2017 Annual Report

Powering your ideas™

AT A GLANCE

National Bank of Canada provides integrated financial services to consumers, small and medium-sized enterprises (SMEs) and large corporations in its domestic market while also offering specialized services internationally. It operates in four business segments—Personal and Commercial, Wealth Management, Financial Markets, and U.S. Specialty Finance and International—with total assets of $246 billion as at October 31, 2017.

Through more than 21,000 employees, National Bank offers a complete range of financial services that include: banking and investment solutions for individuals and businesses as well as securities brokerage, insurance and wealth management services.

National Bank is the leading bank in Quebec and the partner of choice for SMEs. It is one of the six systemically important banks in Canada and has branches in almost every province. Through representative offices, subsidiaries, and partnerships, it also operates in the United States, Europe and other parts of the world.

Its head office is located in Montreal and its securities are listed on the Toronto Stock Exchange.

National Bank by the numbers

2.6 MILLION CLIENTS

6,609 MILLION $ TOTAL REVENUES

21,635 EMPLOYEES

477 BILLION $ ASSETS UNDER MANAGEMENT AND ADMINISTRATION

2,024 MILLION $ NET INCOME

429 BRANCHES

931 BANKING MACHINES

246 BILLION $ TOTAL ASSETS

21.3 BILLION $ MARKET CAPITALIZATION

FINANCIAL OVERVIEW

As at October 31 or for the year ended October 31 (millions of Canadian dollars, except per share amounts)	2017	2016	% change
Operating results			
Total revenues	**6,609**	5,840	**13**
Net income	**2,024**	1,256	**61**
Diluted earnings per share	**$ 5.38**	$ 3.29	**64**
Return on common shareholders' equity	**18.1 %**	11.7 %	
Operating results on a taxable equivalent basis and excluding specified items (1)			
Total revenues on a taxable equivalent basis and excluding specified items	**6,864**	6,279	**9**
Net income excluding specified items	**2,049**	1,613	**27**
Diluted earnings per share excluding specified items	**$ 5.45**	$ 4.35	**25**
Return on common shareholders' equity excluding specified items	**18.3 %**	15.5 %	
Efficiency ratio on a taxable equivalent basis and excluding specified items	**55.9 %**	58.2 %	
Dividends declared	**$ 2.28**	$ 2.18	
Total assets	**245,827**	232,206	**6**
Regulatory ratios under Basel III			
Common Equity Tier 1 (CET1) capital ratio	**11.2 %**	10.1 %	
Leverage ratio	**4.0 %**	3.7 %	
Liquidity coverage ratio (LCR)	**132 %**	134 %	

(1) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.

Our social responsibility 2017

HELPING OUR CLIENTS POWER THEIR IDEAS

- Leading-edge digital and mobile banking services
- New branch concepts where advice and technology converge
- Active participation in developing the entrepreneurial ecosystem

SUPPORTING THE COMMUNITY

- Millions of dollars paid to the community in the form of donations, sponsorships and through fundraising initiatives
- Hundreds of organizations supported Canada-wide
- Committed to enhancing the impact of our social investments

FUELLING ECONOMIC DEVELOPMENT

- $88 million invested in our facilities
- $1 billion spent on goods and services
- $2 billion paid in salaries and employee benefits

PROMOTING DIVERSITY

- Ongoing support of women, cultural communities and the LGBT community
- Industry-leading representation of women among management and directors

HELPING PROTECT THE ENVIRONMENT

- Award-winning energy efficiency program
- Received several LEED® certifications

To learn more:
nbc.ca

MESSAGE FROM THE PRESIDENT AND CHIEF EXECUTIVE OFFICER

Through strong execution in fiscal 2017, we achieved solid operating performance and record profitability. National Bank's share price reached new highs, and the Bank delivered industry-leading returns for its shareholders. While delivering these excellent results, we continued to position the Bank for long-term success by focusing our investments and efforts on our organizational transformation and business growth. I am pleased not only with our financial results, but also with the momentum we are building for the future.

Excellent Performance Across the Board

In 2017, the Bank generated record net income of $2 billion, driven by strong performance across all business lines, effective cost management and a prudent approach to risk. Reflecting the acceleration of our transformation, our efficiency ratio improved significantly and operating leverage was positive. Our return on equity of over 18% is among the highest in the industry.

During the year, we raised our dividend twice for a combined increase of 5% and returned additional capital to shareholders by resuming share repurchases. The Bank delivered industry-leading total shareholder returns of 36.2% and 13.6% over the one- and 10-year periods ended October 31, 2017.

> Our vision is to be a simple, fast and efficient bank. To achieve this, we are focusing on two enablers—our digital transformation and our cultural evolution.

Disciplined Capital Deployment

An important milestone in our fiscal 2017 performance was the strengthening of our Basel III Common Equity Tier 1 (CET1) ratio that reached 11.2%, a result of disciplined capital management.

Our capital deployment priorities are very clear: maintain a strong CET1 ratio; invest to stimulate business growth in our core markets; invest to capture significant efficiency gains and generate operating leverage above 1%; and return capital to our shareholders through predictable dividend growth and disciplined share buybacks.

These priorities will continue to guide our capital deployment decisions in fiscal 2018.

A Simple, Fast and Efficient Bank

Our *one client, one bank* transformation is in full stride. In a rapidly changing environment, we want to remain the financial partner of choice to power our customers' ideas.

Our vision is to be a simple, fast and efficient bank. To achieve this, we are focusing on two enablers—our digital transformation and our cultural evolution. Successful execution will drive superior customer experience, revenue growth and higher operating efficiency, allowing the Bank to sustain long-term value creation for all stakeholders.

Digital Transformation

Through digital transformation, we are becoming more customer-centric and more efficient. Following significant cost reductions in fiscal 2017, we are now focused on a structural cost transformation through digitization, automation, and product and process simplification. Our objective is to improve operating efficiency every year.

Our digital infrastructure and capabilities are designed to give customers full control of their financial life through a single point of access. They will do their banking when they want and using the channel of their choice—whether they want to open an account, apply for home financing or pay bills. Emerging technologies are also offering new ways of engaging with our customers to build and strengthen relationships. In adopting new tools, we are aiming to strike the right balance between technology and a human touch.

Cultural Evolution

While investing in digital technologies, we are mindful that an empowered and engaged workforce is the cornerstone of our long-term success. The Bank is sparing no effort in building a high-performing and change-capable organization that values agility, innovation and collaboration.

The quality of people is the main differentiating factor in our industry. Our employees can be assured that, of all the changes taking place at the Bank, the cultural evolution of our organization is senior management's top priority.

Positioned for Growth

In fiscal 2017, we demonstrated our ability to achieve business growth while deploying major changes in the delivery of our services. Growth remains our priority as we go forward.

Our Personal and Commercial Banking segment is focused on leveraging our leadership in Quebec and increasing market penetration across Canada. In the retail market, we are expanding existing relationships by offering convenience and the best advice while attracting new customers from targeted segments, in particular by using digital tools. In commercial banking, we are growing by providing expert advice and timely response to the needs of Quebec entrepreneurs. We are leveraging our digital platforms and working closely with other National Bank business units to provide the best solutions.

Outside Quebec, we are growing our retail presence through a cluster strategy by focusing on urban areas where National Bank is already well represented by its various business units. We are also seeing opportunities to leverage our digital platforms in the retail market through compelling value propositions. In the commercial market, we are continuing to grow in specialized markets where we have recognized expertise, such as healthcare, agriculture, technology, cinema and real estate.

MESSAGE FROM THE PRESIDENT AND CHIEF EXECUTIVE OFFICER (cont.)

Our Wealth Management segment enters the new fiscal year with strong growth momentum. All business lines are well positioned for organic growth, both in Quebec and across Canada. This segment is differentiated through its unique business model—unbiased advice through open architecture as Canada's largest manager of managers. This allows for the development of investment solutions using some of the world's leading money managers in various asset classes and investment styles. Another growth vector is National Bank Independent Network, which is a leader in providing mission-critical administrative services to over 400 independent wealth management firms across Canada. Our Private Wealth 1859 division is growing beyond the Province of Quebec through its offices in Calgary and Vancouver and will continue to expand across the country.

The success of our Financial Markets business is built on our leadership in Quebec and strong client relationships across Canada. Over the past 20 years, we have built a truly national platform, with more than 60% of our revenues derived outside Quebec. Our Canadian leadership in government debt finance and recognized expertise in risk management solutions provide strong platforms for growth. On the corporate side, we continue to enhance our focus on larger clients across the country while strengthening our leadership position with mid-market clients.

In fiscal 2017, we created a new business segment comprised of Credigy, our Atlanta-based specialty consumer finance subsidiary, and our emerging markets portfolio, notably ABA Bank in Cambodia. I am pleased with the performance of these subsidiaries, which delivered a combined 25% increase in net income in fiscal 2017 and a strong return on equity. This segment currently represents more than 8% of consolidated net income, and we see that figure increasing to about 10% over the next few years. During the year, we extended the moratorium on major investments in emerging markets as we operationalize and consolidate our existing activities.

> **[...] we see growth opportunities for National Bank across Canada in all lines of business.**

Favourable Macroeconomic Environment

Our track record over the past decade demonstrates clearly that we benefit from our positioning as a super-regional bank based in Quebec.

The Province of Quebec has a well-diversified economy, supported by abundant green energy, an educated workforce and a thriving, world-class technology eco-system. Job creation has been strong for several consecutive years, and the unemployment rate has dipped below 6%, the lowest level in over 40 years. Small business and consumer confidence is among the highest in Canada, a development fostered not only by a favourable cyclical backdrop but also by healthy public finances, which allow the implementation of sound fiscal policies aimed at improving Quebec's long-term economic growth. Economic activity remains particularly brisk in Greater Montreal, where immigration is booming and where housing affordability is still very reasonable compared to major urban centres in Ontario and British Columbia.

Looking ahead, we see growth opportunities for National Bank across Canada in all lines of business. As we continue to expand our Canadian footprint, Quebec will remain an important driver of our financial performance, and our overweight position in our core market will remain a significant competitive advantage.

Acknowledgements

I take this opportunity to extend my sincere thanks to all our employees for their contribution to our excellent results. My colleagues in the Office of the President deserve credit for their leadership and for being effective stewards of the Bank's transformation.

Our customers are responding positively to our initiatives and I thank them for doing business with us. I also wish to acknowledge the support and counsel of our Board of Directors and to thank our shareholders for their confidence in the Bank.

Together, we are building the National Bank of the future.

Louis Vachon
President and Chief Executive Officer

OFFICE OF THE PRESIDENT MEMBERS

Louis Vachon
President and Chief Executive Officer

William Bonnell
Executive Vice-President,
Risk Management

Dominique Fagnoule
Executive Vice-President,
Information Technology

Martin Gagnon
Executive Vice-President,
Wealth Management;
Co-President and Co-Chief Executive Officer,
National Bank Financial

Diane Giard
Executive Vice-President,
Personal-Commercial Banking and Marketing

Denis Girouard
Executive Vice-President,
Financial Markets

Brigitte Hébert
Executive Vice-President,
Operations

Lynn Jeanniot
Executive Vice-President,
Human Resources and Corporate Affairs

Ghislain Parent
Chief Financial Officer and
Executive Vice-President,
Finance and Treasury

Ricardo Pascoe
Chief Transformation Officer and
Executive Vice-President,
Strategic Initiatives Office

MESSAGE FROM THE CHAIRMAN OF THE BOARD

At a time of rapid change in the banking industry, the Board of Directors continues to work closely with senior management to position the Bank for sustainable growth and value creation for the benefit of all stakeholders.

In fiscal 2017, financial performance attained record levels and the Bank delivered industry-leading returns for shareholders. The Board was pleased to note that all business segments are performing well and that the Bank's transformation—a key area of focus for the Board—is generating tangible results.

Building the Future

In response to the ever-evolving needs of customers, the Bank is significantly transforming the way it operates. It is investing in digital technologies, implementing new internal processes and driving a culture change throughout the Bank. Both the Board and senior management believe that transitioning to a workplace based on innovation, agility and empowerment is key to the Bank's future success. Fiscal year 2017 saw tangible progress made in every aspect of the transformation, and the Board will continue to closely oversee the progress of plan deployment in the months and years ahead.

> [...] transitioning to a workplace based on innovation, agility and empowerment is key to the Bank's future success.

Investing in Talent

During fiscal 2017, the Board conducted a thorough review of the succession plans at the top three levels of the Bank. We are satisfied that the Bank has strong leadership and employees with the requisite skills.

The Board sees a rich talent pipeline for leadership positions at all levels of the organization. In recent years, the Bank has adapted to industry changes by hiring large numbers of people with new skills and capabilities. It also invests continuously in training, certification, development and new tools.

Board Composition and Renewal

Recent years have witnessed an orderly renewal of the Board with the arrival of many new directors who bring a diverse range of professional backgrounds and expertise. Most of them are current and former CEOs of successful businesses in a number of industry sectors, both traditional and emerging, and the Board is younger in age and tenure.

The Board has an appropriate mix of experience and diversity to exercise effective oversight and to help carry out the Bank's strategic priorities for the benefit of all stakeholders. I would like to take this opportunity to thank the members of the Board for their judicious counsel and exemplary dedication to the Bank.

We are pleased to welcome Rebecca McKillican as a director and member of the Human Resources Committee. Ms. McKillican contributes valuable technology insights to our deliberations as President and CEO of Well.ca, one of the largest online retailers in Canada. Ms. McKillican previously worked for the operating group of investment firm KKR (Kohlberg, Kravis and Roberts) and for McKinsey & Company.

We extend our sincere thanks to André Caillé for his contributions to the Bank's success during his tenure as a director, as well as to Julie Payette, who stepped down following her appointment to the position of Governor General of Canada.

Corporate Governance

Our governance continues to evolve in line with best practices, including the adoption of a 12-year term limit for directors and, very recently, proxy access for director nominations.

Numerous initiatives in recent years have raised our governance practices to the highest standards. A rigorous internal governance audit completed in fiscal 2017 returned positive conclusions as well as recommendations for improvement, which we are in the process of implementing. We are determined to maintain a high-performing and effective Board whose members are collectively responsible for the Bank's enduring success.

Acknowledgements

The Bank's excellent fiscal 2017 results were achieved through a focus on customers and disciplined execution. The Bank has good momentum and strong leadership to drive long-term performance.

On behalf of the Board, I wish to thank Louis Vachon and the members of the Office of the President for their leadership and all employees for their contribution to the Bank's success. We also thank the Bank's 2.6 million customers for their patronage and shareholders large and small for their support.

Jean Houde
Chairman of the Board of Directors

For more information regarding the Bank's governance, please refer to the *Statement of Corporate Practices* available on the Bank's website at nbc.ca.

BOARD OF DIRECTORS MEMBERS

Jean Houde
Montreal, Quebec, Canada
Chairman of the Board of Directors,
National Bank of Canada
and Corporate Director
Director since March 2011

Raymond Bachand
Montreal, Quebec, Canada
Strategic Advisor,
Norton Rose Fulbright Canada LLP
and Corporate Director
Director since October 2014

Maryse Bertrand
Montreal, Quebec, Canada
Corporate Director
Director since April 2012

Pierre Blouin
Île-Bizard, Quebec, Canada
Corporate Director
Director since September 2016

Pierre Boivin
Montreal, Quebec, Canada
President and Chief Executive Officer,
Claridge inc.
Director since April 2013

Gillian H. Denham
Toronto, Ontario, Canada
Corporate Director
Director since October 2010

Richard Fortin
Boucherville, Quebec, Canada
Corporate Director
Director since August 2013

Karen Kinsley
Ottawa, Ontario, Canada
Corporate Director
Director since December 2014

Rebecca McKillican
Oakville, Ontario, Canada
President and Chief Executive Officer,
Well.ca
Director since October 2017

Lino A. Saputo Jr.
Montreal, Quebec, Canada
Chief Executive Officer and
Chairman of the Board of Directors,
Saputo Inc.
Director since April 2012

Andrée Savoie
Dieppe, New Brunswick, Canada
President and Chair of the
Board of Directors,
Acadian Properties Ltd.
Director since April 2015

Pierre Thabet
St-Georges, Quebec, Canada
President, Boa-Franc inc.
Director since March 2011

Louis Vachon
Beaconsfield, Quebec, Canada
President and Chief Executive Officer,
National Bank of Canada
Director since August 2006

Board Committees

Audit Committee
Karen Kinsley *(Chair)*
Pierre Blouin
Richard Fortin
Andrée Savoie

Risk Management Committee
Richard Fortin *(Chair)*
Raymond Bachand
Pierre Boivin
Karen Kinsley
Lino A. Saputo Jr.
Pierre Thabet

Human Resources Committee
Pierre Boivin *(Chair)*
Maryse Bertrand
Pierre Blouin
Gillian H. Denham
Rebecca McKillican

Conduct Review and Corporate Governance Committee
Maryse Bertrand *(Chair)*
Raymond Bachand
Jean Houde
Andrée Savoie

RISK DISCLOSURES

In May 2012, the Financial Stability Board (FSB) formed a working group, the Enhanced Disclosure Task Force (EDTF), that was mandated to develop principles for enhancing the risk disclosures of major banks, to recommend improvements to current risk disclosures, and to identify risk disclosure best practices used by major financial institutions. On October 29, 2012, the EDTF published a report entitled *Enhancing the Risk Disclosures of Banks*, which contains 32 recommendations. The Bank makes every effort to ensure overall compliance with those recommendations and is continuing to enhance its risk disclosures to meet the best practices on an ongoing basis. The risk disclosures required by the EDTF are provided in this Annual Report and in the document entitled *Supplementary Regulatory Capital Disclosure* available on the Bank's website at nbc.ca.

		Pages	
		Annual Report	Supplementary Regulatory Capital Disclosure[1]
General			
1	Location of risk disclosures	8	
	Management's Discussion and Analysis	42 to 87, 100 and 104	
	Consolidated Financial Statements	Notes 1, 7, 17, 24 and 30	
	Supplementary Regulatory Capital Disclosure		4 to 29
2	Risk terminology and risk measures	51 to 87	
3	Top and emerging risks	51 to 53	
4	New key regulatory ratios	43 to 46, 73, 75 and 80	
Risk governance and risk management			
5	Risk management organization, processes and key functions	55 to 69, 75 to 77	
6	Risk management culture	55 and 56	
7	Key risks by business segment, risk management and risk appetite	50, 55 and 56	
8	Stress testing	42, 56, 64 and 73 to 77	
Capital adequacy and risk-weighted assets (RWA)			
9	Minimum Pillar 1 capital requirements	43 to 46	
10	Reconciliation of the accounting balance sheet to the regulatory balance sheet		4 to 7
11	Movements in regulatory capital	47	
12	Capital planning	42 to 50	
13	RWA by business segment and by risk type	48 and 50	8
14	Capital requirements by risk and RWA calculation method	48 and 60 to 64	8
15	Banking book credit risk	48	8 and 11 to 16
16	Movements in RWA by risk type	49	9
17	Assessment of credit risk model performance	59, 62 and 71	11 to 17
Liquidity			
18	Liquidity management and components of the liquidity buffer	75 to 81	
Funding			
19	Summary of encumbered and unencumbered assets	78 and 79	
20	Residual contractual maturities of balance sheet items and off-balance-sheet commitments	191 to 195	
21	Funding strategy and funding sources	81 to 83	
Market risk			
22	Linkage of market risk measures to balance sheet	69 and 70	
23	Market risk factors	68, 71 to 74, 178 to 180	
24	VaR: assumptions, limitations and validation procedures	71 to 73	
25	Stress tests, stressed VaR and backtesting	71 to 74	
Credit risk			
26	Credit risk exposures	63, 67 and 149 to 152	10 to 24 and 19 to 25[2]
27	Policies for identifying impaired loans	65, 120 and 121	
28	Movements in impaired loans and allowances for credit losses	100, 104 and 149 to 152	20
29	Counterparty credit risk relating to derivatives transactions	65, 66 and 161 to 164	25 and 26
30	Credit risk mitigation	64 to 66	22 and 24
Other risks			
31	Other risks: governance, measurement and management	53 and 54 and 84 to 87	
32	Publicly known risk events	84	

(1) For the fourth quarter ended October 31, 2017.
(2) These pages are included in the document entitled *Supplementary Financial Information for the Fourth Quarter Ended October 31, 2017.*

MANAGEMENT'S DISCUSSION AND ANALYSIS

November 30, 2017

The following Management's Discussion and Analysis (MD&A) presents the financial condition and operating results of National Bank of Canada (the Bank). This analysis was prepared in accordance with the requirements set out in *National Instrument 51-102*, *Continuous Disclosure Obligations*, released by the Canadian Securities Administrators (CSA). It is based on the audited consolidated financial statements for the year ended October 31, 2017 (the consolidated financial statements) and prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB), unless otherwise indicated. IFRS represent Canadian generally accepted accounting principles (GAAP). This MD&A should be read in conjunction with the consolidated financial statements and accompanying notes for the year ended October 31, 2017. All amounts are presented in Canadian dollars. Additional information about the Bank, including the *Annual Information Form*, can be obtained from the Bank's website at nbc.ca and SEDAR's website at sedar.com.

Caution Regarding Forward-Looking Statements

From time to time, the Bank makes written and oral forward-looking statements, such as those contained in the Outlook for National Bank and the Major Economic Trends sections of this Annual Report, in other filings with Canadian securities regulators, and in other communications, for the purpose of describing the economic environment in which the Bank will operate during fiscal 2018 and the objectives it hopes to achieve for that period. These forward-looking statements are made in accordance with current securities legislation in Canada and the United States. They include, among others, statements with respect to the economy—particularly the Canadian and U.S. economies—market changes, observations regarding the Bank's objectives and its strategies for achieving them, Bank-projected financial returns and certain risks faced by the Bank. These forward-looking statements are typically identified by future or conditional verbs or words such as "outlook," "believe," "anticipate," "estimate," "project," "expect," "intend," "plan," and similar terms and expressions.

By their very nature, such forward-looking statements require assumptions to be made and involve inherent risks and uncertainties, both general and specific. Assumptions about the performance of the Canadian and U.S. economies in 2018 and how that will affect the Bank's business are among the main factors considered in setting the Bank's strategic priorities and objectives and in determining its financial targets, including provisions for credit losses. In determining its expectations for economic growth, both broadly and in the financial services sector in particular, the Bank primarily considers historical economic data provided by the Canadian and U.S. governments and their agencies.

There is a strong possibility that express or implied projections contained in these forward-looking statements will not materialize or will not be accurate. The Bank recommends that readers not place undue reliance on these statements, as a number of factors, many of which are beyond the Bank's control, could cause actual future results, conditions, actions or events to differ significantly from the targets, expectations, estimates or intentions expressed in the forward-looking statements. These factors include credit risk, market risk, liquidity and funding risk, operational risk, regulatory compliance risk, reputation risk, strategic risk and environmental risk, all of which are described in more detail in the Risk Management section beginning on page 51 of this Annual Report; general economic environment and financial market conditions in Canada, the United States and certain other countries in which the Bank conducts business, including regulatory changes affecting the Bank's business, capital and liquidity; changes in the accounting policies the Bank uses to report its financial condition, including uncertainties associated with assumptions and critical accounting estimates; tax laws in the countries in which the Bank operates, primarily Canada and the United States (including the U.S. *Foreign Account Tax Compliance Act* (FATCA)); changes to capital and liquidity guidelines and to the manner in which they are to be presented and interpreted; changes to the credit ratings assigned to the Bank; and potential disruptions to the Bank's information technology systems, including evolving cyber attack risk.

The foregoing list of risk factors is not exhaustive. Additional information about these factors can be found in the Risk Management section of this Annual Report. Investors and others who rely on the Bank's forward-looking statements should carefully consider the above factors as well as the uncertainties they represent and the risk they entail. Except as required by law, the Bank does not undertake to update any forward-looking statements, whether written or oral, that may be made from time to time, by it or on its behalf.

The forward-looking information contained in this document is presented for the purpose of interpreting the information contained herein and may not be appropriate for other purposes.

FINANCIAL REPORTING METHOD

The presentation of segment disclosures is consistent with the presentation adopted by the Bank for the fiscal year beginning November 1, 2016. This presentation reflects the fact that the activities of subsidiary Credigy Ltd. (Credigy), which had previously been presented in the Financial Markets segment, and that the activities of subsidiary Advanced Bank of Asia Limited (ABA Bank) and of other international investments, which had previously been presented in the *Other* heading, are now presented in the U.S. Specialty Finance and International (USSF&I) segment. The Bank made this change to better align the monitoring of its activities with its management structure.

The Bank has adjusted certain specified items to make the data from fiscal years 2017 and 2016 comparable. These adjustments are presented in the table below.

Reconciliation of Non-GAAP Financial Measures

Year ended October 31
(millions of Canadian dollars)

	Personal and Commercial	Wealth Management	Financial Markets	USSF&I	Other	2017	2016
Net interest income(1)	2,071	431	575	262	(107)	3,232	2,992
Taxable equivalent(2)	–	–	207	–	2	209	231
Financing cost related to holding restructured notes(3)	–	–	–	–	–	–	9
Net interest income on a taxable equivalent basis and excluding specified items	2,071	431	782	262	(105)	3,441	3,232
Non-interest income(1)	990	1,173	813	279	122	3,377	2,848
Taxable equivalent(2)	–	–	35	–	–	35	4
Acquisition-related revenues(4)	–	9	–	–	2	11	31
Write-off of an equity interest in an associate(5)	–	–	–	–	–	–	164
Non-interest income on a taxable equivalent basis and excluding specified items	990	1,182	848	279	124	3,423	3,047
Total revenues on a taxable equivalent basis and excluding specified items	3,061	1,613	1,630	541	19	6,864	6,279
Non-interest expenses	1,646	1,036	658	225	292	3,857	3,875
Charges related to acquisitions(6)	–	(19)	–	–	–	(19)	(22)
Restructuring charge(7)	–	–	–	–	–	–	(131)
Impairment losses on intangible assets(8)	–	–	–	–	–	–	(44)
Litigation charges(9)	–	–	–	–	–	–	(25)
Non-interest expenses excluding specified items	1,646	1,017	658	225	292	3,838	3,653
Contribution on a taxable equivalent basis and excluding specified items	1,415	596	972	316	(273)	3,026	2,626
Provisions for credit losses	153	3	–	48	40	244	484
Income before income taxes on a taxable equivalent basis and excluding specified items	1,262	593	972	268	(313)	2,782	2,142
Income taxes	337	149	18	84	(104)	484	225
Taxable equivalent(2)	–	–	242	–	2	244	235
Income taxes on the revenues related to holding restructured notes(3)	–	–	–	–	–	–	3
Income taxes on acquisition-related items(4)(6)	–	5	–	–	–	5	11
Income taxes on the write-off of an equity interest in an associate(5)	–	–	–	–	–	–	19
Income taxes on the restructuring charge(7)	–	–	–	–	–	–	35
Income taxes on intangible asset impairment losses(8)	–	–	–	–	–	–	12
Income taxes on litigation charges(9)	–	–	–	–	–	–	7
Income taxes on the impact of changes to tax measures(10)	–	–	–	–	–	–	(18)
Income taxes on a taxable equivalent basis and excluding specified items	337	154	260	84	(102)	733	529
Net income excluding specified items	925	439	712	184	(211)	2,049	1,613
Specified items after income taxes(11)	–	(23)	–	–	(2)	(25)	(357)
Net income	925	416	712	184	(213)	2,024	1,256
Non-controlling interests	–	–	–	29	55	84	75
Net income attributable to the Bank's shareholders	925	416	712	155	(268)	1,940	1,181

(1) On November 1, 2016, the Bank reclassified certain amounts in the Consolidated Statement of Income to better reflect the nature of the income presented in the Personal and Commercial segment. As a result, for the year ended October 31, 2016, an amount of $36 million reported in *Non-interest income* was reclassified to *Net interest income*. This reclassification had no impact on *Net income*.

(2) The Bank uses the taxable equivalent basis to calculate net interest income, non-interest income and income taxes. This calculation method consists of grossing up certain tax-exempt income (particularly dividends) by the income tax that would have been otherwise payable. An equivalent amount is added to income taxes. This adjustment is necessary in order to perform a uniform comparison of the return on different assets regardless of their tax treatment.

(3) During the year ended October 31, 2016, the Bank had recorded $9 million in financing costs ($6 million net of income taxes) related to holding restructured notes.

(4) During the year ended October 31, 2017, the Bank recorded an amount of $9 million ($7 million net of income taxes) for its share in the integration costs incurred by Fiera Capital Corporation (Fiera Capital) and an amount of $2 million ($2 million net of income taxes) for its share in the integration costs arising from its equity interest in TMX Group Limited (TMX). For the year ended October 31, 2016, the total amount of these costs had been $31 million ($24 million net of income taxes) and notably included the Bank's share in goodwill and intangible asset impairment losses related to its equity interest in TMX for an amount of $18 million ($13 million net of income taxes).

(5) During the year ended October 31, 2016, the Bank had written off its equity interest in associate Maple Financial Group Inc. (Maple) in an amount of $164 million ($145 million net of income taxes) following the February 6, 2016 event described in the Analysis of the Consolidated Balance Sheet section on page 38 of this MD&A.

(6) During the year ended October 31, 2017, the Bank recorded $19 million in charges ($16 million net of income taxes) related to the Wealth Management acquisitions (2016: $22 million, $18 million net of income taxes). These charges consisted mostly of retention bonuses and the amortization of intangible assets.

(7) During the year ended October 31, 2016, the Bank had recorded a restructuring charge of $131 million ($96 million net of income taxes). This charge consisted mostly of severance pay.

(8) During the year ended October 31, 2016, the Bank had recorded $44 million ($32 million net of income taxes) in intangible asset impairment losses on internally developed software.

(9) During the year ended October 31, 2016, the Bank had recorded $25 million in litigation charges ($18 million net of income taxes) related to resolving litigation and other disputes arising from claims, both ongoing and potential, made against the Bank.

(10) During the year ended October 31, 2016, an $18 million tax provision had been recorded to reflect the impact of substantively enacted changes to tax measures.

(11) For the year ended October 31, 2016, the specified items had included a premium of $3 million, or $0.01 per share, on the redemption of the Series 20 preferred shares for cancellation.

Non-GAAP Financial Measures

The Bank uses a number of financial measures when assessing its results and measuring its overall performance. Some of these financial measures are not calculated in accordance with GAAP, which are based on IFRS. Presenting non-GAAP financial measures helps readers to better understand how management analyzes results, shows the impacts of specified items on the results of the reported periods, and allows readers to assess results without the specified items if they consider such items not to be reflective of the underlying performance of the Bank's operations. Securities regulators require companies to caution readers that non-GAAP measures do not have a standardized meaning under GAAP and therefore may not be comparable to similar measures used by other companies.

In addition to the specified items, in fiscal 2016 the Bank had recorded a sectoral provision of $250 million ($183 million net of income taxes) on non-impaired loans in the oil and gas producer and service company portfolio, reporting it in the Personal and Commercial segment. During fiscal 2017, the Bank reversed this sectoral provision by $40 million ($29 million net of income taxes). Given the materiality of the sectoral provision recognized and presented in accordance with GAAP, it has been excluded from certain analyses in this MD&A.

Like many other financial institutions, the Bank uses the taxable equivalent basis to calculate net interest income, non-interest income and income taxes. This calculation method consists of grossing up certain tax-exempt income (particularly dividends) by the income tax that would have been otherwise payable. An equivalent amount is added to income taxes. This adjustment is necessary in order to perform a uniform comparison of the return on different assets regardless of their tax treatment.

FINANCIAL DISCLOSURE

Disclosure Controls and Procedures

The Bank's financial information is prepared with the support of a set of disclosure controls and procedures (DC&P) that are implemented by the President and Chief Executive Officer (CEO) and by the Chief Financial Officer (CFO) and Executive Vice-President of Finance and Treasury. During the year ended October 31, 2017, in accordance with *Regulation 52-109 Respecting Certification of Disclosure in Issuers' Annual and Interim Filings* (Regulation 52-109), released by the CSA, the design and operation of these controls and procedures were evaluated to determine their effectiveness.

As at October 31, 2017, the CEO and the CFO confirmed the effectiveness of the DC&P. These controls are designed to provide reasonable assurance that the information disclosed in annual and interim filings and in other reports filed or submitted under securities legislation is recorded, processed, summarized and reported within the time periods specified by that legislation. These controls and procedures are also designed to ensure that such information is accumulated and communicated to the Bank's management, including its signing officers, as appropriate, to allow for timely decisions regarding disclosure.

This Annual Report was reviewed by the Disclosure Committee, the Audit Committee, and the Bank's Board of Directors (the Board), which approved it prior to publication.

Internal Controls Over Financial Reporting

The internal controls over financial reporting (ICFR) are designed to provide reasonable assurance that the financial information presented is reliable and that the consolidated financial statements were prepared in accordance with GAAP, which are based on IFRS, unless indicated otherwise as explained on page 10 of this MD&A. Due to inherent limitations, ICFR may not prevent or detect all misstatements in a timely manner.

The CEO and the CFO oversaw the evaluation work performed on the design and operation of the Bank's ICFR in accordance with Regulation 52-109. These controls were evaluated in accordance with the control framework of the Committee of Sponsoring Organizations of the Treadway Commission (COSO — 2013) for financial controls and in accordance with the control framework of the *Control Objectives for Information and Related Technologies* (COBIT) for general information technology controls.

Based on the evaluation results, the CEO and CFO concluded, as at October 31, 2017, that there are no material weaknesses, that the ICFR are effective and provide reasonable assurance that the financial reporting is reliable, and that the Bank's consolidated financial statements were prepared in accordance with GAAP.

Changes to Internal Controls Over Financial Reporting

The CEO and CFO also undertook work whereby they were able to conclude that, during the year ended October 31, 2017, no changes were made to the ICFR that have materially affected, or are reasonably likely to materially affect, the design or operation of the ICFR.

Disclosure Committee

The Disclosure Committee assists the CEO and CFO by ensuring that disclosure controls and procedures and internal control procedures for financial reporting are implemented and operational. In so doing, the Committee ensures that the Bank is meeting its disclosure obligations under current regulations and that the CEO and CFO are producing the requisite certifications.

OVERVIEW

Highlights

As at October 31 or for the year ended October 31 (millions of Canadian dollars, except per share amounts)	2017	2016	2015	2017-16
				% change
Operating results				
Total revenues	**6,609**	5,840	5,746	**13**
Net income	**2,024**	1,256	1,619	**61**
Net income attributable to the Bank's shareholders	**1,940**	1,181	1,549	**64**
Return on common shareholders' equity	**18.1 %**	11.7 %	16.9 %	
Dividend payout ratio[1]	**42 %**	66 %	45 %	
Earnings per share				
Basic	**$ 5.44**	$ 3.31	$ 4.56	**64**
Diluted	**5.38**	3.29	4.51	**64**
Operating results on a taxable equivalent basis and excluding specified items[2]				
Total revenues on a taxable equivalent basis and excluding specified items	**6,864**	6,279	5,982	**9**
Net income excluding specified items	**2,049**	1,613	1,682	**27**
Return on common shareholders' equity excluding specified items	**18.3 %**	15.5 %	17.6 %	
Dividend payout ratio excluding specified items[1]	**41 %**	50 %	43 %	
Efficiency ratio on a taxable equivalent basis and excluding specified items	**55.9 %**	58.2 %	58.6 %	
Earnings per share excluding specified items[2]				
Basic	**$ 5.52**	$ 4.38	$ 4.75	**26**
Diluted	**5.45**	4.35	4.70	**25**
Common share information				
Dividends declared	**$ 2.28**	$ 2.18	$ 2.04	
Book value	**31.51**	28.52	28.26	
Share price				
High	**62.74**	47.88	55.06	
Low	**46.83**	35.83	40.75	
Close	**62.61**	47.88	43.31	
Number of common shares *(thousands)*	**339,592**	338,053	337,236	
Market capitalization	**21,262**	16,186	14,606	
Balance sheet and off-balance-sheet				
Total assets	**245,827**	232,206	216,090	**6**
Loans and acceptances, net of allowances	**134,443**	126,178	115,238	**7**
Impaired loans, net of total allowances	**(339)**	(289)	(112)	
As a % of average loans and acceptances	**(0.3) %**	(0.2) %	(0.1) %	
Deposits[3]	**156,671**	142,066	130,458	**10**
Equity attributable to common shareholders	**10,700**	9,642	9,531	**11**
Assets under administration and under management	**477,358**	397,342	357,793	**20**
Earnings coverage	**13.61**	7.84	10.49	
Regulatory ratios under Basel III				
Capital ratios[4]				
Common Equity Tier 1 (CET1)	**11.2 %**	10.1 %	9.9 %	
Tier 1[5]	**14.9 %**	13.5 %	12.5 %	
Total[5][6]	**15.1 %**	15.3 %	14.0 %	
Leverage ratio[4]	**4.0 %**	3.7 %	3.7 %	
Liquidity coverage ratio (LCR)	**132 %**	134 %	131 %	
Other Information				
Number of employees - Worldwide	**21,635**	21,770	20,189	**(1)**
Number of branches in Canada	**429**	450	452	**(5)**
Number of banking machines in Canada	**931**	938	930	**(1)**

(1) Last four quarters.
(2) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.
(3) The amounts of $2.2 billion and $1.6 billion classified in *Due to clients, dealers and brokers* on the Consolidated Balance Sheets as at October 31, 2016 and 2015, respectively, are now reported in *Deposits*.
(4) The ratios are calculated using the "all-in" methodology.
(5) Ratios as at October 31, 2017 include the redemption of the Series 28 preferred shares on November 15, 2017, and the ratios as at October 31, 2015 include the redemption of the Series 20 preferred shares on November 15, 2015.
(6) The ratio as at October 31, 2015 includes the $500 million redemption of medium-term notes on November 2, 2015.

About National Bank

The Bank carries out its activities in four business segments, Personal and Commercial, Wealth Management, Financial Markets, and U.S. Specialty Finance and International. For presentation purposes, other activities are reported in the *Other* heading of the business segment results. Each reportable segment is distinguished by services offered, type of clientele and marketing strategy. Additional information is provided in the Business Segment Analysis section of this MD&A.

2017 Objectives and Results

When the Bank sets its medium-term objectives, it does not take specified items[(1)] into consideration, as they are inherently unpredictable or non-recurring. Management therefore excludes specified items when assessing the Bank's performance against its objectives.

In fiscal 2017, the Bank recorded $2,024 million in net income compared to $1,256 million in fiscal 2016. Its 2017 diluted earnings per share stood at $5.38 versus $3.29 in 2016, and its 2017 return on common shareholders' equity (ROE) was 18.1% in 2017 versus 11.7% in 2016. Net income excluding specified items totalled $2,049 million in fiscal 2017, up 27%, and diluted earnings per share excluding specified items stood at $5.45, up 25% from $4.35. Furthermore, ROE excluding specified items was 18.3% in 2017 versus 15.5% in 2016.

In 2017, the Bank met all of its medium-term objectives, even largely exceeding its growth target for diluted earnings per share excluding specified items. It did so thanks to steady net income growth across all its business segments and also due to the fact that, in 2016, a sectoral provision for credit losses had been recorded for oil and gas producers and service companies.

2017 Medium-Term Objectives and Results

	Medium-term objectives (%)	2017 results (%)
Growth in diluted earnings per share excluding specified items[(1)]	5-10	25
ROE excluding specified items[(1)]	15-20	18.3
Dividend payout ratio excluding specified items[(1)]	40-50	41
CET1 capital ratio	› 10.0	11.2
Leverage ratio	› 3.5	4.0

(1) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.

Dividends

For fiscal 2017, the Bank declared $778 million in dividends to common shareholders (2016: $736 million), representing 42% of net income attributable to common shareholders (2016: 66%). These dividends represented 41% of net income attributable to common shareholders excluding specified items (2016: 50%).

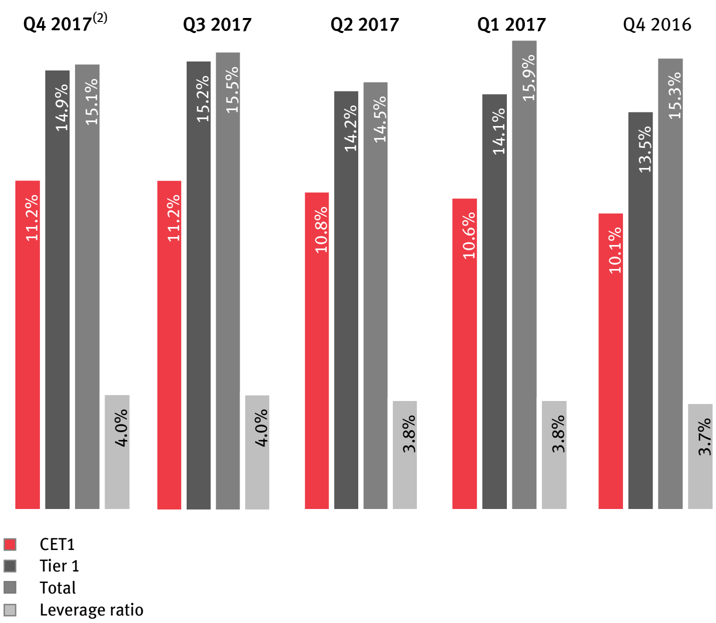
Annual Dividend[(1)]

(1) The figures for fiscal years 2014 and 2013 have been adjusted to reflect the stock dividend paid in 2014.

Regulatory Ratios

As at October 31, 2017, the Bank's CET1, Tier 1 and Total capital ratios were, respectively, 11.2%, 14.9% and 15.1%, i.e., above the regulatory requirements, compared to ratios of, respectively, 10.1%, 13.5% and 15.3% a year earlier. The increase in the CET1 capital ratio stems essentially from net income, net of dividends, common share issuances under the Stock Option Plan, remeasurements of pension plans and other post-employment benefit plans, and low growth in risk-weighted assets, partly offset by the common share repurchases during the year ended October 31, 2017. The increase in the Tier 1 capital ratio stems essentially from the same items as well as from the June 13, 2017 issuance of preferred shares for $400 million, partly offset by the $200 million redemption of preferred shares on November 15, 2017, which is already excluded from capital ratio calculations as at October 31, 2017. The decrease in the Total capital ratio is a result of the April 11, 2017 redemption of $1.0 billion in medium-term notes maturing on April 11, 2022. The leverage ratio as at October 31, 2017 was 4.0% compared to 3.7% as at October 31, 2016.

Evolution of Regulatory Ratios Under Basel III[(1)]



(1) The ratios are calculated using the "all-in" methodology.
(2) The Tier 1 capital ratio and the Total capital ratio include the redemption of the Series 28 preferred shares on November 15, 2017.

High Quality Loan Portfolio

For fiscal 2017, the Bank recorded $244 million in provisions for credit losses, $240 million less than the provisions recorded for fiscal 2016. Essentially, the lower credit loss provisions are related to the sectoral provision on non-impaired loans recorded for the oil and gas producer and service company loan portfolio, which was reversed by $40 million in fiscal 2017 compared to the $250 million recording of this provision in fiscal 2016. Also, at $43 million, the provisions for credit losses on Commercial Banking loans were down $30 million in fiscal 2017. Both of these decreases were partly offset by a $40 million increase in the collective allowance for credit risk on non-impaired loans recorded to reflect growth in the Bank's overall credit portfolio and by a $44 million increase in the provisions for credit losses recorded for loans in the U.S. Specialty Finance and International segment and that is essentially attributable to the Credigy subsidiary. The 2017 provisions for credit losses on impaired loans represented 0.19% of average loans and acceptances, unchanged from fiscal 2016. In addition, impaired loans, net of total allowances, were down $50 million compared to last year given a decline in net impaired loans in the personal and commercial loan portfolios and a $40 million increase in the collective allowance on non-impaired loans, offset by a lower sectoral allowance on non-impaired loans.

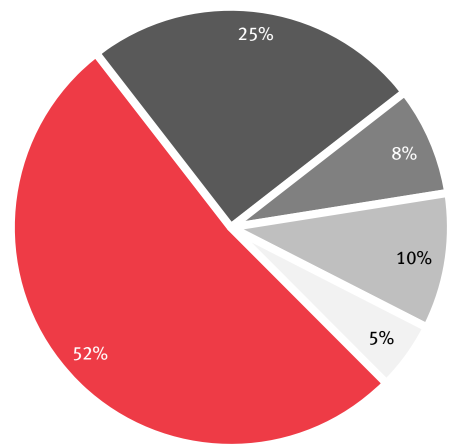
Risk Profile

(millions of Canadian dollars)	2017	2016
Provisions for credit losses[(1)]	**244**	484
Provisions for credit losses on impaired loans as a % of average loans and acceptances	**0.19 %**	0.19 %
Net impaired loans	**206**	281
Gross impaired loans as a % of tangible capital adjusted for allowances	**4.3 %**	6.3 %
Individual and collective allowances as a % of impaired loans	**45.8 %**	42.9 %
Sectoral allowance on non-impaired loans – Oil and gas[(1)]	**139**	204
Collective allowance on non-impaired loans[(1)]	**406**	366
Impaired loans, net of total allowances	**(339)**	(289)

(1) During fiscal 2017, the Bank reversed, by $40 million, the sectoral provision on non-impaired loans for the oil and gas producer and service company loan portfolio. In addition, the 2017 provisions for credit losses include a $40 million increase in the collective allowance for credit risk on non-impaired loans. For the year ended October 31, 2016, the provisions for credit losses had included the $250 million recording of the sectoral provision.

Breakdown of the Average Loan and Acceptance Portfolio[(1)]

As at October 31, 2017



- Personal (2016: 52%)
- Commercial (2016: 26%)
- Wealth Management (2016: 8%)
- Corporate (2016: 11%)
- U.S. Specialty Finance and International (2016: 3%)

(1) Excluding loans and acceptances in the *Other* heading.

Business Loans and Acceptances by Borrower Category

As at October 31	2017	2016
	%	%
Agriculture	**9.6**	9.8
Oil and gas	**4.2**	4.5
Mining	**0.9**	1.2
Construction and real estate	**23.2**	23.0
Manufacturing	**8.5**	7.7
Wholesale and retail	**10.7**	10.6
Transportation	**5.1**	6.5
Telecommunications, media and technology	**3.3**	3.4
Financial institutions	**9.6**	8.3
Services	**12.1**	12.9
Governments and other related services	**12.8**	12.1

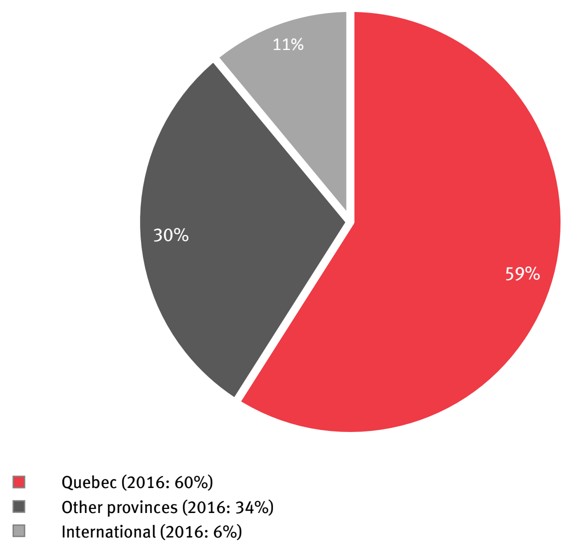
Outlook for National Bank

An essential component of the Bank's strategy is to ensure business diversification by supporting growth in its four business segments—Personal and Commercial, Wealth Management, Financial Markets, and U.S. Specialty Finance and International. Through acquisitions, strategic partnerships and organic growth, the Wealth Management and Financial Markets segments have expanded through the years and now generate close to half of the Bank's total revenues and more than half of its net income. Personal and Commercial Banking, the Bank's largest segment, continues to deliver steady revenue and earnings growth. As for the U.S. Specialty Finance and International segment, it is experiencing substantial revenue and net income growth.

While prioritizing growth in its four main business segments, the Bank also focuses on expanding its presence across Canada while continuing to maintain its leadership position in Quebec. The Financial Markets segment is well-positioned nationally and derives most of its revenues outside Quebec. The Wealth Management segment has established a national presence through its investment advisor channel, its business relationships with independent advisors, and its partnerships and now enjoys a wide distribution reach and consistent revenue growth outside Quebec. The Personal and Commercial segment is largely based in central Canada and has a strong presence in other select markets in Canada as well as a large-scale digital presence nationally.

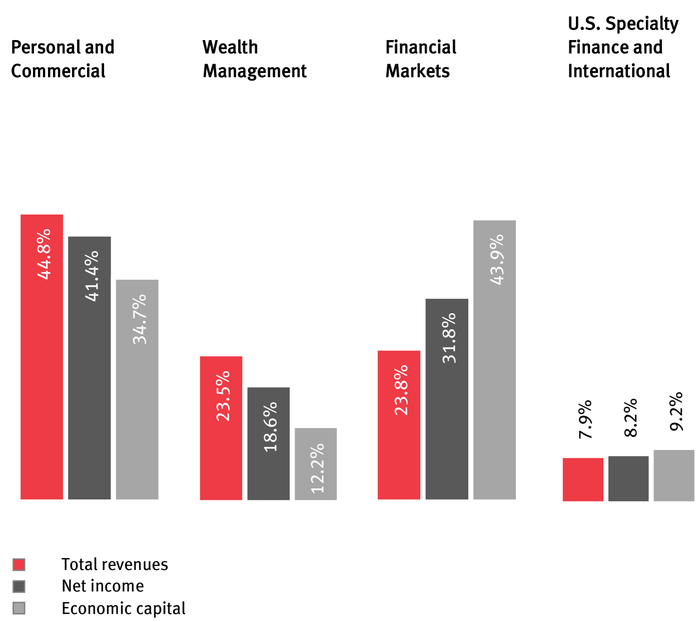
To complement its Canadian operations, the Bank continues to develop international business in specialty consumer finance through its Credigy subsidiary, and its ABA Bank subsidiary continues to achieve growth through a diversified client base in Cambodia. During fiscal 2017, the Bank extended its moratorium on major investments in emerging markets in order to consolidate its existing operations. The Bank's objective is to derive approximately 10% of its net income from international operations in the coming years.

Geographic Distribution of Total Revenues
Year ended October 31, 2017
(taxable equivalent basis)(1)



(1) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.

Business Mix(1)
Year ended October 31, 2017
(taxable equivalent basis)(2)



(1) Excluding the *Other* heading.
(2) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.

Major Economic Trends

Global Economy

The world economy is sending comforting signals with the major regions contributing synchronously to growth. Global consumer confidence is at a cyclical high, stimulated by continuously improving labour markets, a generalized wealth effect (real estate, financial markets) and low energy prices. Inflation remains weak, which is allowing central banks to gradually reduce their accommodative monetary policy. Very good financial conditions lend well to a global rebound in business investment.

Global GDP should grow at its fastest pace since 2011 at an expected rate of 3.7% in 2018 (3.6% in 2017). However, many unknowns loom over the geopolitical situation, notably developments in North Korea and Iran. The rise in commercial protectionism is also a preoccupying phenomenon on the horizon for 2018.

United States

The U.S. economy remains on track to grow roughly 2.2% in 2017 thanks in part to strong performances in the second and third quarters. Reconstruction efforts to address hurricane-related damage will help drive growth in the fourth quarter. The solid labour market is fueling consumer confidence and hence spending. And assuming the debt-ceiling is raised come December and fiscal stimulus is deployed ahead of mid-term congressional elections, another year of above-potential growth can be expected in 2018 (2.4%).

As such, the Bank believes the U.S. Federal Reserve will tighten monetary policy by raising rates in December and twice in 2018.

Canada

Canada's economy remains on track to grow about 3.0% in 2017, well above the consensus expectations among economists at the beginning of the year. Consumption spending has been the major driver of growth this year, benefiting from a confluence of favourable developments, including the best labour market in years, family benefits, low interest rates, and the wealth effects associated with surging home prices. If the Bank is correctly gauging upcoming fiscal stimulus in a pre-electoral context in Quebec, Ontario and possibly British Columbia, 2018 growth will also be strong at 2.5%. So, while the Bank of Canada does not seem inclined to raise rates soon, strong data may eventually force its hand early next year. A less accommodative monetary policy combined with tighter mortgage requirements should cool the residential real estate market, especially in Vancouver and Toronto. The Montreal market is less vulnerable in this respect since housing affordability remains reasonable.

Quebec's economy should expand by 2.0% in 2018, following 2.5% this year. This significantly exceeds its potential growth rate estimated at 1.0%. The province is at full employment, and in the third quarter posted its lowest unemployment rate on record (1976), at 6.0%, and a record participation rate of 75% for people aged 15 to 64. Small business and consumer confidence is among the highest in Canada, a development fostered not only by a favourable cyclical backdrop but also by healthy public finances, which allows for the implementation of sound fiscal policies aimed at improving Quebec's long-term economic growth. Domestic demand continues to drive the province's growth, with Montreal accounting for most of the job creation due to immigration.

FINANCIAL ANALYSIS

Consolidated Results

Year ended October 31
(millions of Canadian dollars)

	2017	2016	2015	2017-16 % change
Operating results				
Net interest income[1]	3,232	2,992	2,717	8
Non-interest income[1]	3,377	2,848	3,029	19
Total revenues	6,609	5,840	5,746	13
Non-interest expenses	3,857	3,875	3,665	–
Contribution	2,752	1,965	2,081	40
Provisions for credit losses[2]	244	484	228	(50)
Income before income taxes	2,508	1,481	1,853	69
Income taxes	484	225	234	115
Net income	2,024	1,256	1,619	61
Diluted earnings per share *(dollars)*	5.38	3.29	4.51	64
Taxable equivalent[3]				
Net interest income	209	231	311	
Non-interest income	35	4	–	
Income taxes	244	235	311	
Impact of taxable equivalent basis on net income	–	–	–	
Specified items[3]				
Items related to holding restructured notes	–	(9)	70	
Acquisition-related items	(30)	(53)	(34)	
Restructuring charge	–	(131)	(86)	
Impairment losses on intangible assets	–	(44)	(46)	
Litigation charges	–	(25)	–	
Write-off of an equity interest in an associate	–	(164)	–	
Gain on disposal of Fiera Capital shares	–	–	29	
Share of current tax asset write-down of an associate	–	–	(18)	
Specified items before income taxes	(30)	(426)	(85)	
Income taxes on specified items[4]	(5)	(69)	(22)	
Specified items after income taxes	(25)	(357)	(63)	
Operating results on a taxable equivalent basis and excluding specified items[3]				
Net interest income on a taxable equivalent basis and excluding specified items[1]	3,441	3,232	3,048	6
Non-interest income on a taxable equivalent basis and excluding specified items[1]	3,423	3,047	2,934	12
Total revenues on a taxable equivalent basis and excluding specified items	6,864	6,279	5,982	9
Non-interest expenses excluding specified items	3,838	3,653	3,505	5
Contribution on a taxable equivalent basis and excluding specified items	3,026	2,626	2,477	15
Provisions for credit losses[2]	244	484	228	(50)
Income before income taxes on a taxable equivalent basis and excluding specified items	2,782	2,142	2,249	30
Income taxes on a taxable equivalent basis and excluding specified items	733	529	567	39
Net income excluding specified items	2,049	1,613	1,682	27
Diluted earnings per share excluding specified items *(dollars)*[5]	5.45	4.35	4.70	25
Average assets	248,351	235,913	222,929	5
Average loans and acceptances	129,150	121,013	108,740	7
Impaired loans, net of total allowances	(339)	(289)	(112)	
Average deposits[6]	154,254	142,852	129,468	8
Efficiency ratio on a taxable equivalent basis and excluding specified items[3]	55.9 %	58.2 %	58.6 %	

(1) The Bank reclassified certain amounts in the Consolidated Statement of Income to better reflect the nature of the income reported in the Personal and Commercial segment. As a result, for the years ended October 31, 2016 and 2015, certain *Non-interest income* items were reclassified to *Net interest income*. This reclassification had no impact on *Net income*.

(2) During the year ended October 31, 2017, the Bank reversed, by $40 million, the sectoral provision on non-impaired loans recorded in 2016 for the oil and gas producer and service company loan portfolio. The 2017 provisions for credit losses also included an amount of $40 million to reflect an increase in the collective allowance for credit risk on non-impaired loans. For 2016, the provisions for credit losses had included a $250 million sectoral provision on non-impaired loans recorded for the oil and gas producer and service company loan portfolio.
(3) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.
(4) For the year ended October 31, 2016, the income taxes on specified items had included an $18 million tax provision recorded to reflect the impact of substantively enacted changes to tax measures.
(5) For the year ended October 31, 2016, the specified items had included a premium of $3 million, or $0.01 per share, on the redemption of the Series 20 preferred shares for cancellation.
(6) On November 1, 2016, the Bank had changed the presentation of certain items on the Consolidated Balance Sheet, and prior year figures were adjusted to reflect those modifications.

Analysis of Consolidated Results

Financial Results

For fiscal 2017, the Bank's net income totalled $2,024 million compared to $1,256 million in fiscal 2016, a substantial increase owing to net income growth across all the business segments as well as to the fact that, in 2016, a sectoral provision of $183 million, net of income taxes, had been recorded for oil and gas producers and service companies. In addition, a greater amount of unfavourable specified items had been recorded in fiscal 2016. In 2017, the specified items, net of income taxes, reduced net income by $25 million, whereas, in 2016, the specified items had reduced net income by $357 million. In 2016, these items, net of income taxes, had included a $145 million write-off of the Bank's equity interest in associate Maple, a $96 million restructuring charge, $32 million in intangible asset impairment losses, and $18 million in litigation charges. For fiscal 2017, the Bank's net income excluding specified items totalled $2,049 million, up 27% from $1,613 million in fiscal 2016.

Total Revenues

The Bank's total revenues on a taxable equivalent basis[1] amounted to $6,853 million in fiscal 2017, a $778 million year-over-year increase (Table 2, page 98) driven by revenue growth across all of the Bank's business segments. The 2017 total revenues on a taxable equivalent basis and excluding specified items were up $585 million or 9% year over year. For both 2017 and 2016, the specified items included acquisition-related items, in particular the Bank's share in the goodwill and intangible asset impairment losses arising from its equity interest in TMX in 2016. In 2016, the specified items had also included the Bank's write-off of its equity interest in associate Maple as well as items related to holding restructured notes.

Net Interest Income

For fiscal 2017, the Bank's net interest income on a taxable equivalent basis totalled $3,441 million, rising $218 million from $3,223 million in fiscal 2016 (Table 3, page 98). In the Personal and Commercial segment, the 2017 net interest income totalled $2,071 million, a $116 million or 6% year-over-year increase driven by growth in average loan and deposit volumes, which rose 4% and 12%, respectively. The loan growth came mainly from residential mortgages and home equity lines of credit. Another factor contributing to the segment's increase in net interest income was a higher net interest margin, which was 2.26% in 2017 compared to 2.24% in 2016. In the Wealth Management segment, the 2017 net interest income totalled $431 million, a $59 million year-over-year increase owing to deposit growth and improved margins. In the U.S. Speciality Finance and International segment, net interest income was up $191 million year over year given growth in the loan volumes of the Credigy subsidiary and the performance of the ABA Bank subsidiary, whose results have been consolidated into the Bank's results since the third quarter of 2016 and that has experienced sustained loan and deposit growth in 2017. As for the Financial Markets segment, the 2017 net interest income was down $156 million year over year, mainly due to trading activities, and should be examined together with the other items of trading activity revenues. For the *Other* heading of segment results, the 2017 net interest income posted a year-over-year increase.

(1) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.

Non-Interest Income

Non-interest income on a taxable equivalent basis totalled $3,412 million in fiscal 2017 versus $2,852 million in fiscal 2016 (Table 4, page 99). The trading revenues recorded in non-interest income amounted to $409 million compared to $154 million in 2016. Including the portion recorded in net interest income, trading activity revenues amounted to $1,006 million in 2017, a $109 million year-over-year increase (Table 5, page 99) attributable to revenues from equity securities, fixed-income securities, and the other segments, whereas revenues from commodities and foreign exchange activities were down year over year.

As shown in Table 4 on page 99, the 2017 underwriting and advisory fees were down $27 million year over year, with the 2017 securities brokerage commissions decreasing 8% year over year given a migration of assets from transactional accounts to fee-based accounts in recent years. Mutual fund revenues and trust service revenues totalled $930 million, a $113 million year-over-year increase resulting from growth in fee-based revenues and in assets under administration.

Revenues from credit fees and card revenues rose 18% and 11%, respectively, compared to 2016, whereas revenues from acceptances and letters of credit and guarantee were down $5 million year over year, partly due to a decline in lending activity with oil and gas companies. The net gains on available-for-sale securities item rose $70 million year over year.

The 2017 deposit and payment service charges rose $21 million or 8% year over year, essentially as a result of the ABA Bank subsidiary, whose results have been consolidated into the Bank's results since the third quarter of 2016. Insurance revenues were up $3 million and other-than-trading foreign exchange revenues remained stable compared to 2016. The share in the net income of associates and joint ventures was up, as the Bank's share in its equity interest in TMX recorded in 2016 had included $18 million in goodwill and intangible asset impairment losses. Other revenues amounted to $363 million, a $96 million year-over-year increase that was mainly due to the Bank's $164 million write-off of its equity interest in associate Maple in 2016, partly offset by a $41 million non-taxable gain recorded in 2016 upon the revaluation of the previously held equity interest in ABA Bank and by a decrease in the Credigy revenues recorded as non-interest income in 2017.

Provisions for Credit Losses

For fiscal 2017, the Bank recorded $244 million in provisions for credit losses, $240 million less than the provisions recorded for fiscal 2016 (Table 6, page 100). Essentially, the lower credit loss provisions are related to the sectoral provision on non-impaired loans recorded for the oil and gas producer and service company loan portfolio, which was reversed by $40 million in fiscal 2017 compared to the $250 million recording of this sectoral provision in fiscal 2016. Also, at $43 million, the provisions for credit losses on Commercial Banking loans were down $30 million in fiscal 2017. Both of these decreases were partly offset by a $40 million increase in the collective allowance for credit risk on non-impaired loans, which was recorded to reflect growth in the Bank's overall credit portfolio, and by a $44 million increase in the provisions for credit losses recorded for loans in the U.S. Specialty Finance and International segment that is essentially attributable to the Credigy subsidiary. The 2017 provisions for credit losses on impaired loans represented 0.19% of average loans and acceptances, unchanged from fiscal 2016.

Non-Interest Expenses

Non-interest expenses stood at $3,857 million in 2017 (Table 7, page 101), an $18 million year-over-year decrease resulting in part from a $131 million restructuring charge, consisting mainly of severance pay, that had been recorded in fiscal 2016. Technology costs, including amortization, were down in 2017, as $44 million in intangible asset impairment losses had been recorded in 2016, partly offset by higher technology investment expenses in 2017. Professional fees stood at $254 million in 2017, a $22 million year-over-year decrease related to servicing fees associated with the business activities of the Credigy subsidiary. Security and theft expense was down year over year, as $25 million in litigation charges had been recorded in 2016 upon resolution of litigation and other disputes arising from claims made against the Bank. Other expenses were also down when compared to 2016. Compensation and employee benefits stood at $2,358 million, a 9% year-over-year increase resulting from the higher variable compensation associated with revenue growth and from the cost of pension plans. In addition, the results of the ABA Bank subsidiary, which have been consolidated into the Bank's results since the third quarter of 2016, led to an overall increase in non-interest expenses. For 2017, non-interest expenses excluding specified items rose $185 million or 5% year over year.

Income Taxes

Detailed information about the Bank's income taxes is provided in Note 25 to the consolidated financial statements. For fiscal 2017, income taxes stood at $484 million, for an effective tax rate of 19%, compared to $225 million and an effective tax rate of 15% in 2016. This change in the effective tax rate stems mainly from the tax impact of several items that had been recorded in 2016, particularly the sectoral provision on non-impaired loans recorded for the oil and gas producer and service company loan portfolio, the restructuring charge, the gain realized following the revaluation of the previously held equity interest in ABA Bank, and the write-off of the Bank's equity interest in associate Maple. Also during fiscal 2016, a tax provision had been recorded to reflect the impact of changes to tax measures.

BUSINESS SEGMENT ANALYSIS | Personal and Commercial

OVERVIEW

The Personal and Commercial segment meets the financial needs of some 2.5 million individuals and more than 135,000 businesses across Canada. These clients entrust the Bank to manage, invest and safeguard their assets and finance their projects. Personal Banking offers everyday transaction solutions, mortgage loans, home equity lines of credit, consumer loans, payment solutions, savings options, and tailored investment solutions as well as a diverse range of insurance products through specialized subsidiaries. Commercial Banking offers financial advice and a full line of services, including credit, deposit and investment solutions, international trade, foreign exchange transactions, payroll, cash management, insurance, electronic transactions and complementary services. Clients turn to the Bank's experienced advisors who take the time to understand their specific needs and help them reach their financial goals. And thanks to the Bank's convenient self-banking channels, 429 branches and 931 banking machines across Canada, clients can do their daily banking whenever and wherever they wish.

Economic and Market Review

In 2017, the Canadian economy grew steadily. Consumer spending was the main engine of growth, thanks to a convergence of several favourable factors such as the best labour market performance in years, low interest rates, and the wealth effects associated with rising residential real estate prices. For 2018, growth is expected to be equally steady, although it is important to remember the increased sensitivity of homeowners in certain major urban centres to potential interest rate increases.

2017 Achievements and Highlights

- To support business growth, raise efficiency and improve customer experience, in fiscal 2017 the Bank invested selectively in its digital strategy and deployed several initiatives. In fact, more than 25 enhancements and added features to its digital applications were deployed for retail customers. In addition, the Bank launched its first mobile application for businesses and rolled out a new fleet of ATMs with enhanced functionality.
- The Bank built strong momentum in the digital engagement of customers, which translated into a 40% increase in active retail mobile users in fiscal 2017.
- Process automation and streamlining combined with a simplification of product lines and investment solutions resulted in higher efficiency compared to the previous year.
- Our client relationship management platform was enhanced to provide employees with a richer client profile, thereby helping them offer personalized and timely advice based on a client's goals, current assets and liabilities, and spending patterns.
- Over 90% of our client-facing employees and their supervisors completed a skills certification initiative under our training program by year-end. The goal of this distinctive program is to ensure that our people can meet the changing expectations of our clients.

Priorities and Outlook for 2018

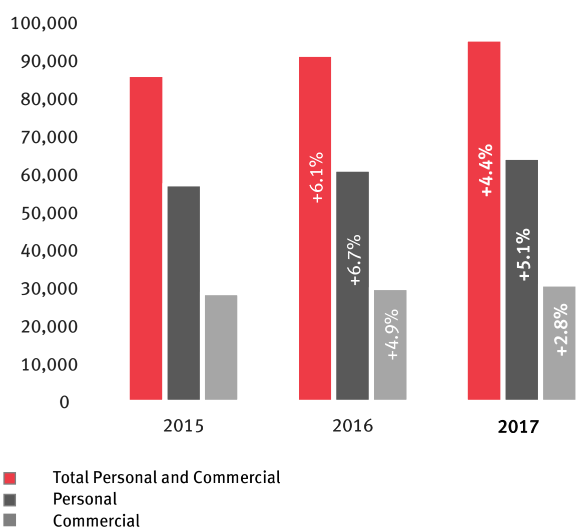
- Continue investing in training and coaching to develop an elite and agile workforce that will be a source of competitive advantage in the age of digital banking.
- Continue deploying initiatives that differentiate the Bank as a simple, easy and fast partner for retail clients.
- Focus on digital origination and straight-through processing for certain key products.
- Launch a new online portal to support our digital strategy.
- Provide clients with a single point of access for all their data and allow them to choose how they receive advice: digital self-service, remote interaction through voice or chat, or in person at a branch or at their chosen location.
- Continue to simplify our product lines and automate processes.
- Position the Bank as the simplest and fastest in terms of origination and service in three major retail banking trips–everyday bank account opening, home financing and payments.
- Increase the use of client information and analytics to anticipate client needs and reach out proactively with relevant solutions.
- Continue transforming the branch network and self-banking channels in line with the digital strategy while achieving an appropriate balance between technology and a human touch.
- Simplify the commercial banking offering and reduce processing time.
- Increase the amount of time Commercial Banking account managers spend with clients by reducing manual paperwork through automation.
- Increase collaboration with other business units—Wealth Management, Private Banking, Financial Markets and Insurance—to serve entrepreneurs.

Segment Results – Personal and Commercial

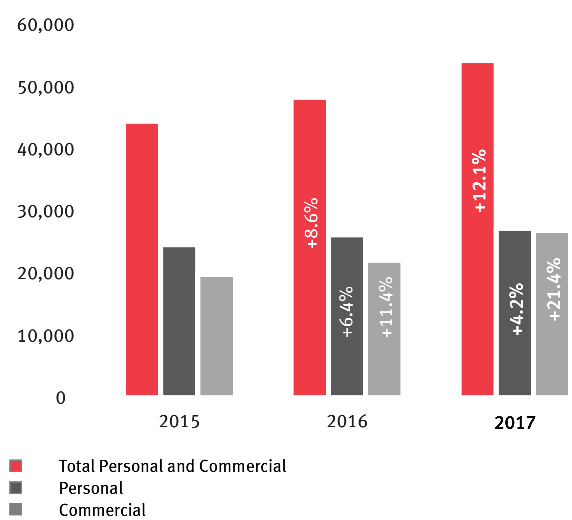
Year ended October 31 (millions of Canadian dollars)	2017		2016[1]		2015[1]		2017-16 % change
Net interest income	2,071		1,955		1,860		6
Non-interest income	990		945		967		5
Total revenues	3,061		2,900		2,827		6
Non-interest expenses	1,646		1,662		1,630		(1)
Contribution	1,415		1,238		1,197		14
Provisions for credit losses[2]	153		475		225		(68)
Income before income taxes	1,262		763		972		65
Income taxes	337		206		261		64
Net income	925		557		711		66
Net income excluding the impact of the sectoral provision[2]	896		740		711		21
Net interest margin[3]	2.26	%	2.24	%	2.28	%	
Average interest-bearing assets	91,461		87,153		81,430		5
Average assets	96,261		92,234		86,977		4
Average loans and acceptances	95,888		91,882		86,583		4
Net impaired loans	199		275		249		(28)
Net impaired loans as a % of average loans and acceptances	0.2	%	0.3	%	0.3	%	
Average deposits	54,302		48,436		44,585		12
Efficiency ratio	53.8	%	57.3	%	57.7	%	

(1) For the years ended October 31, 2016 and 2015, certain amounts have been revised from those previously reported, including a reclassification between *Non-interest income* and *Net interest income* to better reflect the nature of the income. In addition, the restructuring charge recognized in fiscal 2015, which had been allocated among all the Bank's business segments, has been combined into the *Other* heading to reflect the presentation adopted in fiscal 2016.
(2) During the year ended October 31, 2017, the Bank recorded a $40 million reversal ($29 million net of income taxes) of the sectoral provision on non-impaired loans taken for the oil and gas producer and service company loan portfolio in 2016. For the year ended October 31, 2016, the provisions for credit losses had included this sectoral provision of $250 million ($183 million net of income taxes) on non-impaired loans recorded for the oil and gas producer and service company loan portfolio. Given the materiality of this sectoral provision, recorded in accordance with GAAP, net income excluding the impact of the sectoral provision has been presented to provide a better assessment of the segment's results. See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.
(3) Net interest margin is calculated by dividing net interest income by average interest-bearing assets.

