regulatory changes. Reduced market liquidity could impact the valuation of bank securities and the availability and pricing of bank funding. A material downgrade of our ratings could also have other consequences, including those set out in Note 8 on page 161 of the financial statements.

### Operational and Infrastructure Risks

As a large enterprise conducting business in multiple jurisdictions, we are exposed to many operational risks that can have a significant impact. Such risks include the risk of fraud by employees, third-party service providers or others, unauthorized transactions by employees and operational or human error, including process breakdowns or control failures. Given the large volume of transactions we process on a daily basis and the complexity and speed of our business, certain errors may be repeated or compounded before they are discovered and rectified. Shortcomings or failures of our internal processes, employees or systems, or of services and products provided by third parties, including any of our financial, accounting or other data processing systems, could lead to financial loss or restatements and damage our reputation. In addition, despite the contingency plans we or our third-party service providers have in place, our ability to conduct business may be adversely affected by a disruption to the infrastructure that supports both our operations and the communities in which we do business, including but not limited to disruption caused by public health emergencies or terrorist acts.

### Legal Proceedings

We are subject to litigation arising in the ordinary course of business. The unfavourable resolution of any such litigation could have a material adverse effect on our financial results. Damage to our reputation could also result, harming our future business prospects. Information about certain legal and regulatory proceedings we currently face is provided in Note 25 on page 195 of the financial statements.

### Critical Accounting Estimates and Accounting Standards

We prepare our financial statements in accordance with International Financial Reporting Standards (IFRS). Changes that the International Accounting Standards Board makes from time to time to these standards, which govern the preparation of our financial statements, can be difficult to anticipate and may materially affect how we record and report our financial results. Significant accounting policies and future changes in accounting policies are discussed in Note 1 on page 144 of the financial statements.

The application of IFRS requires management to make significant judgments and estimates, sometimes relying on financial and statistical models, that can affect the amounts and dates on which certain assets, liabilities, revenues and expenses are recorded in our financial statements, as well as their recorded values. In making these judgments and estimates, we rely on the best information available at the time. However, it is possible that circumstances may change, that new information may become available or that our models are imprecise.

Our financial results could be affected for the period during which any such new information or change in circumstances became apparent, and the extent of the impact could be significant. More information is included in the discussion of Critical Accounting Estimates on page 113.

**Accuracy and Completeness of Customer and Counterparty Information**

When deciding whether to extend credit or enter into other transactions with customers or counterparties, we may rely on information provided by or on behalf of those customers and counterparties, including audited financial statements and other financial information. We may also rely on representations made by customers and counterparties that the information they provide is accurate and complete. We conduct appropriate due diligence on such customer information and, where practical and economical, we engage valuation and other experts or sources of information to assist with assessing collateral and other customer risks. Our financial results could be adversely affected if the financial statements, collateral value or other financial information provided by customers or counterparties are materially misleading.

**Caution**

This Risks That May Affect Future Results section and the remainder of this Enterprise-Wide Risk Management section contain forward-looking statements.

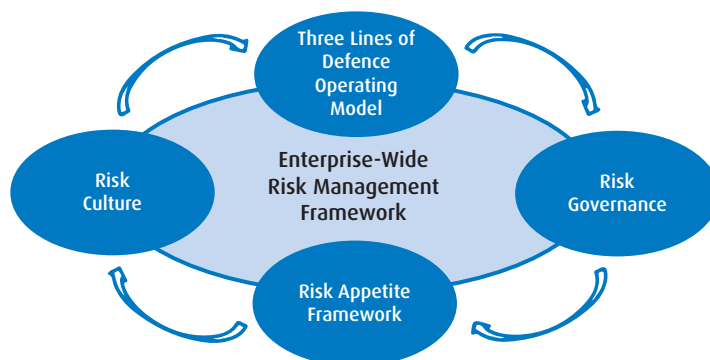
Other factors beyond our control that may affect our future results are noted in the Caution Regarding Forward-Looking Statements on page 30.

We caution that the preceding discussion of risks that may affect future results is not exhaustive.

## Framework and Risks

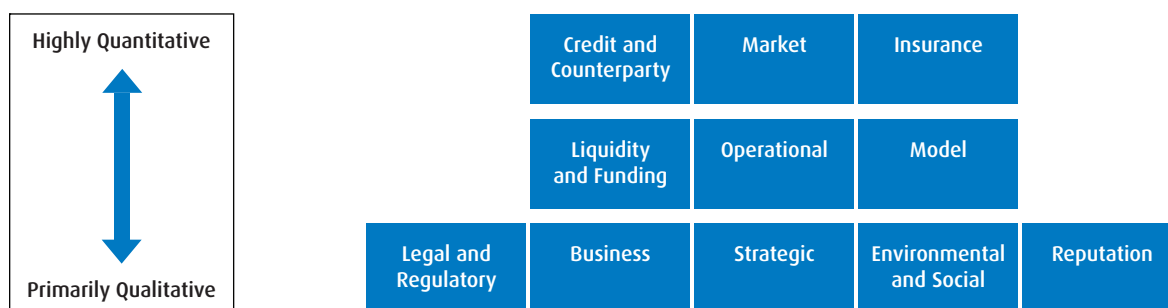
### Enterprise-Wide Risk Management Framework

Our enterprise-wide risk management framework operates at all levels of the bank and consists of our three-lines-of-defence operating model and our risk appetite framework, underpinned by our risk governance structure, and our strong risk culture.



### Risk Types

Our enterprise-wide risk management framework provides for the robust management of individual risk types that could have a material impact on our business. These risk types are shown below grouped according to the degree to which they lend themselves to management via quantitative analysis versus those risks primarily managed more through qualitative techniques. More detail on each of these risk types is provided starting on page 88.



We leverage our enterprise-wide risk management framework, including our policy framework and corresponding risk limits or risk tolerance guidance, to manage each of these risk types within our risk appetite through our first and second line business and risk management processes. As discussed below, management oversight of risk types is provided by management and Board committees and is supported by a control framework.

### Risk Principles

Within the framework, risk-taking and risk management activities across the enterprise are guided by our Risk Principles:

- management of risk is a responsibility at all levels of the organization;
- material risks to which the enterprise is exposed are identified, measured, managed, monitored and reported;
- risk identification and measurement incorporate both qualitative and quantitative elements, including views of risk relative to the external operating environment, as well as stress testing and scenario analysis;

- decision-making is based on a common understanding of risk, accomplished by robust metrics and analysis and sustained through active monitoring and key controls; and
- an economic capital methodology is employed to measure and aggregate risk for all quantifiable risk types and across all business activities in order to facilitate the consistent incorporation of risk into business returns.

### Three Lines of Defence

Our risk management framework is anchored in the three-lines-of-defence approach to managing risk, which is fundamental to our operating model, as described below:

- Our businesses 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 our established risk appetite and to identify, understand, measure, manage, mitigate and report all risks in or arising from their businesses, activities and exposures. The first line discharges its responsibility by using risk management and reporting methodologies and processes developed by the business and by Enterprise Risk and Portfolio Management (ERPM) group and other Corporate Support Areas (CSAs), and may rely on CSAs or other service providers to help discharge these responsibilities. Businesses are responsible for establishing appropriate internal controls in accordance with our risk management framework and for monitoring the efficacy of such controls. Such processes and controls help ensure businesses act within their delegated risk-taking authority and risk limits, as set out in corporate policies and our risk appetite framework.
- The **second line of defence** is comprised of the ERPM group and other CSAs. 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 may establish enterprise-wide risk management policies, infrastructure, processes, methodologies and practices that the first and second lines use to identify, assess, manage and monitor risks across the enterprise. While the first line is responsible for identifying, managing and reporting on the risks in its businesses, the second line independently identifies, assesses, quantifies, monitors, manages and reports on significant risks across the enterprise on an aggregate basis.
- Corporate Audit Division is the **third line of defence**. It provides an independent assessment of the effectiveness of internal controls within the enterprise, including controls that support our risk management and governance processes.

### Risk Culture

At BMO, we believe that risk management is the responsibility of every employee within the organization. This key tenet shapes and influences our corporate culture and is evident in the actions and behaviours of our employees and leaders as they identify, interpret and discuss risks, and make decisions that balance risks and opportunities and seek to optimize risk-adjusted returns. Our senior management plays a critical role in fostering a strong risk culture among all employees by communicating this responsibility effectively, by the example of their own actions and by establishing and enforcing compensation plans and other incentives that are designed to drive desired behaviours. Our risk culture is deeply rooted within our policies, business processes, risk management frameworks, risk appetite, limits and tolerances, capital management and compensation practices, and is evident in every aspect of the way we operate across the enterprise. We actively solicit feedback on the effectiveness of our risk culture, including through standardized and anonymous employee surveys.

Our risk culture is grounded in a "Being BMO" risk management approach that encourages openness, constructive challenge and personal accountability. "Being BMO" values include integrity and the responsibility to make tomorrow better and "Being BMO" behaviours include balancing risk and opportunity, taking ownership and following through on commitments, and speaking up and being candid. Timely and transparent sharing of information is also essential in engaging stakeholders in key decisions and strategy discussions, thereby bringing rigour and discipline to our 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 our organization, so that our 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. Our governance and leadership forums, committee structures, learning curriculums and proactive communication also reinforce and foster our risk culture.

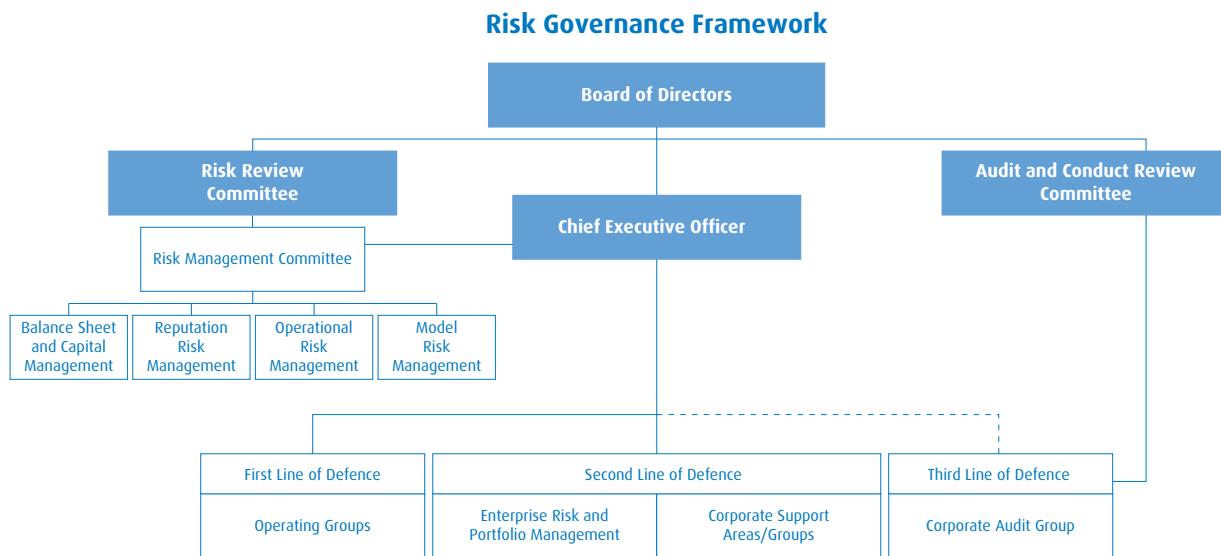
Certain elements of our risk culture that are embedded throughout the enterprise include:

- **Risk appetite** – promotes a clear understanding of the most prevalent risks that our businesses face and facilitates alignment of business strategies with our risk appetite, and provides a control and early warning framework through our key risk metrics, thereby leading to sound business decision-making and execution, supported by a strong monitoring framework.
- **Communication and escalation channels** – encourage engagement and sharing of information between ERPM and the operating groups, leading to greater transparency and open and effective communication. We also foster a culture that encourages the escalation of concerns associated with potential or emerging risks to senior management so that they can be evaluated and appropriately addressed.
- **Compensation philosophy** – pay 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 in our enterprise-wide risk management framework, and do not encourage excessive risk-taking. Our risk managers have input into the design of incentive programs which may affect risk-taking and provide input into the performance assessment of employees who take material risks or who are responsible for losses or events creating an unexpected risk of loss.
- **Training and education** – our programs 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 position in the organization. Our education strategy has been developed in partnership with BMO's Institute for Learning, our risk management professionals, external risk experts and teaching professionals.
- **Rotation programs** – two-way rotation allows employees to transfer between ERPM and the operating groups, thereby effectively embedding our strong risk culture across the enterprise and ensuring many of our risk management professionals have a practical grounding in our business activities.

## Risk Governance

Our enterprise-wide risk management framework 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 and operating procedures. Our corporate policies outline frameworks and objectives for every significant risk type, so that risks to which the enterprise is exposed are appropriately identified, managed, measured, monitored, mitigated and reported in accordance with our risk appetite. Specific policies govern our key risks, such as credit, market, liquidity and funding, model, and operational risks. This enterprise-wide risk management framework is governed at all levels through a hierarchy of committees and individual responsibilities, as outlined in the diagram below.

Our risk management framework is reviewed on a regular basis by the Risk Review Committee of the Board of Directors to thereby guide our risk-taking activities. In each of our operating groups, management, as the first line of defence, is responsible for governance activities, controls, effective implementation and operation of our risk management processes and procedures to ensure effective risk management. ERP, as the second line of defence, oversees effective implementation and operation of our risk processes and procedures with a view to aligning effective outcomes consistent with our overall risk management framework. Individual governance committees establish and monitor further risk management limits, consistent with and in furtherance of Board-approved limits.



In addition to the enterprise-level risk governance framework, appropriate risk governance frameworks, including our three lines of defence, are in place in all our 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 oversight responsibilities in relation to BMO's identification and management of risk as well as our risk culture, adherence to risk management corporate policies and procedures, compliance with risk-related regulatory requirements and the evaluation of the Chief Risk Officer, including input into succession planning for the CRO. Our risk management framework is reviewed on a regular basis by the RRC in order to provide guidance for the governance of our 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 and the performance of its internal and external audit functions.

**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 rest of ERP.

**Chief Risk Officer (CRO)** reports directly to the CEO and is head of ERP 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 a risk management framework and fostering a strong risk culture across the enterprise.

**Risk Management Committee (RMC)** is BMO'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 our operating groups, the CEO and the 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 processes whereby the risks assumed across the enterprise are identified, measured, managed, monitored and reported in accordance with policy guidelines, and are held within limits and risk tolerances.

**Enterprise Risk and Portfolio Management (ERP)**, as the risk management second line of defence, provides comprehensive risk management oversight. It promotes consistency in risk management practices and standards across the enterprise. ERP 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, vetting and risk education. This approach seeks to meet enterprise objectives and to verify that any risks assumed are consistent with BMO's risk appetite.

**Operating Groups** are responsible for identifying, measuring, managing, monitoring and reporting risk within their respective lines of business. 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 ERP. Individual governance committees and ERP establish and monitor further risk management limits that are consistent with and subordinate to the Board-approved limits.



## Risk Appetite Framework

Our Risk Appetite Framework consists of our Risk Appetite Statement, key risk metrics and corporate policies, standards and guidelines, including the related limits, concentration levels and controls defined therein. Our risk appetite defines the amount of risk that BMO is willing to assume given our guiding principles and capital capacity, and thus supports sound business initiatives, appropriate returns and targeted growth. Our risk appetite is integrated into our strategic and capital planning processes and performance management system. On an annual basis, senior management recommends our Risk Appetite Statement and key risk metrics to the RMC and the Board of Directors for approval. Our Risk Appetite Statement is articulated and applied consistently across the enterprise, with key enterprise businesses and entities developing their own risk appetite statements within this framework. Among other things, our risk appetite requires:

- that everything we do is guided by principles of honesty, integrity and respect, as well as high ethical standards;
- taking only those risks that are transparent, understood, measured, monitored and managed;
- maintaining strong capital, liquidity and funding positions that meet or exceed regulatory requirements and the expectations of the market;
- that new products and initiatives are subject to rigorous review and approval, and that new acquisitions provide a good strategic, financial and cultural fit, and have a high likelihood of creating value for our shareholders;
- setting capital limits based on our risk appetite and strategy and having our lines of business optimize risk-adjusted returns within those limits;
- maintaining a robust recovery framework that enables an effective and efficient response in a severe crisis;
- using Economic Capital, regulatory capital and stress testing methodologies to understand our risks and guide our risk-return assessments;
- targeting an investment grade credit rating at a level that allows competitive access to funding;
- limiting exposure to low-frequency, high-severity events that could jeopardize BMO's credit ratings, capital or liquidity position or reputation;
- incorporating risk measures and risk-adjusted returns into our performance management system, including an assessment of performance against our risk appetite and return objectives in compensation decisions;
- maintaining effective policies, procedures, guidelines, compliance standards and controls, training and management that will guide the business practices and risk-taking activities of all employees so that they are able to optimize risk-adjusted returns and adhere to all legal and regulatory obligations, thus protecting BMO's reputation; and
- protecting the assets of BMO and BMO's clients by maintaining a system of prudent risk limits and strong operational risk controls.

## Risk Limits

Our risk limits are shaped by our risk principles, reflect our risk appetite, and inform our business strategies and decisions. In particular, we consider risk diversification, exposure to loss and risk-adjusted returns when setting limits. These limits are reviewed and approved by the Board of Directors and/or management committees 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;
- Liquidity and Funding Risk – limits on minimum levels of liquid assets and maximum levels of asset pledging and wholesale funding, as well as guidelines related to liability diversification, financial condition, earnings at risk and economic value exposure;
- Insurance Risk – limits on policy exposure and reinsurance arrangements; and
- Model Risk – limits on model approval and modification exceptions, material deficiency extensions, and scheduled review extensions.

The Board of Directors, after considering recommendations from the RRC and the RMC, annually reviews and approves key risk limits and in turn delegates overall authority for them to the CEO. The CEO then 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 the 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 whereby 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 essential step in recognizing the key inherent risks that we face, understanding the potential for loss and then acting to mitigate this potential. A Risk Register 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 Economic Capital is reported and stress capital consumption is estimated. Our 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, 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, which 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, regulatory, accounting, tax or reputation risk are reviewed by the Reputation Risk Management Committee or the Trading Products Risk Committee, as appropriate, and are reviewed by our operational risk management process if they involve structural or operational complexity which may create operational risk.

**Investment initiatives** – documentation of risk assessments is formalized through our investment spending approval process, which is reviewed and approved by CSAs.

**New products and services** – policies and procedures for the approval of new or modified products and services offered to our 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 CSAs, as well as by other senior management committees, including the Operational Risk Committee and Reputation Risk Management Committee, as appropriate.

## Risk Monitoring

Enterprise-level risk transparency and monitoring and associated reporting are critical components of our risk management framework 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 and associated metrics that the enterprise currently faces. Our reporting highlights our most significant risks, including assessments of our 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 our risk appetite and the relevant limits established within our Risk Appetite Framework.

On a regular basis, reporting on risk issues is also provided to stakeholders, including regulators, external rating agencies and our shareholders, as well as to others in the investment community.

## Risk-Based Capital Assessment

Two measures of risk-based capital are used by BMO: Economic Capital and Regulatory Capital. Both are aggregate measures of the risk that we take on in pursuit of our financial targets and enable us to evaluate returns on a risk-adjusted basis. Our 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 incorporates 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 and, as appropriate, its credit quality. Risk-based capital methods and material models are reviewed at least annually and, if appropriate, recalibrated or revalidated. Our risk-based capital models provide a forward-looking estimate of the loss in economic or market value incurred over a specified time horizon at the defined confidence level, relative to the expected loss over the same time horizon.

## Stress Testing

Stress testing is a key element of our risk and capital management frameworks. It is integrated in our enterprise and group risk appetite statements and embedded in our management processes. To evaluate our risks, we regularly test a range of scenarios varying in frequency, severity and complexity in our businesses and portfolios and across the enterprise. In addition, we also participate in regulatory stress tests in multiple jurisdictions. Governance of the stress testing framework resides with senior management, including the Enterprise Stress Testing Steering Committee. This committee is comprised of business, risk and finance executives and is accountable for the oversight of BMO's enterprise stress testing and for reviewing and challenging associated scenarios and stress test results. Stress testing and enterprise-wide scenarios associated with the Internal Capital Adequacy Assessment Process (ICAAP), including recommended actions that the organization could take to manage the impact of the 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) and the Dodd-Frank Capital Stress Test (DFAST) – which are U.S. regulatory requirements for our key U.S. subsidiaries – is subject to entity-specific governance.

Quantitative models and qualitative approaches are utilized to assess the impact of changes in the macroeconomic environment on our income statement and balance sheet and the resilience of our capital over a forecast horizon. Models used for stress testing are approved and governed through the Model Risk Management framework and are used as tools to better understand our risks as well as test our capital adequacy.

## Enterprise Stress Testing

Enterprise stress testing supports our internal capital adequacy assessment and target-setting through analysis of the potential effects of low-frequency, high-severity events on our balance sheet, earnings, 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 our risk profile, as well as the macroeconomic environment. Scenarios may be defined by senior management or regulators, and the economic impacts are established by our 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, real estate prices, stock index growth and changes in corporate profits. These macroeconomic variables are used to drive our stress loss models and the qualitative assessments that determine our estimated stress impacts. The scenarios are used by our operating, risk and finance groups to assess a broad range of financial impacts which could arise under such a stress and the ordinary course and extraordinary actions anticipated in response to stress.

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

## Targeted Portfolio and Ad Hoc Stress Testing

Our stress testing framework integrates stress testing at the line of business, portfolio, industry, geography 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 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 test business strategies.

## 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 essential to our success, since the failure to effectively manage credit risk could have an immediate and significant impact on our earnings, financial condition and reputation.

### Credit and Counterparty Risk Governance

The objective of our credit risk management framework is to ensure all material credit risks to which the enterprise is exposed are identified, measured, managed, monitored and reported. The Risk Review Committee (RRC) of the Board of Directors has oversight of the management of all material risks faced by the enterprise, including the credit risk management framework. BMO's credit risk management framework incorporates governing principles which are defined in a series of corporate policies and standards, and which flow through to more specific operating procedures. These are reviewed on a regular basis and modified when necessary to keep them current and consistent with BMO's risk appetite. The structure, limits, collateral requirements, monitoring, reporting and ongoing management of our 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 risks. Credit officers in ERPM approve these credit decisions and are accountable for providing both an objective assessment of the lending recommendations and independent oversight of the risks assumed by the lending officers. All of these experienced and skilled individuals 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. The Board annually reviews our Credit Risk Management Policy and delegates to the CEO key exposure 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 credit terms and conditions, as well as to governing policies, standards and procedures.

All credit risk exposures are subject to regular monitoring. Performing accounts are reviewed on a regular basis, with most commercial and corporate accounts reviewed at least annually. The frequency of review increases in accordance with the likelihood and size of potential credit losses, with deteriorating higher-risk situations 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. Reporting is provided at least quarterly to RRC and senior management committees in order to keep them informed of credit risk developments in our portfolios, including changes in credit risk concentrations, watchlist accounts, impaired loans, allowances for credit losses, negative credit migration and significant emerging credit risk issues, and to facilitate any measures that they may decide to take, when necessary.

Counterparty credit risk (CCR) is the risk that a counterparty to a transaction could default or deteriorate in creditworthiness before the final settlement of funds. Unlike credit risk for a loan, when only the lending bank faces the risk of a direct loss, CCR creates a bilateral risk of loss because the market value of a transaction can be positive or negative to either counterparty. CCR exposures are subject to the same credit oversight, limit framework and approval process as outlined above. However, given the nature of risk, CCR is also monitored through the market risk framework and many are collateralized. In order to reduce the bank's CCR, the bank will often use a designated clearing house or central counterparty (CCP) that intermediates between counterparties for contracts in financial markets. CCPs aim to mitigate the risk through the use of margin requirements (both initial and variation) and a default management process, including a default fund and other resources.

### Credit and Counterparty Risk Management

#### Collateral Management

Collateral is used for credit and/or counterparty risk mitigation purposes to minimize losses that would otherwise be incurred in the event of a default. Depending on the type of borrower, 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 and real estate, or personal assets pledged in support of guarantees. Where possible, we may enter into legally enforceable netting agreements for on-balance sheet credit exposures. In our securities financing transaction business (including repurchase agreements and securities lending), we take eligible financial collateral that we control and can readily liquidate.

On a periodic basis, collateral is subject to regular 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. Credit officers in ERPM provide independent oversight of collateral documentation and valuation. For collateral in the form of investor-owned commercial real estate, a full external appraisal of the property is obtained at the time of loan origination, except where the loan is below a specified threshold amount, in which case an internal evaluation and a site inspection are conducted. Internal evaluation methods may consider 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, depending on its size, a current external appraisal, evaluation or restricted use appraisal is obtained and updated every 12 months while the loan is classified as impaired. In Canada, 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. In certain low LTV ratio cases, BMO may use an external service provided by Canada Mortgage and Housing Corporation to assist in determining whether a full property appraisal is necessary. For high LTV ratio in Canada (greater than 80%) insured mortgages, BMO obtains the value of the property and the default insurer confirms the value.

Collateral for our trading counterparty exposures is primarily comprised of cash and high-quality liquid securities (U.S. and Canadian treasury securities, U.S. agency securities and Canadian provincial government securities) that are monitored and revalued on a daily basis. Collateral is

Material presented in a blue-tinted font above is an integral part of the 2016 annual consolidated financial statements (see page 79).

obtained under the contractual terms of standardized industry documentation. With limited exceptions, we utilize the International Swaps and Derivatives Association Inc. (ISDA) Master Agreement with a Credit Support Annex to document our collateralized trading relationships with our counterparties for over-the-counter (OTC) derivatives that are not centrally cleared. Credit Support Annexes entitle a party to demand collateral (or other credit support) when its OTC derivatives exposure to the other party exceeds an agreed amount (threshold). Collateral transferred can include an independent amount (initial margin) and/or variation margin. Credit Support Annexes contain, among other things, provisions setting out acceptable collateral types and how they are to be valued (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.

To document our contractual securities financing relationships with our counterparties, we utilize master repurchase agreements for repurchase transactions and, for securities lending transactions, we utilize master securities lending agreements. Many G20 jurisdictions are implementing new regulations which will require certain counterparties with significant OTC derivatives exposures to post or collect prescribed types and amounts of collateral for uncleared OTC derivatives transactions. See Legal and Regulatory Risk – Derivatives Reform on page 111.

### Portfolio Management

BMO's credit risk governance policies require an acceptable level of diversification. Limits may be specified for several portfolio dimensions, including industry, specialty segments (e.g., hedge funds and leveraged lending), country, product and single-name concentrations. At year end, our credit assets consisted of a well-diversified portfolio comprised of millions of clients, the majority of them consumers and small to medium-sized businesses. The diversification of our credit exposure may be supplemented by the purchase or sale of credit protection through guarantees, insurance or credit default swaps.

### Wrong-way Risk

Wrong-way risk occurs when exposure to a counterparty is highly correlated with the credit quality of collateral or some other intended mitigant of the risk related to that counterparty. There is specific wrong-way risk, which arises when the counterparty and the market risk factors affecting that mitigant display a high correlation, and general wrong-way risk, which 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 mitigant. Our procedures require that specific wrong-way risk be identified in transactions and accounted for in the assessment of risk. Stress testing of replacement risk is conducted monthly and can be used to identify existing or emerging concentrations of general wrong-way risk in our portfolios.

### Credit and Counterparty Risk Measurement

We quantify credit risk at both the individual borrower or counterparty 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. 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.

**Loss Given Default (LGD)** is a measure of our 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, estimated at a high confidence level.

**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.

For inclusion in regulatory capital calculations, OSFI permits three approaches for the measurement of credit risk: Standardized, Foundation Internal Ratings Based and Advanced Internal Ratings Based (AIRB). Subject to a Basel I Floor, we apply the AIRB Approach for the measurement of credit risk in most of our portfolios, including portfolios of our subsidiary BMO Financial Corp. The Basel III Standardized Approach is currently being used for regulatory capital calculations related to the acquired Marshall & Isley Corporation and GE Transportation Finance portfolios, and to a few other immaterial exposures. We continue to transition these portfolios to the AIRB Approach.

### Risk Rating Systems

BMO's risk rating systems are designed to assess and measure the risk of any exposure. The rating systems differ for retail (consumer and small business) and wholesale (corporate, commercial and sovereign) portfolios.

Credit risk measures are validated and back-tested regularly – quarterly in the case of retail models and annually in the case of wholesale models. Please refer to pages 108 and 109 for a discussion of our 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 and small business loans. These loans are managed in pools of homogeneous risk exposures. For these pools, 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 produce optimal credit decisions in a centralized and automated environment.

The retail risk rating system assesses the borrower's risk based on a narrow range of likely expected conditions, primarily more recent in nature, including delinquency, loan-to-value ratio and loan utilization rate. Product lines within each of the retail risk areas are separately modelled so that the risk-based parameters capture the distinct nature of each product. A final segmentation then sorts each exposure within a product line into homogeneous pools of retail risk that reflect common risk-based parameters. Each pool is assigned a unique combination of PD, LGD and EAD parameters that captures its segment-specific credit risk.

The retail risk rating system is designed to generate estimates of the value of credit risk parameters as accurately as possible but is subject to uncertainty. During the calibration process, adjustments are made at the parameter level for each segment to account for this uncertainty. The retail

parameters are tested quarterly, and are calibrated on an annual basis to incorporate additional data points in the parameter estimation process, ensuring that the most recent experience is incorporated.

### 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 and Sovereign)

Within wholesale portfolios, we utilize an enterprise-wide risk rating framework that is applied to all of our sovereign, bank, corporate and commercial counterparties. One key element of this framework is the assignment of appropriate borrower or counterparty risk ratings (BRRs). A suite of general and sector-specific risk rating models have been developed within each asset class in order to capture the key quantitative and qualitative risk factors associated with borrowers in different industries and portfolios. Risk ratings are assigned using the appropriate internal model. BRRs are assessed and assigned at the time of loan origination and reviewed at least annually. More frequent reviews are conducted for borrowers with weaker risk ratings, borrowers that trigger a review through a rating change or that experience covenant breaches, and borrowers requiring or requesting changes to credit facilities. 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 grade within an asset class to reflect the long-run average of one-year default rates. PD estimates are updated periodically based on internal default experience over a period of more than five years that covers at least one full economic cycle, supplemented by external benchmarking, as applicable.

BMO also assigns an LGD estimate to each separate facility provided to a borrower at the time of origination. An LGD estimate is a measure of the potential economic loss that would be incurred for a facility if the borrower were to default during a period of economic distress. The LGD estimate provides an inverse measure of the protection against loss afforded by the assigned collateral, as applicable, and considers the supporting structural elements of the facility, including seniority, margin arrangements, and product and sectoral characteristics. LGD models have been developed for each asset class using internal data that covers a period of more than seven years, and results are benchmarked using external data, when necessary.

As demonstrated in the table below, our 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
<b>Acceptable</b>		
I-1 to I-3	Aaa to Aa3	AAA to AA-
I-4 to I-5	A1 to Baa1	A+ to BBB+
I-6 to I-7	Baa2 to Baa3	BBB to BBB-
S-1 to S-2	Ba1 to Ba2	BB+ to BB
S-3 to S-4	Ba3 to B1	BB- to B+
<b>Watchlist</b>		
P-1 to P-3	B2 to Ca	B to CC
<b>Default/Impaired</b>		
T1, D-1 to D-4	C	D

## Credit Quality Information

### Portfolio Review

Total enterprise-wide credit exposure was \$681 billion at October 31, 2016, comprised of \$388 billion in Canada, \$264 billion in the United States and \$29 billion in other jurisdictions. This represents an increase of \$59 billion or 9% from the prior year. Additional information can be found in Note 5 on page 156 of the financial statements.

BMO's loan book continues to be well-diversified by industry and geographic region. Gross loans and acceptances increased by \$38 billion or 11% from the prior year to \$374 billion at October 31, 2016. The geographic mix of our Canadian and U.S. portfolios was relatively consistent with the prior year, and represented 64.5% and 32.6% of total loans, respectively, compared with 66.6% and 30.1% in 2015. The consumer loan portfolio represented 49.5% of the total portfolio, a decrease from 53.4% in 2015. Business and government loans represented 50.5% of the total portfolio, up from 46.6% in 2015. Our loan portfolio is well-diversified by industry and we continue to proactively monitor industry sectors that we consider warrant closer attention, including Canadian consumer loans and U.S. and Canadian direct and indirect oil and gas exposures.

Further details on our loan book, including detailed breakdowns by industry and geographic region, can be found in Tables 7 to 15 on pages 128 to 134 and in Note 5 on page 156 of the financial statements. Details related to our credit exposures are discussed in Note 4 on page 153 of the financial statements.



## 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.

## Provision for Credit Losses (PCL)

Total PCL was \$815 million in the current year, up 33% from \$612 million in 2015. Detailed discussions of our PCL, including historical trends in PCL, are provided on page 42, in Table 15 on page 134 and in Note 4 on page 153 of the financial statements.

## Gross Impaired Loans (GIL)

Total GIL increased by \$373 million or 19% from 2015 to \$2,332 million in 2016, with increases in both Canada and the United States, due to an increase in oil and gas impaired loans and the impact of the stronger U.S. dollar. GIL as a percentage of gross loans and acceptances also increased over the prior year from 0.58% in 2015 to 0.62% in 2016.

Factors contributing to the change in GIL are outlined in the table below. Loans classified as impaired during the year increased from \$1,921 million in 2015 to \$2,512 million in 2016, in part due to an increase in oil and gas impaired formations. On a geographic basis, the United States accounted for the majority of impaired loan formations, comprising 56.8% of total formations in 2016, compared with 55.6% in 2015. Detailed breakdowns of impaired loans by geographic region and industry can be found in Table 11 on page 130 and in Note 4 on page 153 of the financial statements.

## Changes in Gross Impaired Loans and Acceptances <sup>(1)</sup>

(Canadian \$ in millions, except as noted)  
For the year ended October 31

	2016	2015	2014
<b>GIL, beginning of year</b>	<b>1,959</b>	2,048	2,544
Classified as impaired during the year	<b>2,512</b>	1,921	2,142
Transferred to not impaired during the year	<b>(577)</b>	(556)	(669)
Net repayments	<b>(869)</b>	(700)	(1,059)
Amounts written off	<b>(706)</b>	(704)	(801)
Recoveries of loans and advances previously written off	-	-	-
Disposals of loans	<b>(34)</b>	(252)	(220)
Foreign exchange and other movements	<b>47</b>	202	111
<b>GIL, end of year</b>	<b>2,332</b>	1,959	2,048
GIL as a % of gross loans and acceptances	<b>0.62</b>	0.58	0.67

(1) GIL excludes purchased credit impaired loans.

## Allowance for Credit Losses (ACL)

Across all loan portfolios, BMO employs a disciplined approach to provisioning and loan loss evaluation, with the prompt identification of problem loans being a key risk management objective. BMO maintains both specific and collective allowances for credit losses. Specific allowances reduce the aggregate carrying value of credit assets for which there is evidence of deterioration in credit quality. BMO also maintains a collective allowance in order to cover any impairment in the existing loan portfolio that cannot yet be associated with individually identified loans. Our approach to establishing and maintaining the collective allowance is based on the requirements of IFRS, in conjunction with guidelines issued by our regulator, OSFI. Our collective allowance methodology groups loans on the basis of similar credit risk characteristics, and applies quantitative and qualitative factors to determine the appropriate level for the collective allowance. The quantitative component of the methodology measures expected long-run losses based on the PD, LGD and EAD risk parameters used in the models we employ to estimate risk-based capital. For commercial and corporate loans, key determinants of incurred but not identified losses include the underlying risk rating of the borrower, industry sector, credit product and amount and quality of collateral held. For consumer and small business loans, exposures are pooled based on similar risk characteristics and the levels of incurred but not identified losses are determined based on the long-run default and historical loss experience of each pool. The qualitative component of the methodology reflects management's judgment with respect to current and near-term macroeconomic and business conditions, portfolio-specific considerations, credit quality trends, changes in lending practices and model factors. We review the collective allowance on a quarterly basis.

BMO maintains the allowance for credit losses at a level that we consider adequate to absorb credit-related losses. As at October 31, 2016, our ACL was \$2,114 million, comprised of specific allowances of \$432 million and a collective allowance of \$1,682 million. This includes specific allowances of \$27 million and a collective allowance of \$162 million related to undrawn commitments and letters of credit that are considered other credit instruments and recorded in other liabilities. Total ACL increased year over year by \$62 million, in part due to the impact of the stronger U.S. dollar. Our coverage ratios remain adequate, with specific ACL as a percentage of GIL at 17.4%.

The collective allowance increased by \$22 million from 2015 to \$1,682 million in 2016. The collective allowance remains adequate and at year end represented 0.76% of credit risk-weighted assets.

Factors contributing to the change in ACL are outlined in the following table. Further details on changes in ACL by country and portfolio can be found in Tables 12 and 13 on page 132 and in Note 4 on page 153 of the financial statements.

Changes in Allowance for Credit Losses <sup>(1)</sup>

(Canadian \$ in millions, except as noted)

For the year ended October 31

	2016	2015	2014
<b>Specific ACL, beginning of year</b>	<b>392</b>	424	485
Specific PCL (charge to income statement)	<b>815</b>	612	561
Recoveries of amounts written off in previous years	<b>343</b>	456	624
Write-offs	<b>(1,047)</b>	(1,065)	(1,149)
Foreign exchange and other movements	<b>(71)</b>	(35)	(97)
<b>Specific ACL, end of year</b>	<b>432</b>	392	424
Collective ACL, beginning of year	<b>1,660</b>	1,542	1,485
Collective PCL (charge to income statement)	-	-	-
Foreign exchange and other movements	<b>22</b>	118	57
<b>Collective ACL, end of year</b>	<b>1,682</b>	1,660	1,542
<b>Total ACL</b>	<b>2,114</b>	2,052	1,966
Comprised of:			
Loans	<b>1,925</b>	1,855	1,734
Specific allowance for other credit instruments	<b>27</b>	35	50
Collective allowance for other credit instruments	<b>162</b>	162	182
Specific ACL as a % of GIL <sup>(2)</sup>	<b>17.4</b>	18.2	18.3

(1) Includes allowances related to other credit instruments that are included in other liabilities.

(2) Ratio excludes specific allowances for other credit instruments that are included in other liabilities.

## European Exposures

BMO's geographic exposures are subject to a country risk management framework that incorporates economic and political assessments and management of exposure within limits based on product, entity and the country of ultimate risk. We closely monitor our European exposures, and our risk management processes incorporate stress tests as appropriate to assess our potential risk. Our exposure to European countries, as at October 31, 2016, 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 (inclusive of credit default swap (CDS) activity), repo-style transactions and derivatives. Funded lending is detailed by counterparty type, as well as by total commitments compared to the funded amount, in the table on page 94.

### European Exposure by Country and Counterparty <sup>(1)</sup>

(Canadian \$ in millions) As at October 31, 2016		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	
<b>GIIPS</b>										
Greece	-	-	-	-	-	-	-	-	-	-
Ireland (7)	25	-	-	-	-	299	55	-	354	379
Italy	-	-	-	-	-	2	3	-	5	5
Portugal	-	-	-	-	-	-	-	-	-	-
Spain	53	6	-	-	6	1	-	-	1	60
<b>Total - GIIPS</b>	<b>78</b>	<b>6</b>	<b>-</b>	<b>-</b>	<b>6</b>	<b>302</b>	<b>58</b>	<b>-</b>	<b>360</b>	<b>444</b>
<b>Eurozone (excluding GIIPS)</b>										
France	111	76	1	171	248	43	-	16	59	418
Germany	133	-	33	1,173	1,206	49	5	9	63	1,402
Luxembourg	291	-	-	-	-	-	36	-	36	327
Netherlands	502	388	14	135	537	9	40	-	49	1,088
Other (8)	27	-	-	101	101	2	3	7	12	140
<b>Total - Eurozone (excluding GIIPS)</b>	<b>1,064</b>	<b>464</b>	<b>48</b>	<b>1,580</b>	<b>2,092</b>	<b>103</b>	<b>84</b>	<b>32</b>	<b>219</b>	<b>3,375</b>
<b>Rest of Europe</b>										
Denmark	11	304	-	50	354	2	-	-	2	367
Norway	135	653	-	-	653	-	-	-	-	788
Sweden	59	108	-	242	350	3	-	-	3	412
United Kingdom	543	68	57	313	438	1,294	143	9	1,446	2,427
Other (8)	133	-	-	-	-	58	9	-	67	200
<b>Total - Rest of Europe</b>	<b>881</b>	<b>1,133</b>	<b>57</b>	<b>605</b>	<b>1,795</b>	<b>1,357</b>	<b>152</b>	<b>9</b>	<b>1,518</b>	<b>4,194</b>
<b>Total - All of Europe (9)</b>	<b>2,023</b>	<b>1,603</b>	<b>105</b>	<b>2,185</b>	<b>3,893</b>	<b>1,762</b>	<b>294</b>	<b>41</b>	<b>2,097</b>	<b>8,013</b>
<b>As at October 31, 2015</b>										
Country	Total	Bank	Corporate	Sovereign	Total	Bank	Corporate	Sovereign	Total	Total net exposure
Total - GIIPS	73	-	-	-	-	8	24	-	32	105
Total - Eurozone (excluding GIIPS)	640	535	14	1,801	2,350	93	36	8	137	3,127
Total - Rest of Europe	523	1,217	49	946	2,212	736	16	1	753	3,488
<b>Total - All of Europe (9)</b>	<b>1,236</b>	<b>1,752</b>	<b>63</b>	<b>2,747</b>	<b>4,562</b>	<b>837</b>	<b>76</b>	<b>9</b>	<b>922</b>	<b>6,720</b>

(1) BMO has the following indirect exposures to Europe as at October 31, 2016:

- Collateral of €427 million to support trading activity in securities (€13 million from GIIPS) and €70 million of cash collateral held.
- Guarantees of \$1.2 billion (\$28 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 \$258 million, with no net single-name\* CDS exposure to GIIPS countries as at October 31, 2016 (\*includes a net position of \$162 million (bought protection) on a CDS Index, of which 19% is comprised of GIIPS domiciled entities).

(5) Repo-style transactions are primarily with bank counterparties for which BMO holds collateral (\$9.6 billion for Europe as at October 31, 2016).

(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 we are required to maintain with the Irish Central Bank of \$108 million as at October 31, 2016.

(8) Includes countries with less than \$300 million net exposure, with \$15 million exposure to the Russian Federation as at October 31, 2016.

(9) Of our total net direct exposure to Europe, approximately 57% was to counterparties in countries with a rating of Aaa/AAA from at least one of Moody's and S&P.

European Lending Exposure by Country and Counterparty <sup>(9)</sup>

(Canadian \$ in millions) Country	Lending <sup>(2)</sup>						
	Funded lending as at October 31, 2016			As at October 31, 2016		As at October 31, 2015	
	Bank	Corporate	Sovereign	Commitments	Funded	Commitments	Funded
<b>GIIPS</b>							
Greece	-	-	-	-	-	-	-
Ireland <sup>(7)</sup>	-	25	-	126	25	27	8
Italy	-	-	-	-	-	2	2
Portugal	-	-	-	-	-	-	-
Spain	43	10	-	80	53	75	63
<b>Total – GIIPS</b>	<b>43</b>	<b>35</b>	<b>-</b>	<b>206</b>	<b>78</b>	<b>104</b>	<b>73</b>
<b>Eurozone (excluding GIIPS)</b>							
France	111	-	-	155	111	64	30
Germany	19	113	1	207	133	79	72
Luxembourg	81	210	-	409	291	328	159
Netherlands	56	446	-	661	502	346	245
Other <sup>(8)</sup>	10	17	-	27	27	231	134
<b>Total – Eurozone (excluding GIIPS)</b>	<b>277</b>	<b>786</b>	<b>1</b>	<b>1,459</b>	<b>1,064</b>	<b>1,048</b>	<b>640</b>
<b>Rest of Europe</b>							
Denmark	11	-	-	11	11	6	6
Norway	26	109	-	200	135	26	26
Sweden	8	51	-	202	59	150	13
United Kingdom	76	467	-	808	543	459	387
Other <sup>(8)</sup>	29	104	-	215	133	137	91
<b>Total – Rest of Europe</b>	<b>150</b>	<b>731</b>	<b>-</b>	<b>1,436</b>	<b>881</b>	<b>778</b>	<b>523</b>
<b>Total – All of Europe <sup>(9)</sup></b>	<b>470</b>	<b>1,552</b>	<b>1</b>	<b>3,101</b>	<b>2,023</b>	<b>1,930</b>	<b>1,236</b>

Refer to footnotes in the table on page 93.

## Derivative Transactions

The following table represents the notional amounts of our over-the-counter (OTC) derivative contracts, comprised of those which are centrally cleared and settled through a designated clearing house or central counterparty and those which are non-centrally cleared. Designated clearing houses and central counterparties 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 central counterparty and, in addition to providing collateral to protect the central counterparty against BMO risk, BMO is at risk as a member for its 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 our 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 the contract. Notional amounts do not represent assets or liabilities and therefore are not recorded in our Consolidated Balance Sheet. The fair values of OTC derivative contracts are recorded in our Consolidated Balance Sheet.

Over-the-Counter Derivatives <sup>(1)</sup> (Notional amounts)

(Canadian \$ in millions) As at October 31	Non-centrally cleared		Centrally cleared		Total	
	2016	2015	2016	2015	2016	2015
<b>Interest Rate Contracts</b>						
Swaps	575,523	690,375	2,151,178	2,269,412	2,726,701	2,959,787
Forward rate agreements	1,288	2,563	429,219	430,181	430,507	432,744
Purchased options	29,508	21,344	-	-	29,508	21,344
Written options	43,921	24,154	-	-	43,921	24,154
<b>Total interest rate contracts</b>	<b>650,240</b>	<b>738,436</b>	<b>2,580,397</b>	<b>2,699,593</b>	<b>3,230,637</b>	<b>3,438,029</b>
<b>Foreign Exchange Contracts</b>						
Cross-currency swaps	89,354	76,083	-	-	89,354	76,083
Cross-currency interest rate swaps	382,666	339,467	-	-	382,666	339,467
Forward foreign exchange contracts	409,189	393,098	-	-	409,189	393,098
Purchased options	29,876	28,297	-	-	29,876	28,297
Written options	30,405	28,960	-	-	30,405	28,960
<b>Total foreign exchange contracts</b>	<b>941,490</b>	<b>865,905</b>	<b>-</b>	<b>-</b>	<b>941,490</b>	<b>865,905</b>
<b>Commodity Contracts</b>						
Swaps	13,603	11,929	-	-	13,603	11,929
Purchased options	6,828	6,172	-	-	6,828	6,172
Written options	4,672	4,103	-	-	4,672	4,103
<b>Total commodity contracts</b>	<b>25,103</b>	<b>22,204</b>	<b>-</b>	<b>-</b>	<b>25,103</b>	<b>22,204</b>
<b>Equity Contracts</b>	<b>58,313</b>	<b>47,114</b>	<b>-</b>	<b>-</b>	<b>58,313</b>	<b>47,114</b>
<b>Credit Default Swaps</b>						
Purchased	1,730	4,365	1,303	1,054	3,033	5,419
Written	793	9,154	188	-	981	9,154
<b>Total credit default swaps</b>	<b>2,523</b>	<b>13,519</b>	<b>1,491</b>	<b>1,054</b>	<b>4,014</b>	<b>14,573</b>
<b>Total</b>	<b>1,677,669</b>	<b>1,687,178</b>	<b>2,581,888</b>	<b>2,700,647</b>	<b>4,259,557</b>	<b>4,387,825</b>

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

## 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 our trading book.

BMO incurs market risk in its trading and underwriting activities and structural banking activities. The magnitude and importance of these activities to the enterprise, along with the relative uncertainty of daily changes in market variables, require a strong and balanced market risk structure that incorporates appropriate and reliable governance, management and measurement. The bank continued to enhance its three-lines-of-defence framework in all areas of Market Risk management in 2016.

### Trading and Underwriting Market Risk Governance

As part of our enterprise-wide risk management framework, we apply comprehensive governance and management processes to our market risk-taking activities. The RRC has oversight of the management of market risk and approves the market risk Corporate Policy, along with limits governing market risk exposures. The RMC, which recommends the market risk Corporate Policy for approval, regularly reviews and discusses significant market risk issues and positions, and provides senior management oversight. These committees are informed of specific risk exposures or other factors that could expose BMO to unusual, unexpected, inappropriate or otherwise not fully identified or quantified risks associated with market or traded credit exposures, as well as other relevant market risk issues. In addition, all individuals authorized to conduct trading and underwriting activities on behalf of BMO are appropriately notified of BMO's risk-taking governance, authority structure, procedures and processes, are given guidance on the relevant corporate policies and standards, and are required to adhere to those policies and standards and to trade and maintain exposures within specified limits and risk tolerances.

### Trading and Underwriting Market Risk Management

We have an independent and professional market risk oversight group that identifies, measures, and limits the market risk inherent in the bank. We monitor an extensive range of risk metrics, including Value at Risk (VaR), Stressed Value at Risk (SVaR), stress and scenario tests, risk sensitivities and operational metrics. We apply a comprehensive set of limits to these metrics with appropriate monitoring, reporting, and escalation of limit breaches. Risk profiles of our trading and underwriting activities are maintained within our risk appetite and supporting limits, and are monitored and reported to traders, management, senior executives and Board committees. Further key controls include the independent valuation of financial assets and liabilities, as well as compliance with our model risk management framework to mitigate model risk.

BMO's Market Risk group also provides oversight of structural market risk, which is managed by BMO's Corporate Treasury group and described on page 98.

### Valuation Product Control

Within the Market Risk group, the Valuation Product Control (VPC) group is responsible for the independent valuation of all trading and available-for-sale (AFS) portfolios within Capital Markets Trading Products and Corporate Treasury, to confirm that they are materially accurate by:

- developing and maintaining valuation adjustment policies and procedures in accordance with regulatory requirements and IFRS;
- establishing official rate sources for valuation of all portfolios; and
- providing an independent review of portfolios where prices supplied by traders are used for valuation.

Trader valuations are reviewed to determine whether they align with an independent assessment of the market value of the related portfolio. If a valuation difference exceeds the prescribed tolerance threshold, a valuation adjustment is recorded in accordance with our accounting policy and regulatory requirements. Prior to the final month-end general ledger close, the Valuation Operating Committee, comprised of key stakeholders from the lines of business, Market Risk, Capital Markets Finance, Corporate Treasury and the Chief Accountant's Group, reviews all valuation adjustments that are proposed by the VPC group.

The Valuation Steering Committee is BMO's senior management valuation committee. It meets at least monthly to address the more challenging material valuation issues related to BMO's portfolios, approves valuation adjustments and methodology changes, and acts as a key forum for discussing positions categorized as Level 3 inputs for financial reporting purposes and their inherent uncertainty.

At a minimum, the following are considered when determining appropriate valuation adjustments: credit valuation adjustments, closeout costs, uncertainty, funding valuation adjustments, liquidity and model risk. A fair value hierarchy is used to categorize the inputs used in the valuation of securities, liabilities, derivative assets and derivative liabilities. Level 1 inputs consist of quoted market prices, Level 2 inputs consist of models that use observable market information and Level 3 inputs consist of results from models for which observable market information is not available. Details of Level 1, Level 2 and Level 3 fair value measurements can be found in Note 17 on page 177 of the financial statements.

### Trading and Underwriting Market Risk Measurement

To capture, measure, and control the multi-dimensional aspects of market risk effectively, a number of metrics and techniques are used, including VaR, SVaR, stress testing, sensitivities, position concentrations, notional values, and revenue losses.

**Value at Risk (VaR)** is measured 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. This measure calculates the maximum loss likely to be experienced in the trading and underwriting portfolios, measured at a 99% confidence level over a specified holding period.

**Stressed Value at Risk (SVaR)** is measured 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, where model inputs are calibrated to historical data from a period of significant financial stress. This measure calculates the maximum loss likely to be experienced in the trading and underwriting portfolios, measured at a 99% confidence level over a specified holding period.



Although it is a valuable indicator of risk, VaR should always be viewed in the context of its limitations. Among these limitations is the assumption that all positions can be liquidated within the assigned one-day holding period (ten-day holding period for regulatory calculations), which may not be the case in illiquid market conditions, and that historical data can be used as a proxy to forecast future market events. Generally, market liquidity horizons are reviewed for suitability and updated where appropriate for relevant risk metrics. Scenario analysis and probabilistic stress testing are performed daily to determine the potential impact of unusual and/or unexpected market changes on our portfolios. As well, historical and 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 portfolio and risks or other ad-hoc analyses are conducted to examine our sensitivity to low-frequency, high-severity hypothetical scenarios. Scenarios are amended, added or removed to better reflect changes in underlying market conditions. The results are reported to the lines of business, the RMC and the RRC on a regular basis. Stress testing is limited by the fact that not all downside scenarios can be predicted and effectively modelled. Neither VaR nor stress testing should be viewed as a definitive predictor of the maximum amount of losses that could occur in any one day, because these measures are based on models and estimates (such as confidence levels) and their results could be exceeded in highly volatile market conditions. On a daily basis, exposures are aggregated by lines of business and risk type and monitored against delegated limit levels, and the results are reported to the appropriate stakeholders. BMO has a robust governance process in place designed to ensure adherence to delegated market risk limits. Amounts exceeding those limits are reported to senior management on a timely basis for resolution and appropriate action.

In addition, we measure the market risk for trading and underwriting portfolios that meet regulatory criteria for trading book capital treatment using the Internal Models Approach. For trading and underwriting portfolios covered by the Internal Models Approach, VaR is computed using BMO's Trading Book VaR model. This is a Monte Carlo scenario simulation model, and its results are used for market risk management and reporting of exposures. The model computes one-day VaR results using a 99% confidence level, and those results reflect the historical correlations between the different classes of market risk factors. We also apply this approach in measuring the market risk for portfolios that are accorded banking book regulatory capital treatment.

We use a variety of methods to verify the integrity of our risk models, including the application of back-testing against hypothetical losses. This process 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. Models are validated by assessing how often the calculated hypothetical losses exceed the VaR measure over a defined period. This testing is aligned with defined regulatory expectations, and its results confirm the reliability of our models. The volatility data and correlations that underpin our models are updated monthly, so that VaR measures reflect current conditions.

Our models are used to determine market risk Economic Capital for each of our lines of business and to determine regulatory capital. For capital calculation purposes, the longer holding periods and/or higher confidence levels that are used are not necessarily the same as those employed in day-to-day risk management. Under the Model Risk Corporate Policy, models are subject to validation by our Model Risk Validation group prior to use. The Model Risk Corporate Policy outlines minimum requirements for the identification, assessment, monitoring and management of models and model risk across the enterprise, and is described on page 107.

The end of the year calculation of Total Trading VaR decreased year over year, while Total Trading Stressed VaR increased. Average fiscal 2016 daily/weekly calculations for both figures ended within 10% of the average of fiscal 2015. Over the year, methodology changes had the largest effects on average Interest Rate VaR for both VaR and SVaR, where there was a large increase, and on average Credit VaR, where there was a significant decrease. Equity and foreign exchange VaR figures were affected by lower exposures.

### Total Trading Value at Risk (VaR) Summary <sup>(1)</sup>

As at or for the year ended October 31 (pre-tax Canadian \$ equivalent in millions)	2016				2015
	Year-end	Average	High	Low	Year-end
Commodity VaR	(0.7)	(0.5)	(1.4)	(0.3)	(0.4)
Equity VaR	(4.5)	(6.1)	(9.9)	(3.1)	(6.9)
Foreign exchange VaR	(1.8)	(1.0)	(3.3)	(0.3)	(2.6)
Interest rate VaR	(10.3)	(10.2)	(16.2)	(5.6)	(10.5)
Credit VaR	(2.0)	(2.5)	(5.0)	(1.4)	(2.7)
Diversification	9.3	8.7	nm	nm	9.8
<b>Total Trading VaR</b>	<b>(10.0)</b>	<b>(11.6)</b>	<b>(18.8)</b>	<b>(6.5)</b>	<b>(13.3)</b>

### Total Trading Stressed Value at Risk (SVaR) Summary <sup>(1)(2)</sup>

As at or for the year ended October 31 (pre-tax Canadian \$ equivalent in millions)	2016				2015
	Year-end	Average	High	Low	Year-end
Commodity SVaR	(1.4)	(1.1)	(2.0)	(0.6)	(0.7)
Equity SVaR	(18.7)	(14.3)	(20.8)	(9.2)	(17.6)
Foreign exchange SVaR	(3.2)	(1.5)	(4.7)	(0.3)	(2.2)
Interest rate SVaR	(23.1)	(14.6)	(24.6)	(7.1)	(10.4)
Credit SVaR	(6.5)	(6.0)	(10.1)	(2.8)	(5.2)
Diversification	25.8	17.3	nm	nm	15.0
<b>Total Trading SVaR</b>	<b>(27.1)</b>	<b>(20.2)</b>	<b>(27.1)</b>	<b>(14.4)</b>	<b>(21.1)</b>

(1) One-day measure using a 99% confidence interval. Losses are in brackets and benefits are presented as positive numbers.

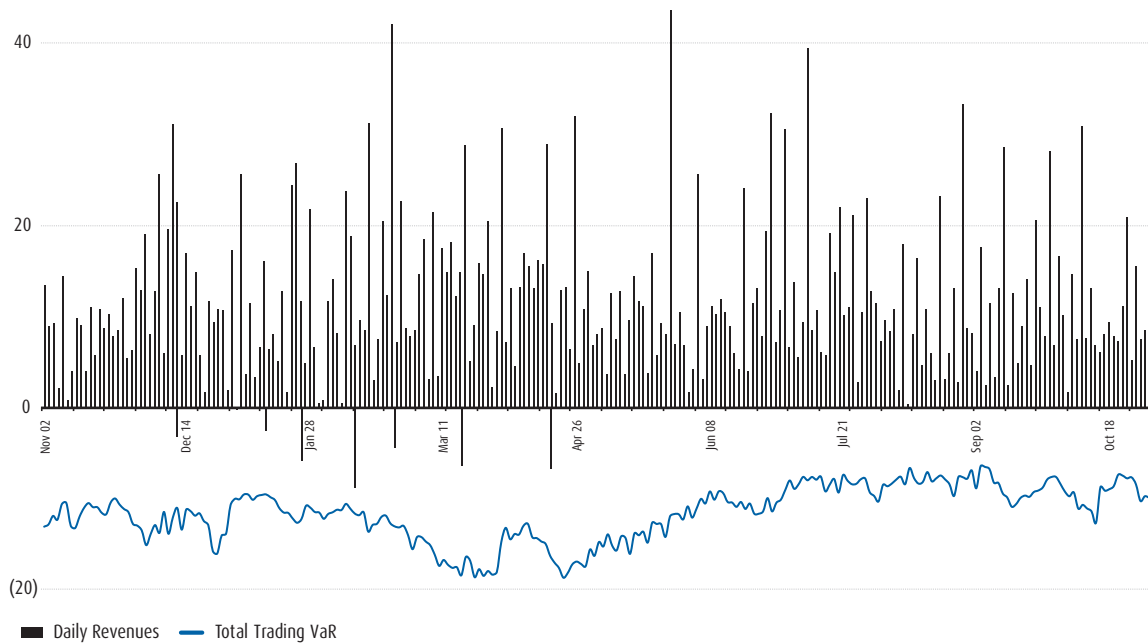
(2) Stressed VaR is produced weekly.  
nm - not meaningful

## Trading Net Revenue

The charts below present daily net revenues plotted against total trading and AFS VaR, along with a representation of daily net revenue distribution. During the current year, the largest loss occurred on February 11, and was the result of normal trading activity and valuation adjustments. The largest gain occurred on May 31, and was primarily due to normal trading and underwriting activity.

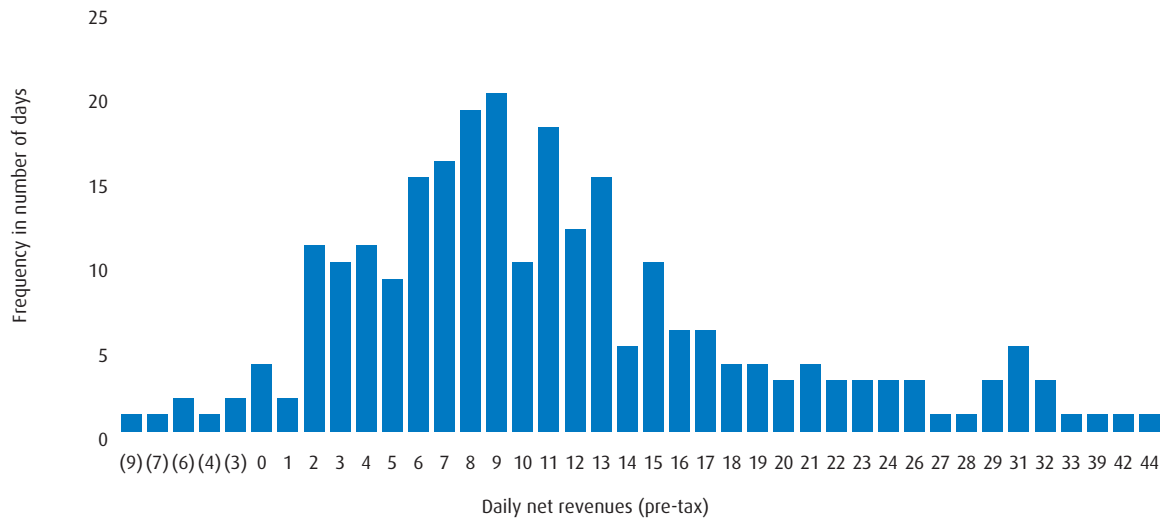
### Trading Net Revenues versus Value at Risk

November 1, 2015 to October 31, 2016 (\$ millions)



### Frequency Distribution of Daily Net Revenues

November 1, 2015 to October 31, 2016 (\$ millions)



## Linkages between Balance Sheet Items and Market Risk Disclosures

The table below presents items reported in our 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.

(Canadian \$ in millions)	As at October 31, 2016				As at October 31, 2015				Main risk factors for non-traded risk balances
	Subject to market risk				Subject to market risk				
	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	
<b>Assets Subject to Market Risk</b>									
Cash and cash equivalents	31,653	-	31,653	-	40,295	-	40,295	-	Interest rate
Interest bearing deposits with banks	4,449	258	4,191	-	7,382	1,212	6,170	-	Interest rate
Securities									
Trading	84,458	76,297	8,161	-	72,460	65,066	7,394	-	Interest rate, credit spread, equity
Available-for-sale	55,663	-	55,663	-	48,006	-	48,006	-	Interest rate, credit spread
Held-to-maturity	8,965	-	8,965	-	9,432	-	9,432	-	Interest rate
Other	899	-	899	-	1,020	-	1,020	-	Equity
Securities borrowed or purchased under resale agreements	66,646	-	66,646	-	68,066	-	68,066	-	Interest rate
Loans (net of allowance for credit losses)	358,730	-	358,730	-	322,717	-	322,717	-	Interest rate, foreign exchange
Derivative instruments	39,183	37,571	1,612	-	38,238	35,924	2,314	-	Interest rate, foreign exchange
Customers' liability under acceptances	13,021	-	13,021	-	11,307	-	11,307	-	Interest rate
Other assets	24,268	-	9,149	15,119	22,958	-	8,195	14,763	Interest rate
<b>Total Assets</b>	<b>687,935</b>	<b>114,126</b>	<b>558,690</b>	<b>15,119</b>	<b>641,881</b>	<b>102,202</b>	<b>524,916</b>	<b>14,763</b>	
<b>Liabilities Subject to Market Risk</b>									
Deposits	473,372	11,604	461,768	-	438,169	9,429	428,740	-	Interest rate, foreign exchange
Derivative instruments	38,227	36,132	2,095	-	42,639	39,907	2,732	-	Interest rate, foreign exchange
Acceptances	13,021	-	13,021	-	11,307	-	11,307	-	Interest rate
Securities sold but not yet purchased	25,106	25,106	-	-	21,226	21,226	-	-	-
Securities lent or sold under repurchase agreements	40,718	-	40,718	-	39,891	-	39,891	-	Interest rate
Other liabilities	50,724	-	50,401	323	44,320	-	44,218	102	Interest rate
Subordinated debt	4,439	-	4,439	-	4,416	-	4,416	-	Interest rate
<b>Total Liabilities</b>	<b>645,607</b>	<b>72,842</b>	<b>572,442</b>	<b>323</b>	<b>601,968</b>	<b>70,562</b>	<b>531,304</b>	<b>102</b>	

(1) Primarily comprised of BMO's balance sheet items that are subject to the trading and underwriting risk management framework and fair valued through profit or loss.

(2) Primarily comprised of BMO's balance sheet items that are subject to the structural balance sheet and insurance risk management framework, or are available-for-sale securities.

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

## Structural (Non-Trading) Market Risk

Structural market risk is comprised of interest rate risk arising from our banking activities (loans and deposits) and foreign exchange risk arising from our foreign currency operations.

### Structural Market Risk Governance

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 the Balance Sheet and Capital Management Committee (BSCMC) regularly review structural market risk positions and provide senior management oversight.

In addition to Board-approved limits on earnings at risk and economic value sensitivities due to changes in interest rates, more granular management limits are in place to guide day-to-day management of this risk. 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.

### Structural Market Risk Measurement

#### Interest Rate Risk

Structural interest rate risk arises when changes in interest rates affect the cash flows, earnings and values of assets and liabilities related to our banking activities. The objective of structural interest rate risk management is to maintain high-quality earnings and maximize sustainable product spread, while managing the risk to the economic value of our assets due to changes in interest rates.

Structural interest rate risk is primarily comprised of interest rate mismatch risk, product embedded option risk, and risk related to consumer behaviour.

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.

Material presented in a blue-tinted font above is an integral part of the 2016 annual consolidated financial statements (see page 79).

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 option 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 traditional 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.

**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.

The models used to measure structural interest rate risk project 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), our 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), we measure our exposure 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 validated and periodically updated through regular model validation, back-testing processes and ongoing dialogue with the lines of business. Models developed to predict customer behaviour are also used in support of product pricing. All models are subject to our model risk management framework described in more detail on page 107.

Structural interest rate earnings and economic value sensitivity to an immediate parallel increase or decrease of 100 basis points in the yield curve are disclosed in the following table. The interest rate gap position is disclosed in Note 19 on page 183 of the financial statements.

During the 2016 fiscal year, we introduced a new Canadian deposit model which reflects greater value for, and earnings on, client deposits as rates rise and the impact of minimum modelled client deposit rates as rates fall. There were no other significant changes in our 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 minimum modelled client deposit rates. Structural economic value exposure to rising interest rates increased relative to October 31, 2015, primarily owing to an increase in fixed rate asset holdings, partially offset by the introduction of the new deposit model noted above. The structural economic value benefit to falling interest rates decreased relative to October 31, 2015, primarily due to the impact of minimum modelled client deposit rates in the new model, partially offset by an increase in fixed rate assets. Structural earnings sensitivity quantifies the potential impact of interest rate changes on structural balance sheet revenues over the next twelve 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. Structural earnings benefit to rising interest rates primarily reflects the benefit of widening deposit spreads as interest rates rise. The decrease in benefit to rising rates relative to October 31, 2015 is primarily owing to the increase in fixed rate asset holdings noted above. The increase in the exposure to falling rates relative to October 31, 2015 primarily reflects the greater extent to which U.S. short-term interest rates can now fall after the increase in U.S. rates during the 2016 fiscal year.

## Structural Balance Sheet Interest Rate Sensitivity <sup>(1)</sup> <sup>(2)</sup> <sup>(3)</sup> <sup>(4)</sup> <sup>(5)</sup>

	As at October 31, 2016		As at October 31, 2015	
	Economic value sensitivity (Pre-tax)	Earnings sensitivity over the next 12 months (Pre-tax)	Economic value sensitivity (Pre-tax)	Earnings sensitivity over the next 12 months (Pre-tax)
(Canadian \$ in millions)				
100 basis point increase	(680.2)	149.0	(647.6)	220.7
100 basis point decrease	7.3	(168.9)	107.3	(95.3)

(1) We began reporting our structural earnings sensitivities on a pre-tax basis beginning in Q1-2016. Positions for fiscal 2015 have been restated for comparative purposes.

(2) Earnings and value sensitivities to falling interest rates assume Canadian and U.S. central banks do not decrease overnight interest rates below nil. The scenarios with decreasing interest rates therefore limit the decrease in both Canadian and U.S. short-term interest rates to 50 basis points for shorter terms (2015 – 50 basis points for CAD and 25 basis points for U.S.). Longer-term interest rates do not decrease below the assumed level of short-term interest rates.

(3) Certain non-trading AFS holdings are managed under the bank's trading risk framework.

(4) Losses are in brackets and benefits are presented as positive numbers.

(5) For BMO's Insurance businesses, a 100 basis point increase in interest rates at October 31, 2016, results in an increase in earnings before tax of \$90 million and an increase in economic value before tax of \$623 million (\$94 million and \$511 million, respectively, at October 31, 2015). A 100 basis point decrease in interest rates at October 31, 2016, results in a decrease in earnings before tax of \$87 million and a decrease in economic value before tax of \$744 million (\$93 million and \$612 million, respectively, at October 31, 2015). These impacts are not reflected in the table above.

## Foreign Exchange Risk

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

Translation risk represents the impact that changes in foreign exchange rates can have on BMO's reported shareholders' equity and capital ratios. BMO may enter into arrangements to offset the impact of foreign exchange movements on its capital ratios and did so during the 2016 fiscal year. Please see the Enterprise-Wide Capital Management section on page 70 for further information.

Transaction risk represents the impact that fluctuations in the Canadian/U.S. dollar exchange rate may 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. If future results are consistent with results in 2016, each one cent increase (decrease) in the Canadian/U.S. dollar exchange rate would be expected to increase (decrease) adjusted net income before income taxes for the year by \$12 million, in the absence of hedging transactions. Refer to the Foreign Exchange section on page 37 for a more complete discussion of the effects of changes in exchange rates on the bank's results.

Material presented in a blue-tinted font above is an integral part of the 2016 annual consolidated financial statements (see page 79).

## 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 fall due. Financial commitments include liabilities to depositors and suppliers, and lending, investment and pledging commitments.

Managing liquidity and funding risk is essential to maintaining the safety and soundness of the enterprise, 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 are, as the first line of defence, responsible for the ongoing management of liquidity and funding risk across the enterprise. BMO's Corporate Treasury group is responsible for identifying, understanding, managing, mitigating, monitoring and reporting on BMO's liquidity and funding risks. The Corporate Treasury group develops and recommends the Liquidity and Funding Risk Management Framework and the related risk appetite, limits and guidelines, monitors compliance with policy requirements and assesses the impact of market events on liquidity requirements on an ongoing basis.

Enterprise Market Risk 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 organization. The RMC and BSCMC provide senior management oversight and also review and discuss significant liquidity and funding policies, issues and action items that arise in the pursuit of our strategic priorities. The 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.

### 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 and guidelines, as well as roles and responsibilities for the management of liquidity and funding risk across the enterprise.

BMO has robust limits and guidelines in place in order to manage liquidity and funding risk. Limits establish the enterprise-level risk appetite for our key Net Liquidity Position (NLP) measure, secured and unsecured funding appetite, for both trading and structural activities, and risk appetite for enterprise pledging activity. Guidelines establish the tolerance for concentrations of maturities, requirements for diversifying counterparty liabilities and limits for business pledging activity. Guidelines are also in place to establish the size and type of uncommitted and committed credit and liquidity facilities that may be outstanding in order to confirm that liquidity and funding risk is appropriately managed. An enterprise-wide contingency plan that will 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 early signs of growing liquidity risk in the market or 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 the 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 are in place for key legal entities which are informed by the legal and regulatory requirements that apply to each entity, and positions are regularly reviewed at the legal entity level to confirm compliance with applicable requirements.

BMO employs funds transfer pricing and liquidity transfer pricing practices to help ensure that the 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 supplemental liquid assets held to meet contingent liquidity requirements.

### Liquidity and Funding Risk Measurement

A key component of liquidity risk management is the measurement of liquidity risk under stress. BMO uses our NLP as a key measure of liquidity risk. The 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, or from the requirement to pledge collateral due to ratings downgrades or as a result of market volatility, as well as the continuing need to fund assets and 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 the related valuation and margin haircuts that may occur as a result of market stress. These funding needs are assessed under severe systemic and enterprise-specific stress scenarios and a combination thereof. BMO focuses on maintaining an NLP sufficient to withstand each scenario.

Stress testing results are compared against BMO's stated risk tolerance and are considered in management decisions on setting limits, guidelines and internal liquidity transfer pricing, and they also help to 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 the NLP, we regularly monitor positions in relation to the limits and guidelines noted in the Liquidity and Funding Risk Management section above. These include required regulatory metrics such as the Liquidity Coverage Ratio (LCR) and Net Cumulative Cash Flow (NCCF).



## 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 our liquidity and funding requirements. Liquid assets are primarily held in our 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 our management framework is subject to haircuts reflecting management's view of the liquidity value of those assets in a severe stress scenario. Liquid assets in the trading businesses include cash on deposit with central banks and short-term deposits with other financial institutions, highly-rated debt and equity securities and short-term reverse repurchase agreements. Supplemental liquidity pool assets are predominantly comprised of cash on deposit with central banks and securities and short-term reverse repurchase agreements of highly-rated Canadian federal and provincial 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- 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 our measurement of liquidity risk. To meet local regulatory requirements, certain of our legal entities maintain their own minimum liquidity positions. There may be legal and regulatory restrictions on our 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 our 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 \$197.7 billion at October 31, 2016, compared with \$188.5 billion at October 31, 2015. The increase in unencumbered liquid assets was primarily due to higher security balances and the impact of the stronger U.S. dollar. Net unencumbered liquid assets are primarily held at the parent bank level, at our U.S. legal entity BMO Harris Bank, and in our 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. We do not consider central bank facilities to be a source of available liquidity when assessing the strength 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 is in place that 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. See Note 25 on page 195 of the financial statements for further information on pledged assets.

## Liquid Assets

	As at October 31, 2016				As at October 31, 2015	
(Canadian \$ in millions)	Carrying value/on-balance sheet assets (1)	Other cash and securities received	Total gross assets (2)	Encumbered assets	Net unencumbered assets (3)	Net unencumbered assets (3)
Cash and cash equivalents	31,653	-	31,653	1,957	29,696	38,063
Deposits with other banks	4,449	-	4,449	-	4,449	7,382
Securities and securities borrowed or purchased under resale agreements						
Sovereigns / Central banks / Multilateral development banks	117,320	18,621	135,941	77,576	58,365	48,573
Mortgage-backed securities and collateralized mortgage obligations	20,937	1,290	22,227	2,481	19,746	18,356
Corporate debt	19,188	7,869	27,057	3,202	23,855	22,444
Corporate equity	59,186	19,420	78,606	37,431	41,175	35,400
Total securities and securities borrowed or purchased under resale agreements	216,631	47,200	263,831	120,690	143,141	124,773
NHA mortgage-backed securities (reported as loans at amortized cost) (4)	22,952	-	22,952	2,516	20,436	18,245
Total liquid assets	275,685	47,200	322,885	125,163	197,722	188,463
Other eligible assets at central banks (not included above) (5)	109,656	-	109,656	398	109,258	109,939
Undrawn credit lines granted by central banks	-	-	-	-	-	-
Total liquid assets and other sources	385,341	47,200	432,541	125,561	306,980	298,402

(1) The carrying values outlined in this table are consistent with the carrying values reported in BMO's balance sheet as at October 31, 2016.

(2) Gross assets include on-balance sheet and off-balance sheet assets.

(3) Net unencumbered liquid assets are 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 encumbered assets.

(4) Under IFRS, 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.

(5) 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 loan portfolio, including incremental securitization, covered bond issuances and Federal Home Loan Bank (FHLB) advances.

## Asset Encumbrance

(Canadian \$ in millions) As at October 31, 2016	Total gross assets (1)	Encumbered (2)		Net unencumbered	
		Pledged as collateral	Other encumbered	Other unencumbered (3)	Available as collateral (4)
Cash and deposits with other banks	36,102	-	1,957	11	34,134
Securities (5)	286,783	95,584	27,622	9,075	154,502
Loans and acceptances	335,778	57,308	398	168,814	109,258
Other assets					
Derivative instruments	39,183	-	-	39,183	-
Customers' liability under acceptances	13,021	-	-	13,021	-
Premises and equipment	2,147	-	-	2,147	-
Goodwill	6,381	-	-	6,381	-
Intangible assets	2,178	-	-	2,178	-
Current tax assets	906	-	-	906	-
Deferred tax assets	3,101	-	-	3,101	-
Other assets	9,555	-	-	9,555	-
Total other assets	76,472	-	-	76,472	-
Total assets	735,135	152,892	29,977	254,372	297,894

(Canadian \$ in millions) As at October 31, 2015	Total gross assets (1)	Encumbered (2)		Net unencumbered	
		Pledged as collateral	Other encumbered	Other unencumbered (3)	Available as collateral (4)
Cash and deposits with other banks	47,677	-	2,232	397	45,048
Securities (5)	261,968	94,367	24,583	8,302	134,716
Loans and acceptances	300,883	43,928	1,594	145,422	109,939
Other assets					
Derivative instruments	38,238	-	-	38,238	-
Customers' liability under acceptances	11,307	-	-	11,307	-
Premises and equipment	2,285	-	-	2,285	-
Goodwill	6,069	-	-	6,069	-
Intangible assets	2,208	-	-	2,208	-
Current tax assets	561	-	-	561	-
Deferred tax assets	3,162	-	-	3,162	-
Other assets	8,673	-	-	8,673	-
Total other assets	72,503	-	-	72,503	-
Total assets	683,031	138,295	28,409	226,624	289,703

(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 lent, 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 \$9.1 billion as at October 31, 2016, which include securities held at BMO's insurance subsidiary, significant equity investments, and certain investments held at our merchant banking business. Other unencumbered assets also include mortgages and loans that may be securitized to access secured funding.

(4) Loans included as 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 loan portfolio, including 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 Liquidity Coverage Ratio (LCR) is summarized in the table on the following page. The average month-end LCR for the quarter ended October 31, 2016 of 131% is calculated as the ratio of the stock of High-Quality Liquid Assets (HQLA) to total net stressed cash outflows over the next 30 calendar days. The average LCR ratio is up from 130% last year mainly due to the decrease in net cash outflows. While banks are required to maintain an LCR greater than 100% in normal conditions, banks are also expected to be able to utilize HQLA in a period of stress, which may result in an LCR of less than 100% during that 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 in a period of stress. BMO's total liquid assets are shown in the Liquid Assets table on page 101.

## Liquidity Coverage Ratio

	For the quarter ended October 31, 2016	
	Total unweighted value (average) (1) (2)	Total weighted value (average) (2) (3)
(Canadian \$ in billions, except as noted)		
<b>High-Quality Liquid Assets</b>		
Total high-quality liquid assets (HQLA)	*	<b>132.3</b>
<b>Cash Outflows</b>		
Retail deposits and deposits from small business customers, of which:	<b>152.5</b>	<b>9.1</b>
Stable deposits	<b>88.5</b>	<b>2.7</b>
Less stable deposits	<b>64.0</b>	<b>6.4</b>
Unsecured wholesale funding, of which:	<b>142.5</b>	<b>80.2</b>
Operational deposits (all counterparties) and deposits in networks of cooperative banks	<b>55.8</b>	<b>13.9</b>
Non-operational deposits (all counterparties)	<b>56.2</b>	<b>35.8</b>
Unsecured debt	<b>30.5</b>	<b>30.5</b>
Secured wholesale funding	*	<b>15.9</b>
Additional requirements, of which:	<b>126.8</b>	<b>24.6</b>
Outflows related to derivatives exposures and other collateral requirements	<b>12.4</b>	<b>4.8</b>
Outflows related to loss of funding on debt products	<b>2.6</b>	<b>2.6</b>
Credit and liquidity facilities	<b>111.8</b>	<b>17.2</b>
Other contractual funding obligations	<b>1.2</b>	-
Other contingent funding obligations	<b>331.3</b>	<b>6.0</b>
Total cash outflows	*	<b>135.8</b>
<b>Cash Inflows</b>		
Secured lending (e.g. reverse repos)	<b>104.3</b>	<b>18.2</b>
Inflows from fully performing exposures	<b>10.0</b>	<b>6.8</b>
Other cash inflows	<b>10.1</b>	<b>10.1</b>
Total cash inflows	<b>124.4</b>	<b>35.1</b>
		<b>Total adjusted value (4)</b>
Total HQLA		<b>132.3</b>
Total net cash outflows		<b>100.7</b>
Liquidity Coverage Ratio (%)		<b>131</b>
For the quarter ended October 31, 2015		
		<b>Total adjusted value (4)</b>
Total HQLA		134.6
Total net cash outflows		103.6
Liquidity Coverage Ratio (%)		130

\* 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) Averages are calculated based on month-end values during the quarter.

(3) Weighted values are calculated after the application of the weights 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 by the LAR Guideline.

## Funding Strategy

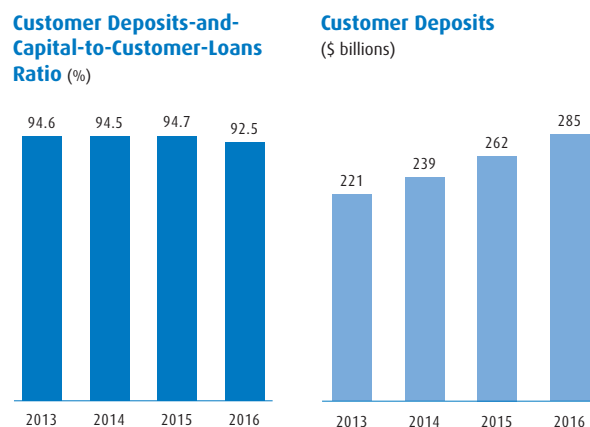
Our funding philosophy requires that secured and unsecured wholesale funding used to support loans and less liquid assets must be of a term (typically maturing in two to ten years) which will support the effective term to maturity of these assets. Wholesale secured and unsecured funding for liquid trading assets is generally 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 time periods. Supplemental liquidity pools are funded with a mix of wholesale term funding.

BMO maintains a large and stable base of customer deposits that, in combination with our strong capital base, is a source of strength. It supports the maintenance of a sound liquidity position and reduces our reliance on wholesale funding. Customer deposits totalled \$284.5 billion at the end of the year, up from \$261.9 billion in 2015, primarily due to deposit growth and the impact of the stronger U.S. dollar. BMO also receives deposits in support of certain trading activities, receives non-marketable deposits from corporate and institutional customers, and issues retail structured notes. These deposits and notes totalled \$49.4 billion as at October 31, 2016.

Total wholesale funding outstanding, largely consisting of negotiable marketable securities, was \$170.3 billion at October 31, 2016, with \$52.7 billion sourced as secured funding and \$117.6 billion sourced as unsecured funding. Wholesale funding outstanding increased from \$159.5 billion at October 31, 2015, primarily due to wholesale funding issuances and the impact of the stronger U.S. dollar. The mix and maturities of BMO's wholesale term funding are outlined in the table below. Additional information on deposit maturities can be found in Note 29 on page 202 of the financial statements. BMO maintains a sizeable portfolio of unencumbered liquid assets, totalling \$197.7 billion as at October 31, 2016, that can be monetized to meet potential funding requirements, as described in the Unencumbered Liquid Assets section above.

Diversification of our wholesale funding sources is an important part of our overall liquidity management strategy. BMO's wholesale funding activities are well-diversified by jurisdiction, currency, investor segment, instrument 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 and home equity line of credit securitizations, covered bonds, and Canadian and U.S. senior unsecured deposits.

BMO's wholesale 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 our businesses in our forecasting and planning process, and assesses funding needs in relation to available potential funding sources. The funding plan is reviewed annually by the RRC and is regularly updated to incorporate actual results and updated forecast information.



Our large customer base and strong capital position reduce our reliance on wholesale funding.

Customer deposits provide a strong funding base.

## Wholesale Funding Maturities <sup>(1)</sup>

(Canadian \$ in millions) As at October 31, 2016	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
Deposits from banks	5,457	358	202	69	6,086	28	181	6,295
Certificates of deposit and commercial paper	14,282	20,511	9,978	9,679	54,450	810	-	55,260
Bearer deposit notes	917	678	2,297	952	4,844	500	-	5,344
Asset-backed commercial paper (ABCP)	1,516	1,882	570	-	3,968	-	-	3,968
Senior unsecured medium-term notes	1,180	2,245	600	6,553	10,578	12,029	20,269	42,876
Senior unsecured structured notes <sup>(2)</sup>	1	-	-	5	6	38	2,149	2,193
Covered bonds and securitizations								
Mortgage and HELOC securitizations	-	684	430	1,520	2,634	2,563	12,908	18,105
Covered bonds	-	2,682	-	-	2,682	533	16,563	19,778
Credit card securitizations	-	1,058	77	-	1,135	693	2,475	4,303
Subordinated debt <sup>(3)</sup>	-	466	100	-	566	-	5,100	5,666
Other <sup>(4)</sup>	-	-	671	4,694	5,365	1,173	-	6,538
<b>Total</b>	<b>23,353</b>	<b>30,564</b>	<b>14,925</b>	<b>23,472</b>	<b>92,314</b>	<b>18,367</b>	<b>59,645</b>	<b>170,326</b>
Of which:								
Secured	1,516	6,306	1,748	6,214	15,784	4,962	31,946	52,692
Unsecured	21,837	24,258	13,177	17,258	76,530	13,405	27,699	117,634
<b>Total <sup>(5)</sup></b>	<b>23,353</b>	<b>30,564</b>	<b>14,925</b>	<b>23,472</b>	<b>92,314</b>	<b>18,367</b>	<b>59,645</b>	<b>170,326</b>

(1) Wholesale unsecured funding primarily includes funding raised through the issuance of marketable, negotiable instruments. Wholesale funding excludes repo transactions and bankers' acceptances, which are disclosed in the contractual maturity table in Note 29 on page 202 of the financial statements, and excludes ABCP issued by certain ABCP conduits that is not consolidated for financial reporting purposes.

(2) Primarily issued to institutional investors.

(3) Includes certain subordinated debt instruments reported as deposits or other liabilities for accounting purposes. Subordinated debt is reported in this table in accordance with recommended Enhanced Disclosure Task Force disclosures.

(4) Refers to Federal Home Loan Bank (FHLB) advances.

(5) Total wholesale funding consists of Canadian-dollar-denominated funding of \$54.1 billion and U.S.-dollar and other foreign-denominated funding of \$116.2 billion as at October 31, 2016.

## Regulatory Developments

The Net Stable Funding Ratio (NSFR) was finalized by the Basel Committee on Banking Supervision in 2015 and is expected to come into force on January 1, 2018. The NSFR is a regulatory measure that assesses the assumed stability of a bank's funding profile in relation to the assumed liquidity value of a bank's assets. OSFI is expected to issue a consultative paper outlining the domestic implementation of the NSFR during 2016. We are assessing the impact of this change, which could increase funding costs in certain of our businesses depending on the final rules, and we are preparing to comply with and report on this pending regulatory requirement.

## Credit Ratings

The credit ratings assigned to BMO's short-term and senior long-term debt securities by external rating agencies are important in the raising of both capital and funding to support our business operations. Maintaining strong credit ratings allows us to access capital markets at competitive pricing levels. Should our credit ratings experience a downgrade, our cost of funding would likely increase significantly and our access to funding and capital through capital markets could be reduced. A material downgrade of our ratings could also have other consequences, including those set out in Note 8 on page 161 of the financial statements.

The credit ratings assigned to BMO's senior debt by rating agencies are indicative of high-grade, high-quality issues. Standard & Poor's (S&P) and Fitch have a stable outlook. Moody's and DBRS have a negative outlook pending further details on the government's approach to implementing a bail-in regime for Canada's domestic systemically important banks.

As at October 31, 2016

Rating agency	Short-term debt	Senior long-term debt	Subordinated debt - NVCC	Outlook
Moody's	P-1	Aa3	Baa1	Negative
S&P	A-1	A+	BBB	Stable
Fitch	F1+	AA-	na	Stable
DBRS	R-1 (high)	AA	A (low)	Negative

na - not applicable



## Operational Risk

**Operational risk** is the potential for loss resulting from inadequate or failed internal processes or systems, human interactions or external events, but excludes business risk, credit risk and market risk.

BMO is exposed to potential losses arising from a variety of operational risks, including process and control failure, theft and fraud, regulatory non-compliance, business disruption, information security breaches, cyber threats and exposure related to outsourcing, as well as damage to physical assets. Operational risk is inherent in all our business and banking activities, including the processes and controls used to manage our risks. While operational risk can never be fully eliminated, it can be managed to reduce exposure to financial loss, reputational harm and regulatory sanctions.

Consistent with the management of risk across the organization, we employ the three-lines-of-defence approach to operational risk. Operational risk management is executed by business units as the first line of defence, overseen by ERPM Operational Risk Management (ORM) and other CSAs as the second line of defence, governed by a robust committee structure and supported by a comprehensive set of policies, standards and operating guidelines. The Corporate Audit Division (CAD), as the third line of defence, verifies our adherence to controls and highlights opportunities to strengthen our process.

### Operational Risk Governance

The Operational Risk Committee (ORC), a sub-committee of the Risk Management Committee (RMC), is the main oversight and governance committee for all operational risk management matters. As part of its governance responsibilities, the ORC provides effective challenge to the policies, standards, operating guidelines, methodologies and tools that give effect to the governing principles of the Operational Risk Management Framework (ORMF). These governance documents are reviewed on a regular basis to ensure they incorporate sound practices and are consistent with our risk appetite. Regular analysis and reporting of our enterprise operational risk profile to the various committees (ORC, RMC and RRC) are important elements of our 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 portfolio profiles. We continue to invest in our reporting platforms to support timely and comprehensive reporting capabilities that 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, with the CROs of businesses providing governance and oversight for their respective units and CSAs providing additional governance and oversight. Independent risk management oversight is provided by the ERPM Operational Risk Management function (ERPM ORM), which is responsible for operational risk strategy, policies, management and governance. ERPM ORM establishes and maintains the Operational Risk Management Framework (ORMF), which defines the processes used by the first line of defence to identify, measure, manage, mitigate, monitor and report key operational risk exposures, losses and near miss operational risk events with significant potential impact. The ORMF also defines the processes by which the ERPM ORM team, as the second line of defence, develops, communicates, supports, monitors and assesses the first line in its management of operational risk. Operational Risk Officers (OROs) within ERPM ORM are utilized to independently assess group operational risk profiles, identify material exposures and potential weaknesses in processes and controls, and recommend appropriate mitigation strategies and actions.

The key programs, methodologies and processes in the ORMF are highlighted below:

- Risk Control Assessment (RCA) is an established process used by our operating groups to identify the key risks associated with their businesses and the controls required for risk mitigation. The RCA 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. On an aggregate basis, RCA results also provide an enterprise-level view of operational risks relative to risk appetite, so that key risks can be appropriately identified, documented, managed and mitigated.
- Process Risk Assessment (PRA) provides a deeper view by identifying key risks and controls in our important business processes, which may span multiple business units. The PRA process enables a greater understanding of our key processes, which facilitates more effective oversight and appropriate risk mitigation.
- BMO's initiative assessment and approval process is used to assess, document and approve qualifying initiatives when new business, services and products are 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 CSAs identify metrics related to their material operational risks. These KRIs are used in monitoring operational risk profiles and their overall relation to our risk appetite, are subject to review and challenge by the ERPM ORM team, and are linked to thresholds that trigger management action.
- Internal loss data serves as an important means of assessing our operational risk exposure and identifying opportunities for future risk prevention measures. In this assessment, internal loss data is analyzed and benchmarked against external data. Material trends are regularly reported to the ORC, RMC and RRC to enable preventative and corrective action to be taken where appropriate. BMO is a member of the Operational Risk Data Exchange Association, the American Bankers Association and other international and national associations of banks that share loss data information anonymously to assist in risk identification, assessment and modelling.
- BMO's operational risk management training programs seek to ensure that our employees are qualified and equipped to execute the ORMF strategy consistently, effectively and efficiently.
- Effective business continuity management provides us with the capability to maintain, manage and recover critical operations and processes in the event of a business disruption, thereby minimizing any adverse effects on our customers and other stakeholders.
- BMO's Corporate Risk & Insurance team provides a second level of mitigation for certain operational risk exposures. We purchase insurance where required by law, regulation or contractual agreement, and where it is economically attractive and practicable to mitigate our risks, to provide adequate protection against unexpected material loss.

Executing our ORMF strategy also involves continuing to strengthen our risk culture by promoting greater awareness and understanding of operational risk within our lines of defence through training and communication as well as the day-to-day execution and oversight of the ORMF, including the identification, management, monitoring, mitigation and reporting of operational risks. We continue to invest in resources to further strengthen our second line of defence support and oversight of the first line. A primary objective of the ORMF is to ensure that our operational risk profile is consistent with our risk appetite and supported by adequate capital.

### Operational Risk Capital and Stress Testing

BMO currently uses the Advanced Measurement Approach (AMA), a risk-sensitive capital model, to determine both economic and regulatory capital requirements for managing operational risk. The AMA Capital Model uses a loss distribution approach along with the four elements required to support the measurement of our operational risk exposure. Internal and external loss data are used as inputs to the AMA Capital Model and, based on shared attributes, are grouped into cells which include operating group, business activity or event type. Minimum enterprise operational risk capital is determined at a specific upper confidence limit of the enterprise total loss distribution (99.9% quantile for regulatory capital and 99.95% quantile for Economic Capital). Business environment and internal control factors are used for post-modelling adjustments, and these are subject to regular review in order to identify and understand risk drivers and to confirm consistency in application across the organization. Scenarios are used to verify the distributions and correlations used to model capital, to provide management with a better understanding of low-frequency, high-severity events and to assess enterprise preparedness for events that could create risks that exceed our risk appetite. We also use scenario analysis as part of our stress testing program, which measures the potential impact of plausible operational, economic, market and credit events on our operations and capital, and allows us to manage tail risk exposure and to confirm the adequacy of our operational risk capital.

### Regulatory Developments

The Basel Committee on Banking Supervision has proposed a new approach to the calculation of regulatory operational risk capital requirements, known as the Standardized Measurement Approach (SMA). The SMA is expected to be finalized in early 2017. It is less risk-sensitive but is intended to promote comparability of risk-based capital measures, as well as reduce model complexity. We are assessing the potential impact of the SMA on our capital requirements and we continue to monitor industry and regulatory developments. While the impact is uncertain at this time, SMA has the potential to increase BMO's operational risk capital requirements. For additional discussion on regulatory developments related to capital management, please refer to the Enterprise-Wide Capital Management section starting on page 70.

## Model Risk

**Model risk** is the potential for adverse consequences following from decisions based on incorrect or misused model results. These adverse consequences can include financial loss, poor business decision-making or damage to reputation.

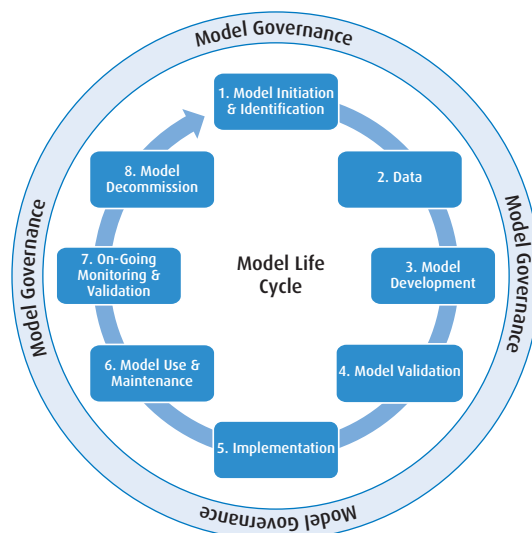
Models are quantitative tools that apply statistical, economic and other quantitative techniques and assumptions to process input data into quantitative estimates. BMO uses models ranging from very simple models that produce straightforward estimates to highly sophisticated models that value complex transactions or provide a broad range of forward-looking estimates.

The results from these models 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. For example, BMO uses models as a core risk management tool to measure exposure to specific risks through stress testing, to value and price transactions, to evaluate credit, market and operational risk regulatory capital requirements and to measure risks on an integrated basis using Economic Capital.

Quantitative tools provide important insights and are effective when used within a framework that controls and mitigates 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 to provide reasonable results.

## Model Risk Management

Risk is inherent in models because model results are estimates that rely on statistical techniques and data to simulate reality. Model risk also arises from potential misuse. Model risk is governed at BMO by the enterprise-wide Model Risk Management Framework, which covers the model life cycle.



This framework sets out an end-to-end approach to model risk governance across the model life cycle and helps to confirm that model risk remains aligned with BMO's enterprise-wide risk appetite. The framework includes BMO's Model Risk Corporate Policy, Model Risk Corporate Standard and Model Risk Guidelines, which outline explicit principles for managing model risk, detail model risk 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, Model Validation and the Model Governance group are the second line of defence, and the Corporate Audit Division is the third line of defence.

The Model Governance group is responsible for the administration of the Model Risk Management Framework, the effectiveness of our model processes and the overall management of model risk. The Model Risk Management Committee, a cross-functional group representing all key stakeholders across the enterprise (model owners, users, developers and validators and the Model Governance group) and a sub-committee of the RMC, meets regularly to help direct the bank's use of models, to oversee the development, implementation and maintenance of the Model Risk Management Framework, provide effective challenge and discuss requirements for governing the enterprise's models.

### Model Development and Validation

Models are developed, implemented and used to meet specific business objectives, including applicable regulatory requirements. Model owners, in consultation with model developers and other stakeholders, determine the design, objectives, intended use and desired functionality of models, and have overall responsibility for ensuring that every model complies with BMO's policies and approved terms of use. Model developers assist the model owners by proposing model solutions, identifying data availability and limitations, and developing and implementing models that address their intended purposes. They do so by engaging model owners and other key stakeholders in the development and implementation processes, and by evaluating and documenting alternatives and model characteristics, outputs, strengths and weaknesses. Our independent Model Validation group reviews the development documentation, results and analysis generated by the model development teams to evaluate whether a proposed model is conceptually and statistically sound, achieves its objectives and is fit for its intended use without creating material model risk. Observations are made for the guidance of model owners, users and developers, remediation of material deficiencies may be required and, unless an exception is obtained in accordance with BMO's policy, approval from the Model Validation group is required before a model can be used. Where a methodology or quantitative tool is not considered to be materially reliant on advanced statistical techniques or does not otherwise meet the definition of a model, the developers and users of such methodology or tool are nevertheless expected to provide appropriate documentation and ensure effective independent review and challenge by knowledgeable BMO employees and managers.

### Model Use and Monitoring

Model owners and other model users are accountable for the appropriate use of models for business decision-making and for the proper care and maintenance of models throughout the model life cycle. The development and validation processes provide guidance to ensure that models can be used effectively within an appropriate range of use, that model limitations are known and that model risk mitigants are implemented. When in use, models are subject to ongoing monitoring, including outcomes analysis and periodic reviews. Ongoing monitoring and outcomes analysis are part of the evaluation process that confirms the continuing validity and adequate performance of each model over time. These techniques and other controls are applied to mitigate potential issues and to help ensure continuing acceptable model performance. All models in use are subject to periodic scheduled reviews, with the frequency based on a model's risk rating, and to earlier reviews if business judgment, triggers or other ongoing monitoring tools indicate that a model's performance may be inadequate. Scheduled reviews require the model owners and developers to assess a model's continuing suitability for use, and such assessment is subject to independent review by the Model Validation group.

### Model Validation, Outcomes Analysis and Back-Testing

Once models are validated, approved and in use, they are subject to regular validation which includes ongoing monitoring and outcomes analysis. As a key component of the outcomes analysis, back-testing compares model results against actual observed outcomes. This analysis serves to confirm the validity and performance of each model over time, and helps to ensure that appropriate controls are in place to address identified issues and enhance a model's overall performance.

All models used within BMO are subject to validation and ongoing monitoring and are used in accordance with our Model Risk Management framework. These include a wide diversity of models ranging from stress loss, market, credit and operational risks to valuation to anti-money laundering models. We highlight a few key applications of this framework below:

**Credit Risk** – The Credit Risk Model Validation Guidelines are an important support for BMO’s Model Risk Corporate Policy. These guidelines include clear and detailed requirements for the back-testing of all credit risk rating models.

The process for back-testing the Probability of Default (PD) model computations includes comparing PD estimates generated by credit risk models against the actual or realized default rates across all obligor ratings. This process also includes examining statistical evidence to confirm that default rates accurately capture sampling variability over time.

The comprehensive validation of a risk rating system involves various prescribed tests and analyses that measure discriminatory power, calibration and dynamic properties, with support from migration analysis. Additional tests or analyses are used to validate borrower risk rating grades and probability of default results.

As with any analysis, judgment is applied in determining which of the various factors, such as data limitations, might affect the overall relevance of a given validation approach or interpretation of statistical analysis. Similar back-testing is applied to the Loss Given Default (LGD) and Exposure at Default (EAD) model computations.

Annual validations of all material models in use are conducted to confirm they perform as intended and that they continue to be fit for use. An annual validation includes a qualitative and quantitative assessment conducted by model developers, which is reviewed and effectively challenged by the Model Validation group, with all conclusions reported to senior management.

**Trading and Underwriting Market Risk** – All internal models used in determining regulatory capital and Economic Capital for trading and underwriting market risk have their Value at Risk (VaR) results back-tested regularly. The bank’s internal VaR model is back-tested daily, and the one-day 99% confidence level VaR at the local and consolidated BMO levels is compared against the realized theoretical Profit & Loss (P&L) calculation, which is the daily change in portfolio value that would occur if the portfolio composition remained unchanged. If the theoretical 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 the Board and our regulators. This process monitors the quality and accuracy of the internal VaR model results and assists in refining overall risk measurement procedures.

**Structural Market Risk** – Back-testing of our structural market risk models is performed monthly and reported quarterly. For products with a scheduled term, such as mortgages and term deposits, the model forecasts of prepayments or redemptions are compared against the actual outcomes observed. For products without a scheduled term, such as credit card loans and chequing accounts, the modelled balance run-off profiles are compared against actual balance trends.

The variances between model forecasts and the actual outcomes experienced are measured against pre-defined risk materiality thresholds. To ensure variances are within the tolerance range, actions such as model review and parameter recalibration are taken. Performance is assessed by analyzing model overrides and tests conducted during model development, such as back-testing and sensitivity testing.

## Insurance Risk

**Insurance risk** is the potential for loss as a result of actual experience being different 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 risk is inherent in all our insurance products, including annuities and life, accident and sickness, and creditor insurance, as well as in our 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 related to premium payments, withdrawals or loans, policy lapses and surrenders, and other voluntary terminations will differ from the behaviour assumed in the pricing calculations; and
- Expense risk – the risk that actual expenses associated with acquiring and administering policies and processing claims will exceed the expenses assumed in the pricing calculations.

BMO’s risk governance practices provide effective independent oversight and control of risk within the insurance business. BMO’s Insurance Risk Management Framework comprises 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; and the Own Risk and Solvency Assessment. All of these are overseen by internal risk committees and the BMO Life Assurance and BMO Life Insurance Boards of Directors. The Insurance Risk Management Committee for BMO Insurance oversees and reports on risk management activities on a quarterly basis to the insurance companies’ Boards of Directors. Senior management within the various lines of business is responsible for managing insurance risk, with oversight provided by the CRO, BMO Insurance, who reports to the CRO, Wealth Management.

A robust product approval process is the cornerstone of the insurance risk management framework for identifying, assessing and mitigating 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, which involves transactions that transfer insurance risk to independent reinsurance companies, is also used to manage our exposure to insurance risk by diversifying risk and limiting claims.

## Legal and Regulatory Risk

**Legal and regulatory risk** is the potential for loss or harm that arises from legislation, contracts, non-contractual rights and obligations, and disputes. This includes the risks of failing 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 our reputation.

BMO's success relies in part on our ability to manage our exposure to legal and regulatory risk prudently. The financial services industry is highly regulated, and we anticipate intense ongoing scrutiny from our supervisors in the oversight process and strict enforcement of regulatory requirements as governments and regulators around the world continue with reforms intended to strengthen the stability of the financial system. Banks globally continue to be subject to fines and penalties for a number of regulatory and conduct issues. As rulemaking and supervisory expectations evolve, we monitor developments to enable BMO to respond to and implement any required changes.

Under the direction of the General Counsel, the Legal and Compliance Group (LCG) maintains enterprise-wide frameworks that identify, measure, manage, monitor and report on legal and regulatory risk. LCG also works with operating groups and other CSAs to identify legal and regulatory requirements, trends and potential risks, recommend mitigation strategies and actions, and oversee litigation involving BMO. Another area of focus for legal and compliance risk management and operating groups is the oversight of fiduciary risk related to BMO's businesses that provide products or services giving rise to fiduciary duties to clients. Of particular importance are policies and practices that address the responsibilities of a business to a client, including service requirements and expectations, client suitability determinations, and disclosure obligations and communications.

Physical protection, as well as the safeguarding of our employees, customers, information and assets from criminal risk, is a top priority. Criminal risk 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, violence, cyber-crime, bribery, and corruption. BMO has transformed its management of criminal risk through the implementation of a robust Criminal Risk Management Framework, which is designed to prevent, detect, respond to and report on criminal risk using a three-lines-of-defence approach and through enhanced centralized management and oversight.

As governments globally seek to curb corruption to counter its negative effects on political stability, sustainable economic development, international trade and investment and in other areas, BMO's Anti-Corruption Office, through its global program and framework, has articulated the key principles and activities required to oversee compliance with anti-corruption legislation in jurisdictions where BMO operates, including providing guidance so that corrupt practices can be identified and avoided and that allegations of corrupt activity can be rigorously investigated.

International regulators continue to focus on anti-money laundering and other related measures, heightening their expectations concerning the quality and efficacy of anti-money laundering and related programs and penalizing institutions that fail to meet these expectations. Under the direction of the Chief Anti-Money Laundering Officer, the Anti-Money Laundering Office is responsible for the governance, oversight and assessment of the principles and procedures designed to help ensure compliance with regulatory requirements and risk parameters related to anti-money laundering, anti-terrorist financing and sanctions measures.

All of these frameworks reflect the three-lines-of-defence operating model described previously. The operating groups and CSAs manage day-to-day risks by complying with corporate policies and standards, while LCG teams 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 how we conduct business. Working with the operating groups and other CSAs, LCG continues to diligently assess and analyze the implications of regulatory changes. We devote substantial resources to implementing the systems and processes required to comply with new regulations while helping meet BMO customers' needs and demands.

We continue to respond to other global regulatory developments, including capital and liquidity requirements under the Basel Committee on Banking Supervision (BCBS) global standards (Basel III), which we expect will put upward pressure on the amount of capital we are required to hold over time. Other global regulatory developments include over-the-counter (OTC) derivatives reform, consumer protection measures and specific financial reforms, such as the *Dodd-Frank Wall Street Reform and Consumer Protection Act* (Dodd-Frank). For additional discussion on regulatory developments relating to capital management and liquidity and funding risk, please refer to the Enterprise-Wide Capital Management section starting on page 70 and the Liquidity and Funding Risk section starting on page 100. For additional discussion regarding the impact of certain potential fiscal policy changes on our results, please see Critical Accounting Estimates – Income Taxes and Deferred Tax Assets on page 114.

**Bank Resolution and Bail-in** – In June 2016, legislation required to implement a bail-in regime was passed by the Canadian government to enhance Canada's bank resolution capabilities in line with international efforts. For additional discussion on the bail-in regime, please refer to the Enterprise-Wide Capital Management section starting on page 70.

**Housing Market Reforms** – In October 2016, the federal government announced preventative measures for the housing market in Canada, including standardizing eligibility criteria for high- and low-ratio insured mortgages, launching a consultation process with market participants on lender risk sharing of loan losses on insured mortgages that default, and addressing tax fairness through changes to the capital gains tax exemption on the sale of a principal residence. We are assessing the impact of these measures on our operations.

**Federal Budget** – The Federal budget was tabled in March 2016. On October 25, 2016, the federal government introduced Bill C-29, *Budget Implementation Act, 2016, No. 2*. If enacted, the Bill will affect the banking industry in Canada through amendments to the *Bank Act*. The proposed amendments will consolidate the consumer provisions under the *Bank Act* to create a comprehensive federal financial consumer protection framework for banks and respond to a trilogy of Supreme Court of Canada cases (referred to as Marcotte) by enhancing federal paramountcy over consumer protection with respect to banking products and services.

**Financial Reforms** – Dodd-Frank reforms include heightened consumer protection, revised regulation of the OTC derivatives markets, heightened prudential standards, broader application of leverage and risk-based capital requirements, and restrictions (the *Volcker Rule*) on proprietary trading and the ownership and sponsorship of private investment funds by banks and their affiliates. We have completed a significant review of our operations and now have policies and systems in place to assess, monitor and report on *Volcker Rule* compliance across the enterprise. U.S. regulators have extended until July 21, 2017 the date by which banking entities must cause their investments in and relationships with "legacy" private investment funds established before December 31, 2013 to conform with the *Volcker Rule*. We are implementing a plan to comply with such requirements.



**FBO Rule** – In February 2014, the Federal Reserve Board finalized the Foreign Banking Organizations (FBO) Rule, which implements the Dodd-Frank enhanced prudential standards for the U.S. operations of non-U.S. banks, such as BMO. The FBO Rule establishes new requirements relating to an intermediate holding company structure, risk-based capital and leverage requirements, capital stress testing requirements, U.S. risk management and risk governance, liquidity risk management and liquidity stress testing frameworks. In December 2014, BMO submitted to the Federal Reserve Board our implementation plan for meeting these requirements by the effective date of July 1, 2016. In accordance with the FBO Rule, BMO certified our compliance with the FBO Rule requirements to the Federal Reserve Board in July 2016.

**Risk Governance Framework** – In September 2014, the Office of the Comptroller of the Currency issued guidelines that establish heightened standards for large national banks with average total consolidated assets of US\$50 billion or more, which includes BMO Harris Bank N.A. The guidelines set out minimum standards for the design and implementation of a bank's risk governance framework and minimum standards for oversight of that framework by a bank's board of directors. The framework must ensure a bank's risk profile is easily distinguished and separate from that of its parent for risk management purposes. A bank's board of directors is responsible for informed oversight of, and providing credible challenge to, management's risk management recommendations and decisions. We have implemented a plan to comply with these guidelines.

**Derivatives Reform** – Under Dodd-Frank, most OTC derivatives transactions are now subject to a comprehensive regulatory regime. Certain derivatives transactions are now required to be centrally cleared and executed on an electronic platform and are subject to reporting and business conduct requirements. In a number of jurisdictions, OTC derivatives transactions must now be reported to designated trade repositories. Capital and margin requirements for derivatives are currently being considered by international regulators, and margin requirements for non-centrally cleared derivatives have been adopted in a number of jurisdictions, including Canada, Europe and the United States. Margin rules will require the exchange of variation margin and initial margin, both of which are designed to secure performance on non-centrally cleared derivatives transactions between covered entities. BMO will be subject to variation margin rules beginning March 1, 2017 and initial margin rules beginning no earlier than September 1, 2018 and no later than September 1, 2019. The U.S. Securities and Exchange Commission (SEC) has adopted rules for security-based swap dealers and other participants in the security-based swap market, including registration requirements. The date or dates for registration, which depend on additional SEC rulemaking, have not been set. BMO is preparing for the impact of these rules and requirements.

**Synthetic Equity Arrangement Rules** – In June 2016, the synthetic equity arrangement rules (SEA Rules) were passed into law in Canada. The SEA Rules would, in certain circumstances, deny any deduction for dividends that are paid or become payable after April 2017. We expect that the effect of the SEA Rules will be to increase our effective tax rate and negatively impact our earnings in fiscal 2017.

**DOL Fiduciary Rule** – In April 2016, the U.S. Department of Labor issued a fiduciary conflict of interest rule that will apply to certain sales and investment activities previously not treated as fiduciary. The rule will require changes to service delivery and compensation models for brokers, banks, investment advisers, insurance companies and consultants that work with individual retirement accounts and employee benefit plans. BMO is implementing plans to comply with this rule.

The General Counsel and the Chief Compliance Officer (CCO) regularly report to the ACRC of the Board and senior management on the effectiveness of our Enterprise Compliance Program (ECP) which, using a risk-based approach, identifies, assesses and manages compliance with applicable legal and regulatory requirements. The ECP directs operating groups and CSAs to maintain compliance policies, procedures and controls to meet these requirements. Under the direction of the CCO, LCG identifies and reports on gaps and deficiencies, and tracks remedial action plans. The Chief Anti-Money Laundering Officer also regularly reports to the ACRC.

All BMO employees must complete annual legal and regulatory training on topics such as anti-corruption, anti-money laundering and privacy. This is done in conjunction with our Code of Conduct training, which tests employees' knowledge and understanding of how they are required to behave as employees of BMO.

## Business Risk

**Business risk** arises from the specific business activities of an enterprise and the effects these could have on its earnings.

Business risk encompasses the potential causes of earnings volatility that are distinct from credit, market or operational risk factors. The management of business risk identifies and addresses factors related to the risk that volumes will decrease or margins will shrink without the company having the ability to compensate for this decline by cutting costs.

BMO faces many risks that are similar to those faced by non-financial firms, principally that our profitability, and hence value, may be eroded by changes in the business environment or by failures of strategy or execution. Sources of these risks include, but are not limited to, changing client expectations, adverse business developments and 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.

## Strategic Risk

**Strategic risk** is the potential for loss due to fluctuations in the external business environment and/or the failure to properly respond to these fluctuations as a result of inaction, ineffective strategies or poor implementation of strategies.

Strategic risk arises from external risks inherent in the business environment within which BMO operates, as well as 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 mitigated through an effective strategic risk management framework, and certain of these risks, including economic, geopolitical and regulatory risks, can be assessed through stress testing.

BMO's Office of Strategic Management (OSM) oversees our strategic planning processes and works with the lines of business, along with ERP, Finance and other CSAs, to identify, monitor and mitigate strategic risk across the enterprise. Our rigorous strategic management framework encourages a consistent approach to the development of strategies and incorporates information linked to financial commitments.

The OSM 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 a consideration of the results of stress testing as an input into strategic decision-making, as appropriate. The potential impacts of changes in the business environment, such as broad industry trends and the actions of competitors, are considered as part of this process and inform strategic decisions within each of our 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 current and potential future business environments.

Performance objectives established through the strategic management process are monitored regularly and reported upon 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 damage to BMO's reputation resulting from environmental or social concerns related to BMO or its customers. Environmental and social risk is often associated with credit, operational and reputation risk.

In order to manage our business responsibly, we consider the impact of our decisions on our various stakeholders. This commitment is embedded in our Board-approved Code of Conduct. We also expect our suppliers to behave in a responsible manner. Our expectations from suppliers – our standards for integrity, fair dealing and sustainability – are outlined in BMO's Supplier Code of Conduct. Environmental and social risk management activities are overseen by the Environmental, Social and Governance (ESG) group and the Environmental Sustainability (ES) group, with support from our lines of business and other CSAs. BMO's Sustainability Council, which is comprised of senior leaders from business and CSAs across our organization, provides insight and guidance for our environmental and social initiatives.

Environmental and social risk covers a broad spectrum of issues, such as climate change, biodiversity, ecosystem health, pollution, waste and the unsustainable use of water and other resources, as well as risks to the livelihoods, health, human rights and cultural heritage of communities. We work with external stakeholders to understand the impact of our operations and financing decisions in the context of these issues, and we apply this understanding in order to determine the consequences for our businesses. As part of our enterprise risk management framework, we evaluate the environmental and social impact of our clients' operations, as well as the impact of their industry sectors. Environmental and social risks associated with credit transactions are managed within BMO's credit and counterparty risk management framework. BMO has also developed and implemented specific financing guidelines on environmental and social risk for specific lines of business. Enhanced due diligence is applied to transactions with clients operating in environmentally sensitive industry sectors, such as forestry or mining, and we avoid doing business with borrowers who have poor environmental and social risk management track records.

BMO applies the Equator Principles and the World Bank/International Finance Corporation environmental and social screening process to assess and manage environmental and social risk in project finance transactions. These principles have been integrated into our credit risk management framework. We are a long-time signatory and participant of the Carbon Disclosure Project – a global initiative which assembles and publishes corporate disclosure on greenhouse gas emissions and climate change.

BMO is a signatory to the UN Principles for Responsible Investment, a framework designed to encourage sustainable investing through the integration of ESG issues into investment, decision-making and ownership practices. BMO's Canadian operations joined the Responsible Investment Association in 2016.

The ESG group is responsible for coordinating the development and maintenance of an enterprise-wide strategy that meets BMO's overarching environmental and social responsibilities. The ES group is responsible for establishing and maintaining an environmental management system that is aligned with ISO 14001, and for setting objectives and targets related to the bank's own operations. This includes our Environmental Policy which was updated in 2016. BMO's operating groups (Procurement and Strategic Sourcing, and Corporate Real Estate) are responsible for putting the appropriate operating procedures in place.

To keep informed of emerging issues, we participate in global forums with our peers, maintain an open dialogue with our internal and external stakeholders, and continuously monitor and evaluate policy and legislative changes in the jurisdictions where we operate. We publicly report our environmental and social performance and targets in our annual Environmental, Social and Governance (ESG) Report and Public Accountability Statement (PAS), and on our Corporate Responsibility website. Selected environmental and social indicators in the ESG Report and PAS are assured by a third party.

## Reputation Risk

**Reputation risk** is the potential for a negative impact on BMO that results from the deterioration of BMO's reputation. Potential negative impacts include revenue loss, a decline in customer loyalty, litigation, regulatory sanctions or additional regulatory oversight, and a decline in BMO's share price.

BMO's reputation is built on our commitment to high standards of business conduct and ethics, and is one of our most valuable assets. By protecting and maintaining our reputation, we safeguard our brand, increase shareholder value, reduce our cost of capital, improve employee engagement and maintain customer loyalty.

We believe that active, ongoing and effective management of reputation risk is best achieved by considering reputation risk issues in the course of strategy development, strategic and operational implementation, and transactional or initiative decision-making, as well as in day-to-day decision-making.

BMO's Code of Conduct provides our employees and directors with guidance on the behaviour that is expected of them, so that they can make the right choice in decisions that affect their work. The Code of Conduct is the foundation of our ethical culture, and we continually reinforce the principles it sets out for our employees in order to minimize risks to our reputation that may result from poor decisions or behaviour.

Reputation risk is also managed through our corporate governance practices and enterprise risk management framework. BMO's Reputation Risk Management Committee reviews instances of significant or heightened reputation risk to BMO.

# Accounting Matters and Disclosure and Internal Control

## Critical Accounting Estimates

The most significant assets and liabilities for which we must make estimates include: allowance for credit losses; financial instruments measured at fair value; pension and other employee future benefits; impairment of securities; provisions for income taxes and deferred tax assets; goodwill and intangible assets; purchased loans; insurance-related liabilities; and provisions including legal reserves. We make judgments in assessing whether substantially all risks and rewards have been transferred in respect of transfers of financial assets and whether we control SEs. These judgments are discussed in Notes 6 and 7, respectively, on page 159 of the financial statements. Note 17 on page 177 of the financial statements discusses the judgments made in determining the fair value of financial instruments. If actual results were to differ from the estimates we make, the impact would be recorded in future periods. We have established detailed policies and control procedures that are intended to ensure the judgments we make in determining the estimates are well controlled, independently reviewed and consistently applied from period to period. We believe that our estimates of the fair value of BMO's assets and liabilities are appropriate.

For a more detailed discussion of the use of estimates, please see Note 1 on page 144 of the financial statements.

### Allowance for Credit Losses

The allowance for credit losses represents our best estimate of probable credit losses in the portfolio of loans and acceptances. This requires significant judgment regarding key assumptions, including the probability of default, severity of loss, the timing of future cash flows and the valuation of collateral. One of our key performance measures is the provision for credit losses as a percentage of average net loans and acceptances. Over the 10 years prior to 2016, our average annual ratio has ranged from a high of 0.88% in 2009 to a low of 0.19% in 2015. This ratio varies with changes in the economy and credit conditions. If we were to apply these high and low ratios to average net loans and acceptances in 2016, our provision for credit losses would range from \$680 million to \$3,148 million and our allowance for credit losses would range from \$1,979 million to \$4,447 million. Our provision for credit losses in 2016 was \$815 million and our allowance for credit losses at October 31, 2016 was \$2,114 million. Additional information on the process and methodology for determining the allowance for credit losses can be found in the discussion of Credit and Counterparty Risk on page 88 as well as in Note 4 on page 153 of the financial statements.

### Financial Instruments Measured at Fair Value

BMO records a number of items at fair value, including its trading and available-for-sale securities, derivatives, securities lent and certain assets and liabilities designated under the fair value option. Fair value represents our estimate of the amount we would receive, or would be required to pay in the case of a liability, in a current transaction between willing parties. We employ a fair value hierarchy to categorize the inputs we use in valuation techniques to measure fair value. The extent of our use of quoted market prices (Level 1), internal models using observable market information (Level 2) and internal models without observable market information (Level 3) in the valuation of securities, derivative assets and derivative liabilities as at October 31, 2016, as well as a sensitivity analysis of our Level 3 financial instruments, is disclosed in Note 17 on page 177 of the financial statements.

Our valuation models use general assumptions and market data, and therefore do not reflect the specific risks and other factors that could affect a particular instrument's fair value. Valuation Product Control (VPC), a group independent of the trading lines of business, verifies the fair values at which financial instruments are recorded. For instruments that are valued using models, VPC identifies situations where valuation adjustments must be made to the model estimates to arrive at fair value. As a result, we incorporate certain adjustments when using internal models to establish fair values. These fair value adjustments take into account the estimated impact of credit risk, liquidity risk and other items, including closeout costs. For example, the credit risk adjustment for derivative financial instruments incorporates credit risk into our determination of fair values by taking into account factors such as the counterparty's credit rating, the duration of the instrument and changes in credit spreads. We also incorporate an estimate of the implicit funding costs borne by BMO for over-the-counter derivative positions (the funding valuation adjustment).

The methodologies used for calculating these adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. Significant changes in methodologies are made only when we believe that a change will result in better estimates of fair value.

### Valuation Adjustments

(Canadian \$ in millions) As at October 31	2016	2015
Credit risk	92	100
Funding risk	60	60
Liquidity risk	43	57
Total	195	217

The impact of tighter credit spreads was largely offset by lower interest rates, resulting in a modest decline in credit risk. Liquidity risk declined due to lower uncertainty in independent market data sources.

### Pension and Other Employee Future Benefits

Our pension and other employee future benefits expense is calculated by our 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. We determine discount rates at each year end for all our plans using high-quality corporate bonds with terms matching the plans' specific cash flows.

Additional information regarding our accounting for pension and other employee future benefits, including a sensitivity analysis for key assumptions, is included in Note 22 on page 188 of the financial statements.

## Impairment of Securities

We have investments in securities issued or guaranteed by Canadian, U.S. and other governments, corporate debt and equity securities, mortgage-backed securities and collateralized mortgage obligations, which are classified as either available-for-sale securities, held-to-maturity securities or other securities. We review held-to-maturity, available-for-sale and other securities at each quarter-end reporting period to identify and evaluate investments that show indications of possible impairment. An investment is considered impaired if there is objective evidence that the estimated future cash flows will be reduced. We consider evidence such as delinquency or default, bankruptcy, restructuring or other evidence of deterioration in the creditworthiness of the issuer, or the absence of an active market. The decision to record a write-down, its amount and the period in which it is recorded could change if management's assessment of those factors were to differ. We do not record impairment write-downs on debt securities when impairment is due to changes in market rates, if future contractual cash flows associated with the debt security are still expected to be recovered.

At the end of 2016, total unrealized losses related to available-for-sale securities for which cost exceeded fair value and an impairment write-down had not been recorded were \$135 million (\$152 million in 2015). Of this amount, \$36 million related to available-for-sale securities for which cost had exceeded fair value for 12 months or more (\$5 million in 2015). These unrealized losses resulted from changes in market interest rates and not from deterioration in the creditworthiness of the issuer.

Additional information regarding our accounting for available-for-sale securities, held-to-maturity securities and other securities and the determination of fair value is included in Note 3 on page 149 and Note 17 on page 177 of the financial statements.

## Income Taxes and Deferred Tax Assets

The provision for income taxes is calculated based on the expected tax treatment of transactions recorded in our Consolidated Statements of Income or Changes in Equity. In determining the provision for income taxes, we interpret tax legislation in a variety of jurisdictions, and record our best estimate of the amount required to settle tax obligations. We also make assumptions about the expected timing of the reversal of deferred tax assets and liabilities. If our interpretations and assumptions differ from those of tax authorities or if the timing of reversals is not as expected, our 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 may be utilized. We are required to assess whether it is probable that our deferred income tax asset will be realized prior to its expiration and, based on all available evidence, determine if any portion of our deferred income tax asset should not be recognized. The factors used to assess the probability of realization are our past experience of income and capital gains, our forecast of future net income before taxes, available tax planning strategies that could be implemented to realize the deferred income tax asset, and the remaining expiration period of tax loss carryforwards. Changes in our assessment of these factors could increase or decrease our provision for income taxes in future periods.

If income tax rates increase or decrease in future periods in a jurisdiction, our provision for income taxes for future periods will increase or decrease accordingly. Furthermore, our 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, a 5% decrease in the U.S. Federal tax rate (from 35% to 30%) would reduce our net deferred tax asset by approximately \$230 million, which would result in a one-time corresponding income tax charge. In addition, however, each 5% decrease in the U.S. Federal tax rate would also increase our annual net income by approximately \$75 million.

In fiscal 2016, we were reassessed by the Canada Revenue Agency (CRA) for additional income taxes in an amount of approximately \$76 million in respect of certain 2011 Canadian corporate dividends. In its reassessment, the CRA denied dividend deductions on the basis that the dividends were received as part of a "dividend rental arrangement." The dividends to which the reassessment relates were received in transactions similar to those addressed in the 2015 Canadian Federal Budget, which introduced prospective rules that apply as of May 1, 2017 for existing arrangements. We remain of the view that our tax filing position was appropriate and intend to challenge the reassessment. If our challenge is unsuccessful, the additional tax expense would negatively impact our net income. For a discussion of the synthetic equity arrangement rules which were passed into law in Canada, see the Legal and Regulatory Risk section on page 110.

Additional information regarding our accounting for income taxes is included in Note 23 on page 192 of the 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 business unit to verify that the recoverable amount of the business unit is greater than its carrying value. If the carrying value were to exceed the recoverable amount of the business unit, an impairment calculation would be performed. The recoverable amount of an asset 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, we employ a discounted cash flow model, consistent with that used when we acquire businesses. 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 our business units in a different manner. Management must exercise judgment and make assumptions in determining fair value, and differences in judgments and assumptions could affect the determination of fair value and any resulting impairment write-down. At October 31, 2016, the estimated fair value of each of our business units was greater than its carrying value.

Definite-lived intangible assets 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. We test definite-lived intangible assets for impairment when circumstances indicate the carrying value may not be recoverable. During the year ended October 31, 2016, we recorded \$nil in impairment of definite-lived intangibles (\$1 million in 2015).

Indefinite life intangible assets are tested annually for impairment. If any intangible assets are determined to be impaired, we write them down to their recoverable amount, the higher of value in use and fair value less costs to sell, when this is less than the carrying value. No such impairment was identified for the years ended October 31, 2016 and 2015. Additional information regarding the composition of goodwill and intangible assets is included in Note 11 on page 169 of the financial statements.

## Purchased Loans

Acquired loans are identified as either purchased performing loans or purchased credit impaired loans (PCI loans), both of which are recorded at fair value at the time of acquisition. The determination of fair value involves estimating the expected cash flows to be received and determining the discount rate to be applied to those cash flows from the loan portfolio. In determining the discount rate, we consider various factors, including our cost to raise funds in the current market, the risk premium associated with the loans and the cost to service the portfolios.

PCI loans are those where the timely collection of principal and interest is no longer reasonably assured as at the date of acquisition. We regularly evaluate what we expect to collect on PCI loans. Changes in expected cash flows could result in the recognition of impairment or a recovery through the provision for credit losses. Estimating the timing and amount of cash flows requires significant management judgment regarding key assumptions, including the probability of default, severity of loss, timing of payment receipts and valuation of collateral. All of these factors are inherently subjective and can result in significant changes in cash flow estimates over the term of a loan.

The purchased performing loans are subject to the same credit review processes we apply to loans we originate. We also assess the portfolio to ensure the remaining credit mark is adequate to cover probable credit losses in the portfolio. This requires judgment regarding assumptions, including the probability of default, severity of loss, timing of future cash flows, and valuation of collateral and estimated life of the loans.

Additional information regarding purchased loans is provided in Note 4 on page 153 of the 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 impact on the valuation of these liabilities would be the result of a change in the assumption for future investment yields. If the assumed yield were to increase by one percentage point, net income would increase by approximately \$66 million. A reduction of one percentage point would lower net income by approximately \$64 million. See the Insurance Risk section on page 109 for further discussion of the impact of changing rates on insurance earnings.

## Provisions

BMO 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 included in making the assessment include a case-by-case assessment of specific facts and circumstances, our 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 amount of the provisions.

Additional information regarding provisions is provided in Note 25 on page 195 of the financial statements.