Loan and Acceptance Volumes
(millions of Canadian dollars)
(% of year-over-year growth)



Deposit Volumes
(millions of Canadian dollars)
(% of year-over-year growth)



Financial Results

In the Personal and Commercial segment, net income totalled $925 million in fiscal 2017, up 66% from $557 million in 2016. This change is mainly related to the sectoral provision on non-impaired loans for the oil and gas producer and service company loan portfolio, which was reversed by $29 million, net of income taxes, in 2017 compared to the $183 million, net of income taxes, recording of this provision in 2016. Net income excluding the impact of the sectoral provision totalled $896 million in 2017, up 21% year over year. The segment's total revenues rose $161 million or 6% year over year, as net interest income grew $116 million while non-interest income was up $45 million. The higher net interest income came primarily from growth in personal and commercial loan and deposit volumes and from a higher net interest margin, which was 2.26% in 2017 versus 2.24% in 2016.

The segment's 2017 non-interest expenses stood at $1,646 million, a 1% year-over-year decrease resulting mainly from lower compensation and employee benefits (related to the transformation plan adopted by the Bank to improve operational efficiency) as well as from lower communications costs and operations support charges. These decreases were partly offset by higher technology expenses related to business development. Given these results, the segment's 2017 contribution increased 14% year over year. Furthermore, at 53.8%, the 2017 efficiency ratio improved by 3.5 percentage points from 57.3% in 2016 and from 57.7% in 2015.

For 2017, the segment recorded $153 million in provisions for credit losses, $322 million less than the $475 million recorded in 2016. This decrease is essentially related to the impact of the sectoral provision, which was reversed by $40 million in 2017 compared to the $250 million recording of this provision in 2016. Also contributing to this decrease were lower provisions for credit losses recorded for commercial loans.

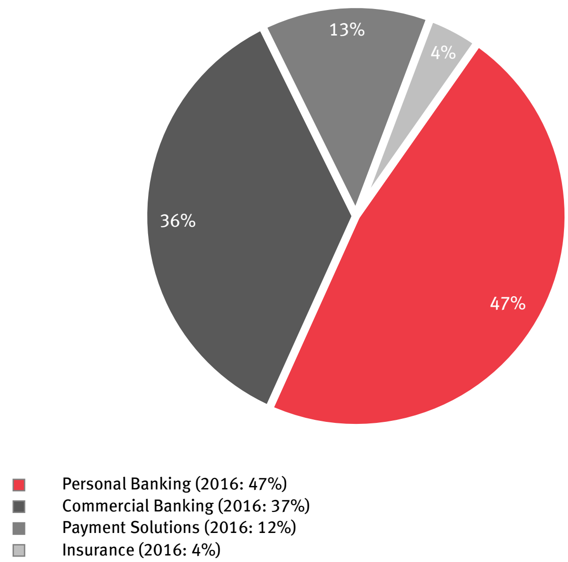
Personal Banking

For fiscal 2017, Personal Banking's revenues amounted to $1,942 million compared to $1,840 million in fiscal 2016, a 6% year-over-year increase driven mainly by a 5% increase in loan volume (primarily mortgage credit and the credit card balance outstanding) and a 4% increase in deposit volume. The 2017 non-interest income was up $47 million year over year, essentially due to increases in revenues from deposit and payment services charges, card revenues, internal commission revenues generated by the distribution of Wealth Management products as well as from higher insurance revenues, which in 2017 included a gain realized following a change to the distribution model for property and casualty insurance. At the same time, the 2017 non-interest expenses were down $10 million year over year, mainly due to lower compensation and employee benefits and to lower communications costs and operations support charges, partly offset by higher technology expenses.

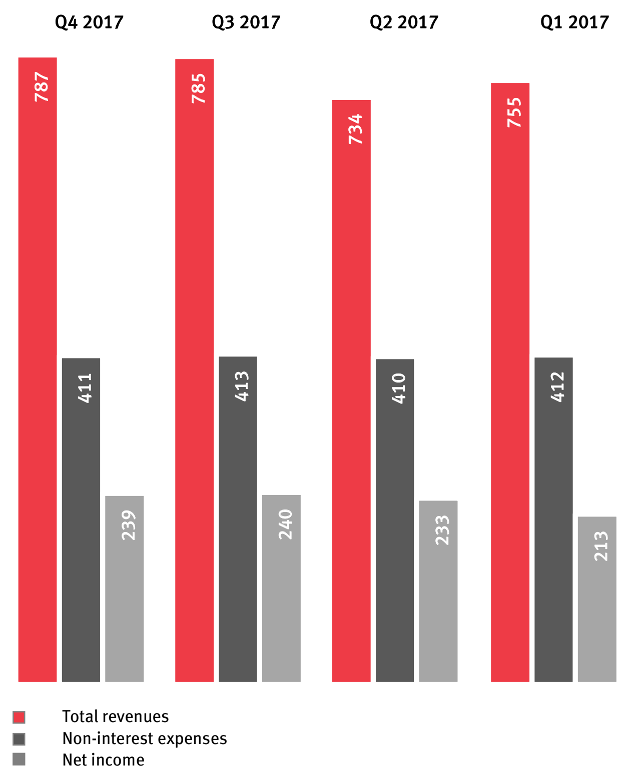
Commercial Banking

For fiscal 2017, Commercial Banking's revenues amounted to $1,119 million, rising 6% from $1,060 million in fiscal 2016. Net interest income was up, driven essentially by growth in loan and deposit volumes of 3% and 21%, respectively, and by a higher net interest margin. Non-interest income was down $2 million as a result of lower revenues from bankers' acceptances due to a decline in lending activity with oil and gas companies, partly offset by higher credit fee revenues and revenues from foreign exchange activities. Non-interest expenses were down $6 million, mainly due to lower compensation and employee benefits and lower technology costs.

Total Revenues by Category
Year ended October 31, 2017



Quarterly Results
(millions of Canadian dollars)



BUSINESS SEGMENT ANALYSIS | Wealth Management

OVERVIEW

The Wealth Management segment believes that the strength of client relationships is—and will remain—the key factor in its success. Therefore, this segment focuses on hiring and retaining advisors and support staff with a passion for providing outstanding client experience and on providing category-leading products and services.

Wealth Management leverages internal and third-party distribution channels as well as its product manufacturers to maintain leadership in Quebec and to continue growing its market share across Canada. The segment is differentiated by its unique business model and a culture that features a high degree of professionalism.

Economic and Market Review

Global economic expansion continued to advance during the year, as industrial production grew rapidly. The rise in various indicators bolstered investor confidence, which partly explains why the market index calculated by Morgan Stanley Capital International (MSCI World) peaked. The S&P/TSX Index also staged a strong comeback at the end of the year. In this context, there was strong growth in revenues, particularly from fee-based services, in accordance with the business strategies put in place. For 2018, the role of advisory services will make it possible to anticipate continued business growth based on various scenarios for potential market changes.

2017 Achievements and Highlights

- The Bank launched the myWEALTH unified solution for clients seeking a complete discretionary platform tailored to their precise needs.
- Assets under management on the myWEALTH platform increased to $32.6 billion, driven by an ongoing migration of clients to fee-based services. The Bank's investment advisors provide personalized investment management advice for negotiated annual fees adapted to client needs.
- Through a commercial agreement with Nest Wealth, a Canadian financial technology company, the Bank has added complementary digital tools to help its investment advisors improve service and further deepen client relationships.
- Ottawa and Halifax became the latest Wealth Management offices to offer clients retail banking services, including credit and transactional services. Personal banking personnel are now embedded in eight Wealth Management offices across Canada, providing greater convenience for clients and increasing internal efficiency.
- The Private Wealth 1859 division continued to expand its affluent client base across the country. During the year, the division deployed state-of-the-art productivity and client relationship management tools to sustain its growth and reputation for stellar service.
- The Bank's investment management subsidiary, National Bank Investments Inc. (NBI), simplified and optimized its mutual fund offering through fund mergers, closings, and modifications while delivering benefits to both investors and the financial advisors offering the funds.
- As the only major Canadian bank to delegate all portfolio management of its investment funds to external firms, the Bank continued to introduce innovative investment solutions on our open architecture platform, including the new NBI Unconstrained Fixed Income Fund, managed by Bill Gross, a portfolio manager at Janus Capital Group, Inc.
- National Bank Independent Network (NBIN), previously named National Bank Correspondent Network, which provides state-of-the-art trade execution and custody services to independent investment advisors and portfolio management firms, onboarded one of its largest clients to date, adding some $23.0 billion in assets under administration. NBIN's assets under administration stood at $168.7 billion at fiscal year-end.

Priorities and Outlook for 2018

- Through a coordinated strategy with other Bank units, grow the Bank's share of savings in Quebec to become the market leader.
- Support business growth outside Quebec by offering credit and other banking services in additional Wealth Management offices as well as in the offices of financial partners who already offer the Bank's retail banking services to their clients on a white-label basis.
- Leverage the Bank's open architecture model to launch new investment solutions that are relevant to individual investors by partnering with the world's best-performing investment management firms.
- Expand NBIN's market share with independent investment advisors and portfolio management firms by providing efficient clearing and back-office services through our unique Web platform, thereby helping them increase efficiency while maintaining compliance with mounting regulatory requirements.
- Maintain full compliance with new regulatory requirements for point-of-sale client disclosure regarding commissions, other forms of compensation, and investment performance.

Segment Results – Wealth Management

Year ended October 31 (millions of Canadian dollars)	2017	2016[(1)]	2015[(1)]	2017-16 % change
Net interest income	431	372	323	16
Fee-based revenues	906	803	761	13
Transaction and other revenues	267	266	335	–
Total revenues	1,604	1,441	1,419	11
Non-interest expenses	1,036	999	983	4
Contribution	568	442	436	29
Provisions for credit losses	3	5	3	(40)
Income before income taxes	565	437	433	29
Income taxes	149	116	110	28
Net income	416	321	323	30
Specified items after income taxes[(2)]	23	26	(1)	
Net income excluding specified items[(2)]	439	347	322	27
Average assets	11,652	11,006	10,388	6
Average loans and acceptances	9,924	9,379	8,772	6
Net impaired loans	4	5	5	
Average deposits	31,192	28,344	24,895	10
Efficiency ratio excluding specified items[(2)]	63.1 %	67.3 %	68.6 %	

(1) For the years ended October 31, 2016 and 2015, certain amounts have been revised from those previously reported. In addition, the restructuring charge recognized in fiscal 2015, which had been allocated among all the Bank's business segments, has been combined into the *Other* heading to reflect the presentation adopted in fiscal 2016.
(2) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.

Assets Under Administration or Under Management – Wealth Management

As at October 31 (millions of Canadian dollars)	2017	2016[(1)]	2015[(1)]	2017-16 % change
Assets under administration	411,817	341,047	308,396	21
Assets under management				
Individual	33,349	27,589	23,614	21
Mutual funds	32,192	28,706	25,783	12
	65,541	56,295	49,397	16
Assets under administration and under management	477,358	397,342	357,793	20

(1) For the years ended October 31, 2016 and 2015, certain amounts have been revised from those previously reported.

Financial Results

In the Wealth Management segment, net income totalled $416 million in fiscal 2017, up $95 million or 30% from $321 million in fiscal 2016. Net income excluding specified items (with the specified items including the acquisition-related charges of recent years) totalled $439 million for fiscal 2017, up $92 million or 27% from $347 million in 2016.

The segment's total revenues amounted to $1,604 million in fiscal 2017 compared to $1,441 million in fiscal 2016, a $163 million year-over-year increase driven mainly by 16% growth in net interest income, attributable to deposit growth and improved margins, as well as by 13% growth in fee-based revenues given net inflows across all solutions and a steady rise in stock market performance during fiscal 2017. Transaction-based and other revenues, particularly brokerage commissions on share and bond transactions, remained essentially unchanged from 2016.

The segment's non-interest expenses stood at $1,036 million in fiscal 2017 compared to $999 million in fiscal 2016, a 4% year-over-year increase mainly attributable to the higher variable compensation and external management fees associated with the revenue growth arising from the segment's greater business volume. In addition, there were year-over-year increases in both operations support charges and in the costs incurred to develop affluent client services in Western Canada. The 2017 efficiency ratio excluding specified items was 63.1% compared to 67.3% in 2016 and 68.6% in 2015.

The segment recorded $3 million in provisions for credit losses in 2017, $2 million less than in 2016.

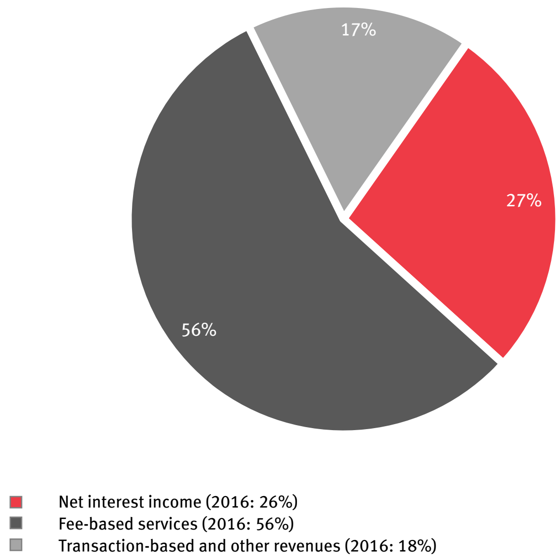
Assets Under Administration and Under Management

As at October 31, 2017, total assets under administration and under management amounted to $477.4 billion, rising $80.0 billion or 20% since October 31, 2016 and 33% since October 31, 2015.

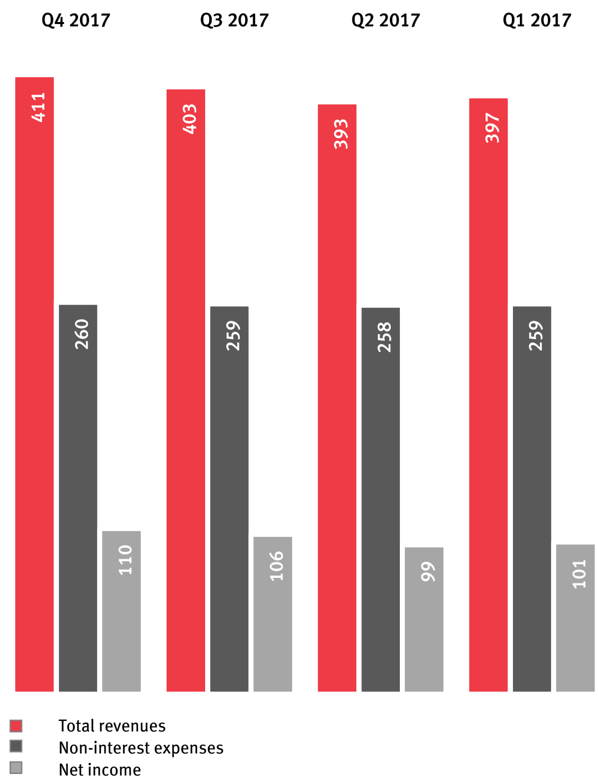
Assets under administration amounted to $411.8 billion as at October 31, 2017, a $70.8 billion or 21% increase since October 31, 2016 that came from net inflows to various solutions and from a stock market recovery.

In the individuals category, assets under management amounted to $33.3 billion as at October 31, 2017 compared to $27.6 billion as at October 31, 2016. Mutual funds totalled $32.2 billion as at October 31, 2017, rising 12% since October 31, 2016 given excellent net inflows to the various distribution networks.

Total Revenues by Category
Year ended October 31, 2017



Quarterly Results
(millions of Canadian dollars)



BUSINESS SEGMENT ANALYSIS | Financial Markets

OVERVIEW

The Financial Markets segment offers a full suite of financial solutions, from debt and equity underwriting to bank credit and risk management products. This segment also delivers comprehensive advisory services in the areas of mergers and acquisitions and financing. Access to the Canadian capital markets is provided through its fixed-income, equities and derivatives business lines. The segment's clients consist of large and mid-sized corporations, public sector clients and institutions across Canada.

Financial Markets is an investment banking leader across Canada and the overall top-ranked franchise in Quebec. In fixed-income and equities, it is a market leader, providing origination, underwriting, distribution, and liquidity through secondary market activities as well as macroeconomic and issuer-focused research.

Through offices in New York, London (UK), and Hong Kong, this segment markets Canadian debt and equity securities to institutional investors in the United States, Europe and Asia. Through its Dublin subsidiary, it engages in trading activities with large European-based institutions in local equity and equity-linked securities exchanges.

Economic and Market Review

The fiscal 2017 environment was conducive to strong capital markets results, with trading revenue supported by volatility and the rising markets in the U.S. following the presidential election. As volatility decreased in the second half, there was a pick-up in underwriting and advisory revenues and strong M&A volumes.

2017 Achievements and Highlights

The Financial Markets segment has prioritized servicing Canadian corporate clients through capital raising, advisory services and risk management solutions. Among its key transactions in 2017, the segment:

- Advised Alimentation Couche-Tard Inc. on a US$4.4 billion acquisition of CST Brands, Inc., including acting as joint bookrunner on the related bank financing and co-bookrunner on a $700 million Canadian tranche of a $3.8 billion multi-tranche cross-border bond financing.
- Advised an investor group led by J.C. Flowers & Co. and Värde Partners on a $2.5 billion acquisition of Fairstone Financial Inc. (previously CitiFinancial Canada) and led the structuring, hedging and financing of securitization transactions to close the acquisition.
- Acted as financial advisor to Parkland Fuel Corporation on a $1.6 billion acquisition of Chevron Canada's downstream fuel business, including serving as joint bookrunner on a $660 million bought deal private placement of Parkland shares, on a $500 million senior unsecured note offering, and on $1 billion in new credit facilities. In addition, it provided risk management solutions to Parkland.
- Served as one of the advisors to Osisko Gold Royalties on a $1.1 billion acquisition of a royalty portfolio from Orion Mine Finance, providing risk management solutions in conjunction with the transaction. The segment subsequently acted as joint bookrunner on a $300 million convertible debenture offering and as sole lead arranger and bookrunner on a $350 million credit facility.
- Acted as joint bookrunner on two preferred share issuances raising $300 million and on a $425 million issuance of senior unsecured notes for Intact Financial Corporation, as part of the acquisition of OneBeacon Insurance Group, Ltd; acted as co-manager on a $414 million bought deal equity issuance and acted as co-lead arranger and joint bookrunner on a $750 million bank financing.
- Acted as financial advisor to The Jean Coutu Group (PJC) Inc. on its announced $4.5 billion sale to METRO INC. In addition, it supported METRO INC. in its financing of the acquisition by acting as co-lead arranger and as joint bookrunner on a $3.4 billion bank commitment at announcement for the cash portion of the transaction consideration and as joint bookrunner on the subsequent $650 million secondary equity bought deal offering of a portion of METRO INC.'s holding in Alimentation Couche-Tard Inc.
- Continued to leverage its derivatives trading and structuring expertise to reach a broader group of clients. Its innovative risk management solutions, which help clients manage risks across all asset classes, have expanded to cover an additional 32% of clients over the last five years, with most of them using multiple risk management products.

Financial Markets has long been a leader in fixed income:

- The segment ranked first in Canada for debt underwriting, excluding self-funded deals, in the first nine months of 2017. It raised a total of $16.5 billion during this period, leading the market in all debt raised. This included acting as joint bookrunner for Bell Canada on $3 billion of senior unsecured notes through two transactions.
- It has maintained its leadership position in government debt financing, leading two five-year fixed-rate Canada Mortgage Bond issuances aggregating $10.25 billion and winning inaugural lead mandates for the City of Ottawa and the City of Toronto.

Financial Markets is one of the leading infrastructure finance firms:

- It acted as financial advisor to the Rideau Transit Group consortium with respect to certain elements of the $3.0 billion Ottawa Light Rail Transit Stage 2 expansion, involving 40 km of new rail line and 23 new stations.
- It acted as financial advisor and sole underwriter for the Link 427 consortium, in connection with the $480 million Highway 427 Expansion project in Ontario, involving the design, construction, financing and maintenance of an expansion to an existing highway in the Toronto area.

Other notable highlights included:

- In fiscal 2017, the Bank raised $1.9 billion through equity, equity-linked, and preferred share issuances for corporate and institutional clients. Corporate transactions included NBF's role as co-lead in CIBC's $800 million issuance of preferred shares. In the managed retail product space, the Bank also raised approximately $500 million for funds managed by Quadravest Capital Management Inc.
- Investment in our research team was rewarded, notably by our 3rd overall ranking and 11 top analysts in the latest Thomson Reuters Analyst Awards.

Priorities and Outlook for 2018

- Focus on corporate clients by providing a complete suite of capital raising, advisory and risk management services.
- Continue to expand corporate client coverage, benefiting from the expansion of investment banking and M&A advisory teams.
- Expand the range of products and services offered to Canadian and international clients through the segment's activities in New York, London, Dublin and Hong Kong.
- Realize the benefits of ongoing investments in technologies that support the segment's client-facing businesses.

Segment Results – Financial Markets

Year ended October 31 (taxable equivalent basis)(1) (millions of Canadian dollars)	2017	2016(2)	2015(2)	2017-16 % change
Trading activity revenues				
Equities	**496**	438	450	**13**
Fixed-income	**304**	263	237	**16**
Commodities and foreign exchange	**103**	116	147	**(11)**
	903	817	834	**11**
Financial market fees	**305**	288	286	**6**
Gains on available-for-sale securities, net	**60**	16	1	
Banking services	**338**	322	286	**5**
Other	**24**	(130)	79	
Total revenues on a taxable equivalent basis	**1,630**	1,313	1,486	**24**
Non-interest expenses	**658**	615	599	**7**
Contribution on a taxable equivalent basis	**972**	698	887	**39**
Provisions for credit losses	**–**	–	–	
Income before income taxes on a taxable equivalent basis	**972**	698	887	**39**
Income taxes on a taxable equivalent basis	**260**	213	236	**22**
Net income	**712**	485	651	**47**
Specified items after income taxes(1)	**–**	145	16	
Net income excluding specified items(1)	**712**	630	667	**13**
Average assets	**95,004**	87,504	86,466	**9**
Average loans and acceptances (Corporate Banking only)	**13,118**	12,552	10,057	**5**
Average deposits	**20,926**	15,201	13,550	**38**
Efficiency ratio on a taxable equivalent basis and excluding specified items(1)	**40.4 %**	41.6 %	39.8 %	

(1) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.
(2) For the years ended October 31, 2016 and 2015, certain amounts have been revised from those previously reported, notably amounts related to the Credigy subsidiary, which are now reported in the USSF&I segment. In addition, the restructuring charge recognized in fiscal 2015, which had been allocated among all the Bank's business segments, has been combined into the *Other* heading to reflect the presentation adopted in fiscal 2016.

Financial Results

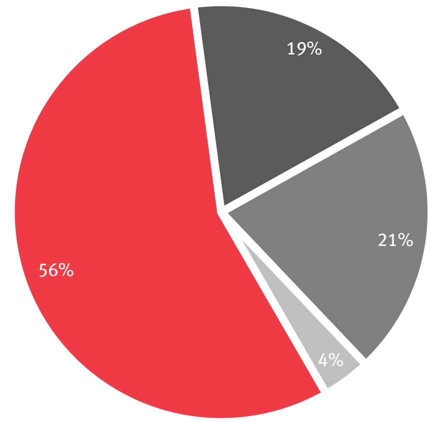
In the Financial Markets segment, net income totalled $712 million in fiscal 2017, up $227 million or 47% from fiscal 2016. The segment's total revenues on a taxable equivalent basis amounted to $1,630 million compared to $1,313 million in fiscal 2016, a $317 million year-over-year increase that was driven by all of the segment's revenue categories, in particular the Other revenue category, which in 2016 had included the $164 million write-off of the Bank's equity interest in associate Maple. Given favourable market conditions, the 2017 trading activity revenues increased 11% year over year owing to growth in revenues from equity securities and from fixed-income securities, which were up 13% and 16%, respectively. As for revenues from financial market fees and revenues from banking services, they increased by 6% and 5%, respectively. Furthermore, the 2017 gains on available-for-sale securities were higher than those recorded in 2016.

For the year ended October 31, 2017, the segment's non-interest expenses increased 7% year over year, mainly due to the higher variable compensation associated with revenue growth as well as to higher operations support charges. At 40.4%, the 2017 efficiency ratio on a taxable equivalent basis and excluding specified items improved by 1.2 percentage points when compared to 41.6% in 2016 and compares to 39.8% in 2015.

The segment did not record any provisions for credit losses for fiscal years 2017, 2016 and 2015.

Excluding the write-off of the Bank's equity interest in associate Maple recorded in 2016, the segment's 2017 net income excluding specified items rose 13% when compared to 2016.

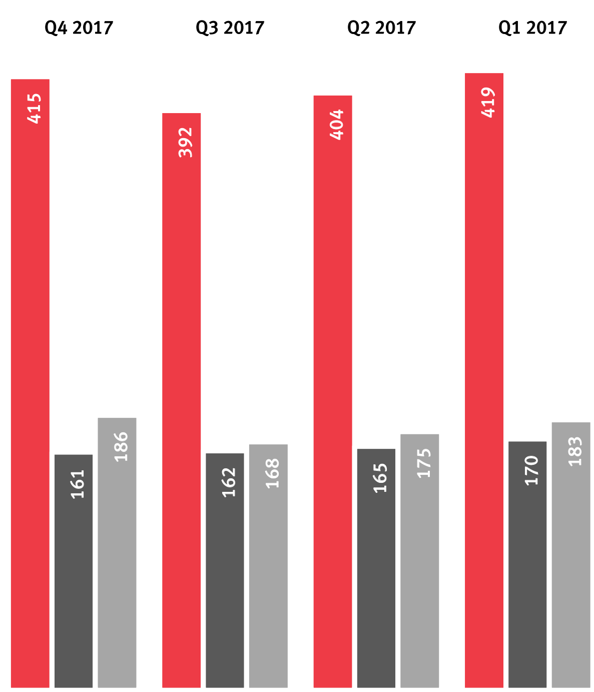
Total Revenues by Category(1)
Year ended October 31, 2017
(taxable equivalent basis)(2)



Trading activity revenues (2016: 57%)
Financial market fees (2016: 20%)
Banking services (2016: 22%)
Gains on available-for-sale securities (2016: 1%)

(1) Excluding revenues from other activities.
(2) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.

Quarterly Results
(taxable equivalent basis)(1)
(millions of Canadian dollars)



Total revenues
Non-interest expenses
Net income

(1) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.

BUSINESS SEGMENT ANALYSIS | U.S. Specialty Finance and International

OVERVIEW

The Bank has an 80% ownership interest in Credigy, a subsidiary specialized in consumer finance investment. Credigy acquires portfolios of consumer receivables from different categories of lenders and seeks to realize the assets through collections to achieve expected returns. The company also provides financing to the consumer receivables market. Purchase and financing decisions are assessed by experienced personnel using proprietary models and analytics expertise. Based in Atlanta, U.S.A., Credigy is primarily active in performing assets covering a broad range of asset classes, mostly in the U.S. market.

The Bank has a 90% ownership interest in ABA Bank, a rapidly growing commercial bank with a diversified client base in Cambodia. ABA Bank was founded in 1996. The Bank also has minority positions in financial groups active in francophone Africa and in Africa-Asia trade. At the end of fiscal 2017, the Bank's investments in emerging markets totalled $433 million.

Economic and Market Review

The U.S. consumer finance industry sustained a strong growth trajectory in 2017, fueled by a rebounding U.S. economy. Increases in consumer and investment spending resulted in real GDP growth. In response to the strengthening economy, the U.S. Federal Reserve gradually raised interest rates during the year.

Cambodia's GDP continued to grow rapidly in 2017. The country continues to benefit from its membership in the dynamic Association of Southeast Asian Nations (ASEAN) trade association, low oil prices, growth of the tourism industry and expansionary fiscal policy.

CREDIGY

2017 Achievements and Highlights

- Invested US$3.4 billion during 2017, a 70% increase from 2016.
- Performing consumer receivables represent more than 96% of Credigy's income-producing assets.
- Achieved a 3.6% return on assets, exceeding the minimum target of 2.5%.
- Selected as one of the 2017 Top Workplaces by the *Atlanta Journal-Constitution*.
- Developed several initiatives to promote employee development.

Priorities and Outlook for 2018

- Continue to build the Credigy brand as the go-to business partner in the U.S. consumer receivables market to access the best opportunities.
- Focus on creative structures within consumer finance.
- Maintain a diversified business book and continue to search for new investments at the best risk-adjusted returns.
- Continue the trajectory of disciplined growth.

ABA BANK

2017 Achievements and Highlights

- Opened seven new branches, bringing the total to 49.
- Increased the number of clients to more than 35,000 borrowers and 214,000 depositors.
- Achieved a 29% return on equity.
- Maintained credit quality with non-performing loans at 0.5%.
- Named Best Bank in Cambodia by *Global Finance* and *Euromoney* magazines in 2017 for the third straight year.

Priorities and Outlook for 2018

- Continue to target micro-businesses and SMEs by opening six new branches in rural areas.
- Drive deposit growth by increasing digital banking and self-banking penetration through innovation: best-in-class mobile banking, remote account opening, quick-response code-based (QR Code) payments, and other functionalities.
- Continue to strengthen the risk management, internal audit and compliance functions.

Segment Results – U.S. Specialty Finance and International

Year ended October 31 (millions of Canadian dollars)	2017	2016[1]	2015[1]	2017-16
				% change
Operating results				
Net interest income	262	71	(7)	269
Non-interest income	279	340	233	(18)
Total revenues	541	411	226	32
Credigy	409	324	216	26
ABA Bank and International	132	87	10	52
Non-interest expenses	225	207	147	9
Credigy	163	182	144	(10)
ABA Bank and International	62	25	3	148
Contribution	316	204	79	55
Provisions for credit losses	48	4	–	
Income before income taxes	268	200	79	34
Income taxes	84	53	25	58
Net income	184	147	54	25
Non-controlling interests	29	20	13	45
Net income attributable to the Bank's shareholders	155	127	41	22
Average assets	7,519	5,319	2,275	41
Average loans and receivables	6,062	3,499	1,302	73
Average other revenue-bearing assets	449	1,162	646	(61)
Average deposits	1,265	487	–	
Efficiency ratio	41.6 %	50.4 %	65.0 %	

(1) The amounts presented for the years ended October 31, 2016 and 2015 are consistent with the segment disclosure presentation adopted by the Bank for the fiscal year that began on November 1, 2016.

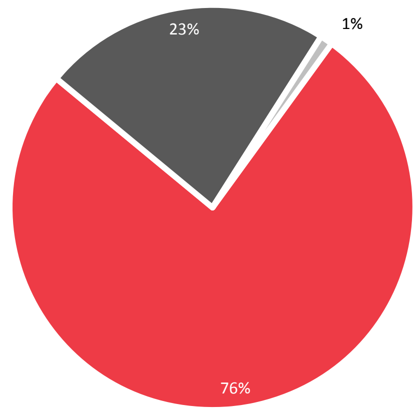
Financial Results

In the U.S. Speciality Finance and International segment, net income totalled $184 million for the year ended October 31, 2017 compared to $147 million in fiscal 2016. The segment's 2017 total revenues amounted to $541 million versus $411 million in fiscal 2016; this revenue growth was driven partly by a 26% increase in Credigy's revenues, particularly due to growth in loan volumes, and partly by the revenues from the ABA Bank subsidiary, consolidated into the Bank's results since the third quarter of 2016, which increased steadily due to growth in loan and deposit volumes. These increases more than made up for the fiscal 2016 recognition of a $41 million non-taxable gain realized on the revaluation of the previously held equity interest in ABA Bank.

For the year ended October 31, 2017, the segment's non-interest expenses stood at $225 million, an $18 million year-over-year increase attributable essentially to all of the non-interest expenses of the ABA Bank subsidiary, which have been consolidated into the Bank's results since the third quarter of 2016. As for the non-interest expenses of the Credigy subsidiary, they were down 10% year over year, primarily as a result of lower servicing fees.

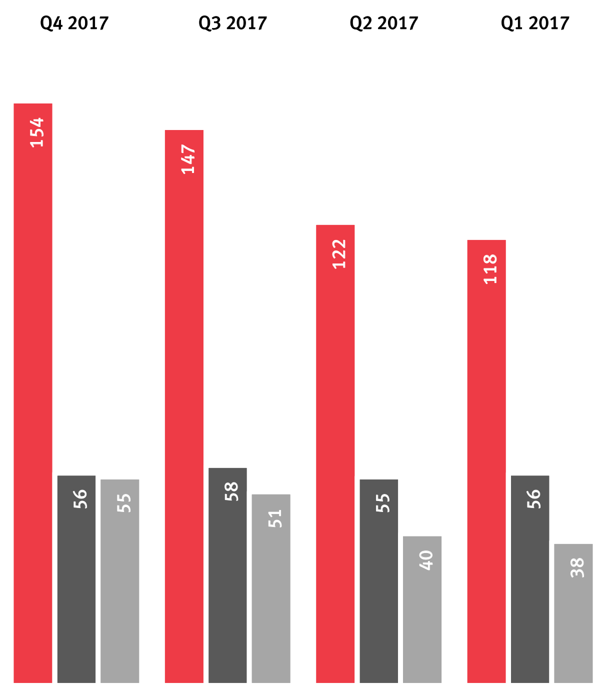
For fiscal 2017, the segment's provisions for credit losses stood at $48 million and were essentially attributable to the provisions recorded for the Credigy subsidiary as a result of its business growth.

Total Revenues by Category
Year ended October 31, 2017



Credigy (2016: 79%)
ABA Bank (2016: 10%)
International (2016: 11%)

Quarterly Results
(millions of Canadian dollars)



Total revenues
Non-interest expenses
Net income

BUSINESS SEGMENT ANALYSIS | Other

OVERVIEW

The *Other* heading reports on Treasury operations, including the Bank's asset and liability management, liquidity management and funding operations; certain non-recurring items; and the unallocated portion of corporate units. Corporate units include Information Technology, Transformation and Strategic Initiatives Office, Risk Management, Operations, Human Resources and Corporate Affairs, and Finance and Treasury. These units provide advice and guidance throughout the Bank and to its business segments in addition to expertise and support in their respective fields.

Segment Results – Other

Year ended October 31
(taxable equivalent basis)(1)
(millions of Canadian dollars)

	2017	2016(2)	2015(2)
Net interest income	(105)	(113)	(149)
Non-interest income	122	123	248
Total revenues on a taxable equivalent basis	17	10	99
Non-interest expenses	292	392	306
Contribution on a taxable equivalent basis	(275)	(382)	(207)
Provisions for credit losses(3)	40	–	–
Income before income taxes on a taxable equivalent basis	(315)	(382)	(207)
Income taxes (recovery) on a taxable equivalent basis	(102)	(128)	(87)
Net loss	(213)	(254)	(120)
Non-controlling interests	55	55	57
Net loss attributable to the Bank's shareholders	(268)	(309)	(177)
Specified items after income taxes(1)	2	186	48
Net loss excluding specified items(1)	(211)	(68)	(72)
Average assets	37,915	39,850	36,823

(1) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.
(2) For the years ended October 31, 2016 and 2015, certain amounts have been revised from those previously reported, notably amounts related to the ABA Bank subsidiary and the other international investments that are now reported in the USSF&I segment. In addition, the restructuring charge recognized in fiscal 2015, which had been allocated among all the Bank's business segments, has been combined into the *Other* heading to reflect the presentation adopted in fiscal 2016.
(3) The $40 million in provisions for credit losses in fiscal 2017 reflects an increase in the collective allowance for credit risk on non-impaired loans.

Financial Results

For the *Other* heading of segment results, there was a net loss of $213 million in fiscal 2017 compared to a net loss of $254 million in fiscal 2016. The 2016 results had been affected by the following specified items, net of income taxes: $6 million in financing costs related to holding restructured notes; a $96 million restructuring charge; $18 million in litigation charges; $32 million in intangible asset impairment losses; and the Bank's $16 million share in the charges related to its equity interest in TMX. Also in fiscal 2016, an $18 million tax provision had been recorded to reflect the impact of changes in tax measures. For fiscal 2017, the *Other* heading's net loss was affected by specified items of $2 million, net of income taxes, related to the Bank's share in TMX.

For the year ended October 31, 2017, net loss excluding specified items stood at $211 million compared to a net loss of $68 million in fiscal 2016. The higher net loss excluding specified items was mainly a result of several factors: the increase of $40 million ($29 million net of income taxes) in the collective allowance for credit risk on non-impaired loans to reflect growth in the Bank's overall credit portfolio; an increase in non-interest expenses arising from compensation and employee benefits, in particular the cost of pension plans and variable compensation; and technology costs resulting from the digital transformation.

QUARTERLY FINANCIAL INFORMATION

Several trends and factors have an impact on the Bank's quarterly net income, revenues, non-interest expenses and provisions for credit losses. The following table presents a summary of results for the past eight quarters. Furthermore, a summary of results for the past 12 quarters is provided in Table 1 on pages 96 and 97.

Quarterly Results Summary(1)

(millions of Canadian dollars)				2017				2016
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Statement of income data								
Net interest income	**841**	**831**	**762**	**798**	778	783	715	716
Non-interest income	**863**	**844**	**835**	**835**	791	774	710	573
Total revenues	**1,704**	**1,675**	**1,597**	**1,633**	1,569	1,557	1,425	1,289
Provisions for credit losses	**70**	**58**	**56**	**60**	59	45	317	63
Non-interest expenses	**976**	**971**	**941**	**969**	1,159	937	876	903
Income taxes	**133**	**128**	**116**	**107**	44	97	22	62
Net income	**525**	**518**	**484**	**497**	307	478	210	261

(1) For additional information about the 2017 fourth quarter results, visit the Bank's website at nbc.ca or the SEDAR website at sedar.com to consult the Bank's *Press Release for the Fourth Quarter of* 2017, published on December 1, 2017.

The analysis below of the past eight quarters reflects the sustained performance of all the business segments and helps readers identify the items that have favourably or unfavourably affected results. Given the net income growth across all of the Bank's main business segments, and due to certain specified items recorded in fiscal 2016, the net income for each quarter of 2017 was up year over year. Conversely, for fiscal 2016, the net income for each quarter but the third quarter was down year over year, mainly due to the specified items recorded in fiscal 2016, as described in the Financial Reporting Method section on page 10 and that provides additional information on non-GAAP financial measures.

For the first quarter of 2017, the year-over-year increase in net income was partly due to a write-off of $145 million, net of income taxes, of the Bank's equity interest in associate Maple in the first quarter of 2016.

For the second quarter of 2017, the year-over-year increase in net income was substantial given that, in the second quarter of 2016, the Bank had recorded a sectoral provision for credit losses for oil and gas producers and service companies of $183 million, net of income taxes.

For the third quarter of 2017, the year-over-year increase in net income was driven by solid performance in the main business segments, which more than made up for the $41 million non-taxable gain recorded in 2016 following a revaluation of the previously held equity interest in ABA Bank.

For the fourth quarter of 2017, the year-over-year increase in net income was substantial, as there was net income growth across all the business segments combined with the fact that, in the fourth quarter of 2016, the following items, net of income taxes, had been recorded: a $96 million restructuring charge, $32 million in intangible asset impairment losses, and $18 million in litigation charges.

As for net interest income, this item posted year-over-year growth in every quarter of 2017 and 2016. These increases were driven by growth in personal and commercial loan and deposit volumes, the net interest income growth at Wealth Management (notably due to deposit growth and improved margins), the net interest income growth at Credigy, and the contributions made by the ABA Bank subsidiary since the third quarter of 2016. These increases more than offset the decrease in net interest income within the Financial Markets segment.

The non-interest income results for every quarter of 2017 and for the fourth quarter of 2016 were up year over year owing to sustained growth by the business segments. For three of the four quarters of 2016, non-interest income was down year over year, particularly because the equity interest in associate Maple was written off in the first quarter of 2016 and, in 2015, revenues related to holding restructured notes and a gain on the disposal of Fiera Capital shares had been recorded.

Over the past eight quarters, the Bank's provisions for credit losses were affected by several items. In the second quarter of 2017, the Bank reversed, by $40 million, the sectoral provision on non-impaired loans recorded for the oil and gas producer and service company loan portfolio, whereas this sectoral provision had initially been recorded, in an amount of $250 million, in the second quarter of 2016. The 2017 second-quarter provisions for credit losses also included a $40 million increase in the collective allowance for credit risk on non-impaired loans. For the fourth quarter of 2017, the year-over-year increase in the provisions for credit losses came essentially from the Credigy subsidiary.

Over most of the past eight quarters, non-interest expenses posted year-over-year increases, mainly as a result of compensation and employee benefits (including the variable compensation associated with revenue growth in the business segments), technology investments, business development expenses, and the acquisition of the ABA Bank subsidiary. For the fourth quarter of 2017, non-interest expenses were down year over year, essentially because a restructuring charge, intangible asset impairment losses, and litigation charges had been recorded in the fourth quarter of 2016.

The effective tax rate was up for three of the four quarters in 2017, whereas the second and fourth quarters of 2016 had posted lower rates. The change in the effective tax rate between the second quarters of 2017 and 2016 came mainly from the tax impact of recording the sectoral provision in the second quarter of 2016 as well as from lower tax-exempt dividend income in the second quarter of 2017. Lastly, during the second quarter of 2016, a tax provision had been recorded to reflect the impact of changes to tax measures.

ANALYSIS OF THE CONSOLIDATED BALANCE SHEET

Consolidated Balance Sheet Summary

As at October 31 (millions of Canadian dollars)	2017	2016(1)	% change
Assets			
Cash and deposits with financial institutions	**8,802**	8,183	**8**
Securities	**65,343**	64,541	**1**
Securities purchased under reverse repurchase agreements and securities borrowed	**20,789**	13,948	**49**
Loans and acceptances (net of allowances for credit losses)	**134,443**	126,178	**7**
Other	**16,450**	19,356	**(15)**
	245,827	232,206	**6**
Liabilities and equity			
Deposits	**156,671**	142,066	**10**
Other	**75,589**	77,026	**(2)**
Subordinated debt	**9**	1,012	**(99)**
Equity attributable to the Bank's shareholders	**12,750**	11,292	**13**
Non-controlling interests	**808**	810	**–**
	245,827	232,206	**6**

(1) On November 1, 2016, the Bank changed the presentation of certain items on the Consolidated Balance Sheet, and the October 31, 2016 figures were adjusted to reflect these modifications.

As at October 31, 2017, the Bank's total assets amounted to $245.8 billion compared to $232.2 billion at year-end 2016, a 6% increase owing mainly to a $6.9 billion increase in securities purchased under reverse repurchase agreements and securities borrowed and an $8.2 billion increase in loans and acceptances.

Cash and Deposits With Financial Institutions

At $8.8 billion as at October 31, 2017, cash and deposits with financial institutions rose $0.6 billion since the same date last year, mainly due to deposits with financial institutions. The Bank's liquidity and funding risk management practices are described on pages 75 to 83 of this MD&A.

Securities

As at October 31, 2017, securities totalled $65.3 billion (27% of total assets), rising $0.8 billion during the year from $64.5 billion as at October 31, 2016. Available-for-sale securities decreased by $6.0 billion, essentially due to a decrease in securities issued or guaranteed by the Canadian government and Canadian provincial and municipal governments. This decrease was offset by held-to-maturity securities and securities at fair value through profit or loss, which rose $5.3 billion and $1.5 billion, respectively, mainly due to securities issued or guaranteed by the Canadian government and equity securities. Securities purchased under reverse repurchase agreements and securities borrowed totalled $20.8 billion as at October 31, 2017, a $6.9 billion increase since year-end 2016 that is mainly related to the business activities of the Financial Markets segment. The Bank's market risk management policies are described on pages 68 to 75 of this MD&A.

Master Asset Vehicles (MAV)

As at October 31, 2017, the carrying value of the restructured notes of the MAV conduits and of the other restructured notes held by the Bank was nil ($619 million as at October 31, 2016). The change in the carrying value of the restructured notes of the MAV conduits during the year ended October 31, 2017 was mainly attributable to capital repayments.

Loans and Acceptances

As at October 31, 2017, loans and acceptances, net of allowances for credit losses, totalled $134.4 billion, up $8.2 billion or 7%, and accounted for 55% of total assets.

Residential mortgage loans outstanding totalled $50.5 billion as at October 31, 2017, rising $1.6 billion or 3% since year-end 2016. This growth was driven by sustained demand for mortgage credit.

Personal loans and credit card receivables totalled $37.0 billion at year-end 2017, a $3.0 billion or 9% increase from $34.0 billion at year-end 2016. This increase came from growth in Credigy and ABA Bank lending activities and from Personal Banking's operations.

At $47.7 billion as at October 31, 2017, loans and acceptances to businesses and government increased $3.6 billion or 8% since October 31, 2016. This increase came mainly from the activities of the Credigy subsidiary and from Commercial Banking. The customers' liability under acceptances decreased by $0.4 billion since last year due to a decline in lending activity with oil and gas companies.

Table 9 (page 103) shows gross loans and acceptances by borrower category as at October 31, 2017. At $66.4 billion, residential mortgages (including home equity lines of credit) have posted strong growth since 2013 and account for 49% of total loans and acceptances. This growth was driven by sustained demand for mortgage credit. Retail loans also increased, totalling $16.4 billion as at October 31, 2017. With respect to commercial loans, there was growth mainly in the financial institutions category, manufacturing category, construction and real estate category, and wholesale and retail category, whereas there were decreases in the transportation category and mining category.

Impaired Loans

As at October 31, 2017, gross impaired loans stood at $380 million, declining $112 million since October 31, 2016, mainly due to decreases in the personal and commercial loan portfolios (Table 10, page 104). Impaired loans represented 4.3% of the tangible capital adjusted for allowances compared to 6.3% as at October 31, 2016. Gross impaired loans, net of individual and collective allowances, decreased $75 million from a year ago, as a result of the decreases in impaired personal and commercial loans.

A detailed description of the Bank's credit risk management practices is provided on pages 60 to 67 of this MD&A as well as in Note 7 to the consolidated financial statements.

Other Assets

As at October 31, 2017, other assets totalled $16.5 billion compared to $19.4 billion as at October 31, 2016. This $2.9 billion decrease in other assets can essentially be traced to a $2.0 billion decrease in derivative financial instruments and a $0.7 billion decrease in premises and equipment. Purchased receivables, investments in associates and joint ventures, goodwill, intangible assets, and the other item of *Other assets* remained relatively stable compared to last year.

Deposit Liability

At $156.7 billion as at October 31, 2017, deposits increased by $14.6 billion or 10% since year-end 2016. At $53.7 billion, personal deposits, as presented in Table 11 (page 105), increased $1.2 billion since October 31, 2016, accounting for 34.3% of all deposits. This increase was driven by Bank initiatives to grow this type of deposit. A summary of total personal savings is provided in the following table.

As shown in Table 11, business and government deposits totalled $97.6 billion, up $13.7 billion or 16% from $83.9 billion at year-end 2016. This increase came from banking and governmental activities and term deposits. Deposits from deposit-taking institutions were down $0.2 billion from the same date last year.

As at October 31, 2017, total personal savings amounted to $210.5 billion, rising 6% from $199.0 billion since October 31, 2016. Overall, off-balance-sheet personal savings stood at $156.8 billion, rising $10.3 billion or 7% since year-end 2016 and driven by excellent net inflows to mutual funds and by a stock market recovery.

Total Personal Savings

As at October 31 (millions of Canadian dollars)	2017	2016[(1)]	% change
Balance sheet			
Deposits	**53,719**	52,521	**2**
Off-balance-sheet			
Brokerage	**124,212**	117,298	**6**
Mutual funds	**32,192**	28,706	**12**
Other	**408**	463	**(12)**
	156,812	146,467	**7**
Total	**210,531**	198,988	**6**

(1) Certain amounts have been revised from those previously reported.

Other Liabilities

Other liabilities stood at $75.6 billion as at October 31, 2017 and consisted of the following items: acceptances, obligations related to securities sold short, obligations related to securities sold under repurchase agreements and securities loaned, derivative financial instruments, liabilities related to transferred receivables, and other liability items. Other liabilities were down $1.4 billion since October 31, 2016, mainly due to a $0.8 billion decrease in obligations related to securities sold under repurchase agreements and securities loaned and a $1.1 billion decrease in derivative financial instruments, partly offset by a $1.2 billion increase in obligations related to securities sold short.

Subordinated Debt and Other Contractual Obligations

Subordinated debt decreased by $1.0 billion since October 31, 2016 as the result of an early redemption, in April 2017, of medium-term notes maturing on April 11, 2022.

Contractual obligations are presented in detail in Note 30 to the consolidated financial statements.

Equity

As at October 31, 2017, equity attributable to the Bank's shareholders was $12.8 billion, up $1.5 billion from $11.3 billion as at October 31, 2016. This increase was essentially driven by an increase in retained earnings, attributable to net income net of dividends, and by common share issuances under the stock option plan, partly offset by common share repurchases for cancellation and by the $400 million issuance of Series 38 preferred shares. The Consolidated Statements of Changes in Equity on page 113 of this Annual Report present the items of equity.

As at October 31, 2017, the Bank had 339.6 million common shares issued and outstanding compared to 338.1 million a year earlier. This increase was mainly due to the issuance of shares under the Stock Option Plan. The Bank repurchased 2 million common shares and issued 16 million Series 38 First Preferred Shares. See Note 19 to the consolidated financial statements. An analysis of the Bank's regulatory capital is presented in the Capital Management section of this MD&A.

Shares and Stock Options

	As at October 31, 2017	
	Number of shares	$ million
First preferred shares		
Series 28[(1)]	8,000,000	200
Series 30	14,000,000	350
Series 32	12,000,000	300
Series 34	16,000,000	400
Series 36	16,000,000	400
Series 38	16,000,000	400
	82,000,000	2,050
Common shares[(2)]	339,591,965	2,768
Stock options[(2)]	14,575,894	

(1) On November 15, 2017, the Bank redeemed all the issued and outstanding Non-Cumulative 5-Year Rate-Reset Series 28 First Preferred Shares. Pursuant to the share conditions, the redemption price was $25.00 per share plus the periodic dividend declared and unpaid. The Bank redeemed 8,000,000 Series 28 preferred shares for a total amount of $200 million.

(2) As at November 24, 2017, there were 340,190,181 common shares and 14,526,844 stock options outstanding.

Related Party Transactions

In the normal course of business, the Bank provides various banking services and enters into contractual agreements and other transactions with associates, joint ventures, directors, key officers and other related parties. These agreements and transactions are entered into under conditions similar to those offered to non-related third parties.

Loans to eligible key officers are granted under the same conditions as those granted to any other employee of the Bank. The main conditions are as follows:

- the employee must meet the same credit requirements as a client;
- mortgage loans, to a maximum of $200,000, are granted for a three-year term at the posted rate less 2% and, for a five-year term, at the posted rate less 2.5% limited to half of the posted rate. Any amount over the $200,000 maximum is financed at the preferential employee rate;
- home equity lines of credit bear interest at Canadian prime less 1%, but never lower than Canadian prime divided by two;
- personal loans bear interest at a risk-based regular client rate;
- credit card advances bear interest at a prescribed fixed rate in accordance with Bank policy;
- personal lines of credit bear interest at Canadian prime less 1%, but never lower than Canadian prime divided by two.

For personal lines of credit, employees may not borrow more than 50% of their annual gross base salary at the reduced rate. The Canadian prime rate is applied to the remainder.

In accordance with the *Bank Act* (Canada), the aggregate of loans granted to key officers of the Bank, excluding mortgage loans granted on their principal residence, cannot exceed twice the officer's annual salary.

Furthermore, the Bank offers a deferred stock unit plan to directors who are not Bank employees. For additional information, see Note 23 to the consolidated financial statements. Additional information on related parties is presented in Notes 9, 28 and 29 to the consolidated financial statements.

Acquisition

Advanced Bank of Asia Limited

On May 16, 2016, the Bank completed the acquisition of Advanced Bank of Asia Limited (ABA Bank), a major Cambodian financial institution that offers financial products and services to individuals and businesses. This acquisition is part of the Bank's international growth strategy and, upon completion, brings the Bank's common share equity interest in ABA Bank to 90%. The sum of the $119 million cash purchase price, of the fair value of the previously held interest, and of the estimated value of the non-controlling interest established at the acquisition date exceeded the fair value of the net assets acquired by $129 million. This excess amount was recorded on the Consolidated Balance Sheet as goodwill and mainly represents ABA Bank's expected business growth in Cambodia. The goodwill from this acquisition was not deductible for tax purposes. The acquired receivables, consisting mainly of personal and commercial loans, had an estimated acquisition-date fair value of $754 million. This amount also represents the gross contractual amounts receivable that the Bank expects to fully recover.

During the year ended October 31, 2016, the Bank also recognized a $41 million non-taxable gain on the revaluation of its previously held equity interest in ABA Bank in the *Non-interest income – Other* item of the Consolidated Statement of Income. For business segment disclosure purposes, this gain and ABA Bank's financial results have been included in the USSF&I segment. ABA Bank's results have been consolidated in the Bank's financial statements as of May 17, 2016.

Maple Financial Group Inc.

The Bank has a 24.9% equity interest in Maple Financial Group Inc. (Maple), a privately owned Canadian company that operated through direct and indirect wholly owned subsidiaries in Canada, Germany, the United Kingdom and the United States. In August 2016, Maple filed for bankruptcy under applicable Canadian laws, and a receiver was appointed to administer the company. Similar proceedings were initiated for each of Maple's other material subsidiaries in their home jurisdictions.

Maple Bank GmbH, an indirect wholly owned subsidiary of Maple, has been the subject of an investigation into alleged tax irregularities by German prosecutors since September 2015 and, to the Bank's knowledge, that investigation is ongoing. The Bank understands that the investigation is focusing on selected trading activities by Maple Bank GmbH and some of its current and former employees during taxation years 2006 to 2010, although the Bank has been advised that the investigation may also extend to subsequent taxation years. The German authorities have alleged that these trading activities violated German tax laws. Neither the Bank nor its employees were involved in these trading activities and, to the Bank's knowledge, are not the subject of this investigation.

On February 6, 2016, the German Federal Financial Supervisory Authority, BaFin, placed a moratorium on the business activities of Maple Bank GmbH, preventing it from carrying out its normal business activities. In light of the situation, the Bank wrote off the carrying value of its equity interest in Maple in an amount of $164 million ($145 million net of income taxes) during the first quarter of 2016. The $164 million write-off of the equity interest in this associate was recognized in the *Non-interest income – Other* item of the Consolidated Statement of Income for the year ended October 31, 2016 and was reported in the Financial Markets segment.

The Bank has advised the German authorities that if it is determined that portions of dividends received from Maple could be reasonably attributable to tax fraud by Maple Bank GmbH, arrangements will be made to repay those amounts to the relevant authority. If any repayments are required, they are not expected to be material to the Bank's financial position.

Income Taxes

In March 2017, the Canada Revenue Agency (CRA) issued a proposed reassessment to the Bank for the 2011 and 2012 taxation years. In May 2017, the CRA reassessed the Bank for the 2012 taxation year. The transactions to which the proposed reassessment and the actual reassessment relate are similar to those prospectively addressed by the synthetic equity arrangement rules introduced in the 2015 Canadian federal budget. The proposed reassessment and the actual reassessment (including estimated provincial income taxes and interest) total approximately $173 million. The CRA may issue reassessments to the Bank in respect of similar activities for fiscal years subsequent to 2012. The Bank is confident that its tax position was appropriate and intends to vigorously defend its position. As a result, no amount has been recognized in the consolidated financial statements as at October 31, 2017.

Event After the Consolidated Balance Sheet Date

Redemption of Preferred Shares

On November 15, 2017, the Bank redeemed all the issued and outstanding Non-Cumulative 5-Year Rate-Reset Series 28 First Preferred Shares. Pursuant to the share conditions, the redemption price was $25.00 per share plus the periodic dividend declared and unpaid. The Bank redeemed 8,000,000 Series 28 preferred shares for a total amount of $200 million, which will reduce *Preferred share capital*.

SECURITIZATION AND OFF-BALANCE-SHEET ARRANGEMENTS

In the normal course of business, the Bank is party to various financial arrangements that, under IFRS, are not required to be recorded on the Consolidated Balance Sheet or are recorded under amounts other than their notional or contractual values. These arrangements include, among others, transactions with structured entities, derivative financial instruments, the issuance of guarantees, credit instruments, and financial assets received as collateral.

Structured Entities

The Bank uses structured entities, among other means, to diversify its funding sources and to offer services to clients, in particular to help them securitize their financial assets or provide them with investment opportunities. Under IFRS, a structured entity must be consolidated if the Bank controls the entity. Note 1 to the consolidated financial statements describes the accounting policy and criteria used for consolidating structured entities. Additional information on consolidated and non-consolidated structured entities is provided in Note 28 to the consolidated financial statements.

Securitization of the Bank's Financial Assets

Mortgage Loans

The Bank participates in two Canada Mortgage and Housing Corporation (CMHC) securitization programs: the Mortgage-Backed Securities Program under the *National Housing Act* (Canada) (NHA) and the Canada Mortgage Bond (CMB) Program. Under the first program, the Bank issues NHA securities backed by insured residential mortgage loans and, under the second, the Bank sells NHA securities to Canada Housing Trust (CHT), which finances the purchase through the issuance of mortgage bonds insured by CMHC. Moreover, these mortgage bonds feature an interest rate swap agreement under which a CMHC-certified counterparty pays CHT the interest due to investors and receives the interest on the NHA securities. As at October 31, 2017, the outstanding amount of NHA securities issued by the Bank and sold to CHT was $16.7 billion. The mortgage loans sold consist of fixed- or variable-rate residential loans that are insured against potential losses by a loan insurer. In accordance with the NHA-MBS Program, the Bank advances the funds required to cover late payments and, if necessary, obtains reimbursement from the insurer that insured the loan. The NHA-MBS and CMB programs do not use liquidity guarantee arrangements. The Bank uses these securitization programs mainly to diversify its funding sources. In accordance with IFRS, because the Bank retains substantially all of the risks and rewards of ownership of the mortgage loans transferred to CHT, the derecognition criteria are not met. Therefore, the insured mortgage loans securitized under the CMB program continue to be recognized in *Loans* on the Bank's Consolidated Balance Sheet and the liabilities for the considerations received from the transfer are recognized in *Liabilities related to transferred receivables* on the Consolidated Balance Sheet. For additional information, see Note 8 to the consolidated financial statements.

Credit Card Receivables

In April 2015, the Bank set up Canadian Credit Card Trust II (CCCT II) to continue its program of securitizing credit card receivables on a revolving basis. The Bank uses this entity for capital management and funding purposes. The Bank acts as the servicer of the receivables sold and maintains a relationship with the clients. Furthermore, it administers the securitization program and ensures that all related procedures are stringently followed and that investors are paid according to the provisions of the program.

As at October 31, 2017, the credit card receivables portfolio held by CCCT II (net of the Bank Certificate held by the Bank) represented an amount outstanding of $1.4 billion. CCCT II issued investors' certificates, $0.9 billion of which is held by third parties and $0.5 billion is held by the Bank. New receivables are periodically sold to the structure on a revolving basis to replace the receivables reimbursed by clients.

The different series of certificates are rated by Fitch Ratings Inc. (Fitch) and DBRS Limited (DBRS). From this portfolio of sold receivables, the Bank retains the excess spread, i.e., the residual net interest income after all the expenses related to this structure have been paid, and thus provides first-loss protection. Furthermore, second-loss protection for issued series is provided by certificates subordinated to the senior notes (Series 2015-1 and 2016-1), representing 6.4% of the total amount of the series issued. The Bank controls CCCT II and thus consolidates it.

Securitization of Third-Party Financial Assets

The Bank administers multi-seller conduits that purchase financial assets from clients and finance those purchases by issuing commercial paper backed by the acquired assets. Clients use these multi-seller conduits to diversify their funding sources and reduce borrowing costs while continuing to service the financial assets and providing some amount of first-loss protection. Notes issued by the conduits and held by third parties provide additional credit loss protection. The Bank acts as a financial agent and provides administrative and transaction structuring services to these conduits. The Bank provides backstop liquidity and credit enhancement facilities under the commercial paper program. These facilities are presented and described in Notes 27 and 28 to the consolidated financial statements. The Bank has concluded derivative financial instrument contracts with these conduits, the fair value of which is presented on the Bank's Consolidated Balance Sheet. The Bank is not required to consolidate these conduits, as it does not control them.

Derivative Financial Instruments

The Bank uses various types of derivative financial instruments to meet its clients' needs, generate trading activity revenues and manage its exposure to foreign exchange, interest, and credit rate risk as well as other market risks. All derivative financial instruments are accounted for at fair value on the Consolidated Balance Sheet. Transactions in derivative financial instruments are expressed as notional amounts. These amounts are not presented as assets or liabilities on the Consolidated Balance Sheet. They represent the face amount of the contract to which a rate or price is applied to determine the amount of cash flows to be exchanged. Notes 1 and 17 to the consolidated financial statements provide additional information on the types of derivative financial instruments used by the Bank and their accounting basis.

Guarantees

In the normal course of business, the Bank enters into various guarantee contracts. The principal types of guarantees are letters of guarantee, backstop liquidity and credit enhancement facilities, certain securities lending activities, and certain indemnification agreements. Note 27 to the consolidated financial statements provides detailed information on these guarantees.

Credit Instruments

In the normal course of business, the Bank enters into various off-balance-sheet credit commitments. The credit instruments used to meet the financing needs of its clients represent the maximum amount of additional credit that the Bank could be required to extend if the commitments were fully drawn. For additional information on these off-balance-sheet credit instruments and other items, see Note 27 to the consolidated financial statements.

Financial Assets Received as Collateral

In the normal course of business, the Bank receives financial assets as collateral as a result of transactions involving securities purchased under reverse repurchase agreements, securities borrowing and lending agreements, and derivative financial instrument transactions. For additional information regarding financial assets received as collateral, see Note 27 to the consolidated financial statements.

ADDITIONAL FINANCIAL DISCLOSURE

The Financial Stability Board (FSB) is an international financial group established at the London G20 Summit in April 2009 as a successor to the Financial Stability Forum (FSF) founded in 1999 at the initiative of the G7. It brings together several national financial authorities (central banks, finance ministries, etc.) as well as several international organizations and groups working to develop financial stability standards. Its objective is to promote cooperation in the oversight and monitoring of financial institutions.

In April 2008, the FSF published a report at the request of the G7 Finance Ministers and Central Bank Governors. OSFI then asked Canadian banks to apply certain recommendations set out in the report.

The recommendations seek to enhance the transparency and measurement of certain exposures, in particular structured entities, subprime and Alt-A exposures, collateralized debt obligations, residential and commercial mortgage-backed securities, and leveraged financing structures. The Bank does not market any specific mortgage financing program to subprime or Alt-A clients. Subprime loans are generally defined as loans granted to borrowers with a higher credit risk profile than prime borrowers, and the Bank does not grant this type of loan. Alt-A loans are granted to borrowers who cannot provide standard proof of income. The Bank's Alt-A loan volume was $408 million as at October 31, 2017 ($483 million as at October 31, 2016).

The Bank does not have any significant direct position in residential and commercial mortgage-backed securities that are not insured by the CMHC. Credit derivative positions are presented in the *Supplementary Regulatory Capital Disclosure* report, which is available on the Bank's website at nbc.ca.

Leveraged financing structures are defined by the Bank as loans granted to large corporate and financial sponsor-backed companies that are typically non-investment grade with much higher levels of debt relative to other companies in the same industry. Leveraged finance is commonly employed to achieve a specific objective, for example, to make an acquisition, complete a buy-out or repurchase shares. Leveraged finance risk exposure takes the form of both funded and unfunded commitments. As at October 31, 2017, total commitments for this type of loan stood at $3,269 million ($2,694 million as at October 31, 2016). Details about other exposures are provided in the table concerning structured entities in Note 28 to the consolidated financial statements.

In May 2012, the FSB formed a working group, the Enhanced Disclosure Task Force (EDTF), that was mandated to develop principles for enhancing the risk disclosures of major banks, to recommend improvements to current risk disclosures, and to identify risk disclosure best practices used by major financial institutions. On October 29, 2012, the EDTF published a report entitled *Enhancing the Risk Disclosures of Banks*, which contains 32 recommendations. The Bank continues to make every effort to ensure overall compliance with those recommendations and is continuing to enhance its risk disclosures to meet the best practices on an ongoing basis. The risk disclosures required by the EDTF are provided in this Annual Report and in the documents entitled *Supplementary Regulatory Capital Disclosure* and *Supplementary Financial Information*, which are available on the Bank's website at nbc.ca. In addition, on page 8 of this Annual Report is a table of contents that readers can use to locate information relative to the 32 recommendations.

CAPITAL MANAGEMENT

Capital management has a dual role of ensuring a competitive return to the Bank's shareholders while maintaining a solid capital foundation that covers risks inherent to the Bank's business, supports its business segments and protects its clients.

Capital Management Framework

The Bank's capital management policy defines guiding principles as well as the roles and responsibilities of its internal capital adequacy assessment process. This process aims to determine the capital that the Bank needs to pursue and accommodate unexpected losses arising from extremely adverse economic and operational conditions. The Bank has implemented a rigorous internal capital adequacy assessment process that comprises the following procedures:

- conducting an overall risk assessment;
- measuring significant risks and the capital requirements on the Bank's financial budget for the next fiscal year and current and prospective risk profiles;
- integrating stress tests across the organization and executing sensitivity analyses to determine the capital buffer above minimum regulatory levels (for additional information on enterprise-wide stress testing, see the Risk Management section of this MD&A);
- aggregating capital and monitoring the reasonableness of internal capital compared with regulatory capital;
- comparing projected internal capital with regulatory capital levels, internal operating targets, and competing banks;
- attesting to the adequacy of the levels of capital at the Bank.

Assessing capital adequacy is an integral part of capital planning and strategy. The Bank sets internal capital ratio targets that include a discretionary cushion in excess of the regulatory requirements, which provides a solid financial structure and sufficient capital to meet management's business needs in accordance with its risk appetite, along with competitive returns to shareholders, under both normal market conditions and a range of severe but plausible stress testing scenarios. The internal capital adequacy assessment process is a key tool in establishing the Bank's capital strategy and is subject to quarterly reviews and periodic amendments.

Risk-adjusted return on capital (RAROC) and shareholder value added (SVA), which are obtained from an assessment of required economic capital, are calculated quarterly for each of the Bank's business segments. The results are then used to guide management in allocating capital among the different business segments.

Structure and Governance

Along with its partners from Risk Management and from Treasury and Finance, the Capital Management team is responsible for maintaining integrated control methods and processes so that an overall assessment of capital adequacy may be performed.

The Board oversees the structure and development of the Bank's capital management policy and ensures that the Bank maintains sufficient capital in accordance with regulatory requirements and in consideration of market conditions. The Board delegates certain responsibilities to the Risk Management Committee (RMC), which in turn recommends capital management policies and oversees their application. However, the Board, on the recommendation of the RMC, assumes the following responsibilities:

- reviewing and approving the capital management policy;
- reviewing and approving the Bank's risk appetite, including the main capital and risk targets and the corresponding limits;
- reviewing and approving the capital plan and strategy on an annual basis, including the Bank's internal capital adequacy assessment process;
- reviewing and approving the implementation of significant measures respecting capital, including contingency measures;
- reviewing significant capital disclosures, including Basel capital adequacy ratios;
- ensuring the appropriateness of the regulatory capital adequacy assessment.

The Office of the President is responsible for defining the Bank's strategy and plays a key role in guiding measures and decisions regarding capital. The Asset/Liability Management Committee oversees capital management, which consists of reviewing the capital plan and strategy and implementing significant measures respecting capital, including contingency measures, and making recommendations with respect to these measures.

Basel Accord and Regulatory Environment

Basel Accord

The Basel Accord proposes a range of approaches of varying complexity, the choice of which determines the sensitivity of capital to risks. A less complex approach, such as the Standardized Approach, uses regulatory weightings, while a more complex approach uses the Bank's internal estimates of risk components to establish risk-weighted assets and calculate regulatory capital.

As required under Basel, risk-weighted assets (RWA) are calculated for each credit risk, market risk, and operational risk. The Bank uses the Advanced Internal Rating-Based (AIRB) Approach for credit risk to determine minimum regulatory capital requirements for a majority of its portfolios. The credit risk of certain portfolios considered to be less significant is weighted according to the Basel Standardized Approach. The simple risk-weighted method is used to calculate the charge related to available-for-sale securities in the form of equity securities. This method requires proactive management of the capital allocated to portfolios with equity securities since, beyond a certain investment threshold, the cost of regulatory capital becomes prohibitive. As for operational risk, the Bank uses the Standardized Approach. Market risk-weighted assets are primarily determined using the Internal Model-Based Approach, but the Standardized Approach is used to assess interest-rate specific risk. Lastly, for externally rated securitization exposures, the Bank uses the Rating-Based Approach (RBA). This approach assigns risk weights to exposures using external ratings. The Bank uses the ratings assigned by Moody's, Standard & Poor's (S&P), Fitch, DBRS or a combination of these ratings.

Capital ratios are calculated by dividing capital by risk-weighted assets. Credit, market and operational risks are factored into the risk-weighted assets calculation for regulatory purposes. Basel rules apply at the consolidated level of the Bank. Assets of non-consolidated entities for regulatory purposes are therefore excluded from the risk-weighted assets calculation.

The definition adopted by the Basel Committee on Banking Supervision (BCBS) distinguishes between three types of capital. Common Equity Tier 1 (CET1) capital consists of common shareholders' equity less goodwill, intangible assets and other capital deductions. The Additional Tier 1 instruments comprise eligible non-cumulative preferred shares and the eligible amount of innovative instruments. The sum of CET1 and Additional Tier 1 capital forms what is known as Tier 1 capital. Tier 2 capital consists of the eligible portion of subordinated debt and certain loan loss allowances. Total regulatory capital is the sum of Tier 1 and Tier 2 capital.

OSFI is responsible for applying the Basel Accord in Canada. As required under the Basel Accord, OSFI requires that regulatory capital instruments other than common equity have a non-viability contingent capital (NVCC) clause to ensure that investors bear losses before taxpayers should the government determine that it is in the public interest to rescue a non-viable financial institution. Instruments issued before January 1, 2013 that would be Basel III compliant if it were not for the absence of the NVCC clause are grandfathered and will be phased out over a period of ten years. The Bank expects to phase out all of its non-NVCC instruments without resorting to any regulatory event redemption.

The Basel III regulatory framework sets out transitional arrangements for the period of 2013 to 2019. OSFI has introduced two methodologies for determining capital. The "all-in" methodology includes all of the regulatory adjustments that will be required by 2019 while retaining the phase-out rules for non-qualifying capital instruments. The "transitional" methodology, which is in line with the BCBS guidelines, in addition to applying the phase-out rules for non-qualifying capital instruments, also applies a more flexible and steady phasing in of the required regulatory adjustments. The Bank will disclose its capital ratios calculated according to both methodologies for each quarter until the start of 2019. However, OSFI requires Canadian banks to meet the minimum "all-in" thresholds rather than the minimum thresholds calculated using the "transitional" method.

Consequently, the Bank and all other major Canadian banks have had to maintain, on an "all-in" basis, a CET1 capital ratio of at least 8.0%, a Tier 1 capital ratio of at least 9.5%, and a Total capital ratio of at least 11.5%. All of these ratios are to include a capital conservation buffer of 2.5% and a 1% surcharge applicable to Domestic Systemically Important Banks (D-SIBs).

The table below provides a comparison of the transitional ratios established by the BCBS and those required by OSFI's "all-in" methodology. All ratios include the capital conservation buffer and the D-SIB surcharge, when applicable.

To ensure an implementation similar to that in other countries, OSFI has decided to phase in the Credit Valuation Adjustment (CVA) charge over a five-year period beginning in 2014. For fiscal 2017, only 72%, 77% and 81% of total CVA were applied, respectively, to the calculation of the CET1, Tier 1 and Total capital ratios. These percentages will increase to 80%, 83% and 86%, respectively, in 2018, and reach 100% in 2019.

Since January 1, 2015, OSFI has been requiring Canadian banks to meet a Basel III leverage ratio of at least 3.0%. The leverage ratio is a measure independent of risk that is calculated by dividing the amount of Tier 1 capital by total exposure. Total exposure is defined as the sum of on-balance-sheet assets (including derivative exposures and securities financing transaction exposures) and off-balance-sheet items. The assets deducted from Tier 1 capital are also deducted from total exposure.