## Transfers of Financial Assets and Consolidation of Structured Entities

We sell Canadian mortgage loans to third-party Canadian securitization programs, including the Canadian Mortgage Bond program, and directly to third-party investors under the National Housing Act Mortgage-Backed Securities program. We assess whether substantially all of the risks and rewards of the loans have been transferred to determine if they qualify for derecognition. Since we continue 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. We continue to recognize the loans and recognize the related cash proceeds as secured financing in our Consolidated Balance Sheet. Additional information concerning the transfer of financial assets is included on page 77, as well as in Note 6 on page 159 of the financial statements.

In the normal course of business, BMO enters into arrangements with SEs. We are required to consolidate SEs if we determine that we control the SEs. We control an SE when we have power over the entity, exposure or rights to variable returns from our investment and the ability to exercise power to affect the amount of our returns. Additional information concerning BMO's interests in SEs is included on page 77, as well as in Note 7 on page 159 of the financial statements.

### Caution

This Critical Accounting Estimates section contains forward-looking statements. Please see the Caution Regarding Forward-Looking Statements.

## Changes in Accounting Policies in 2016

There were no changes in our accounting policies in 2016.

## Future Changes in Accounting Policies

BMO monitors the potential changes to IFRS proposed by the International Accounting Standards Board (IASB) and analyzes the effect that any such changes to the standards may have on BMO's financial reporting and accounting policies. New standards and amendments to existing standards that will be effective for BMO in the future are described in Note 1 on page 144 of the financial statements.

### Adoption of IFRS 9 Financial Instruments

In July 2014, the IASB issued IFRS 9 *Financial Instruments* (IFRS 9), which addresses impairment, classification, measurement, and hedge accounting. At the direction of our regulator, OSFI, IFRS 9 is effective for the bank for the fiscal year beginning November 1, 2017. Additional guidance relating to the adoption of IFRS 9 has been provided by OSFI in its *Guideline – IFRS 9 Financial Instruments and Disclosures* (OSFI Guideline). The OSFI Guideline is consistent with the guidance provided by the Basel Committee on Banking Supervision (BCBS). Additional information and accounting policies concerning IFRS 9 are discussed below, as well as in Note 1 on page 144 of the financial statements.



## Impairment

The impairment provisions of IFRS 9 are expected to have the largest impact on the bank and will result in the earlier recognition of provisions for credit losses, with the initial increase to the collective allowance on adoption of the standard recorded in retained earnings. The new standard is expected to increase the variability of the provision for credit losses.

IFRS 9 introduces a new single expected credit loss (ECL) impairment model for all financial assets and certain off-balance sheet loan commitments and guarantees. The new ECL model will result in an allowance for credit losses being recorded on financial assets regardless of whether there has been an actual loss event. The most significant impact will be on the loan portfolio. The expected credit loss model requires the recognition of credit losses based on the expected lifetime losses on loans that are either credit impaired or have experienced a significant increase in credit risk since origination, and 12 months of expected losses for all other loans. The expected loss calculations are required to incorporate forward-looking macroeconomic information in determining the final provision. We do not expect significant changes to the accounting related to the specific loan loss allowance or the specific provision for credit losses.

### Key Impairment Modelling Concepts

We will leverage our existing enterprise-wide risk management framework wherever allowable under IFRS 9. Certain key modelling concepts, their application under IFRS 9 and key differences from existing regulatory frameworks are discussed below.

The expected credit loss concept already exists in regulatory and stress testing frameworks. As the objectives of these various frameworks differ, the manner in which the expected credit losses are calculated also differs. The ECL is calculated as a function of the probability of default (PD), the exposure at default (EAD) and the loss given default (LGD), with the timing of the loss also considered.

The PD represents the likelihood that a loan will not be repaid and will go into default in either a 12-month or lifetime horizon. The PD for each individual instrument will incorporate a consideration of past events, current market conditions and reasonable and supportable information about future economic conditions. The bank is developing IFRS 9 specific PD models.

The EAD represents an estimate of the outstanding amount of credit exposure at the time a default may occur. For off-balance sheet and undrawn amounts, EAD includes an estimate of any further amounts to be drawn at the time of default. For IFRS 9, EAD models will be adjusted for a 12-month or lifetime horizon and for macroeconomic factors where appropriate.

The LGD is the amount that may not be recovered in the event of default. LGD takes into consideration the amount and quality of any collateral held. The bank will be using its existing LGD models adjusted to meet the IFRS 9 requirements.

The IFRS 9 terms used above differ from those used in calculating our expected losses for regulatory purposes as follows:

	Regulatory Capital	IFRS 9
PD	<ul style="list-style-type: none"> <li>Through the cycle 12-month loss view</li> <li>The definition of default is generally 90 days past due except for credit cards, which uses 180 days past due</li> </ul>	<ul style="list-style-type: none"> <li>Point-in-time 12-month or lifetime horizon based on past experience, current conditions and reasonable supportable forward-looking information</li> <li>Default definition consistent with regulatory capital</li> </ul>
EAD	<ul style="list-style-type: none"> <li>Includes expected draws prior to default and cannot be lower than current outstanding</li> </ul>	<ul style="list-style-type: none"> <li>Represents the expected exposure across a 12-month or lifetime horizon adjusted for economic conditions and can be lower than the current outstanding</li> </ul>
LGD	<ul style="list-style-type: none"> <li>Downturn LGD based on a severe economic downturn</li> <li>Certain regulatory floors apply</li> <li>Includes direct and indirect costs associated with collection</li> </ul>	<ul style="list-style-type: none"> <li>Expected LGD based on 12-month or lifetime horizon adjusted for reasonable supportable forward-looking information where appropriate</li> <li>No regulatory floors</li> <li>Only direct costs included</li> </ul>
Other		<ul style="list-style-type: none"> <li>Lifetime losses are discounted back from point of default to the balance sheet date</li> </ul>

### Impacts on Governance and Controls

We will be realigning certain internal control practices to address the new requirements of IFRS 9. The two largest areas of impact will be on the development of future economic scenarios and the determination of a significant increase in credit risk. We will establish a governance framework to ensure that the economic scenarios that are developed are reasonable and supportable and take into consideration all reasonably available information about possible future events. Additionally, we will develop a process to monitor our credit practices and portfolio composition to ensure that the definition of a significant increase in credit risk remains appropriate.

We will ensure that all impacted internal controls will be updated in accordance with our internal policies and procedures relating to internal control over financial reporting. All controls will be tested and evaluated for effectiveness in accordance with the criteria established in *Internal Control – Integrated Framework*, issued by the Committee of Sponsoring Organizations of the Treadway Commission in May 2013.

### Impacts on Capital Planning

IFRS 9 is expected to have an impact on our reported capital as a result of any adjustment recorded in retained earnings on adoption of the standard and the anticipated increased responsiveness of the allowance to changes in the credit profile going forward. OSFI and the BCBS have not yet finalized their approach to incorporating into the calculation of our capital ratios any adjustments recorded on transition to IFRS 9. The BCBS has issued its *Consultative Document on the Regulatory treatment of accounting provisions – interim approaches and transitional arrangements* with comments due in January of 2017 to address this issue. To ensure timely and appropriate consideration of capital management issues, the bank has established an IFRS 9 Steering Committee which includes representatives from the bank's capital management team. We are in the process of determining the impact of IFRS 9 adoption on both the financial statements and capital planning.

### Classification and Measurement

The new standard requires that we classify debt instruments based on our business model for managing the assets and the contractual cash flow characteristics of the asset. The business model test determines classification based on the business purpose for holding the asset. Generally, debt instruments will be measured at fair value through profit and loss unless certain conditions are met that permit fair value through other comprehensive income (FVOCI) or amortized cost. Debt instruments that have contractual cash flows representing only payments of principal and interest will be eligible for classification as FVOCI or amortized cost. Gains and losses recorded in other comprehensive income for debt instruments will be recognized in profit or loss on disposal.

Equity instruments would generally be measured at fair value through profit and loss unless we elect to measure at fair value through other comprehensive income. This will result in unrealized gains and losses on equity instruments currently classified as available-for-sale equity securities being recorded in income going forward. Currently, these unrealized gains and losses are recognized in other comprehensive income. Should we elect to record equity instruments at fair value through other comprehensive income, gains and losses would never be recognized in income.

### Hedging

IFRS 9 introduces a new hedge accounting model that expands the scope of hedged items and risks eligible for hedge accounting and aligns hedge accounting more closely with risk management. The new model no longer specifies quantitative measures for effectiveness testing and does not permit hedge de-designation. IFRS 9 includes a policy choice that would allow the bank to continue to apply the existing hedge accounting rules. We are currently assessing whether we will adopt the IFRS 9 hedge requirements, or retain the existing requirements.

### Leases

In January 2016, the IASB issued IFRS 16 *Leases* (IFRS 16), which provides guidance for leases that will require lessees to recognize a liability for the present value of future lease liabilities and record a corresponding asset on the balance sheet. There are minimal changes to lessor accounting. IFRS 16 is effective for our fiscal year beginning November 1, 2019. Early adoption is permitted, provided IFRS 15 *Revenue from Contracts with Customers* has been adopted. We are currently assessing the impact of the standard on our future financial results.

### Revenue

In April 2016, the IASB issued amendments to IFRS 15 *Revenue from Contracts with Customers* (IFRS 15), which provides additional clarity on revenue recognition related to identifying performance obligations, application guidance on principal versus agent and licenses of intellectual property. We will be adopting IFRS 15 effective for our fiscal year beginning November 1, 2018. We are currently assessing the impact of the standard on our future financial results.

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## Transactions with Related Parties

In the ordinary course of business, we provide banking services to our key management personnel on the same terms that we offer to our preferred customers for those services. 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. We provide banking services to our joint ventures and equity-accounted investees on the same terms offered to our customers for these services.

Details of our investments in joint arrangements and associates and the compensation of key management personnel are disclosed in Note 28 on page 201 of the financial statements. We also offer employees a subsidy on annual credit card fees.

## 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: (i) the quality of services provided by the shareholders' auditors' engagement team during the audit period; (ii) the relevant qualifications, experience and geographical reach to serve BMO Financial Group; (iii) the quality of communications received from the shareholders' auditors; and (iv) the independence, objectivity and professional skepticism of the shareholders' auditors.

The ACRC believes that it has robust review processes in place to monitor audit quality and oversee the work of the shareholders' auditors, including the lead audit partner, which include:

- 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 qualifications of their 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 ACRC Chair and the lead audit partner to discuss audit issues independently of management; and
- performing a comprehensive review of the shareholders' auditors every five years, and performing an annual review between comprehensive reviews, conducted following the guidelines set out by the Chartered Professional Accountants of Canada (CPA of Canada) and the CPAB.

In 2016, the annual review of the shareholders' auditors was completed. Input was sought from ACRC members, management and corporate audit on areas such as communication effectiveness, industry insights and audit performance. In 2015, the ACRC completed a periodic comprehensive review of the shareholders' auditors. The comprehensive review was based on the recommendations of the CPA of Canada and the CPAB. These reviews focused 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 these reviews, the ACRC was satisfied with the performance of the shareholders' auditors.

Independence of the shareholders' auditors is overseen by the ACRC in accordance with our Auditor Independence Policy. 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 our 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 our Auditor Independence policy, as well as professional standards and securities regulations governing auditor independence.

### Shareholders' Auditors' Fees

Aggregate fees paid to the shareholders' auditors during the fiscal years ended October 31, 2016 and 2015 were as follows:

(Canadian \$ in millions) Fees (1)	2016	2015
Audit fees	17.6	17.1
Audit-related fees (2)	2.5	2.2
Tax fees	-	0.1
All other fees (3)	2.7	2.3
<b>Total</b>	<b>22.8</b>	<b>21.7</b>

(1) The classification of fees is based on applicable Canadian securities laws and U.S. Securities and Exchange Commission definitions.

(2) Audit-related fees for 2016 and 2015 relate to fees paid for accounting advice, specified procedures on our Proxy Circular and other specified procedures.

(3) All other fees for 2016 and 2015 relate primarily to fees paid for reviews of compliance with regulatory requirements for financial information and reports on internal controls over services provided by various BMO Financial Group businesses. They also include the costs of translation services.

# 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, 2016, under the supervision of the CEO and the CFO, Bank of Montreal's management evaluated the effectiveness of the design and operation of our 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 our disclosure controls and procedures were effective, as at October 31, 2016.

## 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 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 Bank of Montreal.

Bank of Montreal's internal control over financial reporting includes policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of Bank of Montreal;
- (ii) are designed to provide reasonable assurance that transactions are recorded as necessary to permit preparation of the financial statements in accordance with IFRS and the requirements of the SEC in the United States, as applicable, and that receipts and expenditures of Bank of Montreal are being made only in accordance with authorizations by management and directors of Bank of Montreal; and
- (iii) are designed to provide reasonable assurance that any unauthorized acquisition, use or disposition of Bank of Montreal's assets which could have a material effect on the 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.

Bank of Montreal'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, 2016.

At the request of Bank of Montreal's Audit and Conduct Review Committee, KPMG LLP (shareholders' auditors), an independent registered public accounting firm, has conducted an audit of the effectiveness of our internal control over financial reporting. The audit report states in its conclusion that, in KPMG's opinion, Bank of Montreal maintained, in all material respects, effective internal control over financial reporting as at October 31, 2016, in accordance with the criteria established in the 2013 COSO Framework. This audit report appears on page 138.

## Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting in fiscal 2016 that have materially affected, or are reasonably likely to materially affect, the adequacy and effectiveness of our 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*. We support the recommendations issued by the 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 79 to 112. An index for the MD&A is provided on page 26. An index for the notes to the financial statements is provided on page 144.  
**Supplementary Financial Information:** An index is provided in our Supplementary Financial 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 88 to 112. A glossary of financial terms (including risk terminology) can be found on pages 206 to 207.
- 3 **Discuss top and emerging risks for the bank.**  
**Annual Report:** BMO's top and emerging risks are discussed on pages 80 to 83.
- 4 **Outline plans to meet new key regulatory ratios once the applicable rules are finalized.**  
**Annual Report:** We outline BMO's plans to meet new regulatory ratios on pages 70 to 73 and 105.

### 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 83 to 87.
- 6 **Describe the bank's risk culture.**  
**Annual Report:** BMO's risk culture is described on page 84.
- 7 **Describe key risks that arise from the bank's business model and activities.**  
**Annual Report:** A diagram of BMO's risk exposure by operating segment is provided on page 75.
- 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 87.

### Capital Adequacy and Risk-Weighted Assets (RWA)

- 9 **Provide minimum Pillar 1 capital requirements.**  
**Annual Report:** Pillar 1 capital requirements are described on pages 70 to 73.  
**Supplementary Financial Information:** Regulatory capital is disclosed on page 35.
- 10 **Summarize information contained in the composition of capital templates adopted by the Basel Committee.**  
**Annual Report:** An abridged version of the regulatory capital template is provided on page 73.  
**Supplementary Financial Information:** Pillar 3 disclosure is provided on pages 35 to 37 and 39. A Main Features template can be found on BMO's website at [www.bmo.com](http://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.**  
**Supplementary Financial Information:** Regulatory capital flow statement is provided on page 40.
- 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 70.
- 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 75.
- 14 **Present a table showing the capital requirements for each method used for calculating RWA.**  
**Annual Report:** Regulatory capital requirement, as a percentage of RWA, is outlined on page 71. Information about significant models used to determine RWA is provided on pages 89 to 90.  
**Supplementary Financial Information:** A table showing RWA by model approach and by risk type is provided on page 39.
- 15 **Tabulate credit risk in the banking book for Basel asset classes.**  
**Supplementary Financial Information:** Wholesale and retail credit exposures by internal rating grades are provided on page 47.
- 16 **Present a flow statement that reconciles movements in RWA by credit risk and market risk.**  
**Supplementary Financial Information:** RWA flow statements are provided on page 41, with a reconciliation on page 38.
- 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 pages 108 to 109.  
**Supplementary Financial Information:** A table showing Exposure at Default and RWA by model approach and asset class is provided on page 39. A table showing estimated and actual loss parameters is provided on page 49.



## 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 100 to 101.

## Funding

### 19 Summarize encumbered and unencumbered assets in a table by balance sheet category.

**Annual Report:** An Asset Encumbrance table is provided on page 102.

Additional collateral requirements in the event of downgrades by rating agencies are disclosed in Note 8 on page 164 of the financial statements.

**Supplementary Financial Information:** The Asset Encumbrance table by currency is provided on page 34.

### 20 Tabulate consolidated total assets, liabilities and off-balance sheet commitments by remaining contractual maturity.

**Annual Report:** A Contractual Maturity table is presented in Note 29 on pages 202 to 205 of the financial statements.

### 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 103 to 104.

A table showing the composition and maturity of wholesale funding is provided on page 104.

## 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 98.

### 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 95 to 97.

Structural (non-trading) market risk exposures are described and quantified on pages 98 to 99.

### 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 108 to 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 95 to 97.

## 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 90 to 92 and in Notes 4 and 5 on pages 153 to 158 of the financial statements.

**Supplementary Financial Information:** Tables detailing credit risk information are provided on pages 20 to 30 and 43 to 50.

### 27 Describe the bank's policies related to impaired loans and renegotiated loans.

**Annual Report:** Impaired and renegotiated loan policies are described in Note 4 on pages 153 and 155, respectively, of the financial statements.

### 28 Provide reconciliations of impaired loans and the allowance for credit losses.

**Annual Report:** Continuity schedules for gross impaired loans and allowance for credit losses are provided on pages 91 to 92 and in Note 4 on pages 154 to 155 of the 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 94 and qualitative disclosures are provided on pages 88 to 89.

**Supplementary Financial Information:** Quantitative disclosures for OTC derivatives are provided on page 33.

### 30 Provide a discussion of credit risk mitigation.

**Annual Report:** A discussion of BMO's credit and counterparty risk management is provided on pages 88 to 89. Collateral management discussions are provided on pages 88 to 89 and in Note 8 on pages 164 and 166 and in Note 25 on page 196 of the financial statements.

**Supplementary Financial Information:** The exposures covered by credit risk mitigation table is provided on page 43.

## 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 83.

Other risks are discussed on pages 106 to 112.

### 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 112.

# Supplemental Information

Certain comparative figures have been reclassified to conform to the current period's presentation and for changes in accounting policies. Refer to Note 1 of the consolidated financial statements. In addition, since November 1, 2011, BMO's financial statements have been reported in accordance with IFRS. Results for years prior to 2011 have not been restated and are presented in accordance with Canadian GAAP as defined at that time (CGAAP).

As a result of these changes, certain growth rates and compound annual growth rates (CAGR) may not be meaningful.

Adjusted results in this section are non-GAAP measures. Refer to the Non-GAAP Measures section on page 33.

## Table 1: Shareholder Value and Other Statistical Information

As at or for the year ended October 31	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>Market Price per Common Share (\$)</b>										
High	87.92	84.39	85.71	73.90	61.29	63.94	65.71	54.75	63.44	72.75
Low	68.65	64.01	67.04	56.74	53.15	55.02	49.78	24.05	35.65	60.21
Close	85.36	76.04	81.73	72.62	59.02	58.89	60.23	50.06	43.02	63.00
<b>Common Share Dividends</b>										
Dividends declared per share (\$)	3.40	3.24	3.08	2.94	2.82	2.80	2.80	2.80	2.80	2.71
Dividend payout ratio (%)	49.0	49.2	47.8	47.5	46.0	57.1	58.6	90.6	73.9	64.8
Dividend yield (%)	4.0	4.3	3.8	4.0	4.8	4.8	4.6	5.6	6.5	4.3
Dividends declared (\$ millions)	2,191	2,087	1,991	1,904	1,820	1,690	1,571	1,530	1,409	1,354
<b>Total Shareholder Return (%)</b>										
Five-year average annual return	12.5	9.5	15.5	17.0	4.2	1.9	5.9	1.8	0.9	14.2
Three-year average annual return	9.9	13.5	16.7	11.5	10.8	17.4	4.5	(5.3)	(5.6)	6.6
One-year return	17.0	(3.0)	17.1	28.8	5.2	2.4	26.4	25.1	(27.9)	(5.8)
<b>Common Share Information</b>										
Number outstanding (in thousands)										
End of year	645,761	642,583	649,050	644,130	650,730	639,000	566,468	551,716	504,575	498,563
Average basic	644,049	644,916	645,860	648,476	644,407	591,403	559,822	540,294	502,062	499,950
Average diluted	646,148	647,162	648,475	649,806	648,615	607,068	563,125	542,313	506,697	508,614
Number of shareholder accounts	52,087	53,481	55,610	56,241	59,238	58,769	36,612	37,061	37,250	37,165
Book value per share (\$)	59.56	56.31	48.18	43.22	39.41	36.76	34.09	31.95	32.02	28.29
Total market value of shares (\$ billions)	55.1	48.9	53.0	46.8	38.4	37.6	34.1	27.6	21.7	31.4
Price-to-earnings multiple	12.3	11.6	12.8	11.8	9.7	12.2	12.7	16.3	11.4	15.3
Price-to-adjusted earnings multiple	11.4	10.9	12.4	11.7	9.9	11.5	12.5	12.5	9.2	11.6
Market-to-book value multiple	1.43	1.35	1.70	1.66	1.47	1.49	1.77	1.57	1.34	2.23
<b>Balances (\$ millions)</b>										
As at assets	687,935	641,881	588,659	537,044	524,684	500,575	411,640	388,458	416,050	366,524
Average daily assets	707,122	664,391	593,928	555,431	543,931	469,934	398,474	438,548	397,609	360,575
Average daily net loans and acceptances	357,708	320,081	292,098	266,107	246,129	215,414	171,554	182,097	175,079	165,783
<b>Return on Equity and Assets</b>										
Return on equity (%)	12.1	12.5	14.0	14.9	15.9	15.1	14.9	9.9	13.0	14.4
Adjusted return on equity (%) (1)	13.1	13.3	14.4	15.0	15.5	16.0	15.0	12.9	16.2	19.0
Return on average assets (%)	0.65	0.66	0.72	0.74	0.75	0.65	0.71	0.41	0.50	0.59
Adjusted return on average assets (%) (1)	0.71	0.70	0.74	0.75	0.73	0.68	0.71	0.52	0.61	0.78
Return on average risk-weighted assets (%)	1.71	1.84	1.85	1.93	1.96	1.70	1.74	0.97	1.07	1.20
Adjusted return on average risk-weighted assets (%) (1)	1.85	1.96	1.91	1.94	1.92	1.79	1.76	1.25	1.32	1.58
Average equity to average total assets (%)	0.05	0.05	0.05	0.05	0.05	0.04	0.05	0.04	0.04	0.04
<b>Other Statistical Information</b>										
Employees (2)										
Canada	29,643	30,669	30,587	30,303	30,797	31,351	29,821	29,118	29,529	28,944
United States	14,147	14,316	14,845	14,694	14,963	15,184	7,445	6,732	7,256	6,595
Other	1,444	1,368	1,346	634	512	440	363	323	288	288
Total	45,234	46,353	46,778	45,631	46,272	46,975	37,629	36,173	37,073	35,827
Bank branches										
Canada	942	939	934	933	930	920	910	900	983	977
United States	576	592	615	626	638	688	321	290	292	243
Other	4	4	4	4	3	3	3	5	5	4
Total	1,522	1,535	1,553	1,563	1,571	1,611	1,234	1,195	1,280	1,224
Automated banking machines										
Canada	3,285	3,442	3,016	2,900	2,596	2,235	2,076	2,030	2,026	1,978
United States	1,314	1,319	1,322	1,325	1,375	1,366	905	636	640	583
Total	4,599	4,761	4,338	4,225	3,971	3,601	2,981	2,666	2,666	2,561

2010 and prior based on CGAAP.

2011 has not been restated to reflect the new IFRS standards adopted in 2014. The adoption of new IFRS standards in 2015 only impacted our results prospectively.

(1) The impact of adjusting items (net of tax) was an increase to net income as follows: 2011 - \$161 million; 2010 - \$32 million; 2009 - \$509 million; 2008 - \$461 million; 2007 - \$675 million. Details on the adjusting items can be found in the 2011 to 2007 Management's Discussion and Analysis.

(2) Reflects full-time equivalent number of employees, comprising full-time and part-time employees and adjustments for overtime hours.

## Table 2: Summary Income Statement and Growth Statistics

(\$ millions, except as noted)  
For the year ended October 31

	2016	2015	2014	2013	2012	5-year CAGR	10-year CAGR
<b>Income Statement – Reported Results</b>							
Net interest income	<b>9,872</b>	8,763	8,292	8,487	8,749	<b>5.7</b>	<b>7.6</b>
Non-interest revenue	<b>11,215</b>	10,626	9,931	8,343	8,354	<b>8.1</b>	<b>7.8</b>
Revenue	<b>21,087</b>	19,389	18,223	16,830	17,103	<b>7.0</b>	<b>7.7</b>
Insurance claims, commissions and changes in policy benefit liabilities (CCPB) (1)	<b>1,543</b>	1,254	1,505	767	1,174	<b>6.7</b>	<b>37.6</b>
Revenue, net of CCPB	<b>19,544</b>	18,135	16,718	16,063	15,929	<b>7.0</b>	<b>6.9</b>
Provision for credit losses	<b>815</b>	612	561	587	764	<b>nm</b>	<b>nm</b>
Non-interest expense	<b>12,997</b>	12,182	10,921	10,226	10,135	<b>8.3</b>	<b>7.4</b>
Income before provision for income taxes	<b>5,732</b>	5,341	5,236	5,250	5,030	<b>7.5</b>	<b>5.2</b>
Provision for income taxes	<b>1,101</b>	936	903	1,055	874	<b>nm</b>	<b>4.4</b>
Net income	<b>4,631</b>	4,405	4,333	4,195	4,156	<b>8.3</b>	<b>5.4</b>
Attributable to bank shareholders	<b>4,622</b>	4,370	4,277	4,130	4,082	<b>8.7</b>	<b>5.7</b>
Attributable to non-controlling interest in subsidiaries	<b>9</b>	35	56	65	74	<b>nm</b>	<b>nm</b>
Net income	<b>4,631</b>	4,405	4,333	4,195	4,156	<b>8.3</b>	<b>5.7</b>
<b>Income Statement – Adjusted Results</b>							
Net interest income	<b>9,872</b>	8,764	8,292	7,830	7,970	<b>6.4</b>	<b>7.6</b>
Non-interest revenue	<b>11,299</b>	10,627	9,931	8,309	8,070	<b>8.2</b>	<b>7.8</b>
Revenue	<b>21,171</b>	19,391	18,223	16,139	16,040	<b>7.3</b>	<b>7.7</b>
Insurance claims, commissions and changes in policy benefit liabilities (CCPB) (1)	<b>1,543</b>	1,254	1,505	767	1,174	<b>6.7</b>	<b>37.6</b>
Revenue, net of CCPB	<b>19,628</b>	18,137	16,718	15,372	14,866	<b>7.4</b>	<b>7.0</b>
Provision for credit losses	<b>815</b>	612	561	357	470	<b>nm</b>	<b>nm</b>
Non-interest expense	<b>12,544</b>	11,819	10,761	9,755	9,410	<b>8.2</b>	<b>7.1</b>
Income before provision for income taxes	<b>6,269</b>	5,706	5,396	5,260	4,986	<b>8.4</b>	<b>6.0</b>
Provision for income taxes	<b>1,249</b>	1,025	943	1,037	927	<b>12.5</b>	<b>5.3</b>
Adjusted net income	<b>5,020</b>	4,681	4,453	4,223	4,059	<b>8.9</b>	<b>6.2</b>
Attributable to bank shareholders	<b>5,011</b>	4,646	4,397	4,158	3,985	<b>8.9</b>	<b>6.2</b>
Attributable to non-controlling interest in subsidiaries	<b>9</b>	35	56	65	74	<b>nm</b>	<b>nm</b>
Adjusted net income	<b>5,020</b>	4,681	4,453	4,223	4,059	<b>8.9</b>	<b>6.2</b>
<b>Earnings per Share (EPS) (\$)</b>							
Basic	<b>6.94</b>	6.59	6.44	6.19	6.13	<b>7.2</b>	<b>2.8</b>
Diluted	<b>6.92</b>	6.57	6.41	6.17	6.10	<b>7.4</b>	<b>3.0</b>
Adjusted diluted	<b>7.52</b>	7.00	6.59	6.21	5.95	<b>8.1</b>	<b>3.8</b>
<b>Year-over-Year Growth-Based Statistical Information (%)</b>							
Net income growth	<b>5.1</b>	1.7	3.3	0.9	33.5	<b>na</b>	<b>na</b>
Adjusted net income growth	<b>7.2</b>	5.1	5.4	4.1	23.9	<b>na</b>	<b>na</b>
Diluted EPS growth	<b>5.3</b>	2.5	3.9	1.1	26.0	<b>na</b>	<b>na</b>
Adjusted diluted EPS growth	<b>7.4</b>	6.2	6.1	4.4	16.7	<b>na</b>	<b>na</b>

Five-year and ten-year CAGR based on CGAAP in 2006 and IFRS in 2011 and 2016.

The adoption of new IFRS standards in 2015 only impacted our results prospectively.

(1) Beginning in 2015, insurance claims, commissions and changes in policy benefit liabilities (CCPB) are reported separately. They were previously reported as a reduction in insurance revenue in non-interest revenue. Prior period amounts and ratios have been reclassified.

nm – not meaningful

na – not applicable

**Table 3: Revenue and Revenue Growth**

(\$ millions, except as noted)  
For the year ended October 31

	2016	2015	2014	2013	2012	5-year CAGR	10-year CAGR
<b>Net Interest Income</b>	<b>9,872</b>	8,763	8,292	8,487	8,749	<b>5.7</b>	<b>7.6</b>
Year-over-year growth (%)	<b>12.7</b>	5.7	(2.3)	(3.0)	17.1	na	na
<b>Adjusted Net Interest Income</b>	<b>9,872</b>	8,764	8,292	7,830	7,970	<b>6.4</b>	<b>7.6</b>
Year-over-year growth (%)	<b>12.6</b>	5.7	5.9	(1.8)	10.0	na	na
<b>Net Interest Margin (1)</b>							
Average earning assets	<b>622,732</b>	579,471	528,786	485,191	461,018	<b>9.0</b>	<b>9.1</b>
Net interest margin (%)	<b>1.59</b>	1.51	1.57	1.75	1.90	na	na
Adjusted net interest margin (%)	<b>1.59</b>	1.51	1.57	1.61	1.73	na	na
Canadian dollar net interest margin (%)	<b>1.60</b>	1.62	1.68	1.76	1.82	na	na
U.S. dollar and other currencies net interest margin (%)	<b>1.56</b>	1.38	1.41	1.74	2.01	na	na
<b>Non-Interest Revenue</b>							
Securities commissions and fees	<b>924</b>	901	894	821	825	<b>(5.3)</b>	<b>(1.3)</b>
Deposit and payment service charges	<b>1,141</b>	1,077	1,002	916	929	<b>6.5</b>	<b>4.6</b>
Trading revenues	<b>1,192</b>	987	949	849	1,025	<b>16.8</b>	<b>5.2</b>
Lending fees	<b>859</b>	737	680	603	544	<b>7.7</b>	<b>9.8</b>
Card fees	<b>461</b>	460	462	461	441	<b>(7.7)</b>	<b>1.5</b>
Investment management and custodial fees	<b>1,556</b>	1,552	1,286	1,003	967	<b>25.7</b>	<b>18.0</b>
Mutual fund revenues	<b>1,364</b>	1,377	1,065	828	665	<b>16.6</b>	<b>10.6</b>
Underwriting and advisory fees	<b>820</b>	706	744	652	600	<b>9.9</b>	<b>7.2</b>
Securities gains, other than trading	<b>84</b>	171	162	285	152	nm	nm
Foreign exchange, other than trading	<b>162</b>	172	179	172	153	<b>4.5</b>	<b>4.7</b>
Insurance revenue (2)	<b>2,023</b>	1,762	2,008	1,212	1,509	<b>7.6</b>	<b>21.7</b>
Investments in associates and joint ventures	<b>140</b>	207	169	190	188	nm	nm
Other revenues	<b>489</b>	517	331	351	356	<b>7.0</b>	<b>7.0</b>
<b>Total Non-Interest Revenue</b>	<b>11,215</b>	10,626	9,931	8,343	8,354	<b>8.1</b>	<b>7.8</b>
Year-over-year growth (%)	<b>5.5</b>	7.0	19.0	(0.1)	10.1	na	na
Non-interest revenue as a % of total revenue	<b>53.2</b>	54.8	54.5	49.6	48.8	na	na
<b>Adjusted Non-Interest Revenue</b>	<b>11,299</b>	10,627	9,931	8,309	8,070	<b>8.2</b>	<b>7.8</b>
Year-over-year adjusted non-interest revenue growth (%)	<b>6.3</b>	7.0	19.5	3.0	6.0	na	na
Adjusted non-interest revenue as a % of total adjusted revenue	<b>53.4</b>	54.8	54.5	51.5	50.3	na	na
<b>Total Revenue</b>	<b>21,087</b>	19,389	18,223	16,830	17,103	<b>7.0</b>	<b>7.7</b>
Year-over-year total revenue growth (%)	<b>8.8</b>	6.4	8.3	(1.6)	13.6	na	na
<b>Total Revenue, net of CCPB (2)</b>	<b>19,544</b>	18,135	16,718	16,063	15,929	<b>7.0</b>	<b>6.9</b>
Year-over-year total revenue growth, net of CCPB (%)	<b>7.8</b>	8.5	4.1	0.8	14.2	na	na
<b>Total Adjusted Revenue</b>	<b>21,171</b>	19,391	18,223	16,139	16,040	<b>7.3</b>	<b>7.7</b>
Year-over-year total adjusted revenue growth (%)	<b>9.2</b>	6.4	12.9	0.6	7.9	na	na
<b>Total Adjusted Revenue, net of CCPB (2)</b>	<b>19,628</b>	18,137	16,718	15,372	14,866	<b>7.4</b>	<b>7.0</b>
Year-over-year total adjusted revenue growth, net of CCPB (%)	<b>8.2</b>	8.5	8.7	3.4	8.2	na	na

Five-year and ten-year CAGR based on CGAAP in 2006 and IFRS in 2011 and 2016.

The adoption of new IFRS standards in 2015 only impacted our results prospectively.

(1) Net interest margin is calculated based on average earning assets.

(2) Beginning in 2015, insurance claims, commissions and changes in policy benefit liabilities (CCPB) are reported separately. They were previously reported as a reduction in insurance revenue in non-interest revenue. Prior period amounts and ratios have been reclassified.

na - not applicable

nm - not meaningful

## Table 4: Non-Interest Expense and Expense-to-Revenue Ratio

(\$ millions, except as noted) For the year ended October 31	2016	2015	2014	2013	2012	5-year CAGR	10-year CAGR
<b>Non-Interest Expense</b>							
Employee compensation							
Salaries	<b>4,082</b>	3,910	3,388	3,259	3,148	<b>9.1</b>	<b>7.9</b>
Performance-based compensation	<b>2,278</b>	2,102	1,946	1,686	1,657	<b>7.9</b>	<b>5.6</b>
Employee benefits	<b>1,022</b>	1,069	908	897	808	<b>10.5</b>	<b>5.5</b>
Total employee compensation	<b>7,382</b>	7,081	6,242	5,842	5,613	<b>8.9</b>	<b>6.8</b>
Premises and equipment							
Rental of real estate	<b>486</b>	462	415	416	400	<b>6.1</b>	<b>7.1</b>
Premises, furniture and fixtures	<b>337</b>	287	261	377	368	<b>1.6</b>	<b>3.9</b>
Property taxes	<b>42</b>	39	39	37	36	<b>6.9</b>	<b>5.0</b>
Computers and equipment (1)	<b>1,528</b>	1,349	1,193	1,003	1,071	<b>11.7</b>	<b>8.0</b>
Total premises and equipment (1)	<b>2,393</b>	2,137	1,908	1,833	1,875	<b>8.7</b>	<b>nm</b>
Other expenses							
Amortization of intangible assets (1)	<b>444</b>	411	382	346	331	<b>14.0</b>	<b>nm</b>
Communications	<b>294</b>	314	289	291	301	<b>2.5</b>	<b>8.4</b>
Business and capital taxes	<b>42</b>	45	39	39	46	<b>(3.7)</b>	<b>(7.6)</b>
Professional fees	<b>523</b>	595	622	527	593	<b>(3.5)</b>	<b>6.2</b>
Travel and business development	<b>646</b>	605	542	514	491	<b>11.1</b>	<b>9.8</b>
Other	<b>1,273</b>	994	897	834	885	<b>10.0</b>	<b>9.6</b>
Total other expenses	<b>3,222</b>	2,964	2,771	2,551	2,647	<b>6.6</b>	<b>9.4</b>
<b>Total Non-Interest Expense</b>	<b>12,997</b>	12,182	10,921	10,226	10,135	<b>8.3</b>	<b>7.4</b>
Year-over-year total non-interest expense growth (%)	<b>6.7</b>	11.5	6.8	0.9	15.9	<b>na</b>	<b>na</b>
<b>Total Adjusted Non-Interest Expense</b>	<b>12,544</b>	11,819	10,761	9,755	9,410	<b>8.2</b>	<b>7.1</b>
Year-over-year total adjusted non-interest expense growth (%)	<b>6.1</b>	9.8	10.3	3.7	3.7	<b>na</b>	<b>na</b>
Non-interest expense-to-revenue ratio (Efficiency ratio) (%)	<b>61.6</b>	62.8	59.9	60.8	59.3	<b>na</b>	<b>na</b>
Adjusted non-interest expense-to-revenue ratio (Adjusted Efficiency ratio) (%)	<b>59.2</b>	60.9	59.1	60.4	58.7	<b>na</b>	<b>na</b>
Efficiency ratio, net of CCPB (2)	<b>66.5</b>	67.2	65.3	63.7	63.6	<b>na</b>	<b>na</b>
Adjusted efficiency ratio, net of CCPB (2)	<b>63.9</b>	65.2	64.4	63.5	63.3	<b>na</b>	<b>na</b>
<b>Government Levies and Taxes</b> (3)							
Government levies other than income taxes							
Payroll levies	<b>324</b>	312	252	249	250	<b>9.8</b>	<b>7.2</b>
Property taxes	<b>42</b>	39	39	37	36	<b>6.9</b>	<b>5.0</b>
Provincial capital taxes	<b>30</b>	33	27	30	37	<b>(7.2)</b>	<b>(9.9)</b>
Business taxes	<b>9</b>	10	9	7	9	<b>5.1</b>	<b>1.5</b>
Harmonized sales tax, GST and other sales taxes	<b>355</b>	319	273	262	249	<b>8.6</b>	<b>11.2</b>
Sundry taxes	<b>3</b>	2	2	1	2	<b>nm</b>	<b>nm</b>
Total government levies other than income taxes	<b>763</b>	715	602	586	583	<b>8.0</b>	<b>6.5</b>
Provision for income taxes	<b>1,101</b>	936	903	1,055	874	<b>nm</b>	<b>4.4</b>
<b>Total Government Levies and Taxes</b>	<b>1,864</b>	1,651	1,505	1,641	1,457	<b>5.9</b>	<b>5.2</b>
Total government levies and taxes as a % of income available to pay							
government levies and taxes	<b>24.4</b>	23.1	25.0	28.7	26.6	<b>na</b>	<b>na</b>
Effective income tax rate (%)	<b>19.2</b>	17.5	17.2	20.1	17.4	<b>na</b>	<b>na</b>
Adjusted effective income tax rate (%)	<b>19.9</b>	18.0	17.5	19.7	18.6	<b>na</b>	<b>na</b>

Five-year and ten-year CAGR based on CGAAP in 2006 and IFRS in 2011 and 2016.

The adoption of new IFRS standards in 2015 only impacted our results prospectively.

(1) In 2009, we adopted new accounting requirements for intangible assets and reclassified certain computer equipment from premises and equipment to intangible assets. Computer and equipment expense and the amortization of intangible assets were restated, but not for years prior to 2007. As such, ten-year growth rates for these expense categories are not meaningful. Together, computer and equipment expense and the amortization of intangible assets increased at a compound annual growth rate of 10.1% over ten years. Together, total premises and equipment expense and the amortization of intangible assets increased at a compound annual growth rate of 8.5% over ten years.

(2) This ratio is calculated excluding insurance claims, commissions and changes in policy benefit liabilities (CCPB).

(3) Government levies are included in various non-interest expense categories.

na - not applicable

nm - not meaningful



Table 5: Average Assets, Liabilities and Interest Rates

(\$ millions, except as noted) For the year ended October 31	2016			2015			2014		
	Average balances	Average interest rate (%)	Interest income/expense	Average balances	Average interest rate (%)	Interest income/expense	Average balances	Average interest rate (%)	Interest income/expense
<b>Assets</b>									
<b>Canadian Dollar</b>									
Deposits with other banks	2,016	1.12	23	1,984	1.04	21	1,632	1.52	25
Securities	84,099	1.12	944	90,322	1.16	1,050	94,234	1.14	1,073
Securities borrowed or purchased under resale agreements	34,906	0.70	245	29,617	0.82	242	23,027	1.03	238
Loans									
Residential mortgages	99,280	2.63	2,615	94,119	2.83	2,663	90,134	3.08	2,779
Non-residential mortgages	6,281	3.37	212	6,176	3.71	229	6,276	4.08	256
Personal and credit cards	56,211	4.73	2,661	55,219	4.89	2,699	55,719	5.13	2,860
Businesses and governments	49,136	3.59	1,766	43,427	3.94	1,710	40,250	4.29	1,726
Total loans	210,908	3.44	7,254	198,941	3.67	7,301	192,379	3.96	7,261
Total Canadian dollar	331,929	2.55	8,466	320,864	2.68	8,614	311,272	2.88	8,957
<b>U.S. Dollar and Other Currencies</b>									
Deposits with other banks	41,821	0.48	200	48,031	0.35	169	38,815	0.41	157
Securities	57,820	1.31	760	54,733	1.20	655	53,921	1.15	620
Securities borrowed or purchased under resale agreements	54,210	0.59	319	44,010	0.38	168	32,629	0.32	109
Loans									
Residential mortgages	8,630	3.52	304	8,631	3.39	293	7,753	3.37	261
Non-residential mortgages	4,672	2.28	106	4,619	2.51	116	4,860	2.48	121
Personal and credit cards	15,771	3.32	524	17,071	3.19	545	15,812	3.32	524
Businesses and governments	105,953	3.61	3,823	79,678	3.26	2,598	61,402	3.46	2,123
Total loans	135,026	3.52	4,757	109,999	3.23	3,552	89,827	3.37	3,029
Total U.S. dollar and other currencies	288,877	2.09	6,036	256,773	1.77	4,544	215,192	1.82	3,915
Other non-interest bearing assets	86,316			86,754			67,464		
<b>Total All Currencies</b>									
Total assets and interest income	707,122	2.05	14,502	664,391	1.98	13,158	593,928	2.17	12,872
<b>Liabilities</b>									
<b>Canadian Dollar</b>									
Deposits									
Banks	9,492	0.25	24	10,158	0.52	53	6,307	0.51	32
Businesses and governments	98,004	1.12	1,097	94,438	1.17	1,102	97,199	1.38	1,342
Individuals	101,402	0.75	757	94,031	0.88	832	89,007	0.97	863
Total deposits	208,898	0.90	1,878	198,627	1.00	1,987	192,513	1.16	2,237
Securities sold but not yet purchased and securities lent or sold (1)	37,017	1.45	537	40,637	1.63	661	40,713	1.74	710
Subordinated debt and other interest bearing liabilities	25,598	2.38	609	25,713	2.96	760	24,712	3.11	769
Total Canadian dollar	271,513	1.11	3,024	264,977	1.29	3,408	257,938	1.44	3,716
<b>U.S. Dollar and Other Currencies</b>									
Deposits									
Banks	26,896	0.55	148	21,626	0.27	59	20,665	0.23	47
Businesses and governments	178,848	0.47	845	167,544	0.32	540	143,738	0.34	491
Individuals	54,081	0.24	131	47,671	0.20	95	41,675	0.22	90
Total deposits	259,825	0.43	1,124	236,841	0.29	694	206,078	0.30	628
Securities sold but not yet purchased and securities lent or sold (1)	50,791	0.31	159	41,792	0.20	85	33,650	0.21	72
Subordinated debt and other interest bearing liabilities	7,192	4.50	322	5,749	3.61	208	4,901	3.34	164
Total U.S. dollar and other currencies	317,808	0.51	1,606	284,382	0.35	987	244,629	0.35	864
Other non-interest bearing liabilities	77,546			78,130			59,139		
<b>Total All Currencies</b>									
Total liabilities and interest expense	666,867	0.69	4,630	627,489	0.70	4,395	561,706	0.82	4,580
Shareholders' equity	40,255			36,902			32,222		
<b>Total Liabilities, Interest Expense and Shareholders' Equity</b>									
	707,122	0.65	4,630	664,391	0.66	4,395	593,928	0.77	4,580
<b>Net interest margin</b>									
– based on earning assets		1.59			1.51			1.57	
– based on total assets		1.40			1.32			1.40	
<b>Net interest income based on total assets</b>									
			9,872			8,763			8,292
<b>Adjusted net interest margin</b>									
– based on earning assets		1.59			1.51			1.57	
– based on total assets		1.40			1.32			1.40	
<b>Adjusted net interest income based on total assets</b>									
			9,872			8,764			8,292

(1) For the years ended October 31, 2016, 2015 and 2014, the maximum amount of securities lent or sold under repurchase agreements at any month end amounted to \$67,169 million, \$57,385 million and \$50,138 million, respectively.

## Table 6: Volume/Rate Analysis of Changes in Net Interest Income

(\$ millions) For the year ended October 31	2016/2015			2015/2014		
	Increase (decrease) due to change in			Increase (decrease) due to change in		
	Average balance	Average rate	Total	Average balance	Average rate	Total
<b>Assets</b>						
<b>Canadian Dollar</b>						
Deposits with other banks	-	2	2	5	(9)	(4)
Securities	(72)	(34)	(106)	(45)	21	(24)
Securities borrowed or purchased under resale agreements	43	(40)	3	68	(64)	4
Loans						
Residential mortgages	146	(194)	(48)	123	(238)	(115)
Non-residential mortgages	4	(21)	(17)	(4)	(23)	(27)
Personal and credit cards	48	(86)	(38)	(26)	(135)	(161)
Businesses and governments	225	(169)	56	136	(153)	(17)
Total loans	423	(470)	(47)	229	(549)	(320)
Change in Canadian dollar interest income	394	(542)	(148)	257	(601)	(344)
<b>U.S. Dollar and Other Currencies</b>						
Deposits with other banks	(22)	53	31	37	(25)	12
Securities	37	68	105	10	24	34
Securities borrowed or purchased under resale agreements	39	112	151	37	23	60
Loans						
Residential mortgages	-	11	11	30	2	32
Non-residential mortgages	1	(11)	(10)	(6)	1	(5)
Personal and credit cards	(41)	20	(21)	42	(21)	21
Businesses and governments	857	368	1,225	632	(156)	476
Total loans	817	388	1,205	698	(174)	524
Change in U.S. dollar and other currencies interest income	871	621	1,492	782	(152)	630
<b>Total All Currencies</b>						
Change in total interest income (a)	1,265	79	1,344	1,039	(753)	286
<b>Liabilities</b>						
<b>Canadian Dollar</b>						
Deposits						
Banks	(4)	(25)	(29)	19	1	20
Businesses and governments	42	(47)	(5)	(38)	(202)	(240)
Individuals	65	(140)	(75)	49	(80)	(31)
Total deposits	103	(212)	(109)	30	(281)	(251)
Securities sold but not yet purchased and securities lent or sold	(59)	(65)	(124)	(1)	(47)	(48)
Subordinated debt and other interest bearing liabilities	(3)	(148)	(151)	31	(40)	(9)
Change in Canadian dollar interest expense	41	(425)	(384)	60	(368)	(308)
<b>U.S. Dollar and Other Currencies</b>						
Deposits						
Banks	14	75	89	2	10	12
Businesses and governments	37	268	305	81	(31)	50
Individuals	13	23	36	13	(8)	5
Total deposits	64	366	430	96	(29)	67
Securities sold but not yet purchased and securities lent or sold	18	56	74	17	(4)	13
Subordinated debt and other interest bearing liabilities	52	63	115	28	15	43
Change in U.S. dollar and other currencies interest expense	134	485	619	141	(18)	123
<b>Total All Currencies</b>						
Change in total interest expense (b)	175	60	235	201	(386)	(185)
Change in total net interest income (a - b)	1,090	19	1,109	838	(367)	471

**Table 7: Net Loans and Acceptances – Segmented Information** <sup>(1) (2) (4) (5) (6) (7)</sup>

(\$ millions)	Canada					United States					Other countries					Total					
As at October 31	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012	
Consumer																					
Residential mortgages	<b>103,558</b>	96,975	92,972	88,677	76,729	<b>8,686</b>	8,905	7,980	7,646	7,416	-	-	-	-	-	<b>112,244</b>	105,880	100,952	96,323	84,145	
Credit cards	<b>7,541</b>	7,427	7,476	7,413	7,381	<b>560</b>	553	496	457	433	-	-	-	-	-	<b>8,101</b>	7,980	7,972	7,870	7,814	
Consumer instalment and other personal loans	<b>50,368</b>	49,181	48,955	49,195	47,955	<b>13,974</b>	16,098	15,088	14,364	13,419	<b>215</b>	206	1	-	-	<b>64,557</b>	65,485	64,044	63,559	61,374	
Total consumer	<b>161,467</b>	153,583	149,403	145,285	132,065	<b>23,220</b>	25,556	23,564	22,467	21,268	<b>215</b>	206	1	-	-	<b>184,902</b>	179,345	172,968	167,752	153,333	
Total businesses and governments	<b>79,443</b>	69,772	63,896	57,967	53,069	<b>98,371</b>	75,430	56,389	45,842	42,955	<b>10,555</b>	10,975	11,145	8,954	5,748	<b>188,369</b>	156,177	131,430	112,763	101,772	
Total loans and acceptances, net of specific allowances	<b>240,910</b>	223,355	213,299	203,252	185,134	<b>121,591</b>	100,986	79,953	68,309	64,223	<b>10,770</b>	11,181	11,146	8,954	5,748	<b>373,271</b>	335,522	304,398	280,515	255,105	
Collective allowance	<b>(893)</b>	(857)	(795)	(791)	(705)	<b>(789)</b>	(803)	(747)	(694)	(755)	-	-	-	-	-	<b>(1,682)</b>	(1,660)	(1,542)	(1,485)	(1,460)	
Total net loans and acceptances	<b>240,017</b>	222,498	212,504	202,461	184,429	<b>120,802</b>	100,183	79,206	67,615	63,468	<b>10,770</b>	11,181	11,146	8,954	5,748	<b>371,589</b>	333,862	302,856	279,030	253,645	

**Table 8: Net Impaired Loans and Acceptances – Segmented Information** <sup>(3) (7)</sup>

(\$ millions)	Canada					United States					Other countries					Total					
As at October 31	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012	
Consumer																					
Residential mortgages	<b>144</b>	159	168	157	182	<b>175</b>	173	303	369	335	-	-	-	-	-	<b>319</b>	332	471	526	517	
Consumer instalment and other personal loans	<b>121</b>	117	136	100	64	<b>345</b>	316	309	274	275	-	-	-	-	-	<b>466</b>	433	445	374	339	
Total consumer	<b>265</b>	276	304	257	246	<b>520</b>	489	612	643	610	-	-	-	-	-	<b>785</b>	765	916	900	856	
Businesses and governments	<b>298</b>	220	247	253	377	<b>843</b>	613	507	944	1,271	<b>1</b>	4	4	3	25	<b>1,142</b>	837	758	1,200	1,673	
Total impaired loans and acceptances, net of specific allowances	<b>563</b>	496	551	510	623	<b>1,363</b>	1,102	1,119	1,587	1,881	<b>1</b>	4	4	3	25	<b>1,927</b>	1,602	1,674	2,100	2,529	
<b>Condition Ratios</b> <sup>(1)</sup>																					
NIL as a % of net loans and acceptances <sup>(3) (4) (8)</sup>	<b>0.23</b>	0.22	0.26	0.25	0.34	<b>1.13</b>	1.10	1.43	2.38	3.03	<b>0.01</b>	0.04	0.04	0.03	0.43	<b>0.52</b>	0.48	0.55	0.75	1.00	
NIL as a % of net loans and acceptances <sup>(3) (4) (5)</sup>																					
Consumer	<b>0.16</b>	0.18	0.20	0.18	0.19	<b>2.26</b>	1.94	2.63	2.90	2.90	-	-	-	-	-	<b>0.42</b>	0.43	0.53	0.54	0.56	
Businesses and governments	<b>0.38</b>	0.32	0.39	0.44	0.71	<b>0.86</b>	0.82	0.92	2.12	3.08	<b>0.01</b>	0.04	0.04	0.03	0.43	<b>0.61</b>	0.54	0.58	1.07	1.67	

(1) Certain balances for fiscal 2012 were restated in 2013 to conform to the current period's presentation.

(2) Aggregate Net Loans and Acceptances balances are net of collective allowances, and all specific allowances excluding those related to off-balance sheet instruments and undrawn commitments. The Consumer and Business and governments Net Loans and Acceptances balances are stated net of specific allowances only (excluding those related to off-balance sheet instruments and undrawn commitments).

(3) Net Impaired Loans balances are net of specific allowances, excluding off-balance sheet instruments and undrawn commitments.

(4) Ratios are presented including purchased portfolios and prior periods have been restated.

(5) Certain ratios for 2013 and 2012 were restated in 2014 to conform to the current period's presentation.

(6) Fiscal 2013 and 2012 balances were reclassified in 2014 to conform to the current period's presentation.

(7) Certain balances for fiscal 2014 and 2013 were restated in 2015 to conform to the current period's presentation.

(8) Certain ratios for 2015, 2014, 2013 and 2012 were restated in 2016 to conform to the current period's presentation.

**Table 9: Net Loans and Acceptances – Segmented Information** <sup>(1)(2)(3)(4)</sup>

(\$ millions) As at October 31	2016	2015	2014	2013	2012
<b>Net Loans and Acceptances by Province</b>					
Atlantic provinces	<b>13,740</b>	13,361	13,065	11,244	11,801
Quebec	<b>38,272</b>	36,486	35,647	33,746	35,650
Ontario	<b>98,448</b>	89,460	84,498	80,726	69,014
Prairie provinces	<b>46,430</b>	43,612	42,043	38,825	34,431
British Columbia and territories	<b>43,127</b>	39,579	37,251	37,920	33,533
Total net loans and acceptances in Canada	<b>240,017</b>	222,498	212,504	202,461	184,429
<b>Net Businesses and Governments Loans by Industry</b>					
Commercial real estate	<b>24,114</b>	20,597	17,636	17,606	18,720
Construction (non-real estate)	<b>3,563</b>	3,544	3,101	2,934	2,539
Retail trade	<b>16,859</b>	14,096	12,580	10,229	9,084
Wholesale trade	<b>12,157</b>	10,243	8,281	7,345	6,821
Agriculture	<b>10,951</b>	9,891	9,155	8,380	7,312
Communications	<b>895</b>	815	831	729	513
Manufacturing	<b>18,689</b>	16,187	13,612	11,250	9,870
Mining	<b>1,862</b>	1,309	1,085	959	662
Oil and gas	<b>7,930</b>	6,667	5,943	3,908	3,466
Transportation	<b>10,694</b>	3,735	2,532	2,152	2,109
Utilities	<b>2,692</b>	1,984	1,670	1,309	1,170
Forest products	<b>889</b>	859	587	631	592
Service industries	<b>35,481</b>	28,384	22,114	18,321	14,992
Financial institutions	<b>35,977</b>	31,220	24,096	19,019	15,113
Government	<b>1,394</b>	1,874	2,076	1,719	1,295
Other	<b>4,222</b>	4,772	6,131	6,272	7,514
	<b>188,369</b>	156,177	131,430	112,763	101,772

**Table 10: Net Impaired Loans and Acceptances – Segmented Information** <sup>(2)(5)</sup>

(\$ millions) As at October 31	2016	2015	2014	2013	2012
<b>Net Impaired Businesses and Governments Loans</b>					
Commercial real estate	<b>60</b>	87	159	379	803
Construction (non-real estate)	<b>45</b>	83	84	32	51
Retail trade	<b>13</b>	55	38	74	68
Wholesale trade	<b>51</b>	47	35	64	58
Agriculture	<b>221</b>	129	103	118	131
Communications	<b>1</b>	13	59	-	5
Manufacturing	<b>106</b>	102	100	74	126
Mining	<b>2</b>	3	2	5	5
Oil and gas	<b>408</b>	100	1	30	1
Transportation	<b>88</b>	30	7	23	41
Utilities	<b>12</b>	14	-	-	6
Forest products	<b>7</b>	9	13	19	24
Service industries	<b>82</b>	107	145	246	263
Financial institutions	<b>39</b>	48	9	-	-
Government	<b>6</b>	-	2	61	68
Other	<b>1</b>	10	1	75	23
	<b>1,142</b>	837	758	1,200	1,673

(1) Certain balances for fiscal 2012 were restated in 2013 to conform to the current period's presentation.

(2) Fiscal 2013 and 2012 balances were reclassified in 2014 to conform to the current period's presentation.

(3) Fiscal 2014 Canadian regional balances were reclassified in 2015 to conform to the current period's presentation.

(4) Aggregated Net Loans and Acceptances are net of collective allowances, and all specific allowances excluding those related to off-balance sheet instruments and undrawn commitments. The Consumer and Business and governments Net Loans and Acceptances balances are stated net of specific allowances (excluding those related to off-balance sheet instruments and undrawn commitments) only.

(5) Net Impaired Loans balances are net of specific allowances, excluding off-balance sheet instruments and undrawn commitments.

**Table 11: Changes in Gross Impaired Loans – Segmented Information** <sup>(5)</sup>

(\$ millions)	Canada					United States					Other countries					Total					
As at October 31	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012	
Gross impaired loans and acceptances (GIL), beginning of year																					
Consumer	<b>359</b>	398	348	338	371	<b>557</b>	678	702	646	388	-	-	-	-	-	<b>916</b>	1,076	1,050	984	759	
Businesses and governments	<b>282</b>	344	406	548	586	<b>757</b>	623	1,081	1,401	1,326	<b>4</b>	5	7	43	14	<b>1,043</b>	972	1,494	1,992	1,926	
Total GIL, beginning of year	<b>641</b>	742	754	886	957	<b>1,314</b>	1,301	1,783	2,047	1,714	<b>4</b>	5	7	43	14	<b>1,959</b>	2,048	2,544	2,976	2,685	
Additions to impaired loans and acceptances																					
Consumer	<b>631</b>	617	643	584	533	<b>473</b>	526	529	637	764	-	-	-	-	-	<b>1,104</b>	1,143	1,172	1,221	1,297	
Businesses and governments	<b>453</b>	231	285	294	352	<b>953</b>	542	685	931	1,416	<b>2</b>	5	-	3	36	<b>1,408</b>	778	970	1,228	1,804	
Total additions	<b>1,084</b>	848	928	878	885	<b>1,426</b>	1,068	1,214	1,568	2,180	<b>2</b>	5	-	3	36	<b>2,512</b>	1,921	2,142	2,449	3,101	
Reductions to impaired loans and acceptances (1)																					
Consumer	<b>(452)</b>	(479)	(431)	(416)	(386)	<b>(282)</b>	(432)	(321)	(243)	(45)	-	-	-	-	-	<b>(734)</b>	(911)	(752)	(659)	(431)	
Businesses and governments	<b>(245)</b>	(151)	(224)	(274)	(314)	<b>(450)</b>	(239)	(859)	(973)	(880)	<b>(4)</b>	(5)	(2)	(36)	(6)	<b>(699)</b>	(395)	(1,085)	(1,283)	(1,200)	
Total reductions due to net repayments and other	<b>(697)</b>	(630)	(655)	(690)	(700)	<b>(732)</b>	(671)	(1,180)	(1,216)	(925)	<b>(4)</b>	(5)	(2)	(36)	(6)	<b>(1,433)</b>	(1,306)	(1,837)	(1,942)	(1,631)	
Write-offs																					
Consumer	<b>(182)</b>	(177)	(162)	(158)	(180)	<b>(163)</b>	(215)	(232)	(338)	(461)	-	-	-	-	-	<b>(345)</b>	(392)	(394)	(496)	(641)	
Businesses and governments	<b>(110)</b>	(142)	(123)	(162)	(76)	<b>(251)</b>	(169)	(284)	(278)	(461)	-	(1)	-	(3)	(1)	<b>(361)</b>	(312)	(407)	(443)	(538)	
Total write-offs	<b>(292)</b>	(319)	(285)	(320)	(256)	<b>(414)</b>	(384)	(516)	(616)	(922)	-	(1)	-	(3)	(1)	<b>(706)</b>	(704)	(801)	(939)	(1,179)	
Gross impaired loans and acceptances, end of year																					
Consumer	<b>356</b>	359	398	348	338	<b>585</b>	557	678	702	646	-	-	-	-	-	<b>941</b>	916	1,076	1,050	984	
Businesses and governments	<b>380</b>	282	344	406	548	<b>1,009</b>	757	623	1,081	1,401	<b>2</b>	4	5	7	43	<b>1,391</b>	1,043	972	1,494	1,992	
Total GIL, end of year	<b>736</b>	641	742	754	886	<b>1,594</b>	1,314	1,301	1,783	2,047	<b>2</b>	4	5	7	43	<b>2,332</b>	1,959	2,048	2,544	2,976	
<b>Condition Ratios</b>																					
GIL as a % of Gross Loans (2)																					
Consumer	<b>0.22</b>	0.23	0.27	0.24	0.26	<b>2.52</b>	2.18	2.87	3.12	3.03	-	-	-	-	-	<b>0.51</b>	0.51	0.62	0.63	0.64	
Businesses and governments	<b>0.48</b>	0.40	0.54	0.68	1.00	<b>1.03</b>	1.01	1.10	2.34	3.28	<b>0.02</b>	0.04	0.04	0.10	0.91	<b>0.74</b>	0.67	0.74	1.32	1.95	
Total Loans and Acceptances	<b>0.31</b>	0.29	0.35	0.37	0.47	<b>1.31</b>	1.30	1.62	2.60	3.20	<b>0.02</b>	0.04	0.04	0.10	0.91	<b>0.62</b>	0.58	0.67	0.91	1.17	
GIL as a % of equity and allowance for credit losses (3) (4) (5)	<b>un</b>	un	un	un	un	<b>un</b>	un	un	un	un	<b>un</b>	un	un	un	un	<b>5.25</b>	4.67	5.49	7.68	9.46	

(1) 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.

(2) Certain balances and ratios for fiscal 2012 were restated in 2013 to conform to the current period's presentation.

(3) Ratios are presented including purchased portfolios and prior periods have been restated.

(4) Certain ratios for 2013 and 2012 were restated in 2014 to conform to the current period's presentation.

(5) GIL excludes Purchased Credit Impaired Loans.

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**Table 12: Changes in Allowance for Credit Losses – Segmented Information** <sup>(3)</sup>

(\$ millions)	Canada					United States					Other countries					Total					
As at October 31	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012	
<b>Allowance for credit losses (ACL), beginning of year</b>																					
Consumer	614	615	602	518	464	393	333	278	291	270	-	-	-	-	-	1,007	948	880	809	734	
Businesses and governments	388	371	433	450	468	657	646	653	659	797	-	1	4	18	12	1,045	1,018	1,090	1,127	1,277	
Total ACL, beginning of year	1,002	986	1,035	968	932	1,050	979	931	950	1,067	-	1	4	18	12	2,052	1,966	1,970	1,936	2,011	
Provision for credit losses																					
Consumer	403	412	436	521	543	(31)	122	202	262	401	-	-	-	-	-	372	534	638	783	944	
Businesses and governments	180	149	97	133	90	263	(70)	(172)	(327)	(267)	-	(1)	(2)	(2)	(3)	443	78	(77)	(196)	(180)	
Total provision for credit losses	583	561	533	654	633	232	52	30	(65)	134	-	(1)	(2)	(2)	(3)	815	612	561	587	764	
Recoveries																					
Consumer	102	111	99	81	91	87	151	102	95	125	-	-	-	-	-	189	262	201	176	216	
Businesses and governments	14	13	15	(1)	4	140	181	408	597	626	-	-	-	-	-	154	194	423	596	630	
Total recoveries	116	124	114	80	95	227	332	510	692	751	-	-	-	-	-	343	456	624	772	846	
Write-offs																					
Consumer	(511)	(521)	(500)	(507)	(563)	(175)	(232)	(242)	(347)	(492)	-	-	-	-	-	(686)	(753)	(742)	(854)	(1,055)	
Businesses and governments	(110)	(143)	(122)	(160)	(76)	(251)	(168)	(285)	(280)	(461)	-	(1)	-	(3)	(1)	(361)	(312)	(407)	(443)	(538)	
Total write-offs	(621)	(664)	(622)	(667)	(639)	(426)	(400)	(527)	(627)	(953)	-	(1)	-	(3)	(1)	(1,047)	(1,065)	(1,149)	(1,297)	(1,593)	
Other, including foreign exchange rate changes																					
Consumer	(13)	(3)	(22)	(11)	(17)	(20)	19	(7)	(23)	(13)	-	-	-	-	-	(33)	16	(29)	(34)	(30)	
Businesses and governments	(1)	(2)	(52)	11	(36)	(16)	68	42	4	(36)	1	1	(1)	(9)	10	(16)	67	(11)	6	(62)	
Total Other, including foreign exchange rate changes	(14)	(5)	(74)	-	(53)	(36)	87	35	(19)	(49)	1	1	(1)	(9)	10	(49)	83	(40)	(28)	(92)	
<b>ACL, end of year</b>																					
Consumer	595	614	615	602	518	254	393	333	278	291	-	-	-	-	-	849	1,007	948	880	809	
Businesses and governments	471	388	371	433	450	793	657	646	653	659	1	-	1	4	18	1,265	1,045	1,018	1,090	1,127	
Total ACL, end of year	1,066	1,002	986	1,035	968	1,047	1,050	979	931	950	1	-	1	4	18	2,114	2,052	1,966	1,970	1,936	
<b>Allocation of Write-offs by Market</b>																					
Consumer	(511)	(521)	(500)	(507)	(563)	(175)	(232)	(242)	(347)	(492)	-	-	-	-	-	(686)	(753)	(742)	(854)	(1,055)	
Businesses and governments	(110)	(143)	(122)	(160)	(76)	(251)	(168)	(285)	(280)	(461)	-	(1)	-	(3)	(1)	(361)	(312)	(407)	(443)	(538)	
<b>Allocation of Recoveries by Market</b>																					
Consumer	102	111	99	81	91	87	151	102	95	125	-	-	-	-	-	189	262	201	176	216	
Businesses and governments	14	13	15	(1)	4	140	181	408	597	626	-	-	-	-	-	154	194	423	596	630	
Net write-offs as a % of average loans and acceptances <sup>(1) (2)</sup>	un	un	un	un	un	un	un	un	un	un	un	un	un	un	un	0.19	0.19	0.18	0.20	0.30	

**Table 13: Allocation of Allowance for Credit Losses – Segmented Information** <sup>(4)</sup>

(\$ millions)	Canada					United States					Other countries					Total					
As at October 31	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012	2016	2015	2014	2013	2012	
Consumer																					
Residential mortgages	15	17	20	27	36	18	21	41	42	30	-	-	-	-	-	33	38	61	69	66	
Consumer instalment and other personal loans	76	66	74	64	55	47	47	25	17	7	-	-	-	-	-	123	113	99	81	62	
Total consumer	91	83	94	91	91	65	68	66	59	37	-	-	-	-	-	156	151	160	150	128	
Businesses and governments	82	62	97	153	172	166	144	116	137	129	1	-	1	4	18	249	206	214	294	319	
Off-balance sheet	-	-	-	-	-	27	35	50	41	29	-	-	-	-	-	27	35	50	41	29	
Total specific allowances	173	145	191	244	263	258	247	232	237	195	1	-	1	4	18	432	392	424	485	476	
Collective allowance	893	857	795	791	705	789	803	747	694	755	-	-	-	-	-	1,682	1,660	1,542	1,485	1,460	
Allowance for credit losses	1,066	1,002	986	1,035	968	1,047	1,050	979	931	950	1	-	1	4	18	2,114	2,052	1,966	1,970	1,936	
<b>Coverage Ratios</b>																					
Specific allowance for credit losses as a % of gross impaired loans and acceptances (GIL) <sup>(1) (5)</sup>																					
Total	23.5	22.6	25.7	32.4	29.7	14.5	16.1	14.0	11.0	8.1	50.0	-	20.0	57.1	41.9	17.4	18.2	18.3	17.5	15.0	
Consumer	25.6	23.1	23.6	26.1	26.9	11.1	12.2	9.7	8.4	5.7	-	-	-	-	-	16.6	16.5	14.9	14.3	13.0	
Businesses and governments	21.6	22.0	28.2	37.7	31.4	16.5	19.0	18.6	12.7	9.2	50.0	-	20.0	57.1	41.9	17.9	19.8	22.0	19.7	16.0	

(1) Ratios are presented including purchased portfolios and prior periods have been restated.

(2) Certain balances and ratios for fiscal 2012 were restated in 2013 to conform to the current period's presentation.

(3) Fiscal 2013 and 2012 balances were reclassified in 2014 to conform to the current period's presentation.

(4) Certain balances for fiscal 2014 and 2013 were restated in 2015 to conform to the current period's presentation.

(5) Ratios excludes specific allowances for Other Credit Instruments, which are included in Other Liabilities.

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**Table 14: Specific Allowances for Credit Losses – Segmented Information** <sup>(2)</sup>

(\$ millions) As at October 31	2016	2015	2014	2013	2012
<b>Businesses and Governments</b>					
<b>Specific Allowances by Industry</b>					
Commercial real estate	13	17	13	46	79
Construction (non-real estate)	4	8	16	26	22
Retail trade	12	23	8	13	17
Wholesale trade	31	19	10	25	6
Agriculture	19	6	8	9	11
Communications	1	9	-	-	1
Manufacturing	36	38	33	36	67
Mining	1	1	10	3	-
Oil and gas	45	2	-	1	2
Transportation	9	5	2	4	2
Utilities	3	-	-	-	1
Forest products	1	2	9	11	15
Service industries	50	33	100	59	75
Financial institutions	10	3	2	29	8
Government	-	-	-	1	1
Other	14	40	3	31	12
Total specific allowances for credit losses on businesses and governments loans <sup>(1)</sup>	249	206	214	294	319

**Table 15: Provision for Credit Losses – Segmented Information** <sup>(2)</sup>

(\$ millions) For the year ended October 31	2016	2015	2014	2013	2012
<b>Consumer</b>					
Residential mortgages	24	11	77	129	132
Cards	264	272	268	305	355
Consumer instalment and other personal loans	246	225	251	313	387
Total consumer	534	508	596	747	874
<b>Businesses and Governments</b>					
Commercial real estate	(16)	(37)	(141)	(185)	(108)
Construction (non-real estate)	15	-	7	36	(14)
Retail trade	13	8	1	(4)	-
Wholesale trade	11	19	29	10	(16)
Agriculture	56	3	15	8	4
Communications	2	13	-	(6)	(5)
Manufacturing	29	67	44	2	25
Mining	20	2	7	2	(1)
Oil and gas	105	25	-	-	-
Transportation	56	(4)	10	(9)	5
Utilities	3	-	-	-	-
Forest products	(1)	-	(1)	3	7
Service industries	21	(29)	80	(37)	23
Financial institutions	(7)	8	(34)	(15)	(29)
Government	-	(2)	(3)	(6)	-
Other	(26)	31	(49)	51	(4)
Total businesses and governments	281	104	(35)	(150)	(113)
Total specific provisions	815	612	561	597	761
Collective provision for credit losses	-	-	-	(10)	3
Total provision for credit losses	815	612	561	587	764
<b>Performance Ratios (%)</b>					
PCL-to-average net loans and acceptances <sup>(3)</sup> <sup>(4)</sup>	0.23	0.19	0.19	0.22	0.31
PCL-to-segmented average net loans and acceptances <sup>(4)</sup>					
Consumer	0.21	0.30	0.37	0.49	0.62
Businesses and governments	0.25	0.05	(0.06)	(0.18)	(0.15)
Specific PCL-to-average net loans and acceptances	0.23	0.19	0.19	0.23	0.31

(1) Amounts for 2016 exclude specific allowances of \$1 million related to Other Credit Instruments (2015 – \$4 million, 2014 – \$23 million, 2013 – \$21 million, 2012 – \$19 million) included in Other Liabilities.

(2) Fiscal 2013 and 2012 balances were reclassified in 2014 to conform to the current period's presentation.

(3) Ratios are presented including purchased portfolios and prior periods have been restated.

(4) Certain balances and ratios for fiscal 2012 were restated in 2013 to conform to the current period's presentation.

## Table 16: Risk-Weighted Assets

(\$ millions) As at October 31	Basel III											
	Exposure at Default			Risk-weighted assets			Exposure at Default			Risk-weighted assets		
	Standardized Approach	Advanced Approach	2016 Total	Standardized Approach	Advanced Approach (2)	2016 Total	Standardized Approach	Advanced Approach	2015 Total	Standardized Approach	Advanced Approach (2)	2015 Total
<b>Credit Risk</b>												
<b>Wholesale</b>												
Corporate, including specialized lending	22,074	242,454	264,528	22,154	82,334	104,488	19,583	218,409	237,992	19,260	72,229	91,489
Corporate small and medium-sized enterprises	-	64,409	64,409	-	33,755	33,755	-	64,525	64,525	-	31,954	31,954
Sovereign	122	87,124	87,246	64	1,912	1,976	172	75,324	75,496	94	1,671	1,765
Bank	264	40,734	40,998	264	4,222	4,486	344	34,964	35,308	341	3,561	3,902
<b>Retail</b>												
Residential mortgages, excluding home equity line of credit	2,594	99,076	101,670	1,349	6,766	8,115	3,425	104,031	107,456	1,740	6,687	8,427
Home equity line of credit	431	39,177	39,608	306	5,829	6,135	592	42,665	43,257	416	7,473	7,889
Qualifying revolving retail	-	34,016	34,016	-	5,110	5,110	-	32,109	32,109	-	4,569	4,569
Other retail, excluding small and medium-sized enterprises	2,395	35,154	37,549	1,567	10,367	11,934	2,557	20,638	23,195	1,624	9,429	11,053
Retail small and medium-sized enterprises	7,135	4,064	11,199	5,427	2,269	7,696	277	2,890	3,167	210	1,758	1,968
Equity	-	2,122	2,122	-	1,403	1,403	-	1,965	1,965	-	1,369	1,369
Trading book	261	145,411	145,672	261	9,414	9,675	165	150,876	151,041	165	8,250	8,415
Securitization	-	23,269	23,269	-	1,878	1,878	-	29,178	29,178	-	2,456	2,456
Other credit risk assets - non-counterparty managed assets	-	24,328	24,328	-	16,197	16,197	-	20,329	20,329	-	16,255	16,255
Scaling factor for credit risk assets under AIRB Approach (1)	-	-	-	-	9,651	9,651	-	-	-	-	8,874	8,874
<b>Total Credit Risk</b>	<b>35,276</b>	<b>841,338</b>	<b>876,614</b>	<b>31,392</b>	<b>191,107</b>	<b>222,499</b>	<b>27,115</b>	<b>797,903</b>	<b>825,018</b>	<b>23,850</b>	<b>176,535</b>	<b>200,385</b>
Market Risk	-	-	-	1,211	7,751	8,962	-	-	-	1,142	9,120	10,262
Operational Risk	-	-	-	4,982	25,520	30,502	-	-	-	4,033	24,505	28,538
<b>Common Equity Tier 1 (CET 1) Capital Risk-Weighted Assets before Capital Floor</b>	<b>35,276</b>	<b>841,338</b>	<b>876,614</b>	<b>37,585</b>	<b>224,378</b>	<b>261,963</b>	<b>27,115</b>	<b>797,903</b>	<b>825,018</b>	<b>29,025</b>	<b>210,160</b>	<b>239,185</b>
Basel I Capital Floor	-	-	-	-	15,599	15,599	-	-	-	-	504	504
<b>Common Equity Tier 1 (CET 1) Capital Risk-Weighted Assets</b>				<b>37,585</b>	<b>239,977</b>	<b>277,562</b>				<b>29,025</b>	<b>210,664</b>	<b>239,689</b>
<b>Tier 1 Capital Risk-Weighted Assets before Credit Valuation Adjustment (CVA) and Capital Floor</b>					<b>224,378</b>	<b>261,963</b>					<b>210,160</b>	<b>239,185</b>
Additional CVA adjustment, prescribed by OSFI, for Tier 1 Capital	-	-	-	-	380	380	-	-	-	-	286	286
Basel I Capital Floor	-	-	-	-	15,219	15,219	-	-	-	-	218	218
<b>Tier 1 Capital Risk-Weighted Assets</b>				<b>37,585</b>	<b>239,977</b>	<b>277,562</b>				<b>29,025</b>	<b>210,664</b>	<b>239,689</b>
<b>Total Capital Risk-Weighted Assets before CVA and Capital Floor</b>					<b>224,378</b>	<b>261,963</b>					<b>210,160</b>	<b>239,185</b>
Additional CVA adjustment, prescribed by OSFI, for Total Capital	-	-	-	-	705	705	-	-	-	-	531	531
Basel I Capital Floor	-	-	-	-	14,894	14,894	-	-	-	-	-	-
<b>Total Capital Risk-Weighted Assets</b>				<b>37,585</b>	<b>239,977</b>	<b>277,562</b>				<b>29,025</b>	<b>210,691</b>	<b>239,716</b>

(1) The scaling factor is applied to the risk-weighted assets amounts for credit risk under the AIRB Approach.

(2) Comparative figures have been amended.

## Table 17: Average Deposits

(\$ millions, except as noted)	2016		2015		2014	
	Average balance	Average rate paid (%)	Average balance	Average rate paid (%)	Average balance	Average rate paid (%)
<b>Deposits Booked in Canada</b>						
Demand deposits - interest bearing	19,493	0.33	18,910	0.36	16,469	0.45
Demand deposits - non-interest bearing	37,296	-	31,762	-	26,702	-
Payable after notice	77,231	0.44	76,458	0.57	76,903	0.70
Payable on a fixed date	136,821	1.35	120,764	1.35	118,094	1.44
<b>Total deposits booked in Canada</b>	<b>270,841</b>	<b>0.83</b>	<b>247,894</b>	<b>0.86</b>	<b>238,168</b>	<b>0.97</b>
<b>Deposits Booked in the United States and Other Countries</b>						
Banks located in the United States and other countries (1)	26,209	0.55	23,952	0.36	19,374	0.34
Governments and institutions in the United States and other countries	6,867	0.36	6,804	0.24	4,216	0.19
Other demand deposits	17,346	0.02	16,109	0.01	12,744	0.02
Other deposits payable after notice or on a fixed date	147,460	0.40	140,709	0.31	124,089	0.38
<b>Total deposits booked in the United States and other countries</b>	<b>197,882</b>	<b>0.38</b>	<b>187,574</b>	<b>0.29</b>	<b>160,423</b>	<b>0.35</b>
<b>Total average deposits</b>	<b>468,723</b>	<b>0.64</b>	<b>435,468</b>	<b>0.62</b>	<b>398,591</b>	<b>0.72</b>

As at October 31, 2016, 2015 and 2014: deposits by foreign depositors in our Canadian bank offices amounted to \$52,834 million, \$37,477 million and \$30,622 million, respectively; total deposits payable after notice included \$30,122 million, \$29,104 million and \$33,109 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 \$35,460 million, \$25,926 million and \$17,738 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.

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

# Statement of Management's Responsibility for Financial Information

Management of Bank of Montreal (the "bank") is responsible for the preparation and presentation of the annual consolidated financial statements, Management's Discussion and Analysis ("MD&A") and all other information in the Annual Report.

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board and meet the applicable requirements of the Canadian Securities Administrators ("CSA") and the Securities and Exchange Commission ("SEC") in the United States. The financial statements also comply with the provisions of the *Bank Act (Canada)* and related regulations, including interpretations of IFRS by our regulator, the Office of the Superintendent of Financial Institutions Canada.

The MD&A has been prepared in accordance with the requirements of securities regulators, including National Instrument 51-102 *Continuous Disclosure Obligations* of the CSA as well as Item 303, *Management's discussion and analysis of financial condition and results of operations*, of Regulation S-K under the United States *Securities Act of 1933* and the *Securities Exchange Act of 1934*, and their related published requirements.

The consolidated financial statements and information in the MD&A necessarily include amounts based on informed judgments and estimates of the expected effects of current events and transactions with appropriate consideration to materiality. In addition, in preparing the financial information we must interpret the requirements described above, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect reported information. The MD&A also includes information regarding the impact of current transactions and events, sources of liquidity and capital resources, operating trends, risks and uncertainties. Actual results in the future may differ materially from our present assessment of this information because events and circumstances in the future may not occur as expected.

The financial information presented in the bank's Annual Report is consistent with that in the consolidated financial statements.

In meeting our responsibility for the reliability and timeliness of financial information, we maintain and rely on a comprehensive system of internal controls, including organizational and procedural controls, disclosure controls and procedures, and internal control over financial reporting. Our system of internal controls includes written communication of our policies and procedures governing corporate conduct and risk management; comprehensive business planning; effective segregation of duties; delegation of authority and personal accountability; escalation of relevant information for decisions regarding public disclosure; careful selection and training of personnel; and accounting policies that we regularly update. Our internal controls are designed to provide reasonable assurance that transactions are authorized, assets are safeguarded and proper records are maintained and that we are in compliance with all regulatory requirements. The system of internal controls is further supported by a compliance function, which is designed to ensure that we and our employees comply with securities legislation and conflict of interest rules, and by an internal audit staff, which conducts periodic audits of all aspects of our operations.

As of October 31, 2016, we, as the bank's Chief Executive Officer and Chief Financial Officer, have determined that the bank's internal control over financial reporting is effective. We have certified Bank of Montreal's annual filings with the CSA and with the SEC pursuant to National Instrument 52-109, *Certification of Disclosure in Issuers' Annual and Interim Filings* and the *Securities Exchange Act of 1934*.

In order to provide their audit opinions on our consolidated financial statements and on the bank's internal control over financial reporting, the Shareholders' Auditors audit our system of internal controls over financial reporting and conduct work to the extent that they consider appropriate. Their audit opinion on the bank's internal control over financial reporting as of October 31, 2016 is set forth on page 138.

The Board of Directors, based on recommendations from its Audit and Conduct Review Committee, reviews and approves the financial information contained in the Annual Report, including the MD&A. The Board of Directors and its relevant committees oversee management's responsibilities for the preparation and presentation of financial information, maintenance of appropriate internal controls, compliance with legal and regulatory requirements, management and control of major risk areas, and assessment of significant and related party transactions.

The Audit and Conduct Review Committee, which is comprised entirely of independent directors, is also responsible for selecting the Shareholders' Auditors and reviewing the qualifications, independence and performance of both the Shareholders' Auditors and internal audit. The Shareholders' Auditors and the bank's Chief Auditor have full and free access to the Board of Directors, its Audit and Conduct Review Committee and other relevant committees to discuss audit, financial reporting and related matters.

The Office of the Superintendent of Financial Institutions Canada conducts examinations and inquiries into the affairs of the bank as are deemed necessary to ensure that the provisions of the *Bank Act*, with respect to the safety of the depositors, are being duly observed and that the bank is in sound financial condition.



**William A. Downe**  
Chief Executive Officer



**Thomas E. Flynn**  
Chief Financial Officer

Toronto, Canada  
December 6, 2016

# Independent Auditors' Report of Registered Public Accounting Firm

## To the Shareholders of Bank of Montreal

We have audited the accompanying consolidated financial statements of Bank of Montreal (the "Bank"), which comprise the consolidated balance sheets as at October 31, 2016 and October 31, 2015, the consolidated statements of income, comprehensive income, changes in equity and cash flows for each of the years in the three-year period ended October 31, 2016, and notes, comprising a summary of significant accounting policies and other explanatory information.

### Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

### Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards and the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

### Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Bank as at October 31, 2016 and October 31, 2015, and its consolidated financial performance and its consolidated cash flows for each of the years in the three-year period ended October 31, 2016 in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board.

### Other Matter

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Bank's internal control over financial reporting as of October 31, 2016, based on the criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated December 6, 2016 expressed an unmodified (unqualified) opinion on the effectiveness of the Bank's internal control over financial reporting.



**Chartered Professional Accountants, Licensed Public Accountants**

December 6, 2016

Toronto, Canada



# Report of Independent Registered Public Accounting Firm

## To the Shareholders of Bank of Montreal

We have audited Bank of Montreal's (the "Bank") internal control over financial reporting as of October 31, 2016, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Bank's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included under the heading "Management's Annual Report on Disclosure Controls and Procedures and Internal Control over Financial Reporting" in the accompanying Management's Discussion and Analysis. Our responsibility is to express an opinion on the Bank's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, 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 policies or procedures may deteriorate.

In our opinion, the Bank maintained, in all material respects, effective internal control over financial reporting as of October 31, 2016, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We also have audited, in accordance with Canadian generally accepted auditing standards and the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of the Bank as at October 31, 2016 and 2015, the consolidated statements of income, comprehensive income, changes in equity and cash flows for each of the years in the three-year period ended October 31, 2016, and notes, comprising a summary of significant accounting policies and other explanatory information, and our report dated December 6, 2016 expressed an unmodified (unqualified) opinion on those consolidated financial statements.

The logo for KPMG LLP, featuring the letters "KPMG" in a stylized, handwritten font, with "LLP" in a smaller, simpler font to the right. A blue horizontal line is drawn underneath the "KPMG" text.

**Chartered Professional Accountants, Licensed Public Accountants**

December 6, 2016

Toronto, Canada

# Consolidated Statement of Income

For the Year Ended October 31 (Canadian \$ in millions, except as noted)	2016	2015	2014
<b>Interest, Dividend and Fee Income</b>			
Loans	\$ 12,575	\$ 11,263	\$ 10,997
Securities (Note 3)	1,704	1,705	1,693
Deposits with banks	223	190	182
	<b>14,502</b>	<b>13,158</b>	<b>12,872</b>
<b>Interest Expense</b>			
Deposits	3,002	2,681	2,865
Subordinated debt	179	171	150
Other liabilities	1,449	1,543	1,565
	<b>4,630</b>	<b>4,395</b>	<b>4,580</b>
<b>Net Interest Income</b>	<b>9,872</b>	<b>8,763</b>	<b>8,292</b>
<b>Non-Interest Revenue</b>			
Securities commissions and fees	924	901	894
Deposit and payment service charges	1,141	1,077	1,002
Trading revenues	1,192	987	949
Lending fees	859	737	680
Card fees	461	460	462
Investment management and custodial fees	1,556	1,552	1,286
Mutual fund revenues	1,364	1,377	1,065
Underwriting and advisory fees	820	706	744
Securities gains, other than trading (Note 3)	84	171	162
Foreign exchange, other than trading	162	172	179
Insurance revenue	2,023	1,762	2,008
Investments in associates and joint ventures	140	207	169
Other	489	517	331
	<b>11,215</b>	<b>10,626</b>	<b>9,931</b>
<b>Total Revenue</b>	<b>21,087</b>	<b>19,389</b>	<b>18,223</b>
<b>Provision for Credit Losses</b> (Note 4)	<b>815</b>	<b>612</b>	<b>561</b>
<b>Insurance Claims, Commissions and Changes in Policy Benefit Liabilities</b> (Note 14)	<b>1,543</b>	<b>1,254</b>	<b>1,505</b>
<b>Non-Interest Expense</b>			
Employee compensation (Notes 21 and 22)	7,382	7,081	6,242
Premises and equipment (Note 9)	2,393	2,137	1,908
Amortization of intangible assets (Note 11)	444	411	382
Travel and business development	646	605	542
Communications	294	314	289
Business and capital taxes	42	45	39
Professional fees	523	595	622
Other	1,273	994	897
	<b>12,997</b>	<b>12,182</b>	<b>10,921</b>
<b>Income Before Provision for Income Taxes</b>	<b>5,732</b>	<b>5,341</b>	<b>5,236</b>
Provision for income taxes (Note 23)	1,101	936	903
<b>Net Income</b>	<b>\$ 4,631</b>	<b>\$ 4,405</b>	<b>\$ 4,333</b>
Attributable to:			
Bank shareholders	4,622	4,370	4,277
Non-controlling interest in subsidiaries	9	35	56
<b>Net Income</b>	<b>\$ 4,631</b>	<b>\$ 4,405</b>	<b>\$ 4,333</b>
<b>Earnings Per Share</b> (Canadian \$) (Note 24)			
Basic	\$ 6.94	\$ 6.59	\$ 6.44
Diluted	6.92	6.57	6.41
Dividends per common share	3.40	3.24	3.08

The accompanying notes are an integral part of these consolidated financial statements.

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



**William A. Downe**  
Chief Executive Officer



**Philip S. Orsino**  
Chairman, Audit and Conduct Review Committee

# Consolidated Statement of Comprehensive Income

For the Year Ended October 31 (Canadian \$ in millions)	2016	2015	2014
<b>Net Income</b>	<b>\$ 4,631</b>	<b>\$ 4,405</b>	<b>\$ 4,333</b>
<b>Other Comprehensive Income (Loss)</b>			
Items that may subsequently be reclassified to net income			
Net change in unrealized gains (losses) on available-for-sale securities			
Unrealized gains (losses) on available-for-sale securities arising during the year (1)	151	(166)	28
Reclassification to earnings of (gains) in the year (2)	(28)	(65)	(77)
	123	(231)	(49)
Net change in unrealized gains (losses) on cash flow hedges			
Gains (losses) on cash flow hedges arising during the year (3)	(26)	528	247
Reclassification to earnings of (gains) losses on cash flow hedges (4)	10	(57)	(98)
	(16)	471	149
Net gains on translation of net foreign operations			
Unrealized gains on translation of net foreign operations	213	3,187	1,378
Unrealized gains (losses) on hedges of net foreign operations (5)	41	(482)	(415)
	254	2,705	963
Items that will not be reclassified to net income			
Gains (losses) on remeasurement of pension and other employee future benefit plans (6)	(422)	200	(125)
Gains (losses) on remeasurement of own credit risk on financial liabilities designated at fair value (Note 1) (7)	(153)	120	-
	(575)	320	(125)
<b>Other Comprehensive Income (Loss)</b>	<b>(214)</b>	<b>3,265</b>	<b>938</b>
<b>Total Comprehensive Income</b>	<b>\$ 4,417</b>	<b>\$ 7,670</b>	<b>\$ 5,271</b>
Attributable to:			
Bank shareholders	4,408	7,635	5,215
Non-controlling interest in subsidiaries	9	35	56
<b>Total Comprehensive Income</b>	<b>\$ 4,417</b>	<b>\$ 7,670</b>	<b>\$ 5,271</b>

(1) Net of income tax (provision) recovery of \$(64) million, \$63 million and \$(22) million for the year ended, respectively.

(2) Net of income tax provision of \$11 million, \$24 million and \$37 million for the year ended, respectively.

(3) Net of income tax (provision) of \$(4) million, \$(188) million and \$(79) million for the year ended, respectively.

(4) Net of income tax provision (recovery) of \$(6) million, \$14 million and \$28 million for the year ended, respectively.

(5) Net of income tax (provision) recovery of \$(10) million, \$167 million and \$144 million for the year ended, respectively.

(6) Net of income tax (provision) recovery of \$156 million, \$(51) million and \$63 million for the year ended, respectively.

(7) Net of income tax (provision) recovery of \$55 million and \$(43) million for the years ended October 31, 2016 and 2015, respectively.

The accompanying notes are an integral part of these consolidated financial statements.

# Consolidated Balance Sheet

As at October 31 (Canadian \$ in millions)	2016	2015
<b>Assets</b>		
<b>Cash and Cash Equivalents</b> (Note 2)	\$ 31,653	\$ 40,295
<b>Interest Bearing Deposits with Banks</b> (Note 2)	4,449	7,382
<b>Securities</b> (Note 3)		
Trading	84,458	72,460
Available-for-sale	55,663	48,006
Held-to-maturity	8,965	9,432
Other	899	1,020
	149,985	130,918
<b>Securities Borrowed or Purchased Under Resale Agreements</b> (Note 4)	66,646	68,066
<b>Loans</b> (Notes 4 and 6)		
Residential mortgages	112,277	105,918
Consumer instalment and other personal	64,680	65,598
Credit cards	8,101	7,980
Businesses and governments	175,597	145,076
	360,655	324,572
Allowance for credit losses (Note 4)	(1,925)	(1,855)
	358,730	322,717
<b>Other Assets</b>		
Derivative instruments (Note 8)	39,183	38,238
Customers' liability under acceptances (Note 12)	13,021	11,307
Premises and equipment (Note 9)	2,147	2,285
Goodwill (Note 11)	6,381	6,069
Intangible assets (Note 11)	2,178	2,208
Current tax assets	906	561
Deferred tax assets (Note 23)	3,101	3,162
Other (Note 12)	9,555	8,673
	76,472	72,503
<b>Total Assets</b>	\$ 687,935	\$ 641,881
<b>Liabilities and Equity</b>		
Deposits (Note 13)	\$ 473,372	\$ 438,169
<b>Other Liabilities</b>		
Derivative instruments (Note 8)	38,227	42,639
Acceptances (Note 14)	13,021	11,307
Securities sold but not yet purchased (Note 14)	25,106	21,226
Securities lent or sold under repurchase agreements (Note 14)	40,718	39,891
Current tax liabilities	81	102
Deferred tax liabilities (Note 23)	242	265
Other (Note 14)	50,401	43,953
	167,796	159,383
<b>Subordinated Debt</b> (Note 15)	4,439	4,416
<b>Equity</b>		
Preferred shares (Note 16)	3,840	3,240
Common shares (Note 16)	12,539	12,313
Contributed surplus	294	299
Retained earnings	21,205	18,930
Accumulated other comprehensive income	4,426	4,640
Total shareholders' equity	42,304	39,422
Non-controlling interest in subsidiaries (Note 16)	24	491
<b>Total Equity</b>	42,328	39,913
<b>Total Liabilities and Equity</b>	\$ 687,935	\$ 641,881

The accompanying notes are an integral part of these consolidated financial statements.  
Certain comparative figures have been reclassified to conform with the current year's presentation.

# Consolidated Statement of Changes in Equity

For the Year Ended October 31 (Canadian \$ in millions)	2016	2015	2014
<b>Preferred Shares</b> (Note 16)			
Balance at beginning of year	\$ 3,240	\$ 3,040	\$ 2,265
Issued during the year	600	950	1,200
Redeemed during the year	-	(750)	(425)
Balance at End of Year	3,840	3,240	3,040
<b>Common Shares</b> (Note 16)			
Balance at beginning of year	12,313	12,357	12,003
Issued under the Shareholder Dividend Reinvestment and Share Purchase Plan (Note 16)	90	58	223
Issued under the Stock Option Plan (Note 16)	136	51	131
Repurchased for cancellation (Note 16)	-	(153)	-
Balance at End of Year	12,539	12,313	12,357
<b>Contributed Surplus</b>			
Balance at beginning of year	299	304	315
Stock option expense/exercised (Note 21)	(14)	-	(7)
Other	9	(5)	(4)
Balance at End of Year	294	299	304
<b>Retained Earnings</b>			
Balance at beginning of year	18,930	17,237	15,087
Net income attributable to bank shareholders	4,622	4,370	4,277
Dividends – Preferred shares (Note 16)	(150)	(117)	(120)
– Common shares (Note 16)	(2,191)	(2,087)	(1,991)
Preferred shares redeemed during the year (Note 16)	-	(3)	-
Common shares repurchased for cancellation (Note 16)	-	(465)	-
Share issue expense	(6)	(5)	(16)
Balance at End of Year	21,205	18,930	17,237
<b>Accumulated Other Comprehensive Income on Available-for-Sale Securities</b>			
Balance at beginning of year	(75)	156	205
Unrealized gains (losses) on available-for-sale securities arising during the year (1)	151	(166)	28
Reclassification to earnings of (gains) in the year (2)	(28)	(65)	(77)
Balance at End of Year	48	(75)	156
<b>Accumulated Other Comprehensive Income on Cash Flow Hedges</b>			
Balance at beginning of year	612	141	(8)
Gains (losses) on cash flow hedges arising during the year (3)	(26)	528	247
Reclassification to earnings of (gains) losses in the year (4)	10	(57)	(98)
Balance at End of Year	596	612	141
<b>Accumulated Other Comprehensive Income on Translation of Net Foreign Operations</b>			
Balance at beginning of year	4,073	1,368	405
Unrealized gains on translation of net foreign operations	213	3,187	1,378
Unrealized gains (losses) on hedges of net foreign operations (5)	41	(482)	(415)
Balance at End of Year	4,327	4,073	1,368
<b>Accumulated Other Comprehensive Income on Pension and Other Employee Future Benefit Plans</b>			
Balance at beginning of year	(90)	(290)	(165)
Gains (losses) on remeasurement of pension and other employee future benefit plans (6)	(422)	200	(125)
Balance at End of Year	(512)	(90)	(290)
<b>Accumulated Other Comprehensive Income on Own Credit Risk on Financial Liabilities Designated at Fair Value</b>			
Balance at beginning of year	120	-	-
Gains (losses) on remeasurement of own credit risk on financial liabilities designated at fair value (Note 1) (7)	(153)	120	-
Balance at End of Year	(33)	120	-
<b>Total Accumulated Other Comprehensive Income</b>	4,426	4,640	1,375
<b>Total Shareholders' Equity</b>	\$ 42,304	\$ 39,422	\$ 34,313
<b>Non-controlling Interest in Subsidiaries</b>			
Balance at beginning of year	491	1,091	1,072
Net income attributable to non-controlling interest	9	35	56
Dividends to non-controlling interest	(10)	(37)	(52)
Redemption of capital trust securities (Note 16)	(450)	(600)	-
Acquisitions	-	-	22
Other	(16)	2	(7)
Balance at End of Year	24	491	1,091
<b>Total Equity</b>	\$ 42,328	\$ 39,913	\$ 35,404

(1) Net of income tax (provision) recovery of \$(64) million, \$63 million and \$(22) million for the year ended, respectively.

(2) Net of income tax provision of \$11 million, \$24 million and \$37 million for the year ended, respectively.

(3) Net of income tax (provision) of \$(4) million, \$(188) million and \$(79) million for the year ended, respectively.

(4) Net of income tax provision (recovery) of \$(6) million, \$14 million and \$28 million for the year ended, respectively.

(5) Net of income tax (provision) recovery of \$(10) million, \$167 million and \$144 million for the year ended, respectively.

(6) Net of income tax (provision) recovery of \$156 million, \$(51) million and \$63 million for the year ended, respectively.

(7) Net of income tax (provision) recovery of \$55 million and \$(43) million for the years ended October 31, 2016 and 2015, respectively.

The accompanying notes are an integral part of these consolidated financial statements.



# Consolidated Statement of Cash Flows

For the Year Ended October 31 (Canadian \$ in millions)	2016	2015	2014
<b>Cash Flows from Operating Activities</b>			
Net Income	\$ 4,631	\$ 4,405	\$ 4,333
Adjustments to determine net cash flows provided by (used in) operating activities			
Impairment write-down of securities, other than trading (Note 3)	17	12	8
Net (gain) on securities, other than trading (Note 3)	(101)	(183)	(170)
Net (increase) decrease in trading securities	(11,403)	15,613	(8,470)
Provision for credit losses (Note 4)	815	612	561
Change in derivative instruments - (Increase) in derivative asset	(306)	(6,178)	(2,822)
- Increase (decrease) in derivative liability	(5,598)	9,320	1,402
Amortization of premises and equipment (Note 9)	384	377	365
Amortization of other assets	219	-	-
Amortization of intangible assets (Note 11)	444	411	382
Net decrease in deferred income tax asset	108	226	241
Net increase (decrease) in deferred income tax liability	(7)	76	(42)
Net (increase) decrease in current income tax asset	(345)	298	546
Net (decrease) in current income tax liability	(18)	(141)	(226)
Change in accrued interest - (Increase) decrease in interest receivable	(81)	53	(36)
- Increase (decrease) in interest payable	64	(113)	160
Changes in other items and accruals, net	2,408	4,792	4,094
Net increase in deposits	22,906	7,967	9,814
Net (increase) in loans	(23,235)	(15,600)	(15,207)
Net increase (decrease) in securities sold but not yet purchased	3,739	(7,049)	4,429
Net increase (decrease) in securities lent or sold under repurchase agreements	(82)	(4,625)	9,073
Net (increase) decrease in securities borrowed or purchased under resale agreements	2,793	(7,940)	(11,362)
Net Cash Provided by (Used in) Operating Activities	(2,648)	2,333	(2,927)
<b>Cash Flows from Financing Activities</b>			
Net increase (decrease) in liabilities of subsidiaries	3,100	(390)	(48)
Proceeds from issuance (maturities) of Covered Bonds (Note 13)	6,773	4,103	(406)
Proceeds from issuance (repayment) of subordinated debt (Note 15)	50	(500)	1,000
Proceeds from issuance of preferred shares (Note 16)	600	950	1,200
Redemption of preferred shares (Note 16)	-	(753)	(425)
Redemption of capital trust securities (Note 16)	(450)	(600)	-
Share issue expense	(6)	(5)	(16)
Proceeds from issuance of common shares (Note 16)	137	51	133
Common shares repurchased for cancellation (Note 16)	-	(618)	-
Cash dividends paid	(2,219)	(2,135)	(1,851)
Cash dividends paid to non-controlling interest	(10)	(37)	(52)
Net Cash Provided by (Used in) Financing Activities	7,975	66	(465)
<b>Cash Flows from Investing Activities</b>			
Net (increase) decrease in interest bearing deposits with banks	3,007	(461)	519
Purchases of securities, other than trading	(34,859)	(16,996)	(24,674)
Maturities of securities, other than trading	6,985	5,267	11,698
Proceeds from sales of securities, other than trading	22,293	16,740	17,184
Premises and equipment - net (purchases)	(224)	(179)	(355)
Purchased and developed software - net (purchases)	(396)	(345)	(382)
Acquisitions (Note 10)	(12,147)	-	(956)
Net Cash Provided by (Used in) Investing Activities	(15,341)	4,026	3,034
Effect of Exchange Rate Changes on Cash and Cash Equivalents	1,372	5,484	2,396
Net increase (decrease) in Cash and Cash Equivalents	(8,642)	11,909	2,038
Cash and Cash Equivalents at Beginning of Year	40,295	28,386	26,348
<b>Cash and Cash Equivalents at End of Year</b>	<b>\$ 31,653</b>	<b>\$ 40,295</b>	<b>\$ 28,386</b>
<b>Represented by:</b>			
Cash and deposits with banks (Note 2)	\$ 29,460	\$ 38,818	\$ 27,056
Cheques and other items in transit, net (Note 2)	2,193	1,477	1,330
	<b>\$ 31,653</b>	<b>\$ 40,295</b>	<b>\$ 28,386</b>
<b>Supplemental Disclosure of Cash Flow Information</b>			
Net cash provided by operating activities includes:			
Amount of interest paid in the year	\$ 4,561	\$ 4,476	\$ 4,407
Amount of income taxes paid in the year	\$ 1,201	\$ 641	\$ 264
Amount of interest and dividend income received in the year	\$ 14,541	\$ 13,138	\$ 12,735

The accompanying notes are an integral part of these consolidated financial statements.  
certain comparative figures have been reclassified to conform with the current year's presentation.

## Note 1: Basis of Presentation

Bank of Montreal (“the bank”) is a chartered bank under the *Bank Act (Canada)* and is a public company incorporated in Canada. We are a highly diversified financial services company and provide a broad range of personal and commercial banking, wealth management and investment banking products and services. The bank’s head office is at 129 rue Saint Jacques, Montreal, Quebec. Its executive offices are at 100 King Street West, 1 First Canadian Place, Toronto, Ontario. Our common shares are listed on the Toronto Stock Exchange and the New York Stock Exchange.

We have prepared these consolidated financial statements in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”). We also comply with interpretations of IFRS by our regulator, the Office of the Superintendent of Financial Institutions Canada (“OSFI”).

Our consolidated financial statements have been prepared on a historic cost basis, except for the revaluation of the following items: assets and liabilities held for trading; available-for-sale financial assets; financial instruments designated at fair value through profit or loss; financial assets and financial liabilities designated as hedged items in qualifying fair value hedge relationships; cash-settled share-based payment liabilities; defined benefit pension and other employee future benefit liabilities; and insurance-related liabilities.

These consolidated financial statements were authorized for issue by the Board of Directors on December 6, 2016.

### Basis of Consolidation

These consolidated financial statements are inclusive of the financial statements of our subsidiaries as at October 31, 2016. We conduct business through a variety of corporate structures, including subsidiaries, joint ventures, structured entities (“SEs”) and associates. Subsidiaries are those entities where we exercise control through our ownership of the majority of the voting shares. Joint ventures are those entities where we exercise joint control through an agreement with other shareholders. We also hold interests in SEs, which we consolidate when we control the SE. These are more fully described in Note 7. All of the assets, liabilities, revenues and expenses of our subsidiaries and consolidated SEs are included in our consolidated financial statements. All intercompany transactions and balances are eliminated on consolidation.

We hold investments in associates, where we exert significant influence over operating, investing and financing decisions (generally companies in which we own between 20% and 50% of the voting shares). These are accounted for using the equity method. The equity method is also applied to our investments in joint ventures. Under the equity method of accounting, investments are initially recorded at cost, and the carrying amount is increased or decreased to recognize our share of investee net income or loss, including other comprehensive income or loss. Our equity accounted investments are recorded as securities, other, in our Consolidated Balance Sheet and our share of the net income or loss is recorded in investments in associates and joint ventures, in our Consolidated Statement of Income. Any other comprehensive income amounts are reflected in the relevant section of our Statement of Comprehensive Income.

Non-controlling interest in subsidiaries is presented in our Consolidated Balance Sheet as a separate component of equity that is distinct from our shareholders’ equity. The net income attributable to non-controlling interest in subsidiaries is presented separately in our Consolidated Statement of Income.

### Specific Accounting Policies

To facilitate a better understanding of our consolidated financial statements, we have disclosed our significant accounting policies throughout the following notes with the related financial disclosures by major caption:

Note	Topic	Page	Note	Topic	Page
1	Basis of Presentation	144	17	Fair Value of Financial Instruments	177
2	Cash and Interest Bearing Deposits with Banks	149	18	Offsetting of Financial Assets and Financial Liabilities	183
3	Securities	149	19	Interest Rate Risk	183
4	Loans and Allowance for Credit Losses	153	20	Capital Management	184
5	Risk Management	156	21	Employee Compensation – Share-Based Compensation	185
6	Transfer of Assets	159	22	Employee Compensation – Pension and Other Employee Future Benefits	188
7	Structured Entities	159	23	Income Taxes	192
8	Derivative Instruments	161	24	Earnings Per Share	194
9	Premises and Equipment	167	25	Commitments, Guarantees, Pledged Assets, Provisions and Contingent Liabilities	195
10	Acquisitions	168	26	Operating and Geographic Segmentation	197
11	Goodwill and Intangible Assets	169	27	Significant Subsidiaries	200
12	Other Assets	170	28	Related Party Transactions	201
13	Deposits	171	29	Contractual Maturities of Assets and Liabilities and Off-Balance Sheet Commitments	202
14	Other Liabilities	172			
15	Subordinated Debt	173			
16	Equity	174			

### Translation of Foreign Currencies

We conduct business in a variety of foreign currencies and present our consolidated financial statements in Canadian dollars, which is our functional currency. Monetary assets and liabilities, as well as non-monetary assets and liabilities measured at fair value that are denominated in foreign currencies, are translated into Canadian dollars at the exchange rate in effect at the balance sheet date. Non-monetary assets and liabilities not measured at fair value are translated into Canadian dollars at historical rates. Revenues and expenses denominated in foreign currencies are translated using the average exchange rate for the year.

Unrealized gains and losses arising from translating our net investment in foreign operations into Canadian dollars, net of related hedging activities and applicable income taxes, are included in our Consolidated Statement of Comprehensive Income within net gain (loss) on translation of net foreign operations. When we dispose of a foreign operation such that control, significant influence or joint control is lost, the cumulative amount of the translation gain (loss) and any applicable hedging activities and related income taxes is reclassified to our Consolidated Statement of Income as part of the gain or loss on disposition.

Foreign currency translation gains and losses on available-for-sale debt securities that are denominated in foreign currencies are included in foreign exchange, other than trading, in our Consolidated Statement of Income. Foreign currency translation gains and losses on available-for-sale equity securities that are denominated in foreign currencies are included in accumulated other comprehensive income on available-for-sale securities in our Consolidated Statement of Changes in Equity. All other foreign currency translation gains and losses are included in foreign exchange, other than trading, in our Consolidated Statement of Income as they arise.

From time to time, we enter into foreign exchange hedge contracts to reduce our exposure to changes in the value of foreign currencies. Realized and unrealized gains and losses that arise on the mark-to-market of foreign exchange contracts related to economic hedges are included in non-interest revenue in our Consolidated Statement of Income. Changes in the fair value of forward contracts that qualify as accounting hedges are recorded in our Consolidated Statement of Comprehensive Income within net change in unrealized gains (losses) on cash flow hedges, with the spot/forward differential (the difference between the foreign currency exchange rate at the inception of the contract and the rate at the end of the contract) recorded in interest income (expense) over the term of the hedge.

## Dividend and Fee Income

### *Dividend Income*

Dividend income is recognized when the right to receive payment is established. This is the ex-dividend date for listed equity securities.

### *Fee Income*

Fee income (including commissions) is recognized based on the services or products for which the fee is paid. See Note 4 for the accounting treatment for lending fees.

Investment management and custodial fees are based primarily on the balance of assets under management and assets under administration, as at the period end, respectively, for services provided.

Securities commissions and fees and underwriting and advisory fees are recorded as revenue when the related services are completed.

Deposit and payment service charges and insurance fees are recognized over the period in which the related services are provided.

Card fees primarily include interchange income, late fees, cash advance fees and annual fees. Card fees are recorded as billed, except for annual fees, which are recorded evenly throughout the year.

## Leases

We are lessors in both financing leases and operating leases. Leases are classified as financing leases if they substantially transfer all the risks and rewards incidental to ownership of the leased asset to the lessee. Otherwise they are classified as operating leases, as we retain substantially all the risks and rewards of asset ownership.

As lessor in a financing lease, a loan is recognized equal to the investment in the lease, which is calculated as the present value of the minimum payments to be received from the lessee, discounted at the interest rate implicit in the lease, plus any unguaranteed residual value we expect to recover at the end of the lease. Finance lease income is recognized in interest, dividend and fee income, loans, in our Consolidated Statement of Income.

Assets under operating leases are recorded in other assets in our Consolidated Balance Sheet. Rental income is recognized on a straight-line basis over the term of the lease in non-interest revenue, other, in our Consolidated Statement of Income. Depreciation on these assets is recognized on a straight-line basis over the life of the lease in non-interest expense, other, in our Consolidated Statement of Income.

## Assets Held-for-Sale

Non-current non-financial assets classified as held-for-sale are measured at the lower of their carrying amount and fair value less costs to sell and are presented within other assets in our Consolidated Balance Sheet. Subsequent to its initial classification, a non-current asset is no longer depreciated or amortized, and any subsequent write-down in fair value less costs to sell is recognized in non-interest revenue, other, in our Consolidated Statement of Income.

## Use of Estimates and Judgments

The preparation of the consolidated financial statements requires management to use estimates and assumptions that affect the carrying amounts of certain assets and liabilities, certain amounts reported in net income and other related disclosures.

The most significant assets and liabilities for which we 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 taxes; purchased loans; goodwill and intangible assets; insurance-related liabilities; provisions; transfers of financial assets; and consolidation of structured entities. We make judgments in assessing whether substantially all risks and rewards have been transferred in respect of transfers of financial assets and whether we control SEs. These judgments are discussed in Notes 6 and 7, respectively. If actual results were to differ from the estimates, the impact would be recorded in future periods.

We have established detailed policies and control procedures that are intended to ensure these judgments are well controlled, independently reviewed and consistently applied from period to period. We believe that our estimates of the value of our assets and liabilities are appropriate.

### *Allowance for Credit Losses*

The allowance for credit losses adjusts the value of loans to reflect their estimated realizable value. In assessing their estimated realizable value, we must rely on estimates and exercise judgment regarding matters for which the ultimate outcome is unknown. These include economic factors, developments affecting companies in particular industries, and specific issues with respect to single borrowers. Changes in circumstances may cause future assessments of credit risk to be materially different from current assessments, which could require an increase or decrease in the allowance for credit losses.

Additional information regarding the allowance for credit losses is included in Note 4.

*Financial Instruments Measured at Fair Value*

Fair value measurement techniques are used to value various financial assets and financial liabilities and are used in performing impairment testing on certain non-financial assets. A detailed discussion of our fair value measurement techniques is included in Note 3 and Note 17.

*Pension and Other Employee Future Benefits*

Our pension and other employee future benefit expense is calculated by our independent actuaries using assumptions determined by management. If actual experience were to differ from the assumptions used, we would recognize this difference in other comprehensive income.

Pension and other employee future benefit expense, plan assets and defined benefit obligations are also sensitive to changes in discount rates. We determine discount rates at each year end for all of our plans using high-quality AA rated corporate bond yields with terms matching the plans' specific cash flows.

Additional information regarding our accounting for pension and other employee future benefits is included in Note 22.

*Impairment of Securities*

We have investments in securities issued or guaranteed by Canadian, U.S. and other government agencies, corporate debt and equity securities, mortgage-backed securities and collateralized obligations, which are classified as either available-for-sale securities, held-to-maturity securities or other securities. We review held-to-maturity, available-for-sale and other securities at each quarter-end reporting period to identify and evaluate investments that show indications of possible impairment.

For held-to-maturity, available-for-sale and other securities, impairment losses are recognized if there is objective evidence of impairment as a result of an event that reduces the estimated future cash flows from the security and the impact can be reliably estimated. Objective evidence of impairment includes default or delinquency by a debtor, restructuring of an amount due to us on terms that we would not otherwise consider, indications that a debtor or issuer will enter bankruptcy, or the disappearance of an active market for a security. In addition, for equity securities, a significant or prolonged decline in the fair value of a security below its cost is objective evidence of impairment.

We do not record impairment write-downs on debt securities when impairment is due to changes in market interest rates if future contractual cash flows associated with the debt security are still expected to be recovered.

Additional information regarding our accounting for held-to-maturity, available-for-sale and other securities, and the determination of fair value is included in Note 3 and Note 17.

*Income Taxes and Deferred Tax Assets*

The provision for income taxes is calculated based on the expected tax treatment of transactions recorded in our Consolidated Statements of Income or Changes in Equity. In determining the provision for income taxes, we interpret tax legislation in a variety of jurisdictions and make assumptions about the expected timing of the reversal of deferred tax assets and liabilities. If our interpretations differ from those of tax authorities or if the timing of reversals is not as expected, our 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 may be utilized. We are required to assess whether it is probable that our deferred income tax assets will be realized prior to expiration and, based on all the available evidence, determine if any portion of our deferred income tax assets should not be recognized. The factors used to assess the probability of realization are our past experience of income and capital gains, forecast of future net income before taxes, available tax planning strategies that could be implemented to realize the deferred income tax asset, and the remaining expiration period of tax loss carryforwards. Changes in our assessment of these factors could increase or decrease our provision for income taxes in future periods.

Additional information regarding our accounting for income taxes is included in Note 23.

*Goodwill and Intangible Assets*

For the purpose of impairment testing, goodwill is allocated to our groups of cash-generating units ("CGUs"), which represent the lowest level within the bank at which goodwill is monitored for internal management purposes. Impairment testing is performed at least annually, by comparing the carrying values and the recoverable amounts of the CGUs to which goodwill has been allocated to determine whether the recoverable amount of each group is greater than its carrying value. If the carrying value of the group were to exceed its recoverable amount, an impairment calculation would be performed. The recoverable amount of a CGU is the higher of its fair value less costs to sell and the value in use.

Fair value less costs to sell is used to perform the impairment test. In determining fair value less costs to sell, we employ a discounted cash flow model consistent with those used when we acquire businesses. 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 business units in a different manner. Management must exercise its judgment and make assumptions in determining fair value less costs to sell, and differences in judgment and assumptions could affect the determination of fair value and any resulting impairment write-down.

Definite-life intangible assets 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. We test definite-life intangible assets for impairment when circumstances indicate the carrying value may not be recoverable. Indefinite life intangible assets are tested annually for impairment. If any intangible assets are determined to be impaired, we write them down to their 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 goodwill and intangible assets is included in Note 11.

*Purchased Loans*

Purchased loans are initially measured at fair value and are identified as either purchased performing loans or purchased credit impaired loans ("PCI loans") at the time of acquisition. The determination of fair value involved estimating the expected cash flows to be received and determining the discount rate to be applied to the cash flows from the loan portfolio. In determining the discount rate, we considered various factors, including

our cost to raise funds in the current market, the risk premium associated with the loans and the cost to service the portfolios. PCI loans are those where the timely collection of principal and interest was no longer reasonably assured as at the date of acquisition. We regularly evaluate what we expect to collect on PCI loans. Changes in expected cash flows could result in the recognition of impairment or a recovery through the provision for credit losses. Estimating the timing and amount of cash flows requires significant management judgment regarding key assumptions, including the probability of default, severity of loss, timing of payment receipts and valuation of collateral. All of these factors are inherently subjective and can result in significant changes in cash flow estimates over the term of the loan.

#### *Insurance-Related Liabilities*

Insurance claims and policy benefit liabilities represent current claims and estimates of future insurance policy benefit 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 impact on the valuation of a liability would result from a change in the assumption for future investment yields.

Additional information regarding insurance-related liabilities is included in Note 14.

#### *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 amounts required to settle any obligations related to these legal actions as at the balance sheet date, taking into account the risks and uncertainties associated with the obligation. Factors considered in making the assessment include: a case-by-case assessment of specific facts and circumstances, our past experience and opinions of legal experts. Management and external experts are involved in estimating any provisions. The actual costs of resolving these claims may be substantially higher or lower than the amounts of the provisions. Additional information regarding provisions is provided in Note 25.

#### *Transfer of Financial Assets and Consolidation of Structured Entities*

We sell 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. We assess whether substantially all of the risks and rewards of the loans have been transferred to determine if they qualify for derecognition. Since we continue to be exposed to substantially all of the repayment, interest rate and/or credit risk associated with the securitized loans, they do not qualify for derecognition. We continue to recognize the loans and the related cash proceeds as secured financings in our Consolidated Balance Sheet. We also use securitization vehicles to securitize our Canadian credit card loans in order to obtain alternate sources of funding. The structure of these vehicles limits the activities they can undertake and the types of assets they can hold, and the vehicles have limited decision-making authority. The vehicles issue term asset-backed securities to fund their activities. We control and consolidate these vehicles, as we have the key decision-making powers necessary to obtain the majority of the benefits of their activities.

For most of our subsidiaries, control is determined based on holding the majority of the voting rights. For certain investments in limited partnerships, we exercise judgment in determining if we control an entity. Based on an assessment of our interests and rights, we have determined that we do not control certain entities, even though we may have an ownership interest greater than 50%. This may be the case when we are not the general partner in an arrangement and the general partner's rights most significantly affect the returns of the entity. Additionally, we have determined that we control certain entities despite having an ownership interest less than 50%. This may be the case when we are the general partner in an arrangement and the general partner's rights most significantly affect the returns of the entity.

Structured entities are discussed in greater detail in Note 7 and transferred assets are discussed in greater detail in Note 6.

## **Future Changes in IFRS**

### *Financial Instruments*

In July 2014, the IASB issued IFRS 9 *Financial Instruments* ("IFRS 9"), which addresses impairment, classification and measurement, and hedge accounting. At the direction of our regulator, OSFI, IFRS 9 is effective for the bank for the fiscal year beginning November 1, 2017. Additional guidance relating to the adoption of IFRS 9 has been provided by OSFI in its *Guideline - IFRS 9 Financial Instruments and Disclosures* ("OSFI Guideline"). The OSFI Guideline is consistent with the guidance provided by the Basel Committee on Banking Supervision ("BCBS").

### **Implementation Approach**

We have established an IFRS 9 Steering Committee which includes senior executive representation from finance, risk, technology, capital management and corporate audit. The Steering Committee is responsible for the overall implementation of IFRS 9, ensuring integration throughout the bank and providing executive review and approval of key decisions made during the transition process.

Our transition approach is based on three work streams which align with the three major topics in the standard: (1) classification and measurement, (2) impairment, and (3) hedge accounting. Each work stream includes key stakeholders from finance, risk and information technology.

### **Classification and Measurement**

The new standard requires that we classify debt instruments based on our business model for managing the assets and the contractual cash flow characteristics of the asset. The business model test determines classification based on the business purpose for holding the asset. Generally, debt instruments will be measured at fair value through profit and loss unless certain conditions are met that permit fair value through other comprehensive income ("FVOCI") or amortized cost. Debt instruments that have contractual cash flows representing only payments of principal and interest will be eligible for classification as FVOCI or amortized cost. Gains and losses recorded in other comprehensive income for debt instruments will be recognized in profit or loss on disposal.

Equity instruments would generally be measured at fair value through profit and loss unless we elect to measure at FVOCI. This will result in unrealized gains and losses on equity instruments currently classified as available-for-sale equity securities being recorded in income going forward. Currently, these unrealized gains and losses are recognized in other comprehensive income. Should we elect to record equity instruments at FVOCI, gains and losses would never be recognized in income.

The bank is currently finalizing our business model assessments and assessing the contractual cash flow characteristics. Certain assets may be reclassified upon adoption on November 1, 2017.



As permitted by IFRS 9, in fiscal 2015, the bank early adopted the provisions relating to the recognition of changes in own credit risk for financial liabilities designated at fair value through profit or loss. Additional information regarding changes in own credit risk is included in Notes 13 and 14.

### Impairment

IFRS 9 introduces a new single expected credit loss (“ECL”) impairment model for all financial assets and certain off-balance sheet loan commitments and guarantees. The new ECL model will result in an allowance for credit losses being recorded on financial assets regardless of whether there has been an actual loss event. The most significant impact will be on the loan portfolio.

The expected credit loss model requires the recognition of credit losses based on 12 months of expected losses for performing loans and recognition of lifetime losses on performing loans that have experienced a significant increase in credit risk since origination.

The determination of a 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 relative changes in probability-weighted probability of default since origination, our credit mitigation processes and certain criteria such as 30-day past due and watchlist status.

IFRS 9 requires consideration of past events, current market conditions and reasonable supportable information about future economic conditions, in determining whether there has been a significant increase in credit risk, and in calculating the amount of expected losses. As a result of the forward looking nature of the standard, it is expected that the provision for credit losses will become more responsive to changes in the economic environment.

We are in the process of developing and testing the key models required under IFRS 9 and we have not yet quantified the impact on our collective allowance; however, it is anticipated that there will be an increase in the allowance for credit losses on adoption, which will be recorded in retained earnings.

### Hedge accounting

IFRS 9 introduces a new hedge accounting model that expands the scope of hedged items and risks eligible for hedge accounting and aligns hedge accounting more closely with risk management. The new model no longer specifies quantitative measures for effectiveness testing and does not permit hedge de-designation. IFRS 9 includes a policy choice that would allow us to continue to apply the existing hedge accounting rules. We are currently assessing whether the bank will adopt the IFRS 9 hedge requirements, or retain the existing requirements.

### Leases

In January 2016, the IASB issued IFRS 16 *Leases* (“IFRS 16”), which provides guidance for leases whereby lessees will recognize a liability for the present value of future lease liabilities and record a corresponding asset on the balance sheet for most leases. There are minimal changes to lessor accounting. IFRS 16 is effective for our fiscal year beginning November 1, 2019. Early adoption is permitted, provided IFRS 15 *Revenue from Contracts with Customers* has been adopted. We are currently assessing the impact of the standard on our future financial results.

### Revenue

In May 2014, the IASB issued IFRS 15 *Revenue from Contracts with Customers* (“IFRS 15”), which replaces the existing standards for revenue recognition. The new standard establishes a framework for the recognition and measurement of revenues generated from contracts with customers, except for items such as financial instruments, insurance contracts and leases. The standard also requires additional disclosures about the nature, amount, timing and uncertainty of revenues and cash flows arising from transactions with our customers.

In April 2016, the IASB issued clarifications to IFRS 15, which provide additional clarity on revenue recognition related to identifying performance obligations, application guidance on principal versus agent and licences of intellectual property. We will be adopting IFRS 15 effective for our fiscal year beginning November 1, 2018. We are currently assessing the impact of the standard on our future financial results.

### Share-based Payment

In June 2016, the IASB issued amendments to IFRS 2 *Share-based Payment* (“IFRS 2”) in relation to the classification and measurement of share-based payment transactions. We do not expect the amendments to have a significant impact on our consolidated financial statements. The amendments are effective for the bank on November 1, 2018.

### Insurance Contracts

In September 2016, the IASB issued amendments to IFRS 4 *Insurance Contracts* (“IFRS 4”), to allow qualifying entities issuing insurance contracts to not apply IFRS 9 before the IASB’s new insurance contracts standard becomes effective. The amendments aim to resolve issues arising from the different effective dates of the two standards. The amendments introduce two alternative options for entities issuing contracts within the scope of IFRS 4, notably a temporary exemption and an overlay approach. The amendments are effective for the bank on November 1, 2018 and November 1, 2017, respectively. We are currently assessing the impact of the standard on our future financial results.

## Note 2: Cash and Interest Bearing Deposits with Banks

(Canadian \$ in millions)	2016	2015
Cash and deposits with banks (1)	29,460	38,818
Cheques and other items in transit, net	2,193	1,477
<b>Total cash and cash equivalents</b>	<b>31,653</b>	<b>40,295</b>

(1) Includes deposits with the Bank of Canada, the U.S. Federal Reserve and other central banks.

### Cheques and Other Items in Transit, Net

Cheques and other items in transit are recorded at cost and represent the net position of the uncleared cheques and other items in transit between us and other banks.

### Cash Restrictions

Some of our foreign operations are required to maintain reserves or minimum balances with central banks in their respective countries of operation, amounting to \$1,958 million as at October 31, 2016 (\$2,232 million in 2015).

### Interest Bearing Deposits with Banks

Deposits with banks are recorded at amortized cost and include acceptances we have purchased that were issued by other banks. Interest income earned on these deposits is recorded on an accrual basis.

## Note 3: Securities

Securities are divided into four types, each with a different purpose and accounting treatment. The types of securities we hold are as follows:

**Trading securities** are securities that we purchase for resale over a short period of time. We classify trading securities and securities designated under the fair value option at fair value through profit or loss ("FVTPL"). We record the transaction costs, gains and losses realized on disposal and unrealized gains and losses due to changes in fair value in our Consolidated Statement of Income in trading revenues.

#### *Securities Designated at FVTPL*

Securities designated at FVTPL are financial instruments that are accounted for at fair value, with changes in fair value recorded in income provided they meet certain criteria. Securities designated at FVTPL must have reliably measurable fair values and satisfy one of the following criteria: (1) the designation eliminates or significantly reduces the inconsistent treatment that would otherwise arise from measuring the gains and losses on a different basis; (2) the securities are part of a group of financial instruments that is managed and evaluated on a fair value basis; or (3) the securities are hybrid financial instruments with embedded derivatives that would significantly modify their cash flow. Securities must be designated on initial recognition, and the designation is irrevocable. If these securities were not designated at fair value, they would be accounted for as available-for-sale securities with unrealized gains and losses recorded in other comprehensive income.

We designate certain securities held by our insurance subsidiaries that support our insurance liabilities at FVTPL, since the actuarial calculation of insurance liabilities is based on the fair value of the investments supporting them. This designation aligns the accounting result with the way the portfolio is managed on a fair value basis. The change in fair value of the securities is recorded in non-interest revenue, insurance revenue, and the change in fair value of the liabilities is recorded in insurance claims, commissions and changes in policy benefit liabilities. The fair value of these investments as at October 31, 2016 of \$7,887 million (\$6,961 million as at October 31, 2015) is recorded in securities, trading, in our Consolidated Balance Sheet. The impact of recording these investments at fair value through profit or loss was an increase in non-interest revenue, insurance revenue, of \$430 million for the year ended October 31, 2016 (increase of \$8 million in 2015).

We designate certain investments held in our merchant banking business at FVTPL, which aligns the accounting result with the way the portfolio is managed. The fair value of these investments as at October 31, 2016 of \$320 million (\$365 million in 2015) is recorded in securities, other, in our Consolidated Balance Sheet. The impact of recording these investments at fair value through profit or loss was a decrease in non-interest revenue, securities gains, other than trading, of \$40 million in our Consolidated Statement of Income for the year ended October 31, 2016 (decrease of \$34 million in 2015).

**Available-for-sale securities** consist of debt and equity securities that may be sold in response to or in anticipation of changes in interest rates and resulting prepayment risk, changes in credit risk, changes in foreign currency risk, changes in funding sources or terms, or to meet liquidity needs.