The Bank ensures that its capital levels are always above the minimum capital requirements for OSFI's "all-in" ratios. By maintaining a strong capital structure, the Bank can cover the risks inherent to its business activities, support its business segments and protect its clients.

Other disclosure requirements pursuant to Pillar 3 of the Basel Accord and a set of recommendations defined by the EDTF are presented in the Supplementary Regulatory Capital Disclosure report published quarterly and available on the Bank's website at nbc.ca. Furthermore, a complete list of capital instruments and their main features is also available on the Bank's website.

Requirements – Regulatory Ratios

	2017	2018	2019	2020	2021	2022
BCBS transitional ratios						
Capital conservation buffer	**1.25 %**	1.875 %	2.5 %	2.5 %	2.5 %	2.5 %
CET1 capital ratio	**5.75 %**	6.375 %	7.0 %	7.0 %	7.0 %	7.0 %
Tier 1 capital ratio	**7.25 %**	7.875 %	8.5 %	8.5 %	8.5 %	8.5 %
Total capital ratio	**9.25 %**	9.875 %	10.5 %	10.5 %	10.5 %	10.5 %
Phase-in of regulatory capital adjustments	**80 %**	100 %	100 %	100 %	100 %	100 %
Phase-out of non-qualifying capital instruments	**50 %**	40 %	30 %	20 %	10 %	– %
OSFI's "all-in" ratios						
Capital conservation buffer	**2.5 %**	2.5 %	2.5 %	2.5 %	2.5 %	2.5 %
D-SIB surcharge	**1.0 %**	1.0 %	1.0 %	1.0 %	1.0 %	1.0 %
CET1 capital ratio	**8.0 %**	8.0 %	8.0 %	8.0 %	8.0 %	8.0 %
Tier 1 capital ratio	**9.5 %**	9.5 %	9.5 %	9.5 %	9.5 %	9.5 %
Total capital ratio	**11.5 %**	11.5 %	11.5 %	11.5 %	11.5 %	11.5 %
Phase-out of non-qualifying capital instruments	**50 %**	40 %	30 %	20 %	10 %	– %
Leverage ratio	**3.0 %**	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %

Regulatory Context

The Bank closely monitors regulatory developments and participates actively in the various consultative processes. Presented below are brief descriptions of ongoing regulatory projects.

In March 2014, the BCBS issued the final rules on the standardized approach for measuring counterparty credit risk (SA-CCR), which will replace the Current Exposure Method (CEM). On August 21, 2017, OSFI announced its intention to bring these rules into force as of the first quarter of 2019. However, it will require institutions to start reporting amounts as of the first quarter of 2018.

In December 2014, the BCBS issued two consultative papers, *Capital Floors: The Design of a Framework Based on Standardised Approaches* and *Revisions to the Standardised Approach for Credit Risk*, the latter having been reviewed a second time in December 2015. The capital floor is meant to mitigate risk related to internal credit risk calculation models and enhance the comparability of risk across banks. The new floor will replace the current one, which is still based on Basel I. The new standardized approach for credit risk aims to reduce reliance on credit rating agencies and improve sensitivity to certain risks.

In July 2015, the BCBS issued a consultative paper, *Review of the Credit Valuation Adjustment Risk Framework*, with the aim of ensuring that all important drivers of CVA are considered in calculating capital, aligning the various accounting frameworks and ensuring consistency with the market risk framework. No date has been set for the implementation of these new rules, which will increase the level of capital the Bank is required to maintain.

On November 9, 2015, the FSB issued a standard entitled *Total Loss-Absorbing Capacity (TLAC) Standard for Global Systemically Important Banks (G-SIBs)*, which aims to implement a resolution strategy to determine whether global systemically important banks (G-SIBs) have sufficient loss-absorbing capacity to minimize impacts on financial stability and maintain the continuity of critical economic functions. On October 12, 2016, the BCBS issued the final version of the document, *TLAC Holdings*, which provides a framework for the standard. It sets out the regulatory capital treatment applicable to loss-absorbing instruments held by internationally active banks. This prudential treatment is intended to reduce contagion in the financial system should a G-SIB go into resolution. On June 16, 2017, OSFI released for comment a draft guideline entitled *Total Loss-Absorbing Capacity* (TLAC). The draft guideline requires D-SIBS to maintain a minimum capacity to absorb losses as required under the *Bank Act* (Canada) and is part of the bank recapitalization (bail-in) regime. D-SIBs will have until November 1, 2021 to comply. Also on June 16, 2017, the Government of Canada released for comment bank bail-in regulations that set out the main features of the regime, including the types of debt instruments that will be subject to the regulations. Eligible shares and liabilities issued before the bail-in regulations come into force would not be subject to conversion. In addition, the regulations officially designate the Canada Deposit Insurance Corporation (CDIC) as the resolution authority for Canada's largest banks and requires D-SIBs to submit resolution plans to the CDIC.

On January 14, 2016, the BCBS issued the final rules for calculating market risk in *Minimum Capital Requirements for Market Risk*, a document that aims to remedy structural weaknesses in the trading portfolio that had not been addressed in previous market risk revisions. On June 29, 2017, the BCBS proposed a simplified alternative to the standardized approach rules set out in the consultative document, *Simplified Alternative to the Standardised Approach to Market Risk Capital Requirements*. On July 20, 2017, OSFI issued a letter indicating its intention to extend, by at least one year, the implementation timeline for the rules on minimum capital requirements for market risk. Consequently, the first regulatory declaration period will not be before the first quarter of 2021.

On March 4, 2016, the BCBS issued *Standardised Measurement Approach for Operational Risk*, a consultative document that proposes a new standardized method for calculating operational risk.

On March 24, 2016, the BCBS issued *Reducing Variation in Credit Risk-Weighted Assets – Constraints on the Use of Internal Model Approaches*, a consultative document that aims to limit the use of advanced credit risk calculation models. On April 6, 2016, the BCBS also issued *Revisions to the Basel III Leverage Ratio Framework*, a consultative document that proposes, in particular, revisions to the treatment of derivative exposures.

On April 21, 2016, the BCBS issued the final version of *Interest Rate Risk in the Banking Book,* a document that addresses risk management, capital treatment, and the supervision of interest rate risk in the banking book. These rules, which have to be implemented by 2018, are intended to ensure that banks have adequate capital to cover potential banking book losses arising from interest rate movements and to limit capital arbitrage between the trading book and the banking book. However, in April 2017, OSFI informed Canadian banks of its intention to postpone application until 2019.

On July 11, 2016, the BCBS revised the final securitization framework rules issued on December 11, 2014 in the document entitled *Revisions to the Securitisation Framework*. This document was amended to include *Criteria for Identifying Simple, Transparent and Comparable Securitisations*, a document issued in July 2015, as well as *Capital Treatment for 'Simple, Transparent and Comparable' Securitisations*, a consultative paper issued in November 2015. The aim of this new document is to address some shortcomings in the current securitization framework while allowing a more favourable capital treatment for transactions meeting the requirements of simplicity, transparency and comparability. On July 6, 2017, the BCBS issued a consultative paper, *Capital Treatment for 'Simple, Transparent and Comparable' Short-Term Securitisations*, which defines short-term securitization rules to supplement the July 2016 document. On August 21, 2017, OSFI announced its intention to implement a new securitization framework in the first quarter of 2019.

In December 2016, OSFI released an update to the *Capital Adequacy Requirements Guideline*. The guideline notably clarifies the rules for recognizing equity investments in funds and for calculating countercyclical buffers. In the Bank's opinion, countercyclical buffers will have a minimal impact on its capital ratios given that it does not have significant exposures in countries affected by the buffer.

On March 29, 2017, the BCBS issued *Pillar 3 Disclosure Requirements – Consolidated and Enhanced Framework*, which sets out the final disclosure rules under Pillar 3. This document incorporates the document issued on January 28, 2015 for phase 1 and the one issued on March 11, 2016 for phase 2. A third phase will be defined later. The new requirements are intended to improve transparency, consistency and comparability of results across banks. On April 20, 2017, OSFI issued the final version of the guideline entitled *Pillar 3 Disclosure Requirements*, specifying therein that D-SIBs will have to meet the BCBS's requirements for the two first phases as of October 31, 2018. This guideline will replace OSFI's November 2007 advisory, *Pillar 3 Disclosure Requirements*.

Also on March 29, 2017, the BCBS issued the final version of *Regulatory Treatment of Accounting Provisions – Interim Approach and Transitional Arrangements.* This document results from the November 1, 2017 adoption of IFRS 9, which requires provisions to be recognized according to expected credit losses rather than incurred losses, as required by the current standard. The BCBS will retain the current Basel Accord regulatory treatment for provisions during a transition period. Jurisdictions may adopt transitional measures to phase in any potential significant negative impacts on regulatory capital arising from the new expected credit loss impairment model under IFRS 9. On August 21, 2017, OSFI released for comment a new, revised version of the *Capital Adequacy Requirements Guideline.* This new version, which applies the same principles set forth by the BCBS, addresses the treatment of allowances following the adoption of IFRS 9. However, on November 29, 2017, OSFI has announced that no transitional measure will be allowed following IFRS 9 adoption.

On October 25, 2017, the BCBS issued the final version of *Identification and Measurement of Step-In Risk,* which measures the risk of the Bank providing support to an unconsolidated entity, should that entity experience financial stress, and do so beyond or in the absence of any contractual obligation, in order to mitigate the impact of the shadow banking system. This rule will come into effect between now and 2020.

Capital Management in 2017

Management Activities

On April 11, 2017, the Bank redeemed $1.0 billion of medium-term notes maturing on April 11, 2022 at a price equal to their nominal value plus accrued interest.

On June 5, 2017, the Bank began a normal course issuer bid to repurchase for cancellation up to 6,000,000 common shares over the 12-month period ending no later than June 4, 2018. During the fiscal year ended October 31, 2017, the Bank repurchased 2,000,000 common shares for $115 million, which reduced *Common share capital* by $16 million and *Retained earnings* by $99 million.

On June 13, 2017, the Bank issued 16,000,000 Non-Cumulative 5-Year Rate-Reset Series 38 First Preferred Shares at a per-share price of $25.00 for gross proceeds of $400 million. Given that the Series 38 preferred shares satisfy the non-viability contingent capital requirements, they qualify for the purposes of calculating regulatory capital under Basel III.

On November 15, 2017, after year-end, the Bank redeemed all the issued and outstanding Non-Cumulative 5-Year Rate-Reset Series 28 First Preferred Shares. Pursuant to the share conditions, the redemption price was $25.00 per share plus the periodic dividend declared and unpaid. The Bank redeemed 8,000,000 Series 28 First Preferred Shares for a total amount of $200 million. These instruments were excluded from the capital ratio calculations as at October 31, 2017.

Regulatory Capital Ratios

As at October 31, 2017, the Bank's CET1, Tier 1 and Total capital ratios were, respectively, 11.2%, 14.9% and 15.1%, i.e., above the regulatory requirements, compared to ratios of, respectively, 10.1%, 13.5% and 15.3% a year earlier. The increase in the CET1 capital ratio stems essentially from net income, net of dividends, common share issuances under the Stock Option Plan, remeasurements of pension plans and other post-employment benefit plans, and low growth in risk-weighted assets, partly offset by common share repurchases during the year ended October 31, 2017. The increase in the Tier 1 capital ratio stems essentially from the same items as well as from the June 13, 2017 issuance of preferred shares for $400 million, partly offset by the $200 million redemption of preferred shares on November 15, 2017, which is already excluded from the capital ratio calculations as at October 31, 2017. The decrease in the Total capital ratio is a result of the April 11, 2017 redemption of $1.0 billion in medium-term notes maturing on April 11, 2022. The leverage ratio as at October 31, 2017 was 4.0%, compared to 3.7% as at October 31, 2016.

Regulatory Capital and Ratios Under Basel III(1)

As at October 31 (millions of Canadian dollars)	2017	2016
Capital		
CET1	**7,856**	6,865
Tier 1(2)	**10,457**	9,265
Total(2)	**10,661**	10,506
Risk-weighted assets		
CET1 capital	**70,173**	68,205
Tier 1 capital	**70,327**	68,430
Total capital	**70,451**	68,623
Total exposure	**262,539**	253,097
Capital ratios		
CET1	**11.2 %**	10.1 %
Tier 1(2)	**14.9 %**	13.5 %
Total(2)	**15.1 %**	15.3 %
Leverage ratio	**4.0 %**	3.7 %

(1) Figures are presented on an "all-in" basis.
(2) Figures as at October 31, 2017 include the redemption of the Series 28 preferred shares on November 15, 2017.

For additional information on capital instruments, see Notes 16, 19 and 20 to the consolidated financial statements.

Dividends

The Bank's strategy for common share dividends is to aim for a dividend payout ratio of between 40% and 50% of net income excluding specified items, taking into account such factors as financial position, cash needs, regulatory requirements and any other factor deemed relevant by the Board.

For fiscal 2017, the Bank declared $778 million in dividends to common shareholders, which represents 42% of net income attributable to common shareholders (2016: 66%). These dividends represented 41% of net income attributable to common shareholders excluding specified items (2016: 50%). The declared dividends are within the target payout range. The Bank has taken a prudent approach to managing regulatory capital and remains confident in its ability to increase earnings going forward.

Movement in Regulatory Capital[1]

Year ended October 31 (millions of Canadian dollars)	2017	2016
Common Equity Tier 1 (CET1) capital		
Balance at beginning	6,865	6,801
Issuance of common shares (including Stock Option Plan)	179	43
Impact of shares purchased or sold for trading	(37)	(12)
Repurchase of common shares	(115)	–
Common share capital issued by subsidiaries and held by third parties	1	7
Contributed surplus	(15)	6
Dividends on preferred and common shares	(863)	(797)
Net income attributable to the Bank's shareholders	1,940	1,181
Removal of own credit spread net of income taxes	25	19
Other	19	(380)
Movements in accumulated other comprehensive income		
Translation adjustments	(39)	22
Available-for-sale securities	(12)	39
Other	(10)	1
Change in goodwill and intangible assets (net of related tax liability)	(81)	(210)
Other, including regulatory adjustments and transitional arrangements		
Change in defined benefit pension plan asset (net of related tax liability)	3	147
Change in amount exceeding 15% threshold		
Deferred tax assets	–	–
Significant investment in common shares of financial institutions	–	–
Change in other regulatory adjustments[2]	(4)	(2)
Balance at end	7,856	6,865
Additional Tier 1 capital		
Balance at beginning	2,400	1,825
New Tier 1 eligible capital issuances	400	800
Redeemed capital[3]	(200)	–
Change in non-qualifying Additional Tier 1 subject to phase-out	–	(225)
Other, including regulatory adjustments and transitional arrangements	1	–
Balance at end	2,601	2,400
Total Tier 1 capital	10,457	9,265
Tier 2 capital		
Balance at beginning	1,241	1,052
New Tier 2 eligible capital issuances	–	–
Redeemed capital[4]	(1,000)	–
Change in non-qualifying Tier 2 subject to phase-out	–	–
Tier 2 instruments issued by subsidiaries and held by third parties	–	2
Change in certain loan loss allowances	(37)	186
Other, including regulatory adjustments and transitional arrangements	–	1
Balance at end	204	1,241
Total regulatory capital	10,661	10,506

(1) Figures are presented on an "all-in" basis.
(2) Represents the change in investments in the Bank's own CET1.
(3) Figures for the year ended October 31, 2017 include the redemption of the Series 28 preferred shares on November 15, 2017. Figures for the year ended October 31, 2016 do not include the November 15, 2015 redemption of Series 20 preferred shares that had been excluded from the calculation of capital as at October 31, 2015.
(4) Figures for the year ended October 31, 2016 do not include the $500 million redemption of notes on November 2, 2015 that had been excluded from the calculation of capital as at October 31, 2015.

RWA by Key Risk Drivers

CET1 RWA amounted to $70.2 billion as at October 31, 2017, rising $2.0 billion from $68.2 billion as at October 31, 2016. This organic growth in RWA was partly offset by the 2017 first-quarter repayment of the restructured notes of the master asset vehicle (MAV) conduits and by foreign exchange movements. The Bank's CET1 risk-weighted assets are presented in the following table.

Capital Adequacy Under Basel III[1]

As at October 31 (millions of Canadian dollars)	2017						2016
	Exposure at default	Risk-weighted assets				Capital requirement[2]	Risk-weighted assets
		Standardized Approach	AIRB Approach	Other Approach	Total		Total
Credit risk							
Retail							
Residential mortgages	49,028	911	4,644	–	5,555	444	5,455
Qualifying revolving retail	6,196	–	1,275	–	1,275	102	1,178
Other retail	16,635	2,357	5,254	–	7,611	609	6,823
Non-retail							
Corporate	63,492	1,700	25,844	–	27,544	2,204	27,393
Sovereign	28,493	282	703	–	985	79	875
Financial institutions	5,339	408	1,123	–	1,531	123	1,574
Banking book equities[3]	910	–	910	–	910	73	875
Securitization	4,740	–	390	–	390	31	831
Other assets	24,376	–	–	3,645	3,645	292	3,176
Counterparty credit risk							
Corporate	16,567	47	150	–	197	16	347
Sovereign	35,603	–	43	–	43	3	34
Financial institutions	53,169	–	366	–	366	29	402
Trading portfolio	8,309	161	2,017	–	2,178	174	2,345
Credit valuation adjustment charge[4]		2,227	–	–	2,227	178	2,055
Regulatory scaling factor		–	2,580	–	2,580	206	2,540
Total – Credit risk	312,857	8,093	45,299	3,645	57,037	4,563	55,903
Market risk							
VaR		–	867	–	867	69	1,014
Stressed VaR		–	1,324	–	1,324	106	1,067
Interest-rate-specific risk		906	–	–	906	73	726
Total – Market risk		906	2,191	–	3,097	248	2,807
Operational risk		10,039	–	–	10,039	803	9,495
Total	312,857	19,038	47,490	3,645	70,173	5,614	68,205

(1) Figures are presented on an "all-in" basis.
(2) The capital requirement is equal to 8% of risk-weighted assets.
(3) Calculated using the simple risk-weighted method.
(4) Calculated based on CET1 RWA.

Risk-Weighted Assets Movement by Key Drivers[1]

Quarter ended (millions of Canadian dollars)	October 31, 2017	July 31, 2017	April 30, 2017	January 31, 2017	October 31, 2016
	Total	Total	Total	Total	Total
Credit risk – Risk-weighted assets at beginning	56,066	56,855	55,148	55,903	55,848
Book size	833	453	889	455	640
Book quality	141	(143)	176	(832)	68
Model updates	(426)	–	–	–	(954)
Methodology and policy	–	–	–	–	–
Acquisitions and disposals	–	–	–	–	–
Foreign exchange movements	423	(1,099)	642	(378)	301
Credit risk – Risk-weighted assets at end	57,037	56,066	56,855	55,148	55,903
Market risk – Risk-weighted assets at beginning	3,263	2,768	3,815	2,807	3,291
Movement in risk levels[2]	(166)	353	(1,047)	1,008	(484)
Model updates	–	142	–	–	–
Methodology and policy	–	–	–	–	–
Acquisitions and disposals	–	–	–	–	–
Market risk – Risk-weighted assets at end	3,097	3,263	2,768	3,815	2,807
Operational risk – Risk-weighted assets at beginning	9,827	9,760	9,611	9,495	9,391
Movement in risk levels	212	67	149	116	104
Acquisitions and disposals	–	–	–	–	–
Operational risk – Risk-weighted assets at end	10,039	9,827	9,760	9,611	9,495
Risk-weighted assets at end	70,173	69,156	69,383	68,574	68,205

(1) Figures are presented on an "all-in" basis and have been calculated based on CET1 risk-weighted assets.
(2) Also includes foreign exchange rate movements that are not considered material.

The table above provides the risk-weighted assets movements by key drivers underlying the different risk categories.

The "Book size" item reflects organic changes in exposure size and composition (including new loans and maturing loans). RWA movements attributable to book size include increases or decreases in exposures, measured by exposure at default, assuming a stable risk profile.

The "Book quality" item is the Bank's best estimate of changes in book quality related to experience, such as underlying customer behaviour or demographics, including changes resulting from model recalibrations or realignments.

The "Model updates" item is used to reflect implementations of new models, changes in model scope, and any other change applied to address model malfunctions.

The "Methodology and policy" item presents the impact of changes in calculation methods resulting from changes in regulatory policies.

Allocation of Economic Capital and Regulatory RWA

Economic capital is an internal measure that the Bank uses to determine the capital it needs to remain solvent and to pursue its business operations. Economic capital takes into consideration the credit, market, operational, business and other risks to which the Bank is exposed as well as the risk diversification effect among them and among the business segments. Economic capital thus helps the Bank to determine the capital required to protect itself against such risks and ensure its long-term viability. The by-segment allocation of economic capital and regulatory RWA was done on a stand-alone basis before attribution of goodwill and intangible assets. The method used to assess economic capital is reviewed regularly in order to accurately quantify these risks.

The Risk Management section of this MD&A provides comprehensive information about the main types of risk. The "Other risks" presented below include risks such as business risk and structural interest rate risk in addition to the benefit of diversification among types of risk.

Allocation of Risks by Business Segment

As at October 31, 2017
(millions of Canadian dollars)

NATIONAL BANK OF CANADA

Business segments	Personal and Commercial	Wealth Management	Financial Markets	U.S. Specialty Finance and International	Other
Major activities	Banking services Credit services Financing Investment solutions Insurance	Investment solutions Trust services Banking services Credit services Wealth management solutions	Banking services Investment banking services Financing solutions to institutional clients Trading and investment solutions	Credigy ABA Bank International investment activties	Treasury operations Liquidity management Bank funding Asset and liability management Corporate units
Economic capital by type of risk	Credit 1,562 Market – Operational 357 Other risks 188 **Total 2,107**	Credit 154 Market – Operational 212 Other risks 379 **Total 745**	Credit 1,947 Market 199 Operational 239 Other risks 281 **Total 2,666**	Credit 432 Market 49 Operational 45 Other risks 33 **Total 559**	Credit (72) Market (36) Operational (26) Other risks 293 **Total 159**
Risk-weighted assets	Credit 28,287 Market – Operational 4,304 **Total 32,591**	Credit 2,548 Market – Operational 2,580 **Total 5,128**	Credit 18,988 Market 3,047 Operational 2,932 **Total 24,967**	Credit 4,993 Market – Operational 546 **Total 5,539**	Credit 2,221 Market 50 Operational (323) **Total 1,948**

RISK MANAGEMENT

In this section of the MD&A, grey-shaded text and tables marked with an asterisk (*) are integral parts of the consolidated financial statements. They represent the Bank's objectives, the risk management policies and procedures, and the methods applied to measure credit risk, market risk as well as liquidity and funding risk, as required by IFRS 7 – *Financial Instruments: Disclosures.*

The Bank views risk as an integral part of its development and the diversification of its activities and advocates a risk management approach consistent with its business expansion strategy. The purpose of sound risk management is to provide reasonable assurance that incurred risks do not exceed acceptable thresholds and that risk-taking contributes to the creation of shareholder value. For the Bank, this means striking a healthy balance between return and risk.

The Bank is exposed to risk in two ways. First, it voluntarily exposes itself to certain risk categories, particularly credit and market risk, in order to generate revenue. Second, it assumes risks that are inherent to its activities—to which it does not choose to expose itself—and that do not generate revenue, i.e., mainly operational risk. These risks may result in losses that could adversely affect future earnings.

Top and Emerging Risks

Top and emerging risks are risks that could have a material adverse effect on the Bank's financial results, reputation or long-term business model and strategy. The Bank's processes are designed to detect and assess these risks as early as possible so that appropriate mitigating strategies can be applied. The Bank's top and emerging risks are as follows.

Risk	Trend	Description
Global economic risks	⇗	Currently, the main global risks consist of slowing economic growth in certain emerging countries, geopolitical tensions—in particular the rapid militarization of North Korea—and the adoption of protectionist measures that are undermining international trade. The coming into power of the new U.S. administration brings its share of concerns about future policies that might affect the Canadian and Quebec economies. Excessive protectionism could adversely affect certain industries and slow international trade, negatively affecting our export clients in turn. Furthermore, the rise of nationalism, the waves of migration to western Europe, and geopolitical tensions have also intensified uncertainty in the economic system. In addition, given exceptional monetary measures taken by central banks combined with mild economic growth and low inflation, long-term interest rates continue to be historically low in the major advanced economies. Such a situation may have prompted market participants to adopt excessive risk-taking strategies in search of higher returns, the negative effects of which may be felt if interest rates return to normal faster than expected, particularly in the United States. Therefore, the Bank is remaining vigilant and continuing to rely on its strong risk management framework to identify, assess and mitigate risk so that it remains within the risk appetite limits.
Economic risks in Canada	⇗	The domestic energy sector struggled in the wake of the global oil supply shock but is gradually adapting to the new environment. The fossil fuel-producing provinces are back on track to growth but their unemployment rates remain high. Fortunately, stable economic and financial conditions in the three largest provinces (Ontario, Quebec, British Columbia) continue to support a credit environment that is favourable for the Bank's loan portfolio. Still, Canada remains vulnerable to a deteriorating economic backdrop, which threatens to erode job creation and disposable household income—even more so given the high household debt levels. Economic growth, and more specifically the housing market, has been stimulated in recent years by very low interest rates. A housing price correction is therefore representing an added source of risk for the Canadian economy should the central banks continue to reduce monetary stimulus. The Bank maintains sound credit practices, but tighter mortgage rules remain an issue for Canadian households. The Bank also closely monitors international developments that may affect the Canadian economy. The renegotiation of agreements such as NAFTA has cast substantial uncertainty over the trade relationship between Canada and the United States and other economic partners. These uncertainties have significantly destabilized the industry, and the Bank has responded by continuing to monitor market developments and remaining vigilant in line with its risk tolerance policy.

Risk	Trend	Description
Low oil and gas prices	⇨	Low oil and gas prices have had a direct impact on the energy sector, challenging many energy companies to implement a broad range of measures to address the situation. Should oil and gas prices continue to fall or remain depressed for an extended period of time, the obstacles to be overcome by these companies will only become more daunting and will affect their repayment capacity and credit quality. The potential impact of a prolonged decrease on the Bank's operating results depends on how long oil prices remain low and how businesses deploy measures to increase efficiency, reduce outflows of funds, and sell assets in order to raise capital to cover operating costs. The Bank is actively managing this portfolio, and several measures have already been taken with our clients to limit the risk of loss.
Information system disruptions and security breaches	⇨	Technology has become a major part of the banking industry's operations, in particular the ever-increasing use of information technologies such as mobile, wireless and web-enabled devices. Despite the Bank's efforts to ensure the integrity of its systems and information, it is exposed to the risks associated with data breaches, malicious software, unauthorized access, hacking, phishing, identity theft, intellectual property theft, asset theft, industrial espionage and possible denial of service due to activities causing network failures and service interruptions. It is also possible for the Bank to be unable to prevent or implement effective preventive measures against every potential cyber-threat, as the tactics used are multiplying, change frequently, come from a wide range of sources and are increasingly sophisticated. Disruptions to or malfunctions in the physical infrastructure or operating systems that support the Bank and its clients, or cyber-threats and security breaches affecting the networks, systems or tools that clients use to access products and services, could cause client attrition; financial loss; inability of clients to do their banking; non-compliance with privacy legislation or any other laws in effect; legal disputes; fines; penalties or regulatory action; reputational damage; compliance, corrective measure, investigative, or restoration costs; cost hikes to maintain and upgrade technological infrastructures and systems, all of which could affect the Bank's operating results or financial position. To protect its clients, the Bank closely monitors and actively manages its control environment. It also monitors the changing global environment and continues to improve the processes and practices used to prevent, identify and manage cybersecurity threats to ensure continuous effectiveness and protection. The Bank continually assesses the effectiveness of key controls through testing, measuring its own practices against best practices, and via external benchmarking. The Bank also invests in projects designed to constantly update and improve its information technology infrastructure, controls, internal resources and technological capabilities. The Board's Risk Management Committee is regularly informed of cybersecurity trends and developments to gain a better understanding of potential cybersecurity risks.

Risk	Trend	Description
Reliance on technology and third parties	⇗	The Bank is reliant on technology, as clients are seeking greater access to products and services on a variety of platforms and because many of the products and services require substantial data processing. As such, the Bank's technology platform must be able to manage all such data. The fast pace of technological change combined with both client and competitive pressures require significant and sustained investment in technology. Unsuccessful implementation of technological improvements or new products or services could significantly affect the Bank's ability to serve and retain clients. Third parties provide essential components of the Bank's commercial infrastructure such as Internet connections and access to network and other communications services. The Bank is also party to outsourcing agreements for IT support and for cash management and processing. Interruptions in these services could adversely affect the Bank's ability to provide products and services to its clients and conduct its business. To mitigate this risk, the Bank has an outsourcing risk management framework that includes business continuity plans that are tested periodically to ensure their effectiveness in times of crisis. Despite these preventative measures, it is possible that these third parties may not anticipate or implement effective measures against all of the risks related to technology and information security. Third-party cloud computing solutions could raise the risks related to data security and breaches if security control protocols involving these third parties are overridden. As such, the Bank's practices for managing procurement processes and suppliers must also continue to evolve so it can appropriately manage the related risks.
Technological innovation	⇗	The Bank's financial performance depends on its ability to develop and market new and innovative products and services, adopt and develop new technologies that help differentiate its products and services and generate cost savings, and market these new products and services at the right time and at competitive prices. Failure to properly review critical changes within the business before and during the implementation and deployment of key technological systems or failure to align client expectations with the Bank's client commitments and operating capabilities could adversely affect the Bank's operating results or financial position.

Other Factors That Can Affect Future Results

International Risks

Through the operations of some of its units (mainly its New York and London offices) and subsidiaries in Canada and abroad (in particular, Credigy Ltd. and Advanced Bank of Asia Limited), the Bank is exposed to risks arising from its presence in international markets and foreign jurisdictions. While these risks do not affect a significant proportion of the Bank's portfolios, their impact must not be overlooked, especially those that are of a legal or regulatory nature. Such risk can be particularly high when the exposure is in a territory where the enforceability of agreements signed by the Bank is uncertain, in countries and regions facing political or socio-economic disturbances, or in countries that may be subject to international sanctions. Generally speaking, there are many ways in which the Bank may be exposed to the risks posed by other countries, not the least of which being foreign laws and regulations. In all such situations, it is important to consider what is referred to as "country risk," which affects not only the activities that the Bank carries out abroad but also the business that it conducts with non-resident clients as well as the services it provides to clients doing business abroad, such as electronic funds transfers, international products and transactions from Canada in foreign currencies.

As part of its activities related to managing international sanctions and to combat money laundering and terrorist financing (MLTF), the Bank performs audits of country risk. This control may have restrictions, the scope of which can vary based on current sanctions and on the MLTF risk classification of the country in question. MLTF risk is a financial, regulatory and reputation risk. The Bank complies with requirements in Canada and those in the countries where it does business. It has implemented internal policies, standards and controls for sound management of prevention, detection, reporting and information exchange. The Bank maintains an infrastructure through which it can respond effectively to this risk and ensure that its employees, officers and directors take part in training. The Bank is committed to complying with regulatory requirements and addressing this risk by taking steps to discourage MLTF through its products and services.

The Bank is exposed to financial risks outside Canada and the United States primarily through its interbank transactions on international financial markets or through international trade finance activities. This geographic exposure represents a moderate proportion of the Bank's total risk. The geographic exposure of loans is disclosed in the quarterly *Supplementary Financial Information* report available on the Bank's website at nbc.ca. To control country risk, the Bank sets credit concentration limits by country and reviews and submits them to the Board for approval upon renewal of the Credit Risk Management Policy. These limits, which are based on a percentage of the Bank's regulatory capital, are proportionate to the level of risk represented by each country, particularly emerging countries. The risk is rated using a classification mechanism similar to the one used for credit default risk. In addition to the country limits per se, authorization caps and limits are established, as a percentage of capital, for the world's high-risk regions, i.e., essentially all regions except for North America, Western European countries and the developed countries of Asia.

Level of Competition

The level of competition in the Bank's markets has an impact on its performance. Retaining clients hinges on several factors, including the prices of products and services, quality of service, and changes to the products and services offered.

Acquisitions

The Bank's ability to successfully complete an acquisition is often conditional on regulatory approval, and the Bank cannot be certain when or under what conditions, if any, approval will be granted. Acquisitions could affect future results should the Bank experience difficulty integrating the acquired business. If the Bank does encounter difficulty integrating an acquired business, maintaining an appropriate governance level over the acquired business, or retaining key officers within the acquired business, these factors could prevent the Bank from realizing expected revenue growth, cost savings, market share gains and other projected benefits of the acquisition.

Ability to Attract and Retain Key Officers

The Bank's future performance depends largely on its ability to attract and retain key officers. There is intense competition for the best people in the financial services industry, and there is no assurance that the Bank, or any entity it acquires, will be able to continue to attract and retain key officers.

Judicial and Regulatory Proceedings

The Bank takes reasonable measures to comply with the laws and regulations in effect in the jurisdictions where it operates. Should these measures prove ineffective, the Bank could be subject to judicial or regulatory decisions resulting in fines, damages, or other costs or to restrictions likely to adversely affect its net income and damage its reputation. The Bank may also be subject to litigation in the normal course of business. Although the Bank establishes provisions for the measures it is subject to under accounting requirements, actual losses resulting from such litigation could differ significantly from the recognized amounts, and unfavourable outcomes in such cases could have a significant adverse effect on the Bank's financial results. The resulting reputational damage could also affect the Bank's future business prospects. For additional information on this topic, see Note 27 to the consolidated financial statements.

Accounting Policies, Methods and Estimates Used by the Bank

The accounting policies and methods used by the Bank determine how the Bank reports its financial position and operating results and may require management to make estimates or rely on assumptions about matters that are inherently uncertain. Any changes to these estimates and assumptions may have a significant impact on the Bank's operating results and financial position.

Other Factors

Other factors that could affect the Bank's future results include amendments to tax legislation, unexpected changes in consumer spending and saving habits, the timely development and launch of new products and services, the ability to successfully align its organizational structure, resources and processes, the ability to activate a business continuity plan within a reasonable time, the potential impact of international conflicts or natural catastrophes on the Bank's activities, and the Bank's ability to foresee and effectively manage the risks associated with these factors through rigorous risk management.

Risk Management Framework

Risk is rigorously managed. That means it is identified, measured and controlled to ensure that the Bank's operations yield an adequate return for the level of risk assumed. Managing risk requires a solid understanding of every type of risk found across the Bank. In addition to providing assurance that risk levels do not exceed acceptable thresholds, effective risk management can be used to control the volatility of the Bank's results.

Despite the exercise of stringent risk management and the mitigation measures in place, risk cannot be suppressed entirely, and the residual risks may occasionally cause significant losses. In the normal course of business, the Bank is primarily exposed to the risks presented below.

Credit risk	Market risk	Funding and liquidity risk	Operational risk	Regulatory compliance risk	Reputation risk	Strategic risk	Environmental risk

To achieve its risk management objectives, the Bank relies on a risk management framework that combines the following components:

- incorporation of risk management into the corporate culture;
- risk appetite and reporting;
- enterprise-wide stress testing;
- governance structure;
- risk management policies;
- risk models governance and vetting framework;
- independent oversight by the Compliance Service;
- independent assessment by Internal Audit.

Incorporation of Risk Management Into the Corporate Culture

The Bank's management continually promotes risk management through internal communications. A balanced approach is advocated, whereby business development initiatives are combined with a constant focus on sound risk management. In particular, risk is taken into consideration when preparing the segments' business plans, when analyzing strategic initiatives and when launching new products. The Bank's risk management is also strengthened by incentive compensation programs that are structured to reflect the Bank's risk appetite. In addition, all employees must complete mandatory annual regulatory compliance training focused on the Bank's Code of Conduct and Ethics and anti-money laundering and anti-terrorism financing efforts. Risk management training is also offered across all segments of the Bank.

Furthermore, to ensure the effectiveness of the existing risk management framework, the Bank has defined clear roles and responsibilities by reinforcing the concept of the three lines of defence. The Governance Structure section presented on the following pages defines this concept as well as the roles and responsibilities at all levels of the organization.

First Line of Defence Business Units	**Second Line of Defence** Risk Management and Oversight Functions	**Third Line of Defence** Internal Audit
– Identify, manage, assess and mitigate risks in day-to-day activities. – Ensure activities are in alignment with the Bank's risk appetite and risk management policies.	– Establish the enterprise-wide risk management framework and policies. – Provide independent oversight of management practices and an independent challenge of the first line of defence. – Promote an effective risk management culture throughout the Bank. – Monitor and report on risk.	– Provide independent assurance to management and the Board on the overall effectiveness of the risk management policies, processes and practices, including the manner in which the first and second lines of defence reach their control and risk management objectives.

The following guiding principles support strong risk management:

- risk is everyone's business: business units, risk management and oversight functions as well as Internal Audit play an important role in ensuring an effective and robust risk management framework is in place;
- client-centric: having quality information is key to understanding our clients, effectively managing risk, and delivering excellent client service;
- enterprise-wide: an integrated view of risk is the basis for sound risk management and decision-making by management;
- human capital: the Bank's employees are engaged, experienced and have a high level of expertise; their curiosity supports continuous development and their rigour promotes a sound risk culture across the organization;
- fact-based: good risk management relies heavily on common sense and judgment and on advanced systems and models.

Risk Appetite and Reporting

Risk-taking is intrinsic to a financial institution's business. Business unit strategies have always—implicitly or explicitly—incorporated decisions about the amount of risk they are willing to assume. Risk appetite represents how much risk an organization is willing to assume to achieve its business strategy. The Bank cultivates a risk management culture that is aligned with its risk appetite, doing so by setting risk tolerance thresholds that determine its risk-taking capacity.

The Bank's risk appetite framework consists of principles, statements, metrics as well as targets and is reinforced by policies and limits. It is defined both quantitatively and qualitatively and requires:

- a target risk rating of at least A+ or the equivalent;
- a risk-reward balance;
- a stable risk profile;
- a strategic level of concentration aligned with approved targets;
- a strong capital position;
- a strong liquidity position;
- a low tolerance to operational and reputation risk;
- a rigorous management of regulatory compliance risk;
- operational and information systems stability in both normal circumstances and crisis.

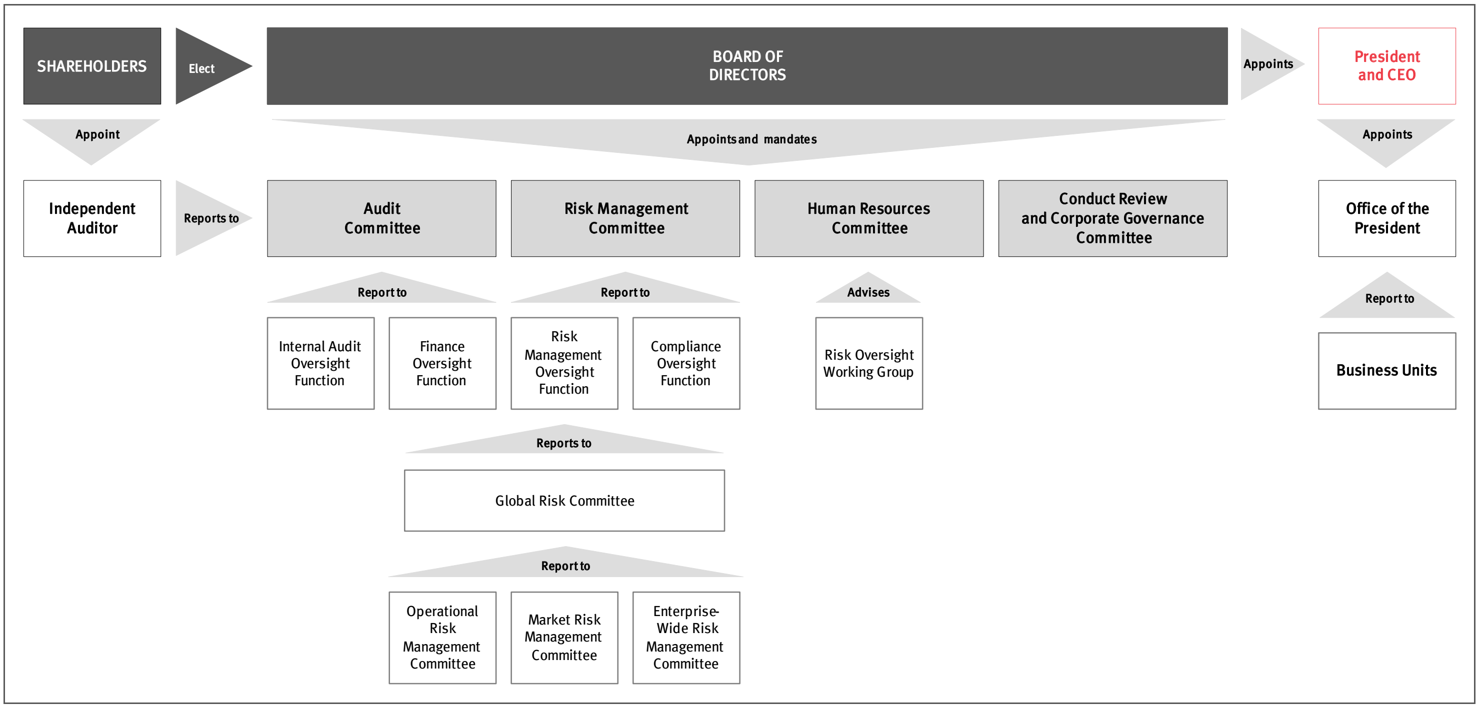
The Bank's management and business units are involved in the process for setting the risk appetite and are responsible for adequately monitoring the chosen key risk indicators. These needs are assessed by means of the enterprise strategic planning process. The risk indicators are reported on a regular basis to ensure an effective alignment of the Bank's risk profile to its risk appetite; otherwise, appropriate actions could be taken.

Enterprise-Wide Stress Testing

As part of a more extensive process aimed at ensuring that the Bank maintains adequate capital levels commensurate with its business strategy and risk appetite, an enterprise-wide stress testing program is in place at the Bank. Stress testing can be defined as a risk management method that assesses the potential effects—on the Bank's financial position, capital and liquidity—of a series of specified changes in risk factors, corresponding to exceptional but plausible events. The program supports management's decision-making process by identifying potential vulnerabilities for the Bank as a whole that are considered in setting limits as well as in longer term business planning. The scenarios and stress test results are reviewed by a group of stress testing experts, a stress testing oversight group and the Global Risk Committee and are approved by the Board. For additional information, see the Stress Testing and Crisis Scenarios headings of the credit, market and liquidity risk sections.

Governance Structure *

The following diagram shows the Bank's overall governance architecture and the governance relationships established for risk management. As the second line of defence, the Risk Management Group sets the risk management rules, policies and guidelines to which the business units must adhere and also ensures compliance therewith.



<u>The Board of Directors (Board)</u>[1]

The Board examines and approves the Bank's overall risk philosophy and risk appetite, acknowledges and understands the main risks faced by the Bank, and makes sure appropriate systems are in place to effectively manage and control those risks. It performs its mandate in this regard both directly and through its committees, particularly the Audit Committee, the Risk Management Committee, the Human Resources Committee and the Conduct Review and Corporate Governance Committee.

<u>The Audit Committee</u>[1]

The Audit Committee oversees the work of the internal auditor and the independent auditor, the financial reporting and analysis process, the Bank's internal controls, and the application of the policy for reporting irregularities related to accounting, internal accounting controls and other auditing matters.

<u>The Risk Management Committee (RMC)</u>[1]

The Risk Management Committee reviews the risk appetite framework, the main risk management policies as well as risk tolerance limits and recommends their approval by the Board. It ensures that appropriate resources, processes and procedures are in place to properly and effectively manage risk on an ongoing basis. Finally, it monitors the risk profile and risk trends of the Bank's activities and ensures alignment with the risk appetite.

<u>The Human Resources Committee</u>[1]

The Human Resources Committee examines and approves the Bank's total compensation policies and programs, taking into consideration the risk management framework, and recommends their approval to the Board. It sets annual objectives and key performance indicators for the President and Chief Executive Officer, recommends that they be approved by the Board, and evaluates the performance and achievements against these objectives and indicators. It recommends to the Board that it approve the compensation of the President and Chief Executive Officer, of the members of the Office of the President, and of the heads of the oversight functions. It also periodically reviews and examines the management succession plan.

<u>The Conduct Review and Corporate Governance Committee</u>[1]

The Conduct Review and Corporate Governance Committee is in charge of implementing and ensuring compliance with rules, procedures, and governance. It oversees the processes for managing and monitoring related party transactions and evaluates the performance and effectiveness of the Board and its members.

(1) Additional information about the Bank's governance architecture can be found in the *Management Proxy Circular for the 2018 Annual Meeting of Holders of Common Shares*, which will soon be available on the Bank's website at nbc.ca and on SEDAR's website at sedar.com. The mandates of the Board and its committees are available in their entirety at nbc.ca.

The Office of the President and the Bank's Management

Composed of the President and Chief Executive Officer and the officers responsible for the Bank's main functions and business units, the Office of the President ensures that risk management is effective and aligned with the Bank's pursuit of its objectives and strategies. The Bank's management promotes the integration of risk management into its corporate culture and manages the primary risks facing the Bank.

The Internal Audit Oversight Function

The Internal Audit Oversight Function is the third line of defence in the risk management framework. It is responsible for providing the Bank's Board and management with objective, independent assurance as well as advice on the effectiveness of the main governance, risk management, and internal control processes and systems and for making recommendations to promote the Bank's long-term strength.

The Finance Oversight Function

The Finance Oversight Function is responsible for optimizing management of financial resources and ensuring sound governance of financial information. It helps the business segments and support functions with their financial performance, ensures compliance with regulatory requirements, and carries out the Bank's reporting to shareholders and the external reporting of the various units, entities and subsidiaries of the Bank.

The Risk Management Oversight Function

The Risk Management Oversight Function is responsible for identifying, assessing and monitoring—independently and using an integrated approach—the various risks to which the Bank is exposed and for promoting a risk management culture within the Bank. The Risk Management team helps the Board and management understand and monitor the main risks. The unit also develops, maintains and communicates the risk appetite framework while overseeing the integrity and reliability of risk measures.

The Compliance Oversight Function

The Compliance Oversight Function is responsible for implementing a Bank-wide regulatory compliance risk management framework by relying on an organizational structure that includes functional links to the main business segments. It also exercises independent oversight of the compliance of the Bank and its subsidiaries with policies and procedures on regulatory compliance risk.

The Risk Oversight Working Group

The working group that monitors compensation-related risks supports the Human Resources Committee in its compensation risk oversight role. It's a three-member group consisting of the Executive Vice-President of Risk Management, the Chief Financial Officer and Executive Vice-President of Finance and Treasury, and the Executive Vice-President of Human Resources and Corporate Affairs. The working group helps to ensure that compensation policies and programs do not unduly encourage senior management members, officers, material risk takers or bank employees to take risks beyond the Bank's risk tolerance thresholds. As part of that role, it ensures that the Bank is adhering to the Corporate Governance Guidelines issued by OSFI and to the Principles for Sound Compensation Practices issued by the Financial Stability Board, for which the Canadian implementation and monitoring is conducted by OSFI. The Board's Risk Management Committee also reviews the reports presented by the working group to the Human Resources Committee.

The Global Risk Committee (GRC)

The Global Risk Committee defines the parameters of the policies that determine risk tolerance and the overall risk strategy, for the Bank and its subsidiaries as a whole, and sets limits as well as tolerance and intervention thresholds enabling the Bank to properly manage the main risks to which it is exposed. The committee approves and monitors all large credit facilities. It also recommends for Board approval the Bank's risk philosophy, risk appetite and risk profile management. The Operational Risk Management Committee, the Market Risk Management Committee, and the Enterprise-Wide Risk Management Committee presented in the governance structure diagram above are the primary committees reporting to the Global Risk Committee. The Global Risk Committee also carries out its mandate through the Senior Complex Valuation Committee, the Committee on Banks, the Models Oversight Committee and the Product and Activity Review Committees.

The Business Units

As the first line of defence, the business units manage risks related to their operations within established limits and in accordance with risk management policies by identifying, analyzing and understanding the risks to which they are exposed and implementing risk mitigation mechanisms. The management of these units must ensure that employees are adhering to current policies and limits.

Risk Management Policies

Risk management policies and the related standards and procedures are the essential elements of the risk management framework. They set out responsibilities, define and describe the main activity-related risks, specify the requirements that the business units must meet in assessing and managing risk, stipulate the authorization process for risk-taking and set the risk limits to be adhered to. These policies cover all the main risks in the Bank, are reviewed regularly to ensure they are still relevant given changes in the markets and in the business plans of the Bank's business units, and apply to the entire Bank and its subsidiaries. Other policies, standards, and procedures complement the main policies and cover more specific aspects of risk management such as business continuity, the launch of new products, initiatives or activities, or financial instrument measurement.

Risk Models Governance and Vetting Framework

In most cases, the Bank's exposure to the main risks, such as credit risk and market risk, is assessed through the use of models. The key components of the Bank's model vetting governance framework are as follows: the model risk management policies, the Models Oversight Committee, and the model vetting group. The policies set the rules and guidelines applicable to both the model development and the model vetting groups. The scope of models covered is wide, ranging from the market risk pricing models and automated credit decision-making models to the business risk capital model, including models used for regulatory capital and stressed capital purposes.

The Bank makes increasing use of models to guide enterprise-wide risk management, financial markets strategy, economic and regulatory capital allocation, global credit risk management, wealth management and profitability measures. Models have in fact become a standard in risk management. This stresses the growing importance of model risk for banks, hence the implementation of a rigorous policy and sound model vetting processes to ensure models can be used appropriately and efficiently to manage risks.

One of the cornerstones of the Bank's policies is the general principle that all models that are deemed important for the Bank or that are used for regulatory capital purposes require independent vetting. To that effect, all models used by the Bank are classified in terms of their risk level (low, medium or high). Based on that assessment, the Bank applies strict guidelines with respect to model review requirements and the minimum frequency of such reviews. The Bank believes that the best defence against "model risk" is the implementation of a robust development and validation framework.

Independent Oversight by the Compliance Service

Compliance is an independent oversight function within the Bank. Its Senior Vice-President and Chief Compliance Officer has direct access to the RMC and to the President and Chief Executive Officer and can communicate directly with officers and directors of the Bank and of its subsidiaries and foreign centres. The Senior Vice-President and Chief Compliance Officer meets regularly with the Chair of the RMC (with whom she has a direct reporting relationship) in the absence of management, to review matters on the relationship between the Compliance Service and the Bank's management and on access to the information required.

Business unit managers must oversee the implementation of mechanisms for the daily control of regulatory compliance risks arising from the operations under their responsibility. Compliance exercises independent oversight in order to assist managers in effectively managing these risks and to obtain reasonable assurance that the Bank is compliant with the regulatory requirements in effect where it does business, both in Canada and internationally.

The control framework covers the following:

- identification, evaluation, communication, maintenance and updating of regulatory requirements;
- information gathering and monitoring of regulatory changes;
- identification of the business units affected by these requirements;
- documentation of compliance and regulatory requirement controls applicable to daily operations, including monitoring procedures, remedial action plans and periodic reports produced by the business units;
- continuous training for all employees;
- information exchange between the business segments, business units and Compliance;
- independent oversight to assess the effectiveness of regulatory compliance risk management by the business units and to detect shortcomings or non-compliance in the application of existing policies and procedures;
- quarterly and annual reports to the RMC on the main results of compliance oversight and on any change to the regulatory compliance risk framework or its effectiveness;
- annual certification process.

Independent Assessment by Internal Audit

Internal Audit is an independent, objective function within the Bank. Through the Audit Committee, it provides assurance to management and the Board as to the Bank's level of command over its activities, advises on how to improve those activities, and contributes to the creation of added value. It helps the Bank to achieve its objectives by applying a systematic, methodical approach for assessing and improving the effectiveness of the design and operation of its main governance, risk management and internal control processes and systems and formulates recommendations to promote the Bank's long-term strength.

Whenever recommendations are issued, Internal Audit is mandated to independently evaluate the appropriateness of the measures taken by managers to resolve issues and then to ensure rigorous follow-up.

The Senior Vice-President of Internal Audit reports to the Chair of the Audit Committee. Her independence is ensured through an administrative relationship with the President and Chief Executive Officer, and she may, at any time, call an unscheduled Audit Committee meeting. Internal Audit has unrestricted access to all business segments, corporate units and subsidiaries of the Bank.

Credit Risk Management

Credit risk is the risk of incurring a financial loss if an obligor does not fully honour its contractual commitments to the Bank. Obligors may be debtors, issuers, counterparties or guarantors. Credit risk is the most significant risk facing the Bank in the normal course of business. The Bank is exposed to credit risk not only through its direct lending activities and transactions but also through commitments to extend credit, letters of guarantee, letters of credit, over-the-counter derivatives trading, available-for-sale debt securities, securities purchased under reverse repurchase agreements, deposits with financial institutions, brokerage activities, and transactions carrying a settlement risk for the Bank such as irrevocable fund transfers to third parties via electronic payment systems.

Governance

A policy framework centralizes the governance of activities that generate credit risk for the Bank and is supplemented by a series of subordinate internal or sectoral policies and guidelines on specific management issues such as credit limits, collateral requirements and risk quantification or issues that provide more thorough guidance for given business segments.

For example, the institutional activities of the Bank and its subsidiaries on financial markets and international commercial transactions are governed by business unit directives that set out standards adapted to the specific environment of these activities. This also applies to retail brokerage subsidiaries. In isolated cases, a business unit or subsidiary may have its own credit policy, and that policy must always fall within the spirit of the Bank's policy framework and be reviewed and approved by the management of the Risk Management Group. The Risk Management Group defines the scope of the universe of subsidiaries carrying significant credit risks and the magnitude of the risks incurred.

Credit risk is controlled through a rigorous process that comprises the following elements:

- credit application;
- credit risk rating and assessment;
- economic capital assessment;
- stress testing and crisis scenarios;
- credit granting process;
- risk mitigation;
- follow-up of monitored accounts and recovery;
- counterparty risk assessment;
- settlement risk assessment.

Credit Risk Rating and Assessment

Before a sound and prudent credit decision can be taken, the obligor's or counterparty's credit risk must be accurately assessed. This is the first step in processing credit applications. Each application is analyzed and assigned one of 19 grades on a scale of 1 to 10 using a credit rating system developed by the Bank for all portfolios exposed to credit risk. As each grade corresponds to a debtor's, counterparty's or third party's probability of default, the Bank can determine the credit risk. The credit risk assessment method varies according to portfolio type. There are two main methods for assessing credit risk, i.e., the Advanced Internal Rating-Based (AIRB) Approach or the Standardized Approach, as defined by the Basel Accord to determine minimum regulatory capital requirements for most of its portfolios.

The main parameters used to measure the credit risk of loans outstanding and undrawn amounts under the AIRB Approach are as follows:

- probability of default (PD), which is the probability of through-the-cycle 12-month default by the obligor, calibrated on a long-run average PD throughout a full economic cycle;
- loss given default (LGD), which represents the magnitude of the loss from the obligor's default that would be expected in an economic downturn and subject to certain regulatory floors, expressed as a percentage of exposure at default (EAD);
- EAD, which is an estimate of the amount drawn and of the expected use of any undrawn portion prior to default, and cannot be lower than the current balance.

The methodology as well as the data and the downturn periods used to estimate LGD are described on the next page.

AIRB APPROACH	DATA	DOWNTURN PERIOD	METHODOLOGY FOR CALCULATING LGD
Retail	The Bank's internal historical data from 1996 to 2014	1996-1998, 2000-2002 October 2008 – December 2009	LGD based on the Bank's historical recoveries and losses
Corporate	The Bank's internal historical data from 2000 to 2014	2000-2003 and 2008-2009	LGD based on the Bank's historical recoveries and losses
Sovereign	Moody's observed default price of bonds, from 1983 to 2010 S&P rating history from 1975 to 2011	No specific period	Based on implied market LGD using observed bond price decreases following the issuer's default
Financial institutions	Global Credit Data Consortium loss and recovery database from 1998 to 2014	1991-1992, 1994, 1998, 2001-2002 and 2008-2009	Model for predicting LGD based on different issue- and issuer-related risk drivers

Personal Credit Portfolios

This category comprises portfolios of residential mortgage loans, consumer loans and loans to certain small businesses. The Bank uses AIRB tools and models to assess credit risk. Models are in place for the main portfolios, particularly mortgage loans, home equity lines of credit, credit cards, budget loans and lines of credit. A risk analysis based on loan grouping in pools of homogeneous obligor and product profiles is used for overall management of personal credit portfolios. This personal credit assessment approach, which has proven particularly effective for estimating loan defaults and losses, takes a number of factors into account, namely:

– behaviour scoring;
– loan product characteristics;
– collateral provided;
– the length of time on the Bank's balance sheet;
– loan status (active, delinquent or defaulted).

This mechanism provides adequate risk measurement inasmuch as it effectively differentiates risk levels by pool. Therefore, the results are periodically reviewed and, if necessary, adjustments are made to the models. Obligor migrations between pools are among the factors considered in the credit risk assessment.

Loan pools are also established based on probability of default, loss given default and exposure at default, which are measured based on the characteristics of the obligor and the transaction itself. The credit risk of these portfolios is estimated using credit scoring models that determine the obligor's probability of default. Loss given default is estimated based on transaction-specific factors such as loan product characteristics (for example, a line of credit versus a term loan), loan-to-value ratio and types of collateral.

Under the Bank's standards applicable to default-risk rating and facility-risk rating and according to its risk review, renewal and quantification standards, default risk ratings must be reviewed annually. Personal credit risk assessments are based on a group of debtors with similar credit histories and behaviour profiles.

The credit scoring models are also used to grant new credit. These models use proven statistical methods that measure applicants' characteristics and history based on internal and external historical information to estimate the applicant's future credit behaviour and assign a probability of default. The underlying data include client information such as current and past employment, historical loan data in the Bank's management systems and information from external sources such as credit rating agencies.

The Bank also uses behaviour scoring models to manage and monitor current commitments. The risk assessment is based on statistical analyses of the past behaviour of obligors with which the Bank has a long-term relationship in an effort to predict their future behaviour. The underlying information includes the obligor's cash flows and borrowing trends. Information on characteristics that determine behaviour in these models also comes from both internal sources on current commitments and external sources.

Business and Government Credit Portfolios

This category comprises business (other than some small businesses that are classified in personal credit portfolios), government and financial institution credit portfolios.

These credit portfolios are assigned a risk rating based on a detailed individual analysis of the financial and non-financial aspects of the obligor, including the obligor's financial strength, sector of economic activity, competitive ability, access to capital and management quality. The Bank has risk-rating tools and models enabling it to specifically assess the risk represented by an obligor in relation to its industry and peers. The models used are adapted to the obligor's broad sector of activity. Models are in place for nine sectors: business/commercial, large business, banks-brokerage, sovereigns, investment funds, energy, real estate, agriculture and insurance.

This risk assessment method assigns a default risk rating to an obligor that reflects its credit quality. To each default credit risk rating corresponds a probability of default (see the following table). Using this classification of obligor credit risk, the Bank can differentiate appropriately between the various assessments of an obligor's capacity to meet its contractual obligations. Default risk ratings are assigned according to an assessment of an obligor's commercial and financial risks based on a solvency review. Various risk quantification models, described below, are used to perform this assessment.

The business and government default risk rating scale used by the Bank is similar to the systems used by major external rating agencies. The complete default risk-rating scale comprised of 19 grades is presented in the Supplementary Regulatory Capital Disclosure report, which is available on the Bank's website at nbc.ca. The following table presents a grouping of the grades by major risk category and compares them with the ratings of two major rating agencies.

Internal Default Risk Ratings – Business and government*

Ratings	PD (%) – Corporate and financial institutions	PD (%) – Sovereign	Standard & Poor's	Moody's	Description(1)
1–2.5	0.000–0.102	0.000–0.059	AAA to A-	Aaa to A3	Excellent
3–4	0.103–0.461	0.060–0.341	BBB+ to BBB-	Baa1 to Baa3	Good
4.5–6.5	0.462–5.624	0.342–6.275	BB+ to B	Ba1 to B2	Satisfactory
7–7.5	5.625–15.283	6.276–20.098	B- to CCC+	B3 to Caa1	Special mention
8–8.5	15.284–99.999	20.099–99.999	CCC & CCC-	Caa2 & Caa3	Substandard
9–10	100	100	CC, C & D	Ca, C & D	Default

(1) Additional information is provided in the table on page 63.

The Bank also uses individual assessment models by industry to assign a risk rating to the credit facility based on the collateral and guarantees the obligor is able to provide and, in some cases, based on other factors.

The Bank consequently has a bi-dimensional risk-rating system that, using models and based on internal and external historical data, establishes a default risk rating for each obligor. In addition, the models assign, to each credit facility, a loss-given-default risk rating that is independent of the risk rating assigned to the obligor.

The Bank's default, and in some cases credit facility, risk-rating systems and the related risk parameters contribute directly to informed credit-granting, renewal and monitoring decisions. They are also used to determine and analyze risk-based pricing. In addition, from a credit portfolio management perspective, they are used to establish counterparty credit concentration limits and segment concentration limits and to determine the credit risk appetite of these portfolios. Moreover, they represent an important component in estimating expected and unexpected losses, measuring minimum required economic capital, and measuring the minimum level of capital required, as prescribed by the regulatory authorities.

The credit risk of obligors and of their facilities are assessed with the PD and LGD parameters at least once a year or more often if significant changes (triggers) are observed when updating financial information or if another qualitative indicator of a deterioration in the obligor's solvency or in the collateral associated with the obligor's facilities is noted.

A watchlist also exists that enables the Bank to more actively monitor the financial position of obligors whose default-risk rating is greater than or equal to 7.0. This process seeks to minimize an obligor's default risk and allows for proactive credit risk management.

Validation

The Risk Management Group monitors the effectiveness of the risk-rating systems and associated parameters, which are also reviewed regularly in accordance with the Bank's policies.

Backtesting is performed at regular intervals to validate the effectiveness of the models used to estimate probability of default, loss given default and exposure at default. For probability of default in particular, this backtesting takes the form of sequentially applied statistical tests designed to assess the following criteria:

- the model's discriminatory power;
- overrides;
- model calibration;
- the stability of the model's output.

The credit risk quantification models are developed and tested by a team of specialists and their performance is monitored by the applicable business units and related credit risk management services. New models are validated by a unit that is independent of both the specialists who developed the model and the concerned business units, and approved through an escalation process established by the model risk management policy. Furthermore, new models or changes to existing models that markedly impact regulatory capital must be approved by the Board before being submitted to the regulatory agencies, and a summary report of all changes to the models is submitted to the RMC once a year.

The default risk-rating systems, methods and models are also subject to periodic independent validation as often as required given the inherent risk of the activity. Models that have a significant impact on regulatory capital must be reviewed regularly, thereby further raising the certainty that these quantification mechanisms are working as expected. The key aspects to be validated are factors allowing accurate risk classification by level, adequate quantification of exposure, use of assessment techniques that include external factors such as economic conditions and credit status and, lastly, compliance with internal policies and regulatory provisions. Each year, the Risk Management Group presents a summary report on the validations to the RMC.

The Bank's credit risk assessment and rating systems are overseen by the Models Oversight Committee, the GRC and the RMC, and are an integral part of a comprehensive Bank-wide credit risk oversight framework. Along with the above-mentioned elements, the Bank documents and periodically reviews the policies, definitions of responsibilities, resource allocation and existing processes.

Personal Credit Portfolio Subject to the AIRB Approach *

The following table presents the credit quality of the personal credit portfolio subject to the AIRB Approach, according to the internal risk-rating categories assigned to debtors.

As at October 31
(millions of Canadian dollars)

						Exposure at default
					2017	2016
	Probability of default (%)	Residential mortgage[1]	Qualifying revolving retail[2]	Other retail[3]	Total	Total
Excellent	0.000-0.144	25,477	3,200	2,390	31,067	26,743
Good	0.145-0.506	14,136	1,160	2,896	18,192	19,784
Satisfactory	0.507-2.681	5,753	1,305	4,250	11,308	10,939
Special mention	2.682-9.348	804	422	846	2,072	2,090
Substandard	9.349-99.999	297	88	225	610	593
Default	100	136	21	103	260	260
		46,603	6,196	10,710	63,509	60,409

(1) Includes home equity lines of credit.
(2) Includes lines of credit and credit card receivables.
(3) Includes consumer loans, credit card receivables, certain SME loans, and other personal loans.

Business and Government Credit Portfolio Subject to the AIRB Approach *

The following table presents the credit quality of the business and government credit portfolio subject to the AIRB Approach, according to the internal risk-rating categories assigned to debtors, as defined in the table on page 62.

As at October 31
(millions of Canadian dollars)

					Exposure at default
				2017	2016
	Drawn[1]	Undrawn commitments[2]	Other exposures[3]	Total	Total
Excellent	26,759	5,820	65,399	97,978	81,105
Good	21,590	10,036	26,391	58,017	52,838
Satisfactory	20,778	3,973	12,750	37,501	30,535
Special mention	1,065	174	43	1,282	1,307
Substandard	85	6	2	93	101
Default	282	1	–	283	345
	70,559	20,010	104,585	195,154	166,231

(1) Amounts drawn represent certain deposits with financial institutions, available-for-sale debt securities, gross loans, customers' liability under acceptances and certain other assets.
(2) Undrawn commitments represent unused portions of authorized credit facilities in the form of loans, acceptances, letters of guarantee and documentary letters of credit, excluding investment banking activities.
(3) Other exposures represent securities purchased under reverse repurchase agreements and securities borrowed as well as securities sold under repurchase agreements and securities loaned, forwards, futures, swaps and options and also include letters of guarantee, documentary letters of credit, and securitized assets that represent the Bank's commitment to make payments in the event a client cannot meet its financial obligations to third parties.

Assessment of Economic Capital

The assessment of the Bank's minimum required economic capital is based on the credit risk assessments of debtors. These two activities are therefore interlinked. The different models used to assess the credit risk of a given portfolio type also enable the Bank to determine the default correlation among debtors. This information is a critical component in the evaluation of potential losses for all portfolios carrying credit risk. Estimates of potential losses, whether expected or not, are based on historical loss experience, portfolio monitoring, market data and statistical modelling. Expected and unexpected losses are factors used in assessing the minimum required economic capital for all of the Bank's credit portfolios. The assessment of economic capital also considers the anticipated potential migrations of obligors' default risk during the remaining term of their credit commitments. The main risk factors that have an impact on economic capital are as follows:

- the obligor's probability of default;
- estimated amount potentially drawn at the time of the obligor's default;
- loss in the event of default;
- the default probability correlation among obligors;
- the residual term of credit commitments;
- impact of economic and sector-based cycles on asset quality.

Stress Testing and Crisis Scenarios

The Bank carries out stress tests to evaluate its sensitivity to crisis situations in certain activity sectors and key portfolios. A global stress test methodology covers most business, government, and personal credit portfolios to provide the Bank with an overview of the situation. By simulating specific scenarios, these tests enable the Bank to measure the level of regulatory capital needed to absorb potential losses and to determine the impact on its solvency. In addition, these tests contribute to portfolio management as they influence the determination of concentration limits by obligor, product or business sector.

Mortgage Loan Underwriting

To mitigate the impact of an economic slowdown and ensure the long-term quality of its portfolio, the Bank uses sound risk management when granting residential mortgages to confirm: (i) the obligor's intention to meet its financial obligations, (ii) the obligor's ability to repay its debts and (iii) the quality of the collateral. In addition, the Bank takes a prudent approach to client qualification by using, for example, a higher interest rate for terms less than five years to mitigate the risk of short- or medium-term rate increases.

Nonetheless, the risk of economic slowdown could adversely affect the profitability of the mortgage portfolio. In stress test analyses, the Bank considers a variety of scenarios to measure the impact of adverse market conditions. In such circumstances, our analyses show significantly higher loan losses, which would decrease profitability and reduce the Bank's capital ratios.

Credit-Granting Process

Credit-granting decisions are based first and foremost on the results of the risk assessment. Aside from a client's solvency, credit-granting decisions are also influenced by factors such as available collateral, transaction compliance with policies, standards and procedures, and the Bank's overall risk-adjusted return objective. Each credit-granting decision is made by authorities within the risk management teams and management who are independent of the business units and are at a reporting level commensurate with the size of the proposed credit transaction and the associated risk.

Decision-making authority is determined in compliance with the delegation of authority set out in the Credit Risk Management Policy. A person in a senior position in the organization approves credit facilities that are substantial or carry a higher risk for the Bank. The GRC approves and monitors all substantial credit facilities. Credit applications that exceed management's latitudes are submitted to the Board for approval. The credit-granting process demands a high level of accountability from managers, who must proactively manage the credit portfolio.

Risk Mitigation

The Bank also controls credit risk using various risk mitigation techniques. In addition to the standard practice of requiring collateral to guarantee repayment of the credit it grants, the Bank also uses protection mechanisms such as credit derivative financial instruments, syndication and loan assignments as well as an orderly reduction in the amount of credit granted.

The most common method used to mitigate credit risk is to obtain quality collateral from obligors. Obtaining collateral cannot replace a rigorous assessment of an obligor's ability to meet its financial obligations, but, beyond a certain risk threshold, it is an essential complement. Collateral is not required in all cases. It depends upon the level of risk presented by the obligor and the type of loan granted. However, if the level of risk to the Bank is considered high, collateral will likely be required. The legal validity and enforceability of any collateral obtained and the Bank's ability to correctly and regularly measure the collateral's value are critical for this mechanism to play its proper role in risk mitigation. The Bank has established specific requirements in its internal policies with respect to the appropriate legal documentation and assessment for the kinds of collateral that business units may require to guarantee the loans granted. The categories of eligible collateral and the lending value of the collateralized assets have also been defined by the Bank. For the most part, they include the following asset categories as well as guarantees (whether secured by collateral or unsecured) and government and bank guarantees:

- accounts receivable;
- inventories;
- machinery and equipment and rolling stock;
- residential and commercial real estate, office buildings and industrial facilities;
- cash and marketable securities.

Portfolio Diversification and Management

The Bank is exposed to credit risk, not only through outstanding loans and undrawn amounts of commitments to a particular obligor but also through the sectoral distribution of the outstanding loans and undrawn amounts and through the exposure of its various credit portfolios to geographical, concentration and settlement risks.

The Bank's approach to controlling these diverse risks begins with a diversification of exposures. Measures designed to maintain a healthy degree of diversification of credit risk in its portfolios are set out in the Bank's internal policies and procedures. These instructions are mainly reflected in the application of various exposure limits: credit concentration limits by counterparty and credit concentration limits by business sector, country, region, product, and type of financial instrument. These limits are determined based on the Bank's credit risk appetite framework and are reviewed periodically in that respect. Compliance with these limits, particularly exceptions, is monitored through periodic reports submitted by the Risk Management Group's officers to the Board.

Continuous analyses are performed in order to anticipate problems with a sector or obligor before they materialize as defaulted payments.

Other Risk Mitigation Methods

Credit risk mitigation measures for transactions in derivative financial instruments, which are regularly used by the Bank, are described in detail in the Counterparty Risk section.

Credit Derivative Financial Instruments and Financial Guarantee Contracts

The Bank also reduces credit risk by using the protection provided by credit derivative financial instruments such as credit default swaps. When the Bank acquires credit protection, it pays a premium on the swap to the counterparty in exchange for the counterparty's commitment to pay if the underlying entity defaults or another event involving the underlying entity and covered by the legal agreement occurs. Since, like obligors, providers of credit protection must receive a default risk rating, the Bank's standards set out all the criteria under which a counterparty may be judged eligible to mitigate the Bank's credit risk. The Bank may also reduce its credit risk by entering into financial guarantee contracts whereby a guarantor indemnifies the Bank for a loss resulting from an obligor failing to make a payment when due in accordance with the contractual terms of a debt instrument.