Available-for-sale securities are initially recorded at fair value plus transaction costs. They are subsequently measured at fair value, with unrealized gains and losses recorded in unrealized gains (losses) on available-for-sale securities in our Consolidated Statement of Comprehensive Income until the security is sold. Gains and losses on disposal and impairment losses (recoveries) are recorded in our Consolidated Statement of Income in non-interest revenue, securities gains, other than trading. Interest income earned and dividends received on available-for-sale securities are recorded in our Consolidated Statement of Income in interest, dividend and fee income, securities.

Investments held by our insurance subsidiaries are classified as available-for-sale securities, except for those investments that support the policy benefit liabilities on our insurance contracts, which are designated at fair value through profit or loss, as discussed above. Interest and other fee income on the insurance available-for-sale securities is recognized when earned in our Consolidated Statement of Income in non-interest revenue, insurance revenue.

**Held-to-maturity securities** are debt securities that we have the intention and ability to hold to maturity and that do not meet the definition of a loan. These securities are initially recorded at fair value plus transaction costs and subsequently measured at amortized cost using the effective interest method. Impairment losses are recorded in our Consolidated Statement of Income in securities gains (losses), other than trading. Interest income earned and amortization of premiums or discounts on the debt securities are recorded in our Consolidated Statement of Income in interest, dividend and fee income, securities.

**Other securities** are investments in companies where we exert significant influence over operating, investing and financing decisions (generally companies in which we own between 20% and 50% of the voting shares). We account for these other securities using the equity method of accounting. Other securities also include certain securities held by our merchant banking business.

We account for all of our securities transactions using settlement date accounting in our Consolidated Balance Sheet. Changes in fair value between the trade date and settlement date are recorded in net income, except for those related to available-for-sale securities, which are recorded in other comprehensive income.

### Impairment Review

For available-for-sale, held-to-maturity and other securities, impairment losses are recognized if there is objective evidence of impairment as a result of an event that reduces the estimated future cash flows from the security.

For equity securities, a significant or prolonged decline in the fair value of a security below its cost is considered to be objective evidence of impairment.

The impairment loss on available-for-sale securities is the difference between the security's amortized cost and its current fair value, less any previously recognized impairment losses. If there is objective evidence of impairment, a write-down is recorded from our Consolidated Statement of Comprehensive Income, unrealized gains (losses) on available-for-sale securities, to our Consolidated Statement of Income in securities gains, other than trading.

The impairment loss on held-to-maturity securities is the difference between a security's carrying amount and the present value of its estimated future cash flows discounted at the original effective interest rate.

If there is objective evidence of impairment, a write-down is recorded in our Consolidated Statement of Income in securities gains, other than trading.

For available-for-sale debt securities, a previous impairment loss is reversed through net income if an event occurs after the impairment was recognized that can be objectively attributed to an increase in fair value, to a maximum of the original impairment charge. For available-for-sale equity securities, previous impairment losses are not reversed through net income, and any subsequent increases in fair value are recorded in other comprehensive income. Reversals of impairment losses on held-to-maturity securities are recorded to a maximum of the amortized cost of the investment before the original impairment charge.

As at October 31, 2016, we had 1,699 available-for-sale securities (682 in 2015) with unrealized losses totalling \$135 million (unrealized losses of \$152 million in 2015). Of these available-for-sale securities, 117 have been in an unrealized loss position continuously for more than one year (69 in 2015), amounting to an unrealized loss position of \$36 million (unrealized loss position of \$5 million in 2015). Unrealized losses on these instruments, excluding corporate equities, resulted from changes in interest rates and not from deterioration in the creditworthiness of the issuers. We expect full recovery of these available-for-sale securities and have determined that there is no significant impairment. The table on page 152 details unrealized gains and losses as at October 31, 2016 and 2015.

We did not own any securities issued by a single non-government entity where the book value, as at October 31, 2016 or 2015, was greater than 10% of our shareholders' equity.

### Fair Value Measurement

For traded securities, quoted market value is considered to be fair value. Quoted market value is based on bid prices. For securities where market quotes are not available, we use estimation techniques to determine fair value. A discussion of fair value measurement is included in Note 17.

(Canadian \$ in millions, except as noted)

	Term to maturity					2016	2015
	Within 1 year	1 to 3 years	3 to 5 years	5 to 10 years	Over 10 years	Total	Total
<b>Trading Securities</b>							
Issued or guaranteed by:							
Canadian federal government	4,467	5,089	1,000	1,205	1,191	12,952	13,854
Canadian provincial and municipal governments	996	1,506	940	1,622	2,358	7,422	6,751
U.S. federal government	1,478	511	1,221	1,579	1,359	6,148	3,252
U.S. states, municipalities and agencies	91	249	190	241	353	1,124	687
Other governments	184	320	87	11	-	602	411
Mortgage-backed securities and collateralized mortgage obligations	194	515	303	45	5	1,062	491
Corporate debt	948	1,187	511	784	6,222	9,652	9,287
Corporate equity	-	-	-	-	45,496	45,496	37,727
<b>Total trading securities</b>	<b>8,358</b>	<b>9,377</b>	<b>4,252</b>	<b>5,487</b>	<b>56,984</b>	<b>84,458</b>	<b>72,460</b>
<b>Available-for-Sale Securities</b>							
Issued or guaranteed by:							
Canadian federal government							
Amortized cost	311	2,473	4,191	1,134	-	8,109	7,906
Fair value	311	2,482	4,229	1,146	-	8,168	7,970
Yield (%)	0.40	1.19	1.36	1.48	-	1.29	1.43
Canadian provincial and municipal governments							
Amortized cost	49	656	2,275	3,120	26	6,126	4,890
Fair value	49	662	2,305	3,188	28	6,232	4,925
Yield (%)	1.25	1.16	1.56	2.84	3.24	2.17	1.93
U.S. federal government							
Amortized cost	33	1,268	472	7,755	36	9,564	1,750
Fair value	33	1,276	474	7,739	35	9,557	1,754
Yield (%)	0.13	1.19	1.37	1.58	1.87	1.51	1.41
U.S. states, municipalities and agencies							
Amortized cost	370	1,053	522	1,364	1,070	4,379	6,026
Fair value	370	1,058	534	1,414	1,074	4,450	6,085
Yield (%)	1.48	1.37	2.21	2.35	1.42	1.80	1.27
Other governments							
Amortized cost	1,199	2,566	1,412	37	-	5,214	5,404
Fair value	1,200	2,573	1,417	37	-	5,227	5,412
Yield (%)	0.89	1.20	1.24	2.28	-	1.15	1.03
Mortgage-backed securities and collateralized mortgage obligations - Canada							
Amortized cost	15	1,113	2,345	-	-	3,473	2,994
Fair value	32	1,127	2,348	-	-	3,507	3,004
Yield (%)	1.54	1.91	1.46	-	-	1.60	1.68
Mortgage-backed securities and collateralized mortgage obligations - U.S.							
Amortized cost	-	8	18	908	8,657	9,591	9,165
Fair value	-	9	18	923	8,665	9,615	9,188
Yield (%)	-	4.24	2.69	2.08	1.61	1.66	1.10
Corporate debt							
Amortized cost	1,781	2,642	2,266	490	40	7,219	7,909
Fair value	1,779	2,656	2,298	517	42	7,292	7,955
Yield (%)	1.16	1.57	2.12	3.18	3.14	1.76	1.85
Corporate equity							
Amortized cost	-	-	-	-	1,529	1,529	1,648
Fair value	-	-	-	-	1,615	1,615	1,713
Yield (%)	-	-	-	-	2.07	2.07	2.37
<b>Total cost or amortized cost</b>	<b>3,758</b>	<b>11,779</b>	<b>13,501</b>	<b>14,808</b>	<b>11,358</b>	<b>55,204</b>	<b>47,692</b>
<b>Total fair value</b>	<b>3,774</b>	<b>11,843</b>	<b>13,623</b>	<b>14,964</b>	<b>11,459</b>	<b>55,663</b>	<b>48,006</b>
<b>Yield (%)</b>	<b>1.04</b>	<b>1.36</b>	<b>1.56</b>	<b>1.99</b>	<b>1.66</b>	<b>1.62</b>	<b>1.47</b>
<b>Held-to-Maturity Securities</b>							
Issued or guaranteed by:							
Canadian federal government							
Amortized cost	150	1,855	-	-	-	2,005	2,330
Fair value	149	1,865	-	-	-	2,014	2,340
Canadian provincial and municipal governments							
Amortized cost	480	966	280	321	-	2,047	2,532
Fair value	481	967	279	358	-	2,085	2,559
Mortgage-backed securities and collateralized mortgage obligations (1)							
Amortized cost	14	567	443	-	3,889	4,913	4,570
Fair value	14	571	445	-	3,944	4,974	4,635
<b>Total cost or amortized cost</b>	<b>644</b>	<b>3,388</b>	<b>723</b>	<b>321</b>	<b>3,889</b>	<b>8,965</b>	<b>9,432</b>
<b>Total fair value</b>	<b>644</b>	<b>3,403</b>	<b>724</b>	<b>358</b>	<b>3,944</b>	<b>9,073</b>	<b>9,534</b>
<b>Other Securities</b>							
Carrying value	-	17	45	13	824	899	1,020
Fair value	-	17	45	13	3,023	3,098	2,729
<b>Total carrying value or amortized cost of securities</b>	<b>12,760</b>	<b>24,561</b>	<b>18,521</b>	<b>20,629</b>	<b>73,055</b>	<b>149,526</b>	<b>130,604</b>
<b>Total value of securities</b>	<b>12,776</b>	<b>24,625</b>	<b>18,643</b>	<b>20,785</b>	<b>73,156</b>	<b>149,985</b>	<b>130,918</b>
<b>Total by Currency (in Canadian \$ equivalent)</b>							
Canadian dollar	7,824	15,928	12,409	8,478	41,713	86,352	82,575
U.S. dollar	4,461	8,177	6,222	12,281	29,672	60,813	45,588
Other currencies	491	520	12	26	1,771	2,820	2,755
<b>Total securities</b>	<b>12,776</b>	<b>24,625</b>	<b>18,643</b>	<b>20,785</b>	<b>73,156</b>	<b>149,985</b>	<b>130,918</b>

(1) These amounts are supported by insured mortgages or issued by U.S. agencies and government-sponsored enterprises.

Yields in the table above are calculated using the cost of the security and the contractual interest or stated dividend rates associated with each security, adjusted for any amortization of premiums and discounts. Tax effects are not taken into consideration. The term to maturity included in the table above is based on the contractual maturity date of the security. Actual maturities could differ, as issuers may have the right to call or prepay obligations. Securities with no maturity date are included in the over 10 years category.

## Unrealized Gains and Losses on Available-for-Sale Securities

(Canadian \$ in millions)	2016								2015	
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value		
Issued or guaranteed by:										
Canadian federal government	8,109	62	3	8,168	7,906	78	14	7,970		
Canadian provincial and municipal governments	6,126	110	4	6,232	4,890	68	33	4,925		
U.S. federal government	9,564	47	54	9,557	1,750	9	5	1,754		
U.S. states, municipalities and agencies	4,379	77	6	4,450	6,026	65	6	6,085		
Other governments	5,214	17	4	5,227	5,404	11	3	5,412		
Mortgage-backed securities and collateralized mortgage obligations - Canada (1)	3,473	37	3	3,507	2,994	22	12	3,004		
Mortgage-backed securities and collateralized mortgage obligations - U.S.	9,591	50	26	9,615	9,165	35	12	9,188		
Corporate debt	7,219	78	5	7,292	7,909	61	15	7,955		
Corporate equity	1,529	116	30	1,615	1,648	117	52	1,713		
<b>Total</b>	<b>55,204</b>	<b>594</b>	<b>135</b>	<b>55,663</b>	<b>47,692</b>	<b>466</b>	<b>152</b>	<b>48,006</b>		

(1) These amounts are supported by insured mortgages.

## Unrealized Losses on Available-for-Sale Securities

(Canadian \$ in millions)	Available-for-sale securities in an unrealized loss position for						Available-for-sale securities in an unrealized loss position for						2015
	Less than 12 months		12 months or longer		Total		Less than 12 months		12 months or longer		Total		
	Gross unrealized losses	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Fair value	
Issued or guaranteed by:													
Canadian federal government	2	844	1	498	3	1,342	14	2,579	-	-	14	2,579	
Canadian provincial and municipal governments	4	642	-	135	4	777	33	2,773	-	-	33	2,773	
U.S. federal government	54	5,294	-	-	54	5,294	5	759	-	-	5	759	
U.S. states, municipalities and agencies	4	1,138	2	157	6	1,295	3	1,271	3	859	6	2,130	
Other governments	4	2,313	-	217	4	2,530	3	1,677	-	543	3	2,220	
Mortgage-backed securities and collateralized mortgage obligations - Canada (1)	2	1,107	1	457	3	1,564	12	1,415	-	-	12	1,415	
Mortgage-backed securities and collateralized mortgage obligations - U.S.	21	3,806	5	879	26	4,685	10	2,728	2	622	12	3,350	
Corporate debt	5	933	-	35	5	968	15	2,726	-	22	15	2,748	
Corporate equity	3	10	27	43	30	53	52	305	-	-	52	305	
<b>Total</b>	<b>99</b>	<b>16,087</b>	<b>36</b>	<b>2,421</b>	<b>135</b>	<b>18,508</b>	<b>147</b>	<b>16,233</b>	<b>5</b>	<b>2,046</b>	<b>152</b>	<b>18,279</b>	

(1) These amounts are supported by insured mortgages.

Income from securities has been included in our consolidated financial statements as follows:

(Canadian \$ in millions)	2016	2015	2014
<b>Reported in Consolidated Statement of Income:</b>			
<b>Interest, Dividend and Fee Income (1)</b>			
Trading securities (2)	923	1,016	954
Available-for-sale securities	623	504	570
Held-to-maturity securities	143	167	152
Other securities	15	18	17
	<b>1,704</b>	<b>1,705</b>	<b>1,693</b>
<b>Non-Interest Revenue</b>			
Available-for-sale securities			
Gross realized gains	59	116	304
Gross realized (losses)	(16)	(18)	(167)
Unrealized gain on investments reclassified from available-for-sale to equity	7	-	-
Other securities, net realized and unrealized gains	51	85	33
Impairment write-downs	(17)	(12)	(8)
Securities gains, other than trading (1)	84	171	162
Trading securities, net realized and unrealized gains (1) (2)	113	92	340
<b>Total income from securities</b>	<b>1,901</b>	<b>1,968</b>	<b>2,195</b>

(1) The following amounts of income related to our insurance operations were included in non-interest revenue, insurance revenue in our Consolidated Statement of Income: Interest, dividend and fee income of \$309 million for the year ended October 31, 2016 (\$282 million in 2015 and \$263 million in 2014); and securities gains, other than trading of \$nil for the year ended October 31, 2016 (\$1 million in 2015 and \$5 million in 2014).

(2) Excluded from the table above are trading securities, net realized and unrealized gains of \$430 million related to our insurance operations for the year ended October 31, 2016 (\$8 million in 2015 and \$379 million in 2014).

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



## Note 4: Loans and Allowance for Credit Losses

Loans are initially measured at fair value plus directly attributable costs, and are subsequently measured at amortized cost using the effective interest method. The effective interest method allocates interest income over the expected term of the loan by applying the effective interest rate to the carrying amount of the loan. The effective interest rate is defined as the rate that exactly discounts estimated future cash receipts through the expected term of the loan to the net carrying amount of the loan. Under the effective interest method, the amount recognized in interest, dividend and fee income, loans, varies over the term of the loan based on the principal outstanding. The treatment of interest income for impaired loans is described below.

### Securities Borrowed or Purchased Under Resale Agreements

Securities borrowed or purchased under resale agreements represent the amounts we will receive as a result of our commitment to resell securities that we have purchased, back to the original seller, on a specified date at a specified price. We account for these instruments as if they were loans.

### Lending Fees

The accounting treatment for lending fees varies depending on the transaction. Some loan origination, restructuring and renegotiation fees are recorded as interest income over the term of the loan, while other lending fees are taken into income at the time of loan origination. Commitment fees are recorded as interest income over the term of the loan, unless we believe the loan commitment will not be used. In the latter case, commitment fees are recorded as lending fees over the commitment period. Loan syndication fees are included in lending fees at the time the syndication is completed, unless the yield on any loans we retain is less than that of other comparable lenders involved in the financing. In the latter case, an appropriate portion of the syndication fee is recorded as interest income over the term of the loan.

### Impaired Loans

Generally, consumer loans in both Canada and the U.S. are classified as impaired when payment is contractually 90 days past due, or one year past due for residential mortgages if guaranteed by the Government of Canada. Credit card loans are immediately written off when principal or interest payments are 180 days past due, and are not reported as impaired. In Canada, consumer instalment loans, other personal loans and some small business loans are normally written off when they are one year past due. In the U.S., all consumer loans are generally written off when they are 180 days past due, except for non-real estate term loans, which are generally written off at 120 days. For the purpose of measuring the amount to be written off, the determination of the recoverable amount includes an estimate of future recoveries.

Corporate and commercial loans are classified as impaired when we determine there is no longer reasonable assurance that principal or interest will be collected in its entirety on a timely basis. Generally, we consider corporate and commercial loans to be impaired when payments are 90 days past due, or for fully secured loans, when payments are 180 days past due. Corporate and commercial loans are written off following a review on an individual loan basis that confirms all recovery attempts have been exhausted.

A loan will be reclassified to performing status when we determine that there is reasonable assurance of full and timely repayment of interest and principal in accordance with the terms and conditions of the loan, and that none of the criteria for classification of the loan as impaired continue to apply.

Our average gross impaired loans were \$2,198 million for the year ended October 31, 2016 (\$2,115 million in 2015). Our average impaired loans, net of the specific allowance, were \$1,771 million for the year ended October 31, 2016 (\$1,730 million in 2015).

Once a loan is identified as impaired, we continue to recognize interest income based on the original effective interest rate of the loan. In the periods following the recognition of impairment, we record an increase to the allowance for these loans reflecting the time value of money. Interest income on impaired loans of \$74 million was recognized for the year ended October 31, 2016 (\$91 million in 2015).

During the year ended October 31, 2016, we recorded a net gain of \$5 million before tax (\$72 million in 2015) on the sale of impaired and written-off loans.

### Allowance for Credit Losses (“ACL”)

The allowance for credit losses recorded in our Consolidated Balance Sheet is maintained at a level that we consider adequate to absorb credit-related losses on our loans and other credit instruments. The portion related to other credit instruments is recorded in other liabilities in our Consolidated Balance Sheet and amounted to \$189 million as at October 31, 2016 (\$197 million in 2015).

The allowance is comprised of a specific allowance and a collective allowance.

#### *Specific Allowance*

These allowances are recorded for individually identified impaired loans to reduce their carrying value to the expected recoverable amount. We review our loans on an ongoing basis to assess whether any loans should be classified as impaired and whether an allowance or write-off should be recorded (excluding credit card loans, which are classified as impaired and written off when principal or interest payments are 180 days past due, as discussed under Impaired Loans). The review of individually significant problem loans is conducted at least quarterly by the account managers, each of whom assesses the ultimate collectability and estimated recoveries for a specific loan based on all events and conditions that are relevant to the loan. This assessment is then approved by an independent credit officer.

#### **Individually Significant Impaired Loans**

To determine the amount we expect to recover from an individually significant impaired loan, we use the value of the estimated future cash flows discounted at the loan's original effective interest rate. The determination of estimated future cash flows of a collateralized impaired loan reflects the expected realization of the underlying security, net of expected costs and any amounts legally required to be paid to the borrower. Security can vary by type of loan and may include cash, securities, real properties, accounts receivable, guarantees, inventory or other capital assets.

#### **Individually Insignificant Impaired Loans**

Residential mortgages, consumer instalment and other personal loans are individually insignificant and may be individually assessed or collectively assessed for losses at the time of impairment, taking into account historical loss experience.

### Collective Allowance

We maintain a collective allowance in order to cover impairment in the existing portfolio for loans that have not yet been individually identified as impaired. Our approach to establishing and maintaining the collective allowance is based on the requirements of IFRS, considering guidelines issued by OSFI.

The collective allowance methodology incorporates both quantitative and qualitative factors to determine an appropriate level for the collective allowance. For the purpose of calculating the collective allowance, we group loans on the basis of similarities in credit risk characteristics. The loss factors for groups of loans are determined based on a minimum of five years of historical data and a one-year loss emergence period, except for credit cards, where a seven-month loss emergence period is used. The loss factors are back-tested and calibrated on a regular basis to ensure that they continue to reflect our best estimate of losses that have been incurred but not yet identified, on an individual basis, within the pools of loans. Historical loss experience data is also reviewed in the determination of loss factors. Qualitative factors are based on current observable data, such as current macroeconomic and business conditions, portfolio-specific considerations and model risk factors.

### Provision for Credit Losses ("PCL")

Changes in the value of our loan portfolio due to credit-related losses or recoveries of amounts previously provided for or written off are included in the provision for credit losses in our Consolidated Statement of Income.

Loans and allowance for credit losses by category are as follows:

(Canadian \$ in millions)	Residential mortgages (1)			Credit card, consumer instalment and other personal loans			Business and government loans			Total		
	2016	2015	2014	2016	2015	2014	2016	2015	2014	2016	2015	2014
Gross loan balances at end of year (3)	<b>112,277</b>	105,918	101,013	<b>72,781</b>	73,578	72,115	<b>175,597</b>	145,076	120,766	<b>360,655</b>	324,572	293,894
Impairment allowances (specific ACL), beginning of year	<b>69</b>	88	89	<b>113</b>	99	81	<b>210</b>	237	315	<b>392</b>	424	485
Amounts written off	<b>(38)</b>	(83)	(87)	<b>(648)</b>	(670)	(655)	<b>(361)</b>	(312)	(407)	<b>(1,047)</b>	(1,065)	(1,149)
Recoveries of amounts written off in previous years	<b>16</b>	72	40	<b>173</b>	190	161	<b>154</b>	194	423	<b>343</b>	456	624
Charge to income statement (specific PCL)	<b>24</b>	11	77	<b>510</b>	497	519	<b>281</b>	104	(35)	<b>815</b>	612	561
Foreign exchange and other movements	<b>(12)</b>	(19)	(31)	<b>(25)</b>	(3)	(7)	<b>(34)</b>	(13)	(59)	<b>(71)</b>	(35)	(97)
Specific ACL, end of year	<b>59</b>	69	88	<b>123</b>	113	99	<b>250</b>	210	237	<b>432</b>	392	424
Collective ACL, beginning of year	<b>111</b>	83	88	<b>714</b>	678	622	<b>835</b>	781	775	<b>1,660</b>	1,542	1,485
Charge to income statement (collective PCL)	<b>(42)</b>	19	(8)	<b>(120)</b>	7	50	<b>162</b>	(26)	(42)	<b>-</b>	-	-
Foreign exchange and other movements	<b>2</b>	9	3	<b>2</b>	29	6	<b>18</b>	80	48	<b>22</b>	118	57
Collective ACL, end of year	<b>71</b>	111	83	<b>596</b>	714	678	<b>1,015</b>	835	781	<b>1,682</b>	1,660	1,542
Total ACL	<b>130</b>	180	171	<b>719</b>	827	777	<b>1,265</b>	1,045	1,018	<b>2,114</b>	2,052	1,966
Comprised of: Loans	<b>104</b>	149	144	<b>719</b>	827	777	<b>1,102</b>	879	813	<b>1,925</b>	1,855	1,734
Other credit instruments (2)	<b>26</b>	31	27	<b>-</b>	-	-	<b>163</b>	166	205	<b>189</b>	197	232
Net loan balances at end of year	<b>112,173</b>	105,769	100,869	<b>72,062</b>	72,751	71,338	<b>174,495</b>	144,197	119,953	<b>358,730</b>	322,717	292,160

(1) Included in the residential mortgages balance are Canadian government and corporate-insured mortgages of \$57,922 million as at October 31, 2016 (\$56,579 million in 2015).

(2) The total specific and collective allowances related to other credit instruments are included in other liabilities.

(3) Included in loans as at October 31, 2016 are \$139,696 million (\$117,098 million in 2015 and \$95,269 million in 2014) of loans denominated in U.S. dollars and \$2,204 million (\$1,966 million in 2015 and \$1,039 million in 2014) of loans denominated in other foreign currencies.

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

Loans and allowance for credit losses by geographic region are as follows:

(Canadian \$ in millions)	Gross amount		Specific allowance (2)		Collective allowance (3)		Net amount	
	2016	2015	2016	2015	2016	2015	2016	2015
By geographic region (1):								
Canada	<b>228,062</b>	212,193	<b>173</b>	145	<b>833</b>	816	<b>227,056</b>	211,232
United States	<b>121,822</b>	101,198	<b>231</b>	212	<b>687</b>	682	<b>120,904</b>	100,304
Other countries	<b>10,771</b>	11,181	<b>1</b>	-	<b>-</b>	-	<b>10,770</b>	11,181
Total	<b>360,655</b>	324,572	<b>405</b>	357	<b>1,520</b>	1,498	<b>358,730</b>	322,717

(1) Geographic region is based upon the country of ultimate risk.

(2) Excludes specific allowance of \$27 million for other credit instruments (\$35 million in 2015), which is included in other liabilities.

(3) Excludes collective allowance of \$162 million for other credit instruments (\$162 million in 2015), which is included in other liabilities.

Impaired loans, including the related allowances, are as follows:

(Canadian \$ in millions)	Gross impaired amount		Specific allowance (3)		Net of specific allowance	
	2016	2015	2016	2015	2016	2015
Residential mortgages	352	370	33	38	319	332
Consumer instalment and other personal loans	589	546	123	113	466	433
Business and government loans	1,391	1,043	249	206	1,142	837
Total (1)	2,332	1,959	405	357	1,927	1,602
By geographic region (2):						
Canada	736	641	173	145	563	496
United States	1,594	1,314	231	212	1,363	1,102
Other countries	2	4	1	-	1	4
Total	2,332	1,959	405	357	1,927	1,602

(1) Excludes purchased credit impaired loans.

(2) Geographic region is based upon the country of ultimate risk.

(3) Excludes specific allowance of \$27 million for other credit instruments (\$35 million in 2015), which is included in other liabilities.

Fully secured loans with amounts past due between 90 and 180 days that we have not classified as impaired totalled \$88 million and \$83 million as at October 31, 2016 and 2015, respectively.

Specific provisions for credit losses by geographic region are as follows:

(Canadian \$ in millions)	Residential mortgages		Credit card, consumer instalment and other personal loans		Business and government loans		Total	
	2016	2015	2016	2015	2016	2015	2016	2015
By geographic region (1):								
Canada	13	9	417	393	117	97	547	499
United States	11	2	93	104	164	8	268	114
Other countries	-	-	-	-	-	(1)	-	(1)
Total	24	11	510	497	281	104	815	612

(1) Geographic region is based upon the country of ultimate risk.

## Foreclosed Assets

Property or other assets that we receive from borrowers to satisfy their loan commitments are classified as either held for use or held for sale according to management's intention and are recorded at the lower of carrying amount or fair value less costs to sell. Fair value is determined based on market prices where available. Otherwise, fair value is determined using methods such as analysis of discounted cash flows or market prices for similar assets.

During the year ended October 31, 2016, we foreclosed on impaired loans and received \$118 million of real estate properties that we classified as held for sale (\$102 million in 2015).

As at October 31, 2016, real estate properties held for sale totalled \$76 million (\$109 million in 2015). These properties are disposed of when considered appropriate. During the year ended October 31, 2016, we recorded an impairment loss of \$18 million on real estate properties classified as held for sale (\$22 million in 2015).

## Renegotiated Loans

From time to time we modify the contractual terms of loans due to the poor financial condition of the borrower. We assess renegotiated loans for impairment consistent with our existing policies for impairment. When renegotiation leads to significant concessions being granted, and the concessions are for economic or legal reasons related to the borrower's financial difficulty that we would not otherwise consider, the loan is classified as impaired. We consider one or a combination of the following to be significant concessions: (1) a reduction of the stated interest rate, (2) an extension of the maturity date or dates at a stated interest rate lower than the current market rate for a new loan with similar terms, or (3) forgiveness of principal or accrued interest.

Renegotiated loans are permitted to remain in performing status if the modifications are not considered to be significant, or are returned to performing status when none of the criteria for classification as impaired continue to apply.

The carrying value of our renegotiated loans was \$988 million as at October 31, 2016 (\$730 million in 2015). Renegotiated loans of \$540 million were classified as performing during the year ended October 31, 2016 (\$361 million in 2015). Renegotiated loans of \$58 million were written off in the year ended October 31, 2016 (\$42 million in 2015).

## Purchased Loans

We record all loans that we purchase at fair value on the day that we acquire the loans. The fair value of the acquired loan portfolio includes an estimate of the interest rate premium or discount on the loans, calculated as the difference between the contractual rate of interest on the loans and prevailing interest rates (the "interest rate mark"). Also included in fair value is an estimate of expected credit losses (the "credit mark") as of the acquisition date. The credit mark consists of two components: an estimate of the amount of losses that exist in the acquired loan portfolio on the acquisition date but that haven't been specifically identified on that date (the "incurred credit mark") and an amount that represents future expected losses (the "future credit mark"). Because we record the loans at fair value, no allowance for credit losses is recorded in our Consolidated Balance Sheet on the day we acquire the loans. Fair value is determined by estimating the principal and interest cash flows expected to be collected on the loans and discounting those cash flows at a market rate of interest. We estimate cash flows expected to be collected based on specific loan reviews for commercial loans. For retail loans, we use models that incorporate management's best estimate of current key assumptions, such as default rates, loss severity and the timing of prepayments, as well as collateral.

Acquired loans are classified into the following categories: those for which on the acquisition date we expect to continue to receive timely principal and interest payments (the “purchased performing loans”) and those for which on the acquisition date the timely collection of interest and principal was no longer reasonably assured (the “purchased credit impaired loans” or “PCI loans”). Because PCI loans are recorded at fair value at acquisition based on the amount expected to be collected, none of the PCI loans are considered to be impaired at acquisition.

Subsequent to the acquisition date, we account for each type of loan as follows:

#### *Purchased Performing Loans*

On December 1, 2015, we acquired GE Capital Transportation Finance (“BMO TF”) which added \$10,688 million of performing loans net of an \$81 million credit mark and a \$41 million interest rate premium to our Consolidated Balance Sheet. The acquired loans are accounted for consistently with our existing purchased performing loans.

The amounts below reflect the acquired loan accounting impact on both the existing portfolio and BMO TF.

For performing loans with fixed terms, the future credit mark is fully amortized into net interest income over the expected life of the loan using the effective interest method. The impact on net interest income for the year ended October 31, 2016 was \$15 million (\$26 million in 2015 and \$34 million in 2014). The incurred credit losses are remeasured at each reporting period, with any increases recorded as an increase in the collective allowance and the provision for credit losses. Decreases in incurred credit losses are recorded as a decrease in the collective allowance and the provision for credit losses until the accumulated collective allowance related to these loans is exhausted. Any additional decrease is recorded in net interest income.

The impact of the remeasurement of incurred credit losses for performing loans with fixed terms for the year ended October 31, 2016 was \$50 million in the provision for credit losses and \$31 million in net interest income (\$1 million recovery and \$nil, respectively, in 2015 and \$2 million provision and \$6 million, respectively, in 2014).

For performing loans with revolving terms, the incurred and future credit marks are amortized into net interest income on a straight-line basis over the contractual terms of the loans. The impact on net interest income of such amortization for the year ended October 31, 2016 was \$5 million (\$15 million in 2015 and \$35 million in 2014).

As performing loans are repaid, the related unamortized credit mark remaining is recorded as net interest income during the period in which the payments are received. The impact on net interest income of such repayments for the year ended October 31, 2016 was \$41 million (\$62 million in 2015 and \$151 million in 2014).

Actual specific provisions for credit losses related to these performing loans will be recorded as they arise in a manner that is consistent with our policy for loans we originate. The total specific provision for credit losses for purchased performing loans for the year ended October 31, 2016 was \$32 million (\$5 million in 2015 and \$56 million in 2014).

As at October 31, 2016, the amount of purchased performing loans remaining on the balance sheet was \$9,415 million (\$4,993 million in 2015). As at October 31, 2016, the credit mark remaining on performing term loans and revolving loans was \$226 million and \$57 million, respectively (\$258 million and \$75 million in 2015). Of the total credit mark for performing loans of \$283 million, \$153 million represents the credit mark that will be amortized over the remaining life of the portfolio. The remaining balance of \$130 million represents the incurred credit mark and will be remeasured each reporting period.

#### *Purchased Credit Impaired Loans*

On December 1, 2015, we recorded \$105 million of purchased credit impaired loans, net of a \$19 million credit mark, related to our acquisition of BMO TF. The acquired assets are accounted for consistently with our existing PCI loans. The amounts below reflect the acquired loan accounting impact on both the existing portfolio and BMO TF.

Subsequent to the acquisition date, we regularly re-evaluate the cash flows we expect to collect on the PCI loans. Increases in expected cash flows will result in a recovery in the specific provision for credit losses and either a reduction in any previously recorded allowance for credit losses or, if no allowance exists, an increase in the current carrying value of the PCI loans. Decreases in expected cash flows will result in a charge to the specific provision for credit losses and an increase in the allowance for credit losses. The impact of these evaluations for the year ended October 31, 2016 was a \$58 million recovery in the specific provision for credit losses (\$86 million recovery in 2015 and \$252 million recovery in 2014).

As at October 31, 2016, the amount of PCI loans remaining on the balance sheet was \$275 million (\$383 million in 2015). As at October 31, 2016, the remaining credit mark related to PCI loans was \$3 million (\$nil in 2015).

#### **FDIC Covered Loans**

Certain acquired loans are subject to a loss share agreement with the Federal Deposit Insurance Corporation (“FDIC”). Under this agreement, the FDIC reimburses us for 80% of the net losses we incur on the covered loans.

We recorded net recoveries of \$25 million for the year ended October 31, 2016 (net provisions of \$36 million in 2015). These amounts are net of the amounts expected to be reimbursed by the FDIC.

## **Note 5: Risk Management**

We have an enterprise-wide approach to the identification, measurement, monitoring and control of risks faced across our organization. The key risks related to our financial instruments are classified as credit and counterparty, market, and liquidity and funding risk.

### **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 risk arises predominantly with respect to loans, over-the-counter derivatives and other credit instruments. This is the most significant measurable risk that we face. Our risk management practices and key measures are disclosed in the text and tables presented in a blue-tinted font in Management’s Discussion and Analysis on pages 88 to 90 of this report. Additional information on loans and derivative-related credit risk is disclosed in Notes 4 and 8, respectively.

## Concentrations of Credit and Counterparty Risk

Concentrations of credit risk 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. Concentrations of credit risk indicate a related sensitivity of our performance to developments affecting a particular counterparty, industry or geographic location. At year end, our credit assets consisted of a well-diversified portfolio representing millions of clients, the majority of them consumers and small to medium-sized businesses.

From an industry viewpoint, our most significant exposure as at year end was to individual consumers, captured within the individual sector in the following table, comprising \$224,041 million (\$209,146 million in 2015). Additional information on the composition of our loans and derivatives exposure is disclosed in Notes 4 and 8, respectively.

### Basel III Framework

We use the Basel III Framework and our economic capital framework (see page 74) for risk management purposes. For regulatory capital, we use the Advanced Internal Ratings Based (“AIRB”) approach to determine credit risk-weighted assets in our portfolio, except for acquired loans in our Marshall & Ilsley (“M&I”), BMO TF and other select portfolios, for which we use the Standardized Approach. The framework uses exposure at default to assess credit and counterparty risk. Exposures are classified as follows:

- Drawn loans include loans, acceptances, deposits with regulated financial institutions, and certain securities. Exposure at default (“EAD”) represents an estimate of the outstanding amount of a credit exposure at the time a default may occur. 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.
- Over-the-counter (“OTC”) derivatives are those in our proprietary accounts that attract credit risk in addition to market risk. EAD for OTC derivatives is equal to the positive replacement cost, after considering netting, plus any potential credit exposure amount.
- 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 total amount drawn.
- Adjusted EAD represents exposures that have been redistributed to a more favourable probability of default band or a different Basel asset class as a result of applying credit risk mitigation.

Total non-trading exposure at default by industry sector, as at October 31, 2016 and 2015, based on the Basel III classifications is as follows:

(Canadian \$ in millions)	Drawn		Commitments (undrawn)		OTC derivatives		Other off-balance sheet items		Repo-style transactions		Total (2)	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Financial institutions	<b>95,392</b>	85,854	<b>20,590</b>	19,268	<b>23</b>	7	<b>3,773</b>	3,321	<b>76,994</b>	50,393	<b>196,772</b>	158,843
Governments	<b>35,569</b>	42,709	<b>2,563</b>	2,069	–	–	<b>863</b>	794	<b>3,583</b>	6,478	<b>42,578</b>	52,050
Manufacturing	<b>18,430</b>	16,133	<b>12,279</b>	13,039	<b>14</b>	21	<b>1,216</b>	1,311	–	–	<b>31,939</b>	30,504
Real estate	<b>24,310</b>	21,100	<b>6,101</b>	5,871	–	–	<b>783</b>	809	–	–	<b>31,194</b>	27,780
Retail trade	<b>17,314</b>	14,352	<b>3,952</b>	4,614	–	–	<b>497</b>	539	–	–	<b>21,763</b>	19,505
Service industries	<b>33,650</b>	28,311	<b>11,503</b>	11,881	<b>1</b>	2	<b>2,909</b>	2,936	–	–	<b>48,063</b>	43,130
Wholesale trade	<b>10,726</b>	8,453	<b>4,282</b>	5,288	–	–	<b>413</b>	372	–	–	<b>15,421</b>	14,113
Oil and gas	<b>7,877</b>	6,575	<b>7,340</b>	7,847	–	–	<b>1,318</b>	818	–	–	<b>16,535</b>	15,240
Individual	<b>182,358</b>	170,323	<b>41,533</b>	38,674	–	–	<b>150</b>	149	–	–	<b>224,041</b>	209,146
Agriculture	<b>10,490</b>	9,860	<b>1,575</b>	1,860	–	–	<b>18</b>	27	–	–	<b>12,083</b>	11,747
Others (1)	<b>21,410</b>	20,899	<b>13,379</b>	14,218	–	1	<b>6,045</b>	5,329	–	–	<b>40,834</b>	40,447
<b>Total exposure at default</b>	<b>457,526</b>	424,569	<b>125,097</b>	124,629	<b>38</b>	31	<b>17,985</b>	16,405	<b>80,577</b>	56,871	<b>681,223</b>	622,505

(1) Includes industries having a total exposure of less than 2%.

(2) Credit exposure excluding Equity, Securitization, Trading Book and other assets such as non-significant investments, goodwill, deferred tax assets and intangibles.

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

Additional information about our credit risk exposure by geographic region and product category for loans is provided in Note 4.

### Credit Quality

We assign risk ratings based on the probability of counterparties defaulting on their financial obligations to us. Our process for assigning risk ratings is disclosed in the text presented in a blue-tinted font in the Enterprise-Wide Risk Management section of Management’s Discussion and Analysis on pages 88 to 90 of this report.

The following tables present our business and government and consumer gross loans and acceptances outstanding by risk rating as at October 31, 2016 and 2015.

### Business and Government Gross Loans and Acceptances by Risk Rating

(Canadian \$ in millions)	Business and government loans and acceptances	
	2016	2015
Acceptable		
Investment grade	<b>96,059</b>	84,059
Sub-investment grade	<b>85,695</b>	67,586
Watchlist	<b>5,340</b>	3,530
Default / Impaired	<b>1,524</b>	1,208
<b>Total</b>	<b>188,618</b>	156,383



## Consumer Gross Loans by Risk Rating

(Canadian \$ in millions)	Residential mortgages		Credit card, consumer instalment and other personal loans		Total	
	2016	2015	2016	2015	2016	2015
Exceptionally low ( $\leq 0.05\%$ )	1	2	18,264	16,834	18,265	16,836
Very low ( $> 0.05\%$ to $0.20\%$ )	68,557	69,100	18,056	18,795	86,613	87,895
Low ( $> 0.20\%$ to $0.75\%$ )	23,379	17,233	14,996	14,933	38,375	32,166
Medium ( $> 0.75\%$ to $7.00\%$ )	17,629	16,513	15,247	16,969	32,876	33,482
High ( $> 7.00\%$ to $99.99\%$ )	421	408	2,287	1,600	2,708	2,008
Standardized performing / Not rated	1,858	2,246	3,311	3,878	5,169	6,124
Default / Impaired	432	416	620	569	1,052	985
<b>Total</b>	<b>112,277</b>	<b>105,918</b>	<b>72,781</b>	<b>73,578</b>	<b>185,058</b>	<b>179,496</b>

## Loans Past Due Not Impaired

Loans that are past due but not classified as impaired are loans where our customers have failed to make payments when contractually due, but for which we expect the full amount of principal and interest payments to be collected. The following table presents the loans that are past due but not classified as impaired as at October 31, 2016 and 2015:

(Canadian \$ in millions)	1 to 29 days		30 to 89 days		90 days or more		Total	
	2016	2015	2016	2015	2016	2015	2016	2015
Residential mortgages (1)	668	641	451	459	33	33	1,152	1,133
Credit card, consumer instalment and other personal loans (2)	1,736	2,474	422	494	88	90	2,246	3,058
Business and government loans	673	416	364	162	139	92	1,176	670
<b>Total</b>	<b>3,077</b>	<b>3,531</b>	<b>1,237</b>	<b>1,115</b>	<b>260</b>	<b>215</b>	<b>4,574</b>	<b>4,861</b>

(1) The percentage of loans 90 days or more past due but not impaired that were guaranteed by the Government of Canada is 7% for 2016 and 5% for 2015.

(2) Credit card loans that are past due are not classified as impaired loans and are written off when 180 days past due.

## 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	
	2016	2015	2016	2015	2016	2015	2016	2015
Canada								
Consumer	47,466	50,911	108,887	97,482	5,205	5,272	161,558	153,665
Commercial and corporate (excluding real estate)	48,997	43,329	14,467	13,677	1,370	461	64,834	57,467
Commercial real estate	5,803	4,739	7,471	6,254	1,417	1,375	14,691	12,368
United States	33,776	30,886	67,262	50,647	20,784	19,665	121,822	101,198
Other countries	9,036	10,136	1,173	741	562	304	10,771	11,181
<b>Total</b>	<b>145,078</b>	<b>140,001</b>	<b>199,260</b>	<b>168,801</b>	<b>29,338</b>	<b>27,077</b>	<b>373,676</b>	<b>335,879</b>

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

(Canadian \$ in millions)	2016	2015
Fixed rate	186,864	160,469
Floating rate	171,866	162,248
Non-interest sensitive (1)	13,021	11,307
<b>Total</b>	<b>371,751</b>	<b>334,024</b>

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

## Market Risk

Market risk is the potential for adverse changes in the value of our 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, as well as the risk of credit migration and default. We incur market risk in our trading and underwriting activities and in the management of structural market risk in our banking and insurance activities.

Our market risk management practices and key measures are disclosed in the text and tables presented in a blue-tinted font in the Enterprise-Wide Risk Management section of Management's Discussion and Analysis on pages 95 to 99 of this report.

## Liquidity and Funding Risk

Liquidity and funding risk is the potential for loss if we are unable to meet financial commitments in a timely manner at reasonable prices as they fall due. It is our policy to ensure that sufficient liquid assets and funding capacity are available to meet financial commitments, including liabilities to depositors and suppliers, and lending, investment and pledging commitments, even in times of stress. Managing liquidity and funding risk is essential to maintaining both depositor confidence and stability in earnings.

Our liquidity and funding risk management practices and key measures are disclosed in the text presented in a blue-tinted font in the Enterprise-Wide Risk Management section of Management's Discussion and Analysis on pages 100 to 103 of this report.

## Note 6: Transfer of Assets

### Loan Securitization

We sell 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. We assess whether substantially all of the risks and rewards of the loans have been transferred to determine if they qualify for derecognition.

Under these programs, we are entitled to the payment over time of the excess of the sum of interest and fees collected from customers, in connection with the loans that were sold, over the yield paid to investors in the third-party securitization programs, less credit losses and other costs. Since we continue 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. We continue to recognize the loans and the related cash proceeds as secured financing in our Consolidated Balance Sheet. The interest and fees collected, net of the yield paid to investors, is recorded in net interest income using the effective interest method over the term of the securitization. Credit losses associated with the loans are recorded in the provision for credit losses. During the year ended October 31, 2016, we sold \$6,803 million of loans to third-party securitization programs (\$7,259 million in 2015).

The following table presents the carrying amount and fair value of transferred assets that did not qualify for derecognition and the associated liabilities:

(Canadian \$ in millions)	2016 (1)		2015	
	Carrying amount of assets	Associated liabilities	Carrying amount of assets	Associated liabilities
Residential mortgages	5,534		7,458	
Other related assets (2)	11,689		10,181	
<b>Total</b>	<b>17,223</b>	<b>16,880</b>	17,639	17,199

(1) The fair value of the securitized assets is \$17,318 million and the fair value of the associated liabilities is \$17,394 million, for a net position of \$(76) million. Securitized assets are those which we have transferred to third parties, including other related assets.

(2) Other related assets represent payments received on account of loans pledged under securitization programs that have not yet been applied against the associated liabilities. The payments received are held on behalf of the investors in the securitization vehicles until principal payments are required to be made on the associated liabilities. In order to compare all assets supporting the associated liabilities, this amount is added to the carrying value of the securitized assets in the table above.

### Securities Lent or Sold Under Repurchase Agreements

Securities lent or sold under repurchase agreements represent short-term funding transactions in which we sell securities that we own and simultaneously commit to repurchase the same securities at a specified price on a specified date in the future. We retain substantially all of the risks and rewards associated with the securities and we continue to recognize them in our Consolidated Balance Sheet with the obligation to repurchase these securities recorded as secured borrowing transactions at the amount owing. The interest expense related to these liabilities is recorded on an accrual basis. Additional information on securities lent or sold under repurchase agreements is provided in Note 14 and Note 17.

## Note 7: Structured Entities

We enter into certain transactions in the ordinary course of business which involve the establishment of structured entities ("SEs") to facilitate or secure customer transactions and to obtain alternate sources of funding. We are required to consolidate a SE if we control the entity. We control a SE when we have power over the SE, exposure to variable returns as a result of our involvement, and the ability to exercise power to affect the amount of our returns.

In assessing whether we control a SE, we consider the entire arrangement to determine the purpose and design of the SE, the nature of any rights held through contractual arrangements and whether we are acting as a principal or agent.

We perform a re-assessment of consolidation if facts and circumstances indicate that there have been changes to one or more of the elements of control over the SE. See Note 1 for more information on our consolidation basis.

### Consolidated Structured Entities

#### Bank Securitization Vehicles

We use securitization vehicles to securitize our Canadian credit card loans and Canadian real estate lines of credit in order to obtain alternate sources of funding. The structure of these vehicles limits the activities they can undertake and the types of assets they can hold, and the vehicles have limited decision-making authority. The vehicles issue term asset-backed securities to fund their activities. We control and consolidate these vehicles, as we have the key decision-making powers necessary to obtain the majority of the benefits of their activities. As at October 31, 2016, \$5,095 million of notes issued by our bank securitization vehicles were included in other liabilities in our Consolidated Balance Sheet (\$4,203 million at October 31, 2015).

#### U.S. Customer Securitization Vehicle

We sponsor a customer securitization vehicle (also referred to as a bank-sponsored multi-seller conduit) that provides our customers with alternate sources of funding through the securitization of their assets. This vehicle provides clients with access to financing in the asset-backed commercial paper ("ABCP") markets by allowing them to sell or transfer a security interest in their assets to the vehicle, which then issues ABCP to investors to fund the purchases. We do not sell assets to the customer securitization vehicle. We earn fees for providing services related to the securitizations, including liquidity, distribution and financial arrangement fees for supporting the ongoing operations of the vehicle. We have determined that we control and therefore consolidate this vehicle, as we are exposed to its variable returns and we have the key decision-making powers necessary to affect the amount of those returns in our capacity as liquidity provider and servicing agent.

We provide liquidity facilities to this vehicle which may require that we provide additional financing to the vehicle in the event that certain events occur. The total committed undrawn amount under these facilities at October 31, 2016 was \$6,314 million (\$7,213 million at October 31, 2015).

### Credit Protection Vehicle

We sponsored a credit protection vehicle which provided credit protection to investors on investments in corporate debt portfolios through credit default swaps. We entered into credit default swaps with swap counterparties and offsetting swaps with the vehicle. We control and consolidate the vehicle. In September 2016, the vehicle redeemed all outstanding medium-term notes and the credit default swaps matured. There is no remaining activity in this vehicle.

### Capital and Funding Vehicles

Capital and funding vehicles are created to issue notes or capital trust securities or to guarantee payments due to bondholders on bonds issued by us. These vehicles may purchase notes issued by us, or we may sell assets to the vehicles in exchange for promissory notes.

For those trusts that purchase assets from us, we have determined that based on the rights of the arrangements we have significant exposure to the variable returns of the trust, and that we control and therefore consolidate these vehicles. During 2016, the capital trust securities issued by one of these vehicles were redeemed. Additional information related to capital trust securities is provided in Note 16.

## Unconsolidated Structured Entities

The table below presents amounts related to our interests in unconsolidated SEs:

	2016			2015		
	Capital and funding vehicles	Canadian customer securitization vehicles (1)	Structured finance vehicles	Capital and funding vehicles	Canadian customer securitization vehicles (1)	Structured finance vehicles
<b>Interests recorded on the balance sheet</b>						
Cash and cash equivalents	11	53	-	11	69	-
Trading securities	-	14	1,056	-	21	2,266
Available-for-sale securities	2	643	-	2	573	-
Other	12	6	-	12	10	11
	<b>25</b>	<b>716</b>	<b>1,056</b>	<b>25</b>	<b>673</b>	<b>2,277</b>
Deposits	1,265	53	879	1,265	69	1,296
Derivatives	-	-	135	-	-	250
Other	21	-	-	20	-	732
	<b>1,286</b>	<b>53</b>	<b>1,014</b>	<b>1,285</b>	<b>69</b>	<b>2,278</b>
<b>Exposure to loss (2)</b>	<b>57</b>	<b>6,796</b>	<b>1,056</b>	<b>57</b>	<b>6,175</b>	<b>2,277</b>
<b>Total assets of the entities</b>	<b>1,285</b>	<b>5,131</b>	<b>1,056</b>	<b>1,285</b>	<b>4,289</b>	<b>2,277</b>

(1) Securities held that are issued by our Canadian customer securitization vehicles are comprised of asset-backed commercial paper and are classified as trading securities and available-for-sale securities. All assets held by these vehicles relate to assets in Canada.

(2) Exposure to loss represents securities held, drawn and undrawn facilities, and derivative assets.

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

### Capital and Funding Vehicles

Certain of our capital and funding vehicles purchase notes issued by us as their underlying assets. In these situations, we are not exposed to significant default or credit risk. Our remaining exposure to variable returns is less than that of the note holders, who are exposed to our default and credit risk. We are not required to consolidate these vehicles.

### Canadian Customer Securitization Vehicles

We sponsor customer securitization vehicles (also referred to as bank-sponsored multi-seller conduits) that provide our customers with alternate sources of funding through the securitization of their assets. These vehicles provide clients with access to financing in the ABCP markets by allowing them to sell or transfer a security interest in their assets to the vehicles, which then issue ABCP to investors to fund the purchases. We do not sell assets to the customer securitization vehicles. We earn fees for providing services related to the securitizations, including liquidity, distribution and financial arrangement fees for supporting the ongoing operations of the vehicles. We have determined that we do not have control of these entities, as their key relevant activity, the servicing of program assets, does not reside with us. We provide liquidity facilities to these vehicles which may require that we provide additional financing to the vehicles in the event that certain events occur. The total committed undrawn amount under these facilities at October 31, 2016 was \$6,134 million (\$5,573 million at October 31, 2015).

### Structured Finance Vehicles

We facilitate development of investment products by third parties, including mutual funds, unit investment trusts and other investment funds that are sold to retail investors. We enter into derivative contracts with these third parties to provide investors with their desired exposure, and we hedge our exposure related to these derivative contracts by investing in other funds through SEs. We are not required to consolidate these vehicles.

### Compensation Trusts

We sponsor various share ownership arrangements, certain of which are administered through trusts. Generally these arrangements permit employees to purchase bank common shares.

Employees can direct a portion of their gross salary towards the purchase of our common shares and we match 50% of employees' contributions up to 6% of their individual gross salary. Our matching contributions are paid into trusts, which purchase our common shares on the open market for distribution to employees once those employees are entitled to the shares under the terms of the plan. We are not required to consolidate our compensation trusts. These trusts are not included in the table above, as we have no interest in the trusts.

Total assets held under our share ownership arrangements amounted to \$1,616 million as at October 31, 2016 (\$1,446 million in 2015).

### *BMO Managed Funds*

We have established a number of funds that we also manage. We assess whether or not we control these funds based on the economic interest we have in the funds, including investments in the funds and management fees earned from the funds, and any investors' rights to remove us as investment manager. Based on our assessment, we have determined that we do not control these funds. Our total exposure to unconsolidated BMO managed funds was \$798 million at October 31, 2016 (\$589 million in 2015), which is included in securities in our Consolidated Balance Sheet.

### *Non-BMO Managed Funds*

We purchase and hold units of non-BMO managed funds for investment and other purposes. We are considered to have an interest in these funds through our holding of units, and because we may act as counterparty in certain derivative contracts or other interests. These activities do not constitute control, and as a result our interests in these funds are not consolidated. Our total exposure to non-BMO managed funds was \$2,525 million at October 31, 2016 (\$3,735 million in 2015), which is included in securities in our Consolidated Balance Sheet.

### **Other Structured Entities**

We may be deemed to be the sponsor of an SE if we are involved in the design, legal set-up or marketing of the SE. We may also be deemed to be the sponsor of an SE if market participants would reasonably associate the entity with us. We do not have an interest in certain SEs that we have sponsored.

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## **Note 8: Derivative Instruments**

Derivative instruments are financial contracts that derive their value from underlying changes in interest rates, foreign exchange rates or other financial or commodity prices or indices.

Derivative instruments are either regulated exchange-traded contracts or negotiated over-the-counter contracts. We use these instruments for trading purposes, as well as to manage our exposures, mainly to foreign currency and interest rate fluctuations, as part of our asset/liability management program.

### **Types of Derivatives**

#### *Swaps*

Swaps are contractual agreements between two parties to exchange a series of cash flows. The various swap agreements that we enter into are as follows:

Interest rate swaps – counterparties generally exchange fixed and floating rate interest payments based on a notional value in a single currency.

Cross-currency swaps – fixed rate interest payments and principal amounts are exchanged in different currencies.

Cross-currency interest rate swaps – fixed and/or floating rate interest payments and principal amounts are exchanged in different currencies.

Commodity swaps – counterparties generally exchange fixed and floating rate payments based on a notional value of a single commodity.

Equity swaps – counterparties exchange the return on an equity security or a group of equity securities for the return based on a fixed or floating interest rate or the return on another equity security or group of equity securities.

Credit default swaps – one counterparty pays the other a fee in exchange for that other counterparty agreeing to make a payment if a credit event occurs, such as bankruptcy or failure to pay.

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.

#### *Forwards and Futures*

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 margining.

#### *Options*

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.

For options written by us, we receive a premium from the purchaser for accepting market risk.

For options purchased by us, we pay a premium for the right to exercise the option. Since we have no obligation to exercise the option, our primary exposure to risk is the potential credit risk if the writer of an over-the-counter contract fails to meet the terms of the contract.

Caps, collars and floors are specialized types of written and purchased options. They are contractual agreements in which the writer agrees to pay the purchaser, based on a specified notional amount, the difference between the market rate and the prescribed rate of the cap, collar or floor. The writer receives a premium for selling this instrument.

A swaption is an option granting its owner the right but not the obligation to enter into an underlying swap.

A future option is an option contract in which the underlying instrument is a single futures contract.

The main risks associated with these derivative instruments are related to exposure to movements in interest rates, foreign exchange rates, credit quality, value of the underlying financial instrument or commodity, as applicable, and the possible inability of counterparties to meet the terms of the contracts.

### **Risks Hedged**

#### *Interest Rate Risk*

We manage interest rate risk through bonds, interest rate futures, interest rate swaps and options, which are linked to and adjust the interest rate sensitivity of a specific asset, liability, forecasted transaction or firm commitment, or a specific pool of transactions with similar risk characteristics.

*Foreign Currency Risk*

We manage foreign currency risk through currency futures, foreign currency options, cross-currency swaps, spot foreign exchange and forward contracts.

**Trading Derivatives**

Trading derivatives include derivatives entered into with customers to accommodate their risk management needs, market-making to facilitate customer-driven demand for derivatives, derivatives transacted on a limited basis to generate trading income from our principal trading positions and certain derivatives that are executed as part of our risk management strategy that do not qualify as hedges for accounting purposes (“economic hedges”).

We structure and market derivative products to enable customers to transfer, modify or reduce current or expected risks.

Principal trading activities include market-making and positioning activities. Market-making involves quoting bid and offer prices to other market participants with the intention of generating revenues based on spread and volume. Positioning activities involve managing market risk positions with the expectation of profiting from favourable movements in prices, rates or indices.

Trading derivatives are recorded at fair value. Realized and unrealized gains and losses are recorded in trading revenues in our Consolidated Statement of Income. Unrealized gains on trading derivatives are recorded as derivative instrument assets and unrealized losses are recorded as derivative instrument liabilities in our Consolidated Balance Sheet.

We may also economically hedge a portion of our U.S. dollar earnings through forward foreign exchange contracts and/or options to minimize fluctuations in our consolidated net income due to the translation of our U.S. dollar earnings. These contracts are recorded at fair value, with changes in fair value recorded in non-interest revenue, trading revenues, in our Consolidated Statement of Income.

**Hedging Derivatives**

In accordance with our risk management strategy, we enter into various derivative contracts to hedge our interest rate and foreign currency exposures. To the extent these derivative instruments are qualified for hedge accounting requirements, we designate them in accounting hedge relationships.

In order for a derivative instrument to qualify as an accounting hedge, the hedging relationship must be designated and formally documented at its inception, detailing the particular risk management objective and strategy for the hedge and the specific asset, liability or cash flow being hedged, as well as how its effectiveness is being assessed. Changes in the fair value of the derivative must be highly effective in offsetting changes in the fair value or changes in the amount of future cash flows of the hedged item.

Hedge effectiveness is evaluated at the inception of the hedging relationship and on an ongoing basis, retrospectively and prospectively, primarily using quantitative statistical measures of correlation. Any ineffectiveness in the hedging relationship is recognized in non-interest revenue, other, in our Consolidated Statement of Income as it arises.

*Cash Flow Hedges*

Cash flow hedges modify exposure to variability in cash flows for variable interest rate bearing instruments, foreign currency denominated assets and liabilities and certain cash-settled share-based payment grants subject to equity price risk. Variable interest rate bearing instruments include floating rate loans and deposits. Our cash flow hedges have a maximum remaining term to maturity of 20 years.

We record interest that we pay or receive on these cash flow hedge derivatives as an adjustment to net interest income in our Consolidated Statement of Income over the life of the hedge.

To the extent that changes in the fair value of the derivative offset changes in the fair value of the hedged item, they are recorded in other comprehensive income. The excess of the change in fair value of the derivative that does not offset changes in the fair value of the hedged item is recorded directly in non-interest revenue, other, in our Consolidated Statement of Income.

For cash flow hedges that are discontinued before the end of the original hedge term, the cumulative unrealized gain or loss recorded in other comprehensive income is amortized to our Consolidated Statement of Income in net interest income for interest rate swaps and in employee compensation for total return swaps as the hedged item is recorded in earnings. If the hedged item is sold or settled, the entire unrealized gain or loss is recognized immediately in net interest income in our Consolidated Statement of Income.

The amount of unrealized gain that we expect to reclassify to our Consolidated Statement of Income over the next 12 months is \$100 million (\$74 million after tax). This will adjust the interest income and interest expense recorded on assets and liabilities and employee compensation expense that were hedged.



The following table presents the impact of cash flow hedges on our financial results.

(Canadian \$ in millions)

Contract type	Fair value change recorded in other comprehensive income	Pre-tax gains/(losses) recorded in income	
		Fair value change recorded in non-interest revenue - other	Reclassification of gains on designated hedges from other comprehensive income to net income
<b>2016</b>			
Interest rate	<b>39</b>	<b>(4)</b>	<b>127</b>
Foreign exchange (1)	<b>(124)</b>	<b>(2)</b>	<b>na</b>
Share-based payment awards	<b>63</b>	<b>-</b>	<b>18</b>
<b>Total</b>	<b>(22)</b>	<b>(6)</b>	<b>145</b>
<b>2015</b>			
Interest rate	697	2	119
Foreign exchange (1)	33	1	na
Share-based payment awards	(14)	-	(8)
<b>Total</b>	<b>716</b>	<b>3</b>	<b>111</b>
<b>2014</b>			
Interest rate	224	3	130
Foreign exchange (1)	102	-	na
<b>Total</b>	<b>326</b>	<b>3</b>	<b>130</b>

(1) Amortization of spot forward differential on foreign exchange contracts of \$161 million loss for the year ended October 31, 2016 (\$40 million loss in 2015 and \$4 million loss in 2014) was transferred from other comprehensive income to interest expense in our Consolidated Statement of Income.

na - not applicable

#### Fair Value Hedges

Fair value hedges modify exposure to changes in a fixed rate instrument's fair value caused by changes in interest rates. These hedges economically convert fixed rate assets and liabilities to floating rate. Our fair value hedges include hedges of fixed rate securities, deposits and subordinated debt.

We record interest receivable or payable on these derivatives as an adjustment to net interest income in our Consolidated Statement of Income over the life of the hedge.

For fair value hedges, the hedging derivative is recorded at fair value and any fixed rate assets and liabilities that are part of a hedging relationship are adjusted for the changes in value of the risk being hedged. To the extent that the change in the fair value of the derivative does not offset changes in the fair value of the hedged item, the net amount is recorded directly in non-interest revenue, other, in our Consolidated Statement of Income.

For fair value hedges that are discontinued, we cease adjusting the hedged item to fair value. The cumulative fair value adjustment of the hedged item is then amortized to net interest income over its remaining term to maturity. If the hedged item is sold or settled, the cumulative fair value adjustment is included in the determination of the gain or loss on sale or settlement.

The following table presents the impact of fair value hedges on our financial results.

(Canadian \$ in millions)

Contract type	Amount of gain/(loss) on hedging derivatives (1)	Pre-tax gains/(losses) recorded in income	
		Fair value hedge adjustment (2)	Hedge ineffectiveness recorded in non-interest revenue - other
<b>Interest rate contracts - 2016</b>	<b>(77)</b>	<b>72</b>	<b>(5)</b>
2015	225	(219)	6
2014	46	(39)	7

(1) Unrealized gains (losses) on hedging derivatives are recorded in Other assets - derivative instruments or Other liabilities - derivative instruments, in the Consolidated Balance Sheet.

(2) Unrealized gains (losses) on hedged items are recorded in Securities - available-for-sale, subordinated debt, deposits and other liabilities.

#### Net Investment Hedges

Net investment hedges mitigate our exposure to foreign currency exchange rate fluctuations related to our net investment in foreign operations. Deposit liabilities denominated in foreign currencies are designated as hedges for a portion of this exposure. The foreign currency translation of our net investment in foreign operations and the corresponding hedging instrument is recorded in unrealized gains (losses) on translation of net foreign operations in other comprehensive income. To the extent that the hedging instrument is not effective, amounts are included in the Consolidated Statement of Income in foreign exchange, other than trading. There was no hedge ineffectiveness associated with net investment hedges for the years ended October 31, 2016 and 2015. We use foreign currency deposits with a term to maturity of zero to three months as hedging instruments in net investment hedges, and the fair value of such deposits was \$4,795 million as at October 31, 2016 (\$1,347 million in 2015).

#### Embedded Derivatives

From time to time, we purchase or issue financial instruments containing embedded derivatives. The embedded derivative is separated from the host contract and carried at fair value if the economic characteristics of the derivative are not closely related to those of the host contract, the terms of the embedded derivative are the same as those of a stand-alone derivative, and the combined contract is not held for trading or designated at fair value. To the extent that we cannot reliably identify and measure the embedded derivative, the entire contract is carried at fair value, with changes in fair value reflected in income. Embedded derivatives in certain of our equity linked notes are accounted for separately from the host instrument.

## Contingent Features

Certain over-the-counter derivative instruments contain provisions that link the amount of collateral we are required to post or pay to our credit ratings (as determined by the major credit rating agencies). If our credit ratings were to be downgraded, certain counterparties to these derivative instruments could demand immediate and ongoing collateralization overnight on derivative liability positions or request immediate payment. The aggregate fair value of all derivative instruments with collateral posting requirements that were in a liability position on October 31, 2016 was \$7,495 million, for which we have posted collateral of \$7,529 million. If our credit rating had been downgraded to A or A- on October 31, 2016 (per Standard & Poor's Ratings Services), we would have been required to post collateral or meet payment demands of an additional \$841 million or \$984 million, respectively (\$532 million or \$800 million, respectively, in 2015).

## Fair Value

Fair value represents point-in-time estimates that may change in subsequent reporting periods due to market conditions or other factors. A discussion of the fair value measurement of derivatives is included in Note 17.

Fair values of our derivative instruments are as follows:

(Canadian \$ in millions)	2016			2015		
	Gross assets	Gross liabilities	Net	Gross assets	Gross liabilities	Net
<b>Trading</b>						
<b>Interest Rate Contracts</b>						
Swaps	16,678	(15,047)	1,631	17,382	(16,449)	933
Forward rate agreements	61	(2)	59	25	(6)	19
Futures	1	-	1	1	-	1
Purchased options	555	-	555	637	-	637
Written options	-	(552)	(552)	-	(581)	(581)
<b>Foreign Exchange Contracts</b>						
Cross-currency swaps	4,351	(3,443)	908	5,128	(4,239)	889
Cross-currency interest rate swaps	9,052	(10,996)	(1,944)	6,847	(12,128)	(5,281)
Forward foreign exchange contracts	4,319	(2,051)	2,268	3,099	(1,306)	1,793
Purchased options	411	-	411	133	-	133
Written options	-	(450)	(450)	-	(178)	(178)
<b>Commodity Contracts</b>						
Swaps	723	(647)	76	993	(1,818)	(825)
Purchased options	496	-	496	674	-	674
Written options	-	(524)	(524)	-	(953)	(953)
<b>Equity Contracts</b>						
<b>Credit Default Swaps</b>						
Purchased	23	-	23	36	-	36
Written	-	(32)	(32)	-	(48)	(48)
Total fair value - trading derivatives	37,571	(36,132)	1,439	35,924	(39,907)	(3,983)
<b>Hedging</b>						
<b>Interest Rate Contracts</b>						
Cash flow hedges - swaps	442	(100)	342	664	(90)	574
Fair value hedges - swaps	327	(453)	(126)	544	(387)	157
Total swaps	769	(553)	216	1,208	(477)	731
<b>Foreign Exchange Contracts</b>						
Cash flow hedges - forward foreign exchange contracts	843	(1,539)	(696)	1,092	(2,255)	(1,163)
Total foreign exchange contracts	843	(1,539)	(696)	1,092	(2,255)	(1,163)
<b>Equity Contracts</b>						
Cash flow hedges - equity contracts	-	(3)	(3)	14	-	14
Total equity contracts	-	(3)	(3)	14	-	14
Total fair value - hedging derivatives (1)	1,612	(2,095)	(483)	2,314	(2,732)	(418)
Total fair value - trading and hedging derivatives	39,183	(38,227)	956	38,238	(42,639)	(4,401)
Less: impact of master netting agreements	(27,538)	27,538	-	(27,415)	27,415	-
Total	11,645	(10,689)	956	10,823	(15,224)	(4,401)

(1) The fair values of hedging derivatives wholly or partially offset the changes in fair values of the related on-balance sheet financial instruments or future cash flows.

Assets are shown net of liabilities to customers where we have a legally enforceable right to offset amounts and we intend to settle contracts on a net basis.

## Notional Amounts

The notional amounts of our 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 the contract. Notional amounts do not represent assets or liabilities and therefore are not recorded in our Consolidated Balance Sheet.

(Canadian \$ in millions)	2016				2015			
	Trading	Hedging		Total	Trading	Hedging		Total
		Cash flow	Fair value			Cash flow	Fair value	
<b>Interest Rate Contracts</b>								
Over-the-counter								
Swaps	2,596,259	60,793	69,649	2,726,701	2,853,087	59,021	47,679	2,959,787
Forward rate agreements	430,507	-	-	430,507	432,744	-	-	432,744
Purchased options	29,508	-	-	29,508	21,344	-	-	21,344
Written options	43,921	-	-	43,921	24,154	-	-	24,154
	<b>3,100,195</b>	<b>60,793</b>	<b>69,649</b>	<b>3,230,637</b>	3,331,329	59,021	47,679	3,438,029
Exchange-traded								
Futures	133,864	-	-	133,864	137,583	-	-	137,583
Purchased options	30,849	-	-	30,849	26,598	-	-	26,598
Written options	30,821	-	-	30,821	25,038	-	-	25,038
	<b>195,534</b>	-	-	<b>195,534</b>	189,219	-	-	189,219
Total interest rate contracts	<b>3,295,729</b>	<b>60,793</b>	<b>69,649</b>	<b>3,426,171</b>	3,520,548	59,021	47,679	3,627,248
<b>Foreign Exchange Contracts</b>								
Over-the-counter								
Cross-currency swaps	89,248	106	-	89,354	75,890	193	-	76,083
Cross-currency interest rate swaps	382,525	141	-	382,666	339,431	36	-	339,467
Forward foreign exchange contracts	365,447	43,742	-	409,189	362,544	30,554	-	393,098
Purchased options	29,876	-	-	29,876	28,297	-	-	28,297
Written options	30,405	-	-	30,405	28,960	-	-	28,960
	<b>897,501</b>	<b>43,989</b>	-	<b>941,490</b>	835,122	30,783	-	865,905
Exchange-traded								
Futures	356	-	-	356	677	-	-	677
Purchased options	2,846	-	-	2,846	2,562	-	-	2,562
Written options	1,441	-	-	1,441	2,012	-	-	2,012
	<b>4,643</b>	-	-	<b>4,643</b>	5,251	-	-	5,251
Total foreign exchange contracts	<b>902,144</b>	<b>43,989</b>	-	<b>946,133</b>	840,373	30,783	-	871,156
<b>Commodity Contracts</b>								
Over-the-counter								
Swaps	13,603	-	-	13,603	11,929	-	-	11,929
Purchased options	6,828	-	-	6,828	6,172	-	-	6,172
Written options	4,672	-	-	4,672	4,103	-	-	4,103
	<b>25,103</b>	-	-	<b>25,103</b>	22,204	-	-	22,204
Exchange-traded								
Futures	24,232	-	-	24,232	20,826	-	-	20,826
Purchased options	6,048	-	-	6,048	7,614	-	-	7,614
Written options	8,159	-	-	8,159	9,720	-	-	9,720
	<b>38,439</b>	-	-	<b>38,439</b>	38,160	-	-	38,160
Total commodity contracts	<b>63,542</b>	-	-	<b>63,542</b>	60,364	-	-	60,364
<b>Equity Contracts</b>								
Over-the-counter	57,994	319	-	58,313	46,942	172	-	47,114
Exchange-traded	7,835	-	-	7,835	4,911	-	-	4,911
Total equity contracts	<b>65,829</b>	<b>319</b>	-	<b>66,148</b>	51,853	172	-	52,025
<b>Credit Default Swaps</b>								
Over-the-counter purchased	3,033	-	-	3,033	5,419	-	-	5,419
Over-the-counter written	981	-	-	981	9,154	-	-	9,154
Total credit default swaps	<b>4,014</b>	-	-	<b>4,014</b>	14,573	-	-	14,573
Total	<b>4,331,258</b>	<b>105,101</b>	<b>69,649</b>	<b>4,506,008</b>	4,487,711	89,976	47,679	4,625,366

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

## Derivative-Related Market Risk

Derivative instruments are subject to market risk. Market risk arises from the potential for a negative impact on the balance sheet and/or statement of income due to adverse changes in the value of derivative instruments as a result of changes in certain market variables. These variables include interest rates, foreign exchange rates, equity and commodity prices and their implied volatilities, as well as credit spreads, credit migration and default. We strive to limit market risk by employing comprehensive governance and management processes for all market risk-taking activities.

## Derivative-Related Credit Risk

Over-the-counter derivative instruments are subject to credit risk arising from the possibility that counterparties may default on their obligations. The credit risk associated with derivatives is normally a small fraction of the notional amount of the derivative instrument. Derivative contracts generally expose us to potential credit loss if changes in market rates affect a counterparty's position unfavourably and the counterparty defaults on payment. The credit risk is represented by the positive fair value of the derivative instrument. We strive to limit credit risk by dealing with counterparties that we believe are creditworthy, and we manage our credit risk for derivatives using the same credit risk process that is applied to loans and other credit assets.

We also pursue opportunities to reduce our exposure to credit losses on derivative instruments, including through collateral and by entering into master netting agreements with counterparties. The credit risk associated with favourable contracts is mitigated by legally enforceable master netting agreements to the extent that unfavourable contracts with the same counterparty must be settled concurrently with favourable contracts.

Exchange-traded derivatives have limited potential for credit exposure, as they are settled net daily with each exchange.

Terms used in the credit risk table below are as follows:

**Replacement cost** represents the cost of replacing all contracts that have a positive fair value, determined using current market rates. It represents in effect the unrealized gains on our derivative instruments. Replacement costs disclosed below represent the net of the asset and liability to a specific counterparty where we have a legally enforceable right to offset the amount owed to us with the amount owed by us and we intend either to settle on a net basis or to realize the asset and settle the liability simultaneously.

**Credit risk equivalent** represents the total replacement cost plus an amount representing the potential future credit exposure, as outlined in OSFI's Capital Adequacy Guideline.

**Risk-weighted assets** represent the credit risk equivalent, weighted on the basis of the creditworthiness of the counterparty, as prescribed by OSFI.

(Canadian \$ in millions)	2016			2015		
	Replacement cost	Credit risk equivalent	Risk-weighted assets	Replacement cost	Credit risk equivalent	Risk-weighted assets
<b>Interest Rate Contracts</b>						
Swaps	17,447	20,506	-	18,590	22,037	-
Forward rate agreements	61	61	-	25	24	-
Purchased options	551	589	-	633	651	-
Total interest rate contracts	18,059	21,156	1,345	19,248	22,712	1,461
<b>Foreign Exchange Contracts</b>						
Cross-currency swaps	4,351	8,959	-	5,128	8,602	-
Cross-currency interest rate swaps	9,054	17,386	-	6,847	13,696	-
Forward foreign exchange contracts	5,160	8,806	-	4,191	7,838	-
Purchased options	380	586	-	115	768	-
Total foreign exchange contracts	18,945	35,737	2,444	16,281	30,904	2,034
<b>Commodity Contracts</b>						
Swaps	723	2,389	-	993	2,472	-
Purchased options	91	1,135	-	69	1,043	-
Total commodity contracts	814	3,524	670	1,062	3,515	496
<b>Equity Contracts</b>						
	713	4,180	347	892	3,366	214
<b>Credit Default Swaps</b>						
	23	92	13	36	146	34
Total derivatives	38,554	64,689	4,819	37,519	60,643	4,239
Less: impact of master netting agreements	(27,538)	(42,248)	-	(27,415)	(40,140)	-
Total	11,016	22,441	4,819	10,104	20,503	4,239

The total derivatives and the impact of master netting agreements for replacement cost do not include exchange-traded derivatives with a fair value of \$629 million as at October 31, 2016 (\$719 million in 2015).

Transactions are conducted with counterparties in various geographic locations and industry sectors. Set out below is the replacement cost of contracts with customers located in the following countries, based on country of ultimate risk.

(Canadian \$ in millions, except as noted)	Before master netting agreements				After master netting agreements			
	2016		2015		2016		2015	
Canada	20,472	53	19,492	52	6,196	56	5,832	58
United States	8,335	22	7,702	21	2,666	24	2,609	26
United Kingdom	3,274	8	3,220	9	600	6	398	4
Other countries (1)	6,473	17	7,105	18	1,554	14	1,265	12
Total	38,554	100%	37,519	100%	11,016	100%	10,104	100%

(1) No other country represented 15% or more of our replacement cost in 2016 or 2015.

Transactions are conducted with various counterparties. Set out below is the replacement cost of contracts (before the impact of master netting agreements) with customers in the following industries:

As at October 31, 2016 (Canadian \$ in millions)	Interest rate contracts	Foreign exchange contracts	Commodity contracts	Equity contracts	Credit default swaps	Total
Financial institutions	12,453	13,319	235	631	23	26,661
Governments	3,306	3,038	51	-	-	6,395
Natural resources	2	25	70	-	-	97
Energy	261	690	128	-	-	1,079
Other	2,037	1,873	330	82	-	4,322
<b>Total</b>	<b>18,059</b>	<b>18,945</b>	<b>814</b>	<b>713</b>	<b>23</b>	<b>38,554</b>

As at October 31, 2015 (Canadian \$ in millions)	Interest rate contracts	Foreign exchange contracts	Commodity contracts	Equity contracts	Credit default swaps	Total
Financial institutions	13,882	10,565	253	708	35	25,443
Governments	2,940	3,343	85	-	-	6,368
Natural resources	-	27	114	-	-	141
Energy	250	693	189	-	-	1,132
Other	2,176	1,653	421	184	1	4,435
<b>Total</b>	<b>19,248</b>	<b>16,281</b>	<b>1,062</b>	<b>892</b>	<b>36</b>	<b>37,519</b>

### Term to Maturity

Our derivative contracts have varying maturity dates. The remaining contractual terms to maturity for the notional amounts of our derivative contracts are set out below:

(Canadian \$ in millions)	Term to maturity					2016 Total notional amounts	2015 Total notional amounts
	Within 1 year	1 to 3 years	3 to 5 years	5 to 10 years	Over 10 years		
<b>Interest Rate Contracts</b>							
Swaps	941,611	491,447	838,179	410,760	44,704	2,726,701	2,959,787
Forward rate agreements, futures and options	605,007	82,327	7,135	4,847	154	699,470	667,461
<b>Total interest rate contracts</b>	<b>1,546,618</b>	<b>573,774</b>	<b>845,314</b>	<b>415,607</b>	<b>44,858</b>	<b>3,426,171</b>	<b>3,627,248</b>
<b>Foreign Exchange Contracts</b>							
Cross-currency swaps	12,425	18,275	33,169	22,959	2,526	89,354	76,083
Cross-currency interest rate swaps	87,804	121,596	87,992	71,732	13,542	382,666	339,467
Forward foreign exchange contracts, futures and options	464,432	8,205	1,079	381	16	474,113	455,606
<b>Total foreign exchange contracts</b>	<b>564,661</b>	<b>148,076</b>	<b>122,240</b>	<b>95,072</b>	<b>16,084</b>	<b>946,133</b>	<b>871,156</b>
<b>Commodity Contracts</b>							
Swaps	3,195	7,504	2,151	753	-	13,603	11,929
Futures and options	21,313	24,973	3,111	542	-	49,939	48,435
<b>Total commodity contracts</b>	<b>24,508</b>	<b>32,477</b>	<b>5,262</b>	<b>1,295</b>	<b>-</b>	<b>63,542</b>	<b>60,364</b>
<b>Equity Contracts</b>							
	53,780	9,147	1,584	101	1,536	66,148	52,025
<b>Credit Contracts</b>							
	1,628	582	213	1,095	496	4,014	14,573
<b>Total notional amount</b>	<b>2,191,195</b>	<b>764,056</b>	<b>974,613</b>	<b>513,170</b>	<b>62,974</b>	<b>4,506,008</b>	<b>4,625,366</b>

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

## Note 9: Premises and Equipment

We record all premises and equipment at cost less accumulated amortization, and less any accumulated impairment, except land, which is recorded at cost. Buildings, computer equipment and operating system software, other equipment and leasehold improvements are amortized on a straight-line basis over their estimated useful lives. When the major components of a building have different useful lives, they are accounted for separately and amortized over each component's useful life. The maximum estimated useful lives we use to amortize our assets are as follows:

Buildings	10 to 40 years
Computer equipment and operating system software	15 years
Other equipment	10 years
Leasehold improvements	Lease term to a maximum of 10 years

Amortization methods, useful lives and the residual values of premises and equipment are reviewed annually for any change in circumstances and are adjusted if appropriate. At least annually, we review whether there are any indications that premises and equipment need to be tested for impairment. If there is an indication that an asset may be impaired, we test for impairment by comparing the asset's carrying value to its recoverable amount. The recoverable amount is calculated as the higher of the value in use and the fair value less costs to sell. Value in use is the present value of the future cash flows expected to be derived from the asset. An impairment charge is recorded when the recoverable amount is less than the carrying value. There were no significant write-downs of premises and equipment due to impairment during the years ended October 31, 2016 and 2015. Gains and losses on disposal are included in non-interest expense, premises and equipment, in our Consolidated Statement of Income.



Net rent expense for premises and equipment reported in our Consolidated Statement of Income for the years ended October 31, 2016, 2015 and 2014 was \$502 million, \$476 million and \$431 million, respectively.

	(Canadian \$ in millions)						2016						2015	
	Land	Buildings	Computer equipment	Other equipment	Leasehold improvements	Total	Land	Buildings	Computer equipment	Other equipment	Leasehold improvements	Total		Total
<b>Cost</b>														
Balance at beginning of year	280	1,908	1,631	901	1,285	6,005	300	1,802	1,571	805	1,182	5,660		5,660
Additions	1	87	228	77	66	459	5	48	228	73	75	429		429
Disposals (1)	(80)	(236)	(26)	(81)	(22)	(445)	(64)	(102)	(243)	(24)	(12)	(445)		(445)
Foreign exchange and other	6	25	11	5	18	65	39	160	75	47	40	361		361
Balance at end of year	207	1,784	1,844	902	1,347	6,084	280	1,908	1,631	901	1,285	6,005		6,005
<b>Accumulated Depreciation and Impairment</b>														
Balance at beginning of year	-	1,076	1,146	651	847	3,720	-	979	1,108	554	743	3,384		3,384
Disposals (1)	-	(121)	(19)	(67)	(18)	(225)	-	(57)	(137)	(14)	(6)	(214)		(214)
Amortization	-	66	172	54	92	384	-	36	153	56	132	377		377
Foreign exchange and other	-	34	7	11	6	58	-	118	22	55	(22)	173		173
Balance at end of year	-	1,055	1,306	649	927	3,937	-	1,076	1,146	651	847	3,720		3,720
Net carrying value	207	729	538	253	420	2,147	280	832	485	250	438	2,285		2,285

(1) Includes fully depreciated assets written off.

## Note 10: Acquisitions

The cost of an acquisition is measured at the fair value of the consideration transferred, including contingent consideration. Acquisition-related costs are recognized as an expense in the period in which they are incurred. The identifiable assets acquired and liabilities assumed and contingent consideration are measured at their fair values at the date of acquisition. Goodwill is measured as the excess of the aggregate of the consideration transferred over the net of the fair value of identifiable assets acquired and liabilities assumed. The results of operations of acquired businesses are included in our consolidated financial statements beginning on the date of acquisition.

### Greene Holcomb Fisher ("GHF")

On August 1, 2016, we completed the acquisition of the business of Greene Holcomb Fisher for cash consideration of US\$53 million (CAD\$69 million). The acquisition complements our existing capital markets activity in the U.S. by increasing the number of experienced mergers and acquisitions professionals and our presence in the marketplace. The acquisition was accounted for as a business combination, and the acquired business and corresponding goodwill are included in our BMO Capital Markets reporting segment.

As part of this acquisition, we acquired intangible assets of \$4 million and goodwill of \$65 million. The intangible asset is being amortized over a maximum of three years on a straight-line basis. Goodwill of \$65 million related to this acquisition is deductible for tax purposes.

GHF contributed less than 1% to revenue and expenses of BMO Capital Markets since acquisition.

### GE Capital Transportation Finance Business ("BMO TF")

On December 1, 2015 we completed the acquisition of the net assets of the GE Capital Transportation Finance business for cash consideration of US\$9.0 billion (CAD\$12.1 billion).

The acquisition is consistent with our commercial banking activities in both Canada and the U.S. and has expanded our commercial customer base. The acquisition was accounted for as a business combination, and the acquired business and corresponding goodwill are included in our U.S. P&C and Canadian P&C reporting segments.

As part of this acquisition, we primarily acquired loans, assets subject to operating leases, and goodwill. We recorded a credit mark of \$100 million and an interest rate premium of \$41 million on the acquired loan portfolio. Additionally, we recorded a fair value adjustment of \$72 million to reduce the value of assets subject to operating leases. A dealer and customer relationship intangible asset is being amortized over a 15 year period on an accelerated basis, and a technology intangible asset is being amortized over five years on a straight-line basis. Goodwill of \$410 million related to this acquisition is deductible for tax purposes.

BMO TF contributed approximately 14% to revenue and expenses of U.S. P&C since acquisition.

The fair values of the assets acquired and liabilities assumed at the date of acquisition are as follows:

(Canadian \$ in millions)	BMO TF	GHF
Loans	10,793	-
Goodwill	410	65
Intangible assets	63	4
Other assets	1,087	-
<b>Total assets</b>	<b>12,353</b>	<b>69</b>
Other liabilities	275	-
<b>Purchase price</b>	<b>12,078</b>	<b>69</b>

The allocation of the purchase price for GHF is subject to refinement as we complete the valuation of the assets acquired and liabilities assumed. The purchase price allocation for BMO TF has been completed.

## Note 11: Goodwill and Intangible Assets

### Goodwill

When we complete an acquisition, we allocate the purchase price paid to the assets acquired, including identifiable intangible assets, and the liabilities assumed. Any portion of the consideration transferred that is in excess of the fair value of those net assets is considered to be goodwill. Goodwill is not amortized and is instead tested for impairment annually.

In performing the impairment test, we utilize the fair value less costs to sell for each group of cash-generating units ("CGUs") based on discounted cash flow projections. Cash flows were projected for the first 10 years based on actual operating results, expected future business performance and past experience. Beyond the first 10 years, cash flows were assumed to grow at perpetual annual rates of up to 3% (3% in 2015). The discount rates we applied in determining the recoverable amounts in 2016 ranged from 6.0% to 12.7% (5.9% to 11.6% in 2015), and were based on our estimate of the cost of capital for each CGU. The cost of capital for each CGU was estimated using the Capital Asset Pricing Model, based on the historical betas of publicly traded peer companies that are comparable to the CGU.

There were no write-downs of goodwill due to impairment during the years ended October 31, 2016 and 2015.

The key assumptions described above may change as market and economic conditions change. However, we estimate that reasonably possible changes in these assumptions are not expected to cause recoverable amounts of our CGUs to decline below their carrying amounts.

A continuity of our goodwill by group of CGUs for the years ended October 31, 2016 and 2015 is as follows:

(Canadian \$ in millions)	Personal and Commercial Banking			Wealth Management		BMO Capital Markets	Total	
	Canadian P&C	U.S. P&C	Total	Traditional Wealth Management	Insurance	Total		
Balance – October 31, 2014	68	2,922	2,990	2,150	2	2,152	211	5,353
Disposals during the year	-	-	-	(21)	-	(21)	-	(21)
Other (1)	-	471	471	245	-	245	21	737
<b>Balance – October 31, 2015</b>	<b>68</b>	<b>3,393</b>	<b>3,461</b>	<b>2,374</b>	<b>2</b>	<b>2,376</b>	<b>232</b>	<b>6,069</b>
Acquisitions (disposals) during the year	<b>29</b>	<b>379</b>	<b>408</b>	<b>(11)</b>	-	<b>(11)</b>	<b>65</b>	<b>462</b>
Other (1)	-	<b>89</b>	<b>89</b>	<b>(246)</b>	-	<b>(246)</b>	<b>7</b>	<b>(150)</b>
<b>Balance – October 31, 2016</b>	<b>97 (2)</b>	<b>3,861 (3)</b>	<b>3,958</b>	<b>2,117 (4)</b>	<b>2 (5)</b>	<b>2,119</b>	<b>304 (6)</b>	<b>6,381</b>

(1) Other changes in goodwill included the effects of translating goodwill denominated in foreign currencies into Canadian dollar and purchase accounting adjustments related to prior-year purchases.

(2) Relates primarily to bcpbank Canada, Diners Club, Aver Media LP, and GE Transportation Finance.

(3) Relates primarily to New Lenox State Bank, First National Bank of Joliet, Household Bank branches, Mercantile Bancorp, Inc., Villa Park Trust Savings Bank, First National Bank & Trust, Ozaukee Bank, Merchants and Manufacturers Bancorporation, Inc., Diners Club, AMCORE, M&I and GE Transportation Finance.

(4) Relates to BMO Nesbitt Burns Inc., Guardian Group of Funds Ltd., Pyrford International plc, Lloyd George Management, M&I, Harris, myCFO, Inc., Stoker Ostler Wealth Advisors, Inc., CTC Consulting LLC, AWMB and F&C Asset Management plc.

(5) Relates to AIG.

(6) Relates to Gerard Klauer Mattison, BMO Nesbitt Burns Inc., Paloma Securities L.L.C., M&I and Greene Holcomb Fisher.

## Intangible Assets

Intangible assets related to our acquisitions are initially recorded at their fair value at the acquisition date and subsequently at cost less accumulated amortization. Software is recorded at cost less accumulated amortization. Amortization expense is recorded in amortization of intangible assets in our Consolidated Statement of Income. The following table presents the changes in the balance of these intangible assets:

(Canadian \$ in millions)	Customer relationships	Core deposits	Branch distribution networks	Purchased software – amortizing	Developed software – amortizing	Software under development	Other	Total
Cost as at October 31, 2014	626	815	167	540	1,933	316	331	4,728
Additions/disposals	(23)	–	(4)	7	345	42	53	420
Acquisitions	–	–	–	–	–	–	–	–
Foreign exchange and other	80	129	27	15	42	11	37	341
Cost as at October 31, 2015	683	944	190	562	2,320	369	421	5,489
<b>Additions/disposals</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>108</b>	<b>165</b>	<b>99</b>	<b>–</b>	<b>372</b>
<b>Acquisitions</b>	<b>59</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>8</b>	<b>67</b>
<b>Foreign exchange and other</b>	<b>(38)</b>	<b>24</b>	<b>4</b>	<b>98</b>	<b>(64)</b>	<b>8</b>	<b>(64)</b>	<b>(32)</b>
<b>Cost as at October 31, 2016</b>	<b>704</b>	<b>968</b>	<b>194</b>	<b>768</b>	<b>2,421</b>	<b>476</b>	<b>365</b>	<b>5,896</b>

The following table presents the accumulated amortization of our intangible assets:

(Canadian \$ in millions)	Customer relationships	Core deposits	Branch distribution networks	Purchased software – amortizing	Developed software – amortizing	Software under development	Other	Total
Accumulated amortization at October 31, 2014	229	506	166	480	1,250	–	45	2,676
Disposals	(8)	–	(3)	–	–	–	–	(11)
Amortization	78	66	2	17	230	–	18	411
Foreign exchange and other	39	83	25	8	60	–	(10)	205
Accumulated amortization at October 31, 2015	338	655	190	505	1,540	–	53	3,281
<b>Amortization</b>	<b>79</b>	<b>63</b>	<b>–</b>	<b>73</b>	<b>210</b>	<b>–</b>	<b>19</b>	<b>444</b>
<b>Foreign exchange and other</b>	<b>(19)</b>	<b>17</b>	<b>4</b>	<b>97</b>	<b>(96)</b>	<b>–</b>	<b>(10)</b>	<b>(7)</b>
<b>Accumulated amortization at October 31, 2016</b>	<b>398</b>	<b>735</b>	<b>194</b>	<b>675</b>	<b>1,654</b>	<b>–</b>	<b>62</b>	<b>3,718</b>
<b>Carrying value at October 31, 2016</b>	<b>306</b>	<b>233</b>	<b>–</b>	<b>93</b>	<b>767</b>	<b>476</b>	<b>303</b>	<b>2,178</b>
Carrying value at October 31, 2015	345	289	–	57	780	369	368	2,208

Intangible assets are amortized to income over the period during which we believe the assets will benefit us, on either a straight-line or an accelerated basis, over a period not to exceed 15 years. We have \$162 million as at October 31, 2016 (\$198 million as at October 31, 2015) in intangible assets with indefinite lives that relate primarily to fund management contracts.

The useful lives of intangible assets are reviewed annually for any changes in circumstances. We test definite-life intangible assets for impairment when events or changes in circumstances indicate that their carrying value may not be recoverable. Indefinite-life intangible assets are tested annually for impairment. If any intangible assets are determined to be impaired, we write them down to their recoverable amount, the higher of value in use and fair value less costs to sell, when this is less than the carrying value.

There were no write-downs of intangible assets during the year ended October 31, 2016 (\$1 million in 2015).

## Note 12: Other Assets

### Customers' Liability under Acceptances

Acceptances represent a form of negotiable short-term debt that is issued by our customers, which we guarantee for a fee. The fees earned are recorded in lending fees in our Consolidated Statement of Income over the term of the acceptance. The amount potentially due under the acceptances is recorded in other liabilities on our Consolidated Balance Sheet. We record the bank's equivalent claim against our customers in the event of a call on these commitments in other assets on our Consolidated Balance Sheet.

### Other

The components of other within other assets are as follows:

(Canadian \$ in millions)	2016	2015
Accounts receivable, prepaid expenses and other items	7,862	6,502
Accrued interest receivable	971	882
Due from clients, dealers and brokers	199	309
Insurance-related assets (1)	405	478
Pension asset (Note 22)	118	502
<b>Total</b>	<b>9,555</b>	<b>8,673</b>

(1) Includes reinsurance assets related to our life insurance business in the amount of \$nil as at October 31, 2016 (\$nil in 2015).

## Note 13: Deposits

(Canadian \$ in millions)	Payable on demand				Payable after notice		Payable on a fixed date		Total	
	Interest bearing		Non-interest bearing		2016	2015	2016	2015	2016	2015
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Deposits by:										
Banks (1)	450	828	1,415	1,222	3,448	4,123	28,958	26,436	34,271	32,609
Businesses and governments	17,578	15,262	35,378	35,212	60,331	57,335	162,927	150,335	276,214	258,144
Individuals	3,307	3,095	17,594	15,095	87,627	83,081	54,359	46,145	162,887	147,416
<b>Total (2) (3)</b>	<b>21,335</b>	<b>19,185</b>	<b>54,387</b>	<b>51,529</b>	<b>151,406</b>	<b>144,539</b>	<b>246,244</b>	<b>222,916</b>	<b>473,372</b>	<b>438,169</b>
Booked in:										
Canada	18,937	17,031	40,037	35,300	77,800	75,470	152,894	120,199	289,668	248,000
United States	1,540	1,517	14,229	16,091	73,155	68,396	65,850	76,980	154,774	162,984
Other countries	858	637	121	138	451	673	27,500	25,737	28,930	27,185
<b>Total</b>	<b>21,335</b>	<b>19,185</b>	<b>54,387</b>	<b>51,529</b>	<b>151,406</b>	<b>144,539</b>	<b>246,244</b>	<b>222,916</b>	<b>473,372</b>	<b>438,169</b>

(1) Includes regulated and central banks.

(2) Includes structured notes designated at fair value through profit or loss.

(3) As at October 31, 2016 and 2015, total deposits payable on a fixed date included \$36,261 million and \$26,960 million, respectively, of federal funds purchased, commercial paper issued and other deposit liabilities. Included in deposits as at October 31, 2016 and 2015 are \$233,005 million and \$221,268 million, respectively, of deposits denominated in U.S. dollars, and \$24,097 million and \$19,898 million, respectively, of deposits denominated in other foreign currencies.

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

Deposits payable on demand are comprised primarily of our customers' chequing accounts, some of which we pay interest on. Our customers need not notify us prior to withdrawing money from their chequing accounts.

Deposits payable after notice are comprised primarily of our customers' savings accounts, on which we pay interest. Deposits payable on a fixed date are comprised of:

- Various investment instruments purchased by our customers to earn interest over a fixed period, such as term deposits and guaranteed investment certificates. The terms of these deposits can vary from one day to 10 years.
- Federal funds purchased, which are overnight borrowings of other banks' excess reserve funds at a United States Federal Reserve Bank. As at October 31, 2016, we had borrowed \$906 million of federal funds (\$263 million in 2015).
- Commercial paper, which totalled \$9,461 million as at October 31, 2016 (\$7,134 million in 2015).
- Covered Bonds, which totalled \$19,705 million as at October 31, 2016 (\$12,611 million in 2015).

During the year, we issued EUR €1,750 million of 0.1% Covered Bonds, Series 10 due October 20, 2023, US\$1,500 million of 1.75% Covered Bonds, Series CBL 9 due June 15, 2021, €1,500 million of 0.125% Covered Bonds, Series CBL 8 due April 29, 2021 and €1,500 million of 0.10% Covered Bonds, Series CBL 7 due January 14, 2019. During 2015, we issued €1,500 million of 0.25% Covered Bonds, Series CBL 2 due January 22, 2020, GBP £325 million of 3-month GBP LIBOR + 0.19% Covered Bonds, Series CBL 3 due January 29, 2018, €1,500 million of 0.375% Covered Bonds, Series CBL 4 due August 5, 2020, €1,000 million of 0.75% Covered Bonds, Series CBL 5 due September 21, 2022 and €135 million of 1.597% Covered Bonds, Series CBL 6 due September 28, 2035. During the years ended October 31, 2016 and 2015, US\$1,500 million of 2.625% Covered Bonds, Series CB3 matured and US\$2,000 million of 2.85% Covered Bonds, Series CB2 matured, respectively (under our Global Registered Covered Bond Program).

During the year, we issued US\$3,500 million of Senior Medium-Term Notes (Series C), consisting of US\$1,000 million of 1.35% senior notes, US\$2,000 million of 1.90% senior notes, and US\$500 million of 3-month LIBOR + 0.79% floating rate notes, due August 28, 2018, August 27, 2021 and August 27, 2021, respectively, and US\$2,000 million of Senior Medium-Term Notes (Series C), consisting of US\$1,600 million of 1.5% senior notes and US\$400 million of 3-month LIBOR + 0.65% floating rate notes, due July 18, 2019. During the year, US\$2,000 million of Senior Medium-Term Notes (Series B), comprised of US\$1,000 million of 1.3% senior notes and US\$1,000 million of 3-month LIBOR + 0.52% floating rate notes, US\$100 million of 1-month LIBOR + 0.17% European Medium-Term Notes (Series 86), GBP £375 million of 3-month GBP LIBOR + 0.45% European Medium-Term Notes (Series 70) and US\$50 million of 3-month LIBOR + 0.12% European Medium-Term Notes (Series 84), matured.

The following table presents the maturity schedule for our deposits payable on a fixed date:

(Canadian \$ in millions)	2016	2015
Within 1 year	155,548	144,609
1 to 2 years	24,683	23,385
2 to 3 years	20,637	23,324
3 to 4 years	11,659	7,753
4 to 5 years	18,005	11,170
Over 5 years	15,712	12,675
<b>Total (1)</b>	<b>246,244</b>	<b>222,916</b>

(1) Includes \$221,957 million of deposits, each greater than one hundred thousand dollars, of which \$136,382 million were booked in Canada, \$58,077 million were booked in the United States and \$27,498 million were booked in other countries (\$200,907 million, \$103,101 million, \$72,073 million and \$25,733 million, respectively, in 2015). Of the \$136,382 million of deposits booked in Canada, \$54,904 million mature in less than three months, \$5,020 million mature in three to six months, \$13,737 million mature in six to twelve months and \$62,721 million mature after 12 months (\$103,101 million, \$36,434 million, \$4,956 million, \$11,916 million and \$49,795 million, respectively, in 2015). We have unencumbered liquid assets of \$197,722 million to support these and other deposit liabilities (\$188,463 million in 2015).

Most of our structured note liabilities have been designated at fair value through profit or loss and are accounted for at fair value, which aligns the accounting result with the way the portfolio is managed. The change in fair value of these structured notes was recorded as a decrease of \$73 million in non-interest revenue, trading revenue, and a decrease of \$201 million before tax was recorded in other comprehensive income related to changes in our own credit spread for the year ended October 31, 2016 (an increase of \$196 million recorded in non-interest revenue, trading revenue, and an increase of \$143 million related to changes in our own credit spread in 2015). The impact of changes in our own credit spread is measured based on movements in our own credit spread year over year.

The cumulative change in fair value related to changes in our own credit spread that has been recognized since the notes were designated at fair value to October 31, 2016 was an unrealized loss of approximately \$134 million. Upon adoption of the own credit provisions of IFRS 9 in 2015, \$58 million of this unrealized loss has been recorded in other comprehensive income. The remaining unrealized loss of \$76 million has been recorded through the Statement of Income in prior periods.

The fair value and notional amount due at contractual maturity of these notes as at October 31, 2016 were \$11,604 million and \$11,768 million, respectively (\$9,429 million and \$9,869 million, respectively, in 2015).

## Note 14: Other Liabilities

### Acceptances

Acceptances represent a form of negotiable short-term debt that is issued by our customers, which we guarantee for a fee. The fees earned are recorded in lending fees in our Consolidated Statement of Income over the term of the acceptance. The amount potentially due under the acceptances is recorded in other liabilities on our Consolidated Balance Sheet. We record the bank's equivalent claim against our customers in the event of a call on these commitments in other assets on our Consolidated Balance Sheet.

### Securities Lending and Borrowing

Securities lending and borrowing transactions are generally collateralized by securities or cash. Cash advanced or received as collateral is recorded in other assets or other liabilities, respectively. Interest earned on cash collateral is recorded in interest, dividend and fee income in our Consolidated Statement of Income, and interest expense on cash collateral is recorded in interest expense, other liabilities, in our Consolidated Statement of Income. The transfer of the securities to counterparties is only reflected in our Consolidated Balance Sheet if the risks and rewards of ownership have also been transferred. Securities borrowed are not recognized in our Consolidated Balance Sheet unless they are then sold to third parties, in which case the obligation to return the securities is recorded in Securities sold but not yet purchased at fair value, with any gains or losses recorded in non-interest revenue, trading revenues.

### Securities Sold but not yet Purchased

Securities sold but not yet purchased represent our obligations to deliver securities that we did not own at the time of sale. These obligations are recorded at their fair value. Adjustments to the fair value as at the balance sheet date and gains and losses on the settlement of these obligations are recorded in trading revenues in our Consolidated Statement of Income.

### Securities Lent or Sold Under Repurchase Agreements

Securities lent or sold under repurchase agreements represent short-term funding transactions in which we sell securities that we own and simultaneously commit to repurchase the same securities at a specified price on a specified date in the future. The obligation to repurchase these securities is recorded at the amount owing. The interest expense related to these liabilities is recorded on an accrual basis in interest expense, other liabilities, in our Consolidated Statement of Income.

### Other Liabilities

The components of the other liabilities balance were as follows:

(Canadian \$ in millions)	2016	2015
Securitization and structured entities liabilities	22,377	21,673
Accounts payable, accrued expenses and other items	10,030	8,747
Accrued interest payable	1,037	969
Liabilities of subsidiaries, other than deposits	7,250	3,948
Insurance-related liabilities	7,909	7,060
Pension liability (Note 22)	455	364
Other employee future benefits liability (Note 22)	1,343	1,192
<b>Total</b>	<b>50,401</b>	<b>43,953</b>

Notes issued by our credit protection vehicle, and recorded in securitization and structured entities liabilities, were designated at fair value through profit or loss and accounted for at fair value. This eliminated a measurement inconsistency that would otherwise have arisen from measuring these note liabilities and offsetting changes in the fair value of the related investments and derivatives on a different basis. The fair value of these note liabilities as at October 31, 2015 was \$139 million and is recorded in other liabilities in our Consolidated Balance Sheet. During the year ended October 31, 2016, these note liabilities were fully repaid. The change in fair value of these note liabilities resulted in \$nil in non-interest revenue, trading revenues, for the year ended October 31, 2016 (\$nil in 2015).

We designate the obligation related to certain investment contracts in our insurance business at fair value through profit or loss, which eliminates a measurement inconsistency that would otherwise arise from measuring the investment contract liabilities and offsetting changes in the fair value of the investments supporting them on a different basis. The fair value of these investment contract liabilities as at October 31, 2016 of \$682 million (\$525 million as at October 31, 2015) is recorded in other liabilities in our Consolidated Balance Sheet. The change in fair value of these investment contract liabilities resulted in an increase of \$55 million in insurance claims, commissions and changes in policy benefit liabilities for the year ended October 31, 2016 (increase of \$24 million in 2015). For the year ended October 31, 2016, a loss of \$7 million was recorded in other comprehensive income related to changes in our credit spread (a gain of \$20 million in 2015). Changes in the fair value of investments backing these investment contract liabilities are recorded in non-interest revenue, insurance revenue. The impact of changes in our own credit spread is measured based on movements in our own credit spread over the year.



## Insurance-Related Liabilities

We are engaged in insurance businesses related to life and health insurance, annuities and reinsurance.

Insurance claims and policy benefit liabilities represent current claims and estimates of future insurance policy benefits. 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.

A reconciliation of the change in insurance-related liabilities is as follows:

(Canadian \$ in millions)	2016	2015
Insurance-related liabilities, beginning of year	7,060	6,827
Increase (decrease) in life insurance policy benefit liabilities from:		
New business	348	235
In-force policies	300	-
Changes in actuarial assumptions and methodology	41	(355)
Foreign currency	(1)	4
Net increase (decrease) in life insurance policy benefit liabilities	688	(116)
Change in other insurance-related liabilities	161	349
Insurance-related liabilities, end of year	7,909	7,060

## Reinsurance

In the ordinary course of business, our insurance subsidiaries reinsure risks to other insurance and reinsurance companies in order to provide greater diversification, limit loss exposure to large risks, and provide additional capacity for future growth. These ceding reinsurance arrangements do not relieve our insurance subsidiaries of their direct obligation to the insureds. We evaluate the financial condition of the reinsurers and monitor their credit ratings to minimize our exposure to losses from reinsurer insolvency.

Reinsurance premiums ceded are recorded net against direct premium income and are included in non-interest revenue, insurance revenue, in our Consolidated Statement of Income for the years ended October 31, 2016, 2015 and 2014, as shown in the table below.

(Canadian \$ in millions)	2016	2015	2014
Direct premium income	1,561	2,027	1,850
Ceded premiums	(271)	(466)	(450)
	1,290	1,561	1,400

## Note 15: Subordinated Debt

Subordinated debt represents our direct unsecured obligations, in the form of notes and debentures, to our debt holders and forms part of our regulatory capital. Subordinated debt is recorded at amortized cost using the effective interest rate method. The rights of the holders of our notes and debentures are subordinate to the claims of depositors and certain other creditors. We require approval from OSFI before we can redeem any part of our subordinated debt. Where appropriate, we enter into fair value hedges to hedge the risks caused by changes in interest rates (see Note 8).

During the year ended October 31, 2016, we issued \$1,250 million of 3.32% subordinated notes under our Canadian Medium-Term Note Program. The issue, Series I Medium-Term Notes First Tranche, is due June 1, 2026. The notes reset to a floating rate on June 1, 2021. We also issued \$1,000 million of 3.34% subordinated debt under our Canadian Medium-Term Note Program. The issue, Series H Medium-Term Notes Second Tranche, is due December 8, 2025. The notes reset to a floating rate on December 8, 2020. During the year ended October 31, 2015, we did not issue any subordinated debt.

During the year ended October 31, 2016, we redeemed all of our outstanding \$1,500 million Subordinated Debentures, Series G Medium-Term Notes First Tranche, at a redemption price of 100 percent of the principal amount plus accrued and unpaid interest to, but excluding, the redemption date, and we redeemed all of our outstanding \$700 million Subordinated Debentures, Series D Medium-Term Notes First Tranche, at a redemption price of 100 percent of the principal amount plus accrued and unpaid interest to, but excluding, the redemption date. During the year ended October 31, 2015, we redeemed all of our outstanding \$500 million Subordinated Debentures, Series C Medium-Term Notes Second Tranche, at a redemption price of 100 percent of the principal amount plus accrued and unpaid interest to, but excluding, the redemption date.

The term to maturity and repayments of our subordinated debt required over the next two years and thereafter are as follows:

(Canadian \$ in millions, except as noted)	Face value	Maturity date	Interest rate (%)	Redeemable at our option beginning in	2016 Total	2015 Total
Debentures Series 16	100	February 2017	10.00	February 2012 (1)	100	100
Debentures Series 20	150	December 2025 to 2040	8.25	Not redeemable	150	150
Series D Medium-Term Notes First Tranche	700	April 2021	5.10	April 2016	-	700
Series F Medium-Term Notes First Tranche	900	March 2023	6.17	March 2018 (2)	900	900
Series G Medium-Term Notes First Tranche	1,500	July 2021	3.98	July 2016	-	1,500
Series H Medium-Term Notes First Tranche	1,000	September 2024	3.12	September 2019 (3)	1,000	1,000
Series H Medium-Term Notes Second Tranche	1,000	December 2025	3.34	December 2020 (4)	1,000	-
Series I Medium-Term Notes First Tranche	1,250	June 2026	3.32	June 2021 (5)	1,250	-
<b>Total (6)</b>					<b>4,400</b>	<b>4,350</b>

(1) Redeemable at the greater of par and the Canada Yield Price after their redemption date of February 20, 2012 until their maturity date of February 20, 2017.

(2) Redeemable at the greater of par and the Canada Yield Price prior to March 28, 2018, and redeemable at par commencing March 28, 2018.

(3) Redeemable at par together with accrued and unpaid interest to, but excluding, their redemption date commencing September 19, 2019.

(4) Redeemable at par together with accrued and unpaid interest to, but excluding, their redemption date commencing December 8, 2020.

(5) Redeemable at par together with accrued and unpaid interest to, but excluding, their redemption date commencing June 1, 2021.

(6) Certain amounts of subordinated debt were issued at a premium or discount and include fair value hedge adjustments, which together increased their carrying value as at October 31, 2016 by \$39 million (\$66 million in 2015); see Note 8 for further details. Subordinated debt that we repurchase is excluded from the carrying value.

Please refer to the offering circular related to each of the above issues for further details on Canada Yield Price calculations and the definition of CDOR.

## Non-Viability Contingent Capital

The Series H Medium-Term Notes and the Series I Medium-Term Notes include a non-viability contingent capital provision, which is necessary for the notes issued after a certain date to qualify as regulatory capital under Basel III. As such, the notes are convertible into a variable number of our common shares if OSFI announces that the 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.

## Note 16: Equity

### Share Capital

(Canadian \$ in millions, except as noted)	2016			2015			2014		
	Number of shares	Amount	Dividends declared per share	Number of shares	Amount	Dividends declared per share	Number of shares	Amount	Dividends declared per share
<b>Preferred Shares – Classified as Equity</b>									
Class B – Series 13	-	-	-	-	-	0.56	14,000,000	350	1.13
Class B – Series 14	10,000,000	250	1.31	10,000,000	250	1.31	10,000,000	250	1.31
Class B – Series 15	10,000,000	250	1.45	10,000,000	250	1.45	10,000,000	250	1.45
Class B – Series 16	6,267,391	157	0.85	6,267,391	157	0.85	6,267,391	157	0.85
Class B – Series 17	5,732,609	143	0.53	5,732,609	143	0.60	5,732,609	143	0.64
Class B – Series 18	-	-	-	-	-	-	-	-	0.41
Class B – Series 21	-	-	-	-	-	-	-	-	0.81
Class B – Series 23	-	-	-	-	-	0.34	16,000,000	400	1.35
Class B – Series 25	9,425,607	236	0.84	11,600,000	290	0.98	11,600,000	290	0.98
Class B – Series 26	2,174,393	54	0.10	-	-	-	-	-	-
Class B – Series 27	20,000,000	500	1.00	20,000,000	500	1.00	20,000,000	500	0.59
Class B – Series 29	16,000,000	400	0.98	16,000,000	400	0.98	16,000,000	400	0.46
Class B – Series 31	12,000,000	300	0.95	12,000,000	300	0.95	12,000,000	300	0.31
Class B – Series 33	8,000,000	200	0.95	8,000,000	200	0.45	-	-	-
Class B – Series 35	6,000,000	150	1.25	6,000,000	150	0.41	-	-	-
Class B – Series 36	600,000	600	65.03	600,000	600	-	-	-	-
Class B – Series 38	24,000,000	600	-	-	-	-	-	-	-
	<b>3,840</b>			<b>3,240</b>				<b>3,040</b>	
<b>Common Shares</b>									
Balance at beginning of year	642,583,341	12,313	3.40	649,050,049	12,357	3.24	644,129,945	12,003	3.08
Issued under the Shareholder Dividend Reinvestment and Share Purchase Plan	1,074,601	90	-	690,471	58	-	2,786,997	223	-
Issued/cancelled under the Stock Option Plan and other stock-based compensation plans (Note 21)	2,103,391	136	-	842,821	51	-	2,133,107	131	-
Repurchased for cancellation	-	-	-	(8,000,000)	(153)	-	-	-	-
<b>Balance at End of Year</b>	<b>645,761,333</b>	<b>12,539</b>	<b>3.40</b>	<b>642,583,341</b>	<b>12,313</b>	<b>3.24</b>	<b>649,050,049</b>	<b>12,357</b>	<b>3.08</b>
<b>Share Capital</b>		<b>16,379</b>			<b>15,553</b>			<b>15,397</b>	

## Preferred Shares

We are authorized by our shareholders to issue an unlimited number of Class A Preferred Shares and Class B Preferred Shares without par value, in series, for unlimited consideration. Class B Preferred Shares may be issued in a foreign currency.

On October 21, 2016, we issued 24 million Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 38, at a price of \$25.00 cash per share, for gross proceeds of \$600 million.

On October 16, 2015, we issued 600,000 Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 36, at a price of \$1,000.00 per share, for gross proceeds of \$600 million.

On July 29, 2015, we issued 6 million Non-Cumulative Perpetual Class B Preferred Shares, Series 35, at a price of \$25.00 cash per share, for gross proceeds of \$150 million.

On June 5, 2015, we issued 8 million Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 33, at a price of \$25.00 cash per share, for gross proceeds of \$200 million.

On July 30, 2014, we issued 12 million Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 31, at a price of \$25.00 cash per share, for gross proceeds of \$300 million.

On June 6, 2014, we issued 16 million Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 29, at a price of \$25.00 cash per share, for gross proceeds of \$400 million.

On April 23, 2014, we issued 20 million Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 27, at a price of \$25.00 cash per share, for gross proceeds of \$500 million.

On June 27, 2016, we announced that we did not intend to exercise our right to redeem the currently outstanding Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 25 ("Series 25 Preferred Shares") on August 25, 2016. As a result, subject to certain conditions, the holders of Series 25 Preferred Shares had the right, at their option, to elect by August 10, 2016, to convert all or part of their Series 25 Preferred Shares on a one-for-one basis into Non-Cumulative Floating Rate Class B Preferred Shares, Series 26 ("Series 26 Preferred Shares"), effective August 25, 2016. As at October 31, 2016, approximately 9.4 million Series 25 Preferred Shares and approximately 2.2 million Series 26 Preferred Shares were outstanding for the five-year period commencing on August 26, 2016 and ending on August 25, 2021. Holders of Series 26 Preferred Shares have the option to convert back to Series 25 Preferred Shares, and holders of Series 25 Preferred Shares have the option to convert to Series 26 Preferred Shares on subsequent redemption dates. The Series 25 Preferred Shares carry a non-cumulative quarterly dividend based on prevailing 5-year market rates plus a pre-determined spread, established at each redemption date. The Series 26 Preferred Shares carry a non-cumulative quarterly dividend based on prevailing 3-month market rates plus a pre-determined spread, established prior to each dividend declaration date.

During the year ended October 31, 2015, we redeemed all of our Non-Cumulative Class B Preferred Shares, Series 13, at a redemption price of \$25.25 per share for a gross redemption of \$353 million. Dividends declared for the year ended October 31, 2015 were \$0.56 per share and 14 million shares were outstanding at the time of the dividend declaration. We also redeemed all of our Non-Cumulative Class B Preferred Shares, Series 23, at a redemption price of \$25.00 per share plus declared and unpaid dividends up to but excluding the date fixed for redemption. Dividends declared for the year ended October 31, 2015 were \$0.34 per share and 16 million shares were outstanding at the time of the dividend declaration.

During the year ended October 31, 2014, we redeemed all of our Non-Cumulative Class B Preferred Shares, Series 18, at a redemption price of \$25.00 per share plus declared and unpaid dividends up to but excluding the date fixed for redemption. Dividends declared for the year ended October 31, 2014 were \$0.41 per share and 6 million shares were outstanding at the time of the dividend declaration. We also redeemed all of our Non-Cumulative Class B Preferred Shares, Series 21, at a redemption price of \$25.00 per share plus declared and unpaid dividends up to but excluding the date fixed for redemption. Dividends declared for the year ended October 31, 2014 were \$0.81 per share and 11 million shares were outstanding at the time of the dividend declaration.

## Preferred Share Rights and Privileges

(Canadian \$, except as noted)

	Redemption amount	Quarterly non-cumulative dividend (1)	Reset premiums	Date redeemable / convertible	Convertible to
Class B – Series 14	25.00	\$0.328125	Does not reset	Current (2)	Not convertible
Class B – Series 15	25.00	\$ 0.3625	Does not reset	Current (2)	Not convertible
Class B – Series 16	25.00	\$0.211875 (3)	1.65%	August 25, 2018 (4)(5)	Class B – Series 17 (8)
Class B – Series 17	25.00	Floating (7)	1.65%	August 25, 2018 (4)(6)	Class B – Series 16 (8)
Class B – Series 25	25.00	\$0.112813 (3)	1.15%	August 25, 2021 (4)(5)	Class B – Series 26 (8)
Class B – Series 26	25.00	Floating (7)	1.15%	August 25, 2021 (4)(6)	Class B – Series 25 (8)
Class B – Series 27	25.00	\$ 0.2500 (3)	2.33%	May 25, 2019 (4)(5)	Class B – Series 28 (8)
Class B – Series 29	25.00	\$ 0.24375 (3)	2.24%	August 25, 2019 (4)(5)	Class B – Series 30 (8)
Class B – Series 31	25.00	\$ 0.2375 (3)	2.22%	November 25, 2019 (4)(5)	Class B – Series 32 (8)
Class B – Series 33	25.00	\$ 0.2375 (3)	2.71%	August 25, 2020 (4)(5)	Class B – Series 34 (8)
Class B – Series 35	25.00	\$ 0.3125	Does not reset	August 25, 2020 (2)	Not convertible
Class B – Series 36	1,000.00	\$ 14.6250 (3)	4.97%	November 25, 2020 (4)(5)	Class B – Series 37 (8)
Class B – Series 38	25.00	\$0.303125 (3)	4.06%	February 25, 2022 (4)(5)	Class B – Series 39 (8)

(1) Non-cumulative dividends are payable quarterly as and when declared by the Board of Directors.

(2) Subject to a redemption premium if redeemed prior to November 25, 2016 – Series 14; May 25, 2017 – Series 15; and August 25, 2024 – Series 35.

(3) The dividend rate will reset on the date redeemable and every five years thereafter at a rate equal to the 5-year Government of Canada bond yield plus the reset premium noted. If converted to a floating rate series, the rate will be set as and when declared to the 3-month Government of Canada treasury bill yield plus the reset premium noted.

(4) Redeemable on the date noted and every five years thereafter.

(5) Convertible on the date noted and every five years thereafter if not redeemed. If converted, Series 17, 26, 28, 30, 32, 34, 37 and 39 are floating rate preferred shares.

(6) Convertible on the date noted and every five years thereafter if not redeemed. If converted, Series 16 and 25 are fixed rate preferred shares.

(7) Floating rate will be set as and when declared at the 3-month Government of Canada treasury bill yield plus a reset premium.

(8) If converted, the holders have the option to convert back to the original preferred shares on subsequent redemption dates.

## Non-Viability Contingent Capital

Class B – Series 27, Class B – Series 29, Class B – Series 31, Class B – Series 33, Class B – Series 35, Class B – Series 36 and Class B – Series 38 preferred share issues include a non-viability contingent capital provision, which is necessary for the shares to qualify as regulatory capital under Basel III. As such, the shares are convertible into a variable number of our common shares if OSFI announces that the 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.

## Common Shares

We are authorized by our shareholders to issue an unlimited number of our common shares without par value, for unlimited consideration. Our common shares are not redeemable or convertible. Dividends are declared by our Board of Directors in their discretion. Historically the Board of Directors has declared dividends on a quarterly basis and the amount can vary from quarter to quarter.

## Normal Course Issuer Bid

On February 1, 2016, we renewed our normal course issuer bid, effective for one year. Under this normal course issuer bid, we may repurchase up to 15 million of our common shares for cancellation. The timing and amount of purchases under the program are subject to management discretion based on factors such as market conditions and capital adequacy. We will consult with OSFI before making purchases under the bid.

Our previous normal course issuer bid, which allowed us to repurchase for cancellation up to 15 million of our common shares, expired on January 31, 2016. During the year ended October 31, 2016, we did not make any purchases under the normal course issuer bid. During the year ended October 31, 2015, we repurchased 8 million of our common shares at an average cost of \$77.25 per share. During the year ended October 31, 2014, we did not make any repurchases under the normal course issuer bid.

## Share Redemption and Dividend Restrictions

OSFI must approve any plan to redeem any of our preferred share issues for cash.

We are prohibited from declaring dividends on our preferred or common shares when we would be, as a result of paying such a dividend, in contravention of the capital adequacy, liquidity or any other regulatory directive issued under the *Bank Act*. In addition, common share dividends cannot be paid unless all dividends declared and payable on our preferred shares have been paid or sufficient funds have been set aside to do so.

In addition, we have agreed that if BMO Capital Trust II (the "Trust"), an unconsolidated structured entity, fails to pay any required distribution on its capital trust securities, we will not declare dividends of any kind on any of our preferred or common shares for a period of time following the Trust's failure to pay the required distribution (as defined in the applicable prospectuses) unless the Trust first pays such distribution to the holders of its capital trust securities.

Currently, these limitations do not restrict the payment of dividends on common or preferred shares.

## Shareholder Dividend Reinvestment and Share Purchase Plan

We offer a dividend reinvestment and share purchase plan ("DRIP") for our shareholders. Participation in the plan is optional. Under the terms of the DRIP, cash dividends on common shares are reinvested to purchase additional common shares. Shareholders also have the opportunity to make optional cash payments to acquire additional common shares.

For the dividend paid in the first two quarters of 2016, common shares to supply the DRIP were purchased on the open market. For the dividend paid in the last two quarters of 2016, common shares to supply the DRIP were issued from treasury without a discount. For the dividend paid in the first quarter of 2015, common shares to supply the DRIP were issued from treasury without a discount. Commencing with the dividend paid in the second quarter of 2015, through to the fourth quarter of 2015, common shares to supply the DRIP were purchased on the open market. For the dividend paid in the first two quarters of 2014, common shares to supply the DRIP were purchased on the open market. For the dividend paid in the third quarter of 2014, common shares to supply the DRIP were issued from treasury without a discount. For the dividend paid in the fourth quarter of 2014, common shares to supply the DRIP were issued from treasury with a two percent discount.

During the year ended October 31, 2016, we issued a total of 1,074,601 common shares from treasury (690,471 in 2015) and purchased 1,279,488 common shares in the open market (1,998,589 in 2015) for delivery to shareholders under the DRIP.

## Potential Share Issuances

As at October 31, 2016, we had reserved 44,768,331 common shares (5,842,932 in 2015) for potential issuance in respect of our Shareholder Dividend Reinvestment and Share Purchase Plan. We have also reserved 9,805,299 common shares (12,111,153 in 2015) for the potential exercise of stock options, as further described in Note 21.

## Treasury Shares

When we purchase our common shares as part of our trading business, we record the cost of those shares as a reduction in shareholders' equity. If those shares are resold at a price higher than their cost, the premium is recorded as an increase in contributed surplus. If those shares are resold at a price below their cost, the discount is recorded as a reduction first to contributed surplus and then to retained earnings for any amount in excess of total contributed surplus related to treasury shares.

## Non-Controlling Interest

During the year ended October 31, 2016, our subsidiary, BMO Capital Trust, redeemed all remaining BMO Capital Trust Securities for an aggregate redemption amount of \$450 million, plus accrued and unpaid distributions. These securities were recorded in non-controlling interest in the prior period. These securities formed part of our Tier 1 regulatory capital. Non-controlling interest in other consolidated entities was \$24 million at October 31, 2016 (\$37 million in 2015), which included \$22 million for F&C Asset Management plc (\$27 million in 2015).

## Note 17: Fair Value of Financial Instruments

We record trading assets and liabilities, derivatives, available-for-sale securities and securities sold but not yet purchased at fair value, and other non-trading assets and liabilities at amortized cost less allowances or write-downs for impairment. The fair values presented in this note are based upon the amounts estimated for individual assets and liabilities and do not include an estimate of the fair value of any of the legal entities or underlying operations that comprise our business.

Fair value represents the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between willing market participants at the measurement date. The fair value amounts disclosed represent point-in-time estimates that may change in subsequent reporting periods due to changes in market conditions or other factors. Some financial instruments are not typically exchangeable or exchanged and therefore it is difficult to determine their fair value. Where there is no quoted market price, we determine fair value using management's best estimates based on a range of valuation techniques and assumptions; since these involve uncertainties, the fair values may not be realized in an actual sale or immediate settlement of the asset or liability.

### Governance Over the Determination of Fair Value

Senior executive oversight of our valuation processes is provided through various valuation and risk committees. In order to ensure that all financial instruments carried at fair value are reasonably measured for risk management and financial reporting purposes, we have established governance structures and controls, such as model validation and approval, independent price verification ("IPV") and profit and loss attribution analysis ("PAA"), consistent with industry practice. These controls are applied independently of the relevant operating groups.

We establish and regularly update valuation methodologies for each financial instrument that is required to be measured at fair value. The application of valuation models for products or portfolios is subject to independent approval to ensure only validated models are used. The impact of known limitations of models and data inputs is also monitored on an ongoing basis. IPV is a process that regularly and independently verifies the accuracy and appropriateness of market prices or model inputs used in the valuation of financial instruments. This process assesses fair values using a variety of different approaches to verify and validate the valuations. PAA is a daily process used by management to identify and explain changes in fair value positions across all operating lines of business within BMO Capital Markets. This process works in concert with other processes to ensure that the fair values being reported are reasonable and appropriate.

### Securities

For traded securities, quoted market value is considered to be fair value. Quoted market value is based on bid prices. Securities for which no active market exists are valued using all reasonably available market information. Our fair value methodologies are described below.

#### *Government Securities*

The fair value of government issued or guaranteed debt securities in active markets is determined by reference to recent transaction prices, broker quotes or third-party vendor prices. The fair value of securities that are not traded in an active market is modelled using implied yields derived from the prices of similar actively traded government securities and observable spreads. Market inputs to the model include coupon, maturity and duration.

#### *Mortgage-Backed Securities and Collateralized Mortgage Obligations*

The fair value of mortgage-backed securities and collateralized mortgage obligations is determined using independent prices obtained from third-party vendor prices, broker quotes and relevant market indices, as applicable. If such prices are not available, fair value is determined using cash flow models that make maximum use of observable market inputs or benchmark prices for similar instruments. Valuation assumptions for mortgage-backed securities and collateralized mortgage obligations include discount rates, expected prepayments, credit spreads and recoveries.

#### *Corporate Debt Securities*

The fair value of corporate debt securities is determined using prices observed in the most recent transactions. When observable price quotations are not available, fair value is determined based on discounted cash flow models using discounting curves and spreads obtained from independent dealers, brokers and multi-contributor pricing sources.

#### *Corporate Equity Securities*

The fair value of equity securities is based on quoted prices in active markets, where available. Where quoted prices in active markets are not readily available, fair value is determined using quoted market prices for similar securities or through valuation techniques, including discounted cash flow analysis and multiples of earnings.

#### *Privately Issued Securities*

Privately issued debt and equity securities are valued using recent prices observed in market transactions, where available. Otherwise, fair value is derived from valuation models using a market or income approach. These models consider various factors, including projected cash flows, earnings, revenue and other third-party evidence, as available. The fair value of limited partnership investments is based upon net asset values published by third-party fund managers.

Prices from brokers and multi-contributor pricing sources are corroborated as part of our independent review process, which may include using valuation techniques or obtaining consensus or composite prices from other pricing services. We validate the estimates of fair value by independently obtaining multiple quotes for external market prices and input values. We review the approach taken by third-party vendors to ensure that the vendor employs a valuation model which maximizes the use of observable inputs such as benchmark yields, bid-ask spreads, underlying collateral, weighted-average terms to maturity and prepayment rate assumptions. Fair value estimates from internal valuation techniques are verified, where possible, by reference to prices obtained from third-party vendors.

### Loans

In determining the fair value of our fixed rate and floating rate performing loans, we discount the remaining contractual cash flows, adjusted for estimated prepayment, at market interest rates currently offered for loans with similar terms.

The value of our loan balances determined using this approach is further adjusted by a credit mark that represents an estimate of the expected credit losses in our loan portfolio.