Loan Syndication

The Bank has developed specific instructions on the appropriate objectives, responsibilities and documentation requirements for loan syndication.

Follow-Up of Monitored Accounts and Recovery

Credit granted and obligors are monitored on an ongoing basis and in a manner commensurate with the related risk. Loan portfolio managers use an array of intervention methods to conduct a particularly rigorous follow-up on files that show risk of default. When loans continue to deteriorate and there is an increase in risk to the point where monitoring has to be increased, a group specialized in managing problem accounts steps in to maximize collection of the disbursed amounts and tailor strategies to these accounts.

In these cases, loan portfolio managers prepare and submit, to the credit department, a detailed monitoring report each month to track the status of at-risk obligors and the corrective measures undertaken. The management of each department concerned performs follow-ups on the reports, and each quarter a credit monitoring committee meets to review the action plans and monitoring reports of obligors that have commitments of $3 million or more. The authority to approve allowances for credit losses is attributed using limits delegated on the basis of hierarchical level under the Credit Risk Management Policy.

Information on the recognition of impaired loans and allowances for credit losses are presented in Note 1 to the consolidated financial statements.

Forbearance and Restructuring

Situations where a business or retail obligor begin showing clear signs of potential insolvency are managed on a case-by-case basis and require the use of judgment. The Loan Work Out Policy sets the principles applicable in such situations to guide loan restructuring decisions and identify situations where distressed restructuring applies. A distressed restructuring situation occurs when the Bank, for economic or legal reasons related to the obligor's financial difficulties, grants the obligor a special concession that is contrary to the Bank's policies. Such concessions could include a lower interest rate, waiver of principal and extension of the maturity date.

The Bank has established a management framework for commercial and corporate obligors that represent higher-than-normal risk of default. It outlines the roles and responsibilities of loan portfolio managers with respect to managing high-risk accounts and the responsibilities of the Work Out units and other participants in the process. Lastly, the Credit Risk Management Policy and a management framework are used to determine the authorization limits for distressed restructuring situations. During fiscal years 2017 and 2016, the amount of distressed loan restructurings was not significant.

Counterparty Risk Assessment

Counterparty risk is a credit risk that the Bank incurs on various types of transactions involving financial instruments. The most significant risks are those it faces when it trades derivative financial instruments with counterparties on the over-the-counter market or when it purchases securities under reverse repurchase agreements or sells securities under repurchase agreements. Securities lending transactions and securities brokerage activities involving derivative financial instruments are also sources of counterparty risk. Note 17 to the consolidated financial statements provides a complete description of the credit risk for derivative financial instruments by type of traded product. The Risk Management Group has developed models by broad category of financial instrument through which it applies an advanced methodology for calculating the Bank's credit risk exposure and economic capital. The exposures are subject to limits. These two elements are established based on the potential volatility of the underlying assets until maturity of the contract.

Counterparty obligations related to the trading of contracts on derivative financial instruments, securities lending transactions and reverse repurchase agreements are frequently subject to credit risk mitigation measures. The mitigation techniques are somewhat different from those used for loans and advances and depend on the nature of the instrument or the type of contract traded. The most widely used measure is the signing of master agreements: the International Swaps & Derivatives Association, Inc. (ISDA) master agreement, the Global Master Repurchase Agreement (GMRA) and the Global Master Securities Lending Agreement (GMSLA). These agreements make it possible, in the event of default, insolvency or bankruptcy of one of the contracting parties, to apply full netting of the gross amounts of the market values for each of the transactions covered by the agreement and in force at the time of default. The amount of the final settlement is therefore the net balance of gains and losses on each transaction, which reduces exposure when a counterparty defaults. The Bank's policies require that an ISDA, GMRA, or GMSLA agreement be signed with most trading counterparties to derivatives, foreign exchange forward contracts, lending transactions and reverse repurchase agreements.

Another mechanism for reducing credit risk on derivatives and foreign exchange forward contracts complements the ISDA master agreement in many cases and provides the Bank and its counterparty (or either of the parties, if need be) with the right to request collateral from the counterparty when the net balance of gains and losses on each transaction exceeds a threshold defined in the agreement. These agreements, also known as Credit Support Annexes (CSAs), are common between financial institutions active in international financial markets since they limit credit risk while providing traders with additional flexibility to continue trading with the counterparty. The Bank often uses this type of legal documentation in transactions with financial institutions and governments. For business transactions, the Bank prefers to use internal mechanisms set out in the credit agreements. The Bank's internal policies set the conditions governing the implementation of such mitigation methods.

Requiring collateral as part of a securities lending transaction or reverse repurchase agreement is not solely the result of an internal credit decision. In fact, it is a mandatory market practice imposed by self-regulating organizations in the financial services sector such as the Investment Industry Regulatory Organization of Canada.

The Bank also has policies and guidelines governing its own collateral pledged to counterparties, given the potential impact of such asset transfers on its liquidity. In accordance with its Liquidity, Funding & Pledging Policy, the Bank conducts simulations of potential counterparty collateral claims under CSAs in effect, in the event of a Bank downgrade or other unlikely occurrences. The simulations are based on various Bank downgrading scenarios or market value fluctuations of transactions covered by CSAs.

The Bank has identified circumstances in which it is likely to be exposed to wrong-way risk, which is generally associated with exposure to counterparty risk and characterized by higher risk for the Bank if a counterparty's probability of default increases (unfavourable positive correlation). A common wrong-way risk arises from the trading of derivatives contracts with counterparties where the underlying assets may include equity securities issued by those counterparties.

Assessment of Settlement Risk

Settlement risk potentially arises from transactions that feature reciprocal delivery of cash or securities between the Bank and a counterparty. Foreign exchange contracts are an example of transactions that can generate significant levels of settlement risk. However, the implementation of multilateral settlement systems that allow settlement netting among participating institutions has contributed greatly to reducing the risks associated with the settlement of foreign exchange transactions among banks. The Bank also uses financial intermediaries to gain access to established clearing houses in order to minimize settlement risk for certain financial derivative transactions. In some cases, the Bank may have direct access to established clearing houses for settling financial transactions such as repurchase agreements or reverse repurchase agreements. In addition, certain derivative financial instruments traded over the counter are settled directly or indirectly by central counterparties. For additional information, see the table that presents notional amounts in Note 17 to the consolidated financial statements.

There are several other types of transactions that may generate settlement risk, in particular the use of certain electronic fund transfer services. This risk refers to the possibility that the Bank may make a payment or settlement on a transaction without receiving the amount owed from the counterparty, and with no opportunity to recover the funds delivered (irrevocable settlement).

The ultimate means for completely eliminating such a risk is for the Bank to complete no payments or settlements before receiving the funds due from the counterparty. Such an approach cannot, however, be used systematically. For several electronic payment services, the Bank is able to implement mechanisms that allow it to make its transfers revocable or to debit the counterparty in the amount of the settlements before it makes its own transfer. On the other hand, the nature of transactions in financial instruments makes it impossible for such practices to be widely used. For example, on foreign exchange transactions involving a currency other than the U.S. dollar, time zone differentials impose strict payment schedules on the parties. The Bank cannot unduly postpone a settlement without facing significant penalties, due to the large size of amounts involved.

The most effective way for the Bank to control settlement risks, both for financial market transactions and irrevocable transfers, is to impose internal risk limits based on the counterparty's ability to pay.

The amounts shown in the following tables represent the Bank's maximum exposure to credit risk as at the financial reporting date without taking into account any collateral held or any other credit enhancements. These amounts do not take into account allowances for credit losses nor amounts pledged as collateral. The tables also exclude equity securities.

Maximum Credit Risk Exposure Under the Basel Asset Categories *

(millions of Canadian dollars)						As at October 31, 2017
	Drawn	Undrawn commitments	Repo-style transactions(1)	OTC derivatives	Other off-balance-sheet items(2)	Total
Retail						
Residential mortgage	41,308	7,720	–	–	–	49,028
Qualifying revolving retail	2,834	3,362	–	–	–	6,196
Other retail	15,169	1,452	–	–	14	16,635
	59,311	12,534	–	–	14	71,859
Non-retail						
Corporate	44,554	16,002	16,553	14	2,936	80,059
Sovereign	24,325	4,024	35,289	314	144	64,096
Financial institutions	4,505	193	52,811	358	641	58,508
	73,384	20,219	104,653	686	3,721	202,663
Trading portfolio	–	–	–	8,309	–	8,309
Securitization	–	–	–	–	4,740	4,740
Total – Gross credit risk	132,695	32,753	104,653	8,995	8,475	287,571
Standardized Approach	11,154	230	4,101	189	366	16,040
AIRB Approach	121,541	32,523	100,552	8,806	8,109	271,531
Total – Gross credit risk	132,695	32,753	104,653	8,995	8,475	287,571

(millions of Canadian dollars)						As at October 31, 2016
	Drawn	Undrawn commitments	Repo-style transactions(1)	OTC derivatives	Other off-balance-sheet items(2)	Total
Retail						
Residential mortgage	40,600	5,978	–	–	–	46,578
Qualifying revolving retail	2,795	2,921	–	–	–	5,716
Other retail	13,980	1,301	–	–	93	15,374
	57,375	10,200	–	–	93	67,668
Non-retail						
Corporate	40,956	14,416	14,418	27	2,890	72,707
Sovereign	23,068	3,623	30,559	328	135	57,713
Financial institutions	4,074	252	36,835	324	609	42,094
	68,098	18,291	81,812	679	3,634	172,514
Trading portfolio	–	–	–	9,623	–	9,623
Securitization	616	–	–	–	3,452	4,068
Total – Gross credit risk	126,089	28,491	81,812	10,302	7,179	253,873
Standardized Approach	10,458	277	2,294	282	491	13,802
AIRB Approach	115,631	28,214	79,518	10,020	6,688	240,071
Total – Gross credit risk	126,089	28,491	81,812	10,302	7,179	253,873

(1) Securities purchased under reverse repurchase agreements and sold under repurchase agreements as well as securities loaned and borrowed.
(2) Letters of guarantee, documentary letters of credit and securitized assets that represent the Bank's commitment to make payments in the event that a client cannot meet its financial obligations to third parties.

Market Risk Management

Market risk is the risk of losses in on- and off-balance-sheet positions arising from movements in market parameters.

The Bank is exposed to market risk through its participation in market making, trading, investing and asset/liability management activities. Trading and market making activities involve taking positions, particularly on various instruments such as bonds, shares, currencies, commodities or derivative financial instruments. The Bank is exposed to non-trading market risk through its asset/liability management portfolios and its short-term funding and investment portfolios.

Market risk comes from a number of factors, the most important of which are:

- interest rate risk: relates to changes in the term structure of interest rates of financial instruments such as bonds, money market instruments and derivative financial instruments;
- foreign exchange risk: relates to changes in foreign exchange rates of financial instruments such as investments in foreign subsidiaries, foreign currency denominated loans and securities, future cash flows in foreign currencies and derivative financial instruments;
- equity risk: relates to changes in overall equity prices (general equity risk) or in individual characteristics that are specific to an entity (equity-specific risk) for financial instruments such as common shares and options;
- commodity risk: relates to changes in commodity prices for financial instruments used in exchange trading or over-the-counter trading, involving either physical trading or derivatives trading of commodities;
- traded credit risk: relates to changes in the creditworthiness of all issuers (general traded credit risk) or in the characteristics of an issuer (issuer-specific traded credit risk) relating mainly to the Bank's portfolios of debt securities and credit derivatives, whose value could be adversely affected by changes in credit spreads, by credit migration or by defaults;
- implied correlation risk: relates to changes in the implied correlations between two or more risk factors found primarily in complex derivative financial instruments with several correlated risk factors;
- market liquidity risk: relates to a significant decrease or, at worst, a halt in the level of expected market activity for a specific market or for a variety of instruments, thereby making the instruments concerned less liquid or illiquid. This exposes the Bank to losses due to the inability to execute its transactions at the prevailing prices, which may not represent the true price at which the position can be fully unwound. Almost all traded instruments are exposed to this type of risk depending mainly on frequency and volume of transactions;
- portfolio diversification and hedging risk (basis risk): relates to changes in correlations realized between two or more risk factors. Adverse changes in realized correlations can reduce the portfolio diversification benefit in the sense that several of the positions could have a higher correlation than expected, giving rise to simultaneous losses. In addition, adverse changes in realized correlations can make hedging strategies less effective if the underlying position and the hedge position have a weaker correlation than expected.

The trading portfolios include positions in financial instruments and commodities held either with trading intent or to hedge other elements of the trading book. Positions held with trading intent are those held for short-term resale and/or with the intent of taking advantage of actual or expected short-term price movements or to lock in arbitrage profits. These portfolios target one of the following objectives: market making, trading, proprietary trading, liquidating positions for clients or selling financial products to clients.

Non-trading portfolios include all financial instruments held to maturity or until conditions are more advantageous to invest in other investments or held strictly for liquidity management, short-term funding and asset/liability management purposes.

Governance

The Board is responsible for approving the market risk management policy framework and the Bank's market risk appetite measures and targets. The Bank's President and Chief Executive Officer, who has ultimate responsibility for market risk limits, manages the Bank's market risk based on the risk appetite targets set and approved by the Board to generate acceptable return on market risk capital. The President and Chief Executive Officer delegates risk-taking responsibilities to business unit managers reporting to him. The business units are responsible for the market risks inherent to their particular activities and must therefore actively manage such risks. The Market Risk Management Committee monitors market risk across the Bank and ensures that the magnitude and mix of risks remain within the Bank's market risk appetite targets and risk limits. This committee also ensures that the risk management environment is transparent, disciplined and controlled.

An integrated control framework is used to manage market risk, which is overseen by the Market Risk Management Committee. The Bank is continually adapting its market risk management and oversight framework.

A comprehensive policy governs global market risk management across the Bank's units and subsidiaries that are exposed to this type of risk. The policy presents the main mechanisms used for identifying and measuring the types of market risk to which the Bank is exposed, most of which are described on the previous page. It also defines the link between the Bank's market risk appetite approved by the Board and the framework implemented for setting market risk limits across all the Bank's business units that are allowed to undertake market risk. The purpose of the market risk limits is to set out tolerance thresholds for these business units or portfolios to comply with the Bank's market risk appetite targets. These are cascaded down to business units using a hierarchy of different types of limits (e.g., Value at Risk (VaR), stop loss limit) allocated by portfolio, trading unit, unit manager and officer, as well as an appropriate breach escalation process.

The following tables provide a breakdown of the Bank's Consolidated Balance Sheet into assets and liabilities by those that carry market risk and those that do not carry market risk, distinguishing between trading positions whose main risk measures are VaR and SVaR and non-trading positions that use other risk measures.

Reconciliation of Market Risk with Consolidated Balance Sheet Items

(millions of Canadian dollars)					As at October 31, 2017
		Market risk measures			
	Balance sheet	Trading[1]	Non-Trading[2]	Not subject to market risk	Non-traded risk primary risk sensitivity
Assets					
Cash and deposits with financial institutions	8,802	154	8,385	263	Interest rate[3]
Securities					
At fair value through profit or loss	47,536	46,825	711	–	Interest rate[3]
Available-for-sale	8,552	–	8,552	–	Interest rate[3] and equity[4]
Held-to-maturity	9,255	–	9,255	–	Interest rate[3]
Securities purchased under reverse repurchase agreements and securities borrowed	20,789	–	20,789	–	Interest rate[3][5]
Loans, net of allowances	128,452	5,638	122,814	–	Interest rate[3]
Customers' liability under acceptances	5,991	–	5,991	–	Interest rate[3]
Derivative financial instruments	8,423	7,508	915	–	Interest rate[6] and exchange rate
Purchased receivables	2,014	–	2,014	–	Interest rate
Defined benefit asset	56	–	56	–	Other[7]
Other	5,957	–	–	5,957	
	245,827	60,125	179,482	6,220	
Liabilities					
Deposits	156,671	5,692	150,979	–	Interest rate[3]
Acceptances	5,991	–	5,991	–	Interest rate[3]
Obligations related to securities sold short	15,363	15,363	–	–	
Obligations related to securities sold under repurchase agreements and securities loaned	21,767	–	21,767	–	Interest rate[3][5]
Derivative financial instruments	6,612	6,045	567	–	Interest rate[6] and exchange rate
Liabilities related to transferred receivables	20,098	4,452	15,646	–	Interest rate[3]
Defined benefit liability	252	–	252	–	Other[7]
Other	5,506	15	945	4,546	Interest rate[3]
Subordinated debt	9	–	9	–	Interest rate[3]
	232,269	31,567	196,156	4,546	

(1) Trading positions whose risk measures are VaR and SVaR. See the tables on the following pages that show the VaR and SVaR distributions of the trading portfolios by risk category as well as their correlation effect.
(2) Non-trading positions that use other risk measures.
(3) See the tables on the following pages that show the VaR and SVaR distributions of the trading portfolios by risk category and their correlation effect as well as the interest rate sensitivity tables.
(4) The fair value of equity securities classified as available-for-sale is presented in Notes 3 and 6 to the consolidated financial statements.
(5) These instruments are recorded at amortized cost and are subject to credit risk for capital management purposes. For transactions with maturities of more than one day, interest rate risk is included in the VaR and SVaR measures when they relate to trading activities.
(6) See Notes 17 and 18 to the consolidated financial statements.
(7) See Note 24 to the consolidated financial statements.

(millions of Canadian dollars)					As at October 31, 2016
		Market risk measures			
	Balance sheet	Trading(1)	Non-trading(2)	Not subject to market risk	Non-traded risk primary risk sensitivity
Assets					
Cash and deposits with financial institutions	8,183	181	7,580	422	Interest rate(3)
Securities					
At fair value through profit or loss	45,964	44,545	1,419	–	Interest rate(3) and other(4)
Available-for-sale	14,608	–	14,608	–	Interest rate(3) and equity(5)
Held-to-maturity	3,969	–	3,969	–	Interest rate(3)
Securities purchased under reverse repurchase agreements and securities borrowed	13,948	–	13,948	–	Interest rate(3)(6)
Loans, net of allowances	119,747	6,454	113,293	–	Interest rate(3)
Customers' liability under acceptances, net of allowances	6,431	–	6,431	–	Interest rate(3)
Derivative financial instruments	10,416	9,195	1,221	–	Interest rate(7) and exchange rate
Purchased receivables	1,858	–	1,858	–	Interest rate
Defined benefit asset	48	–	48	–	Other(8)
Other	7,034	–	–	7,034	
	232,206	60,375	164,375	7,456	
Liabilities					
Deposits(9)	142,066	4,826	137,240	–	Interest rate(3)
Acceptances	6,441	–	6,441	–	Interest rate(3)
Obligations related to securities sold short	14,207	14,207	–	–	
Obligations related to securities sold under repurchase agreements and securities loaned	22,636	–	22,636	–	Interest rate(3)(6)
Derivative financial instruments	7,725	6,818	907	–	Interest rate(7) and exchange rate
Liabilities related to transferred receivables	20,131	4,378	15,753	–	Interest rate(3)
Defined benefit liability	314	–	314	–	Other(8)
Other(9)	5,572	43	1,346	4,183	Interest rate(3)
Subordinated debt	1,012	–	1,012	–	Interest rate(3)
	220,104	30,272	185,649	4,183	

(1) Trading positions whose risk measures are VaR and SVaR. See the tables on the following pages that show the VaR and SVaR distributions of the trading portfolios by risk category as well as their correlation effect.
(2) Non-trading positions that use other risk measures.
(3) See the tables on the following pages that show the VaR and SVaR distributions of the trading portfolios by risk category and their correlation effect as well as the interest rate sensitivity tables.
(4) See the Master Asset Vehicles section in Note 6 to the consolidated financial statements.
(5) The fair value of equity securities classified as available-for-sale is presented in Notes 3 and 6 to the consolidated financial statements.
(6) These instruments are recorded at amortized cost and are subject to credit risk for capital management purposes. For transactions with maturities of more than one day, interest rate risk is included in the VaR and SVaR measures when they relate to trading activities.
(7) See Notes 17 and 18 to the consolidated financial statements.
(8) See Note 24 to the consolidated financial statements.
(9) An amount of $2,159 million representing amounts due to clients, dealers and brokers, classified in *Liabilities – Other* in this table as at October 31, 2016, is now reported in *Deposits*.

Assessing Market Risk

The Risk Management Group uses a variety of risk measures to estimate the size of potential losses under more or less severe scenarios, and using both short-term and long-term time horizons. For short-term horizons, the Bank's risk measures include VaR, SVaR, and sensitivity metrics. For long-term horizons or sudden significant market moves, including those due to a lack of market liquidity, the risk measures include stress testing across an extensive range of scenarios. VaR is a statistical measure of risk that is used to quantify market risks by product and by risk type as well as aggregate risk by portfolio, on a scale ranging from one trading unit to another, for the Bank as a whole. VaR is defined as the maximum loss at a specific confidence level over a certain horizon under normal market conditions. The VaR method has the advantage of providing a uniform measurement of financial instrument-related market risks based on a single statistical confidence level and time horizon. The Bank uses a historical price distribution to compute the probable loss levels at the 99% confidence level, using a two-year daily time series of risk factor changes. VaR is the maximum daily loss the Bank could incur, in 99 cases out of 100, in a given portfolio. In other words, the loss could exceed that amount in only one out of 100 cases.

The trading VaR is measured by assuming a holding period of one day for ongoing market risk management and a 10-day horizon for regulatory capital purposes. This assumption is used to combine the VaR of various portfolios and provides an estimate of the daily market risk incurred by the Bank. VaR is calculated on a daily basis both for major classes of financial instruments (including derivative financial instruments) and all trading portfolios of the Financial Markets segment and Corporate Treasury of the Bank.

In addition to the one-day trading VaR, the Bank calculates a trading SVaR, which is a statistical measure of risk that replicates the VaR calculation method (one-day holding period for risk management purposes and 10-day horizon for regulatory capital purposes) but uses, instead of the variable two-year history of market risk data input, 12-month historical data corresponding to a continuous period of significant financial stress that is relevant in terms of the Bank's portfolios.

VaR methodology techniques are well suited to measure risks under normal market conditions. VaR metrics are most appropriate as a risk measure for trading positions in liquid financial markets. However, there are limitations in measuring risks with this method when extreme and sudden market risk events occur, since they are likely to underestimate the Bank's market risk. VaR methodology limitations include the following:

- past changes in market risk factors may not always produce accurate predictions of the distribution and correlations of future market movements;
- a VaR with a daily time horizon does not fully capture the market risk of positions that cannot be liquidated or hedged within one day;
- the market risk factor historical database used for VaR calculation may not reflect potential losses that could occur under unusual market conditions (e.g., periods of extreme illiquidity) relative to the historical period used for VaR estimates;
- the use of a 99% VaR confidence level does not reflect the extent of potential losses beyond that percentile.

Given the limitations to VaR, for the Bank it represents only one component in its risk management oversight, which also incorporates, among other measures, stress testing, sensitivity analysis, concentration and liquidity limits and analysis.

The Bank also conducts backtesting of the VaR model. It consists of comparing the profits and losses to the statistical VaR measure. Backtesting is essential to verifying the VaR model's capacity to adequately forecast the maximum risk of market losses and thus validate, retroactively, the quality and accuracy of the results obtained using the model. If the backtesting results present material discrepancies, the VaR model could be revised in accordance with the Bank's model risk management framework.

Trading Activities

The revenues generated by trading activities are compared with VaR as a backtesting assessment of the appropriateness of this risk measure as well as the financial performance of trading activities relative to the risk undertaken.

The first table below shows the VaR distribution of trading portfolios by risk category as well as their correlation effect. The second table on the next page shows the SVaR distribution, i.e., the VaR of the Bank's current portfolios obtained following the calibration of risk factors over a 12-month stress period.

VaR of Trading Portfolios by Risk Category[(1)] *

(millions of Canadian dollars)	**Year ended October 31, 2017**			
	Low	**High**	**Average**	**Period end**
Interest rate	**(2.1)**	**(7.8)**	**(4.1)**	**(4.1)**
Foreign exchange	**(0.8)**	**(3.7)**	**(2.2)**	**(1.0)**
Equity	**(2.2)**	**(14.2)**	**(3.4)**	**(2.5)**
Commodity	**(0.4)**	**(2.0)**	**(0.8)**	**(0.7)**
Correlation effect[(2)]	**n.m.**	**n.m.**	**5.3**	**4.4**
Total trading VaR	**(3.6)**	**(11.1)**	**(5.2)**	**(3.9)**

(millions of Canadian dollars)	Year ended October 31, 2016			
	Low	High	Average	Period end
Interest rate	(2.2)	(6.0)	(3.9)	(3.6)
Foreign exchange	(2.0)	(5.3)	(3.1)	(2.8)
Equity	(2.3)	(5.6)	(3.7)	(3.0)
Commodity	(0.6)	(2.6)	(1.1)	(0.9)
Correlation effect[(2)]	n.m.	n.m.	5.8	5.3
Total trading VaR	(4.1)	(8.4)	(6.0)	(5.0)

n.m. Computation of a correlation effect for the high and low is not meaningful, as highs and lows may occur on different days and be attributable to different types of risk.

(1) Amounts are presented on a pre-tax basis and represent one-day VaR using a 99% confidence level.

(2) The total trading VaR is less than the sum of the individual risk factor VaR results due to the correlation effect.

SVaR of Trading Portfolios by Risk Category[1] *

(millions of Canadian dollars)	Year ended October 31, 2017			
	Low	High	Average	Period end
Interest rate	(4.1)	(13.4)	(8.1)	(10.6)
Foreign exchange	(1.0)	(8.6)	(2.6)	(1.7)
Equity	(2.5)	(16.3)	(4.6)	(5.3)
Commodity	(0.5)	(2.7)	(1.0)	(0.7)
Correlation effect[2]	n.m.	n.m.	9.2	10.2
Total trading SVaR	(3.9)	(13.7)	(7.1)	(8.1)

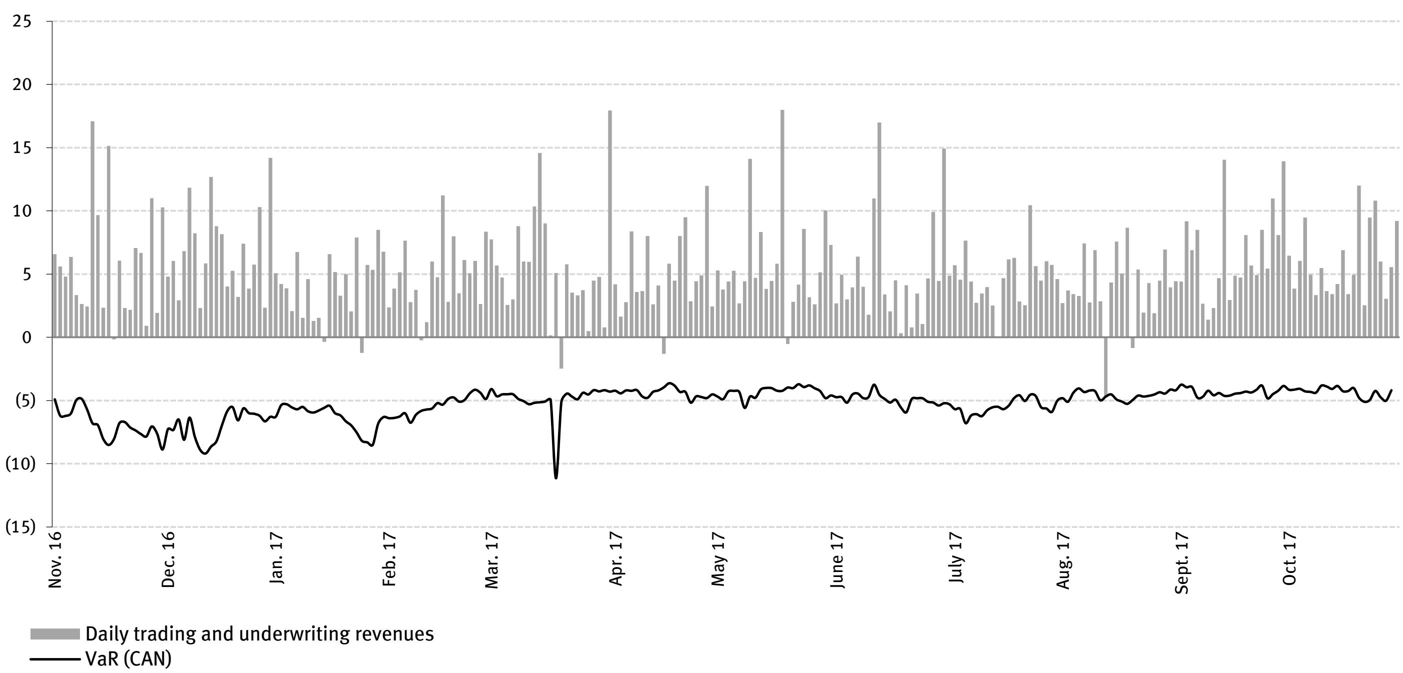
(millions of Canadian dollars)	Year ended October 31, 2016			
	Low	High	Average	Period end
Interest rate	(4.2)	(10.1)	(7.1)	(6.0)
Foreign exchange	(1.9)	(9.6)	(3.9)	(3.7)
Equity	(2.2)	(7.2)	(4.5)	(3.3)
Commodity	(0.6)	(4.0)	(1.4)	(1.0)
Correlation effect[2]	n.m.	n.m.	9.0	8.2
Total trading SVaR	(4.5)	(11.8)	(7.9)	(5.8)

n.m. Computation of a correlation effect for the high and low is not meaningful, as highs and lows may occur on different days and be attributable to different types of risk.
(1) Amounts are presented on a pre-tax basis and represent one-day SVaR using a 99% confidence level.
(2) The total trading SVaR is less than the sum of the individual risk factor SVaR results due to the correlation effect.

The average total trading VaR was $5.2 million for fiscal 2017, down slightly from $6.0 million in fiscal 2016, as higher interest rate VaR was more than offset by lower foreign exchange VaR and lower commodity VaR. The average total trading SVaR stood at $7.1 million for fiscal 2017 compared to $7.9 million the previous fiscal year. This decrease was essentially caused by lower foreign exchange SVaR.

The table below shows daily trading and underwriting revenues and VaR. Daily trading and underwriting revenues were positive on 96% of the days for the year ended October 31, 2017. Daily trading and underwriting losses in excess of $1 million were recorded on 4 days. None of these losses exceeded the VaR.

Daily Trading and Underwriting Revenues
(millions of Canadian dollars)



Stress Testing and Crisis Scenarios

Stress testing is a risk management technique that consists of estimating potential losses under abnormal market conditions and risk factor movements. Stress testing enhances transparency by exploring a range of potential low-probability events. Comprehensive stress testing scenarios include the following:

- changes in all relevant market rates;
- potential political shifts;
- market illiquidity;
- the interplay between market and credit risk.

These stress tests and sensitivity analyses simulate the results that the portfolios would generate if the extreme scenarios in question were to occur. The Bank's stress testing framework applied to all positions generating market risk currently comprises the following range of different stress test scenarios:

- interest rate: sharp parallel increases/decreases in interest rates; non-parallel movements (flattening and steepening) and increases/decreases in credit spreads;
- equity: sharp stock market crash coupled with a significant increase in volatility; increase in stock prices associated with a lesser volatility; increase in volatility of term structure coupled with a decrease in stock prices;
- commodity: significant increases/decreases in commodity prices coupled with increases/decreases in volatility; short-term and long-term increases/decreases in commodity prices;
- foreign exchange: depreciation/appreciation of the U.S. dollar and of other currencies relative to the Canadian dollar.

Controlling Risk

Outstanding VaR exposure is monitored daily in relation to established limits for each type of market risk, portfolio and business unit. The RMC reviews VaR results and other risk measure results each quarter, including any breaches of the limits set out in the policy.

The Bank also uses economic capital for market risk as an indicator for risk appetite and limits setting. This indicator measures the amount of capital that is required to absorb unexpected losses due to market risk events over a one-year horizon and with a determined confidence level. For additional information on economic capital, see page 50 in the Capital Management section of this MD&A.

Separate policies govern the pricing and valuation adjustments on financial instruments measured at fair value.

Structural Interest Rate Risk

As part of its core banking activities, such as lending and deposit taking, the Bank is exposed to interest rate risk. Interest rate risk is the potential negative impact of interest rate fluctuations on the Bank's annual net interest income and economic value of equity. Activities related to hedging, investments and term funding are also exposed to structural interest rate risk. The Bank's main exposure to interest rate risk stems from a variety of sources:

- yield curve risk, which refers to changes in the level, slope and shape of the yield curve;
- repricing risk, which arises from timing differences in the maturity and repricing of on- and off-balance-sheet items;
- options risk, either implicit (e.g., prepayment in mortgage loans) or explicit (e.g., capped mortgages and rate guarantees) in balance sheet products;
- basis risk that is caused by imperfect correlation between different yield curves.

Funds transfer pricing is a process by which the Bank's business units are charged or paid according to their use or supply of funding. Through this mechanism, all funding activities as well as the interest rate risk and liquidity risk associated with those activities are centralized in Corporate Treasury.

Active management of structural interest rate risk can significantly enhance the Bank's profitability and add to shareholder value. The Bank's goal is to maximize its economic value of equity and annual net interest income considering the Bank's risk appetite. This has to be accomplished within prescribed risk limits and is done primarily by implementing a policy framework approved by the Board, which establishes a risk tolerance threshold, monitoring structures controlled by the various committees, risk indicators, reporting procedures, delegation of responsibilities and segregation of duties. The Bank also prepares an annual funding plan that incorporates the expected growth of assets and liabilities.

Regulatory Environment

In April 2016, the BCBS issued the final version of *Interest Rate Risk in the Banking Book*, a document that addresses risk management, capital treatment, and supervision of interest rate risk in the banking book. This document replaces *Principles for the Management and Supervision of Interest Rate Risk* published by the BCBS in 2004. Two objectives are behind the document:

- ensure that banks have enough capital to cover potential banking book losses stemming from changes in interest rates;
- limit capital arbitrage between the trading book and the banking book.

Presently, the Bank is fully compliant with the 2004 principles and is progressing towards compliance with the final BCBS rules, the application of which will be mandatory starting in 2018. However, in April 2017, OSFI informed Canadian banks of its intention to postpone application until 2019.

Governance

Management of the Bank's structural interest rate risk is mandated to Corporate Treasury. In this role, the Corporate Treasury executives and personnel are responsible for the identification and day-to-day management of the risks inherent to structural interest rate risk hedging decisions and operations. They act as the primary effective challenge function with respect to the execution and monitoring of these activities. Moreover, they must ensure compliance with the structural interest rate risk policy. The Office of the President approves and endorses the structural interest rate exposure and strategies on the recommendation of Corporate Treasury. Operational supervision is ensured by two committees: the Management Forecast Committee and the Intersector Funding Committee. The former analyzes the various structural interest rate risk metrics. The latter ensures that the funds transfer pricing mechanism is adequate and captures all new products offered. Both committees report to the Office of the President – Asset/Liability Management Committee.

Stress Testing and Crisis Scenarios

Stress tests are performed on a regular basis to assess the impact of various scenarios on annual net interest income and on the economic value of equity in order to guide the management of structural interest rate risk. Crisis scenarios are performed where the yield curve level, slope and shape are shocked. Yield curve basis and volatility scenarios are also performed. All risk factors mentioned above are covered by specific scenarios and have Board-approved or GRC-approved risk limits.

Dynamic simulation is also used to project the Bank's future net interest income, future economic value and future structural interest rate risk exposure. These simulations project cash flows of assets, liabilities and off-balance-sheet products over a given investment horizon. Given their dynamic nature, they encompass assumptions pertaining to changes in volume, client term preference, prepayments of deposits and loans, and yield curve.

The following tables present the potential before-tax impact of an immediate and sustained 100-basis-point increase or decrease in interest rates on the economic value of equity and on the net interest income of the non-trading portfolios for the next 12 months, assuming no further hedging is undertaken.

Interest Rate Sensitivity – Non-Trading Activities (Before Tax) *

(millions of Canadian dollars)	As at October 31, 2017		
	Canadian dollar	**Other currencies**	**Total**
Impact on equity			
100-basis-point increase in the interest rate	**(191)**	**36**	**(155)**
100-basis-point decrease in the interest rate	**159**	**(6)**	**153**
Impact on net interest income			
100-basis-point increase in the interest rate	**3**	**44**	**47**
100-basis-point decrease in the interest rate	**(7)**	**(11)**	**(18)**

(millions of Canadian dollars)	As at October 31, 2016		
	Canadian dollar	Other currencies	Total
Impact on equity			
100-basis-point increase in the interest rate	(210)	26	(184)
100-basis-point decrease in the interest rate	169	(33)	136
Impact on net interest income			
100-basis-point increase in the interest rate	(10)	33	23
100-basis-point decrease in the interest rate	18	(37)	(19)

Investment Governance

The Bank has created available-for-sale securities and held-to-maturity securities portfolios in liquid and less liquid securities for strategic, long-term investment and liquidity management purposes. These investments carry market risk, credit risk, liquidity risk and concentration risk.

The investment governance sets out the guiding principles and general management standards that must be followed by all those who manage portfolios of available-for-sale and held-to-maturity securities included in the portfolios of the Bank and its subsidiaries. Under this investment governance, business units that are active in managing these types of portfolios must adopt internal investment policies that set, among other things, targets and limits for the allocation of assets in the portfolios concerned and internal approval mechanisms. The primary objective is to reduce concentration risk by industry, issuer, country, type of financial instrument and credit quality.

Overall limits in value and in proportion to the Bank's equity are set on the outstanding amount of liquid preferred shares, liquid equity securities excluding preferred shares, and instruments classified as illiquid securities in the available-for-sale securities portfolios. The overall exposure to common shares with respect to an individual issuer and the total outstanding amount invested in hedge funds and private equity funds, for investment banking services, are also subject to these limits. Restrictions are also set on investments defined as special. Lastly, the Bank has a specific strategic investment policy, approved by the Board, which defines strategic investments as purchases of business assets or acquisitions of significant interests in an entity for purposes of acquiring control or creating a long-term relationship.

Structural Foreign Exchange Risk

The Bank's structural foreign exchange risk arises from investments in foreign operations denominated in currencies other than the Canadian dollar. This risk, predominantly in U.S. dollars, is measured by assessing the impact of currency fluctuations on net interest income and shareholders' equity. The Bank uses financial instruments (derivative and non-derivative) to hedge some of this risk. An adverse change in foreign exchange rates can also impact the Bank's capital ratios due to the amount of RWA denominated in a foreign currency. When the Canadian dollar depreciates relative to other currencies, unrealized translation gains on the Bank's net investments in foreign operations, net of related hedges, are reported in other comprehensive income in shareholders' equity. In addition, the Canadian-dollar equivalent of U.S.-dollar-denominated RWA and regulatory capital deductions increases. The reverse is true when the Canadian dollar appreciates relative to the U.S. dollar. The structural foreign exchange risk exposure is managed to ensure that the potential impacts on the capital ratios and net income are within tolerable limits set by risk policies.

Liquidity and Funding Risk Management

Liquidity and funding risk is the risk that the Bank will be unable to honour daily cash and financial obligations without resorting to costly and untimely measures. Liquidity and funding risk arises when sources of funds become insufficient to meet scheduled payments under the Bank's commitments. Liquidity risk stems from mismatched cash flows related to assets and liabilities as well as the characteristics of certain products such as credit commitments and non-fixed-term deposits.

The Bank's primary objective as a financial institution is to manage liquidity such that it supports the Bank's business strategy and allows it to honour its commitments when they come due, even in extreme conditions. This is done primarily by implementing a policy framework approved by the Board, which establishes a risk appetite, monitoring structures controlled by various committees, risk indicators, reporting procedures, delegation of responsibilities and segregation of duties. The Bank also prepares an annual funding plan that incorporates the expected growth of assets and liabilities.

Regulatory Environment

The Bank works closely with national and international regulators to implement regulatory liquidity standards while adapting its processes and policies to reflect the Bank's liquidity risk appetite towards these new requirements.

In May 2014, OSFI issued its final *Liquidity Adequacy Requirements* (LAR) guideline and this LAR guideline is reviewed annually to reflect national and international regulatory changes. The LAR guideline is the new liquidity framework proposed by OSFI. It contains the following six chapters:

- overview;
- liquidity coverage ratio (LCR);
- net stable funding ratio (NSFR);
- net cumulative cash flow (NCCF);
- liquidity monitoring tools;
- intraday liquidity monitoring tools.

The LCR is intended to oversee banks through severe short-term stress while the NSFR is a structural ratio over a one-year horizon. The NCCF metric is defined as a monitoring tool that calculates survival period. It is based on the assumptions of a stress scenario prescribed by OSFI that aims to represent a combined systemic and bank-specific crisis.

The OSFI guideline entitled *Public Disclosure Requirements for Domestic Systemically Important Banks on Liquidity Coverage Ratio* is based on the BCBS's final LCR rules and prescribes a standardized format across the banking industry. The Canadian D-SIBs implemented the LCR disclosure requirements in January 2015.

The Bank is currently monitoring the NSFR ratio and will be compliant in time for the implementation. In June 2015, BCBS issued its final Net Stable Funding Ratio Disclosure Standards document. Designed to improve the transparency of NSFR disclosure, this document sets out a common framework for public disclosure of this ratio. On March 6, 2017, OSFI notified Canadian deposit-taking institutions of its intention to extend the implementation timeline of the NSFR to January 1, 2019.

Furthermore, on April 20, 2016, the federal government introduced a bill to implement bank recapitalization measures, and, on June 22, 2016, a law was adopted. The law amends the *Canada Deposit Insurance Corporation Act* (CDICA) to, among other things, permit the Canada Deposit Insurance Corporation (CDIC) to be appointed receiver of a D-SIB and to convert certain shares and certain eligible liabilities of a D-SIB into common shares of the concerned bank if OSFI considers that the bank has ceased, or is about to cease, to be viable. On June 16, 2017, OSFI released for comment a draft guideline entitled *Total Loss-Absorbing Capacity* (TLAC). The draft guideline requires D-SIBs to maintain a minimum capacity to absorb losses as required under the *Bank Act* (Canada) and is part of the bank recapitalization (bail-in) regime. D-SIBs will have until November 1, 2021 to comply. On June 16, 2017, the Government of Canada released for comment bank bail-in regulations. In addition, the regulations officially designate CDIC as the resolution authority for Canada's largest banks and requires D-SIBs to submit resolution plans to the CDIC. The Bank continues to monitor bail-in regime developments, as additional details on implementation, scope and timing are expected to follow through regulations.

The Bank also produces Quantitative Impact Study (QIS) reports that are submitted to the Bank for International Settlements (BIS). Using the QIS results, the BIS can follow the progress of Basel III implementation.

Governance

Corporate Treasury manages liquidity and funding needs Bank-wide. Its activities comprise:

- managing day-to-day cash flow, collateral and short-term funding;
- planning and issuing long-term funding and determining liquidity cost transfer pricing;
- participating in the development and implementation of the liquidity management framework, the Liquidity, Funding and Pledging Governance policy, the annual funding plan and the liquidity contingency plan;
- developing and implementing the LAR guidelines and the national and international regulations to which the Bank must adhere;
- monitoring, measuring and reporting on the Bank's exposure to liquidity risk, both overall and by currency;
- establishing and maintaining an adequate risk assessment process and effective controls.

The Bank's Liquidity, Funding and Pledging Governance policy requires review and approval by the RMC, based on recommendations from the GRC. The Bank has established two levels of limits. The first level of limits encompasses the Bank's overall liquidity position and is Board approved, while the second level of limits is more focused on specific elements of liquidity risk and is approved by the GRC. The Board not only approves the supervision of day-to-day risk management and governance but also backup plans in anticipation of emergency and liquidity crisis situations. If a limit has to be revised, the Risk Management Group with the support of Corporate Treasury, submits the proposed revision to the GRC. If the latter approves the request, it is presented to the Board for approval only if a level-one limit is concerned.

Liquidity risk supervision at the Bank is mainly assigned to the Liquidity and Funding Committee, composed of representatives from Corporate Treasury, the Risk Management Group, and Internal Audit. In accordance with the roles and responsibilities under their respective mandates, the members of this committee are also asked for input in developing risk management and control mechanisms and implementing policies.

Through the Liquidity and Funding Committee, Corporate Treasury regularly reports changes in liquidity, funding and pledging indicators and compliance with regulatory, Board and GRC approved limits. If control reports indicate non-compliance with the limits and, generally, deterioration of liquidity indicators, Corporate Treasury takes remedial action. According to the escalation process, problematic situations are reported to the management of the Finance and Treasury unit and of the Risk Management Group, as well as to the GRC and to the RMC. An executive report on the Bank's liquidity and funding risk management, which describes the Bank's liquidity position and informs the Board of non-compliance with the limits and other rules observed during the reference period as well as remedial action taken, is submitted quarterly to the RMC.

Although the day-to-day and strategic management of risks associated with liquidity, funding and pledging activities and the monitoring of compliance with the resulting policy is assumed by Corporate Treasury, the Risk Management Group is responsible for ensuring that an appropriate risk management framework is in place and that risk appetite and policy are adhered to. This provides an independent oversight and effective challenge for the liquidity, funding and pledging decisions, strategy and exposure.

Liquidity Management

The Bank performs liquidity management, funding and pledging operations not only from its head office and regional offices in Canada, but also through certain foreign centres. Although the volume of such operations abroad represents a sizable portion of global liquidity management, the Bank's liquidity management is centralized. By organizing liquidity, funding and pledging activities within Corporate Treasury, the Bank can better coordinate enterprise-wide funding and risk monitoring activities. All internal funding transactions between Bank entities are controlled by Corporate Treasury.

This centralized structure streamlines the allocation and control of liquidity management, funding and pledging limits. Nonetheless, the Liquidity, Funding and Pledging Governance policy contains special provisions for the financial centres that are most active in terms of institutional funding and sets limits and monitoring thresholds for secured and unsecured short-term funding, both in absolute value and materiality.

The Bank's funds transfer pricing system prices liquidity by allocating the cost or income to the various business segments. Liquidity costs are allocated to liquidity-intensive activities, mainly long-term loans, and commitments to extend credit and less liquid securities as well as strategic investments. The liquidity compensation is credited to the suppliers of funds, primarily funding in the form of stable deposits from the Bank's distribution network.

Short-term day-to-day funding decisions are based on a daily cumulative net cash position, which is controlled using liquidity ratio limits. Among these ratios and metrics, the Bank pays particular attention to the funds obtained on the wholesale market and to cumulative cash flows over various time horizons.

Moreover, the Bank's collateral pledging activities are monitored in relation to the different limits set by the Bank and are subject to monthly stress tests using simulations. In particular, the Bank uses various scenarios to estimate the potential amounts of additional collateral that would be required in the event of a downgrade to the Bank's credit rating.

Liquidity risk can be assessed in many different ways using different liquidity indicators. One of the key monitoring tools of liquidity risk is the Bank's survival period based on contractual maturity and behavioural assumptions applied to balance sheet items as well as off-balance-sheet commitments.

Stress Testing and Crisis Scenarios

Using various simulations, survival period measures the number of months it would take to completely utilize the Bank's liquid assets if the Bank were to lose deposits prematurely or if funds from wholesale markets were not renewed at maturity. It is measured monthly using three scenarios. These scenarios were developed to assess sensitivity to a Bank-specific or systemic crisis. Deposit loss simulations are carried out based on their degree of stability, while the value of certain assets is encumbered by an amount reflecting their readiness for liquidation in a crisis. These scenarios are reviewed and submitted to the Board once a year for approval.

The Bank considers, among its simulations, a severe liquidity crisis scenario, where the Bank experiences difficulties in a turbulent financial market. This scenario combines a significant limitation in the access to its funding channels and a significant decrease of its assets' marketability.

The stress test results provide the Bank with its potential liquidity requirements under each scenario and, given the liquidity risk appetite adopted, allow the Bank to manage unwanted risk. Each scenario has its own set of underlying assumptions that cover a wide range of aspects, including haircuts, encumbrance on liquid assets, loss of deposits, collateral usage and assets pledged. It also includes an estimate of the funding needs of contingent liabilities. Contingent liquidity risk refers to the possibility that the Bank needs a significant amount of funding due to events such as an unexpected increase in drawdowns on committed lines, withdrawal of deposits, increase in collateral requirements or other triggers embedded in legal documentation.

The following assumptions underlie the scenarios:

- partial non-renewal at maturity for most of the Bank's unsecured wholesale funding;
- non-renewal of a portion of the retail and commercial deposits;
- run-offs on demand deposits;
- partial renewal of loans;
- drawdowns on committed lines;
- additional collateral required for the Bank in the event of a credit rating downgrade;
- limited access to the foreign exchange market.

The results of these stress tests are reviewed on a monthly basis by the Liquidity and Funding Committee while the Board reviews the results each quarter.

Lastly, the Bank maintains an up-to-date, comprehensive financial contingency and crisis recovery plan that describes the measures to be taken in the event of a critical liquidity situation. This plan is reviewed and approved annually by the Board as part of business continuity and recovery planning. See the Regulatory Compliance Risk Management section for additional information.

Liquidity Risk Appetite

The Bank monitors and manages its risk appetite through liquidity limits, ratios and stress tests. The Bank's liquidity risk appetite is based on the following principles:

- ensure the Bank has a sufficient amount of unencumbered liquid assets to cover its financial requirements, in both normal and stressed conditions;
- ensure the Bank keeps a liquidity buffer above the minimum regulatory requirement;
- ensure the Bank maintains diversified and stable sources of funding.

Liquid Assets

To protect depositors and creditors from unexpected crisis situations, the Bank holds a portfolio of unencumbered liquid assets that can be readily liquidated to meet financial obligations. This portfolio consists of highly liquid securities, most of which are issued or guaranteed by governments, and of cash loans maturing in less than 30 days. The majority of unencumbered liquid assets are held in Canadian or U.S. dollars. Moreover, all assets that can be quickly monetized are considered liquid assets. The Bank's liquidity reserves do not factor in the availability of the central bank's emergency liquidity facilities. The following tables provide information on the Bank's encumbered and unencumbered assets.

Liquid Asset Portfolio

As at October 31
(millions of Canadian dollars)

	2017					2016
	Bank-owned liquid assets(1)	Liquid assets received(2)	Total liquid assets	Encumbered liquid assets(3)	Unencumbered liquid assets	Unencumbered liquid assets
Cash and deposits with financial institutions	8,802	–	8,802	1,957	6,845	6,201
Securities						
Issued or guaranteed by the Canadian government, U.S. Treasury, other U.S. agencies and other foreign governments	21,003	30,422	51,425	32,104	19,321	15,356
Issued or guaranteed by Canadian provincial and municipal governments	12,446	13,056	25,502	20,797	4,705	7,553
Other debt securities	4,845	1,816	6,661	3,176	3,485	3,488
Equity securities	27,049	46,915	73,964	54,301	19,663	9,349
Loans						
Securities backed by insured residential mortgages	9,505	–	9,505	4,113	5,392	4,236
As at October 31, 2017	83,650	92,209	175,859	116,448	59,411	
As at October 31, 2016	80,541	71,292	151,833	105,650		46,183

As at October 31
(millions of Canadian dollars)

	2017	2016
Unencumbered liquid assets by entity		
National Bank (parent)	27,769	25,951
Domestic subsidiaries	9,871	8,185
Foreign subsidiaries and branches	21,771	12,047
	59,411	46,183

As at October 31
(millions of Canadian dollars)

	2017	2016
Unencumbered liquid assets by currency		
Canadian dollar	31,146	28,629
U.S. dollar	21,260	13,829
Other currencies	7,005	3,725
	59,411	46,183

Liquid Asset Portfolio – Average(4)

Year ended October 31
(millions of Canadian dollars)

	2017					2016
	Bank-owned liquid assets(1)	Liquid assets received(2)	Total liquid assets	Encumbered liquid assets(3)	Unencumbered liquid assets	Unencumbered liquid assets
Cash and deposits with financial institutions	10,838	–	10,838	1,955	8,883	6,057
Securities						
Issued or guaranteed by the Canadian government, U.S. Treasury, other U.S. agencies and other foreign governments	21,184	22,335	43,519	28,244	15,275	12,842
Issued or guaranteed by Canadian provincial and municipal governments	14,583	13,558	28,141	22,264	5,877	7,462
Other debt securities	4,778	1,386	6,164	2,478	3,686	3,065
Equity securities	25,259	48,728	73,987	59,082	14,905	11,711
Loans						
Securities backed by insured residential mortgages	10,315	–	10,315	3,511	6,804	3,125
As at October 31, 2017	86,957	86,007	172,964	117,534	55,430	
As at October 31, 2016	72,709	68,216	140,925	96,663		44,262

(1) Bank-owned liquid assets include assets for which there are no legal or geographic restrictions.
(2) Securities received as collateral with respect to securities financing and derivative transactions and securities purchased under reverse repurchase agreements and securities borrowed.
(3) In the normal course of its funding activities, the Bank pledges assets as collateral in accordance with standard terms. Encumbered liquid assets include assets used to cover short sales, obligations related to securities sold under repurchase agreements and securities loaned, guarantees related to security-backed loans and borrowings, collateral related to derivative financial instrument transactions, asset-backed securities and liquid assets legally restricted from transfers.
(4) The average is based on the sum of the end-of-period balances of the 12 months of the year divided by 12.

Summary of Encumbered and Unencumbered Assets

(millions of Canadian dollars)						As at October 31, 2017
		Encumbered assets[1]		Unencumbered assets	Total	Encumbered assets as % of total assets
	Pledged as collateral	Other[2]	Available as collateral	Other[3]		
Cash and deposits with financial institutions	76	1,881	6,845	–	8,802	0.8
Securities	23,595	–	41,748	–	65,343	9.6
Securities purchased under reverse repurchase agreements and securities borrowed	–	15,363	5,426	–	20,789	6.2
Loans, net of allowances	40,415	–	5,392	82,645	128,452	16.5
Customers' liability under acceptances	–	–	–	5,991	5,991	–
Derivative financial instruments	–	–	–	8,423	8,423	–
Purchased receivables	–	–	–	2,014	2,014	–
Investments in associates and joint ventures	–	–	–	631	631	–
Premises and equipment	–	–	–	558	558	–
Goodwill	–	–	–	1,409	1,409	–
Intangible assets	–	–	–	1,239	1,239	–
Other assets	–	–	–	2,176	2,176	–
	64,086	17,244	59,411	105,086	245,827	33.1

(millions of Canadian dollars)						As at October 31, 2016
		Encumbered assets[1]		Unencumbered assets	Total	Encumbered assets as % of total assets
	Pledged as collateral	Other[2]	Available as collateral	Other[3]		
Cash and deposits with financial institutions	94	1,888	6,201	–	8,183	0.9
Securities	28,176	–	35,746	619	64,541	12.1
Securities purchased under reverse repurchase agreements and securities borrowed	–	13,948	–	–	13,948	6.0
Loans, net of allowances	36,151	–	4,236	79,360	119,747	15.6
Customers' liability under acceptances, net of allowances	–	–	–	6,431	6,431	–
Derivative financial instruments	–	–	–	10,416	10,416	–
Purchased receivables	–	–	–	1,858	1,858	–
Investments in associates and joint ventures	–	–	–	645	645	–
Premises and equipment	–	–	–	1,338	1,338	–
Goodwill	–	–	–	1,412	1,412	–
Intangible assets	–	–	–	1,140	1,140	–
Other assets[4]	–	–	–	2,547	2,547	–
	64,421	15,836	46,183	105,766	232,206	34.6

(1) In the normal course of its funding activities, the Bank pledges assets as collateral in accordance with standard terms. Encumbered assets include assets used to cover short sales, obligations related to securities sold under repurchase agreements and securities loaned, guarantees related to security-backed loans and borrowings, collateral related to derivative financial instrument transactions, asset-backed securities, residential mortgage loans securitized and transferred under the Canada Mortgage Bond program, assets held in consolidated trusts supporting the Bank's funding activities and mortgage loans transferred under covered bond programs.

(2) Other encumbered assets include assets for which there are restrictions and therefore cannot be used for collateral or funding purposes as well as assets used to cover short sales.

(3) Other unencumbered assets are assets that cannot be used for collateral or funding purposes in their current form. This category includes assets that are potentially eligible as funding program collateral (for example, Canada Mortgage and Housing Corporation insured mortgages that can be securitized into mortgage-backed securities under the *National Housing Act* (Canada)).

(4) The *Due from clients, dealers and brokers* amount of $843 million presented separately on the Consolidated Balance Sheet as at October 31, 2016 is now reported in *Other assets*.

Liquidity Coverage Ratio (LCR)

The LCR was introduced to ensure banks maintain sufficient liquidity to withstand periods of severe short-term stress. OSFI has been requiring Canadian banks to maintain a minimum LCR of 100%. An LCR above 100% ensures that banks are holding sufficient high-quality liquid assets (HQLA) to cover net cash outflows given a severe, 30-day liquidity crisis. The assumptions underlying the LCR scenario were established by the BCBS and OSFI.

The following table provides average LCR data calculated using the daily figures in the quarter. For the quarter ended October 31, 2017, the Bank's average LCR was 132%, well above the 100% regulatory requirement and demonstrating the Bank's solid liquidity position.

LCR Disclosure Requirements(1)

(millions of Canadian dollars)			For the quarter ended
	October 31, 2017		July 31, 2017
	Total unweighted value(2) **(average)**	**Total weighted value**(3) **(average)**	Total weighted value(3) (average)
High-quality liquid assets (HQLA)			
1 Total HQLA	**n.a.**	**44,413**	44,293
Cash outflows			
2 Retail deposits and deposits from small business customers, of which:	**38,431**	**2,535**	2,529
3 Stable deposits	**18,691**	**561**	552
4 Less stable deposits	**19,740**	**1,974**	1,977
5 Unsecured wholesale funding, of which:	**58,086**	**30,193**	30,791
6 Operational deposits (all counterparties)	**12,111**	**2,913**	2,674
7 Non-operational deposits (all counterparties)	**38,695**	**20,000**	21,171
8 Unsecured debt	**7,280**	**7,280**	6,946
9 Secured wholesale funding	**n.a.**	**15,442**	13,708
10 Additional requirements, of which:	**32,958**	**8,406**	8,837
11 Outflows related to derivative exposures and other collateral requirements	**7,030**	**3,747**	4,203
12 Outflows related to loss of funding on secured debt securities	**1,139**	**1,139**	932
13 Backstop liquidity and credit enhancement facilities and commitments to extend credit	**24,789**	**3,520**	3,702
14 Other contractual commitments to extend credit	**1,486**	**406**	272
15 Other contingent commitments to extend credit	**79,015**	**1,081**	963
16 Total cash outflows	**n.a.**	**58,063**	57,100
Cash inflows			
17 Secured lending (e.g., reverse repos)	**67,687**	**14,446**	13,552
18 Inflows from fully performing exposures	**7,749**	**4,414**	4,416
19 Other cash inflows	**5,635**	**5,635**	6,142
20 Total cash inflows	**81,071**	**24,495**	24,110
		Total adjusted value(4)	Total adjusted value(4)
21 Total HQLA	**n.a.**	**44,413**	44,293
22 Total net cash outflows	**n.a.**	**33,568**	32,990
23 Liquidity coverage ratio (%)(5)	**n.a.**	**132 %**	134 %

n.a. Not applicable
(1) OSFI prescribed a table format in order to standardize disclosure throughout the banking industry.
(2) Unweighted values are calculated as outstanding balances maturing or callable within 30 days (for inflows and outflows).
(3) Weighted values are calculated after the application of respective haircuts (for HQLA) or inflow and outflow rates.
(4) Total adjusted values are calculated after the application of both haircuts and inflow and outflow rates and any applicable caps.
(5) The data in this table has been calculated using averages of the daily figures in the quarter.

Level 1 liquid assets represent 89% of the Bank's HQLA, which includes cash, central bank deposits, and bonds issued or guaranteed by the Canadian government and Canadian provincial governments.

Cash outflows arise from the application of OSFI-prescribed assumptions on deposits, debt, secured funding, commitments and additional collateral requirements. The cash outflows are partly offset by cash inflows, which come mainly from secured loans and performing loans. The Bank expects some quarter-over-quarter variation between reported LCRs, and such variation may not be indicative of a trend. The variation between the quarter ended October 31, 2017 and the previous quarter was a result of normal business activities. The Bank's liquid asset buffer is well in excess of its total net cash outflows.

The LCR assumptions differ from the assumptions used for the liquidity disclosures presented in the tables on the previous pages or those used for internal liquidity management rules. While the liquidity disclosure framework was prescribed by the EDTF, the Bank's internal liquidity metrics use assumptions that are calibrated according to its business model and experience.

Intraday Liquidity

The Bank manages its intraday liquidity in such a way that the amount of available liquidity exceeds its maximum intraday liquidity requirements. The Bank monitors its intraday liquidity on an hourly basis and the evolution is presented monthly to the Liquidity and Funding Committee.

Funding Risk

Funding risk is defined as the risk to the Bank's ongoing ability to raise sufficient funds to finance actual or proposed business activities on an unsecured or secured basis at an acceptable price. The Bank maintains a good balance of its funding through appropriate diversification of its unsecured funding vehicles, securitization programs and secured funding. The Bank also diversifies its funding by currency, geography and maturity. The funding management priority is to achieve the optimal balance between the deposit-liability of the Bank's retail network, secured funding and unsecured funding. This brings optimal stability to the funding and reduces vulnerability to unpredictable events.

The Bank's retail network deposits are its primary and most stable source of funding. Stable funds are used to fund Bank activities, whereas funds from the wholesale markets are used to fund securities. In order to maintain the ideal funding profile, the Bank seeks to limit short-term wholesale funding and is careful to diversify its funding sources. The Bank seeks to diversify its funding sources by geographic location, currency, instrument, maturity and depositor. In addition, the Bank is actively involved in securitization programs (residential mortgages and credit card receivables) that diversify its access to long-term funding.

Funding and liquidity levels remained sound and robust over the year and the Bank does not foresee any event, commitment or demand that might have a significant impact on its funding and liquidity risk position. For additional information, see the table entitled Residual Contractual Maturities of Balance Sheet Items and Off-Balance-Sheet Commitments in Note 30 to the consolidated financial statements.

Credit Ratings

The credit ratings assigned by ratings agencies represent their assessment of the Bank's credit quality based on qualitative and quantitative information provided to them. Credit ratings may be revised at any time based on macro-economic factors or on the current and projected financial condition of the Bank. Credit ratings are one of the main factors that influence the Bank's ability to access financial markets at a reasonable cost. A downgrade in the Bank's credit ratings could adversely affect the cost, size and term of future funding. The following table presents the Bank's credit ratings according to four rating agencies as at October 31, 2017. Funding and liquidity levels remained sound and robust, and the Bank continues to enjoy excellent access to the market for its funding needs.

	Moody's[(1)]	S&P	DBRS	Fitch
Short-term senior debt	P-1	A-1	R-1(mid)	F1
Canadian commercial paper		A-1(mid)		
Long-term deposits			AA(low)	
Long-term senior debt	A1	A	AA(low)	A+
Subordinated debt	Baa2	BBB+	A(high)	A
Preferred shares	Ba1(hyb)	P-2(low)	Pfd-2	BBB-
NVCC preferred shares	Ba1(hyb)	P-3(high)	Pfd-2(low)	
Rating outlook	Negative[(2)]	Stable	Negative[(3)]	Stable

(1) On May 10, 2017, Moody's credit rating agency lowered the credit ratings for long-term debt of all Canadian D-SIBs by one notch. The credit ratings for the Bank's long-term senior debt therefore moved to A1 from Aa3. The credit rating for short-term senior debt remained stable at P-1.

(2) Credit rating agency Moody's maintained the "negative" outlook for all Canadian D-SIBs due to the pending *Regulations to Implement the Bank Recapitalization (Bail-in) Regime*.

(3) Credit rating agency DBRS maintained the "negative" outlook for many Canadian D-SIBs due to the pending *Regulations to Implement the Bank Recapitalization (Bail-in) Regime*. The "negative" outlook applies to long-term deposits, long-term senior debt and non-NVCC subordinated debt.

Guarantees

As part of a comprehensive liquidity management framework, the Bank regularly reviews its contracts that stipulate that additional collateral could be required in the event of a downgrade of the Bank's credit rating. The Bank's liquidity position management already incorporates additional collateral requirements in the event of a one-notch to three-notch downgrade. The table below presents the additional collateral requirements in the event of a one-notch or three-notch credit rating downgrade.

(millions of Canadian dollars)	As at October 31, 2017	
	One-notch downgrade	Three-notch downgrade
Derivatives[1]	1	15

(1) Contractual requirements related to agreements known as Credit Support Annexes.

Funding Strategy

The key objectives of the funding strategy are to:

- support the organic growth of the Bank through prudent liquidity and funding management to withstand severe stresses;
- fund core banking activities with deposits and securitizations;
- limit short-term wholesale funding.

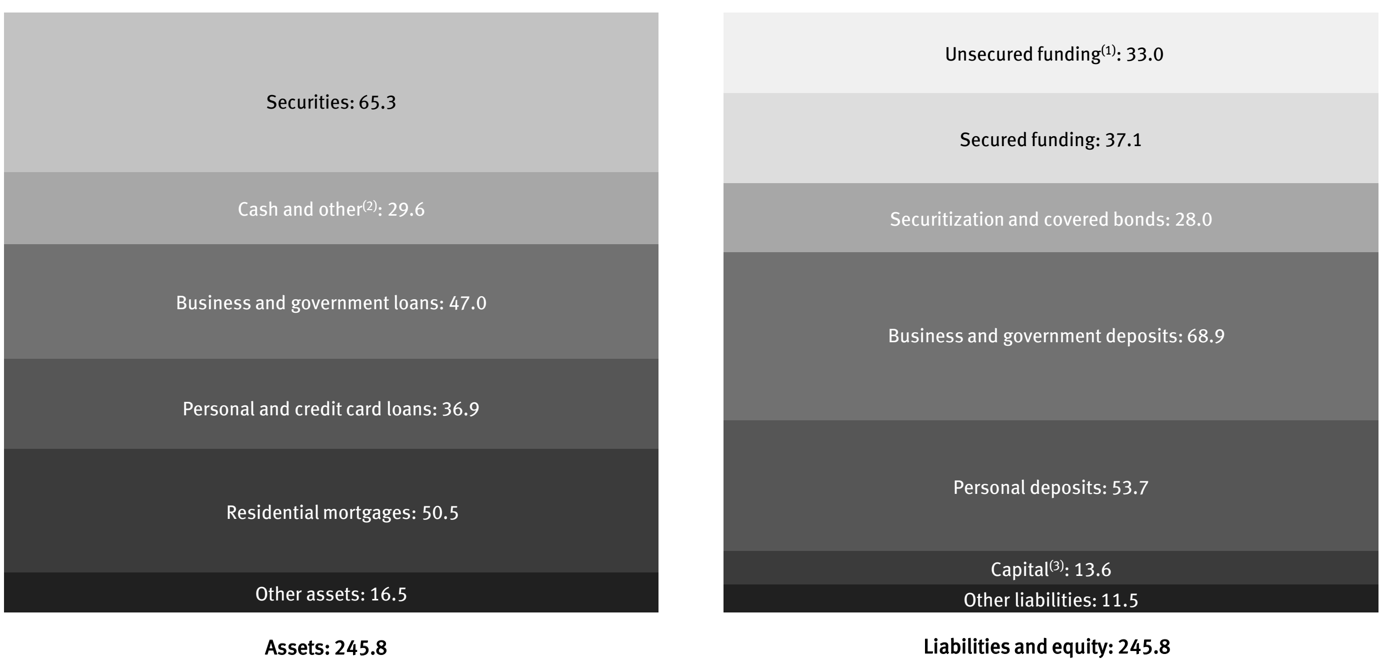
The Bank actively monitors and controls liquidity risk exposures and funding needs within and across entities, business segments and currencies. The process involves evaluating the liquidity position of individual business segments in addition to that of the Bank as a whole as well as the liquidity risk from raising unsecured and secured funding in foreign currencies. The funding strategy is executed through the funding plan.

The Bank's funding framework consists of the following:

- maintaining a diversified deposit strategy;
- maintaining active access to wholesale funding markets and ensuring diversification by depositor, funding vehicle type, geographic location, currency, and tenor of funding in the secured and unsecured markets;
- monitoring and controlling liquidity risk exposure and funding needs across all the Bank's entities, business segments and currencies using a well-developed funds transfer pricing system that includes a liquidity premium and using effective liquidity monitoring tools;
- having funding centres in the Montreal, Toronto, New York and London offices;
- investing in infrastructure to ensure quality and timeliness in data transmission;
- integrating the regulatory framework in day-to-day liquidity management and the long-term funding plan.

The Bank's balance sheet is diversified and is supported by a funding strategy. The core banking activities are funded entirely through personal and commercial deposits and through securitization programs. In addition to core deposits, the Bank also receives non-marketable deposits from governments and corporations. Wholesale funding is invested in cash and securities. The chart below shows the Bank's funding structure as at October 31, 2017.

Funding Structure
As at October 31, 2017
(billions of Canadian dollars)



(1) This category comprises term funding products, marketable or non-marketable.
(2) This category comprises securities purchased under reverse repurchase agreements and securities borrowed.
(3) This category comprises subordinated debt and equity.

Diversified Funding Sources

The purpose of diversification by source, geographic location, currency, instrument, maturity and depositor is to mitigate liquidity and funding risk by ensuring that the Bank has in place alternative sources of funds that strengthen its capacity to withstand a variety of severe yet plausible institution-specific and market-wide shocks. To meet this objective, the Bank:

- takes funding diversification into account in the business planning process;
- maintains a variety of funding programs to access different markets;
- sets limits on funding concentration;
- maintains strong relationships with fund providers;
- is active in various funding markets of all tenors;
- identifies and monitors the main factors that affect the ability to raise funds.

The Bank is active in the following funding programs:

- Canadian dollar Senior Unsecured Debt;
- U.S. dollar Senior Unsecured Debt;
- Canadian Medium Term Note Shelf;
- U.S. dollar Commercial Paper programs;
- U.S. dollar Certificates of Deposit;
- Euro Medium Term Note program;
- Canada Mortgage and Housing Corporation securitization programs;
- Canadian Credit Card Trust II;
- Legislative Covered Bond program.

The table below presents the residual contractual maturities of the Bank's wholesale funding. The information has been presented in accordance with the categories recommended by the EDTF for comparison purposes with other banks.

Residual Contractual Maturities of Wholesale Funding(1)

(millions of Canadian dollars)								As at October 31, 2017
	1 month or less	Over 1 month to 3 months	Over 3 months to 6 months	Over 6 months to 12 months	Subtotal 1 year or less	Over 1 year to 2 years	Over 2 years	Total
Deposits from banks(2)	706	6	10	–	722	–	–	722
Certificates of deposit and commercial paper(3)	1,242	2,499	3,685	1,571	8,997	626	–	9,623
Asset-backed commercial paper	–	–	–	–	–	–	–	–
Senior unsecured medium-term notes(4)	250	928	26	1,667	2,871	2,998	5,718	11,587
Senior unsecured structured notes	–	–	–	13	13	330	4,428	4,771
Covered bonds and asset-backed securities								
Mortgage securitization	–	1,873	448	1,081	3,402	3,486	13,210	20,098
Covered bonds	–	–	967	–	967	1,492	4,551	7,010
Securitization of credit card receivables	–	–	–	–	–	36	873	909
Subordinated liabilities(5)	–	–	–	–	–	–	9	9
Other(6)	6,296	3	10	–	6,309	–	–	6,309
	8,494	5,309	5,146	4,332	23,281	8,968	28,789	61,038
Secured funding	–	1,873	1,415	1,081	4,369	5,014	18,634	28,017
Unsecured funding	8,494	3,436	3,731	3,251	18,912	3,954	10,155	33,021
	8,494	5,309	5,146	4,332	23,281	8,968	28,789	61,038
As at October 31, 2016	6,207	3,880	4,854	5,850	20,791	7,250	29,549	57,590

(1) Bankers' acceptances are not included in this table.
(2) Deposits from banks include all non-negotiable term deposits from banks.
(3) Includes bearer deposit notes.
(4) Certificates of deposit denominated in euros are included in senior unsecured medium-term notes.
(5) Subordinated debt is presented in this table but the Bank does not consider it as part of its wholesale funding.
(6) The *Other* item includes non-negotiable term deposits from non-bank financial institutions such as broker-dealers, pension funds and trust companies.