## Derivative Instruments

A number of valuation techniques are employed to estimate fair value, including discounted cash flow analysis, the Black-Scholes model, Monte Carlo simulation and other accepted market models. These vetted models incorporate current market measures for interest rates, currency exchange rates, equity and commodity prices and indices, credit spreads, recovery rates, corresponding market volatility levels, spot prices, correlation levels and other market-based pricing factors. Option implied volatilities, an input into many valuation models, are either obtained directly from market sources or calculated from market prices. Multi-contributor pricing sources are used wherever possible.

In determining the fair value of complex and customized derivatives, we consider all reasonably available information, including dealer and broker quotations, multi-contributor pricing sources and any relevant observable market inputs. Our model calculates fair value based on inputs specific to the type of contract, which may include stock prices, correlation for multiple assets, interest rates, foreign exchange rates, yield curves and volatilities.

We calculate a credit valuation adjustment (“CVA”) to recognize the risk that any given derivative counterparty may not ultimately be able to fulfill its obligations. The CVA is derived from market-observed credit spreads or proxy credit spreads and our assessment of the net counterparty credit risk exposure, taking into account credit mitigants such as collateral, master netting agreements and settlements through clearing houses. We also calculate a funding valuation adjustment (“FVA”) to recognize the implicit funding costs associated with over-the-counter derivative positions. The FVA is determined by reference to market funding spreads.

## Deposits

In determining the fair value of our deposits, we incorporate the following assumptions:

- For fixed rate, fixed maturity deposits, we discount the remaining contractual cash flows for these deposits, adjusted for expected redemptions, at market interest rates currently offered for deposits with similar terms and risks.
- For fixed rate deposits with no defined maturities, we consider fair value to equal carrying value, based on carrying value being equivalent to the amount payable on the reporting date.
- For floating rate deposits, changes in interest rates have minimal impact on fair value since deposits reprice to market frequently. On that basis, fair value is assumed to equal carrying value.

A portion of our structured note liabilities that have coupons or repayment terms linked to the performance of interest rates, foreign currencies, commodities or equity securities have been designated at fair value through profit or loss. The fair value of these structured notes is estimated using internally vetted valuation models and incorporates observable market prices for identical or comparable securities, as well as other inputs such as interest rate yield curves, option volatilities and foreign exchange rates, where appropriate. Where observable prices or inputs, are not available, management judgment is required to determine the fair value by assessing other relevant sources of information, such as historical data and proxy information from similar transactions.

## Securities Sold But Not Yet Purchased

The fair value of these obligations is based on the fair value of the underlying securities, which can be equity or debt securities. As these obligations are fully collateralized, the method used to determine fair value would be the same as that used for the relevant underlying equity or debt securities.

## Securities Purchased Under Resale Agreements and Securities Sold Under Repurchase Agreements

The fair value of these agreements is determined using a discounted cash flow model. Inputs to the model include contractual cash flows and collateral funding spreads.

## Securitization Liabilities

The determination of the fair value of securitization liabilities, recorded in other liabilities, is based on quoted market prices or quoted market prices for similar financial instruments, where available. Where quoted prices are not available, fair value is determined using valuation techniques, such as discounted cash flows, that maximize the use of observable inputs.

## Subordinated Debt

The fair value of our subordinated debt is determined by referring to current market prices for the same or similar instruments.

## Financial Instruments with a Carrying Value Approximating Fair Value

### *Short-term Financial Instruments*

The carrying value of certain financial assets and liabilities, such as interest bearing deposits with banks, securities borrowed, customers’ liability under acceptances, certain other assets, acceptances, securities lent and certain other liabilities, is a reasonable estimate of fair value due to their short-term nature or because they are frequently repriced to current market rates.

### *Other Financial Instruments*

Carrying value is assumed to be a reasonable estimate of fair value for our cash and cash equivalents and certain other securities.

For longer-term financial instruments recorded within other liabilities, fair value is determined as the present value of contractual cash flows using discount rates at which liabilities with similar remaining maturities could be issued as at the balance sheet date.

Certain assets, including premises and equipment, goodwill and intangible assets, as well as shareholders’ equity, are not considered financial instruments and therefore no fair value has been determined for these items.

## Fair Value of Financial Instruments Not Carried at Fair Value on the Balance Sheet

Set out in the following tables are the amounts that would be reported if all financial assets and liabilities not currently carried at fair value were reported at their fair values.

(Canadian \$ in millions)

	2016				
	Carrying value	Fair value	Valued using quoted market prices	Valued using models (with observable inputs)	Valued using models (without observable inputs)
<b>Securities</b>					
Held to maturity	8,965	9,073	864	8,209	-
Other (1)	579	2,778	-	-	2,778
	9,544	11,851	864	8,209	2,778
<b>Securities purchased under resale agreements (2)</b>	56,272	56,246	-	56,246	-
<b>Loans</b>					
Residential mortgages	112,277	112,400	-	-	112,400
Consumer instalment and other personal	64,680	64,043	-	-	64,043
Credit cards	8,101	7,862	-	-	7,862
Businesses and governments	175,597	173,601	-	-	173,601
	360,655	357,906	-	-	357,906
<b>Deposits (3)</b>	461,768	462,062	-	462,062	-
<b>Securities sold under repurchase agreements (4)</b>	34,932	35,222	-	35,222	-
<b>Other liabilities (5)</b>	23,080	23,610	-	23,610	-
<b>Subordinated debt</b>	4,439	4,580	-	4,580	-

This table excludes financial instruments with a carrying value approximating fair value, such as cash and cash equivalents, interest bearing deposits with banks, securities borrowed, customers' liability under acceptances, certain other assets, acceptances, securities lent and certain other liabilities.

(1) Excluded from other securities is \$320 million of securities related to our merchant banking business that are carried at fair value on the balance sheet.

(2) Excludes \$10,374 million of securities borrowed for which carrying value approximates fair value.

(3) Excludes \$11,604 million of structured note liabilities designated at fair value through profit and loss and accounted for at fair value.

(4) Excludes \$5,786 million of securities lent for which carrying value approximates fair value.

(5) Other liabilities include securitization and SE liabilities and certain other liabilities of subsidiaries, other than deposits.

(Canadian \$ in millions)

	2015				
	Carrying value	Fair value	Valued using quoted market prices	Valued using models (with observable inputs)	Valued using models (without observable inputs)
<b>Securities</b>					
Held to maturity	9,432	9,534	856	8,678	-
Other (1)	655	2,364	-	-	2,364
	10,087	11,898	856	8,678	2,364
<b>Securities purchased under resale agreements (2)</b>	55,626	54,979	-	54,979	-
<b>Loans</b>					
Residential mortgages	105,918	106,322	-	-	106,322
Consumer instalment and other personal	65,598	64,668	-	-	64,668
Credit cards	7,980	7,728	-	-	7,728
Businesses and governments	145,076	143,387	-	-	143,387
	324,572	322,105	-	-	322,105
<b>Deposits (3)</b>	428,740	429,032	-	429,032	-
<b>Securities sold under repurchase agreements (4)</b>	33,576	33,704	-	33,704	-
<b>Other liabilities (5)</b>	22,497	23,025	-	23,025	-
<b>Subordinated debt</b>	4,416	4,590	-	4,590	-

This table excludes financial instruments with a carrying value approximating fair value, such as cash and cash equivalents, interest bearing deposits with banks, securities borrowed, customers' liability under acceptances, certain other assets, acceptances, securities lent and certain other liabilities.

(1) Excluded from other securities is \$365 million of securities related to our merchant banking business that are carried at fair value on the balance sheet.

(2) Excludes \$12,440 million of securities borrowed for which carrying value approximates fair value.

(3) Excludes \$9,429 million of structured note liabilities designated at fair value through profit and loss and accounted for at fair value.

(4) Excludes \$6,315 million of securities lent for which carrying value approximates fair value.

(5) Other liabilities include securitization and SE liabilities and certain other liabilities of subsidiaries, other than deposits.

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

## Fair Value Hierarchy

We use a fair value hierarchy to categorize financial instruments according to the inputs we use in valuation techniques to measure fair value.

### Valuation Techniques and Significant Inputs

We determine the fair value of publicly traded fixed maturity debt and equity securities using quoted prices in active markets (Level 1) when these are available. When quoted prices in active markets are not available, we determine the fair value of financial instruments using models such as discounted cash flows, with observable market data for inputs, such as yield and prepayment rates or broker quotes and other third-party vendor quotes (Level 2). Fair value may also be determined using models where significant market inputs are not observable due to inactive markets or minimal market activity (Level 3). We maximize the use of observable market inputs to the extent possible.

Our Level 2 trading securities are primarily valued using discounted cash flow models with observable spreads or broker quotes. The fair value of Level 2 available-for-sale securities is determined using discounted cash flow models with observable spreads or third-party vendor quotes. Level 2 structured note liabilities are valued using models with observable market information. Level 2 derivative assets and liabilities are valued using industry-standard models and observable market information.

The extent of our use of actively quoted market prices (Level 1), internal models using observable market information as inputs (Level 2) and internal models without observable market information as inputs (Level 3) in the valuation of securities, fair value liabilities, derivative assets and derivative liabilities was as follows:

(Canadian \$ in millions)	2016			2015		
	Valued using quoted market prices	Valued using models (with observable inputs)	Valued using models (without observable inputs)	Valued using quoted market prices	Valued using models (with observable inputs)	Valued using models (without observable inputs)
<b>Trading Securities</b>						
Issued or guaranteed by:						
Canadian federal government	10,998	1,954	-	12,342	1,512	-
Canadian provincial and municipal governments	3,404	4,018	-	3,183	3,568	-
U.S. federal government	6,012	136	-	2,937	314	-
U.S. states, municipalities and agencies	-	1,124	-	-	589	98
Other governments	316	286	-	396	15	-
Mortgage-backed securities and collateralized mortgage obligations	-	1,062	-	-	491	-
Corporate debt	565	8,996	91	328	8,717	243
Corporate equity	44,459	1,037	-	35,901	1,826	-
	<b>65,754</b>	<b>18,613</b>	<b>91</b>	<b>55,087</b>	<b>17,032</b>	<b>341</b>
<b>Available-for-Sale Securities</b>						
Issued or guaranteed by:						
Canadian federal government	6,286	1,882	-	4,988	2,982	-
Canadian provincial and municipal governments	3,995	2,237	-	2,658	2,267	-
U.S. federal government	9,557	-	-	1,754	-	-
U.S. states, municipalities and agencies	-	4,449	1	-	6,084	1
Other governments	3,083	2,144	-	2,328	3,084	-
Mortgage-backed securities and collateralized mortgage obligations	-	13,122	-	-	12,192	-
Corporate debt	4,974	2,314	4	5,977	1,972	6
Corporate equity	33	126	1,456	358	104	1,251
	<b>27,928</b>	<b>26,274</b>	<b>1,461</b>	<b>18,063</b>	<b>28,685</b>	<b>1,258</b>
<b>Other Securities</b>	-	-	<b>320</b>	-	-	<b>365</b>
<b>Fair Value Liabilities</b>						
Securities sold but not yet purchased	23,552	1,554	-	19,499	1,727	-
Structured note liabilities and other note liabilities	-	11,613	-	-	9,577	-
Annuity liabilities	-	682	-	-	525	-
	<b>23,552</b>	<b>13,849</b>	<b>-</b>	<b>19,499</b>	<b>11,829</b>	<b>-</b>
<b>Derivative Assets</b>						
Interest rate contracts	5	18,059	-	5	19,248	-
Foreign exchange contracts	31	18,945	-	18	16,281	-
Commodity contracts	405	814	-	605	1,062	-
Equity contracts	188	713	-	91	892	-
Credit default swaps	-	23	-	-	35	1
	<b>629</b>	<b>38,554</b>	<b>-</b>	<b>719</b>	<b>37,518</b>	<b>1</b>
<b>Derivative Liabilities</b>						
Interest rate contracts	16	16,138	-	25	17,488	-
Foreign exchange contracts	17	18,462	-	15	20,091	-
Commodity contracts	262	909	-	380	2,391	-
Equity contracts	69	2,322	-	103	2,098	-
Credit default swaps	-	32	-	-	48	-
	<b>364</b>	<b>37,863</b>	<b>-</b>	<b>523</b>	<b>42,116</b>	<b>-</b>

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

## Quantitative Information about Level 3 Fair Value Measurements

The table below presents the fair values of our significant Level 3 financial instruments, the valuation techniques used to determine their fair values and the value ranges of significant unobservable inputs used in the valuations.

As at October 31, 2016 (Canadian \$ in millions, except as noted)	Reporting line in fair value hierarchy table	Fair value of assets	Valuation techniques	Significant unobservable inputs	Range of input values (1)	
					Low	High
<b>Securities</b>						
Private equity (2)	Corporate equity	<b>1,456</b>	Net Asset Value EV/EBITDA	Net Asset Value Multiple	<b>na</b> <b>4x</b>	<b>na</b> <b>12x</b>
Collateralized loan obligations securities (3)	Corporate debt	<b>95</b>	Discounted Cash Flow Model	Yield/Discount Margin	<b>1.50%</b>	<b>1.50%</b>
Merchant banking securities	Other	<b>320</b>	Net Asset Value EV/EBITDA	Net Asset Value Multiple	<b>na</b> <b>5.0x</b>	<b>na</b> <b>8.8x</b>

(1) The low and high input values represent the actual highest and lowest level of inputs used to value a group of financial instruments in a particular product category. These input ranges do not reflect the level of input uncertainty, but are affected by the specific underlying instruments within the product category. The input ranges will therefore vary from period to period based on the characteristics of the underlying instruments held at each balance sheet date.

(2) Included in private equity is \$778 million of Federal Reserve Bank and U.S. Federal Home Loan Bank shares that we hold to meet regulatory requirements. These shares are carried at cost, which is deemed to approximate fair value since these shares are not traded in the market.

(3) Includes both trading and available-for-sale instruments.

na – not applicable

## Significant Unobservable Inputs in Level 3 Instrument Valuations

### Net Asset Value

Net asset value represents the estimated value of a security based on valuations received from the investment or fund manager. The valuation of certain private equity securities is based on the economic benefit derived from our investment.

### EV/EBITDA Multiple

The fair value of private equity and merchant banking investments is derived by calculating an enterprise value (“EV”) using the EV/EBITDA multiple and then proceeding through a waterfall of the company’s capital structure to determine the value of the assets or securities we hold. The EV/EBITDA multiple is determined using judgment in considering factors such as multiples for comparable listed companies, recent transactions and company-specific factors, as well as liquidity discounts that account for the lack of active trading in these assets and securities.

### Yield/Discount Margin

A financial instrument’s yield is the interest rate used to discount future cash flows in a valuation model. An increase in the yield, in isolation, would result in a decrease in the related fair value measurement. The discount margin is the difference between a debt instrument’s yield and a benchmark instrument’s yield. Benchmark instruments have high credit quality ratings and similar maturities and are often government bonds. The discount margin for an instrument forms part of the yield used in a discounted cash flow calculation. Generally, an increase in the discount margin will result in a decrease in fair value.

## Sensitivity Analysis of Level 3 Instruments

Sensitivity analysis at October 31, 2016, for securities which represent greater than 10% of Level 3 instruments, is provided below.

Within Level 3 trading securities is corporate debt of \$91 million related to securities which are hedged with credit default swaps that are also considered to be Level 3 instruments. As at October 31, 2016, the derivative assets and derivative liabilities were valued at \$nil and \$nil, respectively. We determine the valuation of these derivatives and the related securities based on market-standard models we use to model the specific collateral composition and cash flow structure of the related deal. As at October 31, 2016, the impact of assuming a 10 basis point increase or decrease in the discount margin would be a \$0.1 million decrease or increase in fair value, respectively.

We have not applied another reasonably possible alternative assumption to the significant Level 3 categories of private equity investments and merchant banking securities, as the net asset values are provided by the investment or fund managers.

### Significant Transfers

Our policy is to record transfers of assets and liabilities between fair value hierarchy levels at their fair values as at the end of each reporting period, consistent with the date of the determination of fair value. Transfers between the various fair value hierarchy levels reflect changes in the availability of quoted market prices or observable market inputs that result from changing market conditions. The following is a discussion of the significant transfers between Level 1, Level 2 and Level 3 balances for the year ended October 31, 2016.

During the year ended October 31, 2016, \$174 million of trading securities and \$110 million of available-for-sale securities were transferred from Level 1 to Level 2 due to reduced observability of the inputs used to value these securities. During the year ended October 31, 2016, \$82 million of trading securities and \$215 million of available-for-sale securities were transferred from Level 2 to Level 1 due to increased availability of quoted prices in active markets.

During the year ended October 31, 2016, \$98 million of trading securities were transferred from Level 3 to Level 2 due to increased availability of observable inputs used to value these securities and \$3 million of available-for-sale securities were transferred out of Level 3 because this investment became an associate.

## Changes in Level 3 Fair Value Measurements

The tables below present a reconciliation of all changes in Level 3 financial instruments during the years ended October 31, 2016 and 2015, including realized and unrealized gains (losses) included in earnings and other comprehensive income.

For the year ended October 31, 2016 (Canadian \$ in millions)	Change in fair value								Fair value as at October 31, 2016	Change in unrealized gains (losses) recorded in income for instruments still held (2)
	Balance October 31, 2015	Included in earnings	Included in other compre- hensive income	Purchases	Sales	Maturities/ Settlement (1)	Transfers into Level 3	Transfers out of Level 3		
<b>Trading Securities</b>										
Issued or guaranteed by:										
U.S. states, municipalities and agencies	98	-	-	-	-	-	-	(98)	-	-
Corporate debt	243	2	4	-	-	(158)	-	-	91	2
<b>Total trading securities</b>	<b>341</b>	<b>2</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>(158)</b>	<b>-</b>	<b>(98)</b>	<b>91</b>	<b>2</b>
<b>Available-for-Sale Securities</b>										
Issued or guaranteed by:										
U.S. states, municipalities and agencies	1	-	-	-	-	-	-	-	1	na
Corporate debt	6	-	-	9	(9)	(2)	-	-	4	na
Corporate equity	1,251	(27)	44	283	(92)	-	-	(3)	1,456	na
<b>Total available-for-sale securities</b>	<b>1,258</b>	<b>(27)</b>	<b>44</b>	<b>292</b>	<b>(101)</b>	<b>(2)</b>	<b>-</b>	<b>(3)</b>	<b>1,461</b>	<b>na</b>
<b>Other Securities</b>	<b>365</b>	<b>(40)</b>	<b>7</b>	<b>42</b>	<b>(54)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>320</b>	<b>(38)</b>
<b>Derivative Assets</b>										
Credit default swaps	1	-	-	-	-	(1)	-	-	-	-
<b>Derivative Liabilities</b>										
Credit default swaps	-	-	-	-	-	-	-	-	-	-

(1) Includes cash settlement of derivative assets and derivative liabilities.

(2) Changes in unrealized gains (losses) on trading securities, derivative assets and derivative liabilities still held on October 31, 2016 are included in earnings for the year.

na - not applicable

For the year ended October 31, 2015 (Canadian \$ in millions)	Change in fair value								Fair value as at October 31, 2015	Change in unrealized gains (losses) recorded in income for instruments still held (2)
	Balance October 31, 2014	Included in earnings	Included in other compre- hensive income	Purchases	Sales	Maturities/ Settlement (1)	Transfers into Level 3	Transfers out of Level 3		
<b>Trading Securities</b>										
Issued or guaranteed by:										
U.S. states, municipalities and agencies	85	-	13	-	-	-	-	-	98	-
Corporate debt	538	(13)	79	-	-	(361)	-	-	243	(13)
<b>Total trading securities</b>	<b>623</b>	<b>(13)</b>	<b>92</b>	<b>-</b>	<b>-</b>	<b>(361)</b>	<b>-</b>	<b>-</b>	<b>341</b>	<b>(13)</b>
<b>Available-for-Sale Securities</b>										
Issued or guaranteed by:										
U.S. states, municipalities and agencies	1	-	-	-	-	-	-	-	1	na
Corporate debt	8	-	-	-	(1)	(1)	-	-	6	na
Corporate equity	1,104	(25)	178	151	(157)	-	-	-	1,251	na
<b>Total available-for-sale securities</b>	<b>1,113</b>	<b>(25)</b>	<b>178</b>	<b>151</b>	<b>(158)</b>	<b>(1)</b>	<b>-</b>	<b>-</b>	<b>1,258</b>	<b>na</b>
<b>Other Securities</b>	<b>467</b>	<b>(34)</b>	<b>66</b>	<b>80</b>	<b>(214)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>365</b>	<b>(26)</b>
<b>Derivative Assets</b>										
Credit default swaps	12	(11)	-	-	-	-	-	-	1	(11)
<b>Derivative Liabilities</b>										
Credit default swaps	8	(8)	-	-	-	-	-	-	-	(8)

(1) Includes cash settlement of derivative assets and derivative liabilities.

(2) Changes in unrealized gains (losses) on trading securities, derivative assets and derivative liabilities still held on October 31, 2015 are included in earnings for the year.

na - not applicable

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



## Note 18: Offsetting of Financial Assets and Financial Liabilities

Financial assets and financial liabilities are offset and the net amount is reported in our Consolidated Balance Sheet when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis, or realize the asset and settle the liability simultaneously. The following table presents the amounts that have been offset in our Consolidated Balance Sheet, including securities purchased under resale agreements, securities sold under repurchase agreements and derivative instruments, generally under a market settlement mechanism (e.g. an exchange or clearing house) where simultaneous net settlement can be achieved to eliminate credit and liquidity risk between counterparties. Also presented are amounts not offset in the Consolidated Balance Sheet related to transactions where a master netting agreement or similar arrangement is in place with a right of set-off only in the event of default, insolvency or bankruptcy, or where the offset criteria are otherwise not met.

(Canadian \$ in millions) 2016

	Gross amounts	Amounts offset in the balance sheet	Net amounts presented in the balance sheet	Amounts not offset in the balance sheet			Net amount
				Impact of master netting agreements	Securities received/pledged as collateral (1) (2)	Cash collateral	
<b>Financial Assets</b>							
Securities borrowed or purchased under resale agreements	69,795	3,149	66,646	7,204	58,775	-	667
Derivative instruments	54,726	15,543	39,183	27,538	1,610	2,740	7,295
	124,521	18,692	105,829	34,742	60,385	2,740	7,962
<b>Financial Liabilities</b>							
Derivative instruments	53,770	15,543	38,227	27,538	5,677	491	4,521
Securities lent or sold under repurchase agreements	43,867	3,149	40,718	7,204	33,281	-	233
	97,637	18,692	78,945	34,742	38,958	491	4,754

(Canadian \$ in millions) 2015

	Gross amounts	Amounts offset in the balance sheet	Net amounts presented in the balance sheet	Amounts not offset in the balance sheet			Net amount
				Impact of master netting agreements	Securities received/pledged as collateral (1) (2)	Cash collateral	
<b>Financial Assets</b>							
Securities borrowed or purchased under resale agreements	70,073	2,007	68,066	5,313	61,587	-	1,166
Derivative instruments	54,504	16,266	38,238	27,415	1,290	2,087	7,446
	124,577	18,273	106,304	32,728	62,877	2,087	8,612
<b>Financial Liabilities</b>							
Derivative instruments	58,905	16,266	42,639	27,415	7,990	492	6,742
Securities lent or sold under repurchase agreements	41,898	2,007	39,891	5,313	34,104	-	474
	100,803	18,273	82,530	32,728	42,094	492	7,216

(1) Financial assets received/pledged as collateral are disclosed at fair value and are limited to the net balance sheet exposure (i.e. any over-collateralization is excluded from the table).

(2) Certain amounts of collateral are restricted from being sold or re-pledged except in the event of default or the occurrence of other predetermined events.

## Note 19: Interest Rate Risk

We earn interest on interest bearing assets and we pay interest on interest bearing liabilities. We also hold derivative instruments, such as interest rate swaps and interest rate options, with values that are sensitive to changes in interest rates. To the extent that we hold assets, liabilities and derivative instruments maturing or repricing at different points in time, we are exposed to interest rate risk.

### Interest Rate Gap Position

The determination of the interest rate sensitivity or gap position by necessity entails numerous assumptions. It is based on the earlier of the repricing date or maturity date of assets, liabilities and derivatives used to manage interest rate risk.

The gap position presented is as at October 31, 2016 and 2015. It represents the position outstanding at the close of the business day and may change significantly in subsequent periods based on customer behaviour and the application of our asset and liability management strategies.

The assumptions for the years ended October 31, 2016 and 2015 were as follows:

#### Assets

Fixed rate, fixed term assets, such as residential mortgage loans and consumer loans, are reported based upon the scheduled repayments and estimated prepayments that reflect expected borrower behaviour.

Trading and underwriting (mark-to-market) assets and interest bearing assets on which the customer interest rate changes with the prime rate or other short-term market rates are reported in the zero to three months category.

Goodwill and intangible and fixed assets are reported as non-interest sensitive. Other fixed rate and non-interest bearing assets with no defined maturity are reported based upon an assumed maturity profile that considers historical and forecasted trends in balances.

#### Liabilities

Fixed rate, fixed term liabilities, such as investment certificates, are reported at scheduled maturity with estimated redemptions that reflect expected depositor behaviour.

Interest bearing deposits on which the customer interest rate changes with the prime rate or other short-term market rates are reported in the zero to three months category.

Fixed rate and non-interest bearing liabilities with no defined maturity are reported based upon an assumed maturity profile that considers historical and forecasted trends in balances.

#### Capital

Common shareholders' equity is reported as non-interest sensitive.

#### Yields

Yields are based upon the effective interest rates for the assets or liabilities on October 31, 2016 and 2015.

### Interest Rate Gap Position

(Canadian \$ in millions, except as noted)

As at October 31, 2016	0 to 3 months	4 to 6 months	7 to 12 months	Total within 1 year	Effective interest rate (%)	1 to 5 years	Effective interest rate (%)	Over 5 years	Effective interest rate (%)	Non-interest sensitive	Total
<b>Assets</b>											
Cash and cash equivalents	28,233	497	555	29,285	0.67	2,110	0.15	-	-	258	31,653
Interest bearing deposits with banks	4,449	-	-	4,449	0.49	-	-	-	-	-	4,449
Securities	94,542	1,942	2,183	98,667	1.20	26,661	1.90	23,563	2.65	1,094	149,985
Securities borrowed or purchased under resale agreements	62,173	4,072	338	66,583	0.39	63	0.66	-	-	-	66,646
Loans	207,409	16,803	26,794	251,006	3.14	102,265	3.56	5,459	3.77	-	358,730
Other assets	41,496	368	1,125	42,989	na	7,995	na	1,216	na	24,272	76,472
<b>Total assets</b>	<b>438,302</b>	<b>23,682</b>	<b>30,995</b>	<b>492,979</b>		<b>139,094</b>		<b>30,238</b>		<b>25,624</b>	<b>687,935</b>
<b>Liabilities and Equity</b>											
Deposits	237,533	25,325	36,577	299,435	0.92	153,695	0.74	20,242	0.71	-	473,372
Securities sold but not yet purchased	25,106	-	-	25,106	1.33	-	-	-	-	-	25,106
Securities lent or sold under repurchase agreements	40,536	182	-	40,718	0.27	-	-	-	-	-	40,718
Other liabilities	61,993	494	1,763	64,250	na	13,655	na	10,040	na	14,027	101,972
Subordinated debt	39	100	-	139	7.19	4,150	3.89	150	7.83	-	4,439
Total equity	573	-	250	823	na	2,542	na	600	na	38,363	42,328
<b>Total liabilities and shareholders' equity</b>	<b>365,780</b>	<b>26,101</b>	<b>38,590</b>	<b>430,471</b>		<b>174,042</b>		<b>31,032</b>		<b>52,390</b>	<b>687,935</b>
<b>Asset/liability gap position</b>	<b>72,522</b>	<b>(2,419)</b>	<b>(7,595)</b>	<b>62,508</b>		<b>(34,948)</b>		<b>(794)</b>		<b>(26,766)</b>	<b>-</b>
<b>Notional amounts of derivatives</b>	<b>(57,456)</b>	<b>(29)</b>	<b>1,716</b>	<b>(55,769)</b>		<b>55,250</b>		<b>519</b>		<b>-</b>	<b>-</b>
<b>Total interest rate gap position - 2016</b>											
Canadian dollar	3,132	(687)	(84)	2,361		12,278		561		(15,200)	-
Foreign currency	11,934	(1,761)	(5,795)	4,378		8,024		(836)		(11,566)	-
<b>Total gap</b>	<b>15,066</b>	<b>(2,448)</b>	<b>(5,879)</b>	<b>6,739</b>		<b>20,302</b>		<b>(275)</b>		<b>(26,766)</b>	<b>-</b>
<b>Total interest rate gap position - 2015</b>											
Canadian dollar	(419)	1,989	4,690	6,260		6,608		1,054		(13,922)	-
Foreign currency	8,258	(2,464)	(1,448)	4,346		11,940		(4,968)		(11,318)	-
<b>Total gap</b>	<b>7,839</b>	<b>(475)</b>	<b>3,242</b>	<b>10,606</b>		<b>18,548</b>		<b>(3,914)</b>		<b>(25,240)</b>	<b>-</b>

na - not applicable

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

## Note 20: Capital Management

Our objective is to maintain a strong capital position in a cost-effective structure that: considers our target regulatory capital ratios and internal assessment of required economic capital; is consistent with our targeted credit ratings; underpins our operating groups' business strategies; and builds depositor confidence and long-term shareholder value.

Our approach includes establishing limits, targets and performance measures for the management of balance sheet positions, risk levels and minimum capital amounts, as well as issuing and redeeming capital instruments to obtain a cost-effective capital structure.

Regulatory capital requirements and risk-weighted assets for the consolidated entity are determined in accordance with OSFI's Capital Adequacy Requirements Guideline which includes a Basel I capital floor.

Common Equity Tier 1 capital is the most permanent form of capital. It is comprised of common shareholders' equity less deductions for goodwill, intangible assets and certain other items. Tier 1 capital is primarily comprised of regulatory common equity, preferred shares and innovative hybrid instruments, net of Tier 1 capital deductions.

Tier 2 capital is primarily comprised of subordinated debentures and the eligible portion of the collective allowance for credit losses, net of certain Tier 2 capital deductions. Total capital includes Tier 1 and Tier 2 capital. Details of the components of our capital position are presented in Notes 11, 12, 15 and 16.

Our Common Equity Tier 1 Capital Ratio, Tier 1 Capital Ratio, Total Capital Ratio and Leverage Ratio are the primary regulatory capital measures.

- The Common Equity Tier 1 Capital Ratio is defined as common shareholders' equity, net of capital adjustments, divided by Common Equity Tier 1 capital risk-weighted assets.
- The Tier 1 Capital Ratio is defined as Tier 1 capital divided by Tier 1 capital risk-weighted assets.
- The Total Capital Ratio is defined as Total capital divided by Total capital risk-weighted assets.
- The Leverage Ratio is defined as Tier 1 capital divided by the sum of on-balance sheet items and specified off-balance sheet items, net of specified adjustments.

We have met OSFI's stated minimum capital ratio requirements as at October 31, 2016.

## Regulatory Capital Measures and Risk-Weighted Assets

(Canadian \$ in millions, except as noted)	2016	2015
Common Equity Tier 1 Capital	<b>28,159</b>	25,628
Tier 1 Capital	<b>32,236</b>	29,416
Total Capital	<b>37,862</b>	34,584
Common Equity Tier 1 Capital Risk-Weighted Assets	<b>277,562</b>	239,689
Tier 1 Capital Risk-Weighted Assets	<b>277,562</b>	239,689
Total Capital Risk-Weighted Assets	<b>277,562</b>	239,716
Common Equity Tier 1 Capital Ratio	<b>10.1%</b>	10.7%
Tier 1 Capital Ratio	<b>11.6%</b>	12.3%
Total Capital Ratio	<b>13.6%</b>	14.4%
Leverage Ratio	<b>4.2%</b>	4.2%

All 2016 and 2015 balances above are on an "all-in" basis.

## Note 21: Employee Compensation – Share-Based Compensation

### Stock Option Plan

We maintain a Stock Option Plan for designated officers and employees. Options are granted at an exercise price equal to the closing price of our common shares on the day before the grant date. Stock options granted on or after December 2013 vest in equal tranches of 50% on the third and fourth anniversaries of their grant date. Options granted prior to December 2013 vest in tranches over a four-year period starting from their grant date. Each tranche is treated as a separate award with a different vesting period. Certain options can only be exercised once certain performance targets are met. All options expire 10 years from their grant date.

We determine the fair value of stock options on their grant date and record this amount as compensation expense over the period that the stock options vest, with a corresponding increase to contributed surplus. When these stock options are exercised, we issue shares and record the amount of proceeds, together with the amount recorded in contributed surplus, in share capital. The estimated grant date fair value of stock options granted to employees who are eligible to retire is expensed at the date of grant.

The following table summarizes information about our Stock Option Plan:

(Canadian \$, except as noted)	2016		2015		2014	
	Number of stock options	Weighted-average exercise price	Number of stock options	Weighted-average exercise price	Number of stock options	Weighted-average exercise price
Outstanding at beginning of year	<b>12,111,153</b>	<b>74.08</b>	13,337,765	76.21	14,968,711	78.17
Granted	<b>754,714</b>	<b>77.23</b>	641,875	78.09	1,618,223	68.60
Exercised	<b>2,103,391</b>	<b>55.32</b>	842,821	54.22	2,133,107	53.66
Forfeited/cancelled	<b>104,606</b>	<b>71.76</b>	71,281	64.49	88,965	79.77
Expired	<b>852,571</b>	<b>158.30</b>	954,385	139.14	1,027,097	139.34
Outstanding at end of year	<b>9,805,299</b>	<b>72.21</b>	12,111,153	74.08	13,337,765	76.21
Exercisable at end of year	<b>5,605,485</b>	<b>74.25</b>	6,959,569	80.52	6,607,237	90.85
Available for grant	<b>4,151,676</b>		4,275,858		4,222,722	
Outstanding stock options as a percentage of outstanding shares	<b>1.52%</b>		1.88%		2.06%	

Employee compensation expense related to this plan for the years ended October 31, 2016, 2015 and 2014 was \$6 million, \$6 million and \$11 million before tax, respectively (\$6 million, \$6 million and \$11 million after tax, respectively).

The intrinsic value of a stock option grant is the difference between the current market price of our common shares and the strike price of the option. The aggregate intrinsic value of stock options outstanding at October 31, 2016, 2015 and 2014 was \$211 million, \$179 million and \$279 million, respectively. The aggregate intrinsic value of stock options exercisable at October 31, 2016, 2015 and 2014 was \$146 million, \$125 million and \$145 million, respectively.

Options outstanding and exercisable at October 31, 2016 and 2015 by range of exercise price were as follows:

Range of exercise prices	2016						2015					
	Options outstanding			Options exercisable			Options outstanding			Options exercisable		
	Number of stock options	Weighted-average remaining contractual life (years)	Weighted-average exercise price	Number of stock options	Weighted-average remaining contractual life (years)	Weighted-average exercise price	Number of stock options	Weighted-average remaining contractual life (years)	Weighted-average exercise price	Number of stock options	Weighted-average remaining contractual life (years)	Weighted-average exercise price
\$30.01 to \$40.00	302,174	2.1	34.13	302,174	2.1	34.13	577,358	3.1	34.13	577,358	3.1	34.13
\$40.01 to \$50.00	120,224	2.9	41.65	120,224	2.9	41.65	187,327	3.6	42.46	187,327	3.6	42.46
\$50.01 to \$60.00	3,179,402	4.4	56.07	3,179,402	4.4	56.07	4,218,387	5.3	56.00	3,624,686	5.2	56.00
\$60.01 to \$70.00	4,158,001	5.1	64.05	1,291,855	5.2	60.36	5,458,588	5.2	63.94	1,531,760	4.5	61.87
\$70.01 and over (1)	2,045,498	6.2	121.31	711,830	1.4	203.16	1,669,493	4.7	170.26	1,038,438	2.0	226.28

(1) Certain options were issued as part of the acquisition of M&I.

The following table summarizes non-vested stock option activity for the years ended October 31, 2016 and 2015:

	2016		2015	
	Number of stock options	Weighted-average grant date fair value	Number of stock options	Weighted-average grant date fair value
Non-vested at beginning of year	5,151,584	6.55	6,730,528	6.74
Granted	754,714	7.60	641,875	7.45
Vested	1,075,952	5.42	1,533,402	6.90
Expired	525,926	8.70	623,730	8.55
Forfeited/cancelled	104,606	6.78	63,687	6.68
Non-vested at end of year	4,199,814	6.76	5,151,584	6.55

The following table summarizes further information about our Stock Option Plan:

(Canadian \$ in millions, except as noted)	2016	2015	2014
Unrecognized compensation cost for non-vested stock option awards	4	4	5
Weighted-average period over which this cost will be recognized (in years)	2.5	2.3	2.7
Total intrinsic value of stock options exercised	55	18	49
Cash proceeds from stock options exercised	116	46	115
Actual tax benefits realized on stock options exercised	-	1	1
Weighted-average share price for stock options exercised (in dollars)	81.41	76.05	76.63

The fair value of options granted was estimated using a binomial option pricing model. The weighted-average fair value of options granted during the years ended October 31, 2016, 2015 and 2014 was \$7.60, \$7.45 and \$6.36, respectively. To determine the fair value of the stock option tranches on the grant date, the following ranges of values were used for each option pricing assumption:

	2016	2015	2014
Expected dividend yield	5.5%	4.7% - 4.8%	5.0%
Expected share price volatility	19.8% - 20.0%	16.9% - 17.0%	16.4%
Risk-free rate of return	1.3% - 1.4%	1.9% - 2.0%	2.5% - 2.6%
Expected period until exercise (in years)	6.5 - 7.0	6.5 - 7.0	6.5 - 7.0

Changes to the input assumptions can result in different fair value estimates.

Expected dividend yield is based on market expectations of future dividends on our common shares. Expected share price volatility is determined based on the market consensus implied volatility for traded options on our common shares. The risk-free rate is based on the yields of a Canadian swap curve with maturities similar to the expected period until exercise of the options. The weighted-average exercise price on the grant date for the years ended October 31, 2016, 2015 and 2014 was \$77.23, \$78.09 and \$68.60, respectively.

## Other Share-Based Compensation

### Share Purchase Plans

We offer various employee share purchase plans. The largest of these plans provides the employee the option of directing a portion of their gross salary toward the purchase of our common shares. We match 50% of employee contributions up to 6% of their individual gross salary. Our contributions during the first two years vest after two years of participation in the plan, with subsequent contributions vesting immediately. The shares held in the employee share purchase plan are purchased on the open market and are considered outstanding for purposes of computing earnings per share. The dividends earned on our common shares held by the plan are used to purchase additional common shares on the open market.

We account for our contribution as employee compensation expense when it is contributed to the plan.

Employee compensation expense related to these plans for the years ended October 31, 2016, 2015 and 2014 was \$51 million, \$52 million and \$50 million, respectively. There were 18.9 million, 19.0 million and 18.7 million common shares held in these plans for the years ended October 31, 2016, 2015 and 2014, respectively.

### Mid-Term Incentive Plans

We offer mid-term incentive plans for executives and certain senior employees. Payment amounts are adjusted to reflect reinvested dividends and changes in the market value of our common shares. Depending on the plan, the recipient receives either a single cash payment at the end of the three-year period of the plan, or cash payments over the three years of the plan. As the awards are cash settled, they are recorded as liabilities.

Amounts payable under such awards are recorded as compensation expense over the vesting period. Amounts related to units granted to employees who are eligible to retire are expensed at the time of grant. Subsequent changes in the fair value of the liability are recorded in compensation expense in the period in which they arise.

Mid-term incentive plan units granted during the years ended October 31, 2016, 2015 and 2014 totalled 6.4 million, 5.8 million and 5.9 million, respectively.

Prior to 2015, we entered into agreements with third parties to assume our liabilities related to a portion of units granted for a fixed up-front payment. For units subject to such arrangements, we no longer have any obligation for future cash payments and as a result no liability is recorded related to these awards. All cash payments made under such arrangements are deferred on the Consolidated Balance Sheet as other assets and are recognized on a straight-line basis over the vesting period. Subsequent changes in the market value of our common shares do not affect the amount of compensation expense related to these awards.

The amount of deferred compensation remaining in other assets relating to these arrangements at October 31, 2016 was \$2 million (\$38 million in 2015) and is expected to be recognized over a weighted-average period of less than 1 year (1 year in 2015).

Employee compensation expense related to plans where we entered into agreements with third parties for the years ended October 31, 2016, 2015 and 2014 was \$26 million, \$81 million and \$239 million before tax, respectively (\$19 million, \$60 million and \$177 million after tax, respectively).

Mid-term incentive plan units for which we did not enter into agreements with third parties for the years ended October 31, 2016, 2015 and 2014 totalled 6.4 million, 5.8 million and 3.1 million units, respectively. The weighted-average grant date fair value of these awards as at October 31, 2016, 2015 and 2014 was \$492 million, \$475 million and \$228 million, respectively, for which we recorded employee compensation expense of \$537 million, \$303 million and \$172 million before tax, respectively (\$397 million, \$224 million and \$127 million after tax, respectively). Beginning in November 2014, we no longer enter into agreements with third parties; however, we economically hedge the impact of the change in market value of our common shares by entering into total return swaps (equity contracts). Gains (losses) recognized for the years ended October 31, 2016, 2015 and 2014 were \$111 million, \$(27) million and \$59 million, respectively, resulting in net employee compensation expense of \$426 million, \$330 million and \$113 million, respectively.

A total of 17.0 million, 16.1 million and 16.5 million mid-term incentive plan units were outstanding as at October 31, 2016, 2015 and 2014, respectively, and the intrinsic value of those awards which had vested was \$883 million, \$497 million and \$288 million, respectively. Cash payments made in relation to these liabilities were \$131 million, \$127 million and \$57 million, respectively.

#### *Deferred Incentive Plans*

We offer deferred incentive plans for members of our Board of Directors, executives and key employees in BMO Capital Markets and Wealth Management. Under these plans, fees, annual incentive payments and/or commissions can be deferred as share units of our common shares. These share units are either fully vested on the grant date or vest at the end of three years. The value of these share units is adjusted to reflect reinvested dividends and changes in the market value of our common shares.

Deferred incentive plan payments are paid in cash upon the participant's departure from the bank.

Employee compensation expense for these plans is recorded in the year the fees, incentive payments and/or commissions are earned. Changes in the amount of the incentive plan payments as a result of dividends and share price movements are recorded as increases or decreases in employee compensation expense in the period of the change.

Deferred incentive plan units granted during the years ended October 31, 2016, 2015 and 2014 totalled 0.4 million, 0.3 million and 0.4 million, respectively, and the weighted-average grant date fair value of these units was \$28 million, \$26 million and \$26 million, respectively.

Liabilities related to these plans are recorded in other liabilities in our Consolidated Balance Sheet and totalled \$414 million and \$395 million as at October 31, 2016 and 2015, respectively. Payments made under these plans for the years ended October 31, 2016, 2015 and 2014 were \$53 million, \$25 million and \$18 million, respectively.

Employee compensation expense related to these plans for the years ended October 31, 2016, 2015 and 2014 was \$67 million, \$(2) million and \$63 million before tax, respectively (\$50 million, \$(1) million and \$47 million after tax, respectively). We have entered into derivative instruments to hedge our exposure related to these plans. Changes in the fair value of these derivatives are recorded as employee compensation expense in the period in which they arise. Gains (losses) on these derivatives for the years ended October 31, 2016, 2015 and 2014 were \$57 million, \$(16) million and \$52 million before tax, respectively. These gains (losses) resulted in net employee compensation expense for the years ended October 31, 2016, 2015 and 2014 of \$10 million, \$14 million and \$11 million before tax, respectively (\$7 million, \$10 million and \$8 million after tax, respectively).

A total of 4.8 million, 4.9 million and 4.7 million deferred incentive plan units were outstanding for the years ended October 31, 2016, 2015 and 2014, respectively.



## Note 22: Employee Compensation – Pension and Other Employee Future Benefits

### Pension and Other Employee Future Benefit Plans

We sponsor a number of arrangements globally, with the largest of such arrangements located in Canada, the United States and the United Kingdom, that provide pension and/or other employee future benefits to our retired and current employees. The largest of these arrangements, by defined benefit obligation, are the primary defined benefit pension plans for employees in Canada and the United States and the primary other employee future benefit plan for employees in Canada.

Pension arrangements include defined benefit pension plans, as well as supplementary arrangements that provide pension benefits in excess of statutory limits. Generally, under these plans we provide retirement benefits based on an employee's years of service and average annual earnings over a period of time prior to retirement. Our pension and other employee future benefit expenses, recorded in employee compensation expense, mainly comprise the current service cost plus or minus the interest on net defined benefit assets or liabilities. In addition, we provide defined contribution pension plans to employees in some of our subsidiaries. The costs of these plans, recorded in employee compensation expense, are equal to our contributions to the plans.

During the year, we announced the closure of the defined benefit pension plans for our employees in the United States. As a result of the closure of these plans, we recorded a curtailment gain of \$52 million in non-interest expense, employee compensation, in our Consolidated Statement of Income. A defined contribution pension plan will be available for employees affected by the closure in 2017.

We also provide other employee future benefits, including health and dental care benefits and life insurance, for eligible current and retired employees.

Short-term employee benefits, such as salaries, paid absences, bonuses and other benefits, are accounted for on an accrual basis over the period in which the employees provide the related services.

### Investment Policy

The assets of the defined benefit pension plans are managed in accordance with all applicable laws and regulations. The plans are administered under a well-defined governance structure, with the oversight resting with the Board of Directors.

The plans are managed under a framework that considers both assets and liabilities in the development of an investment policy and in managing risk. Over the past several years, we have implemented a liability-driven investment strategy for the primary Canadian plan to enhance risk-adjusted returns while reducing the plan's surplus volatility. This strategy has meaningfully reduced the impact of the plan on our regulatory capital.

The plans invest in asset classes that include equities, fixed income and alternative strategies, under established investment guidelines. Plan assets are diversified across asset classes and by geographic exposure. They are managed by asset management firms that are responsible for the selection of investment securities. Derivative instruments are permitted under policy guidelines and are generally used to hedge foreign currency exposures, manage interest rate exposures or replicate the return of an asset.

### Asset Allocations

The asset allocation ranges and weighted-average actual asset allocations of our primary pension plans, based on the fair market values at October 31, are as follows:

	Pension benefit plans		
	Range 2016	Actual 2016	Actual 2015
Equities	25% – 50%	42%	42%
Fixed income investments	35% – 55%	44%	45%
Other	10% – 25%	14%	13%

Our pension and other employee future benefit plan assets are measured at fair value on a recurring basis.

### Risk Management

The plans are exposed to various risks, including market risk (interest rate, equity and foreign currency risks), credit risk, operational risk, surplus risk and longevity risk. We follow a number of approaches to monitor and actively manage these risks, including monitoring surplus-at-risk, which measures a plan's risk in an asset-liability framework; stress testing and scenario analyses to evaluate the volatility of the plans' financial positions and any potential impact on the bank; hedging of currency exposures and interest rate risk within policy limits; controls related to asset mix allocations, geographic allocations, portfolio duration, credit quality, sector guidelines, issuer/counterparty limits and others; and ongoing monitoring of exposures, performance and risk levels.

### Pension and Other Employee Future Benefit Liabilities

Our actuaries perform valuations of our defined benefit obligations for pension and other employee future benefits as at October 31 of each year using the projected unit credit method based on management's assumptions about discount rates, rates of compensation increase, retirement age, mortality and health care cost trend rates.

The discount rates for the primary Canadian and U.S. pension and other employee future benefit plans were selected based on high-quality AA rated corporate bond yields with terms matching the plans' cash flows.

The fair value of plan assets is deducted from the defined benefit obligation to determine the net defined benefit asset or liability. For defined benefit pension plans that are in a net defined benefit asset position, the recognized asset is limited to the present value of economic benefits available in the form of future refunds from the plan or reductions in future contributions to the plan (the "asset ceiling"). Changes in the asset ceiling are recognized in other comprehensive income. Components of the change in our net defined benefit assets or liabilities and our pension and other employee future benefit expense are as follows:

**Benefits earned by employees** represent benefits earned in the current year. They are determined with reference to the current workforce and the amount of benefits to which employees will be entitled upon retirement, based on the provisions of our benefit plans.

**Interest on net defined benefit asset or liability** represents the increase in the net defined benefit asset or liability that results from the passage of time and is determined by applying the discount rate to the net defined benefit asset or liability.

**Actuarial gains and losses** may arise in two ways. First, each year our actuaries recalculate the defined benefit obligations and compare them to those estimated as at the previous year end. Any differences that result from changes in demographic and economic assumptions or from plan member experience being different from management's expectations at the previous year end are considered actuarial gains or losses. Second, actuarial gains and losses arise when there are differences between the discount rate and actual returns on plan assets. Actuarial gains and losses are recognized immediately in other comprehensive income as they occur and are not subsequently reclassified to income in future periods.

**Plan amendments** are changes in our defined benefit obligations that result from changes to provisions of the plans. The effects of plan amendments are recognized immediately in income when a plan is amended.

**Settlements** occur when defined benefit obligations for plan participants are settled, usually through lump sum cash payments, and as a result we no longer have any obligation to provide such participants with benefit payments in the future.

### Funding of Pension and Other Employee Future Benefit Plans

We fund our defined benefit pension plans in Canada and the United States in accordance with statutory requirements, and the assets in these plans are used to pay benefits to retirees and other employees. Some groups of employees are also eligible to make voluntary contributions in order to receive enhanced benefits. Our supplementary pension plan in Canada is funded, while in the United States the supplementary pension plan is unfunded.

Our other employee future benefit plans in Canada and the United States are either partially funded or unfunded. Benefit payments related to these plans are either paid through the respective plan or paid directly by us.

We measure the fair value of plan assets for our plans in Canada and the United States as at October 31. In addition to actuarial valuations for accounting purposes, we are required to prepare valuations for determining our minimum funding requirements for our pension arrangements in accordance with the relevant statutory framework (our "funding valuation"). An annual funding valuation is performed for our plans in Canada and the United States. The most recent funding valuation for our primary Canadian plan was performed as at October 31, 2016 and the most recent funding valuation for our primary U.S. plan was performed as at January 1, 2016. Benefit payments for fiscal 2017 are estimated to be \$477 million.

A summary of plan information for the past three years is as follows:

(Canadian \$ in millions)	Pension benefit plans			Other employee future benefit plans		
	2016	2015	2014	2016	2015	2014
Defined benefit obligation	<b>8,992</b>	7,934	7,504	<b>1,493</b>	1,323	1,317
Fair value of plan assets	<b>8,655</b>	8,072	7,536	<b>150</b>	131	113
Surplus (deficit) and net defined benefit asset (liability)	<b>(337)</b>	138	32	<b>(1,343)</b>	(1,192)	(1,204)
Surplus (deficit) is comprised of:						
Funded or partially funded plans	<b>(127)</b>	362	197	<b>7</b>	(32)	(12)
Unfunded plans	<b>(210)</b>	(224)	(165)	<b>(1,350)</b>	(1,160)	(1,192)
Surplus (deficit) and net defined benefit asset (liability)	<b>(337)</b>	138	32	<b>(1,343)</b>	(1,192)	(1,204)

### Pension and Other Employee Future Benefit Expenses

Pension and other employee future benefit expenses are determined as follows:

(Canadian \$ in millions)	Pension benefit plans			Other employee future benefit plans		
	2016	2015	2014	2016	2015	2014
<b>Annual benefits expense</b>						
Benefits earned by employees	<b>224</b>	286	241	<b>25</b>	29	25
Net interest (income) expense on net defined benefit (asset) liability	<b>(10)</b>	(5)	(11)	<b>52</b>	50	50
Gain on settlement	-	(13)	-	-	-	-
Administrative expenses	<b>5</b>	4	5	-	-	-
Remeasurement of other long-term benefits	-	-	-	<b>6</b>	4	(5)
Benefits expense	<b>219</b>	272	235	<b>83</b>	83	70
Canada and Quebec pension plan expense	<b>73</b>	73	68	-	-	-
Defined contribution expense	<b>96</b>	86	66	-	-	-
Total annual pension and other employee future benefit expenses recognized in the Consolidated Statement of Income	<b>388</b>	431	369	<b>83</b>	83	70

### Weighted-average assumptions used to determine benefit expenses

	Pension benefit plans			Other employee future benefit plans		
	2016	2015	2014	2016	2015	2014
Discount rate at beginning of year	<b>4.2%</b>	4.1%	4.6%	<b>4.4%</b>	4.2%	4.7%
Rate of compensation increase	<b>2.7%</b>	2.9%	2.9%	<b>2.4%</b>	2.6%	2.7%
Assumed overall health care cost trend rate	<b>na</b>	na	na	<b>5.3% (1)</b>	5.5% (1)	5.4% (1)

(1) Trending to 4.5% in 2030 and remaining at that level thereafter.

na - not applicable

Assumptions regarding future mortality are based on published statistics and mortality tables calibrated to plan experience, when applicable. The current life expectancies underlying the amounts of the defined benefit obligations for our primary plans are as follows:

(Years)	Canada		United States	
	2016	2015	2016	2015
<b>Life expectancy for those currently age 65</b>				
Males	23.5	23.5	22.2	22.2
Females	23.9	23.9	23.8	23.7
<b>Life expectancy at age 65 for those currently age 45</b>				
Males	24.5	24.5	23.4	23.3
Females	24.9	24.9	25.0	24.9

Changes in the estimated financial positions of our pension benefit plans and other employee future benefit plans are as follows:

(Canadian \$ in millions, except as noted)	Pension benefit plans		Other employee future benefit plans	
	2016	2015	2016	2015
<b>Defined benefit obligation</b>				
Defined benefit obligation at beginning of year	7,934	7,504	1,323	1,317
Current service cost	224	286	25	29
Interest cost	326	311	57	55
Gain due to settlement	-	(13)	-	-
Benefits paid	(406)	(373)	(42)	(39)
Settlement payments	-	(92)	-	-
Employee contributions	13	12	4	4
Actuarial (gains) losses due to:				
Demographic assumption changes	(34)	17	(37)	(47)
Financial assumption changes	1,041	(146)	164	(33)
Plan member experience	(9)	108	(6)	11
Foreign exchange and other	(97)	320	5	26
Defined benefit obligation at end of year	8,992	7,934	1,493	1,323
Wholly or partially funded defined benefit obligation	8,782	7,710	143	163
Unfunded defined benefit obligation	210	224	1,350	1,160
Total defined benefit obligation	8,992	7,934	1,493	1,323
<b>Weighted-average assumptions used to determine the defined benefit obligation</b>				
Discount rate at end of year	3.4%	4.2%	3.6%	4.4%
Rate of compensation increase	2.8%	2.7%	2.4%	2.4%
Assumed overall health care cost trend rate	na	na	5.3% (1)	5.5% (1)
<b>Fair value of plan assets</b>				
Fair value of plan assets at beginning of year	8,072	7,536	131	113
Interest income	336	316	5	5
Return on plan assets (excluding interest income)	532	182	10	(6)
Employer contributions	235	231	38	35
Employee contributions	13	12	4	4
Benefits paid	(406)	(373)	(42)	(39)
Settlement payments	-	(92)	-	-
Administrative expenses	(5)	(4)	-	-
Foreign exchange and other	(122)	264	4	19
Fair value of plan assets at end of year	8,655	8,072	150	131
Surplus (deficit) and net defined benefit asset (liability) at end of year	(337)	138	(1,343)	(1,192)
<b>Recorded in:</b>				
Other assets	118	502	-	-
Other liabilities	(455)	(364)	(1,343)	(1,192)
Surplus (deficit) and net defined benefit asset (liability) at end of year	(337)	138	(1,343)	(1,192)
<b>Actuarial gains (losses) recognized in other comprehensive income</b>				
Net actuarial gains on plan assets	532	182	10	(6)
Actuarial gains (losses) on defined benefit obligation due to:				
Demographic assumption changes	34	(17)	34	44
Financial assumption changes	(1,041)	146	(160)	35
Plan member experience	9	(108)	12	(4)
Foreign exchange and other	(8)	(22)	-	1
<b>Actuarial gains (losses) recognized in other comprehensive income for the year</b>	(474)	181	(104)	70

(1) Trending to 4.5% in 2030 and remaining at that level thereafter.

na - not applicable

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

Our pension and other employee future benefit plan assets are measured at fair value on a recurring basis. The fair values of plan assets held by our primary plans as at October 31 are as follows:

(Canadian \$ in millions)	Canadian plans		U.S. plans (1)	
	2016	2015	2016	2015
Cash and money market funds (2)	68	44	48	62
Securities issued or guaranteed by: (3)				
Canadian federal government	144	188	-	-
Canadian provincial and municipal governments	722	603	-	-
U.S. federal government	3	-	145	91
U.S. states, municipalities and agencies	-	-	18	14
Other governments	-	9	-	-
Pooled funds (4)	3,451	3,166	106	86
Derivative instruments	(26)	(5)	-	-
Corporate debt (5)	881	892	481	458
Corporate equity (2)	832	792	539	511
	<b>6,075</b>	<b>5,689</b>	<b>1,337</b>	<b>1,222</b>

(1) All of the U.S. plans' assets have quoted prices in active markets, except pooled funds, corporate debt and securities issued or guaranteed by U.S. states, municipalities and agencies.

(2) All of the cash and money market funds and corporate equity held by Canadian plans as at October 31, 2016 and 2015 have quoted prices in active markets.

(3) \$537 million (\$307 million in 2015) of securities issued or guaranteed by governments held by Canadian plans have quoted prices in active markets.

(4) \$1,607 million (\$1,495 million in 2015) of pooled funds held by Canadian plans have quoted prices in active markets.

(5) \$7 million (\$36 million in 2015) of corporate debt held by Canadian plans have quoted prices in active markets.

No plan assets are directly invested in the bank's or related parties' securities as at October 31, 2016 and 2015. As at October 31, 2016, our primary Canadian plan indirectly held, through pooled funds, approximately \$13 million (\$9 million in 2015) of our common shares. The plans do not hold any property we occupy or other assets we use.

The plans paid \$4 million in the year ended October 31, 2016 (\$4 million in 2015) to the bank and certain of our subsidiaries for investment management, record-keeping, custodial and administrative services rendered.

### Sensitivity of Assumptions

Key weighted-average assumptions used in measuring the defined benefit obligations for our primary plans are outlined in the following table. The sensitivity analysis provided in the table should be used with caution as it is hypothetical and the impact of changes in each key assumption may not be linear. The sensitivities to changes in each key variable have been calculated independently of the impact of changes in other key variables. Actual experience may result in simultaneous changes in a number of key assumptions, which would amplify or reduce certain sensitivities.

(Canadian \$ in millions, except as noted)	Defined benefit obligation	
	Pension benefit plans	Other employee future benefit plans
Discount rate (%)	3.4	3.6
Impact of: 1% increase (\$)	(934)	(178)
1% decrease (\$)	1,188	231
Rate of compensation increase (%)	2.8	2.4
Impact of: 0.25% increase (\$)	52	2
0.25% decrease (\$)	(51)	(2)
Mortality		
Impact of: 1 year shorter life expectancy (\$)	(151)	(34)
1 year longer life expectancy (\$)	148	34
Assumed overall health care cost trend rate (%)	na	5.3 (1)
Impact of: 1% increase (\$)	na	92
1% decrease (\$)	na	(88)

(1) Trending to 4.5% in 2030 and remaining at that level thereafter.

na - not applicable

## Disaggregation of Defined Benefit Obligation

Disaggregation of the defined benefit obligation for our primary plans is as follows:

	2016	2015
<b>Canadian pension plans</b>		
Active members	45%	44%
Inactive and retired members	55%	56%
	<b>100%</b>	<b>100%</b>
<b>U.S. pension plans</b>		
Active members	68%	68%
Inactive and retired members	32%	32%
	<b>100%</b>	<b>100%</b>
<b>Canadian other employee future benefit plans</b>		
Active members	44%	43%
Inactive and retired members	56%	57%
	<b>100%</b>	<b>100%</b>

## Maturity Profile

The duration of the defined benefit obligation for our primary plans is as follows:

(Years)	2016	2015
Canadian pension plans	16.0	14.8
U.S. pension plans	8.3	10.6
Canadian other employee future benefit plans	17.2	16.2

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

## Cash Flows

Cash payments we made during the year in connection with our employee future benefit plans are as follows:

(Canadian \$ in millions)	Pension benefit plans			Other employee future benefit plans		
	2016	2015	2014	2016	2015	2014
Contributions to defined benefit plans	192	198	254	-	-	-
Contributions to defined contribution plans	96	86	66	-	-	-
Benefits paid directly to pensioners	43	33	30	38	35	33
	<b>331</b>	<b>317</b>	<b>350</b>	<b>38</b>	<b>35</b>	<b>33</b>

Our best estimate of the contributions we expect to make to our defined benefit plans for the year ending October 31, 2017 is approximately \$208 million to our pension benefit plans and \$44 million to our other employee future benefit plans.

## Note 23: Income Taxes

We report our provision for income taxes in our Consolidated Statement of Income based upon transactions recorded in our consolidated financial statements regardless of when they are recognized for income tax purposes, with the exception of repatriation of retained earnings from our foreign subsidiaries, as noted below.

In addition, we record an income tax expense or benefit in other comprehensive income or directly in shareholders' equity when the taxes relate to amounts recorded in other comprehensive income or shareholders' equity. For example, income tax expense (recovery) on hedging gains (losses) related to our net investment in foreign operations is recorded in our Consolidated Statement of Comprehensive Income as part of unrealized gains (losses) on translation of net foreign operations.

Current tax is the amount of income tax recoverable (payable) in respect of the taxable loss (profit) for a period. Deferred income tax assets and liabilities are measured at the tax rates expected to apply when temporary differences reverse. Changes in deferred income tax assets and liabilities related to a change in tax rates are recorded in income in the period the tax rate is substantively enacted, except to the extent that the tax arises from a transaction or event which is recognized either in other comprehensive income or directly in shareholders' equity. Current and deferred taxes are only offset when they are levied by the same taxation authority, levied on the same entity or group of entities and when there is a legal right to offset.

Included in deferred income tax assets is \$1,328 million related to U.S. tax loss carryforwards that will expire in various amounts in U.S. taxation years from 2029 through 2034 and \$15 million related to U.K. tax loss carryforwards that are available for use indefinitely against relevant profits generated in the U.K. On the evidence available, including management projections of income, we believe that there will be sufficient taxable income generated by our business operations to support these deferred tax assets. The amount of tax on temporary differences, unused tax losses and unused tax credits for which no deferred tax asset is recognized in our Consolidated Balance Sheet as at October 31, 2016 is \$156 million (\$193 million as at October 31, 2015). Deferred tax assets have not been recognized in respect of these items because it is not probable that realization of these assets will occur.

Income that we earn in foreign countries through our branches or subsidiaries is generally subject to tax in those countries. We are also subject to Canadian taxation on the income earned in our foreign branches. Canada allows a credit for certain foreign taxes paid on this income. Upon repatriation of retained earnings from certain foreign subsidiaries, we would be required to pay tax on certain of these earnings. As repatriation of such earnings is not planned in the foreseeable future, we have not recorded the related deferred income tax liability.

The amount of temporary differences associated with investments in subsidiaries, branches, associates and interests in joint ventures for which deferred tax liabilities have not been recognized is \$31 billion as at October 31, 2016 (\$27 billion in 2015).

## Provision for Income Taxes

(Canadian \$ in millions)	2016	2015	2014
<b>Consolidated Statement of Income</b>			
Current			
Provision for income taxes for the current period	927	685	547
Adjustments in respect of current tax for prior periods	8	18	(1)
Deferred			
Origination and reversal of temporary differences	168	248	361
Effect of changes in tax rates	(2)	(15)	(4)
	<b>1,101</b>	936	903
<b>Other Comprehensive Income and Shareholders' Equity</b>			
Income tax expense (recovery) related to:			
Gains (losses) on remeasurement of pension and other employee future benefit plans	(156)	51	(63)
Unrealized gains (losses) on available-for-sale securities, net of hedging activities	53	(87)	(15)
Gains (losses) on remeasurement of own credit risk on financial liabilities designated at fair value	(55)	43	-
Gains on cash flow hedges	10	174	51
Hedging of unrealized (gains) losses on translation of net foreign operations	10	(167)	(144)
Total	<b>963</b>	950	732

(Canadian \$ in millions)	2016	2015	2014
<b>Components of Total Provision for Income Taxes</b>			
Canada: Current income taxes			
Federal	507	395	292
Provincial	289	215	200
	<b>796</b>	610	492
Canada: Deferred income taxes			
Federal	(120)	131	33
Provincial	(67)	71	29
	<b>(187)</b>	202	62
Total Canadian	<b>609</b>	812	554
Foreign: Current income taxes	106	36	(58)
Deferred income taxes	248	102	236
Total foreign	<b>354</b>	138	178
Total	<b>963</b>	950	732

Set out below is a reconciliation of our statutory tax rates and income taxes that would be payable at these rates to the effective income tax rates and provision for income taxes that we have recorded in our Consolidated Statement of Income:

(Canadian \$ in millions, except as noted)	2016		2015		2014	
Combined Canadian federal and provincial income taxes at the statutory tax rate	1,525	26.6%(1)	1,410	26.4%	1,382	26.4%
Increase (decrease) resulting from:						
Tax-exempt income from securities	(367)	(6.4)	(378)	(7.1)	(343)	(6.5)
Foreign operations subject to different tax rates	(2)	-	(39)	(0.7)	(69)	(1.3)
Change in tax rate for deferred income taxes	(2)	-	(15)	(0.3)	(4)	(0.1)
Income attributable to investments in associates and joint ventures	(47)	(0.8)	(44)	(0.8)	(39)	(0.8)
Adjustments in respect of current tax for prior periods	8	0.1	18	0.3	(1)	-
Other	(14)	(0.3)	(16)	(0.3)	(23)	(0.5)
Provision for income taxes and effective tax rate	<b>1,101</b>	<b>19.2%</b>	936	17.5%	903	17.2%

(1) The combined statutory tax rate changed during the year as a result of legislation that became substantively enacted with respect to the year. Certain comparative figures have been reclassified to conform with the current year's presentation.