Operational Risk Management

Operational risk is the risk of loss resulting from an inadequacy or a failure ascribable to people, processes, technology or external events. Operational risk exists for every Bank activity. Theft, fraud, cyber attacks, unauthorized transactions, system errors, human error, amendments to or misinterpretation of laws and regulations, litigation or disputes with clients or property damage are just a few examples of events likely to cause financial loss, harm the Bank's reputation or lead to punitive damages or regulatory penalties or sanctions.

Although operational risk cannot be eliminated entirely, it can be managed in a thorough and transparent manner to keep it at an acceptable level. The Bank's operational risk management framework is built on the concept of three lines of defence and provides a clear allocation of responsibilities to all levels of the organization, as mentioned below.

Operational Risk Management Framework

By identifying, assessing and monitoring operational risk, business units and corporate units can:

- recognize and understand the inherent and residual risks to which their activities and operations are exposed;
- identify measures for keeping such risks at an acceptable level;
- manage the risks proactively and continuously.

The main tools developed for the purposes of this framework are described below.

Collection and Analysis of Data on Operational Losses Incurred by the Bank

The Operational Risk Unit applies a process, across the Bank and its subsidiaries, for collecting and compiling data on internal operational losses. This data is entered into a centralized database and includes the amount of each loss, the type of risk involved, a description of the event that caused the loss, and the date of the loss, making it possible to better understand the fundamental causes of this type of loss and develop mitigation strategies. During fiscal years 2017 and 2016, there were no material losses resulting from an operational risk event.

Collection and Analysis of Data on External Operational Events Observed in the Financial Industry

The Bank collects and analyzes information reported in the media on significant operational events experienced by other financial institutions in order to assess the effectiveness of its own operational risk management practices and reinforce them, if necessary.

Operational Risk Self-Assessment

The operational risk self-assessment program gives each business unit and corporate unit the means to proactively identify and assess new or major operational risks to which they are exposed, evaluate the effectiveness of mitigating controls, and develop action plans to keep such risks at acceptable levels.

Key Risk Indicators

The business units and corporate units define key indicators associated with their main operational risks. The key indicators are used to monitor operational risk profiles and are related to critical thresholds that, once reached, result in action by management. Using key risk indicators, the business units and corporate units can track risks and proactively detect any adverse change in risk exposure.

Specialized Risk Assessment Programs

Certain specialized groups have implemented programs with their own risk-specific policies and procedures as well as oversight mechanisms to ensure they are respected. Such specialized programs exist for:

- management of financial reporting risk;
- management of technological and information security risks;
- management of business continuity;
- management of risks related to third parties;
- fraud risk management;
- model risk management;
- review and approval of new products and activities;
- information confidentiality.

Operational Risk Reports and Disclosures

The Operational Risk Unit regularly reports to the Operational Risk Management Committee, to the GRC, and to the RMC on the status of operational risk across the Bank, on the measures taken with respect to the risks, and on the significant exposures to losses and emerging risks in order to ensure management accountability and attention is maintained over current and emerging issues. This reporting enhances the transparency and proactive management of major operational risk factors.

Insurance Program

In order to protect itself against any material losses related to its exposure to unforeseeable operational risks, the Bank also has adequate insurance, the nature and amount of which meet its coverage requirements.

Regulatory Compliance Risk Management

Regulatory compliance risk is the risk of the Bank or its employees failing to comply with the regulatory requirements in effect where the Bank does business, both in Canada and internationally. Regulatory risk is present in all of the daily operations of each Bank segment. A situation of regulatory non-compliance can adversely affect the Bank's reputation and result in penalties, fines and sanctions or increased oversight by regulators.

The Bank operates in a highly regulated industry. The diversity of its activities and its geographical reach in Canada and abroad add to this complexity, since its operations are overseen by various regulatory bodies and self-regulatory organizations.

Organizational Structure of Compliance
The Senior Vice-President and Chief Compliance Officer acts as the Chief Anti-Money Laundering Officer and oversees the compliance program and the anti-money laundering and anti-terrorism financing (AML/ATF) program for all the Bank's segments.

Regulatory Compliance Framework
To ensure sound management of regulatory compliance, the Bank favours proactive approaches, incorporates regulatory requirements into its day-to-day operations, and communicates regularly with its employees to remind them of the importance of complying with regulations.

Regulatory risk management ensures that events stemming from regulatory non-compliance that could have an impact on the Bank's activities and reputation are proactively identified and understood and that mitigating strategies are implemented. It also provides reasonable assurance that the Bank is in compliance, in all material respects, with the regulatory requirements in effect where it does business, both in Canada and internationally.

The implementation of a regulatory compliance risk management framework across the Bank is entrusted to the Compliance Service, which has the following mandate:

- make sure that policies and procedures that ensure compliance with the regulations in effect in all territories where the Bank and its subsidiaries operate, including regulations related to AML/ATF activities, are in place and operational;
- develop compliance training and information programs for employees of the Bank and of its subsidiaries and foreign centres;
- exercise independent oversight of the compliance of the Bank, its subsidiaries, and its foreign centres with policies and procedures;
- report relevant compliance and AML/ATF matters to the Bank's Board and inform it of any changes in the effectiveness of the Bank's risk management framework.

The Bank holds itself to high regulatory compliance risk management standards in order to earn the trust of its clients, its shareholders, the market and the general public.

Described below are the main regulatory developments that have been monitored over the past year.

Recovery and Resolution Planning
As part of the regulatory measures used to manage systemic risks, D-SIBs are required to have in place recovery and resolution plans. A recovery plan is essentially a road map that guides the recovery of a Bank in the event of severe financial stress; conversely, a resolution plan guides its orderly wind-down in the event of failure when recovery is no longer an option. The Bank develops and periodically updates its recovery and resolution plans to prepare for these high-risk, but low-probability events. These plans are presented to its domestic regulatory authorities. The Bank also works on documenting a resolution plan with Canada Deposit Insurance Corporation (CDIC) that would ensure orderly winding down of the Bank's operations.

Liquidity Reforms
To promote a more resilient banking sector, more stringent international rules on liquidity were introduced by the BCBS through Basel III and implemented at a national level. In Canada, the liquidity rules began phasing in during 2015. For additional information, see the Liquidity and Funding Risk Management section of this MD&A.

Increased Regulatory Oversight for D-SIBs
Since six major Canadian banks were designated as D-SIBs in March 2013, regulatory oversight has increased. The regulatory agencies are paying close attention to capital ratio determination approaches, guaranteed mortgage lending, risk data aggregation and risk reporting (RDARR), stress test scenarios, the implementation of AML/ATF programs, recovery and resolution planning (living will) and the implementation of effective anti-cyberterrorism measures. The Bank is making every effort to meet the regulatory requirements and is incorporating these initiatives into its day-to-day business management.

Over-The-Counter (OTC) Derivative Financial Instrument Reforms
The Canadian Securities Administrators (CSA) and OSFI are piloting the implementation of the regulatory framework stemming from the G20 commitments related to over-the-counter derivatives markets. The main components of the regulatory reform are:

- reporting of derivatives data;
- clearing of certain transactions through central counterparties;
- capital and margin requirements for transactions that are exempted from mandatory clearing;
- trading of derivatives on electronic platforms, registration of market participants and protection of customer positions and collateral.

This reform is being implemented gradually, and the Bank is closely monitoring the implementation of these regulatory initiatives in Canada, the United States and Europe in order to ensure that the necessary measures are adopted to achieve compliance with the new requirements applicable to its activities on over-the-counter markets.

Anti-Money Laundering and Anti-Terrorism Financing (AML/ATF)
In June 2017, amendments to the *Proceeds of Crime (Money Laundering) and Terrorist Financing Regulations* came into force. They provide a regulatory framework for governing the treatment of politically exposed domestic persons and provide additional components to be considered in risk assessments. The transition period for implementing the new client identity verification methods has been extended until January 23, 2018.

Common Reporting Standard (CRS)
The Standard for Automatic Exchange of Financial Account Information, known as the Common Reporting Standard (CRS), was developed by the Organization for Economic Co-operation and Development (OECD) at the request of the G8 and G20 in order to fight tax evasion. About 100 jurisdictions, including Canada, have confirmed their membership.

The CRS came into effect in Canada on July 1, 2017. It requires financial institutions, including the Bank, to collect and disclose, to the Canada Revenue Agency (CRA), certain information about mandatorily reportable accounts whose holders are tax residents of a jurisdiction other than Canada. The information is sent to the CRA via an annual reporting process and, as of 2018, the information will be exchanged with the tax authorities of other jurisdictions participating in the CRS. Information is exchanged reciprocally, so similar information about accounts held outside Canada by tax residents of Canada will be provided to the CRA.

Qualified Intermediary Agreement
The Qualified Intermediary Agreement (QIA) is an agreement concerning withholdings on certain U.S.-source income (such as dividends and interest) and the reporting of such income. Through a contractual agreement with the U.S. tax authorities, qualified intermediary entities can benefit from a reduced administrative burden to enable their clients to receive the advantageous taxation rates allowed under the tax treaties. In January 2017, the terms of the QIA were amended by the U.S. tax authorities. These new measures are currently being implemented.

Taxation of U.S. dividend-equivalent income
Subsection 871(m) of the *US Internal Revenue Code* is intended to guarantee that investors who are not U.S. residents pay tax on dividends paid on instruments related to U.S. equities. Transactions entered into as of January 1, 2017 and related to derivative instruments whose underlying securities are U.S. shares or "ineligible indexes" are subject to withholding and reporting requirements. Following the implementation of these new measures, other requirements set out in this legislation and that were to apply in January 2018 have, however, been postponed by one year.

Good practice in the foreign exchange market
The *FX Global Code of Conduct* is a voluntary code of good practice that applies to all participants in the wholesale foreign exchange market in all of the world's financial centres. Published in May 2017, the code is the result of nearly two years of collaborative effort among central banks, including the Bank of Canada, and market participants from the world's leading financial centres. The code defines the good practices that should be followed by market participants to guarantee a robust, fair and transparent foreign exchange market. It covers such areas as ethics, governance, execution of orders (confirmation and settlement) information sharing, and risk management. The Bank has launched a project to implement this new framework, which should be put in place gradually between November 2017 and May 2018.

Investigation into sales practices
During fiscal 2017, the Financial Consumer Agency of Canada and the Office of the Superintendent of Financial Institutions launched an industry-wide review, which is ongoing, into the sales practices of financial institutions in Canada. The Bank is participating and will continue to monitor the related developments.

Reputation Risk Management

Reputation risk is the risk that the Bank's operations or practices will be judged negatively by the public, whether that judgment is with or without basis, thereby adversely affecting the perception, image or trademarks of the Bank, potentially resulting in costly litigation or loss of income. Reputation risk generally arises from a deficiency in managing another risk. The Bank's reputation may, for example, be adversely affected by non-compliance with laws and regulations or by process failures. All risks must therefore be managed effectively in order to protect the Bank's reputation.

The Bank seeks to ensure that its employees are constantly aware of the potential repercussions of their actions on the Bank's reputation and image. In addition to the previously discussed operational risk management initiatives, a variety of mechanisms are in place to support sound reputation risk management, including codes of professional conduct applicable to all employees, policies regarding ethics and corporate governance and appropriate training programs.

The Bank also has a policy, approved by the Board, that covers reputation risk stemming from complex structured financing transactions and other transactions that may give rise to reputation issues. The policy sets the reputation risk management rules and practices applicable to these transactions. The policy is complemented by the special provisions of the new products and activities policy, which determines the approvals required by the various committees that assess risk whenever new products or activities are introduced within the business units. These provisions are intended, among other things, to provide oversight for the management of reputation risk, which may be material for such products or activities. The new products and activities policy requires that any new product or activity for which reputation risk is determined to be high be submitted to the GRC for approval.

The activities of the Compliance Service, Legal Affairs Department, Public Relations Department and Investor Relations Department complete the reputation risk management framework.

Strategic Risk Management

Strategic risk is the risk of a loss arising from inappropriate strategic orientations, improper execution or ineffective response to economic or financial changes. The corporate strategic plan is developed by the Office of the President, in alignment with the Bank's overall risk appetite, and approved by the Board. Once approved, the initiatives of the strategic plan are monitored regularly to ensure that they are progressing according to plan. If not, strategies could be reviewed or adjusted if deemed appropriate.

In addition, the Bank has a specific Board-approved policy for strategic investments, which are defined as purchases of business assets or acquisitions of significant interests in an entity for the purposes of acquiring control or creating a long-term relationship. As such, acquisition projects and other strategic investments are analyzed through a due diligence process to ensure that these investments are aligned with the corporate strategic plan and the Bank's risk appetite.

Environmental Risk Management

Environmental risk is the risk of a loss or damage to the Bank's reputation arising from environmental concerns related to the Bank or its clients. Environmental risk is often associated with credit risk and operational risk.

Environmental risk is defined as any impact arising from environmental issues (such as climate change, pollution and waste management) that causes a loss of financial value or operating value or that damages the Bank's reputation. This risk arises from commercial and operating activities. For example, environmental issues related to the purchase or sale of contaminated properties by clients of the Bank or the deployment of large-scale projects could expose the Bank to credit and reputation risk. The Bank has implemented a process that examines supplier practices in order to assess their impact on the environment and consider this aspect more thoroughly in its decision-making. The Bank has set up a series of eco-responsible measures that allow for better management of greenhouse gas emissions arising from its activities and for a cleaner environment. It is also the first Canadian company to obtain Carbon Care Certification from Enviro-access for its greenhouse gas reduction efforts over the last five years. It is working with firms of experts to create an environmental strategy that will allow it to contribute more to sustainable development. The Bank is a signatory to the Carbon Disclosure Project, which collects and publishes information disclosed by companies worldwide regarding their management of climate change and their greenhouse gas emissions.

The Bank would also be forced to deal with operational risk and the risk related to the legal environment when environmental issues arise in its branches or administrative offices.

In this context, the Risk Management Group develops requirements that are prescribed in its internal policies in order to reveal, assess, control and monitor environmental risk. For their part, the business segments and corporate units must integrate requirements and controls related to the management of environmental risk in their activities. The Risk Management Group monitors its application and regularly reviews the standards. Each year, the Bank publishes its performance objectives and results in its *Social Responsibility Report,* which is available on its website at nbc.ca. This year again, it is one of the 20 greenest banks in the world and it continues to work to improve its environmental strategies.

CRITICAL ACCOUNTING ESTIMATES

A summary of the significant accounting policies used by the Bank is presented in Note 1 to the consolidated financial statements of this Annual Report. Some of these accounting policies are considered critical given their importance to the presentation of the Bank's financial position and operating results and require subjective and complex judgments and estimates on matters that are inherently uncertain. Any change in these judgments and estimates could have a significant impact on the Bank's consolidated financial statements. The critical accounting estimates are as follows.

Impairment of Financial Assets

At the end of each reporting period, the Bank determines whether there is objective evidence of impairment of a financial asset or group of financial assets. There is objective evidence of impairment when one or more loss events occur after the initial recognition of the asset and prior to or on the balance sheet date and these events adversely affect the estimated future cash flows of the financial assets in question. Management must exercise judgment to determine whether certain events or circumstances constitute objective evidence of impairment and to estimate the timing of future cash flows.

Available-for-Sale Securities

Available-for-sale securities are reviewed for objective evidence of impairment at the end of each reporting period, which is an exercise that requires the use of judgment and estimates. The Bank considers all available objective evidence of impairment, including observable data about loss events such as: a significant financial difficulty of the issuer, a breach of contract such as a default, and situations involving bankruptcy or other financial reorganization. In addition to these loss events, objective evidence of impairment for an equity security also includes information about significant changes with an adverse effect that have taken place in the technological, market, economic, or legal environment in which the issuer operates, and indicates that the cost of the investment in the equity security may not be recovered. For equity securities, a significant or prolonged decline in fair value below cost is also objective evidence of impairment.

If there is objective evidence of impairment, any amount previously recognized in *Accumulated other comprehensive income* is reclassified to *Non-interest income* in the Consolidated Statement of Income. This amount is determined as the difference between the acquisition cost (net of any capital repayments and amortization) and the current fair value of the asset less any impairment loss on that investment previously recognized in the Consolidated Statement of Income.

This accounting estimate has an impact, across all business segments, on *Available-for-sale securities* on the Consolidated Balance Sheet, on *Other comprehensive income* in the Consolidated Statement of Comprehensive Income, and on *Non-interest income* in the Consolidated Statement of Income.

Allowances for Credit Losses

A loan, except credit card receivables, is considered impaired if there is objective evidence of impairment and, in management's best estimate, the timely collection of principal and interest is no longer reasonably assured, or when a payment is contractually 90 days past due, unless the loan is fully secured and collection efforts are reasonably expected to result in repayment of the debt within 180 days. For credit card receivables, they are written off when payment is 180 days in arrears. Loans that are insured or fully guaranteed by a Canadian government (federal or provincial) or by a Canadian government agency are considered impaired when they are more than 365 days in arrears.

Allowances for credit losses are management's best estimate of losses in its credit portfolio as at the balance sheet date. They relate primarily to loans but may also cover the credit risk associated with deposits with financial institutions, loan substitute securities, credit instruments such as acceptances, and off-balance-sheet items such as commitments to extend credit, letters of guarantee and letters of credit. Management reviews portfolio credit quality on an ongoing basis to ensure that the amount of the allowance for credit losses is adequate.

The allowances for credit losses on impaired loans are calculated on a loan-by-loan basis and assessed either individually or collectively based on the portfolio's historical net loss experience. The allowance for credit losses on non-impaired loans is assessed collectively taking into account the Bank's overall credit portfolio.

When assessing allowances for credit losses, management must use its judgment in establishing reasonable assumptions and subjective and critical estimates concerning the probability of default, probable losses in the event of default, the amount at risk in the event of default, the amount and dates of future cash flows, the value of the underlying collateral and realization costs. Any changes in these estimates and assumptions, as well as the use of different, but equally reasonable, estimates and assumptions, could have an impact on the allowances for credit losses and, consequently, on the provisions for credit losses for the year. A description of the methods used to calculate the allowances for credit losses can be found in Note 1 to the consolidated financial statements. All business segments are affected by this accounting estimate.

Fair Value of Financial Instruments

When they are initially recognized, all financial assets and liabilities, including derivative financial instruments, are recorded at fair value on the Consolidated Balance Sheet. In subsequent periods, they are measured at fair value, except for items classified in the following categories, which are measured at amortized cost using the effective interest rate method: financial assets held to maturity, loans and receivables, and financial liabilities at amortized cost. The fair value of a financial instrument is the price that would be received to sell a financial asset or paid to transfer a financial liability in an orderly transaction in the principal market at the measurement date under current market conditions (i.e., an exit price).

Unadjusted quoted prices in active markets, based on bid prices for financial assets and offered prices for financial liabilities, provide the best evidence of fair value. A financial instrument is considered quoted in an active market when prices in exchange, dealer, broker or principal-to-principal markets are accessible at the measurement date. An active market is one where transactions occur with sufficient frequency and volume to provide quoted prices on an ongoing basis.

When there is no quoted price in an active market, the Bank uses another valuation technique that maximizes the use of relevant observable inputs and minimizes the use of unobservable inputs. The chosen valuation technique incorporates all the factors that market participants would take into account in pricing a transaction. Judgment is required in applying a large number of acceptable valuation techniques and estimates to determine fair value. The estimated fair value reflects market conditions on the valuation date and, consequently, may not be indicative of future fair value.

The best evidence of the fair value of a financial instrument at initial recognition is the transaction price, i.e., the fair value of the consideration received or paid. If there's a difference between the fair value at initial recognition and the transaction price, and the fair value is determined using a valuation technique based on observable market inputs or, in the case of a derivative, if the risks are fully offset by other contracts entered into with third parties, this difference is recognized in the Consolidated Statement of Income. In other cases, the difference between the fair value at initial recognition and the transaction price is deferred on the Consolidated Balance Sheet. The amount of the deferred gain or loss is recognized over the term of the financial instrument. The unamortized balance is immediately recognized in net income when (i) observable market inputs can be obtained and support the fair value of the transaction, (ii) the risks associated with the initial contract are substantially offset by other contracts entered into with third parties, (iii) the gain or loss is realized through a cash receipt or payment, or (iv) the transaction matures or is cancelled before maturity.

In certain cases, measurement adjustments are recognized to address factors that market participants would use at the measurement date to determine fair value but that are not included in the measurement technique due to system limitations or uncertainty surrounding the measure. These factors include, but are not limited to, the unobservable nature of inputs used in the valuation model, assumptions about risk such as market risk, credit risk, or risk related to the valuation model and future administration costs. The Bank may also consider market liquidity risk when determining the fair value of financial instruments when it believes these instruments could be disposed of for a consideration below the fair value otherwise determined due to a lack of market liquidity or an insufficient volume of transactions in a given market. The measurement adjustments also include the funding valuation adjustment applied to derivative financial instruments to reflect the market implied cost or benefits of funding collateral for uncollateralized or partly collateralized transactions.

IFRS establishes a fair value hierarchy that classifies the inputs used in financial instrument fair value measurement techniques according to three levels. The fair value hierarchy has the following levels:

– Level 1: Inputs corresponding to unadjusted quoted prices in active markets for identical assets and liabilities and accessible to the Bank at the measurement date. These instruments consist primarily of equity securities, derivative financial instruments traded in active markets, and certain highly liquid debt securities actively traded in over-the-counter markets.
– Level 2: Valuation techniques based on inputs, other than the quoted prices included in Level 1 inputs, that are directly or indirectly observable in the market for the asset or liability. These inputs are quoted prices of similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; inputs other than quoted prices used in a valuation model that are observable for that instrument; and inputs that are derived principally from or corroborated by observable market inputs by correlation or other means. These instruments consist primarily of certain loans, certain deposits, derivative financial instruments traded in over-the-counter markets, certain debt securities, certain equity securities whose value is not directly observable in an active market, liabilities related to transferred receivables as well as certain other liabilities.
– Level 3: Valuation techniques based on one or more significant inputs that are not observable in the market for the asset or liability. The Bank classifies financial instruments in Level 3 when the valuation technique is based on at least one significant input that is not observable in the markets. The valuation technique may also be partly based on observable market inputs. Financial instruments whose fair values are classified in Level 3 consist of investments in hedge funds, certain derivative financial instruments, equity and debt securities of private companies, certain restructured notes, and certain deposits (structured deposit notes).

Establishing fair value is an accounting estimate and has an impact on *Securities at fair value through profit or loss*, certain *Loans*, *Available-for-sale securities*, *Obligations related to securities sold short*, *Derivative financial instruments*, and financial instruments designated at fair value through profit or loss on the Consolidated Balance Sheet. This estimate also has an impact on *Non-interest income* in the Consolidated Statement of Income of the Financial Markets segment and of the *Other* heading. Lastly, this estimate has an impact on *Other comprehensive income* in the Consolidated Statement of Comprehensive Income. For additional information on the fair value determination of financial instruments, see Notes 3 and 6 to the consolidated financial statements.

Impairment of Non-Financial Assets

Premises and equipment and intangible assets with finite useful lives are tested for impairment when events or changes in circumstances indicate that their carrying value may not be recoverable. At the end of each reporting period, the Bank determines whether there is an indication that premises and equipment or intangible assets with finite useful lives may be impaired. Goodwill and intangible assets that are not yet available for use or that have indefinite useful lives are tested for impairment annually or more frequently if there is an indication that the asset might be impaired.

An asset is tested for impairment by comparing its carrying amount with its recoverable amount. The recoverable amount must be estimated for the individual asset. Where it is not possible to estimate the recoverable amount of an individual asset, the recoverable amount of the cash-generating unit (CGU) to which the asset belongs will be determined. Goodwill is always tested for impairment at the level of a CGU or a group of CGUs. A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The Bank uses judgment to identify CGUs.

An asset's recoverable amount is the higher of fair value less costs to sell and the value in use of the asset or CGU. Value in use is the present value of expected future cash flows from the asset or CGU. The recoverable amount of the CGU is determined using valuation models that consider various factors such as projected future cash flows, discount rates and growth rates. The use of different estimates and assumptions in applying the impairment tests could have a significant impact on income. If the recoverable amount of an asset or a CGU is less than its carrying amount, the carrying amount is reduced to its recoverable amount and an impairment loss is recognized in *Non-interest expenses* in the Consolidated Statement of Income.

Management exercises judgment when determining whether there is objective evidence that premises and equipment or intangible assets with finite useful lives may be impaired. It also uses judgment in determining to which CGU or group of CGUs an asset or goodwill is to be allocated. Moreover, for impairment assessment purposes, management must make estimates and assumptions regarding the recoverable amount of non-financial assets, CGUs or a group of CGUs. For additional information on the estimates and assumptions used to calculate the recoverable amount of an asset or CGU, see Note 11 to the consolidated financial statements.

Any changes to these estimates and assumptions may have an impact on the recoverable amount of a non-financial asset and, consequently, on impairment testing results. These accounting estimates have an impact on *Premises and equipment*, *Intangible assets* and *Goodwill* reported on the Consolidated Balance Sheet. The aggregate impairment loss, if any, is recognized as a non-interest expense for the corresponding segment and presented in the *Other* item.

Employee Benefits – Pension Plans and Other Post-Employment Benefits

Pension plan and other post-employment plan expenses and obligations are actuarially determined using the projected benefit method prorated on service. The calculations incorporate management's best estimates of various actuarial assumptions such as discount rates, rates of compensation increase, health care cost trend rates, mortality rates and retirement age.

Remeasurements of these plans result in actuarial gains and losses related to the defined benefit obligation and the actual return on plan assets, excluding the net interest determined by applying a discount rate to the net asset or liability of the plans. Remeasurements are immediately recognized in *Other comprehensive income* and will not be subsequently reclassified to net income; these cumulative gains and losses are reclassified to *Retained earnings*.

The use of different assumptions could have a significant impact on the defined benefit asset (liability) presented in *Other assets (Other liabilities)* on the Consolidated Balance Sheet, on the pension plan and other post-employment benefit plan expenses presented in *Compensation and employee benefits* in the Consolidated Statement of Income, as well as on *Remeasurements of pension plans and other post-employment benefit plans* presented in *Other comprehensive income*. All business segments are affected by this accounting estimate. For additional information, including the significant assumptions used to determine the Bank's pension plan and other post-employment benefit plan expenses and the sensitivity analysis for significant plan assumptions, see Note 24 to the consolidated financial statements.

Income Taxes

The Bank makes assumptions to estimate income taxes as well as deferred tax assets and liabilities. This process includes estimating the actual amount of income taxes payable and evaluating tax loss carryforwards and temporary differences arising from differences between the values of the items reported for accounting and for income tax purposes. Deferred tax assets and liabilities, presented in *Other assets* and *Other liabilities* on the Consolidated Balance Sheet, are calculated according to the tax rates to be applied in future periods. Previously recorded deferred tax assets and liabilities must be adjusted when the date of the future event is revised based on current information. The Bank periodically evaluates deferred tax assets to assess recoverability. In the Bank's opinion, based on the information at its disposal, it is probable that all deferred tax assets will be realized prior to their expiration.

This accounting estimate affects *Income taxes* in the Consolidated Statement of Income for all business segments. For additional information on income taxes, see Notes 1 and 25 to the consolidated financial statements.

Litigation

In the normal course of business, the Bank and its subsidiaries are involved in various claims relating, among other matters, to loan portfolios, investment portfolios and supplier agreements, including court proceedings, investigations or claims of a regulatory nature, class actions or other legal remedies of varied natures. The recent developments in the main legal proceeding involving the Bank are as follows:

Watson

In 2011, a class action was filed in the Supreme Court of British Columbia against Visa Corporation Canada (Visa), MasterCard International Incorporated (MasterCard) as well as National Bank and a number of other financial institutions. The plaintiff is alleging that the credit card networks and financial institutions engaged in a price-fixing system to increase or maintain the fees paid by merchants on Visa and MasterCard transactions. In so doing, they would have been in breach of the *Competition Act*. An unspecified amount of compensatory and punitive damages is being claimed. During the year ended October 31, 2017, the Bank entered into an agreement-in-principle with the plaintiffs in order to settle this dispute in the five jurisdictions where the class action was filed. This agreement is subject to the approval of the Court in each of those jurisdictions.

It is impossible to determine the outcome of the claims instituted or which may be instituted against the Bank and its subsidiaries. The Bank estimates, based on the information at its disposal, that while the amount of contingent liabilities pertaining to these claims, taken individually or in the aggregate, could have a material impact on the Bank's consolidated operating income for a particular period, it would not have a material adverse impact on the Bank's consolidated financial position.

Provisions are liabilities of uncertain timing and amount. A provision is recognized when the Bank has a present obligation (legal or constructive) arising from a past event, when it is probable that an outflow of economic resources will be required to settle the obligation and when the amount of the obligation can be reliably estimated. Provisions are based on the Bank's best estimates of the economic resources required to settle the present obligation, given all relevant risks and uncertainties, and, when it is significant, the effect of the time value of money.

The recognition of a litigation provision requires the Bank's management to assess the probability of loss and estimate any potential monetary impact. The Bank examines each litigation provision individually by considering the development of each case, its past experience in similar transactions and the opinion of its legal counsel. Each new piece of information can alter the Bank's assessment as to the probability and estimated amount of the loss and the extent to which it adjusts the recorded provision. Moreover, the actual settlement cost of these litigations can be significantly higher or lower than the amounts recognized.

Structured Entities

In the normal course of business, the Bank enters into arrangements and transactions with structured entities. Structured entities are entities designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when voting rights relate solely to administrative tasks and the relevant activities are directed by means of contractual arrangements. A structured entity is consolidated when the Bank concludes, after evaluating the substance of the relationship and its right or exposure to variable returns, that it controls that entity. Management must exercise judgment in determining whether the Bank controls an entity. Additional information is provided in the *Securitization and Off-Balance-Sheet Arrangements* section of this MD&A (pages 39 and 40) and in Note 28 to the consolidated financial statements.

FUTURE ACCOUNTING POLICY CHANGES

The IASB issues revisions and amendments to a number of standards, some of which have already had an impact on the Bank and others that could have an impact in the future. The Bank is currently assessing the impact that adoption of the following standards will have on its consolidated financial statements. A summary of these amendments and the effective dates applicable to the Bank are presented below.

Effective Date – Early Adoption on November 1, 2017

IFRS 9 – *Financial Instruments*

In July 2014, the IASB issued a complete and final version of IFRS 9, which replaces the guidance in IAS 39 – *Financial Instruments: Recognition and Measurement*. IFRS 9 sets out requirements for the classification and measurement of financial assets and financial liabilities, for the impairment of financial assets, and for general hedge accounting. Macro hedge accounting has been decoupled from IFRS 9 and will be considered and issued as a separate standard. As a result of IFRS 9, consequential amendments have been made to IFRS 7 – *Financial Instruments: Disclosures*, requiring additional qualitative and quantitative disclosures that must be adopted at the same time as IFRS 9. In December 2015, the Basel Committee on Banking Supervision issued *Guidance on Credit Risk and Accounting for Expected Credit Losses*. In June 2016, OSFI issued the final guideline on IFRS 9 *Financial Instruments and Disclosures*, setting out its expectations regarding IFRS 9 application.

For the Bank, the IFRS 9 effective date is November 1, 2018 with early adoption permitted. However, on January 9, 2015, OSFI issued a final version of *Early Adoption of IFRS 9 Financial Instruments for Domestic Systemically Important Banks* and stated therein that it expects Domestic Systemically Important Banks (D-SIBs), a group that includes the Bank, to adopt IFRS 9 as of November 1, 2017. The Bank will therefore adopt IFRS 9 as of November 1, 2017. Its first financial statements presented in accordance with IFRS 9 will be its unaudited interim condensed consolidated financial statements for the quarter ending January 31, 2018. In general, IFRS 9 is to be applied retrospectively. As permitted by IFRS 9, the Bank will not restate the comparative period financial statements. The retrospective impact of applying IFRS 9 will be accounted for through adjustments to the opening balances of *Retained earnings, Accumulated other comprehensive income* and *Non-controlling interests* as at November 1, 2017.

<u>Classification and Measurement</u>

IFRS 9 provides a single model for financial asset classification and measurement that is based on both the business model for managing financial assets and the contractual cash flow characteristics of the financial assets. These factors determine whether the financial assets are measured at amortized cost, fair value through other comprehensive income, or fair value through profit or loss.

IFRS 9 requires that all debt instrument financial assets, including loans, that do not meet a "solely payment of principal and interest" (SPPI) condition, including those that contain embedded derivatives, be classified as at fair value through profit or loss. For those that meet the SPPI condition, classification at initial recognition will be determined based on the business model under which these assets are managed. Upon transition, the business model test will be based on the facts and circumstances as at November 1, 2017. Debt instruments that are being managed on a "held for trading" or fair value basis will be classified as at fair value through profit or loss. Debt instruments that are managed on a "hold to collect and for sale" basis will be classified as at fair value through other comprehensive income. Finally, debt instruments that are managed on a "hold to collect" basis will be classified as at amortized cost. In addition, IFRS 9 also includes an option to irrevocably designate, at initial recognition, a debt instrument as measured at fair value through profit or loss if doing so eliminates or significantly reduces an accounting mismatch and if OSFI requirements are also met. This designation is also available for existing financial assets and liabilities at the date of IFRS 9 adoption.

Under IFRS 9, all equity instrument financial assets must be classified as at fair value through profit or loss. However, the Bank may, at initial recognition of a non-trading equity instrument, irrevocably elect to designate the instrument as at fair value through other comprehensive income with no subsequent reclassification of gains and losses to net income. Dividends will continue to be recognized in net income. This designation is also available for existing non-trading equity instruments at the date of IFRS 9 adoption. Derivative financial instruments will continue to be measured at fair value through profit or loss.

The classification and measurement of financial liabilities remain essentially unchanged under IFRS 9, except for financial liabilities designated as measured at fair value through profit or loss under the fair value option. Once the fair value election is made, changes in fair value attributable to changes in an entity's own credit risk must be recognized in *Other comprehensive income* rather than in net income. On February 1, 2016, the Bank early adopted, on a prospective basis, the own credit risk provisions of IFRS 9.

Impairment

Overall Comparison of the New Impairment Model and the Current Model

IFRS 9 introduces a new, single impairment model for financial assets that requires the recognition of expected credit losses (ECL) rather than incurred losses as applied under the current standard. Currently, impairment losses are recognized if, and only if, there is objective evidence of impairment as a result of one or more loss events that occurred after initial recognition of the asset and that loss event has a detrimental impact on the estimated future cash flows of the asset that can be reliably estimated. If there is no objective evidence of impairment for an individual financial asset, that financial asset is included in a group of assets with similar credit risk characteristics and collectively assessed for impairment losses incurred but not yet identified. Under IFRS 9, ECLs will be recognized in profit or loss before a loss event has occurred, which could result in earlier recognition of credit losses compared to the current model.

Under the current standard, incurred losses are measured by incorporating reasonable and supportable information about past events and current conditions. Under IFRS 9, the ECL model, which is forward-looking, in addition requires that forecasts of future events and economic conditions be used when determining significant increases in credit risk and when measuring expected losses. Forward-looking macroeconomic factors such as unemployment rates, housing price indices, interest rates, and gross domestic product will be incorporated into the risk parameters. Estimating forward-looking information will require significant judgment and must be consistent with the forward-looking information used by the Bank for other purposes, such as forecasting and budgeting.

Scope

The impairment model applies to all financial assets not measured at fair value through profit or loss. The ECL model also applies to loan commitments and financial guarantees that are not measured at fair value through profit or loss.

Measurement of Expected Credit Losses

ECLs are measured as the probability-weighted present value of expected cash shortfalls over the remaining expected life of the financial instrument. The measurement of ECLs will be based primarily on the product of the instrument's probability of default (PD), loss given default (LGD), and exposure at default (EAD). IFRS 9 requires the estimate of expected credit losses to reflect an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes. The Bank will incorporate three forward-looking macroeconomic scenarios in its ECL calculation process: a base scenario, an upside scenario, and a downside scenario. Probability-weights will be attributed to each scenario. The scenarios and probability weights will be reassessed quarterly and subject to management review.

The ECL model contains a three-stage approach that is based on the change in the credit quality of assets since initial recognition. If, at the reporting date, the credit risk of non-impaired financial instruments has not increased significantly since initial recognition, these financial instruments are classified in Stage 1, and a loss allowance that is measured, at each reporting date, at an amount equal to 12-month expected credit losses is recorded. When there is a significant increase in credit risk since initial recognition, these non-impaired financial instruments are migrated to Stage 2, and a loss allowance that is measured, at each reporting date, at an amount equal to lifetime expected credit losses is recorded. In subsequent reporting periods, if the credit risk of the financial instrument improves such that there is no longer a significant increase in credit risk since initial recognition, the ECL model requires reverting to recognition of 12-month expected credit losses. When one or more events that have a detrimental impact on the estimated future cash flows of a financial asset have occurred, the financial asset is considered credit-impaired and is migrated to Stage 3, and an allowance equal to lifetime expected losses continues to be recorded or the financial asset is written off.

Interest income is calculated on the gross carrying amount of the financial assets in Stages 1 and 2 and on the net carrying amount of the financial assets in Stage 3.

Assessment of Significant Increase in Credit Risk

To assess whether the credit risk of a financial instrument has increased significantly, the PD occurring over its expected life as at the reporting date is compared with the PD occurring over its expected life on the date of initial recognition, and reasonable and supportable information indicative of significant increases in credit risk since initial recognition is considered. The Bank has included relative and absolute thresholds in the definition of significant increase in credit risk and a backstop of 30 days past due. All financial instruments that are 30 days past due are migrated to Stage 2 even if other metrics do not indicate that a significant increase in credit risk has occurred.

Definition of Default

IFRS 9 does not define default but requires the definition to be consistent with the definition used for internal credit risk management purposes. However, IFRS 9 contains a rebuttable presumption that default does not occur later than when a financial asset is 90 days past due. Under IFRS 9, the Bank will consider a financial asset, other than a credit card receivable, as credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of a financial asset have occurred or when contractual payments are 90 days past due. The backstop for credit card receivables will be 180 days past due. The Bank's write-off policy under IAS 39 is not expected to be materially different under IFRS 9.

Comparison of Regulatory Expected Credit Loss Model and IFRS 9 Expected Credit Loss Model

The IFRS 9 ECL calculation has leveraged, where appropriate, the expected credit loss model parameters used by the Bank for regulatory purposes, namely: PD, LGD and EAD. Adjustments to these parameters were made to comply with IFRS 9 requirements. After the adoption of IFRS 9, an ECL model will be used for both regulatory and accounting purposes. However, there are key differences, which are summarized below.

Regulatory Capital

On March 29, 2017, the Basel Committee on Banking Supervision (BCBS) released details on the interim regulatory treatment for accounting provisions as well as standards for transitional arrangements. Given the coming into effect of IFRS 9, the BCBS will retain the current Basel Accord regulatory treatment for provisions during a transition period.

Jurisdictions may adopt transitional measures to phase in any potential significant negative impacts on regulatory capital arising from the new expected credit loss impairment model under IFRS 9. On August 21, 2017, OSFI released for comment a new, revised version of the *Capital Adequacy Requirements (CAR) Guideline* to be implemented in the first quarter of 2018. Consistent with the BCBS position, the proposed CAR Guideline retains the current regulatory treatment of accounting provisions. As for transitional measures to phase-in any potential negative impacts on regulatory capital, on November 29, 2017, OSFI has announced that no mitigation measure will be allowed for banks whose capital position could be significantly affected by IFRS 9 adoption.

Hedge Accounting

IFRS 9 introduces a new general hedge accounting model that better aligns hedge accounting with risk management activities. However, the current hedge accounting requirements under IAS 39 may continue to be applied until the IASB finalizes its macro hedge accounting project. As permitted, the Bank elected not to adopt the IFRS 9 hedge accounting requirements and instead will continue applying the IAS 39 hedge accounting requirements. The Bank will, however, comply with the revised hedge accounting disclosures required by the consequential amendments made to IFRS 7.

Transition Impact

As at October 31, 2017, the Bank's best estimate of the impact of transitioning to IFRS 9 is a decrease of approximately $165 million, net of income taxes, in equity as at November 1, 2017, and a decrease of approximately 16 basis points in the Common Equity Tier 1 (CET1) capital ratio. The estimate of the impact for the Bank relates primarily to the classification and measurement requirements, in particular the election to irrevocably designate certain financial assets and financial liabilities at fair value through profit or loss under the fair value option, as permitted by the IFRS 9 transitional provisions.

The estimate of the impact of applying the new impairment model for financial assets is not significant. The Bank continues to refine and validate the new impairment models leading up to the disclosure of its 2018 first quarter results.

	Regulatory Capital	IFRS 9
PD	Through-the-cycle 12-month PD calibrated on a long run average PD throughout a full economic cycle. The default backstop is generally 90 days past due.	Point-in-time 12-month or lifetime PD based on past experience, current conditions and relevant forward-looking information. The default backstop is generally 90 days past due.
LGD	Downturn LGD based on losses that would be expected in an economic downturn and subject to certain regulatory floors. All collection costs are included.	Expected LGD based on past experience, current conditions and relevant forward-looking information. The value of collateral and other credit risk mitigants are incorporated as appropriate and undue conservatism and floors are excluded.
EAD	Based on the drawn balance plus expected utilization of any undrawn portion prior to default, and cannot be lower than the current balance.	Represents the expected balance at default across the lifetime horizon on forward-looking expectations.
Other		ECLs are discounted from the default date to the reporting date.

Effective Date – November 1, 2018

IFRS 15 – *Revenue From Contracts With Customers*

In May 2014, the IASB issued a new standard, IFRS 15, which replaces the current revenue recognition standards and interpretations. IFRS 15 provides a single comprehensive model to use when accounting for revenue arising from contracts with customers. The new model applies to all contracts with customers except those that are within the scope of other IFRS standards such as leases, insurance contracts and financial instruments. As a result, the majority of the Bank's revenue, including net interest income, will not be impacted.

At its meeting on July 22, 2015, the IASB unanimously confirmed its proposal to defer the effective date of IFRS 15 to fiscal years beginning on or after January 1, 2018, which will be November 1, 2018 for the Bank. In April 2016, the IASB issued amendments to IFRS 15, clarifying some requirements and providing additional transitional relief at the date of initial application.

On transition, IFRS 15 permits to either restate prior periods or to apply the standard on a modified retrospective basis. The Bank plans to use the modified retrospective basis, recognizing the cumulative effect of initially applying the standard as an adjustment to the opening balance of *Retained earnings* as at November 1, 2018, without restating comparative periods.

While the impact assessment is not complete, the Bank does not currently expect the adoption of IFRS 15 to have a significant impact on its consolidated financial statements. The Bank is continuing to review its revenue contracts that fall within the scope of IFRS 15 and to assess the impact of the new standard on its consolidated financial statements, including the additional disclosure requirements.

Effective Date – November 1, 2019

IFRS 16 – *Leases*

In January 2016, the IASB issued a new standard, IFRS 16 – *Leases*. The new standard requires lessees to recognize most leases on the balance sheet using a single model, thereby eliminating the distinction between operating and finance leases. Lessor accounting, however, remains similar to current accounting practice, and the distinction between operating and finance leases is retained. Early application is permitted if IFRS 15 – *Revenue From Contracts With Customers* is also applied.

IFRIC Interpretation 23 – *Uncertainty Over Income Tax Treatments*

In June 2017, the IASB issued IFRIC Interpretation 23, which addresses how to reflect tax treatment uncertainty in accounting for income taxes.

Effective Date – November 1, 2021

IFRS 17 – *Insurance Contracts*

In May 2017, the IASB issued IFRS 17 – *Insurance Contracts*, a new standard that replaces IFRS 4, the current insurance contract accounting standard. IFRS 17 introduces a new accounting framework that will improve the comparability and quality of financial information.

ADDITIONAL FINANCIAL INFORMATION

TABLE 1 – QUARTERLY RESULTS

(millions of Canadian dollars, except per share amounts)					2017
	Total	Q4	Q3	Q2	Q1
Statement of income data					
Net interest income[1]	3,232	841	831	762	798
Non-interest income[1]	3,377	863	844	835	835
Total revenues	6,609	1,704	1,675	1,597	1,633
Provisions for credit losses	244	70	58	56	60
Non-interest expenses	3,857	976	971	941	969
Income taxes	484	133	128	116	107
Net income	2,024	525	518	484	497
Non-controlling interests	84	19	24	22	19
Net income attributable to the Bank's shareholders	1,940	506	494	462	478
Earnings per common share					
Basic	$ 5.44	$ 1.40	$ 1.39	$ 1.30	$ 1.35
Diluted	5.38	1.39	1.37	1.28	1.34
Dividends (per share)					
Common	$ 2.28	$ 0.58	$ 0.58	$ 0.56	$ 0.56
Preferred					
Series 20	–	–	–	–	–
Series 28	0.9500	0.2375	0.2375	0.2375	0.2375
Series 30	1.0250	0.2562	0.2563	0.2562	0.2563
Series 32	0.9750	0.2437	0.2438	0.2437	0.2438
Series 34	1.4000	0.3500	0.3500	0.3500	0.3500
Series 36	1.3500	0.3375	0.3375	0.3375	0.3375
Series 38	0.4724	0.4724	–	–	–
Return on common shareholders' equity	18.1 %	17.8 %	18.2 %	17.9 %	18.4 %
Total assets		245,827	240,072	239,020	234,119
Long-term financial liabilities[2]		9	9	10	1,009
Net impaired loans		206	240	213	226
Number of common shares outstanding *(thousands)*					
Average – Basic	340,809	341,108	341,555	341,107	339,476
Average – Diluted	344,771	345,507	345,353	345,416	343,270
End of period		339,592	341,580	341,524	340,810
Per common share					
Book value		$ 31.51	$ 30.84	$ 29.97	$ 29.51
Share price					
High	$ 62.74	62.74	56.44	58.75	56.60
Low	46.83	55.29	51.77	52.94	46.83
Number of employees		21,635	21,526	21,290	21,295
Number of branches in Canada		429	443	445	448

(1) The prior year figures have been adjusted to reflect a reclassification of certain amounts between the *Non-interest income – Credit fees* item and the *Net interest income* item in order to better reflect the nature of the income reported in the Personal and Commercial segment.
(2) Subordinated debt.

				2016					2015
Total	Q4	Q3	Q2	Q1	Total	Q4	Q3	Q2	Q1
2,992	778	783	715	716	2,717	703	686	657	671
2,848	791	774	710	573	3,029	702	824	764	739
5,840	1,569	1,557	1,425	1,289	5,746	1,405	1,510	1,421	1,410
484	59	45	317	63	228	61	56	57	54
3,875	1,159	937	876	903	3,665	960	906	936	863
225	44	97	22	62	234	37	95	24	78
1,256	307	478	210	261	1,619	347	453	404	415
75	18	18	17	22	70	19	17	16	18
1,181	289	460	193	239	1,549	328	436	388	397
$ 3.31	$ 0.79	$ 1.32	$ 0.52	$ 0.68	$ 4.56	$ 0.96	$ 1.29	$ 1.14	$ 1.17
3.29	0.78	1.31	0.52	0.67	4.51	0.95	1.28	1.13	1.16
$ 2.18	$ 0.55	$ 0.55	$ 0.54	$ 0.54	$ 2.04	$ 0.52	$ 0.52	$ 0.50	$ 0.50
–	–	–	–	–	1.5000	0.3750	0.3750	0.3750	0.3750
0.9500	0.2375	0.2375	0.2375	0.2375	0.9500	0.2375	0.2375	0.2375	0.2375
1.0250	0.2562	0.2563	0.2562	0.2563	1.0250	0.2562	0.2563	0.2562	0.2563
0.9750	0.2437	0.2437	0.2438	0.2438	1.0760	0.2438	0.2438	0.2438	0.3446
1.1373	0.3500	0.3500	0.4373	–	–	–	–	–	–
0.5733	0.5733	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–
11.7 %	11.0 %	18.7 %	7.7 %	9.5 %	16.9 %	13.6 %	18.8 %	17.6 %	17.8 %
	232,206	229,896	220,734	219,301		216,090	215,560	207,123	214,474
	1,012	1,014	1,015	1,021		1,522	1,530	1,529	1,539
	281	251	300	234		254	254	249	194
337,460	337,882	337,553	337,329	337,074	329,790	331,459	329,527	329,275	328,880
339,895	341,018	340,196	339,530	339,265	333,139	334,138	333,127	332,849	332,925
	338,053	336,826	337,418	337,535		337,236	330,001	330,141	329,860
	$ 28.52	$ 28.39	$ 27.75	$ 27.77		$ 28.26	$ 27.60	$ 27.01	$ 26.33
$ 47.88	47.88	46.65	45.56	44.11	$ 55.06	46.33	50.01	49.15	55.06
35.83	44.14	40.98	35.95	35.83	40.75	40.75	43.78	45.02	44.21
	21,770	21,731	20,105	20,114		20,189	20,502	20,659	20,691
	450	453	453	453		452	452	452	452

TABLE 2 – OVERVIEW OF RESULTS

Year ended October 31 (taxable equivalent basis)[1] (millions of Canadian dollars)	2017	2016	2015	2014	2013[2]
Net interest income[3]	**3,441**	3,223	3,028	2,834	2,721
Non-interest income[3]	**3,412**	2,852	3,029	2,849	2,639
Total revenues	**6,853**	6,075	6,057	5,683	5,360
Non-interest expenses	**3,857**	3,875	3,665	3,423	3,206
Contribution	**2,996**	2,200	2,392	2,260	2,154
Provisions for credit losses	**244**	484	228	208	181
Income before income taxes	**2,752**	1,716	2,164	2,052	1,973
Income taxes	**728**	460	545	514	461
Net income	**2,024**	1,256	1,619	1,538	1,512
Non-controlling interests	**84**	75	70	69	63
Net income attributable to the Bank's shareholders	**1,940**	1,181	1,549	1,469	1,449
Average assets	**248,351**	235,913	222,929	206,680	193,509

(1) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.
(2) Certain amounts have been adjusted to reflect accounting standard changes in 2014.
(3) The prior year figures have been adjusted to reflect a reclassification of certain amounts between the *Non-interest income* item and the *Net interest income* item in order to better reflect the nature of the income reported in the Personal and Commercial segment.

TABLE 3 – CHANGES IN NET INTEREST INCOME

Year ended October 31 (taxable equivalent basis)[1] (millions of Canadian dollars)	2017	2016	2015	2014	2013[2]
Personal and Commercial					
Net interest income[3]	**2,071**	1,955	1,860	1,770	1,690
Average assets	**96,261**	92,234	86,977	81,516	76,696
Average interest-bearing assets	**91,461**	87,153	81,430	75,963	70,718
Net interest margin[3][4]	**2.26 %**	2.24 %	2.28 %	2.33 %	2.39 %
Wealth Management					
Net interest income	**431**	372	323	312	272
Average assets	**11,652**	11,006	10,388	10,400	9,080
Financial Markets					
Net interest income	**782**	938	1,001	825	781
Average assets	**95,004**	87,504	86,466	85,427	86,573
U.S. Specialty Finance and International					
Net interest income	**262**	71	(7)	(1)	3
Average assets	**7,519**	5,319	2,275	771	490
Other					
Net interest income	**(105)**	(113)	(149)	(72)	(25)
Average assets	**37,915**	39,850	36,823	28,566	20,670
Total					
Net interest income[3]	**3,441**	3,223	3,028	2,834	2,721
Average assets	**248,351**	235,913	222,929	206,680	193,509

(1) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.
(2) Certain amounts have been adjusted to reflect accounting standard changes in 2014.
(3) The prior year figures have been adjusted to reflect a reclassification of certain amounts between the *Non-interest income* item and the *Net interest income* item in order to better reflect the nature of the income reported in the Personal and Commercial segment.
(4) Net interest margin is calculated by dividing net interest income by average interest-bearing assets.

TABLE 4 – NON-INTEREST INCOME

Year ended October 31 (taxable equivalent basis)[1] (millions of Canadian dollars)	2017	2016	2015	2014	2013
Underwriting and advisory fees	**349**	376	387	388	301
Securities brokerage commissions	**216**	235	273	333	335
Mutual fund revenues	**412**	364	320	251	219
Trust service revenues	**518**	453	446	388	314
Credit fees[2]	**130**	110	112	98	90
Revenues from acceptances, letters of credit and guarantee	**231**	236	223	217	226
Card revenues	**132**	119	128	134	121
Deposit and payment service charges	**279**	258	238	234	235
Trading revenues (losses)	**409**	154	209	106	186
Gains (losses) on available-for-sale securities, net	**140**	70	82	103	82
Insurance revenues, net	**117**	114	107	108	118
Foreign exchange revenues, other than trading	**81**	81	88	89	90
Share in the net income of associates and joint ventures	**35**	15	26	44	26
Other	**363**	267	390	356	296
	3,412	2,852	3,029	2,849	2,639
Domestic	**3,027**	2,434	2,737	2,545	2,358
International					
United States	**340**	337	284	303	227
Other	**45**	81	8	1	54
Non-interest income as a % of total revenues on a taxable equivalent basis[1]	**49.8 %**	46.9 %	50.0 %	50.1 %	49.2 %
Non-interest income as a % of total revenues on a taxable equivalent basis and excluding specified items[1]	**49.9 %**	48.5 %	49.0 %	49.4 %	47.9 %

(1) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.
(2) The prior year figures have been adjusted to reflect a reclassification of certain amounts between the *Non-interest income – Credit fees* item and the *Net interest income* item in order to better reflect the nature of the income reported in the Personal and Commercial segment.

TABLE 5 – TRADING ACTIVITY REVENUES[1]

Year ended October 31 (taxable equivalent basis)[2] (millions of Canadian dollars)	2017	2016	2015	2014	2013
Financial markets					
Equities	**496**	438	450	332	288
Fixed-income	**304**	263	237	207	237
Commodities and foreign exchange	**103**	116	147	82	88
	903	817	834	621	613
Other segments	**103**	80	151	122	212
	1,006	897	985	743	825

(1) Includes net interest income and non-interest income.
(2) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.

TABLE 6 – PROVISIONS FOR CREDIT LOSSES

Year ended October 31 (millions of Canadian dollars)	**2017**	2016	2015	2014	2013
Provisions for credit losses on impaired loans					
Personal	**150**	152	162	155	148
Commercial	**43**	73	63	50	44
Wealth Management	**3**	5	3	3	3
Financial Markets	**–**	–	–	–	(14)
U.S. Specialty Finance and International	**48**	4	–	–	–
Total	**244**	234	228	208	181
Sectoral allowance on non-impaired loans – Oil and gas[1]	**(40)**	250	–	–	–
Collective allowance on non-impaired loans[2]	**40**	–	–	–	–
Total provisions for credit losses	**244**	484	228	208	181
Average loans and acceptances	**129,150**	121,013	108,740	99,548	92,398
Provisions for credit losses on impaired loans as a % of average loans and acceptances	**0.19 %**	0.19 %	0.21 %	0.21 %	0.20 %
Provisions for credit losses on impaired and non-impaired loans as a % of average loans and acceptances	**0.19 %**	0.40 %	0.21 %	0.21 %	0.20 %
Allowances for credit losses					
Balance at beginning	**781**	569	604	578	577
Provisions for credit losses	**244**	484	228	208	181
Write-offs	**(238)**	(201)	(197)	(118)	(112)
Write-offs on credit cards	**(82)**	(81)	(81)	(79)	(78)
Recoveries and other[3]	**14**	10	15	15	10
Balance at end	**719**	781	569	604	578
Composition of allowances:					
Individual and collective allowances on impaired loans	**174**	211	203	238	212
Sectoral allowance on non-impaired loans – Oil and gas[1]	**139**	204	–	–	–
Collective allowance on non-impaired loans[2]	**406**	366	366	366	366

(1) The sectoral allowance on non-impaired loans – oil and gas was established collectively for the portfolio of loans to producers and service companies in the oil and gas sector.
(2) The collective allowance for credit risk on non-impaired loans was established taking into account the Bank's overall credit portfolio, except for loans covered by the sectoral allowance.
(3) Includes foreign exchange and other movements.

TABLE 7 – NON-INTEREST EXPENSES

Year ended October 31 (millions of Canadian dollars)	2017	2016	2015	2014	2013[1]
Compensation and employee benefits[2]	**2,358**	2,161	2,160	2,049	1,899
Occupancy	**195**	195	185	183	194
Technology	**364**	367	352	335	319
Amortization – Premises and equipment	**41**	38	38	39	43
Amortization – Technology	**204**	220	182	178	139
Communications	**61**	67	69	68	68
Professional fees	**254**	276	233	227	221
Restructuring charge[3]	**–**	131	86	–	–
Advertising and external relations	**87**	83	77	80	71
Stationery	**24**	25	24	25	22
Travel and business development	**35**	37	36	34	30
Security and theft	**26**	45	15	43	26
Capital and payroll taxes	**73**	71	69	44	46
Other	**135**	159	139	118	128
Total	**3,857**	3,875	3,665	3,423	3,206
Domestic	**3,571**	3,601	3,457	3,223	3,006
International					
United States	**209**	235	192	186	183
Other	**77**	39	16	14	17
Non-interest expenses as a % of total revenues on a taxable equivalent basis[4]	**56.3 %**	63.8 %	60.5 %	60.2 %	59.8 %
Non-interest expenses as a % of total revenues on a taxable equivalent basis and excluding specified items[4]	**55.9 %**	58.2 %	58.6 %	58.6 %	60.2 %

(1) Certain amounts have been adjusted to reflect accounting standard changes in 2014.
(2) Compensation and employee benefits included an amount of $12 million in severance pay in 2013.
(3) The 2016 restructuring charge had included $129 million in compensation and employee benefits and $2 million in occupancy expenses, and the 2015 restructuring charge had included $51 million in compensation and employee benefits and $35 million in other charges such as occupancy expenses and professional fees.
(4) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.

TABLE 8 – CHANGE IN AVERAGE VOLUMES

Year ended October 31 (taxable equivalent basis)[1] (millions of Canadian dollars)	2017		2016		2015		2014		2013[2]	
	Average volume $	**Rate %**	Average volume $	Rate %	Average volume $	Rate %	Average volume $	Rate %	Average volume $	Rate %
Assets										
Deposits with financial institutions	**15,802**	**0.72**	14,079	0.46	11,771	0.26	10,313	0.28	7,051	0.27
Securities	**66,591**	**1.75**	60,784	1.98	57,494	2.25	57,559	2.42	58,094	2.33
Securities purchased under reverse repurchase agreements and securities borrowed	**19,878**	**1.03**	19,038	0.75	25,610	0.79	24,789	0.68	21,271	0.79
Residential mortgage loans	**49,264**	**2.62**	46,213	2.69	41,719	2.85	38,517	3.02	35,590	3.13
Personal loans and credit card receivables	**34,044**	**3.86**	32,480	3.84	30,817	3.94	28,714	4.18	26,917	4.21
Business and government loans	**39,993**	**3.91**	34,510	3.20	27,096	3.20	23,498	3.42	21,126	3.60
Impaired loans, net of total allowances	**(276)**	**(0.61)**	(177)	(0.97)	(88)	(1.78)	(119)	(1.89)	(161)	(0.78)
Interest-bearing assets	**225,296**	**2.51**	206,927	2.42	194,419	2.47	183,271	2.60	169,888	2.68
Other assets	**23,055**		28,986		28,510		23,409		23,621	
Total assets	**248,351**	**2.28**	235,913	2.12	222,929	2.15	206,680	2.31	193,509	2.35
Liabilities and equity										
Personal deposits	**49,435**	**0.99**	44,510	1.13	42,480	1.20	43,000	1.31	40,156	1.45
Deposit-taking institutions	**7,567**	**0.69**	12,468	0.39	10,925	0.24	8,685	0.24	7,237	0.32
Other deposits	**97,252**	**1.21**	85,874	1.10	76,063	1.12	63,919	1.22	54,636	1.12
	154,254	**1.11**	142,852	1.04	129,468	1.07	115,604	1.18	102,029	1.19
Subordinated debt	**423**	**3.81**	1,047	3.16	1,571	3.80	1,906	3.96	2,381	4.30
Obligations other than deposits	**44,204**	**0.74**	38,804	0.31	40,374	0.41	44,230	0.91	45,156	1.07
Interest-bearing liabilities	**198,881**	**1.11**	182,703	0.98	171,413	1.03	161,740	1.19	149,566	1.22
Other liabilities	**36,599**		41,561		40,792		35,288		35,180	
Equity	**12,871**		11,649		10,724		9,652		8,763	
Liabilities and equity	**248,351**	**0.89**	235,913	0.76	222,929	0.79	206,680	0.93	193,509	0.95
Net interest margin		**1.39**		1.36		1.36		1.38		1.40

(1) See the Financial Reporting Method section on page 10 for additional information on non-GAAP financial measures.
(2) Certain amounts have been adjusted to reflect accounting standard changes in 2014.

TABLE 9 – DISTRIBUTION OF GROSS LOANS AND ACCEPTANCES BY BORROWER CATEGORY UNDER BASEL ASSET CLASSES

As at October 31
(millions of Canadian dollars)

	2017		2016		2015		2014		2013	
	$	**%**	$	%	$	%	$	%	$	%
Residential mortgage[1][2]	**66,398**	**49.1**	58,265	45.9	54,004	46.6	50,011	46.8	46,836	47.8
Qualifying revolving retail	**4,217**	**3.1**	4,178	3.3	4,093	3.6	4,033	3.8	3,962	4.1
Other retail	**12,150**	**9.0**	10,316	8.1	9,512	8.2	9,027	8.5	8,801	9.0
Agriculture	**4,923**	**3.6**	4,599	3.6	4,433	3.8	3,857	3.6	3,553	3.6
Financial institutions	**4,932**	**3.7**	3,872	3.0	2,679	2.3	1,482	1.4	1,693	1.7
Manufacturing	**4,341**	**3.2**	3,597	2.8	3,765	3.3	3,689	3.5	3,286	3.4
Construction and real estate	**11,891**	**8.8**	10,729	8.5	10,439	9.0	9,088	8.5	7,562	7.7
Transportation	**2,593**	**1.9**	3,013	2.4	1,956	1.7	1,223	1.1	1,202	1.2
Telecommunications, media and technology	**1,662**	**1.2**	1,578	1.2	1,254	1.1	1,540	1.4	1,471	1.5
Oil and gas	**2,129**	**1.6**	2,102	1.7	3,220	2.8	3,621	3.4	3,552	3.6
Mining	**470**	**0.4**	582	0.5	392	0.3	247	0.2	211	0.2
Wholesale and retail	**5,497**	**4.1**	4,932	3.9	4,873	4.2	5,281	5.0	4,587	4.7
Services	**12,726**	**9.4**	11,659	9.2	9,861	8.5	9,308	8.7	8,512	8.7
Other[2]	**1,233**	**0.9**	7,537	5.9	5,326	4.6	4,366	4.1	2,688	2.8
	135,162	**100.0**	126,959	100.0	115,807	100.0	106,773	100.0	97,916	100.0

(1) Includes residential mortgage loans on one-to-four-unit dwellings (Basel definition) and home equity lines of credit.
(2) Since November 1, 2016, the loans acquired by the Financial Markets segment for securitization purposes, and reported in the *Other* category, are now being reported in the *Residential mortgage* category. Figures as at October 31, 2016 and from previous years were not adjusted to reflect those modifications.

TABLE 10 – IMPAIRED LOANS

As at October 31 (millions of Canadian dollars)	2017	2016	2015	2014	2013
Net impaired loans					
Personal[1]	78	85	92	88	70
Commercial	121	190	157	158	111
Wealth Management	4	5	5	2	2
Financial Markets	–	–	–	–	–
U.S. Specialty Finance and International	3	1	–	–	–
Other	–	–	–	–	–
Total net impaired loans	206	281	254	248	183
Gross impaired loans	380	492	457	486	395
Individual and collective allowances on impaired loans	174	211	203	238	212
Net impaired loans	206	281	254	248	183
Provisioning rate	45.8 %	42.9 %	44.4 %	49.0 %	53.7 %
As a % of average loans and acceptances	0.2 %	0.2 %	0.2 %	0.2 %	0.2 %
As a % of common shareholders' equity	1.9 %	2.9 %	2.7 %	2.9 %	2.4 %
As a % of tangible capital adjusted for allowances	4.3 %	6.3 %	5.9 %	7.1 %	6.5 %

(1) Includes $39 million in net consumer loans in 2017 (2016: $40 million; 2015: $42 million; 2014: $46 million; 2013: $37 million).

TABLE 11 – DEPOSITS

As at October 31 (millions of Canadian dollars)	2017		2016[1]		2015[1]		2014[1]		2013[1][2]	
	$	%	$	%	$	%	$	%	$	%
Personal	**53,719**	**34.3**	52,521	37.0	47,394	36.3	44,963	37.5	42,652	41.8
Business and government	**97,571**	**62.3**	83,905	59.0	76,845	58.9	67,364	56.2	57,103	55.9
Deposit-taking institutions	**5,381**	**3.4**	5,640	4.0	6,219	4.8	7,556	6.3	2,356	2.3
Total	**156,671**	**100.0**	142,066	100.0	130,458	100.0	119,883	100.0	102,111	100.0
Domestic	**145,288**	**92.8**	131,869	92.8	116,315	89.2	105,621	88.1	94,647	92.6
International										
United States	**5,825**	**3.7**	4,442	3.1	9,655	7.4	12,152	10.1	6,893	6.8
Other	**5,558**	**3.5**	5,755	4.1	4,488	3.4	2,110	1.8	571	0.6
Total	**156,671**	**100.0**	142,066	100.0	130,458	100.0	119,883	100.0	102,111	100.0
Personal deposits as a % of total assets		**21.9**		22.6		21.9		21.9		22.7

(1) Certain amounts have been revised from those previously reported, particularly an amount of $2,159 million classified in *Due to clients, dealers and brokers* on the Consolidated Balance Sheet as at October 31, 2016 that is now reported in *Deposits* ($1,628 million as at October 31, 2015). Figures as at October 31, 2014 and 2013 were not adjusted to reflect those changes.
(2) Certain amounts have been adjusted to reflect accounting standard changes in 2014.

AUDITED CONSOLIDATED FINANCIAL STATEMENTS

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

The consolidated financial statements of National Bank of Canada (the Bank) have been prepared in accordance with section 308(4) of the *Bank Act* (Canada), which states that, except as otherwise specified by the Office of the Superintendent of Financial Institutions (Canada) (OSFI), the financial statements are to be prepared in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB). IFRS represent Canadian generally accepted accounting principles (GAAP). None of the OSFI accounting requirements are exceptions to IFRS.

Management maintains the accounting and internal control systems needed to discharge its responsibility, which is to provide reasonable assurance that the financial accounts are accurate and complete and that the Bank's assets are adequately safeguarded. Controls that are currently in place include quality standards on staff hiring and training; the implementation of organizational structures with clear divisions of responsibility and accountability for performance; the *Code of Professional Conduct*; and the communication of operating policies and procedures.

As Chief Executive Officer and as Chief Financial Officer, we have overseen the evaluation of the design and operation of the Bank's internal controls over financial reporting in accordance with *Regulation 52-109 Respecting Certification of Disclosures in Issuers' Annual and Interim Filings* released by the Canadian Securities Administrators. Based on the evaluation work performed, we have concluded that the internal controls over financial reporting were effective as at October 31, 2017 and that they provide reasonable assurance that the financial information is reliable and that the Bank's consolidated financial statements have been prepared in accordance with IFRS.

The Board of Directors (the Board) is responsible for reviewing and approving the financial information contained in the Annual Report. Acting through the Audit Committee, the Board also oversees the presentation of the consolidated financial statements and ensures that accounting and control systems are maintained. Composed of directors who are neither officers nor employees of the Bank, the Audit Committee is responsible, through Internal Audit, for performing an independent and objective review of the Bank's internal control effectiveness, i.e., governance processes, risk management processes and control measures. Furthermore, the Audit Committee reviews the consolidated financial statements and recommends their approval to the Board.

The control systems are supported by the presence of the Compliance Service, which exercises independent oversight in order to assist managers in effectively managing regulatory compliance risk and to obtain reasonable assurance that the Bank is compliant with regulatory requirements.

The Senior Vice-President of Internal Audit has direct access to the Chair of the Audit Committee and to the President and Chief Executive Officer. In addition, the Senior Vice-President and Chief Compliance Officer has a direct functional link to the Chair of the Risk Management Committee and direct access to the President and Chief Executive Officer.

In accordance with the *Bank Act* (Canada), OSFI is mandated to protect the rights and interests of the depositors. Accordingly, OSFI examines and enquires into the business and affairs of the Bank, as deemed necessary, to ensure that the provisions of the *Bank Act* (Canada) are being satisfied and that the Bank is in sound financial condition.

The independent auditor, Deloitte LLP, whose report follows, was appointed by the shareholders on the recommendation of the Board. The auditor has full and unrestricted access to the Audit Committee to discuss audit and financial reporting matters.

Louis Vachon
President and Chief Executive Officer

Ghislain Parent
Chief Financial Officer and Executive Vice-President
Finance and Treasury

Montreal, Canada, November 30, 2017

INDEPENDENT AUDITOR'S REPORT

To the Shareholders of National Bank of Canada

We have audited the accompanying consolidated financial statements of National Bank of Canada (the Bank), which comprise the consolidated balance sheets as at October 31, 2017 and 2016, the consolidated statements of income, the consolidated statements of comprehensive income, the consolidated statements of changes in equity and the consolidated statements of cash flows for the years ended October 31, 2017 and 2016, and 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.

The Auditor's 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. 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 the auditor's 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, the auditor considers 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, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. 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 financial position of the Bank as at October 31, 2017 and 2016 and its financial performance and its cash flows for the years ended October 31, 2017 and 2016 in accordance with the International Financial Reporting Standards issued by the International Accounting Standards Board.

Deloitte LLP[1]

Montreal, Canada, November 30, 2017

[1] CPA auditor, CA, public accountancy permit No. A121501

(millions of Canadian dollars)

CONSOLIDATED BALANCE SHEETS

As at October 31		2017	2016
Assets			
Cash and deposits with financial institutions		8,802	8,183
Securities	Notes 4 and 6		
At fair value through profit or loss		47,536	45,964
Available-for-sale		8,552	14,608
Held-to-maturity		9,255	3,969
		65,343	64,541
Securities purchased under reverse repurchase agreements and securities borrowed		20,789	13,948
Loans	Note 7		
Residential mortgage		50,518	48,868
Personal and credit card		36,963	33,964
Business and government		41,690	37,686
		129,171	120,518
Customers' liability under acceptances		5,991	6,441
Allowances for credit losses		(719)	(781)
		134,443	126,178
Other			
Derivative financial instruments	Note 17	8,423	10,416
Purchased receivables		2,014	1,858
Investments in associates and joint ventures	Note 9	631	645
Premises and equipment	Note 10	558	1,338
Goodwill	Note 11	1,409	1,412
Intangible assets	Note 11	1,239	1,140
Other assets	Note 12	2,176	2,547
		16,450	19,356
		245,827	232,206
Liabilities and equity			
Deposits	Notes 4 and 13	156,671	142,066
Other			
Acceptances		5,991	6,441
Obligations related to securities sold short		15,363	14,207
Obligations related to securities sold under repurchase agreements and securities loaned		21,767	22,636
Derivative financial instruments	Note 17	6,612	7,725
Liabilities related to transferred receivables	Notes 4 and 8	20,098	20,131
Other liabilities	Note 14	5,758	5,886
		75,589	77,026
Subordinated debt	Note 16	9	1,012
Equity			
Equity attributable to the Bank's shareholders	Notes 19 and 23		
Preferred shares		2,050	1,650
Common shares		2,768	2,645
Contributed surplus		58	73
Retained earnings		7,706	6,706
Accumulated other comprehensive income		168	218
		12,750	11,292
Non-controlling interests	Note 20	808	810
		13,558	12,102
		245,827	232,206

The accompanying notes are an integral part of these audited consolidated financial statements.

Louis Vachon
President and Chief Executive Officer

Karen Kinsley
Director

(millions of Canadian dollars)

CONSOLIDATED STATEMENTS OF INCOME

Year ended October 31		2017	2016
Interest income			
Loans		**4,511**	3,872
Securities at fair value through profit or loss		**598**	620
Available-for-sale securities		**227**	330
Held-to-maturity securities		**130**	24
Deposits with financial institutions		**114**	65
		5,580	4,911
Interest expense			
Deposits		**1,780**	1,435
Liabilities related to transferred receivables		**403**	404
Subordinated debt		**16**	33
Other		**149**	47
		2,348	1,919
Net interest income		**3,232**	2,992
Non-interest income			
Underwriting and advisory fees		**349**	376
Securities brokerage commissions		**216**	235
Mutual fund revenues		**412**	364
Trust service revenues		**518**	453
Credit fees		**361**	346
Card revenues		**132**	119
Deposit and payment service charges		**279**	258
Trading revenues (losses)	Note 22	**374**	150
Gains (losses) on available-for-sale securities, net		**140**	70
Insurance revenues, net		**117**	114
Foreign exchange revenues, other than trading		**81**	81
Share in the net income of associates and joint ventures	Note 9	**35**	15
Other	Note 9	**363**	267
		3,377	2,848
Total revenues		**6,609**	5,840
Provisions for credit losses	Note 7	**244**	484
		6,365	5,356
Non-interest expenses			
Compensation and employee benefits		**2,358**	2,161
Occupancy		**236**	233
Technology		**568**	587
Communications		**61**	67
Professional fees		**254**	276
Restructuring charge	Note 15	**–**	131
Other		**380**	420
		3,857	3,875
Income before income taxes		**2,508**	1,481
Income taxes	Note 25	**484**	225
Net income		**2,024**	1,256
Net income attributable to			
Preferred shareholders		**85**	64
Common shareholders		**1,855**	1,117
Bank shareholders		**1,940**	1,181
Non-controlling interests		**84**	75
		2,024	1,256
Earnings per share *(dollars)*	Note 26		
Basic		**5.44**	3.31
Diluted		**5.38**	3.29
Dividends per common share *(dollars)*	Note 19	**2.28**	2.18

The accompanying notes are an integral part of these audited consolidated financial statements.

(millions of Canadian dollars)

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Year ended October 31	2017	2016
Net income	**2,024**	1,256
Other comprehensive income, net of income taxes		
Items that may be subsequently reclassified to net income		
Net foreign currency translation adjustments		
Net unrealized foreign currency translation gains (losses) on investments in foreign operations	**(64)**	62
Net foreign currency translation (gains) losses on investments in foreign operations reclassified to net income	**–**	(12)
Impact of hedging net foreign currency translation gains (losses)	**25**	(33)
Impact of hedging net foreign currency translation (gains) losses reclassified to net income	**–**	5
	(39)	22
Net change in available-for-sale securities		
Net unrealized gains (losses) on available-for-sale securities	**119**	113
Net (gains) losses on available-for-sale securities reclassified to net income	**(131)**	(74)
	(12)	39
Net change in cash flow hedges		
Net gains (losses) on derivative financial instruments designated as cash flow hedges	**33**	34
Net (gains) losses on designated derivative financial instruments reclassified to net income	**(26)**	(18)
	7	16
Share in the other comprehensive income of associates and joint ventures	**(10)**	1
Items that will not be subsequently reclassified to net income		
Remeasurements of pension plans and other post-employment benefit plans	**97**	(257)
Net fair value change attributable to credit risk on financial liabilities designated at fair value through profit or loss	**(21)**	(66)
	76	(323)
Total other comprehensive income (loss), net of income taxes	**22**	(245)
Comprehensive income	**2,046**	1,011
Comprehensive income attributable to		
Bank shareholders	**1,966**	931
Non-controlling interests	**80**	80
	2,046	1,011

INCOME TAXES – OTHER COMPREHENSIVE INCOME

The following table presents the income tax expense or recovery for each component of other comprehensive income.

Year ended October 31	2017	2016
Net foreign currency translation adjustments		
Net unrealized foreign currency translation gains (losses) on investments in foreign operations	**(2)**	(1)
Net foreign currency translation (gains) losses on investments in foreign operations reclassified to net income	**–**	(2)
Impact of hedging net foreign currency translation gains (losses)	**1**	(9)
Impact of hedging net foreign currency translation (gains) losses reclassified to net income	**–**	2
	(1)	(10)
Net change in available-for-sale securities		
Net unrealized gains (losses) on available-for-sale securities	**46**	42
Net (gains) losses on available-for-sale securities reclassified to net income	**(48)**	(27)
	(2)	15
Net change in cash flow hedges		
Net gains (losses) on derivative financial instruments designated as cash flow hedges	**12**	13
Net (gains) losses on designated derivative financial instruments reclassified to net income	**(9)**	(7)
	3	6
Share in the other comprehensive income of associates and joint ventures	**(3)**	–
Remeasurements of pension plans and other post-employment benefit plans	**36**	(94)
Net fair value change attributable to credit risk on financial liabilities designated at fair value through profit or loss	**(8)**	(24)
	25	(107)

The accompanying notes are an integral part of these audited consolidated financial statements.

(millions of Canadian dollars)

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

Year ended October 31		2017	2016
Preferred shares at beginning	Note 19	**1,650**	1,023
Issuances of Series 34, 36 and 38 preferred shares		**400**	800
Redemption of Series 20 preferred shares for cancellation		**–**	(173)
Preferred shares at end		**2,050**	1,650
Common shares at beginning	Note 19	**2,645**	2,614
Issuances of common shares			
Stock Option Plan		**179**	43
Repurchases of common shares for cancellation		**(16)**	–
Impact of shares purchased or sold for trading		**(37)**	(12)
Other		**(3)**	–
Common shares at end		**2,768**	2,645
Contributed surplus at beginning		**73**	67
Stock option expense	Note 23	**11**	12
Stock options exercised		**(26)**	(6)
Contributed surplus at end		**58**	73
Retained earnings at beginning		**6,706**	6,705
Net income attributable to the Bank's shareholders		**1,940**	1,181
Dividends	Note 19		
Preferred shares		**(85)**	(61)
Common shares		**(778)**	(736)
Premium paid on preferred shares redeemed for cancellation	Note 19	**–**	(3)
Premium paid on common shares repurchased for cancellation	Note 19	**(99)**	–
Share issuance expenses, net of income taxes		**(8)**	(11)
Remeasurements of pension plans and other post-employment benefit plans		**97**	(257)
Net fair value change attributable to the credit risk on financial liabilities designated at fair value through profit or loss		**(21)**	(66)
Impact of a financial liability resulting from put options written to non-controlling interests		**(34)**	(46)
Other		**(12)**	–
Retained earnings at end		**7,706**	6,706
Accumulated other comprehensive income at beginning		**218**	145
Net foreign currency translation adjustments		**(39)**	22
Net change in unrealized gains (losses) on available-for-sale securities		**(12)**	39
Net change in gains (losses) on cash flow hedges		**11**	11
Share in the other comprehensive income of associates and joint ventures		**(10)**	1
Accumulated other comprehensive income at end		**168**	218
Equity attributable to the Bank's shareholders		**12,750**	11,292
Non-controlling interests at beginning	Note 20	**810**	801
Net income attributable to non-controlling interests		**84**	75
Other comprehensive income attributable to non-controlling interests		**(4)**	5
Distributions to non-controlling interests		**(82)**	(71)
Non-controlling interests at end		**808**	810
Equity		**13,558**	12,102

ACCUMULATED OTHER COMPREHENSIVE INCOME

As at October 31	2017	2016
Accumulated other comprehensive income		
Net foreign currency translation adjustments	**(13)**	26
Net unrealized gains (losses) on available-for-sale securities	**39**	51
Net gains (losses) on instruments designated as cash flow hedges	**146**	135
Share in the other comprehensive income of associates and joint ventures	**(4)**	6
	168	218

The accompanying notes are an integral part of these audited consolidated financial statements.

(millions of Canadian dollars)

CONSOLIDATED STATEMENTS OF CASH FLOWS

Year ended October 31		2017	2016
Cash flows from operating activities			
Net income		2,024	1,256
Adjustments for			
Provisions for credit losses		244	484
Amortization of premises and equipment and intangible assets		351	417
Impairment losses on intangible assets	Note 11	–	45
Write-off of an equity interest in an associate	Note 9	–	164
Gain on the revaluation of the previously held equity interest in Advanced Bank of Asia Limited	Note 33	–	(41)
Gain on the disposal of an equity interest in a joint venture		(17)	–
Deferred taxes		(13)	(136)
Losses (gains) on sales of available-for-sale securities, net		(140)	(79)
Impairment losses on available-for-sale securities		–	9
Share in the net income of associates and joint ventures		(35)	(15)
Stock option expense		11	12
Change in operating assets and liabilities			
Securities at fair value through profit or loss		(1,572)	(3,967)
Securities purchased under reverse repurchase agreements and securities borrowed		(6,841)	3,754
Loans, net of securitization		(8,982)	(13,278)
Deposits		14,605	10,639
Obligations related to securities sold short		1,156	(3,126)
Obligations related to securities sold under repurchase agreements and securities loaned		(869)	8,857
Derivative financial instruments, net		880	395
Purchased receivables		(156)	(420)
Interest and dividends receivable and interest payable		19	6
Current tax assets and liabilities		(73)	245
Other items		929	217
		1,521	5,438
Cash flows from financing activities			
Issuances of preferred shares		400	800
Redemption of preferred shares for cancellation		–	(176)
Issuances of common shares, net of the impact of shares purchased for trading		116	25
Repurchases of common shares for cancellation		(115)	–
Redemption of subordinated debt		(1,000)	(500)
Share issuance expenses		(8)	(11)
Dividends paid		(846)	(600)
Distributions to non-controlling interests		(82)	(71)
		(1,535)	(533)
Cash flows from investing activities			
Acquisition of Advanced Bank of Asia Limited	Note 33	–	(119)
Net change in investments in associates and joint ventures		35	–
Purchases of available-for-sale securities		(4,277)	(6,284)
Maturities of available-for-sale securities		516	786
Sales of available-for-sale securities		9,523	5,355
Purchases of held-to-maturity securities		(5,269)	(3,962)
Net change in tangible assets leased under operating leases		674	372
Net change in premises and equipment		(94)	(140)
Net change in intangible assets		(268)	(268)
		840	(4,260)
Impact of currency rate movements on cash and cash equivalents		(207)	(29)
Increase in cash and cash equivalents		619	616
Cash and cash equivalents at beginning		8,183	7,567
Cash and cash equivalents at end(1)		8,802	8,183
Supplementary information about cash flows from operating activities			
Interest paid		2,315	1,898
Interest and dividends received		5,565	4,860
Income taxes paid		612	235

The accompanying notes are an integral part of these audited consolidated financial statements.

(1) This item is the equivalent of Consolidated Balance Sheet item *Cash and deposits with financial institutions*. It includes an amount of $2.0 billion as at October 31, 2017 ($2.0 billion as at October 31, 2016) for which there are restrictions. In addition, a negligible amount was held in escrow as at October 31, 2017 ($3 million as at October 31, 2016).

NOTES TO THE AUDITED CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 – BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

National Bank of Canada (the Bank) is a financial institution incorporated and domiciled in Canada and whose shares are listed on the Toronto Stock Exchange. Its head office is located at 600 De La Gauchetière Street West in Montreal, Quebec, Canada. The Bank is a chartered bank under Schedule 1 of the *Bank Act* (Canada) and is regulated by the Office of the Superintendent of Financial Institutions Canada (OSFI).

The Bank provides integrated financial services to consumers, small- and medium-sized enterprises, and large corporations and operates four business segments, namely, the Personal and Commercial segment, the Wealth Management segment, the Financial Markets segment, and the U.S. Specialty Finance and International (USSF&I) segment. Its full line of services includes banking and investing solutions for individuals and businesses, securities brokerage, insurance and wealth management.

On November 30, 2017, the Board of Directors (the Board) authorized the publication of the Bank's audited annual consolidated financial statements (the consolidated financial statements) for the year ended October 31, 2017.

Basis of Presentation

The consolidated financial statements of the Bank have been prepared in accordance with section 308(4) of the *Bank Act* (Canada), which states that, except as otherwise specified by OSFI, the financial statements are to be prepared in accordance with the International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB). IFRS represent Canadian generally accepted accounting principles (GAAP). None of the OSFI accounting requirements are exceptions to IFRS.

On November 1, 2016, the Bank reclassified certain Personal and Commercial segment revenues in the Consolidated Statement of Income to better reflect the nature of the income reported. As a result, for the year ended October 31, 2016, an amount of $36 million reported in *Non-interest income – Credit fees* was reclassified to *Interest income – Loans*.

Also on November 1, 2016, the Bank changed the presentation of certain items on the Consolidated Balance Sheet, and certain amounts were revised from those previously reported. The *Due from clients, dealers and brokers* item as at October 31, 2016 is now presented in *Other assets* on the Consolidated Balance Sheet. All deposits have been grouped into a single *Deposits* item. To better reflect the nature of certain liabilities on the Consolidated Balance Sheet, an amount of $2.2 billion reported in the *Due to clients, dealers and brokers* item was reclassified to the *Deposits* item as at October 31, 2016. The *Due to clients, dealers and brokers* item is now presented in *Other liabilities* on the Consolidated Balance Sheet.

Unless otherwise indicated, all amounts are expressed in Canadian dollars, which is the Bank's functional and presentation currency.

NOTE 1 – BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

Summary of Significant Accounting Policies

Judgments, Estimates and Assumptions

In preparing consolidated financial statements in accordance with IFRS, management must exercise judgment and make estimates and assumptions that affect the reporting date carrying amounts of assets and liabilities, net income and related information. Furthermore, certain accounting policies require complex judgments and estimates because they apply to matters that are inherently uncertain, in particular accounting policies applicable to allowances for credit losses, the fair value determination of financial instruments, the impairment of available-for-sale securities, the impairment of non-financial assets, pension plans and other post-employment benefits, income taxes, provisions, and the consolidation of structured entities. Descriptions of these judgments and estimates are provided in each of the related notes to the consolidated financial statements. Actual results could differ from these estimates, in which case the impact is recognized in the consolidated financial statements of future fiscal periods. The accounting policies described in this note provide greater detail about the use of estimates and assumptions and reliance on judgment.

Basis of Consolidation

Subsidiaries

The consolidated financial statements include all of the assets, liabilities, operating results and cash flows of the Bank and its subsidiaries, after elimination of intercompany transactions and balances. The subsidiaries are entities, including structured entities, controlled by the Bank. A structured entity is an entity created to accomplish a narrow and well-defined objective and is designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when voting rights relate solely to administrative tasks and the relevant activities are directed by means of contractual arrangements.

Management must exercise judgment in determining whether the Bank must consolidate an entity. The Bank controls an entity only if the following three conditions are met:

- it has decision-making authority regarding the entity's relevant activities;
- it has exposure or rights to variable returns from its involvement with the entity; and
- it has the ability to use its power to affect the amount of the returns.

When determining decision-making authority, many factors are taken into account, including the existence and effect of actual and potential voting rights held by the Bank that can be exercised as well as the holding of instruments that are convertible into voting shares. In addition, the Bank must determine whether, as an investor with decision-making rights, it acts as a principal or agent.

Based on these principles, an assessment of control is performed at the inception of a relationship between any entity and the Bank. When performing this assessment, the Bank considers all facts and circumstances, and it must reassess whether it still controls an investee if facts and circumstances indicate that there are changes to one or more of the three conditions of control.

The Bank consolidates the entities it controls from the date on which control is obtained and ceases to consolidate them from the date control ceases. The Bank uses the acquisition method to account for the acquisition of a subsidiary from a third party on the date control is obtained.

Non-Controlling Interests

Non-controlling interests in subsidiaries represent the equity interests of third parties in the Bank's subsidiaries and are presented in total *Equity,* separately from *Equity attributable to the Bank's shareholders.* The non-controlling interests' proportionate share in the net income and other comprehensive income of the Bank's subsidiaries are presented in total net income and total comprehensive income, respectively.

With respect to units issued to third parties by mutual funds and certain other funds that are consolidated, they are presented at fair value in *Other liabilities* on the Consolidated Balance Sheet. Lastly, changes in ownership interests in subsidiaries that do not result in a loss of control are recognized as equity transactions. The difference between the adjustment in the carrying value of the non-controlling interest and the fair value of the consideration paid or received is recognized directly in *Equity attributable to the Bank's shareholders*.

Investments in Associates and Joint Ventures

The Bank exercises significant influence over an entity when it has the power to participate in the financial and operating policy decisions of the investee. The Bank has joint control over an entity when there's a contractually agreed sharing of control of an entity that exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

Investments in associates, i.e., entities over which the Bank exercises significant influence, and investments in joint ventures, i.e., entities over which the Bank has rights to the net assets and exercises joint control, are accounted for using the equity method. Under the equity method, the investment is initially recorded at cost and, following acquisition, the Bank's shares in the net income and in the other comprehensive income are recognized, respectively, in *Non-interest income* in the Consolidated Statement of Income and in *Other comprehensive income* in the Consolidated Statement of Comprehensive Income. The carrying value of the investment is adjusted by an equivalent amount on the Consolidated Balance Sheet and reduced by distributions received.

Foreign Currencies

The consolidated financial statements are presented in Canadian dollars, which is the Bank's functional and presentation currency. Each entity in the group determines its own functional currency, and the items reported in the financial statements of each entity are measured using that currency.

Monetary assets and liabilities denominated in foreign currencies are translated into the functional currency using the rates in effect on the date of the Consolidated Balance Sheet. Translation gains and losses are recognized in *Non-interest income* in the Consolidated Statement of Income. Revenues and expenses denominated in foreign currencies are translated at the average exchange rates for the period. Non-monetary assets and liabilities are translated into the functional currency at historical rates. Non-monetary items denominated in foreign currencies measured at fair value are translated using the exchange rates in effect on the date fair value is determined, and the translation gains or losses are recognized in the Consolidated Statement of Income. Translation gains or losses on non-monetary items classified as available for sale are recognized in *Other comprehensive income.* Upon disposal or due to impairment of a non-monetary item classified as available for sale, the deferred translation gains or losses are reclassified, in whole or in part, from *Accumulated other comprehensive income* to *Non-interest income* of the Consolidated Statement of Income.

In the consolidated financial statements, the assets and liabilities of all foreign operations are translated into the Bank's functional currency using the rates in effect on the Consolidated Balance Sheet date, whereas the revenues and expenses of such foreign operations are translated into the Bank's functional currency at the average exchange rates for the period. Any goodwill resulting from the acquisition of a foreign operation that does not have the same functional currency as the parent company, and any fair value adjustments to the carrying amounts of assets and liabilities resulting from the acquisition, are treated as assets and liabilities of the foreign operation and translated using the rates in effect on the Consolidated Balance Sheet date. Gains and losses on translating the financial statements of foreign operations, along with related hedge and tax effects, are presented in *Other comprehensive income.* Upon disposal of a foreign operation, the deferred cumulative amount recognized in *Accumulated other comprehensive income* relating to that particular operation is reclassified to *Non-interest income* of the Consolidated Statement of Income.

Classification and Measurement of Financial Instruments

In accordance with the accounting framework for financial instruments, all financial assets and liabilities must be classified based on their characteristics, management's intention, or choice of category in certain circumstances. When initially recognized, all financial assets are classified as at fair value through profit or loss, held to maturity, available for sale, or loans and receivables, while financial liabilities are classified as at fair value through profit or loss or as financial liabilities at amortized cost. Certain debt securities that are not quoted in an active market may be classified as loans and receivables, and impairment is determined using the same model as for loans. Loans and receivables that the Bank intends to sell immediately or in the near term must be classified as at fair value through profit or loss, whereas loans and receivables for which the Bank may not recover substantially all of its initial investment, for reasons other than credit deterioration, must be classified as available for sale.

When initially recognized, all financial assets and liabilities, including derivative financial instruments, are recorded at fair value on the Consolidated Balance Sheet. In subsequent periods, they are measured at fair value, except for items classified in the following categories, which are measured at amortized cost using the effective interest rate method: financial assets held to maturity, loans and receivables, and financial liabilities at amortized cost.

Under the fair value option, a financial asset or liability may be irrevocably designated at fair value through profit or loss when it is initially recognized. Financial assets thus designated are recognized at fair value, and any change in fair value is recorded in *Non-interest income* in the Consolidated Statement of Income. Financial liabilities thus designated are recognized at fair value, and any changes in fair value attributable to changes in the Bank's own credit risk are recognized in *Other comprehensive income* unless these changes offset the amounts recognized in *Net income.* Fair value changes not attributable to the Bank's own credit risk are recognized in *Non-interest income* in the Consolidated Statement of Income. The amounts recognized in *Other comprehensive income* will not be subsequently reclassified to *Net income*. Interest income and expenses arising from these financial instruments designated at fair value through profit or loss are recorded in the *Net interest income* item of the Consolidated Statement of Income. The Bank may use this option in the following cases.

- If, consistent with a documented risk management strategy, using this option allows the Bank to eliminate or significantly reduce the measurement or recognition mismatch of measuring financial assets or liabilities on a different basis, and if the fair values are reliable.
- If a group of financial assets and financial liabilities to which an instrument belongs is managed and its performance is evaluated on a fair value basis, in accordance with the Bank's documented risk management or investment strategy, and information is provided on that basis to senior management. Consequently, the Bank may use the fair value option if it has implemented a documented risk management strategy to manage a group of financial instruments together on the fair value basis, if it can demonstrate that significant financial risks are eliminated or significantly reduced, and if the fair values are reliable.
- For hybrid financial instruments with one or more embedded derivatives that would significantly modify the cash flows of the financial instruments and that would otherwise be bifurcated and accounted for separately.

NOTE 1 – BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

Reclassification of Financial Instruments

A financial asset, other than a derivative financial instrument or a financial asset that, upon initial recognition, was designated as measured at fair value through profit or loss, may be reclassified out of the fair value through profit or loss category in rare circumstances if the financial asset is no longer held for the purpose of selling it in the near term. The financial asset must be reclassified at its fair value on the date of reclassification, and this fair value becomes its new amortized cost, as applicable. No gain or loss previously recognized in the Consolidated Statement of Income may be reversed.

Establishing Fair Value

The fair value of a financial instrument is the price that would be received to sell a financial asset or paid to transfer a financial liability in an orderly transaction in the principal market at the measurement date under current market conditions (i.e., an exit price).

Unadjusted quoted prices in active markets, based on bid prices for financial assets and offered prices for financial liabilities, provide the best evidence of fair value. A financial instrument is considered quoted in an active market when prices in exchange, dealer, broker or principal-to-principal markets are accessible at the measurement date. An active market is one where transactions occur with sufficient frequency and volume to provide quoted prices on an ongoing basis.

When there is no quoted price in an active market, the Bank uses another valuation technique that maximizes the use of relevant observable inputs and minimizes the use of unobservable inputs. The chosen valuation technique incorporates all the factors that market participants would take into account in pricing a transaction. Judgment is required when applying a large number of acceptable valuation techniques and estimates to determine fair value. The estimated fair value reflects market conditions on the valuation date and, consequently, may not be indicative of future fair value.

The best evidence of the fair value of a financial instrument at initial recognition is the transaction price, i.e., the fair value of the consideration received or paid. If there is a difference between the fair value at initial recognition and the transaction price, and the fair value is determined using a valuation technique based on observable market inputs or, in the case of a derivative, if the risks are fully offset by other contracts entered into with third parties, this difference is recognized in the Consolidated Statement of Income. In other cases, the difference between the fair value at initial recognition and the transaction price is deferred on the Consolidated Balance Sheet. The amount of the deferred gain or loss is recognized over the term of the financial instrument. The unamortized balance is immediately recognized in net income when (i) observable market inputs can be obtained and support the fair value of the transaction, (ii) the risks associated with the initial contract are substantially offset by other contracts entered into with third parties, (iii) the gain or loss is realized through a cash receipt or payment, or (iv) the transaction matures or is cancelled before maturity.

In certain cases, measurement adjustments are recognized to address factors that market participants would use at the measurement date to determine fair value but that are not included in the measurement technique due to system limitations or uncertainty surrounding the measure. These factors include, but are not limited to, the unobservable nature of inputs used in the valuation model, assumptions about risk such as market risk, credit risk, or risk related to the valuation model, and future administration costs. The Bank may also consider market liquidity risk when determining the fair value of financial instruments when it believes these instruments could be disposed of for a consideration below the fair value otherwise determined due to a lack of market liquidity or an insufficient volume of transactions in a given market.

As permitted when certain criteria are met, the Bank has elected to determine fair value based on net exposure to credit risk or market risk for certain portfolios of financial instruments, mainly derivatives.

Cash and Deposits With Financial Institutions

Cash and deposits with financial institutions consist of cash and cash equivalents, amounts pledged as collateral as well as amounts placed in escrow. Cash comprises cash and bank notes. Cash equivalents consist of deposits with the Bank of Canada, deposits with financial institutions, including net receivables related to cheques and other items in the clearing process, as well as the net amount of cheques and other items in transit.

Securities at Fair Value Through Profit or Loss

Securities at fair value through profit or loss are generally purchased for sale in the near term or are part of portfolios of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit-taking. The Bank accounts for securities transactions at fair value through profit or loss on the settlement date on the Consolidated Balance Sheet. Changes in fair value between the trade date and the settlement date are included in *Non-interest income* in the Consolidated Statement of Income.

Securities at fair value through profit or loss are recognized at fair value, and transaction fees are recognized directly in the Consolidated Statement of Income. Interest income as well as realized and unrealized gains and losses on such securities are recorded in *Non-interest income* in the Consolidated Statement of Income. Dividend income is recorded in *Interest income* in the Consolidated Statement of Income.

Available-for-Sale Securities
Securities that are neither classified as at fair value through profit or loss nor as held to maturity nor in the loans and receivables category are classified as available-for-sale securities. The Bank accounts for available-for-sale securities transactions on the trade date, and the related transaction costs are capitalized.

Available-for-sale securities are recognized at fair value. Unrealized gains and losses are recognized, net of impairment losses and income taxes, provided they are not hedged by derivative financial instruments in a fair value hedging relationship, in *Other comprehensive income.* When the securities are sold, the realized gains or losses, determined on an average cost basis, are reclassified to *Non-interest income* in the Consolidated Statement of Income on the transaction date.

The amortization of premiums and discounts, calculated using the effective interest rate method, as well as dividend and interest income, are recognized in *Interest income* in the Consolidated Statement of Income.

Held-to-Maturity Securities
Held-to-maturity securities are financial assets with fixed or determinable payments and a fixed maturity that the Bank intends and is able to hold until maturity. The Bank accounts for held-to-maturity securities transactions on the trade date, and the related transaction costs are capitalized. These securities are initially recognized at fair value. In subsequent periods, they are recognized at amortized cost using the effective interest rate method, less any impairment loss measured using the same impairment model used for loans. Interest income and the amortization of premiums and discounts on these securities are recognized in *Net interest income* in the Consolidated Statement of Income.

Securities Purchased Under Reverse Repurchase Agreements, Obligations Related to Securities Sold Under Repurchase Agreements and Securities Borrowed and Loaned
The Bank recognizes these transactions at amortized cost using the effective interest rate method. Securities sold under repurchase agreements remain on the Consolidated Balance Sheet, whereas securities purchased under reverse repurchase agreements are not recognized. Reverse repurchase agreements and repurchase agreements are treated as collateralized lending and borrowing transactions.

The Bank also borrows and lends securities. Securities loaned remain on the Consolidated Balance Sheet while securities borrowed are not recognized. As part of these transactions, the Bank pledges or receives collateral in the form of cash or securities. Collateral pledged in the form of securities remains on the Consolidated Balance Sheet. Collateral received in the form of securities is not recognized on the Consolidated Balance Sheet. Collateral pledged or received in the form of cash is recognized in financial assets or liabilities on the Consolidated Balance Sheet.

When the collateral is pledged or received in the form of cash, the interest income and expense are recorded in *Net interest income* in the Consolidated Statement of Income.

Loans
Loans, including transaction costs directly attributable to the granting of the loans, other than loans classified or designated as measured at fair value through profit or loss, are presented on the Consolidated Balance Sheet at amortized cost using the effective interest rate method. Loans classified or designated as measured at fair value through profit or loss are recognized at fair value.

Impairment of Financial Assets
At the end of each reporting period, the Bank determines whether there is objective evidence of impairment of a financial asset or group of financial assets. There is objective evidence of impairment when one or more loss events occur after the initial recognition of the asset and prior to or on the balance sheet date and these events adversely affect the estimated future cash flows of the financial assets in question. Management must exercise judgment to determine whether certain events or circumstances constitute objective evidence of impairment and to estimate the timing of future cash flows.

<u>Available-for-Sale Securities</u>
Available-for-sale securities are reviewed for objective evidence of impairment at the end of each reporting period. The Bank considers all available objective evidence of impairment, including observable data about loss events such as: a significant financial difficulty of the issuer, a breach of contract such as a default, and situations involving bankruptcy or other financial reorganization. In addition to these loss events, objective evidence of impairment for an equity security also includes information about significant changes with an adverse effect that have taken place in the technological, market, economic, or legal environment in which the issuer operates, and indicates that the cost of the investment in the equity security may not be recovered. For equity securities, a significant or prolonged decline in fair value below cost is also considered objective evidence of impairment.

NOTE 1 – BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

If there is objective evidence of impairment, any amount previously recognized in *Accumulated other comprehensive income* is reclassified to *Non-interest income* in the Consolidated Statement of Income. This amount is determined as the difference between the acquisition cost (net of any capital repayments and amortization) and the current fair value of the asset less any impairment loss on that investment previously recognized in the Consolidated Statement of Income.

Once an impairment loss has been recognized for an available-for-sale security, the subsequent accounting treatment depends on whether the instrument is a debt or equity security.

- For an available-for-sale debt security, a subsequent decline in fair value will be accounted for in *Non-interest income* in the Consolidated Statement of Income when there is further objective evidence of impairment as a result of further decreases in the estimated future cash flows of the debt security. Impairment losses recognized in income relating to an available-for-sale debt security must be reversed in the Consolidated Statement of Income when, in a subsequent period, the fair value of the security increases and the increase can be objectively associated with an event occurring after the loss was recognized.
- For an available-for-sale equity security, subsequent decreases in fair value are accounted for in the Consolidated Statement of Income. Impairment losses recognized are not reversed through the Consolidated Statement of Income. All subsequent increases in fair value will be accounted for in *Other comprehensive income* in the Consolidated Statement of Comprehensive Income.

Impaired Loans
A loan, except credit card receivables, is considered impaired if there is objective evidence of impairment and, in management's best estimate, the timely collection of principal and interest is no longer reasonably assured, or when a payment is contractually 90 days past due, unless the loan is fully secured and collection efforts are reasonably expected to result in repayment of the debt within 180 days. For credit card receivables, they are written off when payment is 180 days in arrears. Loans that are insured or fully guaranteed by a Canadian government (federal or provincial) or by a Canadian government agency are considered impaired when more than 365 days in arrears.

When a counterparty to a loan fails to make the payment when contractually due, that loan is considered past due but not impaired.

When a loan is deemed impaired, interest recognition ceases and the carrying amount of the loan is reduced to its estimated realizable amount by writing off all or part of the loan or by taking an allowance for credit losses. The impairment loss is calculated by comparing the present value of expected future cash flows, discounted at the initial effective interest rate of the loan, to its current carrying amount including accrued interest. The losses are recorded in *Provisions for credit losses* in the Consolidated Statement of Income.

A loan is returned to performing status when the timely collection of future interest and principal is reasonably assured and when all principal and interest payments in arrears have been collected.

A loan and its related allowance for credit losses are normally written off in whole or in part when the Bank considers the probability of recovery to be non-existent and when all guarantees and other remedies available to the Bank have been exhausted or if the borrower is bankrupt or winding up and balances owing are not likely to be recovered.

Situations where a retail, commercial or government borrower begin showing clear signs of potential insolvency are managed on a case-by-case basis and require the use of judgment. In these situations, the Bank may grant a concession to the borrower regarding the original terms and conditions of the loan, for example by reducing the rate, granting a forgiveness of principal or extending the term despite the Bank's credit policies. Once the terms of the loan have been renegotiated and agreed upon with the borrower, the loan is considered a restructured loan. As of the restructuring date, the current carrying amount of the loan, including accrued interest, is reduced to the present value of expected cash flows under the modified terms, discounted at the original effective interest rate of the loan. The reduction in the carrying value is recorded in *Provisions for credit losses* in the Consolidated Statement of Income.

Allowances for Credit Losses
Allowances for credit losses are management's best estimate of losses in its credit portfolio as at the balance sheet date. They relate primarily to loans but may also cover the credit risk associated with deposits with financial institutions, loan substitute securities, credit instruments such as acceptances, and off-balance-sheet items such as commitments to extend credit, letters of guarantee and letters of credit.

Changes in allowances for credit losses attributable to the passage of time are recorded in *Interest income* in the Consolidated Statement of Income, whereas changes attributable to a revision of expected payments are recorded in *Provisions for credit losses* in the Consolidated Statement of Income.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the allowances were recognized, the previously recognized impairment loss is reversed directly in *Provisions for credit losses* in the Consolidated Statement of Income.

The allowances for credit losses on impaired loans are calculated on a loan-by-loan basis and assessed either individually or collectively based on the portfolio's historical net loss experience. The allowance for credit losses on non-impaired loans is assessed collectively.

Allowances on Impaired Loans
Impairment allowances are recorded for all individually identified impaired loans to reduce their carrying amount to the estimated realizable amount. For each impaired loan, the Bank records an individual allowance, when the credit loss assessment is based on a detailed analysis of the borrower's file, or a collective allowance, when the credit loss assessment is based on the portfolio's historical net loss experience.

For all individually significant impaired loans, namely business and government loans, and for certain impaired loans that are not individually significant, namely residential mortgages, the Bank records an individual allowance since the credit loss assessment is based on a detailed analysis of the borrower's file. For all other impaired loans that are not individually significant but have been individually identified as impaired, the Bank records for each such loan a collective allowance based on historical net loss experience.

Allowances on Non-Impaired Loans
When the credit risk of a portfolio of loans that have similar credit risk characteristics increases significantly, such as a group of loans of a specific industry, but the loans have yet to be individually identified as impaired, a sectoral allowance is established collectively for the entire loan portfolio. The sectoral allowance is determined using an approach similar to the collective allowance measurement on non-impaired loans, i.e., an approach based on expected default and loss factors determined by statistical analysis of historical loss data by loan type, and on an analysis of the industry-specific market factors such as market liquidity, credit spreads, and risk factor levels.

All loans that have not been individually identified as impaired, and that are not covered by a sectoral allowance, are grouped according to their credit risk characteristics for the purpose of calculating a collective allowance on non-impaired loans. The collective allowance on non-impaired loans includes two components for credit risk: the allocated collective allowance and the unallocated collective allowance.

The allocated collective allowance for the business and government loan portfolio is based on expected default and loss factors determined by statistical analysis of historical loss data, delineated by loan type, to which is added an amount that takes into account the discovery period and migration risk. For personal loans, the allocated collective allowance is calculated based on specific parameters by product, and no discovery period is calculated. Losses are determined by the application of loss ratios established through statistical analysis of historical loss data.

The unallocated collective allowance reflects management's assessment of probable portfolio losses that have not been captured by the allocated collective allowance. This assessment takes into account general economic and business conditions, recent credit loss data, and credit quality and concentration trends when the collective allowance is determined at the Consolidated Balance Sheet date. This allowance also reflects model and estimation risks. The unallocated collective allowance does not represent future losses or serve as a substitute for the allocated collective allowance.

The sectoral allowance and collective allowance on non-impaired loans are collectively established and reflect the impairment losses that the Bank has incurred as a result of events that have occurred but where the individual loss has not been identified.

Purchased Receivables
On the acquisition date, purchased receivables are measured at fair value, which incorporates incurred and expected credit losses estimated on the acquisition date and the interest rate differential between the receivable's contractual interest rate and the current market rates for the remaining term. As a result, no allowances for credit losses are recorded on the Consolidated Balance Sheet on the acquisition date. Discounts related to incurred credit losses are not amortized.

Purchased performing receivables are subsequently accounted for at amortized cost based on their contractual cash flows, and any discount or premium is considered an adjustment to the loan yield and is amortized over the expected life of the receivable using the effective interest rate method and recorded in the Consolidated Statement of Income.

When receivables are acquired with objective evidence of incurred credit loss, where the timely collection of contractual principal and interest is not reasonably assured, these receivables are subsequently accounted for at amortized cost based on the present value of expected future cash flows discounted at the initial effective interest rate. At the end of each reporting period, the Bank re-evaluates the expected future cash flows and adjusts the carrying amount of the receivables to reflect the revised expected future cash flows discounted at the initial effective interest rate. This adjustment is immediately recorded in the Consolidated Statement of Income.

NOTE 1 – BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

Derecognition of Financial Assets and Securitization

A financial asset is considered for derecognition when the Bank has transferred contractual rights to receive the cash flows or assumed an obligation to transfer these cash flows to a third party. The Bank derecognizes a financial asset when it considers that substantially all of the risks and rewards of the asset have been transferred or when the contractual rights to the cash flows of the financial asset expire. When the Bank considers that it has retained substantially all of the risks and rewards of the transferred asset, it continues to recognize the financial asset and, if applicable, recognizes a financial liability on the Consolidated Balance Sheet. If, due to a derivative financial instrument, the transfer of a financial asset does not result in derecognition, the derivative financial instrument is not recognized on the Consolidated Balance Sheet.

When the Bank has neither transferred nor retained substantially all the risks and rewards related to a financial asset, it derecognizes the financial asset it no longer controls. Any rights and obligations retained following the asset transfer are recognized separately as an asset or liability. If the Bank retains control of the financial asset, it continues to recognize the asset to the extent of its continuing involvement in that asset, i.e., to the extent to which it is exposed to changes in the value of the transferred asset.

In order to diversify its funding sources, the Bank participates in two Canada Mortgage and Housing Corporation (CMHC) securitization programs: the Mortgage-Backed Securities Program under the *National Housing Act* (Canada) (NHA) and Canada Mortgage Bond (CMB) program. Under the first program, the Bank issues NHA securities backed by insured residential mortgages and, under the second, the Bank sells NHA securities to Canada Housing Trust (CHT). As part of these transactions, the Bank retains substantially all of the risks and rewards related to ownership of the mortgage loans sold. Therefore, the insured mortgage loans securitized under the CMB program continue to be recognized in the *Loans* item on the Bank's Consolidated Balance Sheet and the liabilities for the considerations received from the transfer are recognized in *Liabilities related to transferred receivables* on the Consolidated Balance Sheet. Moreover, insured mortgage loans securitized and retained by the Bank continue to be recognized in *Loans* on the Consolidated Balance Sheet.

Derecognition of Financial Liabilities

A financial liability is derecognized when the obligation is discharged, cancelled or expires. The difference between the carrying value of the financial liability transferred and the consideration paid is recognized in the Consolidated Statement of Income.

Acceptances and Customers' Liability Under Acceptances

The potential liability of the Bank under acceptances is recorded as a customer commitment liability on the Consolidated Balance Sheet. The Bank's potential recourse vis à vis clients is recorded as an equivalent offsetting asset. Fees are recorded in *Non-interest income* in the Consolidated Statement of Income.

Obligations Related to Securities Sold Short

This financial liability represents the Bank's obligation to deliver the securities it sold but did not own at the time of sale. Obligations related to securities sold short are recorded at fair value and presented as liabilities on the Consolidated Balance Sheet. Realized and unrealized gains and losses are recognized in *Non-interest income* in the Consolidated Statement of Income.

Derivative Financial Instruments

In the normal course of business, the Bank uses derivative financial instruments to meet the needs of its clients, to generate trading activity revenues, and to manage its exposure to interest rate risk, foreign exchange risk, credit risk and other market risks.

All derivative financial instruments are recorded at fair value on the Consolidated Balance Sheet. Derivative financial instruments with a positive fair value are included in assets, and derivative financial instruments with a negative fair value are included in liabilities on the Consolidated Balance Sheet.

<u>Embedded Derivative Financial Instruments</u>

An embedded derivative financial instrument is a component of a financial instrument or another contract, the characteristics of which are similar to those of a derivative product. Taken together, the financial instrument or contract is considered to be a hybrid instrument comprising a host contract and an embedded derivative financial instrument.

Embedded derivatives are bifurcated and accounted for separately if, and only if, the following three conditions are met: the economic characteristics and risks of the embedded derivative are not closely related to those of the host contract, the embedded derivative is a separate instrument that meets the definition of a derivative financial instrument, and the hybrid contract is not recorded at fair value.

Embedded derivatives that must be bifurcated and separately accounted for are recorded at fair value on the Consolidated Balance Sheet. Realized and unrealized gains and losses are recognized in *Non-interest income* in the Consolidated Statement of Income. In general, all embedded derivatives are presented on a combined basis with the host contract. However, certain embedded derivatives that are bifurcated from the host contract are presented in *Derivative financial instruments* on the Consolidated Balance Sheet.

Held-for-Trading Derivative Financial Instruments

Derivative financial instruments are recognized at fair value, and the realized and unrealized gains and losses (including interest income and expense) are recorded in *Non-interest income* in the Consolidated Statement of Income.

Derivative Financial Instruments Designated as Hedging Instruments

Policy

The purpose of a hedging transaction is to modify the Bank's exposure to one or more risks by creating an offset between changes in the fair value of, or the cash flows attributable to, the hedged item and the hedging instrument. Hedge accounting ensures that offsetting gains, losses, revenues and expenses are recognized in the Consolidated Statement of Income in the same period or periods.

Documenting and Assessing Effectiveness

The Bank designates and formally documents each hedging relationship, at its inception, by detailing the risk management objective and the hedging strategy. The documentation identifies the specific asset, liability or cash flows being hedged, the related hedging instrument, the nature of the specific risk exposure or exposures being hedged, the intended term of the hedging relationship and the method for assessing the effectiveness or ineffectiveness of the hedging relationship. At the inception of the hedging relationship, and for every financial reporting period for which the hedge has been designated, the Bank ensures that the hedging relationship is highly effective and consistent with its originally documented risk management objective and strategy. When a hedging relationship meets the hedge accounting requirements, it is designated as either a fair value hedge, a cash flow hedge or a foreign exchange hedge of a net investment in a foreign operation.

Fair Value Hedge

In a fair value hedge, the Bank mainly uses interest rate swaps to hedge changes in the fair value of a hedged item. The carrying amount of the hedged item is adjusted based on the effective portion of the gains or losses attributable to the hedged risk, which are recognized in the Consolidated Statement of Income, as well as the change in the fair value of the hedging instrument. The resulting ineffective portion is recognized in *Non-interest income* in the Consolidated Statement of Income.

The Bank prospectively discontinues hedge accounting if the hedging instrument is sold or expires or if the hedging relationship no longer qualifies for hedge accounting or if the Bank revokes the designation. When the designation is revoked, the hedged item is no longer adjusted to reflect changes in fair value, and the amounts previously recorded as cumulative adjustments with respect to the effective portion of gains and losses attributable to the hedged risk are amortized using the effective interest rate method and recognized in the Consolidated Statement of Income over the remaining useful life of the hedged item. If the hedged item is sold or terminated before maturity, the cumulative adjustments to the effective portion of gains and losses attributable to the hedged risk are immediately recorded in the Consolidated Statement of Income.

Cash Flow Hedge

In a cash flow hedge, the Bank mainly uses interest rate swaps and total return swaps to hedge variable cash flows attributable to the hedged risk related to a financial asset or liability (or to a group of financial assets or liabilities). The effective portion of changes in fair value of the hedging instrument is recognized in *Other comprehensive income* and the ineffective portion in *Non-interest income* in the Consolidated Statement of Income.

The amounts previously recorded in *Accumulated other comprehensive income* are reclassified to the Consolidated Statement of Income of the period or periods during which the cash flows of the hedged item affect the Consolidated Statement of Income. If the hedging instrument is sold or expires or if the hedging relationship no longer qualifies for hedge accounting or if the Bank cancels that designation, then the amounts previously recognized in *Accumulated other comprehensive income* are reclassified to the Consolidated Statement of Income in the period or periods during which the cash flows of the hedged item affect the Consolidated Statement of Income.

Hedge of a Net Investment in a Foreign Operation

Derivative and non-derivative financial instruments are used to hedge foreign exchange risk related to investments made in foreign operations whose functional currency is not the Canadian dollar. The effective portion of the gains and losses on the hedging instrument is recognized in *Other comprehensive income* and the ineffective portion in *Non-interest income* in the Consolidated Statement of Income. Upon the total or partial sale of a net investment in a foreign operation, amounts reported in *Accumulated other comprehensive income* are reclassified, in whole or in part, to *Non-interest income* in the Consolidated Statement of Income.

Offsetting of Financial Assets and Liabilities

Financial assets and liabilities are offset and the net amount is presented on the Consolidated Balance Sheet when the Bank has a legally enforceable right to set off the recognized amounts and intends to settle on a net basis or to realize the asset and settle the liability simultaneously.

NOTE 1 – BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

Premises and Equipment

Premises and equipment, except for land, are recognized at cost less accumulated amortization and accumulated impairment losses. Land is recorded at cost net of any impairment losses.

Premises and equipment and the significant components of a building that have different useful lives or that provide economic benefits at a different pace are systematically amortized over their useful lives. Amortization methods and useful lives are reviewed on an annual basis. The amortization expense is recorded in *Non-interest expenses* in the Consolidated Statement of Income.

	Methods	Useful life
Significant components of a building		
Exterior design	Straight-line	20 years
Interior design, roofing and electromechanical system	Straight-line	30 years
Structure	Straight-line	75 years
Other buildings	5% declining balance	
Computer equipment	Straight-line	3-4 years
Other equipment and furniture	Straight-line	1-8 years
Leasehold improvements	Straight-line	(1)

(1) The average amortization period is 15 years, determined using the lesser of the useful life or the lease term plus the first renewal option.

Goodwill

The Bank uses the acquisition method to account for business combinations. The consideration transferred in a business combination is measured at the acquisition-date fair value and the transaction costs related to the acquisition are expensed as incurred. When the Bank acquires control of a business, all of the identifiable assets and liabilities of the acquiree, including intangible assets, are recorded at fair value. The interests previously held in the acquiree are also measured at fair value. Goodwill represents the excess of the purchase consideration and all previously held interests over the fair value of identifiable net assets of the acquiree. If the fair value of identifiable net assets exceeds the purchase consideration and all previously held interests, the difference is immediately recognized as a gain on a bargain purchase.

Non-controlling interests in the net assets of consolidated subsidiaries are identified separately from the Bank's ownership interest and can be initially measured at either fair value or at the non-controlling interest's proportionate share of the acquiree's identifiable net assets. The measurement basis is selected on a case-by-case basis. Following the acquisition, non-controlling interests consist of the value assigned to those interests at initial recognition plus the non-controlling interests' share of changes in equity since the date of the combination.

Intangible Assets

Intangible Assets With Finite Useful Lives

Software and certain other intangible assets are recognized at cost net of accumulated amortization and accumulated impairment losses. These intangible assets are systematically amortized on a straight-line basis over their useful lives, which vary between four and ten years. The amortization expense is recorded in *Non-interest expenses* in the Consolidated Statement of Income.

Intangible Assets With Indefinite Useful Lives

The Bank's intangible assets with indefinite useful lives come from the acquisition of subsidiaries or groups of assets and consist of management contracts and a trademark. They are recognized at the acquisition-date fair value. The management contracts are for the management of open-ended funds. At the end of each reporting period, the Bank reviews the useful lives to determine whether events and circumstances continue to support an indefinite useful life assessment. Intangible assets are deemed to have an indefinite useful life following an examination of all relevant factors, in particular: a) the contracts do not have contractual maturities; b) the stability of the business segment to which the intangible assets belong; c) the Bank's capacity to control the future economic benefits of the intangible assets; and d) the continued economic benefits generated by the intangible assets.

Impairment of Non-Financial Assets

Premises and equipment and intangible assets with finite useful lives are tested for impairment when events or changes in circumstances indicate that their carrying value may not be recoverable. At the end of each reporting period, the Bank determines whether there is an indication that premises and equipment or intangible assets with finite useful lives may be impaired. Goodwill and intangible assets that are not yet available for use or that have indefinite useful lives are tested for impairment annually or more frequently if there is an indication that the asset might be impaired.

An asset is tested for impairment by comparing its carrying amount with its recoverable amount. The recoverable amount must be estimated for the individual asset. Where it is not possible to estimate the recoverable amount of an individual asset, the recoverable amount of the cash-generating unit (CGU) to which the asset belongs will be determined. A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The Bank uses judgment to identify CGUs.

An asset's recoverable amount is the higher of fair value less costs to sell and the value in use of the asset or CGU. Value in use is the present value of expected future cash flows from the asset or CGU. The recoverable amount of the CGU is determined using valuation models that consider various factors such as projected future cash flows, discount rates and growth rates. The use of different estimates and assumptions in applying the impairment tests could have a significant impact on income.

Corporate assets, such as the head office building and computer equipment, do not generate cash inflows that are largely independent of the cash inflows from other assets or groups of assets. Therefore, the recoverable amount of an individual corporate asset cannot be determined unless management has decided to dispose of the asset. However, if there is an indication that a corporate asset may be impaired, the recoverable amount is determined for the CGU or group of CGUs to which the corporate asset belongs, and is compared with the carrying amount of this CGU or group of CGUs.

Goodwill is always tested for impairment at the level of a CGU or groups of CGUs. For impairment testing purposes, from the acquisition date, goodwill resulting from a business combination must be allocated to the CGU or group of CGUs expected to benefit from the synergies of the business combination. Each CGU or group of CGUs to which goodwill is allocated must represent the lowest level for which the goodwill is monitored internally at the Bank and must not be larger than an operating segment. The allocation of goodwill to a CGU or group of CGUs involves management's judgment. If an impairment loss is to be recognized, the Bank does so by first reducing the carrying amount of goodwill allocated to the CGU or group of CGUs and then reducing the carrying amounts of the other assets of the CGU or group of CGUs in proportion to the carrying amount of each asset in the CGU or group of CGUs.

If the recoverable amount of an asset or a CGU is less than its carrying amount, the carrying amount is reduced to its recoverable amount and an impairment loss is recognized in *Non-interest expenses* in the Consolidated Statement of Income. An impairment loss recognized in prior periods for an asset other than goodwill must be reversed if, and only if, there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment was recognized. If this is the case, the carrying amount of the asset is increased, as the impairment loss was reversed, but shall not exceed the carrying amount that would have been determined, net of amortization, had no impairment loss been recognized for this asset in previous years.

Leases

A lease is an agreement whereby the lessor conveys to the lessee the right to use an asset for an agreed period of time in return for a payment or series of payments. A finance lease is a lease that transfers substantially all the risks and rewards incidental to ownership of the leased asset to the lessee. Title may or may not eventually be transferred. An operating lease is a lease other than a finance lease. The Bank primarily enters into operating leases.

When the Bank is the lessee under an operating lease, the rental expense is recognized on a straight-line basis over the lease term in *Non-interest expenses* in the Consolidated Statement of Income. When the Bank is the lessor, the lease assets remain on the Consolidated Balance Sheet and are reported in premises and equipment, and the rental income is recognized net of related expenses in *Non-interest income* in the Consolidated Statement of Income.

Provisions

Provisions are liabilities of uncertain timing and amount. A provision is recognized when the Bank has a present obligation (legal or constructive) arising from a past event, when it is probable that an outflow of economic resources will be required to settle the obligation and when the amount of the obligation can be reliably estimated. Provisions are based on the Bank's best estimates of the economic resources required to settle the present obligation, given all relevant risks and uncertainties, and, when it is significant, the effect of the time value of money. The provisions are reviewed at the end of each reporting period. Provisions are presented in *Other liabilities* on the Consolidated Balance Sheet.

NOTE 1 – BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

Revenue Recognition
The Bank's revenues are recognized in the Consolidated Statement of Income as they are earned.

Interest Income and Expense
Interest income and expense, except for the interest income on securities classified as at fair value through profit or loss, are recognized in *Net interest income* and calculated using the effective interest rate method. The effective interest rate is the rate that discounts estimated future cash inflows and outflows through the expected life of the financial instrument (or, when appropriate, a shorter period) to the net carrying amount of the instrument. When calculating the effective interest rate, the Bank estimates cash flows considering all contractual terms of the financial instrument but without considering future credit losses and also includes all fees paid or received related to the contract that are an integral part of the effective interest rate, transaction costs and all other premiums or discounts.

Commission Revenues
Loan origination fees, including commitment, restructuring and renegotiation fees, are considered an integral part of the yield earned on the loan. They are deferred and amortized using the effective interest rate method, and the amortization is recognized in *Interest income* over the term of the loan. Direct costs for originating a loan are netted against the loan origination fees. If it is likely that a commitment will result in a loan, commitment fees receive the same accounting treatment, i.e., they are deferred and amortized using the effective interest rate method and the amortization is recognized in *Interest income* over the term of the loan. Otherwise, they are recorded in *Non-interest income* over the term of the commitment.

Loan syndication fees are recorded in *Non-interest income* unless the yield on the loan retained by the Bank is less than that of other comparable lenders involved in the financing. In such cases, an appropriate portion of the fees is deferred and amortized using the effective interest rate method, and the amortization is recognized in *Interest income* over the term of the loan. Certain mortgage loan prepayment fees are recognized in *Interest income* in the Consolidated Statement of Income when earned.

Dividend Income
Dividends from an equity instrument are recognized in the Consolidated Statement of Income when the Bank's right to receive payment is established.

Insurance Revenues
Insurance contracts, including reinsurance contracts, are arrangements under which one party accepts significant insurance risk by agreeing to compensate the policyholder if a specified uncertain future event were to occur. Gross premiums, net of premiums transferred under reinsurance contracts, are recognized when they become due. Royalties received from reinsurers are recognized when earned. Claims are recognized when received and an amount is estimated as they are being processed. All of these amounts are recognized on a net basis in *Non-interest income* in the Consolidated Statement of Income.

Upon recognition of a premium, a reinsurance asset and insurance liability are recognized, respectively, in *Other assets* and in *Other liabilities* on the Consolidated Balance Sheet. Subsequent changes in the carrying value of the reinsurance asset and insurance liability are recognized on a net basis in *Non-interest income* in the Consolidated Statement of Income.

Income Taxes
Income taxes include current taxes and deferred taxes and are recorded in net income except for income taxes generated by items recognized in *Other comprehensive income* or directly in equity.

Current tax is the amount of income tax payable on the taxable income for a period. It is calculated using the enacted or substantively enacted tax rates prevailing on the reporting date, and any adjustments recognized in the period for current tax of prior periods. Current tax assets and liabilities are offset and the net balance is presented in either *Other assets* or *Other liabilities* on the Consolidated Balance Sheet when the Bank has a legally enforceable right to set off the recognized amounts and intends to settle on a net basis or to simultaneously realize the asset and settle the liability.

Deferred tax is established based on temporary differences between the carrying values and the tax bases of assets and liabilities, in accordance with enacted or substantively enacted income tax laws and rates that will apply on the date the differences will reverse. Deferred tax is not recognized for temporary differences related to the following:

- the initial accounting of goodwill;
- the initial accounting of an asset or liability in a transaction that is not a business combination and that, at the time of the transaction, affects neither accounting income nor taxable income;
- investments in subsidiaries, associates and joint ventures when it is probable that the temporary difference will not reverse in the foreseeable future and that the Bank controls the timing of the reversal of the temporary difference;
- investments in subsidiaries, associates and joint ventures when it is probable that the temporary difference will not reverse in the foreseeable future and that there will not be taxable income to which the temporary difference can be recognized.

Deferred tax assets are tax benefits in the form of deductions the Bank may claim to reduce its taxable income in future years. At the end of each reporting period, the carrying amount of deferred tax assets is revised and reduced to the extent that it is no longer probable that sufficient taxable income will be available to allow the benefit of the deferred tax asset to be utilized.

Deferred tax assets and liabilities are offset and the net balance is presented in either *Other assets* or *Other liabilities* on the Consolidated Balance Sheet when the Bank has a legally enforceable right to set off the current tax assets and liabilities, and if the deferred tax assets and liabilities relate to taxes levied by the same taxation authority on the same taxable entity, or on different taxable entities that intend to settle current tax assets and liabilities based on their net amount.

The Bank makes assumptions to estimate income taxes as well as deferred tax assets and liabilities. This process includes estimating the actual amount of current taxes and evaluating tax loss carryforwards and temporary differences arising from differences between the values of the items reported for accounting and for income tax purposes. Deferred tax assets and liabilities presented on the Consolidated Balance Sheet are calculated according to the tax rates to be applied in future periods. Previously recorded deferred tax assets and liabilities must be adjusted when the date of the future event is revised based on current information.

Moreover, the Bank is subject to the jurisdiction of various tax authorities. In the normal course of its business, the Bank is involved in a number of transactions for which the tax impacts are uncertain. As a result, the Bank accounts for provisions for uncertain tax positions that adequately represent the tax risk stemming from tax matters under discussion or being audited by tax authorities or from other matters involving uncertainty. The amounts of these provisions reflect the best possible estimates of the amounts that may have to be paid based on qualitative assessments of all relevant factors. The provisions are estimated at the end of each reporting period. However, it is possible that an adjustment to the provision needs to be recognized at a future date following an audit by the tax authorities. When the final assessment differs from the initially provisioned amounts, the difference will impact the income taxes of the period in which the assessment was made.

Financial Guarantee Contracts

A financial guarantee contract is a contract or indemnification agreement that could require the Bank to make specified payments (in cash, financial instruments, other assets, Bank shares, or provisions of services) to reimburse the beneficiary in the event of a loss resulting from a debtor defaulting on the original or amended terms of a debt instrument.

To reflect the fair value of the obligation assumed at the inception of a financial guarantee, a liability is recorded in *Other liabilities* on the Consolidated Balance Sheet. After initial recognition, the Bank must measure financial guarantee contracts at the higher of the estimated amount needed to settle the financial obligation under the guarantee or the amount initially recognized less, where applicable, the accumulated amortization that corresponds to revenue earned during the period. This revenue is recognized in *Credit fees* in the Consolidated Statement of Income.

Employee Benefits – Pension Plans and Other Post-Employment Benefits

The Bank offers defined benefit pension plans and other post-employment benefit plans to eligible employees. The other post-employment benefit plans include post-retirement medical, dental and life insurance coverage. While pension plans are funded, the other plans are not.

Plan expenses and obligations are actuarially determined based on the projected benefit method prorated on service. The calculations use management's best estimates of various actuarial assumptions such as discount rates, rates of compensation increase, health care cost trend rates, mortality rates and retirement age.

The net asset or net liability of pension plans and other post-employment benefit plans are calculated separately for each plan as the difference between the present value of the future benefits earned by employees in respect of current- and prior-period service and the fair value of plan assets. The net asset or net liability is included in either the *Other assets* or *Other liabilities* item of the Consolidated Balance Sheet.

The expense related to pension plans and other post-employment benefit plans consists of the following items: current service cost, net interest on the net plan asset or liability, administration costs and past service cost, if any, recognized when a plan is amended. This expense is recognized in *Compensation and employee benefits* in the Consolidated Statement of Income. The net amount of interest income and expense is determined by applying a discount rate to the net plan asset or liability amount.

Remeasurements resulting from pension plans and other post-employment benefit plans represent actuarial gains and losses related to the defined benefit obligation and the actual return on plan assets, excluding net interest determined by applying a discount rate to the net asset or liability of the plans. Remeasurements are immediately recognized in *Other comprehensive income* and will not be subsequently reclassified to net income; these cumulative gains and losses are reclassified to *Retained earnings.*

NOTE 1 – BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

Share-Based Payments

The Bank has several share-based compensation plans: the Stock Option Plan, the Stock Appreciation Rights (SAR) Plan, the Deferred Stock Unit (DSU) Plan, the Restricted Stock Unit (RSU) Plan, the Performance Stock Unit (PSU) Plan, the Deferred Compensation Plan (DCP) of National Bank Financial and the Employee Share Ownership Plan.

Compensation expense is recognized over the service period required for employees to become fully entitled to the award. This period is generally the same as the vesting period, except where the required service period begins before the award date. Compensation expense related to awards granted to employees eligible to retire on the award date is immediately recognized on the award date. Compensation expense related to awards granted to employees who will become eligible to retire during the vesting period is recognized over the period from the award date to the date the employee becomes eligible to retire. For all of these plans, as of the first year of recognition, the expense includes cancellation and forfeiture estimates. These estimates are subsequently revised as necessary. The Bank uses derivative financial instruments to hedge the risks associated with some of these plans. The compensation expense for these plans, net of related hedges, is recognized in the Consolidated Statement of Income.

Under the Stock Option Plan, the Bank uses the fair value method to account for stock options awarded. The options vest at 25% per year, and each tranche is treated as though it was a separate award. The fair value of each of the tranches is measured on the award date using the Black-Scholes model, and this fair value is recognized in *Compensation and employee benefits* and *Contributed surplus.* When the options are exercised, the *Contributed surplus* amount is credited to *Equity – Common shares* on the Consolidated Balance Sheet. The proceeds received from the employees when these options are exercised are also credited to *Equity – Common shares* on the Consolidated Balance Sheet.

SARs are recorded at fair value when awarded and their fair value is remeasured at the end of each reporting period until they are exercised. The cost is recognized in *Compensation and employee benefits* in the Consolidated Statement of Income and in *Other liabilities* on the Consolidated Balance Sheet. The obligation that results from the change in fair value at each period is recognized in net income gradually over the vesting period, and periodically thereafter, until the SARs are exercised. When a SAR is exercised, the Bank makes a cash payment equal to the increase in the stock price since the date of the award.

The obligation that results from the award of a DSU, RSU, PSU and DCP unit is recognized in net income, and the corresponding amount is included in *Other liabilities* on the Consolidated Balance Sheet. For the DSU, RSU and DCP plans, the change in the obligation attributable to variations in the share price and dividends paid on common shares for these plans is recognized in *Compensation and employee benefits* in the Consolidated Statement of Income for the period in which the variations occur. On the redemption date, the Bank makes a cash payment equal to the value of the common shares on that date. For the PSU Plan, the change in the obligation attributable to changes in the stock price, adjusted upward or downward depending on the relative result of the performance criteria, and the change in the obligation attributable to dividends paid on the shares awarded under the plan, are recognized in *Compensation and employee benefits* in the Consolidated Statement of Income for the period in which the changes occur. On the redemption date, the Bank makes a cash payment equal to the value of the common shares on that date, adjusted upward or downward according to the performance criteria. This is based on the total shareholder return (TSR) achieved by the Bank compared to that of the S&P/TSX Banks adjusted sub-index.

The Bank's contributions to the employee share ownership plan are expensed as incurred.

NOTE 2 – FUTURE ACCOUNTING POLICY CHANGES

The IASB issues revisions and amendments to a number of standards, some of which have already had an impact on the Bank and others that could have an impact in the future. The Bank is currently assessing the impact that adoption of the following standards will have on its consolidated financial statements. A summary of these amendments and the effective dates applicable to the Bank are presented below.

Effective Date – Early Adoption on November 1, 2017

IFRS 9 – *Financial Instruments*

In July 2014, the IASB issued a complete and final version of IFRS 9, which replaces the guidance in IAS 39 – *Financial Instruments: Recognition and Measurement*. IFRS 9 sets out requirements for the classification and measurement of financial assets and financial liabilities, for the impairment of financial assets, and for general hedge accounting. Macro hedge accounting has been decoupled from IFRS 9 and will be considered and issued as a separate standard. As a result of IFRS 9, consequential amendments have been made to IFRS 7 – *Financial Instruments: Disclosures*, requiring additional qualitative and quantitative disclosures that must be adopted at the same time as IFRS 9. In December 2015, the Basel Committee on Banking Supervision issued *Guidance on Credit Risk and Accounting for Expected Credit Losses*. In June 2016, OSFI issued the final guideline on IFRS 9 *Financial Instruments and Disclosures*, setting out its expectations regarding IFRS 9 application.

For the Bank, the IFRS 9 effective date is November 1, 2018 with early adoption permitted. However, on January 9, 2015, OSFI issued a final version of *Early Adoption of IFRS 9 Financial Instruments for Domestic Systemically Important Banks* and stated therein that it expects Domestic Systemically Important Banks (D-SIBs), a group that includes the Bank, to adopt IFRS 9 as of November 1, 2017. The Bank will therefore adopt IFRS 9 as of November 1, 2017. Its first financial statements presented in accordance with IFRS 9 will be its unaudited interim condensed consolidated financial statements for the quarter ending January 31, 2018. In general, IFRS 9 is to be applied retrospectively. As permitted by IFRS 9, the Bank will not restate the comparative period financial statements. The retrospective impact of applying IFRS 9 will be accounted for through adjustments to the opening balances of *Retained earnings, Accumulated other comprehensive income* and *Non-controlling interests* as at November 1, 2017.

<u>Classification and Measurement</u>

IFRS 9 provides a single model for financial asset classification and measurement that is based on both the business model for managing financial assets and the contractual cash flow characteristics of the financial assets. These factors determine whether the financial assets are measured at amortized cost, fair value through other comprehensive income, or fair value through profit or loss.

IFRS 9 requires that all debt instrument financial assets, including loans, that do not meet a "solely payment of principal and interest" (SPPI) condition, including those that contain embedded derivatives, be classified as at fair value through profit or loss. For those that meet the SPPI condition, classification at initial recognition will be determined based on the business model under which these assets are managed. Upon transition, the business model test will be based on the facts and circumstances as at November 1, 2017. Debt instruments that are being managed on a "held for trading" or fair value basis will be classified as at fair value through profit or loss. Debt instruments that are managed on a "hold to collect and for sale" basis will be classified as at fair value through other comprehensive income. Finally, debt instruments that are managed on a "hold to collect" basis will be classified as at amortized cost. In addition, IFRS 9 also includes an option to irrevocably designate, at initial recognition, a debt instrument as measured at fair value through profit or loss if doing so eliminates or significantly reduces an accounting mismatch and if OSFI requirements are also met. This designation is also available for existing financial assets and liabilities at the date of IFRS 9 adoption.

Under IFRS 9, all equity instrument financial assets must be classified as at fair value through profit or loss. However, the Bank may, at initial recognition of a non-trading equity instrument, irrevocably elect to designate the instrument as at fair value through other comprehensive income with no subsequent reclassification of gains and losses to net income. Dividends will continue to be recognized in net income. This designation is also available for existing non-trading equity instruments at the date of IFRS 9 adoption. Derivative financial instruments will continue to be measured at fair value through profit or loss.

The classification and measurement of financial liabilities remain essentially unchanged under IFRS 9, except for financial liabilities designated as measured at fair value through profit or loss under the fair value option. Once the fair value election is made, changes in fair value attributable to changes in an entity's own credit risk must be recognized in *Other comprehensive income* rather than in net income. On February 1, 2016, the Bank early adopted, on a prospective basis, the own credit risk provisions of IFRS 9.

NOTE 2 – FUTURE ACCOUNTING POLICY CHANGES (cont.)

Impairment

Overall Comparison of the New Impairment Model and the Current Model

IFRS 9 introduces a new, single impairment model for financial assets that requires the recognition of expected credit losses (ECL) rather than incurred losses as applied under the current standard. Currently, impairment losses are recognized if, and only if, there is objective evidence of impairment as a result of one or more loss events that occurred after initial recognition of the asset and that loss event has a detrimental impact on the estimated future cash flows of the asset that can be reliably estimated. If there is no objective evidence of impairment for an individual financial asset, that financial asset is included in a group of assets with similar credit risk characteristics and collectively assessed for impairment losses incurred but not yet identified. Under IFRS 9, ECLs will be recognized in profit or loss before a loss event has occurred, which could result in earlier recognition of credit losses compared to the current model.

Under the current standard, incurred losses are measured by incorporating reasonable and supportable information about past events and current conditions. Under IFRS 9, the ECL model, which is forward-looking, in addition requires that forecasts of future events and economic conditions be used when determining significant increases in credit risk and when measuring expected losses. Forward-looking macroeconomic factors such as unemployment rates, housing price indices, interest rates, and gross domestic product will be incorporated into the risk parameters. Estimating forward-looking information will require significant judgment and must be consistent with the forward-looking information used by the Bank for other purposes, such as forecasting and budgeting.

Scope

The impairment model applies to all financial assets not measured at fair value through profit or loss. The ECL model also applies to loan commitments and financial guarantees that are not measured at fair value through profit or loss.

Measurement of Expected Credit Losses

ECLs are measured as the probability-weighted present value of expected cash shortfalls over the remaining expected life of the financial instrument. The measurement of ECLs will be based primarily on the product of the instrument's probability of default (PD), loss given default (LGD), and exposure at default (EAD). IFRS 9 requires the estimate of expected credit losses to reflect an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes. The Bank will incorporate three forward-looking macroeconomic scenarios in its ECL calculation process: a base scenario, an upside scenario, and a downside scenario. Probability-weights will be attributed to each scenario. The scenarios and probability weights will be reassessed quarterly and subject to management review.

The ECL model contains a three-stage approach that is based on the change in the credit quality of assets since initial recognition. If, at the reporting date, the credit risk of non-impaired financial instruments has not increased significantly since initial recognition, these financial instruments are classified in Stage 1, and a loss allowance that is measured, at each reporting date, at an amount equal to 12-month expected credit losses is recorded. When there is a significant increase in credit risk since initial recognition, these non-impaired financial instruments are migrated to Stage 2, and a loss allowance that is measured, at each reporting date, at an amount equal to lifetime expected credit losses is recorded. In subsequent reporting periods, if the credit risk of the financial instrument improves such that there is no longer a significant increase in credit risk since initial recognition, the ECL model requires reverting to recognition of 12-month expected credit losses. When one or more events that have a detrimental impact on the estimated future cash flows of a financial asset have occurred, the financial asset is considered credit-impaired and is migrated to Stage 3, and an allowance equal to lifetime expected losses continues to be recorded or the financial asset is written off.

Interest income is calculated on the gross carrying amount of the financial assets in Stages 1 and 2 and on the net carrying amount of the financial assets in Stage 3.

(millions of Canadian dollars)

Assessment of Significant Increase in Credit Risk

To assess whether the credit risk of a financial instrument has increased significantly, the PD occurring over its expected life as at the reporting date is compared with the PD occurring over its expected life on the date of initial recognition, and reasonable and supportable information indicative of significant increases in credit risk since initial recognition is considered. The Bank has included relative and absolute thresholds in the definition of significant increase in credit risk and a backstop of 30 days past due. All financial instruments that are 30 days past due are migrated to Stage 2 even if other metrics do not indicate that a significant increase in credit risk has occurred.

Definition of Default

IFRS 9 does not define default but requires the definition to be consistent with the definition used for internal credit risk management purposes. However, IFRS 9 contains a rebuttable presumption that default does not occur later than when a financial asset is 90 days past due. Under IFRS 9, the Bank will consider a financial asset, other than a credit card receivable, as credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of a financial asset have occurred or when contractual payments are 90 days past due. The backstop for credit card receivables will be 180 days past due. The Bank's write-off policy under IAS 39 is not expected to be materially different under IFRS 9.