## Components of Deferred Income Tax Balances

(Canadian \$ in millions)

	Allowance for credit losses	Employee future benefits	Deferred compensation benefits	Other comprehensive income	Tax loss carry- forwards	Other	Total
<b>Deferred Income Tax Assets (1)</b>							
As at October 31, 2014	758	374	419	(7)	1,418	584	3,546
Benefit (expense) to income statement	149	(1)	(16)	-	(300)	14	(154)
(Expense) to equity	-	-	-	(20)	-	-	(20)
Translation and other	112	9	28	(4)	206	76	427
As at October 31, 2015	1,019	382	431	(31)	1,324	674	3,799
Benefit (expense) to income statement	(149)	8	30	-	7	23	(81)
Benefit (expense) to equity	-	34	-	(51)	-	-	(17)
Translation and other	13	-	1	-	12	(5)	21
As at October 31, 2016	883	424	462	(82)	1,343	692	3,722
<b>Deferred Income Tax Liabilities (2)</b>							
		Premises and equipment	Pension benefits	Goodwill and intangible assets	Securities	Other	Total
As at October 31, 2014		(349)	(4)	(367)	(1)	16	(705)
Benefit (expense) to income statement		(71)	29	92	6	(135)	(79)
(Expense) to equity		-	(51)	-	-	-	(51)
Translation and other		(34)	(7)	(41)	4	11	(67)
As at October 31, 2015		(454)	(33)	(316)	9	(108)	(902)
Benefit (expense) to income statement		(160)	(3)	65	2	11	(85)
Benefit to equity		-	122	-	-	-	122
Translation and other		1	3	(2)	1	(1)	2
As at October 31, 2016		(613)	89	(253)	12	(98)	(863)

(1) Deferred tax assets of \$3,101 million and \$3,162 million as at October 31, 2016 and 2015, respectively, are presented on the balance sheet net by legal jurisdiction.

(2) Deferred tax liabilities of \$242 million and \$265 million as at October 31, 2016 and 2015, respectively, are presented on the balance sheet net by legal jurisdiction.

In fiscal 2016, we were reassessed by the Canada Revenue Agency (CRA) for additional income taxes in an amount of approximately \$76 million in respect of certain 2011 Canadian corporate dividends. In its reassessment, the CRA denied dividend deductions on the basis that the dividends were received as part of a dividend rental arrangement. The dividends to which the reassessment relates were received in transactions similar to those addressed in the 2015 Canadian Federal Budget, which introduced prospective rules that apply as of May 1, 2017 for existing arrangements. We remain of the view that our tax filing position was appropriate and intend to challenge the reassessment.

## Note 24: Earnings Per Share

Basic earnings per share is calculated by dividing net income attributable to our shareholders, after deducting preferred share dividends, by the daily average number of fully paid common shares outstanding throughout the year.

Diluted earnings per share is calculated in the same manner, with further adjustments made to reflect the dilutive impact of instruments convertible into our common shares.

The following table presents our basic and diluted earnings per share:

	2016	2015	2014
<b>Basic Earnings per Share</b> (Canadian \$ in millions, except as noted)			
Net income attributable to bank shareholders	4,622	4,370	4,277
Dividends on preferred shares	(150)	(117)	(120)
Net income available to common shareholders	4,472	4,253	4,157
Average number of common shares outstanding (in thousands)	644,049	644,916	645,860
Basic earnings per share (Canadian \$)	6.94	6.59	6.44
<b>Diluted Earnings per Share</b>			
Net income available to common shareholders	4,472	4,253	4,157
Stock options potentially exercisable (1)	8,708	9,472	10,832
Common shares potentially repurchased	(6,609)	(7,226)	(8,217)
Average diluted number of common shares outstanding (in thousands)	646,148	647,162	648,475
Diluted earnings per share (Canadian \$)	6.92	6.57	6.41

(1) In computing diluted earnings per share, we excluded average stock options outstanding of 1,351,582, 1,906,715 and 1,734,932 with weighted-average exercise prices of \$185.52, \$185.22 and \$235.07 for the years ended October 31, 2016, 2015 and 2014, respectively, as the average share price for the period did not exceed the exercise price.

## Note 25: Commitments, Guarantees, Pledged Assets, Provisions and Contingent Liabilities

In the normal course of business, we enter into a variety of contracts under which we may be required to make payments to reimburse a counterparty for a loss if a third party does not perform according to the terms of a contract or does not make payments when due under the terms of a debt instrument, and contracts under which we provide indirect guarantees of the indebtedness of another party, all of which are considered guarantees.

Guarantees that qualify as derivatives are accounted for in accordance with the policy for derivative instruments (see Note 8). For guarantees that do not qualify as derivatives, the liability is initially recorded at fair value, which is generally the fee received. Subsequently, guarantees are recorded at the higher of the initial fair value, less amortization to recognize any fee income earned over the period, and the best estimate of the amount required to settle the obligation. Any change in the liability is reported in our Consolidated Statement of Income.

In addition, we enter into a variety of commitments, including off-balance sheet credit instruments such as backstop liquidity facilities, securities lending, letters of credit, credit default swaps and commitments to extend credit, as a method of meeting the financial needs of our customers. These commitments include contracts where we 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, due to changes in an underlying interest rate, foreign exchange rate or other variable. The contractual amount of our commitments represents our maximum undiscounted potential exposure, before possible recoveries under recourse and collateral provisions. Collateral requirements for these instruments are consistent with collateral requirements for loans.

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.

We strive to limit credit risk by dealing only with counterparties that we believe are creditworthy, and we manage our credit risk for other credit instruments using the same credit risk process that is applied to loans and other credit assets.

The maximum amount payable related to our various commitments is as follows:

(Canadian \$ in millions)	2016	2015
<b>Financial Guarantees</b>		
Standby letters of credit	<b>16,853</b>	15,351
Credit default swaps (1) (2)	<b>981</b>	9,154
<b>Other Credit Instruments</b>		
Backstop liquidity facilities	<b>5,776</b>	5,041
Securities lending	<b>6,022</b>	6,081
Documentary and commercial letters of credit	<b>1,135</b>	1,101
Commitments to extend credit (3)	<b>121,499</b>	101,660
Other commitments	<b>4,379</b>	3,586
<b>Total</b>	<b>156,645</b>	141,974

(1) As at October 31, 2016, \$nil (\$8,000 million in 2015) of the credit default swaps outstanding relates to our credit protection vehicle. The vehicle redeemed all outstanding medium-term notes and the credit default swaps matured. There is no remaining activity in this vehicle.

(2) The fair value of the related derivative liabilities included in our Consolidated Balance Sheet was \$32 million as at October 31, 2016 (\$48 million in 2015).

(3) Commitments to extend credit exclude personal lines of credit and credit cards that are unconditionally cancellable at our discretion.

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

### Financial Guarantees

Standby letters of credit represent our obligation to make payments to third parties on behalf of customers if they are unable to make the required payments or meet other contractual requirements. The majority have a term of one year or less. Collateral requirements for standby letters of credit and guarantees are consistent with our collateral requirements for loans. Standby letters of credit and guarantees include our guarantee of a subsidiary's debt directly provided to a third party.

Written credit default swaps require us to compensate a counterparty following the occurrence of a credit event in relation to a specified reference obligation, such as a bond or a loan. The terms of these contracts range from less than one year to 10 years. Refer to Note 8 for details.

### Other Credit Instruments

Backstop liquidity facilities are provided to asset-backed commercial paper ("ABCP") programs administered by either us or third parties as an alternative source of financing in the event that such programs are unable to access ABCP markets or when predetermined performance measures of the financial assets held by these programs are not met. The terms of the backstop liquidity facilities do not require us to advance money to these programs in the event of bankruptcy of the borrower. The facilities' terms are generally no longer than one year, but can be several years.

We lend eligible customers' securities to third-party borrowers who have been evaluated for credit risk using the same credit risk process that is applied to loans and other credit assets. In connection with these activities, we provide an indemnification to clients against losses resulting from the failure of the borrower to return loaned securities when due. All borrowings are fully collateralized with cash or marketable securities. As securities are loaned, we require borrowers to maintain collateral which is equal to or in excess of 100% of the fair value of the securities borrowed. The collateral is revalued on a daily basis.

Documentary and commercial letters of credit represent our agreement to honour drafts presented by a third party upon completion of specific activities.

Commitments to extend credit represent our commitment to our customers to grant them credit in the form of loans or other financings for specific amounts and maturities, subject to their meeting certain conditions.

As a participant in merchant banking activities, we enter into commitments to fund external private equity funds and investments in equity and debt securities at market value at the time the commitments are drawn. In addition, we act as underwriter for certain new issuances under which we alone or together with a syndicate of financial institutions purchase the new issue for resale to investors.

## Indemnification Agreements

In the normal course of operations, we enter into various agreements that provide general indemnifications. These indemnifications typically occur in connection with sales of assets, securities offerings, service contracts, membership agreements, clearing arrangements, derivative contracts and leasing transactions. Based on historical experience, we expect the risk of loss to be remote.

## Exchange and Clearinghouse Guarantees

We are a member of several securities and futures exchanges and clearinghouses. Membership in certain of these organizations may require us to pay a pro rata share of the losses incurred by the organization in the event of default of another member. It is difficult to estimate our maximum exposure under these membership agreements, since this would require an assessment of future claims that may be made against us that have not yet occurred. Based on historical experience, we expect the risk of loss to be remote.

## Pledged Assets

In the normal course of business, we pledge assets as security for various liabilities that we incur.

The following tables summarize our pledged assets and collateral, and the activities to which they relate:

(Canadian \$ in millions)	2016	2015
<b>Bank Assets</b>		
Cash and securities (1)		
Issued or guaranteed by the government of Canada	7,502	14,712
Issued or guaranteed by a Canadian province, municipality or school corporation	6,018	5,343
Other	52,164	42,625
Mortgages, securities borrowed or purchased under resale agreements and other	82,667	72,004
	<b>148,351</b>	134,684
(Canadian \$ in millions)	2016	2015
<b>Assets pledged to:</b>		
Clearing systems, payment systems and depositories	1,518	1,626
Foreign governments and central banks	3	3
Obligations related to securities sold under repurchase agreements	29,014	25,268
Securities borrowing and lending	49,218	46,678
Derivatives transactions	7,818	12,798
Securitization	26,530	27,373
Covered bonds	20,285	12,301
Other	13,965	8,637
Total pledged assets and collateral (1)	<b>148,351</b>	134,684

(1) Excludes cash pledged with central banks disclosed as restricted cash in Note 2.

## Collateral

When entering into trading activities such as purchases under resale agreements, securities borrowing and lending activities or financing and for certain derivative transactions, we require our counterparties to provide us with collateral that will protect us from losses in the event of their default. Collateral transactions (received or pledged) are typically conducted under terms that are usual and customary in standard trading activities. If there is no default, the securities or their equivalents must be returned to or returned by the counterparty at the end of the contract.

The fair value of counterparty collateral that we are permitted to sell or repledge (in the absence of default by the owner of the collateral) was \$115,895 million as at October 31, 2016 (\$111,088 million as at October 31, 2015). The fair value of collateral that we have sold or repledged was \$67,917 million as at October 31, 2016 (\$60,245 million as at October 31, 2015).

## Lease Commitments

We have entered into a number of non-cancellable leases for premises and equipment. Our computer and software leases are typically fixed for one term and our premises leases have various renewal options and rights. Our total contractual rental commitments as at October 31, 2016 were \$1,985 million. The commitments for each of the next five years and thereafter are \$357 million for 2017, \$317 million for 2018, \$272 million for 2019, \$243 million for 2020, \$194 million for 2021 and \$602 million thereafter. Included in these amounts are commitments related to 857 leased branch locations as at October 31, 2016.

## Provisions and Contingent Liabilities

Provisions are recognized when we have a legal or constructive obligation as a result of past events, such as contractual commitments, legal or other obligations where we can reliably estimate the obligation, and it is probable we will be required to settle the obligation. We recognize as a provision the best estimate of the amount required to settle the obligations as of the balance sheet date, taking into account the risks and uncertainties surrounding the obligations.

Changes in the provision balance during the year were as follows:

(Canadian \$ in millions)	2016	2015
Balance at beginning of year	211	195
Additional provisions/increase in provisions	274	268
Provisions utilized	(185)	(230)
Amounts reversed	(34)	(32)
Exchange differences and other movements	2	10
Balance at end of year	268	211

Contingent liabilities are potential obligations arising from past events, the existence of which will only be confirmed by the occurrence or non-occurrence of one or more future events not wholly within our control.

## Legal Proceedings

The bank and its subsidiaries are party to legal proceedings, including regulatory investigations, in the ordinary course of business. While there is inherent difficulty in predicting the outcome of these proceedings, management does not expect the outcome of any of these proceedings, individually or in the aggregate, to have a material adverse effect on the consolidated financial position or the results of operations of the bank.

BMO Nesbitt Burns Inc., an indirect subsidiary of the bank, has been named as a defendant in several individual actions and proposed class actions in Canada and the United States brought on behalf of shareholders of Bre-X Minerals Ltd. Many of the actions have been resolved as to BMO Nesbitt Burns Inc., including two during the year ended October 31, 2010. Management believes that there are strong defences to the remaining claims and will vigorously defend them.

## Note 26: Operating and Geographic Segmentation

### Operating Groups

We conduct our business through three operating groups, each of which has a distinct mandate. We determine our operating groups based on our management structure and therefore these groups, and the results attributed to them, may not be comparable with those of other financial services companies. We evaluate the performance of our groups using reported and adjusted measures such as net income, revenue growth, return on equity, and non-interest expense-to-revenue (productivity) ratio, as well as operating leverage.

### Personal and Commercial Banking

Personal and Commercial Banking ("P&C") is comprised of two operating segments: Canadian Personal and Commercial Banking and U.S. Personal and Commercial Banking.

#### *Canadian Personal and Commercial Banking*

Canadian Personal and Commercial Banking ("Canadian P&C") provides a full range of financial products and services to eight million customers. Personal Banking provides financial solutions for everyday banking, financing, investing, credit card and creditor insurance needs. Commercial banking provides our small business and commercial banking customers with a broad suite of integrated commercial and capital markets products, as well as financial advisory services.

#### *U.S. Personal and Commercial Banking*

U.S. Personal and Commercial Banking ("U.S. P&C") offers a broad range of products and services. Our retail and small and mid-sized business banking customers are served through our branches, contact centres, online and mobile banking platforms and automated banking machines across eight states.

### Wealth Management

BMO's group of wealth management businesses serves a full range of client segments from mainstream to ultra high net worth and institutional, with a broad offering of wealth management products and services, including insurance products. Wealth Management ("WM") is a global business with an active presence in markets across Canada, the United States, Europe and Asia.

### BMO Capital Markets

BMO Capital Markets ("BMO CM") is a North American-based financial services provider offering a complete range of products and services to corporate, institutional and government clients. Through our Investment and Corporate Banking and Trading Products lines of business, we operate in 30 locations around the world, including 16 offices in North America.

### Corporate Services

Corporate Services consists of Corporate Support Areas ("CSAs"), including Technology and Operations ("T&O"). CSAs provide enterprise-wide expertise and governance support in a variety of areas, including strategic planning, risk management, finance, legal and regulatory compliance, marketing, communications and human resources. T&O manages, maintains and provides governance over information technology, operations services, real estate and procurement for the bank.

The costs of these CSAs and T&O services are largely transferred to the three client operating groups (P&C, WM and BMO CM), with remaining related amounts retained in Corporate Services results. As such, Corporate Services operating results largely reflect the impact of residual treasury and asset liability management activities, the elimination of taxable equivalent adjustments, the results from certain impaired real estate secured assets, certain purchased loan accounting impacts, residual unallocated expenses, certain acquisition integration costs, restructuring costs, and adjustments to the collective allowance for credit losses.

Corporate Services results prior to 2016 reflected certain items in respect of the 2011 purchased loan portfolio, including recognition of the reduction in the credit mark that is reflected in net interest income over the term of the purchased loans and provisions and recoveries of credit

losses on the purchased loan portfolio. Beginning in the first quarter of 2016, the reduction in the credit mark that is reflected in net interest income and the provision for credit losses on the purchased performing loan portfolio are being recognized in U.S. P&C, consistent with the accounting for the acquisition of BMO TF, and given that these amounts have reduced substantially in size. Results for prior periods have not been reclassified. Recoveries or provisions on the 2011 purchased credit impaired loan portfolio continue to be recognized in Corporate Services. Purchased loan accounting impacts related to BMO TF are recognized in U.S. P&C. Also effective in the first quarter of 2016, income from equity investments has been reclassified from net interest income to non-interest revenue in Canadian P&C, Wealth Management and Corporate Services. Results from prior periods have been reclassified.

### **Basis of Presentation**

The results of these operating groups are based on our internal financial reporting systems. The accounting policies used in these segments are generally consistent with those followed in the preparation of our consolidated financial statements, as disclosed in Note 1 and throughout the consolidated financial statements. A notable accounting measurement difference is the taxable equivalent basis adjustment as described below.

Periodically, certain business lines and units within the business lines are transferred between client and corporate support groups to more closely align our organizational structure with our strategic priorities. In addition, revenue and expense allocations are updated to more accurately align with current experience. Results for prior periods are restated to conform to the current year's presentation.

#### *Taxable Equivalent Basis*

We analyze revenue on a taxable equivalent basis ("teb") 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 comparison of income between taxable and tax-exempt sources. The offset to the groups' teb adjustments is reflected in Corporate Services revenue and provision for income taxes.

#### *Inter-Group Allocations*

Various estimates and allocation methodologies are used in the preparation of the operating groups' financial information. We allocate expenses directly related to earning revenue to the groups that earned the related revenue. Expenses not directly related to earning revenue, such as overhead expenses, are allocated to operating groups using allocation formulas applied on a consistent basis. Operating group net interest income reflects internal funding charges and credits on the groups' assets, liabilities and capital, at market rates, taking into account relevant terms and currency considerations. The offset of the net impact of these charges and credits is reflected in Corporate Services.

## Geographic Information

We operate primarily in Canada and the United States, but we also have operations in the United Kingdom, Europe, the Caribbean and Asia, which are grouped in other countries. We allocate our results by geographic region based on the location of the unit responsible for managing the related assets, liabilities, revenues and expenses, except for the consolidated provision for credit losses, which is allocated based upon the country of ultimate risk. Our results and average assets, grouped by operating segment and geographic region, are as follows:

(Canadian \$ in millions)	Canadian P&C	U.S. P&C	Wealth Management	BMO CM	Corporate Services	Total	Canada	United States	Other countries
<b>2016</b>									
Net interest income (1)	5,060	3,528	614	1,509	(839)	9,872	5,680	3,944	248
Non-interest revenue	1,908	1,121	5,274	2,853	59	11,215	7,168	2,903	1,144
Total Revenue	6,968	4,649	5,888	4,362	(780)	21,087	12,848	6,847	1,392
Provision for credit losses	542	257	9	81	(74)	815	611	204	-
Insurance claims, commissions and changes in policy benefit liabilities	-	-	1,543	-	-	1,543	1,288	-	255
Amortization	276	433	233	105	-	1,047	498	474	75
Non-interest expense	3,183	2,470	3,102	2,471	724	11,950	6,569	4,619	762
Income before taxes and non-controlling interest in subsidiaries	2,967	1,489	1,001	1,705	(1,430)	5,732	3,882	1,550	300
Provision for income taxes	760	408	239	437	(743)	1,101	603	409	89
Reported net income (loss)	2,207	1,081	762	1,268	(687)	4,631	3,279	1,141	211
Non-controlling interest in subsidiaries	-	-	2	-	7	9	7	-	2
Net Income (loss) attributable to bank shareholders	2,207	1,081	760	1,268	(694)	4,622	3,272	1,141	209
Average Assets	208,017	105,907	30,642	303,273	59,283	707,122	420,155	260,018	26,949
(Canadian \$ in millions)	Canadian P&C	U.S. P&C	Wealth Management	BMO CM	Corporate Services	Total	Canada	United States	Other countries
<b>2015</b>									
Net interest income (1)	4,806	2,836	565	1,332	(776)	8,763	5,467	3,182	114
Non-interest revenue	1,834	780	5,198	2,535	279	10,626	6,297	2,720	1,609
Total Revenue	6,640	3,616	5,763	3,867	(497)	19,389	11,764	5,902	1,723
Provision for credit losses	496	119	7	26	(36)	612	561	52	(1)
Insurance claims, commissions and changes in policy benefit liabilities	-	-	1,254	-	-	1,254	624	-	630
Amortization	236	223	231	98	-	788	428	284	76
Non-interest expense	3,103	2,167	3,126	2,385	613	11,394	6,300	4,376	718
Income before taxes and non-controlling interest in subsidiaries	2,805	1,107	1,145	1,358	(1,074)	5,341	3,851	1,190	300
Provision for income taxes	700	278	295	329	(666)	936	651	240	45
Reported net income (loss)	2,105	829	850	1,029	(408)	4,405	3,200	950	255
Non-controlling interest in subsidiaries	-	-	5	-	30	35	30	-	5
Net Income (loss) attributable to bank shareholders	2,105	829	845	1,029	(438)	4,370	3,170	950	250
Average Assets	197,209	88,873	29,147	289,936	59,226	664,391	402,199	234,475	27,717
(Canadian \$ in millions)	Canadian P&C	U.S. P&C	Wealth Management	BMO CM	Corporate Services	Total	Canada	United States	Other countries
<b>2014</b>									
Net interest income (1)	4,654	2,484	537	1,175	(558)	8,292	5,328	2,838	126
Non-interest revenue	1,752	673	4,801	2,539	166	9,931	6,684	2,329	918
Total Revenue	6,406	3,157	5,338	3,714	(392)	18,223	12,012	5,167	1,044
Provision for credit losses	528	177	(3)	(18)	(123)	561	533	30	(2)
Insurance claims, commissions and changes in policy benefit liabilities	-	-	1,505	-	-	1,505	1,230	-	275
Amortization	229	223	193	102	-	747	424	279	44
Non-interest expense	2,952	1,858	2,647	2,247	470	10,174	5,868	3,812	494
Income before taxes and non-controlling interest in subsidiaries	2,697	899	996	1,383	(739)	5,236	3,957	1,046	233
Provision for income taxes	682	243	216	309	(547)	903	680	213	10
Reported net income (loss)	2,015	656	780	1,074	(192)	4,333	3,277	833	223
Non-controlling interest in subsidiaries	-	-	3	-	53	56	54	-	2
Net Income (loss) attributable to bank shareholders	2,015	656	777	1,074	(245)	4,277	3,223	833	221
Average Assets	190,529	74,357	24,980	259,324	44,738	593,928	370,701	200,901	22,326

(1) Operating groups report on a taxable equivalent basis – see Basis of Presentation section. Certain comparative figures have been reclassified to conform with the current year's presentation.



## Note 27: Significant Subsidiaries

As at October 31, 2016, the bank, either directly or indirectly through its subsidiaries, controls the following significant operating subsidiaries.

	Head or principal office	Book value of shares owned by the bank (Canadian \$ in millions)
Bank of Montreal Capital Markets (Holdings) Limited	London, England	249
BMO Capital Markets Limited	London, England	
Pyrford International Limited	London, England	
Bank of Montreal (China) Co. Ltd.	Beijing, China	440
Bank of Montreal Holding Inc. and subsidiaries, including:	Calgary, Canada	21,784
BMO Investments Limited	Hamilton, Bermuda	
BMO Reinsurance Limited	St. Michaels, Barbados	
BMO Nesbitt Burns Holdings Corporation	Toronto, Canada	
BMO Nesbitt Burns Inc.	Toronto, Canada	
BMO Private Investment Counsel Inc.	Toronto, Canada	
BMO Asset Management Inc.	Toronto, Canada	
BMO Capital Markets Real Estate Inc.	Toronto, Canada	
BMO Nesbitt Burns Securities Ltd.	Toronto, Canada	
BMO Private Equity (Canada) Inc. and subsidiaries	Toronto, Canada	
BMO Estate Insurance Advisory Services Inc.	Toronto, Canada	
BMO Investments Inc.	Toronto, Canada	
BMO Global Tax Advantage Fund Inc.	Toronto, Canada	
BMO InvestorLine Inc.	Toronto, Canada	
BMO Service Inc.	Toronto, Canada	
Bank of Montreal Ireland plc	Dublin, Ireland	979
Bank of Montreal Mortgage Corporation	Calgary, Canada	2,799
BMO Mortgage Corp.	Vancouver, Canada	
BMO Financial Corp. and subsidiaries, including:	Chicago, United States	19,835
BMO Asset Management Corp. and subsidiaries	Chicago, United States	
Money, Inc.	Toronto, Canada	
BMO Capital Markets Corp.	New York, United States	
BMO Harris Bank National Association and subsidiaries	Chicago, United States	
BMO Harris Investment Company LLC.	Las Vegas, United States	
BMO Harris Central National Association	Roselle, United States	
BMO Harris Financial Advisors, Inc.	Chicago, United States	
BMO Harris Financing, Inc. and subsidiaries	Chicago, United States	
BMO Private Equity (U.S.), Inc. and subsidiaries	Chicago, United States	
CTC my CFO, LLC	Palo Alto, United States	
Stoker Ostler Wealth Advisors, Inc.	Scottsdale, United States	
BMO Global Asset Management (Europe) Limited	London, England	290
F&C Asset Management plc and subsidiaries, including:	London, England	
F&C Group (Holdings) Limited	London, England	
F&C Netherlands BV	Amsterdam, Netherlands	
F&C Portugal, Gestão de Patrimonios, S.A.	Lisbon, Portugal	
BMO Real Estate Partners LLP. and subsidiaries	London, England	
BMO Life Insurance Company	Toronto, Canada	872
BMO Life Holdings (Canada), ULC	Halifax, Canada	
BMO Life Assurance Company	Toronto, Canada	
BMO Trust Company	Toronto, Canada	1,024
BMO Trustee Asia Limited	Hong Kong, China	2
BMO Corporate Services Asia Limited	Hong Kong, China	
LGM (Bermuda) Limited	Hamilton, Bermuda	91
Lloyd George Investment Management (Bermuda) Limited	Hamilton, Bermuda	
BMO Global Asset Management (Asia) Limited	Hong Kong, China	
LGM Investments Limited	London, England	

### Significant Restrictions

Our ability to transfer funds between our subsidiaries may be restricted by statutory, contractual, capital and regulatory requirements. Restrictions include:

- Assets pledged as security for various liabilities we incur. Refer to Note 25 for details.
- Assets of our consolidated structured entities that are held for the benefit of the note holders. Refer to Note 7 for details.
- Assets held by our insurance subsidiaries. Refer to Note 14 for details.
- Regulatory and statutory requirements that reflect capital and liquidity requirements. Refer to Note 20 for details.
- Funds required to be held with central banks. Refer to Note 2 for details.

## Note 28: Related Party Transactions

Related parties include subsidiaries, associates, joint ventures, key management personnel and employee future benefit plans. Transactions with our subsidiaries are eliminated on consolidation, and are not disclosed as related party transactions.

### Key Management Personnel Compensation

Key management personnel is defined as those persons having authority and responsibility for planning, directing and/or controlling the activities of an entity, being the members of our Board of Directors ("directors") and certain senior executives.

The following table presents the compensation of key management personnel.

(Canadian \$ in millions)	2016	2015
Base salary and incentives	22	20
Post-employment benefits	2	2
Share-based payments (1)	32	27
Total key management personnel compensation	56	49

(1) Amounts included in share-based payments are the fair values of awards granted in the year.

We offer senior executives preferential interest rates on credit card balances, a fee-based subsidy on annual credit card fees, and a select suite of customer loan and mortgage products at rates normally accorded to preferred customers. At October 31, 2016, loans to key management personnel totalled \$7 million (\$15 million in 2015).

Directors receive a specified amount of their annual retainers in deferred stock units. Until a director's shareholdings (including deferred stock units) are eight times greater than their annual retainer, they are required to take 100% of their annual retainer and other fees in the form of either our common shares or deferred stock units. They may elect to receive the remainder of such retainer fees and other remuneration in cash, common shares or deferred stock units.

Directors of our wholly owned subsidiary, BMO Financial Corp., are required to take a specified minimum amount of their annual retainers and other fees in the form of deferred stock units.

### Joint Ventures and Associates

We provide banking services to our joint ventures and associates on the same terms offered to our customers for these services. Our investment in a joint venture of which we own 50% totalled \$187 million as at October 31, 2016 (\$256 million in 2015). Our investments in associates over which we exert significant influence totalled \$390 million as at October 31, 2016 (\$389 million in 2015).

The following table presents transactions with our joint ventures and associates.

(Canadian \$ in millions)	2016	2015
Loans	323	265
Deposits	205	180
Fees paid for services received	83	99
Interest income, loans	5	5
Interest expense	3	3

Subsequent to year end, one of our joint venture investments entered into an agreement to sell a subsidiary. This sale is expected to close by December 31, 2016 and will generate a gain on sale for the parent entity. We will record our share of the equity method earnings in our first quarter results, which will include our share of the gain on sale, estimated to be \$170 million.

## Note 29: Contractual Maturities of Assets and Liabilities and Off-Balance Sheet Commitments

The tables below show the remaining contractual maturity 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. We forecast asset and liability cash flows, both under normal market conditions and under 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. For further details, see the blue-tinted font portion of the Liquidity and Funding Risk section of Management's Discussion and Analysis.

(Canadian \$ in millions)

										2016
	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
<b>On-Balance Sheet Financial Instruments</b>										
<b>Assets</b>										
Cash and cash equivalents	30,745	-	-	-	-	-	-	-	908	31,653
Interest bearing deposits with banks	2,930	728	421	363	7	-	-	-	-	4,449
Securities										
Trading securities	412	1,449	1,058	2,794	2,645	6,507	7,122	16,975	45,496	84,458
Available-for-sale securities	826	740	1,401	431	376	5,771	19,695	24,808	1,615	55,663
Held-to-maturity securities	-	-	294	-	350	2,841	1,270	4,210	-	8,965
Other securities	-	-	-	-	-	8	54	13	824	899
Total securities	1,238	2,189	2,753	3,225	3,371	15,127	28,141	46,006	47,935	149,985
Securities borrowed or purchased under resale agreements	51,085	10,993	4,167	338	-	63	-	-	-	66,646
Loans										
Residential mortgages	1,001	1,212	3,347	4,772	3,930	24,555	64,044	9,416	-	112,277
Consumer instalment and other personal	371	374	791	828	887	5,431	24,041	8,542	23,415	64,680
Credit cards	-	-	-	-	-	-	-	-	8,101	8,101
Businesses and governments	11,473	5,904	7,155	6,727	20,547	18,140	63,049	11,380	31,222	175,597
Allowance for credit losses	-	-	-	-	-	-	-	-	(1,925)	(1,925)
Total loans and acceptances, net of allowance	12,845	7,490	11,293	12,327	25,364	48,126	151,134	29,338	60,813	358,730
Other Assets										
Derivative instruments	2,508	4,483	1,443	1,480	1,804	3,826	9,796	13,843	-	39,183
Customers' liability under acceptances	11,230	1,748	42	-	1	-	-	-	-	13,021
Premises and equipment	-	-	-	-	-	-	-	-	2,147	2,147
Goodwill	-	-	-	-	-	-	-	-	6,381	6,381
Intangible assets	-	-	-	-	-	-	-	-	2,178	2,178
Current tax assets	-	-	-	-	-	-	-	-	906	906
Deferred tax assets	-	-	-	-	-	-	-	-	3,101	3,101
Other	1,274	453	106	18	4	3	-	4,324	3,373	9,555
Total other assets	15,012	6,684	1,591	1,498	1,809	3,829	9,796	18,167	18,086	76,472
Total Assets	113,855	28,084	20,225	17,751	30,551	67,145	189,071	93,511	127,742	687,935

(Canadian \$ in millions)

2016

	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
<b>Liabilities and Equity</b>										
Deposits (1)										
Banks	11,940	12,327	2,239	1,488	464	500	-	-	5,313	34,271
Businesses and governments	33,833	29,737	15,216	13,174	8,359	15,499	34,103	13,006	113,287	276,214
Individuals	2,733	5,072	6,082	5,632	7,252	8,684	16,198	2,706	108,528	162,887
Total deposits	48,506	47,136	23,537	20,294	16,075	24,683	50,301	15,712	227,128	473,372
Other liabilities										
Derivative instruments	1,956	3,064	2,315	1,373	1,240	5,434	9,303	13,542	-	38,227
Acceptances	11,230	1,748	42	-	1	-	-	-	-	13,021
Securities sold but not yet purchased	25,106	-	-	-	-	-	-	-	-	25,106
Securities lent or sold under repurchase agreements	38,004	2,532	182	-	-	-	-	-	-	40,718
Current tax liabilities	-	-	-	-	-	-	-	-	81	81
Deferred tax liabilities	-	-	-	-	-	-	-	-	242	242
Securitization and liabilities related to structured entity	7	1,881	589	648	876	3,248	9,756	5,372	-	22,377
Other	8,651	1,152	701	22	4,809	1,704	140	2,444	8,401	28,024
Total other liabilities	84,954	10,377	3,829	2,043	6,926	10,386	19,199	21,358	8,724	167,796
Subordinated debt	-	-	100	-	-	-	-	-	4,339	4,439
Total Equity	-	-	-	-	-	-	-	-	42,328	42,328
Total Liabilities and Equity	133,460	57,513	27,466	22,337	23,001	35,069	69,500	37,070	282,519	687,935

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

(Canadian \$ in millions)

2016

	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
<b>Off-Balance Sheet Commitments</b>										
Commitments to extend credit (1)	2,267	7,896	3,776	8,293	12,289	16,236	75,998	3,013	-	129,768
Operating leases	30	61	90	88	88	317	709	602	-	1,985
Securities lending	6,022	-	-	-	-	-	-	-	-	6,022
Purchase obligations	45	96	128	132	129	148	172	99	-	949

(1) 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.

(Canadian \$ in millions)										2015
	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
<b>On-Balance Sheet Financial Instruments</b>										
<b>Assets</b>										
Cash and cash equivalents	39,438	-	-	-	-	-	-	-	857	40,295
Interest bearing deposits with banks	5,077	1,728	411	94	70	2	-	-	-	7,382
Securities										
Trading securities	954	1,432	633	3,900	2,241	3,639	5,993	15,940	37,728	72,460
Available-for-sale securities	1,260	1,198	995	590	2,434	4,641	18,699	16,476	1,713	48,006
Held-to-maturity securities	66	96	367	311	318	658	3,721	3,895	-	9,432
Other securities	3	-	-	-	-	-	61	13	943	1,020
Total securities	2,283	2,726	1,995	4,801	4,993	8,938	28,474	36,324	40,384	130,918
Securities borrowed or purchased under resale agreements	44,959	17,564	4,400	714	389	40	-	-	-	68,066
Loans										
Residential mortgages	1,189	2,022	4,014	4,758	4,567	17,807	61,913	9,648	-	105,918
Consumer instalment and other personal	475	619	1,334	1,509	1,513	3,844	23,578	9,228	23,498	65,598
Credit cards	-	-	-	-	-	-	-	-	7,980	7,980
Businesses and governments	6,406	8,895	5,929	6,482	16,426	16,118	45,541	8,203	31,076	145,076
Allowance for credit losses	-	-	-	-	-	-	-	-	(1,855)	(1,855)
Total loans and acceptances, net of allowance	8,070	11,536	11,277	12,749	22,506	37,769	131,032	27,079	60,699	322,717
Other Assets										
Derivative instruments	3,611	2,862	1,043	1,827	752	4,961	9,591	13,591	-	38,238
Customers' liability under acceptances	8,607	2,692	8	-	-	-	-	-	-	11,307
Premises and equipment	-	-	-	-	-	-	-	-	2,285	2,285
Goodwill	-	-	-	-	-	-	-	-	6,069	6,069
Intangible assets	-	-	-	-	-	-	-	-	2,208	2,208
Current tax assets	-	-	-	-	-	-	-	-	561	561
Deferred tax assets	-	-	-	-	-	-	-	-	3,162	3,162
Other	1,249	445	47	4	-	-	12	4,347	2,569	8,673
Total other assets	13,467	5,999	1,098	1,831	752	4,961	9,603	17,938	16,854	72,503
Total Assets	113,294	39,553	19,181	20,189	28,710	51,710	169,109	81,341	118,794	641,881

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

(Canadian \$ in millions)

2015

	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
<b>Liabilities and Equity</b>										
<b>Deposits (1)</b>										
Banks	12,548	7,370	4,050	1,195	1,172	101	-	-	6,173	32,609
Businesses and governments	20,505	38,097	21,001	7,270	10,962	14,497	27,112	10,891	107,809	258,144
Individuals	1,632	3,457	5,392	3,872	6,086	8,787	15,135	1,784	101,271	147,416
<b>Total deposits</b>	<b>34,685</b>	<b>48,924</b>	<b>30,443</b>	<b>12,337</b>	<b>18,220</b>	<b>23,385</b>	<b>42,247</b>	<b>12,675</b>	<b>215,253</b>	<b>438,169</b>
<b>Other liabilities</b>										
Derivative instruments	2,586	3,858	1,574	3,493	1,259	6,030	11,637	12,202	-	42,639
Acceptances	8,607	2,692	8	-	-	-	-	-	-	11,307
Securities sold but not yet purchased	21,226	-	-	-	-	-	-	-	-	21,226
Securities lent or sold under repurchase agreements	35,599	3,990	121	104	77	-	-	-	-	39,891
Current tax liabilities	-	-	-	-	-	-	-	-	102	102
Deferred tax liabilities	-	-	-	-	-	-	-	-	265	265
Securitization and liabilities related to structured entity	2	880	446	2,514	337	3,864	8,834	4,796	-	21,673
Other	8,148	319	30	15	185	1,071	3,181	2,201	7,130	22,280
<b>Total other liabilities</b>	<b>76,168</b>	<b>11,739</b>	<b>2,179</b>	<b>6,126</b>	<b>1,858</b>	<b>10,965</b>	<b>23,652</b>	<b>19,199</b>	<b>7,497</b>	<b>159,383</b>
Subordinated debt	-	-	-	-	-	100	-	4,316	-	4,416
<b>Total Equity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>39,913</b>	<b>39,913</b>
<b>Total Liabilities and Equity</b>	<b>110,853</b>	<b>60,663</b>	<b>32,622</b>	<b>18,463</b>	<b>20,078</b>	<b>34,450</b>	<b>65,899</b>	<b>36,190</b>	<b>262,663</b>	<b>641,881</b>

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

(Canadian \$ in millions)

2015

	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
<b>Off-Balance Sheet Commitments</b>										
Commitments to extend credit (1)	1,815	6,651	3,994	5,946	6,549	15,542	63,885	2,319	-	106,701
Operating leases	29	60	89	88	87	328	721	675	-	2,077
Securities lending	6,081	-	-	-	-	-	-	-	-	6,081
Purchase obligations	54	103	153	160	154	467	302	127	-	1,520

(1) 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.

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



# 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.

**Allowance for Credit Losses** represents an amount deemed adequate by management to absorb credit-related losses on loans and acceptances and other credit instruments. Allowances for credit losses can be specific or collective and are recorded on the balance sheet as a deduction from loans and acceptances or, as they relate to credit instruments, as other liabilities. Pages 91, 113, 153

**Assets under Administration and 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 physical assets such as trade receivables, and is generally used for short-term financing needs. Pages 77, 104

**Average Earning Assets** represents the daily or monthly average balance of deposits with other banks and loans and securities, over a one-year period.

**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.

**Business Risk** arises from the specific business activities of an enterprise and the effects these could have on its earnings. Page 111

**Collective Allowance** is maintained to cover impairment in the existing portfolio for loans that have not yet been individually identified as impaired. Our approach to establishing and maintaining the collective allowance is based on the requirements of IFRS, considering guidelines issued by our regulator, OSFI. The collective allowance is assessed on a quarterly basis and a number of factors are considered when determining its level, including the long-run expected loss amount and management's credit judgment with respect to current macro-economic and portfolio conditions. Pages 42, 91, 154

**Common Equity Tier 1 (CET1) capital** is comprised of common shareholders' equity less deductions for goodwill, intangible assets, defined benefit pension assets, certain deferred tax assets and certain other items. Pages 71, 184

**Common Equity Tier 1 Ratio** reflects CET1 capital divided by risk-weighted assets for CET1. Pages 35, 71, 73, 185

**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 Support Areas (CSAs)** provide enterprise-wide expertise and governance in a variety of areas including Technology and Operations (T&O), strategic planning, risk management, finance, legal and regulatory compliance, marketing, communications and human resources. Pages 62, 84

**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. Pages 88, 156

**Derivatives** are contracts with a value that is "derived" from movements in 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 attributable to bank shareholders, after the deduction of preferred dividends, by the average number of common shares outstanding. Diluted EPS, which is our 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. Pages 34, 194

**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. Page 99

**Economic Capital** is an expression of the enterprise's capital demand requirement relative to the bank's

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 across several different risk types 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 and business, based on a one-year time horizon using a defined confidence level. Pages 74, 87

**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. Page 99

**Efficiency Ratio (or Expense-to-Revenue Ratio)** is a key 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 43

**Environmental and Social Risk** is the potential for loss or damage to BMO's reputation resulting from environmental or social concerns related to BMO or its customers. Environmental and social risk is often associated with credit, operational and reputation risk. 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.

**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 margining. Page 161

**Hedging** is a risk management technique used to neutralize, manage or offset interest rate, foreign currency, equity, commodity or credit 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.

**Innovative Tier 1 Capital** is a form of Tier 1 capital issued by structured entities that can be included in calculating a bank's Tier 1 Capital Ratio,

Total Capital Ratio and Leverage Ratio. Under Basel III, Innovative Tier 1 Capital is non-qualifying and is part of the grandfathered capital being phased out between 2013 and 2022.

**Insurance Risk** is the potential for loss as a result of actual experience being different 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 risk is inherent in all our insurance products, including annuities and life, accident and sickness, and creditor insurance, as well as in our reinsurance business. Page 109

**Legal and Regulatory Risk** is the potential for loss or harm that arises from legislation, contracts, non-contractual rights and obligations, and disputes. This includes the risks of failing 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 our reputation. Page 110

**Leverage Ratio** is defined as Tier 1 capital divided by the sum of on-balance sheet items and specified off-balance sheet items, net of specified adjustments. Page 71

**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 fall due. Financial commitments include liabilities to depositors and suppliers, and lending, investment and pledging commitments. Pages 100, 158

**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 our trading book. Pages 95, 158

**Mark-to-Market** represents the valuation of financial instruments at market rates as of the balance sheet date, where required by accounting rules.

**Model Risk** is the potential for adverse consequences following from decisions based on incorrect or misused model outputs. These adverse consequences can include financial loss, poor business decision-making or damage to reputation. Page 107

**Net Interest Income** is comprised of earnings on assets, such as loans and securities, including interest and dividend income and BMO's share of income from investments accounted for using the equity method of accounting, less interest expense paid on liabilities, such as deposits. Page 39

**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 total assets. Page 39

**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. Page 35

**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 43

**Operational Risk** is the potential for loss resulting from inadequate or failed internal processes or systems, human interactions or external events, but excludes business risk, credit risk and market 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. Page 161

**Provision for Credit Losses** 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. Pages 42, 91, 154

**Reputation Risk** is the potential for a negative impact on BMO that results from the deterioration of BMO's reputation. Potential negative impacts include revenue loss, a decline in customer loyalty, litigation, regulatory sanctions or additional regulatory oversight, and a decline in BMO's share price. Page 112

**Return on Equity or Return on Common Shareholders' Equity (ROE)** is calculated as net income, less non-controlling interest in subsidiaries and preferred dividends, 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 35

**Return on Tangible Common Equity (ROTCE)** is calculated as net income available to common shareholders adjusted for amortization of intangibles as a percentage of average tangible common equity. Adjusted ROTCE is calculated using adjusted net income rather than net income. Page 35

**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 is calculated for credit, market (trading) and operational risk categories based on OSFI's prescribed rules. Page 71

**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, commercial mortgages, auto loans and credit card debt obligations, to third parties. Page 159

**Specific Allowances** reduce the carrying value of individually identified impaired loans to the amount we expect to recover if there is evidence of deterioration in credit quality. Pages 91, 153

**Strategic Risk** is the potential for loss due to fluctuations in the external business environment and/

or the failure to properly respond to these fluctuations as a result of inaction, ineffective strategies or poor implementation of strategies. Page 111

**Stressed Value at Risk (SVaR)** is measured 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, where model inputs are calibrated to historical data from a period of significant financial stress. This measure calculates the maximum loss likely to be experienced in the trading and underwriting portfolios, measured at a 99% confidence level over a specified holding period. Pages 95, 96

**Structured Entities (SEs)** include entities for which voting or similar rights are not the dominant factor in determining control of the entity. We are required to consolidate an SE if we control the entity by having power over the entity, exposure to variable returns as a result of our involvement and the ability to exercise power to affect the amount of our returns. Pages 78, 159

**Swaps** are contractual agreements between two parties to exchange a series of cash flows. The various swap agreements that we enter into are as follows:

- *Commodity swaps* – counterparties generally exchange fixed 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 that other counterparty agreeing to make a payment if a credit event occurs, such as bankruptcy or failure to pay.
- *Cross-currency interest rate swaps* – fixed and/or 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 the 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 and floating rate interest payments based on a notional value in a single currency. Page 161

**Tangible Common Equity** is calculated as common shareholders' equity less goodwill and acquisition-related intangible assets, net of related deferred tax liabilities. Page 35

**Taxable Equivalent Basis (teb):** Revenues of operating groups are presented in our 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. Pages 38, 198

**Tier 1 Capital** is comprised of CET1 capital, preferred shares and innovative hybrid instruments, less certain regulatory deductions. Pages 71, 184

**Tier 1 Capital Ratio** reflects Tier 1 capital divided by Tier 1 capital risk-weighted assets. Pages 71, 185

**Total Capital** includes Tier 1 and Tier 2 capital. **Tier 2 capital** is primarily comprised of subordinated debentures and may include a portion of the collective and individual allowances for credit losses, less certain regulatory deductions. Pages 71, 185

**Total Capital Ratio** reflects Total capital divided by Total capital risk-weighted assets. Pages 71, 185

**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 that dividends received were reinvested in additional common shares. The one-year TSR also assumes that dividends were reinvested in shares. Page 32

**Trading-Related Revenues** include net interest income and non-interest revenue earned from on- 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 revenues also include 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 41

**Value at Risk (VaR)** is measured 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. This measure calculates the maximum loss likely to be experienced in the trading and underwriting portfolios, measured at a 99% confidence level over a specified holding period. Pages 95, 96

# Where to Find More Information

## Corporate Governance

Our website provides information on our corporate governance practices, including our code of conduct, our Director Independence Standards and our board mandate and committee charters.

[www.bmo.com/corporategovernance](http://www.bmo.com/corporategovernance)

## Management Proxy Circular

Our management proxy circular contains information on our directors, board committee reports and a detailed discussion of our corporate governance practices. It will be published in March 2017 and will be available on our website.

[www.bmo.com/corporategovernance](http://www.bmo.com/corporategovernance)

## Stock Exchange Governance Requirements

A summary of the significant ways in which our corporate governance practices differ from the corporate governance practices required to be followed by U.S. domestic companies under New York Stock Exchange Listing Standards and NASDAQ Stock Market Rules is posted on our website.

[www.bmo.com/corporategovernance](http://www.bmo.com/corporategovernance)

## Sustainability Performance

BMO's *Environmental, Social and Governance Report and Public Accountability Statement* (ESG Report/PAS) outlines how we manage the environmental, social and governance impacts of our business while creating value for our many stakeholders. We use the Global Reporting Initiative (GRI) as a framework for reporting on our sustainability performance. This report is available on our website.

[www.bmo.com/corporateresponsibility](http://www.bmo.com/corporateresponsibility)

## Corporate Responsibility

BMO's *Corporate Responsibility Report*, a companion piece to the ESG Report/PAS, illustrates the way we conduct our business, what we stand for and the commitments we've made to our customers and the communities where we operate. This report and additional information are available on our website.

[www.bmo.com/corporateresponsibility](http://www.bmo.com/corporateresponsibility)

## Have Your Say

If you have a question you would like to ask at our annual meeting of shareholders, you can submit your question in person or during the webcast. You can also submit a question to the board by writing to the Corporate Secretary at Corporate Secretary's Office, 21st Floor, 1 First Canadian Place, Toronto, ON M5X 1A1, or emailing [corp.secretary@bmo.com](mailto:corp.secretary@bmo.com).

## Shareholders

Contact our Transfer Agent and Registrar for:

- Dividend information
- Change in share registration or address
- Lost certificates
- Estate transfers
- Duplicate mailings
- Direct registration

### Computershare Trust Company of Canada

100 University Avenue, 8th Floor, Toronto, ON M5J 2Y1

Email: [service@computershare.com](mailto:service@computershare.com)

[www.computershare.com/ca/en](http://www.computershare.com/ca/en)

Canada and the United States

Call: **1-800-340-5021** Fax: **1-888-453-0330**

International

Call: **514-982-7800** Fax: **416-263-9394**

### Computershare Trust Company, N.A.

Co-Transfer Agent (U.S.)

Online filing information:

BMO filings in Canada

Canadian Securities Administrators

[www.sedar.com](http://www.sedar.com)

BMO filings in the United States

Securities and Exchange Commission

[www.sec.gov/edgar.shtml](http://www.sec.gov/edgar.shtml)

For all other shareholder inquiries:

### Shareholder Services

BMO Financial Group

Corporate Secretary's Office

21st Floor, 1 First Canadian Place

Toronto, ON M5X 1A1

Email: [corp.secretary@bmo.com](mailto:corp.secretary@bmo.com)

Call: **416-867-6785** Fax: **416-867-6793**

## Institutional Investors and Research Analysts

To obtain additional financial information:

### Head, Investor Relations

BMO Financial Group

10th Floor, 1 First Canadian Place

Toronto, ON M5X 1A1

Email: [investor.relations@bmo.com](mailto:investor.relations@bmo.com)

Call: **416-867-4770** Fax: **416-867-3367**

## Employees

For information on BMO's Employee Share Ownership Plan:

Call: **1-877-266-6789**

## General

To obtain printed copies of the annual report or make inquiries about company news and initiatives:

### Corporate Communications Department

BMO Financial Group

28th Floor, 1 First Canadian Place

Toronto, ON M5X 1A1

*On peut obtenir sur demande un exemplaire en français.*

[www.bmo.com](http://www.bmo.com)

## Customers

For assistance with your investment portfolio or other financial needs:

### BMO Bank of Montreal

English and French: **1-877-225-5266**

Cantonese and Mandarin: **1-800-665-8800**

Outside Canada and the continental United States:

**514-881-3845**

TTY service for hearing impaired customers:

**1-866-889-0889**

[www.bmo.com](http://www.bmo.com)

### BMO InvestorLine: 1-888-776-6886

[www.bmoinvestorline.com](http://www.bmoinvestorline.com)

### BMO Harris Bank

United States: **1-888-340-2265**

Outside the United States: **1-847-238-2265**

[www.bmoharris.com](http://www.bmoharris.com)

### BMO Nesbitt Burns: 416-359-4000

[www.bmonesbitburns.com](http://www.bmonesbitburns.com)

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The following are trademarks owned by other parties:

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AIR MILES is a trademark of AIR MILES International Trading B.V.

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## Your vote matters.

Look out for your proxy circular in March and remember to vote.

### Important Dates

**Fiscal Year End** October 31  
**Annual Meeting** April 4, 2017,  
9:30 a.m. (local time)

The annual meeting of shareholders will be held in Toronto, Ontario, at the BMO Institute for Learning, 3550 Pharmacy Avenue. The meeting will be webcast. Details are available on our website.

[www.bmo.com/investorrelations](http://www.bmo.com/investorrelations)

### 2017 Dividend Payment Dates\*

Common and preferred shares record dates

February 1 May 1  
August 1 November 1

Common shares payment dates

February 28 May 26  
August 28 November 28

Preferred shares payment dates

February 27 May 25  
August 25 November 25

\*Subject to approval by the Board of Directors.

The *Bank Act* prohibits a bank from declaring or paying a dividend if it is or would thereby be in contravention of regulations or an order from the Superintendent of Financial Institutions Canada dealing with adequacy of capital or liquidity. Currently, this limitation does not restrict the payment of dividends on Bank of Montreal's common or preferred shares.

## Managing Your Shares

### Our Transfer Agent and Registrar

Computershare Trust Company of Canada serves as Transfer Agent and Registrar for common and preferred shares, with transfer facilities in Montreal, Toronto, Winnipeg, Calgary and Vancouver. Computershare Investor Services PLC and Computershare Trust Company, N.A. serve as Transfer Agents and Registrars for common shares in Bristol, United Kingdom and Canton, Massachusetts, respectively. See previous page for contact information.

### Reinvesting Your Dividends and Purchasing Additional Common Shares

Through the Shareholder Dividend Reinvestment and Share Purchase Plan, you can reinvest cash dividends from your BMO common shares to purchase additional BMO common shares without paying a commission or service charge. You can also purchase additional common shares in amounts up to \$40,000 per fiscal year. Contact Computershare Trust Company of Canada or Shareholder Services for details.

**Auditors** KPMG LLP

# Shareholder Information

## Market for Shares of Bank of Montreal

The common shares of Bank of Montreal are listed on the Toronto Stock Exchange (TSX) and New York Stock Exchange (NYSE). The preferred shares of Bank of Montreal are listed on the TSX.

## Common Share Trading in Fiscal 2016

Primary stock exchanges	Ticker	Closing price			Total volume of shares traded
		October 31, 2016	High	Low	
TSX	BMO	\$85.36	\$87.92	\$68.65	327.0 million
NYSE	BMO	US\$63.60	US\$67.69	US\$47.54	161.1 million

## Common Share History

Date	Action	Common share effect
March 14, 2001	100% stock dividend	Equivalent to a 2-for-1 stock split
March 20, 1993	100% stock dividend	Equivalent to a 2-for-1 stock split
June 23, 1967	Stock split	5-for-1 stock split

## Dividends Paid per Share in 2016 and Prior Years

Bank of Montreal has paid dividends for 188 years – the longest-running dividend payout record of any company in Canada.

Issue/Class	Ticker	Shares outstanding at October 31, 2016	2016	2015	2014	2013	2012
Common	BMO	645,761,333	\$ 3.36 (a)	\$ 3.20	\$ 3.04	\$ 2.92	\$ 2.80
Preferred Class B							
Series 5 (b)	BMO.PR.H	–	–	–	–	\$ 0.66	\$ 1.33
Series 10 (c)	BMO.PR.V	–	–	–	–	–	US\$ 0.37
Series 13 (d)	BMO.PR.J	–	–	\$ 0.84	\$ 1.13	\$ 1.13	\$ 1.13
Series 14 (e)	BMO.PR.K	10,000,000	\$ 1.31	\$ 1.31	\$ 1.31	\$ 1.31	\$ 1.31
Series 15 (f)	BMO.PR.L	10,000,000	\$ 1.45	\$ 1.45	\$ 1.45	\$ 1.45	\$ 1.45
Series 16 (g)	BMO.PR.M	6,267,391	\$ 0.85	\$ 0.85	\$ 0.85	\$ 1.30	\$ 1.30
Series 17 (h)	BMO.PR.R	5,732,609	\$ 0.54	\$ 0.62	\$ 0.65	–	–
Series 18 (i)	BMO.PR.N	–	–	–	\$ 0.81	\$ 1.63	\$ 1.63
Series 21 (j)	BMO.PR.O	–	–	–	\$ 1.22	\$ 1.63	\$ 1.63
Series 23 (k)	BMO.PR.P	–	–	\$ 0.68	\$ 1.35	\$ 1.35	\$ 1.35
Series 25 (l)	BMO.PR.Q	9,425,607	\$ 0.98	\$ 0.98	\$ 0.98	\$ 0.98	\$ 0.98
Series 26 (m)	BMO.PR.A	2,174,393	–	–	–	–	–
Series 27 (n)	BMO.PR.S	20,000,000	\$ 1.00	\$ 1.00	\$ 0.34	–	–
Series 29 (o)	BMO.PR.T	16,000,000	\$ 0.98	\$ 1.19	–	–	–
Series 31 (p)	BMO.PR.W	12,000,000	\$ 0.95	\$ 1.02	–	–	–
Series 33 (q)	BMO.PR.Y	8,000,000	\$ 1.16	–	–	–	–
Series 35 (r)	BMO.PR.Z	6,000,000	\$ 1.35	–	–	–	–
Series 36 (s)	–	600,000	–	–	–	–	–
Series 38 (t)	BMO.PR.B	24,000,000	–	–	–	–	–

- (a) Dividend amount paid on Common Shares in 2016 was \$3.36.  
Dividend amount declared on Common Shares in 2016 was \$3.40.  
(b) Series 5 were issued in February 1998 and redeemed in February 2013. Dividend amount declared in 2013 of \$0.33 was included in the redemption price.  
(c) Series 10 were issued in December 2001 and redeemed in February 2012.  
(d) Series 13 were issued in January 2007 and redeemed in May 2015.  
(e) Series 14 were issued in September 2007.  
(f) Series 15 were issued in March 2008.  
(g) Series 16 were issued in June 2008.  
(h) Series 17 were issued in August 2013.  
(i) Series 18 were issued in December 2008 and redeemed in February 2014.

- (j) Series 21 were issued in March 2009 and redeemed in May 2014.  
(k) Series 23 were issued in June 2009 and redeemed in February 2015.  
(l) Series 25 were issued in March 2011.  
(m) Series 26 were issued in August 2016.  
(n) Series 27 Non-Viability Contingent Capital (NVCC) were issued in April 2014.  
(o) Series 29 NVCC were issued in June 2014.  
(p) Series 31 NVCC were issued in July 2014.  
(q) Series 33 NVCC were issued in June 2015.  
(r) Series 35 NVCC were issued in July 2015.  
(s) Series 36 NVCC were issued in October 2015 by way of private placement and are not listed on an exchange.  
(t) Series 38 were issued in October 2016.

## Employee Ownership\*

**84.7%** of Canadian employees participate in the BMO Employee Share Ownership Plan – a clear indication of their commitment to the company.  
\*As of October 31, 2016.

## Credit Ratings

Credit rating information appears on pages 25 and 105 of this annual report and on our website.

[www.bmo.com/creditratings](http://www.bmo.com/creditratings)

## Direct Deposit

You can choose to have your dividends deposited directly to an account in any financial institution in Canada or the United States that provides electronic funds transfer.

## Personal Information Security

We advise our shareholders to be diligent in protecting their personal information. Details are available on our website.

[www.bmo.com/security](http://www.bmo.com/security)



## Wishing it forward

To celebrate the bank's 200th year, we've introduced a new twist on an old idea: an interactive fountain where people can make digital wishes, large and small. Realized by artists Jennifer Marman and Daniel Borins, the fountain is the first of its kind, paying homage to the past by combining 50,000 flip dots – reminiscent of those once used in railway station arrival-departure boards – with state-of-the-art digital technology that animates the fountain when people interact with it. Simply choose a category, make a wish, and toss the digital coin to wish it forward. Visitors can share their wish with friends on social media, and see others' wishes in BMO's online wish universe.

Throughout 2017, we'll be fulfilling a number of these wishes – in categories such as Green, Togetherness, Legacy and Community – as a way of saying thank-you to communities where we do business. Individuals and organizations are invited to "wish it forward" online at [BMO200.com](http://BMO200.com) or by visiting the BMO200 fountain at bank locations in Chicago, Montreal and Toronto. Smaller versions will also travel to select branches and sponsored events across North America. "We hope to see a variety of wishes made through the BMO200 fountain in the coming months – everything from greening public spaces to recognizing people who have gone above and beyond for their community," said Cameron Fowler, Group Head, Canadian Personal & Commercial Banking, when the 17-foot fountain was activated at Toronto's First Canadian Place in January 2017. "BMO's wish is that, in any small way, the wishes that we're able to fulfill may cause a ripple effect that can be long lasting."

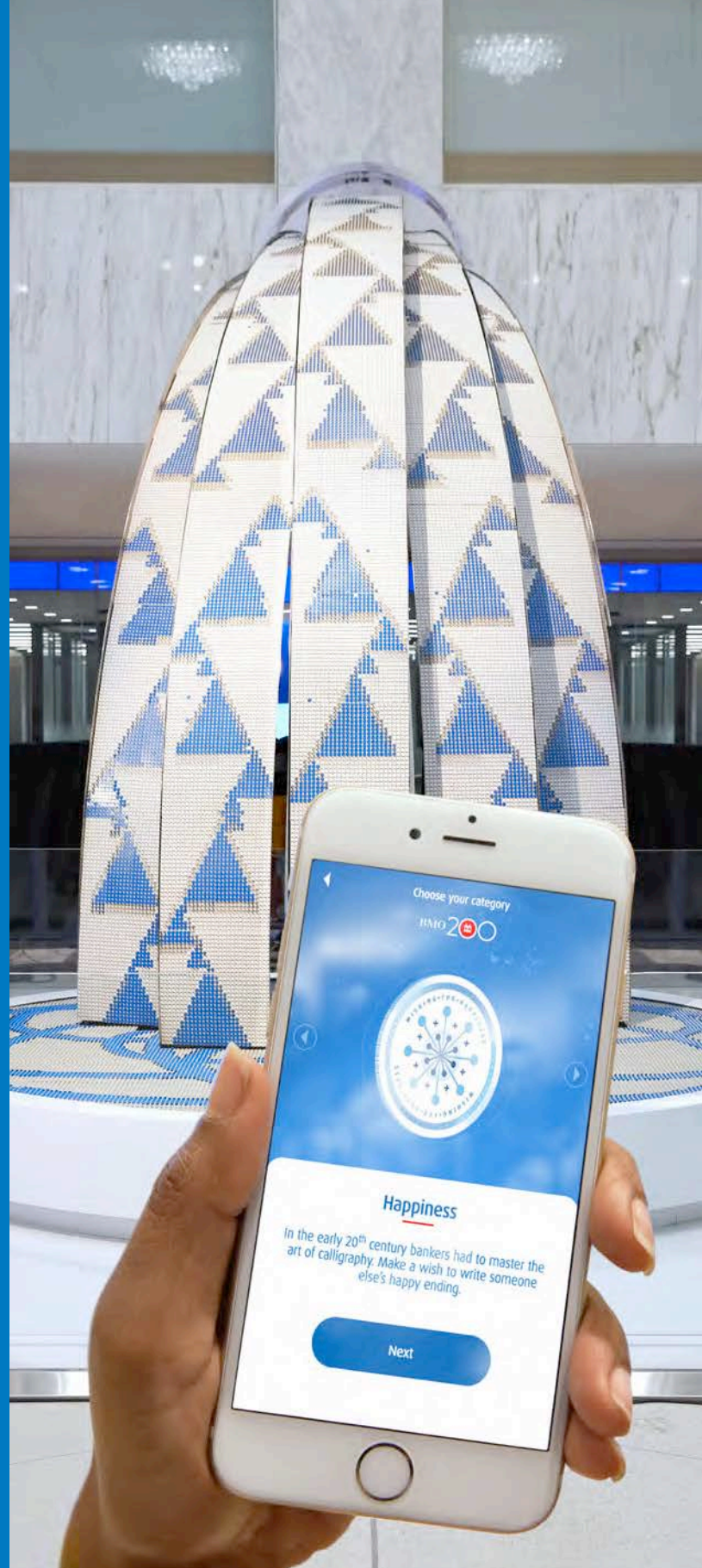
Make your wish here:

 [bmo200.com](http://bmo200.com)

#BMO200

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**BMO** 



Carbon offsets  
provided by:



This annual report is carbon neutral.

100%