Comparison of Regulatory Expected Credit Loss Model and IFRS 9 Expected Credit Loss Model

The IFRS 9 ECL calculation has leveraged, where appropriate, the expected credit loss model parameters used by the Bank for regulatory purposes, namely: PD, LGD and EAD. Adjustments to these parameters were made to comply with IFRS 9 requirements. After the adoption of IFRS 9, an ECL model will be used for both regulatory and accounting purposes. However, there are key differences, which are summarized below.

	Regulatory Capital	**IFRS 9**
PD	Through-the-cycle 12-month PD calibrated on a long run average PD throughout a full economic cycle. The default backstop is generally 90 days past due.	Point-in-time 12-month or lifetime PD based on past experience, current conditions and relevant forward-looking information. The default backstop is generally 90 days past due.
LGD	Downturn LGD based on losses that would be expected in an economic downturn and subject to certain regulatory floors. All collection costs are included.	Expected LGD based on past experience, current conditions and relevant forward-looking information. The value of collateral and other credit risk mitigants are incorporated as appropriate and undue conservatism and floors are excluded.
EAD	Based on the drawn balance plus expected utilization of any undrawn portion prior to default, and cannot be lower than the current balance.	Represents the expected balance at default across the lifetime horizon on forward-looking expectations.
Other		ECLs are discounted from the default date to the reporting date.

Regulatory Capital

On March 29, 2017, the Basel Committee on Banking Supervision (BCBS) released details on the interim regulatory treatment for accounting provisions as well as standards for transitional arrangements. Given the coming into effect of IFRS 9, the BCBS will retain the current Basel Accord regulatory treatment for provisions during a transition period. Jurisdictions may adopt transitional measures to phase in any potential significant negative impacts on regulatory capital arising from the new expected credit loss impairment model under IFRS 9. On August 21, 2017, OSFI released for comment a new, revised version of the *Capital Adequacy Requirements (CAR) Guideline* to be implemented in the first quarter of 2018. Consistent with the BCBS position, the proposed CAR Guideline retains the current regulatory treatment of accounting provisions. As for transitional measures to phase-in any potential negative impacts on regulatory capital, on November 29, 2017, OSFI has announced that no mitigation measures will be allowed for banks whose capital position could be significantly affected by IFRS 9 adoption.

Hedge Accounting

IFRS 9 introduces a new general hedge accounting model that better aligns hedge accounting with risk management activities. However, the current hedge accounting requirements under IAS 39 may continue to be applied until the IASB finalizes its macro hedge accounting project. As permitted, the Bank elected not to adopt the IFRS 9 hedge accounting requirements and instead will continue applying the IAS 39 hedge accounting requirements. The Bank will, however, comply with the revised hedge accounting disclosures required by the consequential amendments made to IFRS 7.

NOTE 2 – FUTURE ACCOUNTING POLICY CHANGES (cont.)

Transition Impact

As at October 31, 2017, the Bank's best estimate of the impact of transitioning to IFRS 9 is a decrease of approximately $165 million, net of income taxes, in equity as at November 1, 2017, and a decrease of approximately 16 basis points in the Common Equity Tier 1 (CET1) capital ratio. The estimate of the impact for the Bank relates primarily to the classification and measurement requirements, in particular the election to irrevocably designate certain financial assets and financial liabilities at fair value through profit or loss under the fair value option, as permitted by the IFRS 9 transitional provisions.

The estimate of the impact of applying the new impairment model for financial assets is not significant. The Bank continues to refine and validate the new impairment models leading up to the disclosure of its 2018 first quarter results.

Effective Date – November 1, 2018

IFRS 15 – *Revenue From Contracts With Customers*

In May 2014, the IASB issued a new standard, IFRS 15, which replaces the current revenue recognition standards and interpretations. IFRS 15 provides a single comprehensive model to use when accounting for revenue arising from contracts with customers. The new model applies to all contracts with customers except those that are within the scope of other IFRS standards such as leases, insurance contracts and financial instruments. As a result, the majority of the Bank's revenue, including net interest income, will not be impacted.

At its meeting on July 22, 2015, the IASB unanimously confirmed its proposal to defer the effective date of IFRS 15 to fiscal years beginning on or after January 1, 2018, which will be November 1, 2018 for the Bank. In April 2016, the IASB issued amendments to IFRS 15, clarifying some requirements and providing additional transitional relief at the date of initial application.

On transition, IFRS 15 permits to either restate prior periods or to apply the standard on a modified retrospective basis. The Bank plans to use the modified retrospective basis, recognizing the cumulative effect of initially applying the standard as an adjustment to the opening balance of *Retained earnings* as at November 1, 2018, without restating comparative periods.

While the impact assessment is not complete, the Bank does not currently expect the adoption of IFRS 15 to have a significant impact on the consolidated financial statements. The Bank is continuing to review its revenue contracts that fall within the scope of IFRS 15 and to assess the impact of the new standard on its consolidated financial statements, including the additional disclosure requirements.

Effective Date – November 1, 2019

IFRS 16 – *Leases*

In January 2016, the IASB issued a new standard, IFRS 16 – *Leases*. The new standard requires lessees to recognize most leases on the balance sheet using a single model, thereby eliminating the distinction between operating and finance leases. Lessor accounting, however, remains similar to current accounting practice, and the distinction between operating and finance leases is retained. Early application is permitted if IFRS 15 – *Revenue From Contracts With Customers* is also applied.

IFRIC Interpretation 23 – *Uncertainty Over Income Tax Treatments*

In June 2017, the IASB issued IFRIC Interpretation 23, which addresses how to reflect tax treatment uncertainty in accounting for income taxes.

Effective Date – November 1, 2021

IFRS 17 – *Insurance Contracts*

In May 2017, the IASB issued IFRS 17 – *Insurance Contracts*, a new standard that replaces IFRS 4, the current insurance contract accounting standard. IFRS 17 introduces a new accounting framework that will improve the comparability and quality of financial information.

(millions of Canadian dollars)

NOTE 3 – FAIR VALUE OF FINANCIAL INSTRUMENTS

Fair Value and Carrying Value of Financial Instruments by Category

Financial assets and financial liabilities are recognized on the Consolidated Balance Sheet at fair value or at amortized cost in accordance with the categories set out in the accounting framework for financial instruments.

							As at October 31, 2017
	Carrying value and fair value			Carrying value	Fair value		
	Financial instruments classified as at fair value through profit or loss	Financial instruments designated at fair value through profit or loss	Available-for-sale financial instruments measured at fair value	Financial instruments at amortized cost	Financial instruments at amortized cost	Total carrying value	Total fair value
Financial assets							
Cash and deposits with financial institutions	–	–	–	8,802	8,802	8,802	8,802
Securities	46,780	756	8,552	9,255	9,229	65,343	65,317
Securities purchased under reverse repurchase agreements and securities borrowed	–	657	–	20,132	20,132	20,789	20,789
Loans and acceptances, net of allowances	5,523	115	–	128,805	128,944	134,443	134,582
Other							
Derivative financial instruments	8,423	–	–	–	–	8,423	8,423
Purchased receivables	–	–	–	2,014	2,014	2,014	2,014
Other assets	–	–	–	994	994	994	994
Financial liabilities							
Deposits	–	5,501		151,170 (1)	151,571	156,671	157,072
Other							
Acceptances	–	–		5,991	5,991	5,991	5,991
Obligations related to securities sold short	15,363	–		–	–	15,363	15,363
Obligations related to securities sold under repurchase agreements and securities loaned	–	534		21,233	21,233	21,767	21,767
Derivative financial instruments	6,612	–		–	–	6,612	6,612
Liabilities related to transferred receivables	–	6,209		13,889	13,940	20,098	20,149
Other liabilities	15	–		2,902	2,904	2,917	2,919
Subordinated debt	–	–		9	6	9	6

(1) Includes embedded derivative financial instruments.

(millions of Canadian dollars)

NOTE 3 – FAIR VALUE OF FINANCIAL INSTRUMENTS (cont.)

As at October 31, 2016

	Carrying value and fair value			Carrying value	Fair value		
	Financial instruments classified as at fair value through profit or loss	Financial instruments designated at fair value through profit or loss	Available-for-sale financial instruments measured at fair value	Financial instruments at amortized cost	Financial instruments at amortized cost	Total carrying value	Total fair value
Financial assets							
Cash and deposits with financial institutions	–	–	–	8,183	8,183	8,183	8,183
Securities	44,499	1,465	14,608	3,969	3,993	64,541	64,565
Securities purchased under reverse repurchase agreements and securities borrowed	–	158	–	13,790	13,790	13,948	13,948
Loans and acceptances, net of allowances	6,290	164	–	119,724	120,641	126,178	127,095
Other							
Derivative financial instruments	10,416	–	–	–	–	10,416	10,416
Purchased receivables	–	–	–	1,858	1,858	1,858	1,858
Other assets[1]	–	–	–	1,317	1,317	1,317	1,317
Financial liabilities							
Deposits[2]	–	4,655		137,411[3]	138,267	142,066	142,922
Other							
Acceptances	–	–		6,441	6,441	6,441	6,441
Obligations related to securities sold short	14,207	–		–	–	14,207	14,207
Obligations related to securities sold under repurchase agreements and securities loaned	–	–		22,636	22,636	22,636	22,636
Derivative financial instruments	7,725	–		–	–	7,725	7,725
Liabilities related to transferred receivables	–	6,206		13,925	13,974	20,131	20,180
Other liabilities[2]	43	–		3,158	3,173	3,201	3,216
Subordinated debt	–	–		1,012	1,013	1,012	1,013

(1) The *Due from clients, dealers and brokers* amount of $843 million presented separately on the Consolidated Balance Sheet as at October 31, 2016 is now reported in *Other assets*.
(2) An amount of $2,699 million reported in *Due to clients, dealers and brokers* on the Consolidated Balance Sheet as at October 31, 2016 is now reported in *Deposits* ($2,159 million) and in *Other liabilities* ($540 million).
(3) Includes embedded derivative financial instruments.

Establishing Fair Value

The fair value of a financial instrument is the price that would be received to sell a financial asset or paid to transfer a financial liability in an orderly transaction in the principal market at the measurement date under current market conditions (i.e., an exit price).

Unadjusted quoted prices in active markets provide the best evidence of fair value. When there is no quoted price in an active market, the Bank applies other valuation techniques that maximize the use of relevant observable inputs and that minimize the use of unobservable inputs. Such valuation techniques include the following: using information available from recent market transactions, referring to the current fair value of a comparable financial instrument, applying discounted cash flow analysis, applying option pricing models, or relying on any other valuation technique that is commonly used by market participants and has proven to yield reliable estimates. Judgment is required when applying many of the valuation techniques. The Bank's valuation was based on its assessment of the conditions prevailing as at October 31, 2017 and may change in the future. Furthermore, there may be valuation uncertainty resulting from the choice of valuation model used.

Valuation Governance

Fair value is established in accordance with a rigorous control framework. The Bank has policies and procedures that govern the process for determining fair value. These policies are documented and periodically reviewed by the Risk Management Group. All valuation models are validated, and controls have been implemented to ensure that they are applied.

The fair value of existing or new products is determined and validated by functions independent of the risk-taking team. Complex fair value matters are reviewed by valuation committees made up of experts from various specialized functions.

For financial instruments classified in Level 3 of the fair value hierarchy, the Bank has documented the classification policies to determine the hierarchy, and there are controls in place to ensure that fair value is measured appropriately, reliably and consistently. Valuation methods and the underlying assumptions are reviewed on a regular basis.

Valuation Methods and Assumptions

<u>Financial Instruments Whose Fair Value Equals Carrying Value</u>

The carrying value of the following financial instruments is a reasonable approximation of fair value:

- cash and deposits with financial institutions;
- securities purchased under reverse repurchase agreements and securities borrowed;
- obligations related to securities sold under repurchase agreements and securities loaned;
- customers' liability under acceptances;
- acceptances;
- purchased receivables;
- certain items of other assets and other liabilities.

<u>Securities and Obligations Related to Securities Sold Short</u>

These financial instruments are recognized at fair value on the Consolidated Balance Sheet. Their fair value is based on quoted prices in active markets, i.e., bid prices for financial assets and offered prices for financial liabilities. If there are no quoted prices in an active market, fair value is estimated based on prices for securities that, in substance, are identical. If such prices are not available, fair value is determined using valuation techniques that incorporate assumptions based primarily on observable market inputs such as current market prices, the contractual prices of the underlying instruments, the time value of money, credit risk, interest rate yield curves and currency rates.

When one or more significant inputs are not observable in the markets, fair value is established primarily on the basis of internal estimates and data that consider the valuation policies in effect at the Bank, economic conditions, the specific characteristics of the financial asset or liability and other relevant factors.

Securities Issued or Guaranteed by Governments

Securities issued or guaranteed include government debt securities of the governments of Canada (federal, provincial and municipal) as well as debt securities of the U.S. government (U.S. Treasury), of other U.S. agencies and of other foreign governments. The fair value of these securities is based on unadjusted quoted prices in active markets. For those classified in Level 2, quoted prices for identical or similar instruments in active markets are used to determine fair value. In the absence of an observable market, valuation techniques such as the discounted cash flow method could be used, incorporating assumptions on benchmark yields (CDOR, LIBOR and other) and the risk spreads of similar securities.

NOTE 3 – FAIR VALUE OF FINANCIAL INSTRUMENTS (cont.)

Equity Securities and Other Debt Securities
The fair value of equity securities is determined primarily by using quoted prices in active markets. For equity securities and other debt securities classified in Level 2, a valuation technique based on quoted prices of identical and similar instruments in an active market is used to determine fair value. In the absence of observable inputs, valuation techniques such as the discounted cash flow method could be used, incorporating assumptions on benchmark yields (CDOR, LIBOR and other) and the risk spreads of similar securities. For those classified in Level 3, fair value can be determined based on the net asset value, which represents the estimated value of a security based on valuations received from investment or fund managers or the general partners of the limited partnerships. Fair value can also be determined using internal valuation techniques adjusted for risk factors related to the financial instruments and for economic conditions.

Restructured Notes of the Master Asset Vehicle (MAV) Conduits
In establishing the fair value of the restructured notes of the MAV conduits classified as Level 2, the Bank considered the quality of the underlying assets. The Bank determined fair value using a valuation technique that incorporates discounted cash flows. For the restructured notes of the MAV I and MAV II conduits, the discount rate is based 80% on the CDX.IG index tranches and 20% on a basket of securities backed by assets such as credit card receivables, Residential Mortgage-Backed Securities (RMBS), Commercial Mortgage-Backed Securities (CMBS) and automobile loans.

In establishing the fair value of the restructured notes, the Bank adjusts, as required, its liquidity assumption to reflect market conditions. The Bank determines the fair value of the restructured notes of the MAV conduits it is holding by comparing the value obtained using the above-described methodology against a range of values. The values situated in this range were obtained by adjusting various liquidity scenarios.

Other Restructured Notes of MAV I and MAV II Conduits
The fair value of these financial instruments, which are classified in Level 3, is determined based on the net asset value, which represents the estimated value of a security based on valuations received from the administrator of the conduits.

<u>Derivative Financial Instruments</u>
Derivative financial instruments are recorded at fair value on the Consolidated Balance Sheet. For exchange-traded derivative financial instruments, fair value is based on the quoted price in an active market, i.e., bid prices for financial assets or offered prices for financial liabilities.

For over-the-counter (OTC) derivative financial instruments, fair value is determined using well established valuation techniques that incorporate assumptions based primarily on observable market inputs such as current market prices and the contractual prices of the underlying instruments, the time value of money, interest rate yield curves, credit curves, currency rates as well as price and rate volatility factors. In establishing the fair value of OTC derivative financial instruments, the Bank also incorporates the following factors:

Credit Valuation Adjustment (CVA)
The CVA is a valuation adjustment applied to derivative financial instruments to reflect the credit risk of the counterparty. For each counterparty, the CVA is based on the expected positive exposure and probabilities of default through time. The exposures are determined by incorporating relevant factors such as current and potential future market values, master netting arrangements, collateral agreements and expected recovery rates. The default probabilities are inferred using credit default swap (CDS) spreads. When unavailable, relevant proxies are used. While the general methodology currently assumes independence between expected positive exposures and probabilities of default, adjustments are applied to certain types of transactions where there is a direct link between the exposure at default and the default probabilities.

Debit Valuation Adjustment (DVA)
The DVA reflects the Bank's own credit risk in the valuation of derivative financial instruments. The DVA is based on the expected negative exposure and probabilities of default of the Bank over time. The exposures are determined by incorporating relevant factors such as current and potential future market values, master netting arrangements, collateral agreements and expected recovery rates. The market implied spreads of the Bank are used in the calculation of the DVA.

Funding Valuation Adjustment (FVA)

The FVA is a valuation adjustment applied to derivative financial instruments to reflect the market implied cost or benefits of funding collateral for uncollateralized or partly collateralized transactions. The expected exposures are determined using methodologies consistent with the CVA and DVA framework. The funding level used to determine the FVA is based on the average funding level of relevant market participants.

When the valuation techniques incorporate one or more significant inputs that are not observable in the markets, the fair value of OTC derivative financial instruments is established primarily on the basis of internal estimates and data that consider the valuation policies in effect at the Bank, economic conditions, the specific characteristics of the financial asset or financial liability and other relevant factors.

Loans

The fair value of fixed-rate mortgage loans is determined by discounting expected future contractual cash flows, adjusted for several factors, including prepayment options, current market interest rates for similar loans, and other relevant variables where applicable. The fair value of variable-rate mortgage loans is deemed to equal carrying value.

The fair value of other fixed-rate loans is determined by discounting expected future contractual cash flows using current market interest rates charged for similar new loans. The fair value of variable-rate loans is deemed to equal carrying value.

Deposits

The fair value of fixed-term deposits is determined primarily by discounting expected future contractual cash flows and considering several factors such as redemption options and market interest rates currently offered for financial instruments with similar conditions. For certain term funding instruments, fair value is determined using market prices for similar instruments. The fair value of demand deposits and notice deposits is deemed to equal carrying value.

The fair value of structured deposit notes is established using valuation models that maximize the use of observable inputs when available, such as benchmark indices, and also incorporates the DVA, which reflects the Bank's own credit risk. In calculating DVA, the market implied spreads of the Bank are used to infer its probabilities of default. Lastly, when fair value is determined using option pricing models, the valuation techniques are similar to those described for derivative financial instruments.

Liabilities Related to Transferred Receivables

These liabilities arise from sale transactions to Canada Housing Trust (CHT) of securities backed by insured residential mortgages and other securities under the Canada Mortgage Bond (CMB) program. These transactions do not qualify for derecognition. They are recorded as guaranteed borrowings, which results in the recording of liabilities on the Consolidated Balance Sheet. The fair value of these liabilities is established using valuation techniques based on observable market inputs such as Canada Mortgage Bond prices.

Other Liabilities and Subordinated Debt

The fair value of these financial liabilities is based on quoted market prices in an active market. If there is no active market, fair value is determined by discounting contractual cash flows using the current market interest rates offered for similar financial instruments that have the same term to maturity.

NOTE 3 – FAIR VALUE OF FINANCIAL INSTRUMENTS (cont.)

Hierarchy of Fair Value Measurements

IFRS establishes a fair value hierarchy that classifies the inputs used in financial instrument fair value measurement techniques according to three levels. This fair value hierarchy requires observable market inputs to be used whenever such inputs exist. According to the hierarchy, the highest level of inputs are unadjusted quoted prices in active markets for identical instruments and the lowest level of inputs are unobservable inputs. If inputs from different levels of the hierarchy are used, the financial instrument is classified in the same level as the lowest level input that is significant to the fair value measurement. The fair value hierarchy has the following levels.

– Level 1: Inputs corresponding to unadjusted quoted prices in active markets for identical assets and liabilities and accessible to the Bank at the measurement date. These instruments consist primarily of equity securities, derivative financial instruments traded in active markets, and certain highly liquid debt securities actively traded in over-the-counter markets.
– Level 2: Valuation techniques based on inputs, other than the quoted prices included in Level 1 inputs, that are directly or indirectly observable in the market for the asset or liability. These inputs are quoted prices of similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; inputs other than quoted prices used in a valuation model that are observable for that instrument; and inputs that are derived principally from or corroborated by observable market inputs by correlation or other means. These instruments consist primarily of certain loans, certain deposits, derivative financial instruments traded in over-the-counter markets, certain debt securities, certain equity securities whose value is not directly observable in an active market, liabilities related to transferred receivables and certain other liabilities.
– Level 3: Valuation techniques based on one or more significant inputs that are not observable in the market for the asset or liability. The Bank classifies financial instruments in Level 3 when the valuation technique is based on at least one significant input that is not observable in the markets. The valuation technique may also be partly based on observable market inputs.

Financial instruments whose fair values are classified in Level 3 consist of the following:

– financial instruments measured at fair value through profit or loss: investments in hedge funds for which there are certain restrictions on unit or security redemptions, as well as certain derivative financial instruments whose fair value is established using internal valuation models that are based on significant unobservable market inputs.
– available-for-sale securities: certain restructured notes as well as equity and debt securities of private companies.
– certain deposits (structured deposit notes) whose fair value is established using internal valuation models that are based on significant unobservable market inputs.

Transfers Between the Fair Value Hierarchy Levels
Transfers of financial instruments between Levels 1 and 2 and transfers to (or from) Level 3 are deemed to have taken place at the beginning of the quarter in which the transfer occurred. Significant transfers can occur between the fair value hierarchy levels due to new information on inputs used to determine fair value and the observable nature of those inputs.

During fiscal 2017, $358 million in securities classified as at fair value through profit or loss and $17 million in obligations related to securities sold short were transferred from Level 2 to Level 1 resulting from changing market conditions ($214 million in securities classified as at fair value through profit or loss and $71 million in obligations related to securities sold short in fiscal 2016). In addition, during fiscal 2017, $103 million in securities classified as at fair value through profit or loss and $53 million in obligations related to securities sold short were transferred from Level 1 to Level 2 (for fiscal 2016, $56 million in securities classified as at fair value through profit or loss and no obligations related to securities sold short).

During fiscal years 2017 and 2016, financial instruments were transferred to (or from) Level 3 due to changes in the availability of observable market inputs resulting from changing market conditions.

(millions of Canadian dollars)

Financial Instruments Recorded at Fair Value on the Consolidated Balance Sheet

The following tables show financial instruments recorded at fair value on the Consolidated Balance Sheet according to the fair value hierarchy.

			As at October 31, 2017	
	Level 1	Level 2	Level 3	Total financial assets/liabilities at fair value
Financial assets				
Securities				
At fair value through profit or loss				
Securities issued or guaranteed by				
Canadian government	2,506	6,156	–	8,662
Canadian provincial and municipal governments	–	7,770	–	7,770
U.S. Treasury, other U.S. agencies and other foreign governments	1,916	212	–	2,128
Other debt securities	–	2,599	–	2,599
Equity securities	25,751	610	16	26,377
	30,173	17,347	16	47,536
Available-for-sale				
Securities issued or guaranteed by				
Canadian government	66	4,215	–	4,281
Canadian provincial and municipal governments	–	2,584	–	2,584
U.S. Treasury, other U.S. agencies and other foreign governments	519	2	–	521
Other debt securities	–	494	–	494
Equity securities	109	237	326	672
	694	7,532	326	8,552
Securities purchased under reverse repurchase agreements and securities borrowed	–	657	–	657
Loans and acceptances, net of allowances	–	5,638	–	5,638
Other				
Derivative financial instruments	68	8,284	71	8,423
	30,935	39,458	413	70,806
Financial liabilities				
Deposits	–	5,708	1	5,709
Other				
Obligations related to securities sold short	10,515	4,848	–	15,363
Obligations related to securities sold under repurchase agreements	–	534	–	534
Derivative financial instruments	118	6,443	51	6,612
Liabilities related to transferred receivables	–	6,209	–	6,209
Other liabilities	–	15	–	15
	10,633	23,757	52	34,442

(millions of Canadian dollars)

NOTE 3 – FAIR VALUE OF FINANCIAL INSTRUMENTS (cont.)

				As at October 31, 2016
	Level 1	Level 2	Level 3	Total financial assets/liabilities at fair value
Financial assets				
Securities				
At fair value through profit or loss				
Securities issued or guaranteed by				
Canadian government	2,284	4,904	–	7,188
Canadian provincial and municipal governments	–	10,547	–	10,547
U.S. Treasury, other U.S. agencies and other foreign governments	3,968	206	–	4,174
Other debt securities	–	2,934	–	2,934
Equity securities	20,410	693	18	21,121
	26,662	19,284	18	45,964
Available-for-sale				
Securities issued or guaranteed by				
Canadian government	241	6,040	–	6,281
Canadian provincial and municipal governments	–	4,996	–	4,996
U.S. Treasury, other U.S. agencies and other foreign governments	1,614	95	–	1,709
Other debt securities	–	948	30	978
Equity securities	201	168	275	644
	2,056	12,247	305	14,608
Securities purchased under reverse repurchase agreements and securities borrowed	–	158	–	158
Loans and acceptances, net of allowances	–	6,454	–	6,454
Other				
Derivative financial instruments	87	10,196	133	10,416
	28,805	48,339	456	77,600
Financial liabilities				
Deposits	–	4,788	7	4,795
Other				
Obligations related to securities sold short	8,732	5,475	–	14,207
Derivative financial instruments	117	7,490	118	7,725
Liabilities related to transferred receivables	–	6,206	–	6,206
Other liabilities	–	43	–	43
	8,849	24,002	125	32,976

(millions of Canadian dollars)

Financial Instruments Classified in Level 3

The Bank classifies financial instruments in Level 3 when the valuation technique is based on at least one significant input that is not observable in the markets. The valuation technique may also be based, in part, on observable market inputs. The following table shows the significant unobservable inputs used for the fair value measurements of financial instruments classified in Level 3 of the hierarchy.

As at October 31, 2017

	Fair value	Primary valuation techniques	Significant unobservable inputs	Range of input values Low	High
Financial assets					
Securities					
Equity securities and other debt securities	342	Net asset value	Net asset value	100 %	100 %
		Market comparable	EV/EBITDA(1) multiple	11 x	14 x
		Discounted cash flows	Credit spread	455 Bps(2)	705 Bps(2)
Other					
Derivative financial instruments					
Interest rate contracts	1	Discounted cash flows	Discount rate	2.20 %	2.20 %
Equity contracts	70	Option pricing model	Long-term volatility	7 %	23 %
			Market correlation	(42) %	(42) %
	413				
Financial liabilities					
Deposits					
Structured deposit notes	1	Option pricing model	Long-term volatility	8 %	39 %
			Market correlation	(37) %	83 %
Other					
Derivative financial instruments					
Interest rate contracts	1	Discounted cash flows	Discount rate	2.20 %	2.20 %
Equity contracts	50	Option pricing model	Long-term volatility	8 %	41 %
			Market correlation	(42) %	83 %
	52				

As at October 31, 2016

	Fair value	Primary valuation techniques	Significant unobservable inputs	Range of input values Low	High
Financial assets					
Securities					
Other restructured notes of the MAV I and MAV II conduits	6	Net asset value	Net asset value	100 %	100 %
Equity securities and other debt securities	317	Net asset value	Net asset value	100 %	100 %
		Market comparable	EV/EBITDA(1) multiple	11 x	14 x
		Price-based model	Price equivalent	71 %	121 %
Other					
Derivative financial instruments					
Interest rate contracts	2	Discounted cash flows	Discount rate	2.20 %	2.20 %
Equity contracts	131	Option pricing model	Long-term volatility	10 %	25 %
			Market correlation	(56) %	(56) %
	456				
Financial liabilities					
Deposits					
Structured deposit notes	7	Option pricing model	Long-term volatility	10 %	55 %
			Market correlation	(33) %	87 %
Other					
Derivative financial instruments					
Equity contracts	118	Option pricing model	Long-term volatility	10 %	54 %
			Market correlation	(56) %	87 %
	125				

(1) EV/EBITDA means Enterprise Value/Earnings Before Interest, Taxes, Depreciation and Amortization.
(2) Bps or basis point is a unit of measure equal to 0.01%.

NOTE 3 – FAIR VALUE OF FINANCIAL INSTRUMENTS (cont.)

Significant Unobservable Inputs Used for Fair Value Measurements of Financial Instruments Classified in Level 3

Net Asset Value

Net asset value is the estimated value of a security based on valuations received from the investment or fund managers, the administrators of the conduits or the general partners of the limited partnerships. The net asset value of a fund is the total fair value of assets less liabilities.

EV/EBITDA (Enterprise Value/Earnings Before Interest, Taxes, Depreciation and Amortization) Multiple and Price Equivalent

Private equity valuation inputs include earnings multiples, which are determined based on comparable companies, and a higher multiple will translate into a higher fair value. Price equivalent is a percentage of the market price based on the liquidity of the security.

Discount Rate

When discounted cash flow methods are used, the discount rate is the input used to bring future cash flows to their present value. A higher discount rate will translate into a lower fair value.

Long-Term Volatility

Volatility is a measure of the expected future variability of market prices. Volatility is generally observable in the market through options prices. However, the long-term volatility of options with a longer maturity might not be observable. An increase (decrease) in long-term volatility is generally associated with an increase (decrease) in long-term correlation. Higher long-term volatility may increase or decrease an instrument's fair value depending on its terms.

Market Correlation

Correlation is a measure of the inter-relationship between two different variables. A positive correlation means that the variables tend to move in the same direction; a negative correlation means that the variables tend to move in opposite directions. Correlation is used to measure financial instruments whose future returns depend on several variables. Changes in correlation will either increase or decrease a financial instrument's fair value depending on the terms of its contractual payout.

Sensitivity Analysis of Financial Instruments Classified in Level 3

The Bank performs sensitivity analyses for the fair value measurements of financial instruments classified in Level 3, substituting unobservable inputs with one or more reasonably possible alternative assumptions.

For equity securities and other debt securities, the Bank varies significant unobservable inputs such as net asset values, EV/EBITDA multiples, or price equivalents and establishes a reasonable fair value range that could result in a $40 million increase or decrease in the fair value recorded as at October 31, 2017 (a $40 million increase or decrease as at October 31, 2016).

For derivative financial instruments and embedded derivatives related to structured deposit notes, the Bank varies long-term volatility and market correlation inputs and establishes a reasonable fair value range. As at October 31, 2017, for derivative financial instruments, the net fair value could result in a $3 million increase or decrease ($7 million increase or decrease as at October 31, 2016), whereas for structured deposit notes, the fair value could result in a $1 million increase or decrease ($1 million increase or decrease as at October 31, 2016).

(millions of Canadian dollars)

Change in the Fair Value of Financial Instruments Classified in Level 3

The Bank may hedge the fair value of financial instruments classified in the various levels through offsetting hedge positions. Gains and losses for financial instruments classified in Level 3 presented in the following tables do not reflect the inverse gains and losses on financial instruments used for economic hedging purposes that may have been classified in Level 1 or 2 by the Bank. In addition, the Bank may hedge the fair value of financial instruments classified in Level 3 using other financial instruments classified in Level 3. The effect of these hedges is not included in the net amount presented in the following tables. The gains and losses presented hereafter may comprise changes in fair value based on observable and unobservable inputs.

	Year ended October 31, 2017			
	Securities at fair value through profit or loss	**Available-for-sale securities**	**Derivative financial instruments[1]**	**Deposits**
Fair value as at October 31, 2016	**18**	**305**	**15**	**(7)**
Total realized and unrealized gains (losses) included in *Net income*[2]	**2**	**24**	**(9)**	**–**
Total realized and unrealized gains (losses) included in *Other comprehensive income*	**–**	**(28)**	**–**	**–**
Purchases	**4**	**85**	**–**	**–**
Sales	**(10)**	**(57)**	**–**	**–**
Issuances	**–**	**–**	**–**	**(10)**
Settlements and other	**–**	**(3)**	**18**	**1**
Financial instruments transferred into Level 3	**2**	**–**	**–**	**(1)**
Financial instruments transferred out of Level 3	**–**	**–**	**(4)**	**16**
Fair value as at October 31, 2017	**16**	**326**	**20**	**(1)**
Change in unrealized gains and losses included in *Net income* with respect to financial assets and financial liabilities held as at October 31, 2017[3]	**1**	**–**	**(9)**	**–**

	Year ended October 31, 2016			
	Securities at fair value through profit or loss	Available-for-sale securities	Derivative financial instruments[1]	Deposits
Fair value as at October 31, 2015	21	261	(38)	(20)
Total realized and unrealized gains (losses) included in *Net income*[4]	(1)	8	(31)	9
Total realized and unrealized gains (losses) included in *Other comprehensive income*	–	14	–	–
Purchases	18	42	–	–
Sales	(26)	(13)	–	–
Issuances	–	–	–	(13)
Settlements and other	–	(8)	20	3
Financial instruments transferred into Level 3	6	1	67	(32)
Financial instruments transferred out of Level 3	–	–	(3)	46
Fair value as at October 31, 2016	18	305	15	(7)
Change in unrealized gains and losses included in *Net income* with respect to financial assets and financial liabilities held as at October 31, 2016[5]	(1)	–	(31)	9

(1) The derivative financial instruments include assets and liabilities presented on a net basis.
(2) Total net gains included in *Non-interest income* was $17 million.
(3) Total unrealized losses included in *Non-interest income* was $8 million.
(4) Total net losses included in *Non-interest income* was $15 million.
(5) Total unrealized losses included in *Non-interest income* was $23 million.

(millions of Canadian dollars)

NOTE 3 – FAIR VALUE OF FINANCIAL INSTRUMENTS (cont.)

Financial Instruments Not Recorded at Fair Value on the Consolidated Balance Sheet

The following tables show the financial instruments that have not been recorded at fair value on the Consolidated Balance Sheet according to the fair value hierarchy, except for those whose carrying value is a reasonable approximation of fair value.

				As at October 31, 2017
	Level 1	**Level 2**	**Level 3**	**Total**
Financial assets				
Held-to-maturity securities				
Securities issued or guaranteed by				
Canadian government	–	5,368	–	5,368
Canadian provincial and municipal governments	–	2,086	–	2,086
U.S. Treasury, other U.S. agencies and other foreign governments	–	20	–	20
Other debt securities	–	1,755	–	1,755
	–	9,229	–	9,229
Loans, net of allowances	–	50,665	72,288	122,953
Financial liabilities				
Deposits	–	151,571	–	151,571
Other				
Liabilities related to transferred receivables	–	13,940	–	13,940
Other liabilities	–	947	–	947
Subordinated debt	–	6	–	6
	–	166,464	–	166,464

				As at October 31, 2016
	Level 1	Level 2	Level 3	Total
Financial assets				
Held-to-maturity securities				
Securities issued or guaranteed by				
Canadian government	–	2,652	–	2,652
Canadian provincial and municipal governments	–	548	–	548
Other debt securities	–	793	–	793
	–	3,993	–	3,993
Loans, net of allowances	–	44,895	69,305	114,200
Financial liabilities				
Deposits	–	136,108	–	136,108
Other				
Liabilities related to transferred receivables	–	13,974	–	13,974
Other liabilities	–	1,359	–	1,359
Subordinated debt	–	1,013	–	1,013
	–	152,454	–	152,454

(millions of Canadian dollars)

NOTE 4 – FINANCIAL INSTRUMENTS DESIGNATED AT FAIR VALUE THROUGH PROFIT OR LOSS

The Bank chose to designate certain financial instruments at fair value through profit or loss according to the criteria presented in Note 1. Consistent with its risk management strategy and as permitted by the fair value option, when the designation eliminates or significantly reduces the measurement or recognition mismatch resulting from measuring financial assets and liabilities on different bases, the Bank designated at fair value through profit or loss certain securities, certain securities purchased under reverse repurchase agreements, certain obligations related to securities sold under repurchase agreements, and certain liabilities related to transferred receivables. The fair value of liabilities related to transferred receivables does not include credit risk, as the holders of these liabilities are not exposed to the Bank's credit risk.

The Bank also designated certain deposits that include embedded derivative financial instruments and certain loans at fair value through profit or loss. There is no exposure to credit risk on the loans to the extent that they are fully collateralized.

To determine a change in fair value arising from a change in the credit risk of deposits designated at fair value through profit or loss, the Bank calculates, at the beginning of the period, the present value of the instrument's contractual cash flows using the following rates: first, using an observed discount rate for similar securities that reflects the Bank's credit spread and, then, using a rate that excludes the Bank's credit spread. The difference obtained between the two values is then compared to the difference obtained using the same rates at the end of the period.

Information about the financial assets and financial liabilities designated at fair value through profit or loss is provided in the following tables.

	Carrying value as at October 31, 2017	Change in the total fair value (including the change in the fair value attributable to credit risk) for the year ended October 31, 2017	Change in fair value since the initial recognition of the instrument
Financial assets designated at fair value through profit or loss			
Securities	756	(4)	16
Securities purchased under reverse repurchase agreements	657	–	–
Loans	115	(11)	(32)
	1,528	(15)	(16)
Financial liabilities designated at fair value through profit or loss			
Deposits(1)(2)	5,501	(113)	34
Securites sold under repurchase agreements	534	–	–
Liabilities related to transferred receivables	6,209	158	(52)
	12,244	45	(18)

	Carrying value as at October 31, 2016	Change in the total fair value (including the change in the fair value attributable to credit risk) for the year ended October 31, 2016	Change in fair value since the initial recognition of the instrument
Financial assets designated at fair value through profit or loss			
Securities	1,465	10	326
Securities purchased under reverse repurchase agreements	158	–	–
Loans	164	(14)	(27)
	1,787	(4)	299
Financial liabilities designated at fair value through profit or loss			
Deposits(1)(2)	4,655	(132)	(81)
Liabilities related to transferred receivables	6,206	41	(207)
	10,861	(91)	(288)

(1) For the year ended October 31, 2017, the change in the fair value of deposits designated at fair value through profit or loss attributable to credit risk, and recorded in *Other comprehensive income*, resulted in a $29 million loss (for the year ended October 31, 2016, a net loss of $75 million consisting of a $90 million loss recognized in *Other comprehensive income* upon early prospective adoption of the credit risk provisions set out in IFRS 9 – *Financial Instruments* on February 1, 2016 and a $15 million gain recognized in *Net income*).
(2) The amount at maturity that the Bank will be contractually required to pay to the holders of these deposits varies and will differ from the reporting date fair value.

(millions of Canadian dollars)

NOTE 5 – OFFSETTING FINANCIAL ASSETS AND FINANCIAL LIABILITIES

Financial assets and liabilities are offset and the net amount is presented on the Consolidated Balance Sheet when the Bank has a legally enforceable right to set off the recognized amounts and intends to settle on a net basis or to realize the asset and settle the liability simultaneously.

Generally, over-the-counter financial derivatives subject to master netting arrangements of the International Swaps & Derivatives Association, Inc. or other similar agreements do not meet the netting criteria on the Consolidated Balance Sheet because the right of set-off is legally enforceable only in the event of default, insolvency or bankruptcy.

Generally, securities purchased under reverse repurchase agreements and securities borrowed as well as obligations related to securities sold under repurchase agreements and securities loaned, subject to master agreements, do not meet the netting criteria since they confer a right of set-off that is enforceable only in the event of default, insolvency or bankruptcy.

However, the above-mentioned transactions may be subject to contractual netting agreements concluded with clearing houses. If the netting criteria are met, these transactions are netted on the Consolidated Balance Sheet. In addition, as part of these transactions, the Bank may give or receive cash or other financial instruments used as collateral.

The following tables present information on financial assets and financial liabilities that are netted on the Consolidated Balance Sheet because they meet the netting criteria and on those that are not netted and are subject to an enforceable master netting arrangement or similar agreement.

						As at October 31, 2017
				Associated amounts not set off on the Consolidated Balance Sheet		
	Gross amounts recognized	Amounts set off on the Consolidated Balance Sheet	Net amounts reported on the Consolidated Balance Sheet	Financial instruments(1)	Financial assets received/pledged as collateral(2)	Net amounts
Financial assets						
Securities purchased under reverse repurchase agreements and securities borrowed	**24,939**	**4,150**	**20,789**	**3,304**	**17,403**	**82**
Derivative financial instruments	**9,848**	**1,425**	**8,423**	**3,931**	**2,688**	**1,804**
	34,787	**5,575**	**29,212**	**7,235**	**20,091**	**1,886**
Financial liabilities						
Obligations related to securities sold under repurchase agreements and securities loaned	**25,917**	**4,150**	**21,767**	**3,304**	**18,385**	**78**
Derivative financial instruments	**8,037**	**1,425**	**6,612**	**3,931**	**1,187**	**1,494**
	33,954	**5,575**	**28,379**	**7,235**	**19,572**	**1,572**

						As at October 31, 2016
				Associated amounts not set off on the Consolidated Balance Sheet		
	Gross amounts recognized	Amounts set off on the Consolidated Balance Sheet	Net amounts reported on the Consolidated Balance Sheet	Financial instruments(1)	Financial assets received/pledged as collateral(2)	Net amounts
Financial assets						
Securities purchased under reverse repurchase agreements and securities borrowed	25,115	11,167	13,948	1,843	12,035	70
Derivative financial instruments	12,521	2,105	10,416	4,743	3,390	2,283
	37,636	13,272	24,364	6,586	15,425	2,353
Financial liabilities						
Obligations related to securities sold under repurchase agreements and securities loaned	33,803	11,167	22,636	1,843	20,633	160
Derivative financial instruments	9,830	2,105	7,725	4,743	1,740	1,242
	43,633	13,272	30,361	6,586	22,373	1,402

(1) Carrying amount of financial instruments that are subject to a master netting agreement or similar agreement but that do not satisfy offsetting criteria.
(2) Excluding non-financial instruments collateral.

(millions of Canadian dollars)

NOTE 6 – SECURITIES

Residual Contractual Maturities of Securities

As at October 31					2017	2016
	1 year or less	Over 1 year to 5 years	Over 5 years	No specified maturity	Total	Total
Securities at fair value through profit or loss						
Securities issued or guaranteed by						
Canadian government	1,976	5,528	1,158	–	8,662	7,188
Canadian provincial and municipal governments	412	4,734	2,624	–	7,770	10,547
U.S. Treasury, other U.S. agencies and other foreign governments	1,856	205	67	–	2,128	4,174
Other debt securities	862	1,084	653	–	2,599	2,934
Equity securities	6	28	–	26,343	26,377	21,121
	5,112	11,579	4,502	26,343	47,536	45,964
Available-for-sale securities						
Securities issued or guaranteed by						
Canadian government	56	3,569	656	–	4,281	6,281
Canadian provincial and municipal governments	2	353	2,229	–	2,584	4,996
U.S. Treasury, other U.S. agencies and other foreign governments	1	116	404	–	521	1,709
Other debt securities	11	275	203	5	494	978
Equity securities	75	79	4	514	672	644
	145	4,392	3,496	519	8,552	14,608
Held-to-maturity securities						
Securities issued or guaranteed by						
Canadian government	60	5,331	–	–	5,391	2,606
Canadian provincial and municipal governments	30	1,161	901	–	2,092	544
U.S. Treasury, other U.S. agencies and other foreign governments	–	20	–	–	20	–
Other debt securities	538	1,057	157	–	1,752	819
	628	7,569	1,058	–	9,255	3,969

(millions of Canadian dollars)

NOTE 6 – SECURITIES (cont.)

Gross Gains (Losses) on Available-for-Sale Securities

				As at October 31, 2017
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Carrying value
Securities issued or guaranteed by				
Canadian government	4,308	6	(33)	4,281
Canadian provincial and municipal governments	2,502	87	(5)	2,584
U.S. Treasury, other U.S. agencies and other foreign governments	536	–	(15)	521
Other debt securities	487	9	(2)	494
Equity securities	633	64	(25)	672
	8,466	166	(80)	8,552

				As at October 31, 2016
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Carrying value
Securities issued or guaranteed by				
Canadian government	6,201	83	(3)	6,281
Canadian provincial and municipal governments	4,704	312	(20)	4,996
U.S. Treasury, other U.S. agencies and other foreign governments	1,702	11	(4)	1,709
Other debt securities	951	29	(2)	978
Equity securities	588	94	(38)	644
	14,146	529	(67)	14,608

Impairment Losses Recognized

At the end of each financial reporting period, the Bank determines whether there is objective evidence of impairment for each available-for-sale security. During the year ended October 31, 2017, a negligible amount ($9 million for the year ended October 31, 2016) for impairment charges was recognized in *Gains (losses) on available-for-sale securities, net* in the Consolidated Statement of Income. In addition, during the years ended October 31, 2017 and 2016, no amounts were reversed in the Consolidated Statement of Income to recognize subsequent increases in the fair value of previously impaired debt securities.

Gross Unrealized Losses

As at October 31, 2017 and 2016, the Bank concluded that the gross unrealized losses on available-for-sale securities were mainly due to market price fluctuations and to changes in foreign exchange rates and that there is no objective evidence of impairment requiring an impairment charge to be recognized in the Consolidated Statement of Income.

Held-to-Maturity Securities

At the end of each financial reporting period, the Bank determines whether there is objective evidence of impairment for each held-to-maturity security. As at October 31, 2017 and 2016, there was no objective evidence of impairment on held-to-maturity securities.

Master Asset Vehicles (MAV)

As at October 31, 2017, the carrying value of the restructured notes of the MAV conduits and of the other restructured notes held by the Bank was nil ($619 million as at October 31, 2016). The change in the carrying value of the restructured notes of the MAV conduits during the year ended October 31, 2017 was mainly attributable to capital repayments.

(millions of Canadian dollars)

NOTE 7 – LOANS

Credit Quality

				As at October 31, 2017
	Residential mortgage	Personal and credit card	Business and government(1)(2)	Total
Neither past due(3) nor impaired	50,232	36,498	47,369	134,099
Past due(3) but not impaired	220	385	78	683
Impaired	66	80	234	380
Gross loans	50,518	36,963	47,681	135,162
Less: Allowances on impaired loans				
Individual allowances	13	22	119	154
Collective allowances	–	18	2	20
Allowances on impaired loans	13	40	121	174
	50,505	36,923	47,560	134,988
Less:				
Sectoral allowance on non-impaired loans – Oil and gas(4)				139
Collective allowance on non-impaired loans(5)				406
				545
Loans and acceptances, net of allowances				134,443

				As at October 31, 2016
	Residential mortgage	Personal and credit card	Business and government(1)(2)	Total
Neither past due(3) nor impaired	48,552	33,591	43,673	125,816
Past due(3) but not impaired	245	294	112	651
Impaired	71	79	342	492
Gross loans	48,868	33,964	44,127	126,959
Less: Allowances on impaired loans				
Individual allowances	13	20	156	189
Collective allowances	–	19	3	22
Allowances on impaired loans	13	39	159	211
	48,855	33,925	43,968	126,748
Less:				
Sectoral allowance on non-impaired loans – Oil and gas(4)				204
Collective allowance on non-impaired loans(5)				366
				570
Loans and acceptances, net of allowances				126,178

(1) Business credit portfolios are closely monitored and a monthly watchlist of problem commitments is produced. The watchlist is analyzed by the loan portfolio managers concerned, who must then submit a report to Credit Risk Management.
(2) Includes customers' liability under acceptances.
(3) A loan is past due when the counterparty has not made a payment by the contractual due date.
(4) The sectoral allowance on non-impaired loans was established collectively for the portfolio of loans to producers and service companies in the oil and gas sector.
(5) The collective allowance for credit risk on non-impaired loans was established taking into account the Bank's overall credit portfolio, except for loans covered by the sectoral allowance.

(millions of Canadian dollars)

NOTE 7 – LOANS (cont.)

Loans Past Due But Not Impaired[1]

As at October 31	2017			2016		
	Residential mortgage	Personal and credit card	Business and government	Residential mortgage	Personal and credit card	Business and government
Past due but not impaired						
31 to 60 days	111	110	30	115	112	51
61 to 90 days	40	50	15	48	36	9
90 days and greater	69	225	33	82	146	52
	220	385	78	245	294	112

(1) Loans less than 31 days past due are not presented as they are not considered past due from an administrative standpoint.

Impaired Loans

	As at October 31, 2017			
	Gross	Individual allowances	Collective allowances	Net
Loans				
Residential mortgage	66	13	–	53
Personal and credit card	80	22	18	40
Business and government[1]	234	119	2	113
	380	154	20	206

	As at October 31, 2016			
	Gross	Individual allowances	Collective allowances	Net
Loans				
Residential mortgage	71	13	–	58
Personal and credit card	79	20	19	40
Business and government[1]	342	156	3	183
	492	189	22	281

(1) Includes customers' liability under acceptances.

(millions of Canadian dollars)

Allowances for Credit Losses

							Year ended October 31, 2017
	Balance at beginning	Provisions for credit losses	Write-offs	Write-offs on credit cards	Recoveries and other[1]	Transfers[2]	Balance at end
Allowances on impaired loans							
Residential mortgage							
Individual allowances	13	13	(14)	–	1	–	13
Collective allowances	–	–	–	–	–	–	–
Personal and credit card							
Individual allowances	20	163	(80)	(82)	1	–	22
Collective allowances	19	27	(37)	–	9	–	18
Business and government[3]							
Individual allowances	156	39	(104)	–	3	25	119
Collective allowances	3	2	(3)	–	–	–	2
Individual allowances	189	215	(198)	(82)	5	25	154
Collective allowances	22	29	(40)	–	9	–	20
	211	244	(238)	(82)	14	25	174
Sectoral allowance on non-impaired loans – Oil and gas[4]	204	(40)	–	–	–	(25)	139
Collective allowance on non-impaired loans[5]	366	40	–	–	–	–	406
	570	–	–	–	–	(25)	545
	781	244	(238)	(82)	14	–	719

							Year ended October 31, 2016
	Balance at beginning	Provisions for credit losses	Write-offs	Write-offs on credit cards	Recoveries and other[1]	Transfers[2]	Balance at end
Allowances on impaired loans							
Residential mortgage							
Individual allowances	10	12	(11)	–	2	–	13
Collective allowances	–	–	–	–	–	–	–
Personal and credit card							
Individual allowances	18	123	(41)	(81)	1	–	20
Collective allowances	22	28	(39)	–	8	–	19
Business and government[3]							
Individual allowances	151	67	(107)	–	(1)	46	156
Collective allowances	2	4	(3)	–	–	–	3
Individual allowances	179	202	(159)	(81)	2	46	189
Collective allowances	24	32	(42)	–	8	–	22
	203	234	(201)	(81)	10	46	211
Sectoral allowance on non-impaired loans – Oil and gas[4]	–	250	–	–	–	(46)	204
Collective allowance on non-impaired loans[5]	366	–	–	–	–	–	366
	366	250	–	–	–	(46)	570
	569	484	(201)	(81)	10	–	781

(1) Includes foreign exchange movements.
(2) When a loan covered by the *Sectoral allowance on non-impaired loans – Oil and gas* becomes impaired, the sectoral allowance related to that loan is transferred to the individual allowances on impaired loans.
(3) Includes customers' liability under acceptances.
(4) The sectoral allowance on non-impaired loans was established collectively for the portfolio of loans to producers and service companies in the oil and gas sector.
(5) The collective allowance for credit risk on non-impaired loans was established taking into account the Bank's overall credit portfolio, except for loans covered by the sectoral allowance.

(millions of Canadian dollars)

NOTE 7 – LOANS (cont.)

Distribution of Gross and Impaired Loans by Borrower Category Under the Basel Asset Classes

					2017
			As at October 31		Year ended October 31
	Gross loans(1)	Impaired loans(1)	Allowances on impaired loans(1)	Provisions for credit losses	Write-offs
Retail					
Residential mortgage(2)(3)	66,398	68	13	13	14
Qualifying revolving retail(4)	4,217	17	10	104	109
Other retail(5)	12,150	53	29	86	90
	82,765	138	52	203	213
Non-retail					
Agriculture	4,923	7	3	(1)	3
Oil and gas	2,129	93	34	(40)	56
Mining	470	–	–	–	–
Construction and real estate(6)	11,891	41	20	16	4
Manufacturing	4,341	16	14	–	12
Wholesale and retail	5,497	44	22	10	8
Transportation	2,593	3	2	–	6
Telecommunications, media and technology	1,662	13	8	3	2
Financial institutions	4,932	–	–	–	–
Services	6,178	18	12	7	4
Governments and other related services	6,548	5	5	5	12
Other(3)	1,233	2	2	41	–
	52,397	242	122	41	107
	135,162	380	174	244	320

					2016
			As at October 31		Year ended October 31
	Gross loans(1)	Impaired loans(1)	Allowances on impaired loans(1)	Provisions for credit losses	Write-offs
Retail					
Residential mortgage(2)	58,265	76	13	11	11
Qualifying revolving retail(4)	4,178	18	10	105	108
Other retail(5)	10,316	49	28	45	53
	72,759	143	51	161	172
Non-retail					
Agriculture	4,599	16	6	–	3
Oil and gas	2,102	178	66	284	66
Mining	582	–	–	–	–
Construction and real estate(6)	10,729	19	9	5	2
Manufacturing	3,597	25	21	8	6
Wholesale and retail	4,932	34	17	12	23
Transportation	3,013	6	4	3	5
Telecommunications, media and technology	1,578	23	9	4	–
Financial institutions	3,872	–	–	–	–
Services	6,021	22	8	4	4
Governments and other related services	5,638	18	12	–	–
Other	7,537	8	8	3	1
	54,200	349	160	323	110
	126,959	492	211	484	282

(1) Includes customers' liability under acceptances.
(2) Includes residential mortgages on one-to-four-unit dwellings (Basel definition) and home equity lines of credit.
(3) Since November 1, 2016, the loans acquired by the Financial Markets segment for securitization purposes, and reported in the *Other* category, are now being reported in the *Residential mortgage* category. Figures as at October 31, 2016 were not adjusted to reflect those modifications.
(4) Includes lines of credit and credit card receivables.
(5) Includes consumer loans and other retail loans but excludes SME loans.
(6) Includes non-residential mortgages.

(millions of Canadian dollars)

NOTE 8 – FINANCIAL ASSETS TRANSFERRED BUT NOT DERECOGNIZED

In the normal course of its business, the Bank enters into transactions in which it transfers financial assets such as securities or loans directly to third parties, in particular structured entities. According to the terms of some of those transactions, the Bank retains substantially all of the risks and rewards related to those financial assets. The risks include credit risk, interest rate risk, foreign exchange risk, prepayment risk and other price risks, whereas the rewards include income streams associated with the financial assets. As such, those financial assets are not derecognized and the transactions are treated as collateralized or secured borrowings. The nature of those transactions is described below.

Securities Sold Under Repurchase Agreements and Securities Loaned

When securities are sold under repurchase agreements and securities loaned under securities lending agreements, the Bank transfers financial assets to third parties in accordance with the standard terms for such transactions. These third parties may have an unlimited right to resell or repledge the financial assets received. If cash collateral is received, the Bank records the cash along with an obligation to return the cash, which is included in *Obligations related to securities sold under repurchase agreements and securities loaned* on the Consolidated Balance Sheet. Where securities are received as collateral, the Bank does not record the collateral on the Consolidated Balance Sheet.

Financial Assets Transferred to Structured Entities

Under the Canada Mortgage Bond (CMB) program, the Bank sells securities backed by insured residential mortgages and other securities to Canada Housing Trust (CHT), which finances the purchase through the issuance of insured mortgage bonds. Third-party CMB investors have legal recourse only to the transferred assets. The cash received for these transferred assets is treated as a secured borrowing, and a corresponding liability is recorded in *Liabilities related to transferred receivables* on the Consolidated Balance Sheet.

The following table provides additional information about the nature of the transferred financial assets that do not qualify for derecognition and the associated liabilities.

As at October 31	**2017**	2016
Carrying value of financial assets transferred but not derecognized		
Securities(1)	**42,014**	39,989
Residential mortgages	**19,080**	19,093
	61,094	59,082
Carrying value of associated liabilities(2)	**33,330**	34,992
Fair value of financial assets transferred but not derecognized		
Securities(1)	**42,014**	39,989
Residential mortgages	**19,169**	19,403
	61,183	59,392
Fair value of associated liabilities(2)	**33,356**	35,041

(1) The amount related to the securities loaned is the maximum amount of Bank securities that can be lent. For the obligations related to securities sold under repurchase agreements, the amount includes the Bank's own financial assets as well as those of third parties.
(2) Associated liabilities include obligations related to securities sold under repurchase agreements before the offsetting impact of $1,621 million as at October 31, 2017 ($3,521 million as at October 31, 2016) and liabilities related to transferred receivables. Liabilities related to securities loaned are not included, as the Bank can lend its own financial assets and those of third parties. The carrying value and fair value of liabilities related to securities loaned were $10,156 million as at October 31, 2017 ($11,296 million as at October 31, 2016).

The following table specifies the nature of the transactions related to financial assets transferred but not derecognized.

As at October 31	**2017**	2016
Carrying value of financial assets transferred but not derecognized		
Securities backed by insured residential mortgages and other securities sold to CHT	**20,012**	20,030
Securities sold under repurchase agreements	**13,544**	14,615
Securities loaned	**27,538**	24,437
	61,094	59,082

(millions of Canadian dollars)

NOTE 9 – INVESTMENTS IN ASSOCIATES AND JOINT VENTURES

As at October 31			2017	2016
	Business segment	Ownership percentage	Carrying value	Carrying value
Listed associates[1]				
TMX Group Limited[2]	Other	8.6 %	241	231
Fiera Capital Corporation	Wealth Management	20.6 %	152	154
			393	385
Unlisted associates				
Maple Financial Group Inc.[3]	Financial Markets	24.9 %	–	–
Other			229	230
			229	230
Unlisted joint ventures			9	30
			631	645

(1) The fair value of investments in associates based on quoted prices in an active market was $581 million as at October 31, 2017 ($497 million as at October 31, 2016).
(2) The Bank exercises significant influence over TMX Group Limited mainly because of its equity interest, debt financing, and presence on TMX Group's board of directors.
(3) During fiscal 2016, the Bank had written off the carrying value of its equity interest in Maple Financial Group Inc. in an amount of $164 million. For additional information, see the text below.

As at October 31, 2017 and 2016, there were no significant restrictions limiting the ability of associates and joint ventures to transfer funds to the Bank in the form of dividends or to repay any loans or advances. Furthermore, the Bank has not made any specific commitment or contracted any contingent liability with respect to associates or joint ventures.

TMX Group Limited
TMX Group Limited is a Canadian corporation that directly or indirectly controls a number of entities that operate stock exchanges and clearing houses and provide clearing and settlement services. During the year ended October 31, 2017, TMX Group Limited paid $9 million in dividends to the Bank ($8 million for the year ended October 31, 2016).

Fiera Capital Corporation
Fiera Capital Corporation is an independent Canadian investment management firm. During the year ended October 31, 2017, Fiera Capital Corporation paid $12 million in dividends to the Bank ($10 million for the year ended October 31, 2016).

Maple Financial Group Inc.
The Bank has a 24.9% equity interest in Maple Financial Group Inc. (Maple), a privately owned Canadian company that operated through direct and indirect wholly owned subsidiaries in Canada, Germany, the United Kingdom and the United States. In August 2016, Maple filed for bankruptcy under applicable Canadian laws, and a receiver was appointed to administer the company. Similar proceedings were initiated for each of Maple's other material subsidiaries in their home jurisdictions.

Maple Bank GmbH, an indirect wholly owned subsidiary of Maple, has been the subject of an investigation into alleged tax irregularities by German prosecutors since September 2015 and, to the Bank's knowledge, that investigation is ongoing. The Bank understands that the investigation is focusing on selected trading activities by Maple Bank GmbH and some of its current and former employees during taxation years 2006 to 2010, although the Bank has been advised that the investigation may also extend to subsequent taxation years. The German authorities have alleged that these trading activities violated German tax laws. Neither the Bank nor its employees were involved in these trading activities and, to the Bank's knowledge, are not the subject of this investigation.

On February 6, 2016, the German Federal Financial Supervisory Authority, BaFin, placed a moratorium on the business activities of Maple Bank GmbH, preventing it from carrying out its normal business activities. In light of the situation, the Bank wrote off the carrying value of its equity interest in Maple in an amount of $164 million ($145 million net of income taxes) during the first quarter of 2016. The $164 million write-off of the equity interest in this associate was recognized in the *Non-interest income – Other* item of the Consolidated Statement of Income for the year ended October 31, 2016 and was reported in the Financial Markets segment.

The Bank has advised the German authorities that if it is determined that portions of dividends received from Maple could be reasonably attributable to tax fraud by Maple Bank GmbH, arrangements will be made to repay those amounts to the relevant authority. If any repayments are required, they are not expected to be material to the Bank's financial position.

(millions of Canadian dollars)

The following table provides summarized financial information on the Bank's listed associates.

As at October 31	2017[1]			2016[1]
	TMX Group Limited	Fiera Capital Corporation	Total	Total
Balance sheet				
Current assets	14,743	164	14,907	18,934
Non-current assets	4,469	941	5,410	5,452
Current liabilities	14,641	84	14,725	18,986
Non-current liabilities	1,549	482	2,031	1,975
Income statement				
Total revenues	732	438	1,170	1,027
Net income	218	15	233	(10)
Other comprehensive income (loss)	(2)	(12)	(14)	1
Comprehensive income (loss)	216	3	219	(9)

(1) The balance sheet amounts are the balances reported in the unaudited financial statements as at September 30, 2017 and 2016, which are the most recent available, and the income statement amounts are based on the cumulative balances for the 12-month periods ended September 30, 2017 and 2016.

The table below provides summarized financial information related to the Bank's share of associates and joint ventures that are not individually significant.

Year ended October 31	2017[1]			2016[1]
	Unlisted associates	Unlisted joint ventures	Total	Total
Net income	11	1	12	11
Other comprehensive income	(10)	–	(10)	–
Comprehensive income	1	1	2	11

(1) The amounts are based on the cumulative balances for the 12-month periods ended September 30, 2017 and 2016.

(millions of Canadian dollars)

NOTE 10 – PREMISES AND EQUIPMENT

	Land	Buildings	Computer equipment	Equipment and furniture	Leasehold improvements	Total
Cost						
As at October 31, 2015	14	252	244	1,633	281	2,424
Acquisitions	–	4	115	24	37	180
Disposals	–	(1)	(21)	(566)	(6)	(594)
Fully amortized assets		(2)	(114)	(4)	(16)	(136)
As at October 31, 2016	14	253	224	1,087	296	1,874
Acquisitions	**3**	**7**	**38**	**16**	**32**	**96**
Disposals	**–**	**(4)**	**–**	**(818)**	**(6)**	**(828)**
Fully amortized assets		**(1)**	**(27)**	**(7)**	**(30)**	**(65)**
As at October 31, 2017	**17**	**255**	**235**	**278**	**292**	**1,077**
Accumulated amortization						
As at October 31, 2015		151	158	164	134	607
Amortization for the year		5	42	203	23	273
Disposals		(1)	(13)	(191)	(3)	(208)
Fully amortized assets		(2)	(114)	(4)	(16)	(136)
As at October 31, 2016		153	73	172	138	536
Amortization for the year		**5**	**46**	**106**	**25**	**182**
Disposals		**(3)**	**–**	**(125)**	**(6)**	**(134)**
Fully amortized assets		**(1)**	**(27)**	**(7)**	**(30)**	**(65)**
As at October 31, 2017		**154**	**92**	**146**	**127**	**519**
Carrying value as at October 31, 2016	14	100	151	915	158	1,338
Carrying value as at October 31, 2017	**17**	**101**	**143**	**132**	**165**	**558**

Assets Leased Under Operating Leases

The Bank is a lessor under operating lease agreements for certain buildings. Through one of its subsidiaries, the Bank is also a lessor for equipment leased under operating leases. Upon expiry of a lease, the Bank disposes of the equipment. These leases have terms varying from one year to five years and do not contain any bargain purchase options or contingent rent.

The following table breaks down the future minimum payments receivable under these operating leases.

	As at October 31, 2017
1 year or less	**84**
Over 1 year to 5 years	**42**
Over 5 years	**8**
	134

(millions of Canadian dollars)

NOTE 11 – GOODWILL AND INTANGIBLE ASSETS

Goodwill

The following table presents the change in the carrying amount of goodwill by cash-generating unit (CGU) and by business segment for the years ended October 31, 2017 and 2016.

	Personal and Commercial(1)				Wealth Management	Financial Markets(1)			USSF&I	Total
		Third-Party Solutions(1)	Securities Brokerage(1)	Managed Solutions(1)	Total		Credigy Ltd.(1)	Advanced Bank of Asia Limited(1)	Total	
Balance as at October 31, 2015	51	256	434	269	959	234	33	–	33	1,277
Acquisition of Advanced Bank of Asia Limited (Note 33)	–	–	–	–	–	–	–	129	129	129
Impact of foreign currency translation	–	–	–	–	–	1	–	5	5	6
Balance as at October 31, 2016	51	256	434	269	959	235	33	134	167	1,412
Acquisition of Groupe Financier Abi-Témi inc.(2)	3	–	–	–	–	–	–	–	–	3
Impact of foreign currency translation	–	–	–	–	–	–	(1)	(5)	(6)	(6)
Balance as at October 31, 2017	**54**	**256**	**434**	**269**	**959**	**235**	**32**	**129**	**161**	**1,409**

(1) Constitutes a CGU.
(2) During the year ended October 31, 2017, the Bank, through one of its wholly owned subsidiaries, acquired Groupe Financier Abi-Témi inc. located in Rouyn-Noranda, Canada.

Goodwill Impairment Testing and Significant Assumptions

For impairment testing purposes, from the acquisition date, goodwill resulting from a business combination must be allocated to a CGU or a group of CGUs expected to benefit from the synergies of the business combination. Goodwill is tested for impairment annually or more frequently if events or circumstances indicate that the recoverable value of the CGU or group of CGUs may have fallen below its carrying amount.

Goodwill was tested for impairment during the years ended October 31, 2017 and 2016, and no impairment loss was recognized.

The recoverable value of a CGU or group of CGUs is based on the value in use that is calculated based on discounted pre-tax cash flows. Future pre-tax cash flows are estimated based on a five-year period, which is the reference period used for the most recent financial forecasts approved by management. Cash flows beyond that period are extrapolated using a long-term growth rate.

The discount rate used for each CGU or group of CGUs is calculated using the cost of debt financing and the cost related to the Bank's equity. This rate corresponds to the Bank's weighted average cost of capital and reflects the risk specific to the CGU. The long-term growth rate used in calculating discounted cash flow estimates is based on the forecasted growth rate plus a risk premium. The rate is constant over the entire five-year period for which the cash flows were determined. Growth rates are determined, among other factors, based on past growth rates, economic trends, inflation, competition and the impact of the Bank's strategic initiatives. As at October 31, 2017, for each CGU or CGU group, the discount rate used was 13.2% (12.3% as at October 31, 2016) and the long-term growth rate was between 2.0% and 5.0% depending on the CGU as at October 31, 2017 and 2016.

Estimating a CGU's value in use requires significant judgment regarding the inputs used in applying the discounted cash flow method. The Bank conducts sensitivity analyses by varying the after-tax discount rate and the terminal growth rates upward by 1%; such sensitivity analyses would not increase a CGU's carrying value above its value in use.

(millions of Canadian dollars)

NOTE 11 – GOODWILL AND INTANGIBLE ASSETS (cont.)

Intangible Assets

	Indefinite useful life			Finite useful life				Total
	Management contracts[1]	Trademark	Total	Internally-generated software[2]	Other software	Other intangible assets	Total	
Cost								
As at October 31, 2015	161	11	172	913	107	107	1,127	1,299
Acquisitions	–	–	–	234	36	–	270	270
Impairment losses[3]	–	–	–	(69)	–	(1)	(70)	(70)
Fully amortized intangible assets				(40)	(17)	–	(57)	(57)
As at October 31, 2016	161	11	172	1,038	126	106	1,270	1,442
Acquisitions	**–**	**–**	**–**	**245**	**21**	**2**	**268**	**268**
Fully amortized intangible assets				**(16)**	**(32)**	**–**	**(48)**	**(48)**
As at October 31, 2017	**161**	**11**	**172**	**1,267**	**115**	**108**	**1,490**	**1,662**
Accumulated amortization								
As at October 31, 2015				133	58	49	240	240
Amortization for the year				108	27	9	144	144
Impairment losses[3]				(25)	–	–	(25)	(25)
Fully amortized intangible assets				(40)	(17)	–	(57)	(57)
As at October 31, 2016				176	68	58	302	302
Amortization for the year				**135**	**25**	**9**	**169**	**169**
Fully amortized intangible assets				**(16)**	**(32)**	**–**	**(48)**	**(48)**
As at October 31, 2017				**295**	**61**	**67**	**423**	**423**
Carrying value as at October 31, 2016	161	11	172	862	58	48	968	1,140
Carrying value as at October 31, 2017	**161**	**11**	**172**	**972**	**54**	**41**	**1,067**	**1,239**

(1) For annual impairment testing purposes, management contracts are allocated to the Managed Solutions CGU.
(2) The remaining amortization period for significant internally-generated software is five years.
(3) The Bank wrote off certain internally generated software applications due to obsolescence and decided to discontinue them. The recoverable amount of those applications was estimated to be nil. During the year ended October 31, 2016, $44 million in impairment losses had been recognized and charged to the *Other* heading of segment disclosures.

NOTE 12 – OTHER ASSETS

As at October 31	**2017**	2016
Receivables, prepaid expenses and other items	**690**	668
Interest and dividends receivable	**489**	474
Due from clients, dealers and brokers[1]	**505**	843
Defined benefit asset (Note 24)	**56**	48
Deferred tax assets (Note 25)	**374**	402
Current tax assets	**31**	80
Reinsurance assets	**31**	32
	2,176	2,547

(1) The *Due from clients, dealers and brokers* amount of $843 million presented separately on the Consolidated Balance Sheet as at October 31, 2016 is now reported in *Other assets*.

(millions of Canadian dollars)

NOTE 13 – DEPOSITS

As at October 31			2017	2016(1)
	On demand or after notice(2)	Fixed term(3)	Total	Total
Personal	28,516	25,203	53,719	52,521
Business and government	46,938	50,633	97,571	83,905
Deposit-taking institutions	2,447	2,934	5,381	5,640
	77,901	78,770	156,671	142,066

(1) Certain amounts have been revised from those previously reported, particularly an amount of $2,159 million classified in *Due to clients, dealers and brokers* on the Consolidated Balance Sheet as at October 31, 2016 that is now reported in *Deposits*.
(2) Demand deposits are deposits for which the Bank does not have the right to require notice of withdrawal and consist essentially of deposits in chequing accounts. Notice deposits are deposits for which the Bank may legally require notice of withdrawal and consist mainly of deposits in savings accounts.
(3) Fixed-term deposits are deposits that can be withdrawn by the holder on a specified date and include term deposits, guaranteed investment certificates, savings accounts and plans, covered bonds and similar instruments.

The *Deposits – Business and government* item includes, among other items, the covered bonds, as described below.

Covered Bonds

NBC Covered Bond Guarantor (Legislative) Limited Partnership

In December 2013, the Bank established the covered bond legislative program under which covered bonds are issued. It therefore created NBC Covered Bond Guarantor (Legislative) Limited Partnership (the Guarantor) to guarantee payment of the principal and interest owed to the bondholders. The Bank sold uninsured residential mortgages to the Guarantor and granted it loans to facilitate the acquisition of these assets. During the year ended October 31, 2017, the Bank issued covered bonds under this program in an amount of 150 million pounds sterling (covered bonds in amounts of 750 million euros and 100 million pounds sterling issued during the year ended October 31, 2016). The covered bonds totalled $7.0 billion as at October 31, 2017 ($6.7 billion as at October 31, 2016). See Note 28 for additional information.

The Bank has limited access to the assets owned by this structured entity according to the terms of the agreements that apply to this transaction. The assets owned by this entity totalled $15.9 billion as at October 31, 2017 ($14.2 billion as at October 31, 2016), of which $15.6 billion ($13.9 billion as at October 31, 2016) is presented in *Residential mortgage* loans on the Bank's Consolidated Balance Sheet.

(millions of Canadian dollars)

NOTE 14 – OTHER LIABILITIES

As at October 31	2017	2016
Accounts payable and accrued expenses	**1,797**	1,510
Subsidiaries' debts to third parties	**1,075**	1,447
Interest and dividends payable	**883**	832
Due to clients, dealers and brokers(1)	**647**	540
Defined benefit liability (Note 24)	**252**	314
Deferred tax liabilities (Note 25)	**35**	57
Current tax liabilities	**93**	215
Insurance liabilities	**60**	71
Other items(2)(3)	**916**	900
	5,758	5,886

(1) An amount of $540 million reported in the *Due to clients, dealers and brokers* item on the Consolidated Balance Sheet as at October 31, 2016 is now reported in *Other liabilities*.
(2) As at October 31, 2017, *Other items* included a $46 million restructuring provision ($152 million as at October 31, 2016). See Note 15 for additional information.
(3) As at October 31, 2017, *Other items* included a $12 million litigation provision ($18 million as at October 31, 2016).

NOTE 15 – RESTRUCTURING

During fiscal years 2016 and 2015, the Board approved certain restructuring initiatives to accelerate its transformation plan, satisfy the changing needs of its clients and enhance operational efficiency. This transformation will allow the Bank to maintain the pace of its client-centric shift, pursue the transition to digital banking, maintain a compelling workplace and focus on operational excellence.

During fiscal 2016, the Bank recorded a charge of $131 million in the *Restructuring charge* item of the Consolidated Statement of Income, consisting of severance pay and onerous contracts. This restructuring charge was reported in the *Other* heading of the segment disclosures.

The table below presents the changes in the restructuring provision on the Consolidated Balance Sheet.

	Severance pay	Other	Total
As at October 31, 2015	51	16	67
Restructuring charge	129	2	131
Payments during the year	(34)	(12)	(46)
As at October 31, 2016	146	6	152
Payments during the year	**(104)**	**(2)**	**(106)**
As at October 31, 2017	**42**	**4**	**46**

(millions of Canadian dollars)

NOTE 16 – SUBORDINATED DEBT

The subordinated debt represents direct unsecured obligations, in the form of notes and debentures, to the Bank's debt holders. The rights of the Bank's note and debenture holders are subordinate to the claims of depositors and certain other creditors. Approval from OSFI is required before the Bank can redeem its subordinated notes and debentures in whole or in part.

On April 11, 2017, the Bank redeemed $1.0 billion of medium-term notes maturing on April 11, 2022 at a price equal to their nominal value plus accrued interest.

As at October 31				2017	2016
Maturity date		**Interest rate**	**Characteristics**		
April	2022	3.261%	Redeemable	–	1,000
February	2087	Variable[(1)]	Redeemable at the Bank's option since February 28, 1993	9	9
				9	1,009
Fair value hedge adjustment				–	5
Unamortized issuance costs[(2)]				–	(2)
Total				9	1,012

(1) Debentures denominated in foreign currency totalling US$7 million as at October 31, 2017 (2016: US$7 million) and bearing interest at a rate of 1/8% above six-month LIBOR.
(2) The unamortized costs related to the issuance of the subordinated debt represent the initial cost, net of accumulated amortization calculated using the effective interest rate method.

NOTE 17 – DERIVATIVE FINANCIAL INSTRUMENTS

Derivative financial instruments are financial contracts whose value is derived from an underlying interest rate, exchange rate, or equity, commodity or credit instrument or index.

The main types of derivative financial instruments used are presented below.

Forwards and Futures
Forwards and futures are contractual obligations to buy or deliver a specified amount of currency, interest rate, commodity or financial instrument on a specified future date at a specified price. Forwards are tailor-made agreements transacted in the over-the-counter market. Futures are traded on organized exchanges and are subject to cash margining calculated daily by clearing houses.

Swaps
Swaps are over-the-counter contracts in which two parties agree to exchange cash flows. The Bank uses the following types of swap contracts:

– Cross-currency swaps are transactions in which counterparties exchange fixed-rate interest payments and principal payments in different currencies.
– Interest rate swaps are transactions in which counterparties exchange fixed and floating rate interest payments, based on the notional principal value in the same currency.
– Commodity swaps are transactions in which counterparties exchange fixed and floating rate payments, based on the notional principal value of a commodity.
– Equity swaps are transactions in which counterparties agree to exchange the return on one equity or group of equities for a payment based on a benchmark interest rate.
– Credit default swaps are transactions in which one of the parties agrees to pay returns to the other party so that the latter can make a payment if a credit event occurs.

Options
Options are agreements between two parties in which the writer of the option grants the buyer the right, but not the obligation, to buy or sell, either at a specified date or dates or at any time prior to a predetermined expiry date, a specific amount of currency, commodity or financial instrument at an agreed-upon price upon the sale of the option. The writer receives a premium for the sale of this instrument.

(millions of Canadian dollars)

NOTE 17 – DERIVATIVE FINANCIAL INSTRUMENTS (cont.)

Notional Amounts

Notional amounts are not presented in assets or liabilities on the Consolidated Balance Sheet. They represent the reference amount of the contract to which a rate or price is applied to determine the amount of cash flows to be exchanged.

As at October 31							2017	2016
	Term to maturity							
	3 months or less	Over 3 months to 12 months	Over 1 year to 5 years	Over 5 years	Total contracts	Contracts held for trading purposes	Contracts designated as hedges	Total contracts
Interest rate contracts								
OTC contracts								
Forward rate agreements								
Not settled by central counterparties	691	104	–	–	795	795	–	2,249
Settled by central counterparties	–	819	129	–	948	948	–	8,015
Swaps								
Not settled by central counterparties	6,064	9,143	68,050	41,694	124,951	119,531	5,420	132,364
Settled by central counterparties	111,227	82,338	116,566	48,890	359,021	327,496	31,525	289,597
Options purchased	10	1,082	1,084	630	2,806	2,647	159	4,862
Options written	23	628	567	606	1,824	1,546	278	2,874
	118,015	94,114	186,396	91,820	490,345	452,963	37,382	439,961
Exchange-traded contracts								
Futures								
Long positions	19,817	15,887	7,369	–	43,073	43,073	–	32,275
Short positions	13,793	26,881	5,257	–	45,931	45,931	–	50,275
Options purchased	11,708	–	6,392	–	18,100	18,100	–	19,248
Options written	65	–	2,516	–	2,581	2,581	–	20,119
	45,383	42,768	21,534	–	109,685	109,685	–	121,917
Foreign exchange contracts								
OTC contracts								
Forwards	16,043	6,570	7,365	1,635	31,613	31,613	–	45,221
Swaps	65,571	26,867	57,930	29,493	179,861	168,479	11,382	175,742
Options purchased	4,798	4,138	747	–	9,683	9,683	–	7,822
Options written	4,815	3,526	619	–	8,960	8,960	–	7,005
	91,227	41,101	66,661	31,128	230,117	218,735	11,382	235,790
Exchange-traded contracts								
Futures								
Long positions	45	–	–	–	45	45	–	41
Short positions	424	–	–	–	424	424	–	756
Options purchased	–	–	–	–	–	–	–	10
Options written	–	–	–	–	–	–	–	4
	469	–	–	–	469	469	–	811
Equity, commodity and credit derivative contracts[1]								
OTC contracts								
Forwards	4	56	1,895	287	2,242	2,242	–	3,209
Swaps								
Not settled by central counterparties	6,622	9,520	8,507	457	25,106	24,989	117	20,194
Settled by central counterparties	143	238	7,291	1,210	8,882	8,882	–	1,969
Options purchased	602	90	1,287	230	2,209	2,209	–	2,160
Options written	206	316	846	208	1,576	1,576	–	2,562
	7,577	10,220	19,826	2,392	40,015	39,898	117	30,094
Exchange-traded contracts								
Futures								
Long positions	4,588	192	261	70	5,111	5,111	–	3,574
Short positions	7,976	1,747	1,081	43	10,847	10,847	–	9,798
Options purchased	1,505	357	131	–	1,993	1,993	–	2,311
Options written	746	943	1,032	109	2,830	2,830	–	2,929
	14,815	3,239	2,505	222	20,781	20,781	–	18,612
	277,486	191,442	296,922	125,562	891,412	842,531	48,881	847,185

(1) Includes precious metal contracts.

(millions of Canadian dollars)

Credit Risk

Credit risk on derivative financial instruments is the risk of financial loss that the Bank will have to assume if a counterparty fails to honour its contractual obligations. Credit risk related to derivative financial instruments is subject to the same credit approval, credit limit and monitoring standards as those applied to the Bank's other credit transactions. Consequently, the Bank evaluates the creditworthiness of counterparties and monitors the size of the portfolios as well as the diversification and maturity profiles of these financial instruments.

The Bank limits the credit risk of over-the-counter contracts by dealing with creditworthy counterparties and entering into contracts that provide for the exchange of collateral between parties where the fair value of the outstanding transactions exceeds an agreed threshold. The Bank also negotiates master netting agreements that provide for the simultaneous close-out and settling of all transactions with a given counterparty in the event of default, insolvency or bankruptcy. However, overall exposure to credit risk, reduced through master netting agreements, may change substantially after the balance sheet date because it is affected by all transactions subject to a contract as well as by changes in the market rates of the underlying instruments.

The Bank also uses financial intermediaries to have access to established clearing houses in order to minimize the settlement risk for certain financial derivative transactions. In some cases, the Bank has direct access to clearing houses for settling derivative financial instruments. In addition, certain derivative financial instruments traded over the counter are settled directly or indirectly by central counterparties.

In the case of exchange-traded contracts, exposure to credit risk is limited because these transactions are standardized contracts executed on established exchanges, each of which is associated with a well-capitalized clearing house that assumes the obligations of both counterparties and guarantees their performance obligations. All exchange-traded contracts are subject to initial margins and daily settlement.

Terms Used

Replacement Cost

Replacement cost is the Bank's maximum credit risk associated with derivative financial instruments as at the Consolidated Balance Sheet date. This amount is the positive fair value of all over-the-counter derivative financial instruments, before all master netting agreements and collateral held.

Credit Risk Equivalent

The credit risk equivalent amount is the total replacement cost plus an amount representing the potential future credit risk exposure, as outlined in OSFI's *Capital Adequacy Requirements Guideline*.

Risk-Weighted Amount

The risk-weighted amount is determined by applying the OSFI guidance to the credit risk equivalent.

Credit Risk Exposure of the Derivative Financial Instrument Portfolio

As at October 31			2017			2016
	Replacement cost[1]	**Credit risk equivalent**	**Risk-weighted amount**	Replacement cost[1]	Credit risk equivalent	Risk-weighted amount
Interest rate contracts	**2,214**	**8,598**	**821**	3,812	9,213	909
Foreign exchange contracts	**4,465**	**11,373**	**1,901**	4,295	10,784	1,715
Equity, commodity and credit derivative contracts	**1,677**	**4,816**	**305**	2,222	4,702	487
	8,356	**24,787**	**3,027**	10,329	24,699	3,111
Impact of master netting agreements	**(3,931)**	**(10,445)**	**(756)**	(4,743)	(11,721)	(629)
	4,425	**14,342**	**2,271**	5,586	12,978	2,482

(1) As at October 31, 2017, the total positive fair value of exchange-traded contracts, which amounted to $67 million ($87 million as at October 31, 2016), was excluded.

Credit Risk Exposure of the Derivative Financial Instrument Portfolio by Counterparty

As at October 31		2017		2016
	Replacement cost	**Credit risk equivalent**	Replacement cost	Credit risk equivalent
OECD[1] governments	**956**	**1,761**	1,084	1,859
Banks of OECD member countries	**969**	**3,809**	1,025	3,809
Other	**2,500**	**8,772**	3,477	7,310
	4,425	**14,342**	5,586	12,978

(1) Organization for Economic Co-operation and Development.

(millions of Canadian dollars)

NOTE 17 – DERIVATIVE FINANCIAL INSTRUMENTS (cont.)

Fair Value of Derivative Financial Instruments

As at October 31			2017			2016
	Positive	Negative	Net	Positive	Negative	Net
Contracts held for trading purposes						
Interest rate contracts						
Forwards	5	1	4	7	3	4
Swaps	1,713	1,362	351	2,843	2,147	696
Options	36	7	29	43	10	33
	1,754	1,370	384	2,893	2,160	733
Foreign exchange contracts						
Forwards	573	423	150	1,140	873	267
Swaps	3,531	2,498	1,033	2,987	2,782	205
Options	141	146	(5)	160	138	22
	4,245	3,067	1,178	4,287	3,793	494
Equity, commodity and credit derivative contracts						
Forwards	773	159	614	1,407	152	1,255
Swaps	626	1,163	(537)	490	521	(31)
Options	336	416	(80)	410	407	3
	1,735	1,738	(3)	2,307	1,080	1,227
Total – Contracts held for trading purposes	7,734	6,175	1,559	9,487	7,033	2,454
Contracts designated as hedges						
Interest rate contracts						
Forwards	–	–	–	–	–	–
Swaps	468	342	126	917	679	238
Options	1	6	(5)	2	12	(10)
	469	348	121	919	691	228
Foreign exchange contracts						
Forwards	–	–	–	–	1	(1)
Swaps	220	89	131	8	–	8
Options	–	–	–	–	–	–
	220	89	131	8	1	7
Equity, commodity and credit derivative contracts						
Forwards	–	–	–	–	–	–
Swaps	–	–	–	2	–	2
Options	–	–	–	–	–	–
	–	–	–	2	–	2
Total – Contracts designated as hedges	689	437	252	929	692	237
Designated as fair value hedges	246	217	29	580	436	144
Designated as cash flow hedges	442	220	222	341	255	86
Designated as a hedge of a net investment in a foreign operation	1	–	1	8	1	7
Total fair value	8,423	6,612	1,811	10,416	7,725	2,691
Impact of master netting agreements	(3,931)	(3,931)	–	(4,743)	(4,743)	–
	4,492	2,681	1,811	5,673	2,982	2,691

(millions of Canadian dollars)

NOTE 18 – HEDGING ACTIVITIES

Derivative and Non-Derivative Financial Instruments Designated as Hedging Instruments

As at October 31			2017			2016
	Fair value hedge	**Cash flow hedge**	**Net investment hedge**	Fair value hedge	Cash flow hedge	Net investment hedge
Assets						
Derivative financial instruments	**246**	**442**	**1**	580	341	8
Liabilities						
Derivative financial instruments	**217**	**220**	**–**	436	255	1
Carrying value of non-derivative financial instruments	**–**	**–**	**841**	–	–	1,024
Notional amounts of designated derivative financial instruments	**18,878**	**29,955**	**48**	18,965	24,714	492

Fair Value Hedges

Fair value hedge transactions consist of using interest rate swaps to hedge changes in the fair value of a financial asset or financial liability caused by interest rate fluctuations. Changes in the fair value of the derivative financial instruments used as hedging instruments offset changes in the fair value of the hedged item. The Bank applies this strategy mainly to portfolios of available-for-sale securities, fixed-rate deposits, liabilities related to transferred receivables and subordinated debt.

Results of the Fair Value Hedges

Year ended October 31	2017	2016
Gains (losses) on hedging instruments	**(150)**	(13)
Gains (losses) on hedged items attributable to the hedged risk	**147**	12
Ineffectiveness of fair value hedging relationships	**4**	–

Cash Flow Hedges

Cash flow hedge transactions consist of using interest rate swaps to hedge the risk of changes in future cash flows caused by floating-rate assets or liabilities. The Bank applies this strategy mainly to loan, personal credit line, acceptance and deposit portfolios. The Bank also uses total return swaps to hedge the risk of changes in future cash flows related to the Restricted Stock Unit (RSU) Plan. Some of these swaps are designated as part of a cash flow hedge against a portion of the unrecognized obligation of the RSU Plan. In a cash flow hedge, the derivative financial instruments used as hedging instruments reduce the variability of future cash flows related to the hedged item.

Results of the Cash Flow Hedges

Year ended October 31	2017	2016
Unrealized gains (losses) included in *Other comprehensive income* as the effective portion of the hedging instrument	**45**	47
Losses (gains) reclassified to *Net interest income* in the Consolidated Statement of Income	**(35)**	(25)
Ineffectiveness of cash flow hedging relationships	**1**	(1)

(millions of Canadian dollars)

NOTE 18 – HEDGING ACTIVITIES (cont.)

The following table shows the periods during which the Bank expects the hedged cash flows to occur and have an impact on net income.

	As at October 31, 2017			
	1 year or less	Over 1 year to 2 years	Over 2 years to 5 years	Over 5 years
Expected cash flows from hedged assets	41	41	127	51
Expected cash flows from hedged liabilities	147	119	208	80
Net exposure	(106)	(78)	(81)	(29)

	As at October 31, 2016			
	1 year or less	Over 1 year to 2 years	Over 2 years to 5 years	Over 5 years
Expected cash flows from hedged assets	24	27	74	52
Expected cash flows from hedged liabilities	55	54	120	36
Net exposure	(31)	(27)	(46)	16

Hedges of Net Investments in Foreign Operations
The Bank's structural foreign exchange risk arises from investments in foreign operations denominated in currencies other than the Canadian dollar. The Bank measures this risk by assessing the impact of foreign currency fluctuations and hedges it using financial instruments (derivative or non-derivative). In a hedge of a net investment in a foreign operation, the financial instruments used offset foreign exchange gains and losses on the investments. When non-derivative financial instruments are designated as foreign exchange risk hedges, only the changes in fair value that are attributable to foreign exchange risk are taken into account in assessing and calculating the effectiveness of the hedge.

For the years ended October 31, 2017 and 2016, a negligible amount representing the ineffective portion was recognized in *Non-interest income* in the Consolidated Statement of Income.

(millions of Canadian dollars)

NOTE 19 – SHARE CAPITAL

Authorized

Common Shares

An unlimited number of shares without par value.

First Preferred Shares

An unlimited number of shares, without par value, issuable for a maximum aggregate consideration of $5 billion.

First Preferred Shares

As at October 31, 2017

	Redemption and conversion date in effect as of (1)(2)	Redemption price per share ($)(1)	Convertible into preferred shares(2)	Dividend per share ($)(3)	Reset premium
First preferred shares issued and outstanding					
Series 28	November 15, 2017 (4)(5)	25.00	Series 29	0.23750 (6)	2.43 %
Series 30(7)	May 15, 2019 (4)(5)	25.00	Series 31	0.25625 (6)	2.40 %
Series 32(7)	February 15, 2020 (4)(5)	25.00	Series 33	0.24375 (6)	2.25 %
Series 34(7)	May 15, 2021 (4)(5)	25.00	Series 35	0.35000 (6)	4.90 %
Series 36(7)	August 15, 2021 (4)(5)	25.00	Series 37	0.33750 (6)	4.66 %
Series 38(7)	November 15, 2022 (4)(5)	25.00	Series 39	0.27813 (6)	3.43 %
First preferred shares authorized but not issued					
Series 19(8)	June 30, 2013	25.00	n.a.	0.68750	n.a.
Series 23(8)	July 31, 2013	25.00	n.a.	0.75000	n.a.
Series 29	November 15, 2017 (4)	25.50 (9)	n.a.	Floating rate (10)	2.43 %
Series 31(7)	May 15, 2019 (4)	25.50 (9)	n.a.	Floating rate (10)	2.40 %
Series 33(7)	February 15, 2020 (4)	25.50 (9)	n.a.	Floating rate (10)	2.25 %
Series 35(7)	May 15, 2021 (4)	25.50 (9)	n.a.	Floating rate (10)	4.90 %
Series 37(7)	August 15, 2021 (4)	25.50 (9)	n.a.	Floating rate (10)	4.66 %
Series 39(7)	November 15, 2022 (4)	25.50 (9)	n.a.	Floating rate (10)	3.43 %

n.a. Not applicable
(1) Redeemable in cash at the Bank's option, in whole or in part, subject to the provisions of the *Bank Act* (Canada) and to OSFI approval. Redemption prices are increased by all the declared and unpaid dividends on the preferred shares to the date fixed for redemption.
(2) Convertible at the option of the holders of first preferred shares, subject to certain conditions.
(3) The dividends are non-cumulative and payable quarterly, except for Series 19 and 23, for which the dividends are payable semi-annually.
(4) Redeemable as of the date fixed for redemption and on the same date every five years thereafter.
(5) Convertible as of the date fixed for conversion and on the same date every five years thereafter, subject to certain conditions.
(6) The dividend amount is set for the initial period ending on the date fixed for redemption. Thereafter, these shares carry a non-cumulative quarterly fixed dividend in an amount per share determined by multiplying the rate of interest equal to the sum of the 5-year Government of Canada bond yield on the applicable fixed-rate calculation date by $25.00, plus the reset premium.
(7) Upon the occurrence of a trigger event as defined by OSFI, each outstanding preferred share will be automatically and immediately converted, on a full and permanent basis, without the consent of the holder, into a number of common shares of the Bank determined pursuant to an automatic conversion formula. This conversion will be calculated by dividing the value of the preferred shares, i.e., $25.00 per share, plus all declared and unpaid dividends as at the date of the trigger event, by the value of the common shares. The value of the common shares will be the greater of a $5.00 floor price or the current market price of the common shares. Current market price means the volume weighted average trading price of common shares for the ten consecutive trading days ending on the trading day preceding the date of the trigger event. If the common shares are not listed on an exchange when this price is being established, the price will be the fair value reasonably determined by the Bank's Board.
(8) For additional information, see Note 20.
(9) As of the date fixed for redemption, the redemption price will be $25.50 per share. Thereafter, on the same date every five years, the redemption price will be $25.00 per share.
(10) The dividend period begins as of the date fixed for redemption. The amount of the floating quarterly non-cumulative dividend is determined by multiplying the rate of interest equal to the sum of the 90-day Government of Canada treasury bill yield on the floating rate calculation date by $25.00, plus the reset premium.

Second Preferred Shares

15 million shares without par value, issuable for a total maximum consideration of $300 million. As at October 31, 2017, no shares had been issued or traded.

(millions of Canadian dollars)

NOTE 19 – SHARE CAPITAL (cont.)

Shares Outstanding

As at October 31	2017		2016	
	Number of shares	Shares $	Number of shares	Shares $
First Preferred Shares				
Series 28	8,000,000	200	8,000,000	200
Series 30	14,000,000	350	14,000,000	350
Series 32	12,000,000	300	12,000,000	300
Series 34	16,000,000	400	16,000,000	400
Series 36	16,000,000	400	16,000,000	400
Series 38	16,000,000	400	–	–
	82,000,000	2,050	66,000,000	1,650
Common shares at beginning of the fiscal year	338,053,054	2,645	337,236,322	2,614
Issued pursuant to the Stock Option Plan	4,239,095	179	1,122,756	43
Repurchase of common shares for cancellation	(2,000,000)	(16)	–	–
Impact of shares purchased or sold for trading[(1)]	(591,843)	(37)	(306,024)	(12)
Other	(108,341)	(3)	–	–
Common shares at end of year	339,591,965	2,768	338,053,054	2,645

(1) As at October 31, 2017, 553,980 shares were held for trading, representing a total amount of $35 million (37,863 shares sold short for trading representing $2 million as at October 31, 2016).

Dividends Declared

Year ended October 31	2017		2016	
	Dividends $	Dividends per share	Dividends $	Dividends per share
First Preferred Shares				
Series 28	8	0.9500	8	0.9500
Series 30	14	1.0250	14	1.0250
Series 32	12	0.9750	12	0.9750
Series 34	22	1.4000	18	1.1373
Series 36	22	1.3500	9	0.5733
Series 38	7	0.4724	–	–
	85		61	
Common shares	778	2.2800	736	2.1800
	863		797	

Issuances of Preferred Shares

On June 13, 2017, the Bank issued 16,000,000 Non-Cumulative 5-Year Rate-Reset Series 38 First Preferred Shares at a price equal to $25.00 per share for gross proceeds of $400 million. Given that the Series 38 preferred shares satisfy the non-viability contingent capital requirements, they qualify for the purposes of calculating regulatory capital under Basel III.

On June 13, 2016, the Bank had issued 16,000,000 Non-Cumulative 5-Year Rate-Reset Series 36 First Preferred Shares at a price equal to $25.00 per share for gross proceeds of $400 million. Given that the Series 36 preferred shares satisfy the non-viability contingent capital requirements, they qualify for the purposes of calculating regulatory capital under Basel III.

On January 22, 2016, the Bank had issued 16,000,000 Non-Cumulative 5-Year Rate-Reset Series 34 First Preferred Shares at a price equal to $25.00 per share for gross proceeds of $400 million. Given that the Series 34 preferred shares satisfy the non-viability contingent capital requirements, they qualify for the purposes of calculating regulatory capital under Basel III.

Redemption of Preferred Shares

On August 29, 2017, the Board approved the redemption, on November 15, 2017, of all the issued and outstanding Non-Cumulative 5-Year Rate-Reset Series 28 First Preferred Shares. Pursuant to the share conditions, the redemption price was $25.00 per share plus the periodic dividend declared and unpaid. The Bank redeemed 8,000,000 Series 28 preferred shares for a total amount of $200 million on November 15, 2017.

Repurchases of Common Shares

On June 5, 2017, the Bank began a normal course issuer bid to repurchase for cancellation up to 6,000,000 common shares over the 12-month period ending no later than June 4, 2018. Any repurchase through the Toronto Stock Exchange will be done at market prices. The amounts that will be paid above the average book value of the common shares will be charged to *Retained earnings.* During the year ended October 31, 2017, the Bank repurchased 2,000,000 common shares for $115 million, which reduced *Common share capital* by $16 million and *Retained earnings* by $99 million.

Reserved Common Shares

As at October 31, 2017 and 2016, 15,507,568 common shares were reserved under the Dividend Reinvestment and Share Purchase Plan. As at October 31, 2017, 25,764,866 common shares (21,003,961 as at October 31, 2016) were reserved under the Stock Option Plan.

Common Shares Held in Escrow

As part of the acquisition of Wellington West Holdings Inc. in 2011, the Bank had issued common shares held in escrow. In December 2016, 799,563 of these shares were released to shareholders. In addition, 108,341 shares were cancelled, mainly upon the settlement of certain indemnifications guaranteed by those shares. As at October 31, 2017, the number of common shares held in escrow was 28,881 (936,785 as at October 31, 2016). The Bank expects that the remaining shares in escrow will be settled by the end of calendar year 2018.

Restriction on the Payment of Dividends

The Bank is prohibited from declaring dividends on its common or preferred shares if there are reasonable grounds for believing that the Bank would, by so doing, be in contravention of the regulations of the *Bank Act* (Canada) or OSFI's capital adequacy and liquidity guidelines. In addition, the ability to pay common share dividends is restricted by the terms of the outstanding preferred shares pursuant to which the Bank may not pay dividends on its common shares without the approval of the holders of the outstanding preferred shares, unless all preferred share dividends have been declared and paid or set aside for payment. Moreover, if NBC Asset Trust were unable to pay the full amount of distributions on the trust units, the Bank would withhold from declaring dividends on any of its preferred and common shares during a determined period. For additional information, see Notes 20 and 28.

Dividend Reinvestment Plan

The Bank has a dividend reinvestment plan for common and preferred shareholders. Participation in the plan is optional. Under the terms and conditions of the plan, participants acquire shares through the reinvestment of cash dividends paid on the shares they hold or through optional cash payments. Common shares subscribed by participants are purchased on their behalf in the secondary market through the Bank's transfer agent, Computershare Trust Company of Canada, at a price equal to the average purchase price of the common shares during the ten business days immediately following the dividend payment date.

(millions of Canadian dollars)

NOTE 20 – NON-CONTROLLING INTERESTS

As at October 31	2017	2016
Trust units issued by NBC Asset Trust (NBC CapS II)		
Series 1[1]	410	410
Series 2[2]	359	359
Other	39	41
	808	810

(1) Includes $10 million in accrued interest ($10 million as at October 31, 2016).
(2) Includes $9 million in accrued interest ($9 million as at October 31, 2016).

Trust Units Issued by NBC Asset Trust

Through structured entity NBC Asset Trust (the Trust), a closed-end trust established under the laws of the Province of Ontario, the Bank issued transferable non-voting trust units called "Trust Capital Securities" or "NBC CapS II." These securities are not redeemable or exchangeable for Bank preferred shares at the option of the holder. The gross proceeds from the issuance were used by the Trust to finance the acquisition of mortgage loans from the Bank. For additional information, see Note 28.

The main terms and characteristics of the NBC CapS II trust units are presented below.

	Number	Issuance date	Annual yield	Distribution dates	Semi-annual distribution by NBC CapS II[1]
Series 1	400,000	January 22, 2008	7.235 %	June 30, December 31	$36.175[2]
Series 2	350,000	June 30, 2008	7.447 %	June 30, December 31	$37.235[3]

(1) For each unit with a face value of $1,000.
(2) For each distribution date after June 30, 2018, the distribution will be paid at a rate equal to one-half the sum of the 180-day bankers' acceptance rate in effect plus 3.79%.
(3) For each distribution date after June 30, 2020, the distribution will be paid at a rate equal to one-half the sum of the 180-day bankers' acceptance rate in effect plus 4.09%.

Distribution

No cash distributions will be payable by the Trust on NBC CapS II if the Bank fails to declare regular dividends on its preferred shares or, if no preferred shares are then outstanding, on its outstanding common shares. In this case, the net distributable funds of the Trust will be paid to the Bank as the sole holder of the special trust securities, representing the residual interest in the Trust. Should the Trust fail to pay the semi-annual distributions in full on the NBC CapS II, the Bank will withhold from declaring dividends on any of its preferred and common shares during a determined period.

Automatic Exchange

Each NBC CapS II – Series 1 can be exchanged automatically, without the consent of the holders, for 40 Series 19 First Preferred Shares of the Bank, and each NBC CapS II – Series 2 can be exchanged automatically, without the consent of the holders, for 40 Series 23 First Preferred Shares of the Bank upon the occurrence of one of the following events: (i) proceedings are commenced for the winding-up of the Bank; (ii) OSFI takes control of the Bank; (iii) the Bank posts a Tier 1 capital ratio of less than 5% or a Total capital ratio of less than 8%; or (iv) OSFI has directed the Bank to increase its capital or to provide additional liquidity and the Bank elects such automatic exchange or the Bank fails to comply with such direction to the satisfaction of OSFI. On an automatic exchange, the Bank will hold all outstanding trust capital securities of the Trust.

Redemption at the Option of the Trust

On any distribution date, the Trust may, subject to prior written notice and OSFI approval, redeem, at its option, the NBC CapS II – Series 1 and Series 2, in whole but not in part, without the consent of the holders.

Purchase for Cancellation

The Trust may, with OSFI approval, purchase NBC CapS II – Series 1 and Series 2, in whole or in part, on the open market or by tender or private contract at any price. The NBC CapS II purchased by the Trust, if any, will be cancelled and will not be reissued.

Regulatory Capital

The NBC CapS II – Series 1 and Series 2 qualify as innovative capital instruments and are eligible as additional Tier 1 capital, but because these instruments do not satisfy the non-viability contingent capital requirements, they are to be phased out at a rate of 10% per year between 2013 and 2022.

NOTE 21 – CAPITAL DISCLOSURE

Capital Management Objectives, Policies and Procedures
Capital management has a dual role of ensuring a competitive return to the Bank's shareholders while maintaining a solid capital foundation that covers the risks inherent to the Bank's business, supports its business segments and protects its clients.

The Bank's capital management policy defines the guiding principles as well as the roles and responsibilities regarding its internal capital adequacy assessment process. This process is a key tool in establishing the Bank's capital strategy and is subject to quarterly reviews and periodic amendments.

Capital Management
Capital ratios are obtained by dividing regulatory capital by risk-weighted assets and are expressed as a percentage. Risk-weighted assets are calculated in accordance with the rules established by OSFI for on- and off-balance-sheet risks. Credit, market and operational risks are factored into the risk-weighted assets calculation for regulatory purposes. The definition adopted by the Basel Committee on Banking Supervision (BCBS) distinguishes between three types of capital. Common Equity Tier 1 (CET1) capital consists of common shareholders' equity less goodwill, intangible assets and other capital deductions. The Additional Tier 1 instruments comprise eligible non-cumulative preferred shares and the eligible amount of innovative instruments. The sum of CET1 and Additional Tier 1 capital form what is known as Tier 1 capital. Tier 2 capital consists of the eligible portion of subordinated debt and certain loan loss allowances. Total regulatory capital is the sum of Tier 1 and Tier 2 capital.

The Basel III regulatory framework sets out transitional arrangements for the period of 2013 to 2019. However, OSFI is requiring Canadian banks to meet the 2019 minimum "all-in" requirements rather than the minimum ratios calculated using the transitional methodology. The "all-in" methodology includes all of the regulatory adjustments that will be required by 2019 while retaining the phase-out rules for non-qualifying capital instruments. Consequently, the Bank and all other major Canadian banks have had to maintain, on an "all-in" basis, a CET1 capital ratio of at least 8.0%, a Tier 1 capital ratio of at least 9.5%, and a Total capital ratio of at least 11.5%. All of these ratios are to include a capital conservation buffer of 2.5% and a 1% surcharge applicable to Domestic Systemically Important Banks.

OSFI has been requiring Canadian banks to meet a Basel III leverage ratio of at least 3.0%. The leverage ratio is a measure independent of risk that is calculated by dividing the amount of Tier 1 capital by total exposure. Total exposure is defined as the sum of on-balance-sheet assets (including derivative exposures and securities financing transaction exposures) and off-balance-sheet items. The assets deducted from Tier 1 capital are also deducted from total exposure.

During the years ended October 31, 2017 and 2016, the Bank was in compliance with all of OSFI's regulatory capital requirements.

(millions of Canadian dollars)

NOTE 21 – CAPITAL DISCLOSURE (cont.)

Regulatory Capital and Ratios Under Basel III[1]

As at October 31	2017	2016
Capital		
CET1	7,856	6,865
Tier 1[2]	10,457	9,265
Total[2]	10,661	10,506
Risk-weighted assets		
CET1 capital	70,173	68,205
Tier 1 capital	70,327	68,430
Total capital	70,451	68,623
Total exposure	262,539	253,097
Capital ratios		
CET1	11.2 %	10.1 %
Tier 1[2]	14.9 %	13.5 %
Total[2]	15.1 %	15.3 %
Leverage ratio	4.0 %	3.7 %

(1) Figures are presented on an "all-in" basis.
(2) Figures as at October 31, 2017 include the redemption of the Series 28 preferred shares on November 15, 2017.

NOTE 22 – TRADING ACTIVITY REVENUES

Trading activity revenues consist of the net interest income from trading activities and trading revenues recognized in *Non-interest income* in the Consolidated Statement of Income.

Net interest income comprises dividends related to financial assets and liabilities associated with trading activities, net of interest expenses and interest income related to the financing of these financial assets and liabilities.

Non-interest income consists of realized and unrealized gains and losses as well as interest income on securities measured at fair value through profit or loss, income from held-for-trading derivative financial instruments, and the change in fair value of financial instruments designated at fair value through profit or loss.

Year ended October 31	2017	2016
Net interest income	392	515
Non-interest income	374	150
	766	665

(millions of Canadian dollars)

NOTE 23 – SHARE-BASED PAYMENTS

The compensation expense information provided below excludes the impact of hedging.

Stock Option Plan

The Bank's Stock Option Plan is for officers and other designated persons of the Bank and its subsidiaries. Under this plan, options are awarded annually and provide participants with the right to purchase common shares at an exercise price equal to the closing price of the Bank's common share on the Toronto Stock Exchange on the day preceding the award. The options vest evenly over a four-year period and expire ten years from the award date or, in certain circumstances set out in the plan, within specified time limits. The Stock Option Plan contains provisions for retiring employees that allow the participant's rights to continue vesting in accordance with the stated terms of the grant agreement. The maximum number of common shares that may be issued under the Stock Option Plan was 25,764,866 as at October 31, 2017 (21,003,961 as at October 31, 2016). The number of common shares reserved for a participant may not exceed 5% of the total number of Bank shares issued and outstanding.

As at October 31	2017		2016	
	Number of options	**Weighted average exercise price**	Number of options	Weighted average exercise price
Stock Option Plan				
Outstanding at beginning	**17,302,322**	**$ 38.05**	16,652,313	$ 37.33
Awarded	**1,804,016**	**$ 54.69**	2,140,420	$ 42.17
Exercised	**(4,239,095)**	**$ 36.31**	(1,122,756)	$ 33.06
Cancelled(1)	**(291,349)**	**$ 45.90**	(367,655)	$ 44.30
Outstanding at end	**14,575,894**	**$ 40.46**	17,302,322	$ 38.05
Exercisable at end	**9,250,560**	**$ 36.03**	10,850,976	$ 34.32

(1) Includes 10,728 expired options during the year ended October 31, 2017 (900 expired options during the year ended October 31, 2016).

Exercise price	Options outstanding	Options exercisable	Expiry date
$26.93	546,861	546,861	December 2017
$17.44	881,360	881,360	December 2018
$29.25	909,483	909,483	December 2019
$34.34	1,086,075	1,086,075	December 2020
$34.09	1,297,570	1,297,570	December 2021
$38.36	1,615,570	1,615,570	December 2022
$44.96	2,051,898	1,409,054	December 2023
$47.93	2,494,194	1,104,420	December 2024
$42.17	1,927,107	400,167	December 2025
$54.69	1,765,776	–	December 2026
	14,575,894	9,250,560	

During the year ended October 31, 2017, the Bank awarded 1,804,016 stock options (2,140,420 during the year ended October 31, 2016) with an average fair value of $5.75 per option ($3.70 for the year ended October 31, 2016).

The average fair value of options awarded was estimated on the award date using the Black-Scholes model as well as the following assumptions.

As at October 31	2017	2016
Risk-free interest rate	**1.59%**	1.43%
Expected life of options	**7 years**	7 years
Expected volatility	**20.53%**	21.12%
Expected dividend yield	**4.41%**	5.33%

(millions of Canadian dollars)

NOTE 23 – SHARE-BASED PAYMENTS (cont.)

The expected life of the options is based on historical data and is not necessarily representative of how options will be exercised in the future. Expected volatility is extrapolated from the implied volatility of the Bank's share price and observable market inputs, which are not necessarily representative of actual results. The expected dividend yield represents the annualized dividend divided by the Bank's share price at the award date. The risk-free interest rate is based on the Canadian dollar swap curve at the award date. The exercise price is equal to the Bank's share price at the award date. No other market parameter has been included in the fair value measurement of the options.

The compensation expense recorded for this plan for the year ended October 31, 2017 was $11 million ($12 million for the year ended October 31, 2016).

Stock Appreciation Rights (SAR) Plan

The SAR Plan is for officers and other designated persons of the Bank and its subsidiaries. Under this plan, participants receive, upon exercising the right, a cash amount equal to the difference between the closing price of the Bank's common share on the Toronto Stock Exchange on the day preceding the exercise date and the closing price on the day preceding the award date. SARs vest evenly over a four-year period and expire 10 years after the award date or, in certain circumstances set out in the plan, within specified time limits. The SAR Plan contains provisions for retiring employees that allow the participant's rights to continue vesting in accordance with the stated terms of the grant agreement. A compensation expense of $4 million was recognized for the year ended October 31, 2017 with respect to this plan ($1 million for the year ended October 31, 2016).

As at October 31		2017		2016
	Number of SARs	**Weighted average exercise price**	Number of SARs	Weighted average exercise price
SAR Plan(1)				
Outstanding at beginning	**349,856**	**$ 39.59**	319,920	$ 37.42
Awarded	**63,356**	**$ 54.69**	74,180	$ 42.17
Exercised	**(17,878)**	**$ 33.34**	(44,244)	$ 28.24
Outstanding at end	**395,334**	**$ 42.29**	349,856	$ 39.59
Exercisable at end	**225,637**	**$ 37.69**	185,143	$ 35.28

(1) No SARs cancelled or expired during the years ended October 31, 2017 and 2016.

Exercise price	SARs outstanding	SARs exercisable	Expiry date
$26.93	–	–	December 2017
$17.44	10,780	10,780	December 2018
$29.25	34,430	34,430	December 2019
$34.34	29,340	29,340	December 2020
$34.09	31,616	31,616	December 2021
$38.36	33,020	33,020	December 2022
$44.96	35,360	26,280	December 2023
$47.93	83,252	41,626	December 2024
$42.17	74,180	18,545	December 2025
$54.69	63,356	–	December 2026
	395,334	225,637	

Deferred Stock Unit (DSU) Plans

The DSU Plans are for officers and other designated persons of the Bank and its subsidiaries as well as directors. These plans allow the Bank to tie a portion of the value of the compensation of participants to the future value of the Bank's common shares. A DSU is a right that has a value equal to the closing price of a common share of the Bank on the Toronto Stock Exchange on the day preceding the award. DSUs generally vest evenly over four years. Additional DSUs are credited to the participant's account equal in amount to the dividends paid on common shares of the Bank and vest evenly over the same period as the reference DSUs. DSUs may only be cashed when participants retire or leave the Bank, or for directors, when their term ends. The DSU Plan contains provisions for retiring employees that allow the participant's units to continue vesting in accordance with the stated terms of the grant agreement.

During the year ended October 31, 2017, the Bank awarded 74,436 DSUs at a weighted average price of $54.69 (79,098 DSUs at a weighted average price of $42.17 for the year ended October 31, 2016). A total of 637,989 DSUs were outstanding as at October 31, 2017 (688,035 DSUs as at October 31, 2016). A compensation expense of $14 million was recognized for the year ended October 31, 2017 with respect to these plans ($9 million for the year ended October 31, 2016).

Restricted Stock Unit (RSU) Plan
The RSU Plan is for certain officers and other designated persons of the Bank and its subsidiaries. The objective of this plan is to ensure that the compensation of certain officers and other designated persons is competitive and to foster retention. An RSU represents a right that has a value equal to the average closing price of the Bank's common share, as published by the Toronto Stock Exchange, over the ten trading days preceding the sixth business day in December. RSUs generally vest evenly over three years, although some RSUs vest on the sixth business day of December of the third year following the date of the award, the date on which all RSUs expire. Additional RSUs are credited to the participant's account equal in amount to the dividends declared on the common shares of the Bank and vest evenly over the same period as the reference RSUs. The RSU Plan contains provisions for retiring employees that allow the participant's units to continue vesting in accordance with the stated terms of the award agreement.

During the year ended October 31, 2017, the Bank awarded 2,411,016 RSUs at a weighted average price of $51.21 (2,631,545 RSUs at a weighted average price of $43.43 for the year ended October 31, 2016). As at October 31, 2017, a total of 5,156,316 RSUs were outstanding (5,205,269 RSUs as at October 31, 2016). A compensation expense of $174 million was recognized for the year ended October 31, 2017 with respect to the Plan ($122 million for the year ended October 31, 2016).

Performance Stock Unit (PSU) Plan
The PSU Plan is for officers and other designated persons of the Bank. The objective of this plan is to tie a portion of the value of the compensation of these officers and other designated persons to the future value of the Bank's common shares. A PSU represents a right that has a value equal to the average closing price of the Bank's common share, as published by the Toronto Stock Exchange, over the ten trading days preceding the sixth business day in December, adjusted upward or downward according to performance criteria, which is based on the total shareholder return (TSR) over three years achieved by the Bank compared to that of the S&P/TSX Banks adjusted sub-index. PSUs vest on the sixth business day of December of the third year following the date of the award, the date on which all PSUs expire. Additional PSUs are credited to the participant's account in an amount equal to the dividends declared on the Bank's common shares and vest evenly over the same period as the reference PSUs. The PSU Plan contains provisions for retiring employees that allow the participant's units to continue vesting in accordance with the stated terms of the award agreement.

During the year ended October 31, 2017, the Bank awarded 345,237 PSUs at a weighted average price of $51.21 (364,163 PSUs at a weighted average price of $43.43 for the year ended October 31, 2016). As at October 31, 2017, a total of 881,701 PSUs were outstanding (781,846 PSUs as at October 31, 2016). A compensation expense of $24 million was recognized for the year ended October 31, 2017 with respect to the Plan ($15 million for the year ended October 31, 2016).

Deferred Compensation Plan of National Bank Financial (NBF)
This plan is exclusively for key employees of NBF Wealth Management. The purpose of this plan is to foster the retention of key employees and promote the growth in income and the continuous improvement in profitability at Wealth Management. Under this plan, participants can defer a portion of their annual compensation and NBF may pay a contribution to key employees when certain financial objectives are met. Amounts awarded by NBF and the compensation deferred by participants are invested in, among others, Bank common share units. These share units represent a right, the value of which corresponds to the closing price of the Bank's common share on the Toronto Stock Exchange on the award date. Additional units are paid to the participant's account equal in amount to the dividends declared on the Bank's common shares. Share units representing the amounts awarded by NBF vest evenly over four years. When a participant retires, or in certain cases when the participant's employment is terminated, the participant receives a cash amount representing the value of the vested share units.

During the year ended October 31, 2017, NBF awarded 132,226 share units at a weighted average price of $55.36 (163,845 share units at a weighted average price of $42.05 for the year ended October 31, 2016). As at October 31, 2017, 1,598,966 share units were outstanding (1,569,501 share units as at October 31, 2016). During the year ended October 31, 2017, a $24 million compensation expense was recognized for this Plan ($13 million for the year ended October 31, 2016).

Employee Share Ownership Plan
Under the Bank's Employee Share Ownership Plan, employees who meet the eligibility criteria can contribute up to 8% of their annual gross salary by way of payroll deductions. The Bank matches 25% of the employee contribution up to a maximum of $1,500 per annum. Bank contributions vest to the employee after one year of uninterrupted participation in the plan. Subsequent contributions vest immediately. The Bank's contributions, amounting to $10 million for the year ended October 31, 2017 ($10 million for the year ended October 31, 2016), were charged to *Compensation and employee benefits* when paid. As at October 31, 2017, a total of 5,961,203 common shares were held for this plan (6,359,681 common shares as at October 31, 2016).

Plan shares are purchased on the open market and are considered to be outstanding for earnings per share calculations. Dividends paid on the Bank's common shares held for the Employee Share Ownership Plan are used to purchase other common shares on the open market.

Plan Liabilities and Intrinsic Value
Total liabilities arising from the Bank's share-based compensation plans amounted to $511 million as at October 31, 2017 ($391 million as at October 31, 2016). The intrinsic value of these liabilities that had vested as at October 31, 2017 was $223 million ($186 million as at October 31, 2016).

(millions of Canadian dollars)

NOTE 24 – EMPLOYEE BENEFITS – PENSION PLANS AND OTHER POST-EMPLOYMENT BENEFITS

The Bank offers defined benefit pension plans and other post-employment benefit plans to eligible employees. The pension plans provide benefits based on years of plan participation and average earnings at retirement. The other post-employment benefit plans include post-retirement medical, dental and life insurance coverage. The pension plans are funded whereas the other plans are not funded. The fair value of plan assets and the present value of the defined benefit obligation are measured as at October 31.

The Bank's most significant pension plan is the *Employee Pension Plan of the National Bank of Canada*; it is registered with OSFI and the Canada Revenue Agency and subject to the *Pension Benefits Standards Act, 1985* and the *Income Tax Act*.

The defined benefit plans expose the Bank to specific risks such as investment performance, changes to the discount rate used to calculate the obligation, the longevity of plan members and future inflation. While management believes that the assumptions used in the actuarial valuation process are reasonable, there remains a degree of risk and uncertainty that may cause future results to differ significantly from these assumptions, which could give rise to gains or losses.

According to the Bank's governance rules, the policies and risk management related to the defined benefit plans are overseen at different levels by the pension committees, the Bank's management and the Board's Human Resources Committee. The defined benefit plans are examined on an ongoing basis in order to monitor the funding and investment policies, the plans' financial status and the Bank's funding requirements.

The Bank's funding policy for the defined benefit pension plans is to make at least the minimum annual contributions required by pension regulators.

For funded plans, the Bank determines whether an economic benefit exists in the form of potential reductions in future contributions and in the form of refunds from the plan surplus, where permitted by applicable regulations and plan provisions.

Defined Benefit Obligation, Plan Assets and Funded Status

As at October 31

	Pension plans		Other post-employment benefit plans	
	2017	2016	**2017**	2016
Defined benefit obligation				
Balance at beginning	**3,843**	3,263	**199**	173
Current service cost	**114**	71	**5**	4
Interest cost	**142**	145	**7**	7
Remeasurements				
Actuarial (gains) losses arising from changes in demographic assumptions	**–**	–	**–**	–
Actuarial (gains) losses arising from changes in financial assumptions	**(77)**	492	**(3)**	23
Actuarial (gains) losses arising from experience adjustments	**92**	2	**(7)**	1
Employee contributions	**49**	48		
Benefits paid	**(179)**	(178)	**(10)**	(9)
Balance at end	**3,984**	3,843	**191**	199
Plan assets				
Fair value at beginning	**3,776**	3,521		
Interest income	**135**	154		
Administration cost	**(3)**	(3)		
Remeasurements				
Return on plan assets (excluding interest income)	**138**	167		
Bank contributions(1)	**63**	67		
Employee contributions	**49**	48		
Benefits paid	**(179)**	(178)		
Fair value at end	**3,979**	3,776		
Defined benefit asset (liability) at end	**(5)**	(67)	**(191)**	(199)

(1) For fiscal 2018, the Bank expects to pay an employer contribution of $60 million to the defined benefit pension plans.

(millions of Canadian dollars)

Defined Benefit Asset (Liability)

As at October 31

	Pension plans		Other post-employment benefit plans	
	2017	2016	**2017**	2016
Defined benefit asset included in *Other assets*	**56**	48		
Defined benefit liability included in *Other liabilities*	**(61)**	(115)	**(191)**	(199)
	(5)	(67)	**(191)**	(199)

Cost for Pension Plans and Other Post-Employment Benefits

Year ended October 31

	Pension plans		Other post-employment benefit plans	
	2017	2016	**2017**	2016
Current service cost	**114**	71	**5**	4
Interest expense (income), net	**7**	(9)	**7**	7
Administration costs	**3**	3		
Expense recognized in *Net income*	**124**	65	**12**	11
Remeasurements(1)				
Actuarial (gains) losses on defined benefit obligation	**15**	494	**(10)**	24
Return on plan assets(2)	**(138)**	(167)		
Remeasurements recognized in *Other comprehensive income*	**(123)**	327	**(10)**	24
	1	392	**2**	35

(1) Changes related to the discount rate and to the return on plan assets are reviewed and updated on a quarterly basis. All other assumptions are updated annually.
(2) Excluding interest income.

Allocation of the Fair Value of Pension Plan Assets

As at October 31		**2017**			2016	
	Quoted in an active market(1)	**Not quoted in an active market**	**Total**	Quoted in an active market(1)	Not quoted in an active market	Total
Asset classes						
Cash and cash equivalents	**–**	**108**	**108**	–	54	54
Equity securities	**1,693**	**390**	**2,083**	1,489	391	1,880
Debt securities						
Canadian government	**244**	**–**	**244**	297	–	297
Canadian provincial and municipal governments	**–**	**1,038**	**1,038**	–	1,052	1,052
Restructured notes of the MAV III conduits	**–**	**39**	**39**	–	44	44
Other issuers	**–**	**395**	**395**	–	376	376
Other	**–**	**72**	**72**	–	73	73
	1,937	**2,042**	**3,979**	1,786	1,990	3,776

(1) Unadjusted quoted prices in active markets for identical assets that the Bank can access at the measurement date.

The Bank's investment strategy for plan assets considers several factors, including the time horizon of pension plan obligations and investment risk. For each plan, an allocation range per asset class is defined using a mix of equity and debt securities to optimize the risk-return profile of plan assets and minimize asset/liability mismatching.

The pension plan assets may include investment securities issued by the Bank. As at October 31, 2017 and 2016, the pension plan assets do not include any securities issued by the Bank.

For fiscal 2017, the Bank and its related entities received $6 million ($6 million in fiscal 2016) in fees from the pension plans for related management, administration and custodial services.

(millions of Canadian dollars)

NOTE 24 – EMPLOYEE BENEFITS – PENSION PLANS AND OTHER POST-EMPLOYMENT BENEFITS (cont.)

Allocation of the Defined Benefit Obligation by the Status of Defined Benefit Plan Participants

As at October 31

	Pension plans		Other post-employment benefit plans	
	2017	2016	**2017**	2016
Active employees	**46 %**	48 %	**31 %**	38 %
Retirees	**50 %**	48 %	**69 %**	62 %
Participants with deferred vested benefits	**4 %**	4 %		
	100 %	100 %	**100 %**	100 %
Weighted average duration of the defined benefit obligation *(in years)*	**17**	17	**15**	16

Significant Actuarial Assumptions (Weighted Average)

Discount Rate

The discount rate assumption is based on an interest rate curve that represents the yields on corporate AA bonds. Short-term maturities are obtained using a curve based on observed data from corporate AA bonds. Long-term maturities are obtained using a curve based on observed data and extrapolated data.

In order to measure the pension plan and other post-employment plan obligation, the vested benefits that the Bank expects to pay in each future period are discounted to the measurement date using the spot rate associated with each of the respective periods based on the yield curve derived using the above methodology. The sum of discounted benefit amounts represents the defined benefit obligation. An average discount rate that replicates this obligation is then computed.

To better reflect current service cost, a separate discount rate was determined to account for the timing of future benefit payments associated with the additional year of service to be earned by the plan's active participants. Since these benefits are, on average, being paid at a later date than the benefits already earned by participants as a whole (i.e., longer duration), this method results in the use of a generally higher discount rate for calculating current service cost than that used to measure obligations where the yield curve is positively sloped. The methodology used to determine this discount rate is the same as the one used to establish the discount rate for measuring the obligation.

(millions of Canadian dollars)

Other Assumptions

For measurement purposes, the estimated annual growth rate for health care costs was 5.28% for 2017 (5.77% for 2016). Based on the assumption retained, this rate is expected to decrease gradually to 2.97% in 2034 and remain steady thereafter.

The mortality assumption is a determining factor when measuring the defined benefit obligation. Determining the expected benefit payout period is based on best estimate assumptions regarding mortality. Mortality tables are reviewed at least once a year, and the assumptions made are in accordance with accepted actuarial practice. New results regarding the plans are reviewed and used in calculating best estimates of future mortality.

As at October 31

	Pension plans		Other post-employment benefit plans	
	2017	2016	**2017**	2016
Defined benefit obligation				
Discount rate	**3.65 %**	3.60 %	**3.65 %**	3.60 %
Rate of compensation increase	**3.00 %**	3.00 %	**3.00 %**	3.00 %
Health care cost trend rate			**5.28 %**	5.77 %
Life expectancy *(in years)* at 65 for a participant currently at				
Age 65				
Men	**21.2**	21.1	**21.2**	21.1
Women	**23.5**	23.5	**23.5**	23.5
Age 45				
Men	**22.2**	22.2	**22.2**	22.2
Women	**24.5**	24.5	**24.5**	24.5

Year ended October 31

	Pension plans		Other post-employment benefit plans	
	2017	2016	**2017**	2016
Pension plan expense				
Discount rate – Current service	**3.75 %**	4.75 %	**3.75 %**	4.75 %
Discount rate – Interest expense (income), net	**3.60 %**	4.40 %	**3.60 %**	4.40 %
Rate of compensation increase	**3.00 %**	3.00 %	**3.00 %**	3.00 %
Health care cost trend rate			**5.77 %**	5.77 %
Life expectancy *(in years)* at 65 for a participant currently at				
Age 65				
Men	**21.1**	21.1	**21.1**	21.1
Women	**23.5**	23.4	**23.5**	23.4
Age 45				
Men	**22.2**	22.1	**22.2**	22.1
Women	**24.5**	24.4	**24.5**	24.4

(millions of Canadian dollars)

NOTE 24 – EMPLOYEE BENEFITS – PENSION PLANS AND OTHER POST-EMPLOYMENT BENEFITS (cont.)

Sensitivity of Significant Assumptions for 2017

The following table shows the potential impacts of changes to key assumptions on the defined benefit obligation of the pension plans and other post-employment benefit plans as at October 31, 2017. These impacts are hypothetical and should be interpreted with caution as changes in each significant assumption may not be linear.

	Pension plans	Other post-employment benefit plans
	Change in the obligation	Change in the obligation
Impact of a 0.25% increase in the discount rate	(165)	(7)
Impact of a 0.25% decrease in the discount rate	180	8
Impact of a 0.25% increase in the rate of compensation increase	38	1
Impact of a 0.25% decrease in the rate of compensation increase	(34)	(1)
Impact of a 1.00% increase in the health care cost trend rate		9
Impact of a 1.00% decrease in the health care cost trend rate		(8)
Impact of an increase in the age of participants by one year	(96)	(2)
Impact of a decrease in the age of participants by one year	97	2

Projected Benefit Payments

Year ended October 31

	Pension plans	Other post-employment benefit plans
2018	139	10
2019	138	9
2020	139	9
2021	144	9
2022	150	9
2023 to 2027	840	43

(millions of Canadian dollars)

NOTE 25 – INCOME TAXES

The Bank's income tax expense reported in the consolidated financial statements is as follows.

Year ended October 31	2017	2016
Consolidated Statement of Income		
Current taxes		
Current year	508	378
Prior period adjustments	(11)	(17)
	497	361
Deferred taxes		
Origination and reversal of temporary differences	(8)	(150)
Prior period adjustments	(5)	14
	(13)	(136)
	484	225
Consolidated Statement of Changes in Equity		
Share issuance expense and other	8	(4)
Consolidated Statement of Comprehensive Income		
Remeasurements of pension plans and other post-employment benefit plans	36	(94)
Other	(11)	(13)
	25	(107)
Income taxes	517	114

The breakdown of the income tax expense is as follows.

Year ended October 31	2017	2016
Current taxes	505	352
Deferred taxes	12	(238)
	517	114

The temporary differences and tax loss carryforwards resulting in deferred tax assets and liabilities are as follows.

	As at October 31 Consolidated Balance Sheet		Year ended October 31 Consolidated Statement of Income		Year ended October 31 Consolidated Statement of Comprehensive Income	
	2017	2016	2017	2016	2017	2016
Deferred tax assets						
Allowances for credit losses	151	159	(8)	54	–	–
Deferred charges	246	241	5	53	–	–
Defined benefit liability – Pension plans	69	102	–	–	(33)	88
Defined benefit liability – Other post-employment benefit plans	56	58	–	10	(2)	(2)
Deferred revenue	38	33	5	(3)	–	–
Tax loss carryforwards	24	18	6	14	–	–
Other items(1)(2)	61	48	(4)	(10)	8	–
	645	659	4	118	(27)	86
Deferred tax liabilities						
Premises and equipment and intangible assets	(199)	(177)	(22)	(22)	–	–
Defined benefit asset – Pension plans	(55)	(70)	16	(7)	(1)	8
Investments in associates	(25)	(43)	18	22	–	–
Other items	(27)	(24)	(3)	25	–	4
	(306)	(314)	9	18	(1)	12
Net deferred tax assets (liabilities)	339	345	13	136	(28)	98

(1) As at October 31, 2017, the Consolidated Balance Sheet amount includes $3 million in deferred tax assets related to share issuance costs ($4 million as at October 31, 2016) reported in *Retained earnings* on the Consolidated Statement of Changes in Equity.
(2) As at October 31, 2017, the Consolidated Balance Sheet amount includes $6 million in deferred tax assets related to the impact of a foreign subsidiary's transition to IFRS reported in *Retained earnings*.

(millions of Canadian dollars)

NOTE 25 – INCOME TAXES (cont.)

Net deferred tax assets are included in *Other assets* and net deferred tax liabilities are included in *Other liabilities*.

As at October 31	**2017**	2016
Deferred tax assets	**374**	402
Deferred tax liabilities	**(35)**	(57)
	339	345

According to forecasts, which are based on information available on October 31, 2017, the Bank believes that it is probable that the results of future operations will generate sufficient taxable income to utilize all the deferred tax assets before they expire.

As at October 31, 2017, the total amount of temporary differences, unused tax loss carryforwards and unused tax credits for which no deferred tax asset has been recognized was $383 million ($290 million as at October 31, 2016).

As at October 31, 2017, the total amount of temporary differences related to investments in subsidiaries, associates, and joint ventures for which no deferred tax liability has been recognized was $1,057 million ($834 million as at October 31, 2016).

The following table provides a reconciliation of the Bank's income tax rate.

Year ended October 31		**2017**		2016
	$	**%**	$	%
Income before income taxes	**2,508**	**100.0**	1,481	100.0
Income taxes at Canadian statutory income tax rate	**670**	**26.7**	400	27.0
Reduction in income tax rate due to				
Tax-exempt income from securities	**(178)**	**(7.1)**	(168)	(11.3)
Non-taxable portion of capital gains	**(2)**	**(0.1)**	–	–
Tax rates of subsidiaries, foreign entities and associates	**1**	**0.1**	3	0.2
Other items	**(7)**	**(0.3)**	(10)	(0.7)
	(186)	**(7.4)**	(175)	(11.8)
Income taxes reported in the Consolidated Statement of Income and effective income tax rate	**484**	**19.3**	225	15.2

Notice of Assessment

In March 2017, the Canada Revenue Agency (CRA) issued a proposed reassessment to the Bank for the 2011 and 2012 taxation years. In May 2017, the CRA reassessed the Bank for the 2012 taxation year. The transactions to which the proposed reassessment and the actual reassessment relate are similar to those prospectively addressed by the synthetic equity arrangement rules introduced in the 2015 Canadian federal budget. The proposed reassessment and the actual reassessment (including estimated provincial income taxes and interest) total approximately $173 million. The CRA may issue reassessments to the Bank in respect of similar activities for fiscal years subsequent to 2012. The Bank is confident that its tax position was appropriate and intends to vigorously defend its position. As a result, no amount has been recognized in the consolidated financial statements as at October 31, 2017.

NOTE 26 – EARNINGS PER SHARE

Diluted earnings per share is calculated by dividing net income attributable to common shareholders by the weighted average number of common shares outstanding after taking into account the dilution effect of stock options using the treasury stock method and any gain (loss) on the redemption of preferred shares.

Year ended October 31	2017	2016
Basic earnings per share		
Net income attributable to the Bank's shareholders	1,940	1,181
Dividends on preferred shares	85	61
Premium paid on preferred shares redeemed for cancellation	–	3
Net income attributable to common shareholders	1,855	1,117
Weighted average basic number of common shares outstanding *(thousands)*	340,809	337,460
Basic earnings per share *(dollars)*	5.44	3.31
Diluted earnings per share		
Net income attributable to common shareholders	1,855	1,117
Weighted average basic number of common shares outstanding *(thousands)*	340,809	337,460
Adjustment to average number of common shares *(thousands)*		
Stock options(1)	3,962	2,435
Weighted average diluted number of common shares outstanding *(thousands)*	344,771	339,895
Diluted earnings per share *(dollars)*	5.38	3.29

(1) For the year ended October 31, 2017, as the exercise price of the options was lower than the average price of the Bank's common shares, no option was excluded from the diluted earnings per share calculation. For the year ended October 31, 2016, the calculation of the diluted earnings per share had excluded an average number of 5,730,365 options outstanding with a weighted average exercise price of $46.55, as the exercise price of these options was greater than the average price of the Bank's common shares.

(millions of Canadian dollars)

NOTE 27 – GUARANTEES, COMMITMENTS AND CONTINGENT LIABILITIES

Guarantees

The maximum potential amount of future payments represents the maximum risk of loss if there were a total default by the guaranteed parties, without consideration of recoveries under recourse provisions, insurance policies or from collateral held or pledged. The maximum potential amount of future payments for significant guarantees issued by the Bank is presented in the following table.

As at October 31	2017	2016
Letters of guarantee	3,847	3,125
Backstop liquidity, credit enhancement facilities and other	5,049	5,969
Securities lending	1,293	982

Letters of Guarantee

In the normal course of business, the Bank issues letters of guarantee. These letters of guarantee represent irrevocable commitments that the Bank will make payments in the event that a client cannot meet its financial obligations to third parties. The Bank's policy for requiring collateral security with respect to letters of guarantee is similar to that for loans. Generally, the term of these letters of guarantee is less than two years. The collective allowance on non-impaired loans covers all credit risks, including those relating to letters of guarantee. As at October 31, 2017 and 2016, no amount has been recorded on the Consolidated Balance Sheet with respect to these letters of guarantee.

Backstop Liquidity and Credit Enhancement Facilities

Facilities to Multi-Seller Conduits

The Bank administers multi-seller conduits that purchase financial assets from clients and finance those purchases by issuing asset-backed commercial paper. The Bank provides backstop liquidity facilities to these multi-seller conduits. As at October 31, 2017, the notional amount of the global-style backstop liquidity facilities totalled $2.7 billion ($2.9 billion as at October 31, 2016), representing the total amount of the commercial paper outstanding.

These backstop liquidity facilities can be drawn if the conduits are unable to access the commercial paper market, even if there is no general market disruption. These facilities have terms of less than one year and can be periodically renewed. The terms and conditions of these backstop liquidity facilities do not require the Bank to advance money to the conduits if the conduits are insolvent or involved in bankruptcy proceedings or to fund non-performing assets beyond the amount of the available credit enhancements. The backstop liquidity facilities provided by the Bank have not been drawn to date.

The Bank also provides credit enhancement facilities to these multi-seller conduits. These facilities have terms of less than one year and are automatically renewable unless the Bank sends a non-renewal notice. As at October 31, 2017 and 2016, the committed notional value for these facilities was $30 million. To date, the credit enhancement facilities provided by the Bank have not been drawn.

The maximum risk of loss for the Bank cannot exceed the total amount of commercial paper outstanding, i.e., $2.7 billion as at October 31, 2017 ($2.9 billion as at October 31, 2016). As at October 31, 2017, the Bank held $6 million ($4 million as at October 31, 2016) of this commercial paper and, consequently, the maximum potential amount of future payments was $2.7 billion ($2.9 billion as at October 31, 2016).

CDCC Overnight Liquidity Facility

Canadian Derivatives Clearing Corporation (CDCC) acts as a central clearing counterparty for multiple financial instrument transactions in Canada. Certain fixed-income clearing members of CDCC have provided an equally shared committed and uncommitted global overnight liquidity facility for the purpose of supporting CDCC in its clearing activities of securities purchased under reverse repurchase agreements or sold under repurchase agreements. The objective of this facility is to maintain sufficient liquidity in the event of a clearing member's default. As a fixed-income clearing member providing support to CDCC, the Bank provides a liquidity facility. As at October 31, 2017, the notional amount of the overnight uncommitted liquidity facility amounted to $2.3 billion ($2.3 billion as at October 31, 2016). As at October 31, 2017 and 2016, no amount had been drawn.

(millions of Canadian dollars)

Securities Lending

Under securities lending agreements the Bank has entered into with certain clients who have entrusted it with the safekeeping of their securities, the Bank lends the securities to third parties and indemnifies its clients in the event of loss. In order to protect itself against any contingent loss, the Bank obtains, as security from the borrower, a cash amount or extremely liquid marketable securities with a fair value greater than that of the securities loaned. No amount has been recognized on the Consolidated Balance Sheet with respect to potential indemnities resulting from securities lending agreements.

Other Indemnification Agreements

In the normal course of business, including securitization transactions and discontinuances of businesses and operations, the Bank enters into numerous contractual agreements under which it undertakes to compensate the counterparty for costs incurred as a result of litigation, changes in laws and regulations (including tax legislation), claims with respect to past performance, incorrect representations or the non-performance of certain restrictive covenants. The Bank also undertakes to indemnify any person acting as a director or officer or performing a similar function within the Bank or one of its subsidiaries or another entity, at the request of the Bank, for all expenses incurred by that person in proceedings or investigations to which he or she is party in that capacity. Moreover, as a member of a securities transfer network and pursuant to the membership agreement and the regulations governing the operation of the network, the Bank granted a movable hypothec to the network that can be used in the event another member fails to meet its contractual obligations. The durations of the indemnification agreements vary according to circumstance; as at October 31, 2017 and 2016, given the nature of the agreements, the Bank is unable to make a reasonable estimate of the maximum potential liability it could be required to pay to counterparties. No amount has been recorded on the Consolidated Balance Sheet with respect to these agreements.

Master Asset Vehicles (MAV)

Margin Funding Facility

During fiscal 2017, given the repayment of the restructured notes, the Bank ceased its commitment to contribute to the margin funding facility of the MAV conduits. As at October 31, 2016, the Bank had committed to contribute $800 million to a margin funding facility related to the MAV conduits in order to finance potential collateral calls, and no amount had been advanced.

Commitments

Credit Instruments

In the normal course of business, the Bank enters into various off-balance-sheet commitments. The credit instruments used to meet the financing needs of its clients represent the maximum amount of additional credit the Bank could be obligated to extend if the commitments were fully drawn.

As at October 31	2017	2016
Letters of guarantee(1)	3,847	3,125
Documentary letters of credit(2)	137	136
Credit card receivables(3)	7,688	7,187
Commitments to extend credit(3)	52,391	47,815

(1) See the Letters of Guarantee heading on page 184.
(2) Documentary letters of credit are documents issued by the Bank and used in international trade to enable a third party to draw drafts on the Bank up to an amount established under specific terms and conditions; these instruments are collateralized by the delivery of the goods to which they are related.
(3) Credit card receivables and commitments to extend credit represent the undrawn portions of credit authorizations granted in the form of loans, acceptances, letters of guarantee and documentary letters of credit. The Bank is required at all times to make the undrawn portion of the credit authorization available, subject to certain conditions.

Financial Assets Received as Collateral

As at October 31, 2017, the fair value of financial assets received as collateral that the Bank was authorized to sell or repledge was $92.2 billion ($71.3 billion as at October 31, 2016). These financial assets received as collateral consist of securities related to securities financing and derivative transactions as well as securities purchased under reverse repurchase agreements and securities borrowed.

Other Commitments

The Bank acts as an investor in investment banking activities where it enters into agreements to finance external private equity funds and investments in equity and debt securities at market value at the time the agreements are signed. In connection with these activities, the Bank has commitments to invest up to $77 million as at October 31, 2017 ($37 million as at October 31, 2016).

(millions of Canadian dollars)

NOTE 27 – GUARANTEES, COMMITMENTS AND CONTINGENT LIABILITIES (cont.)

Pledged Assets

In the normal course of business, the Bank pledges securities and other assets as collateral. A breakdown of encumbered assets pledged as collateral is provided in the following table. These transactions are concluded in accordance with standard terms and conditions for such transactions.

As at October 31	2017	2016
Assets pledged to		
Bank of Canada	502	–
Direct clearing organizations[1]	1,358	563
Assets pledged in relation to		
Derivative financial instrument transactions	1,330	2,419
Borrowing, securities lending and securities sold under reverse repurchase agreements	40,693	43,390
Securitization transactions	23,151	23,457
Covered bonds[2]	7,668	7,296
Other	126	125
Total	74,828	77,250

(1) Includes assets pledged as collateral for Large Value Transfer System (LVTS) activities.
(2) The Bank has a covered bond program. For additional information, see Notes 13 and 28.

Contingent Liabilities

Litigation

In the normal course of business, the Bank and its subsidiaries are involved in various claims relating, among other matters, to loan portfolios, investment portfolios and supplier agreements, including court proceedings, investigations or claims of a regulatory nature, class actions or other legal remedies of varied natures. The recent developments in the main legal proceeding involving the Bank are as follows:

Watson

In 2011, a class action was filed in the Supreme Court of British Columbia against Visa Corporation Canada (Visa), MasterCard International Incorporated (MasterCard) as well as National Bank and a number of other financial institutions. The plaintiff is alleging that the credit card networks and financial institutions engaged in a price-fixing system to increase or maintain the fees paid by merchants on Visa and MasterCard transactions. In so doing, they would have been in breach of the *Competition Act.* An unspecified amount of compensatory and punitive damages is being claimed. During the year ended October 31, 2017, the Bank entered into an agreement-in-principle with the plaintiffs in order to settle this dispute in the five jurisdictions where the class action was filed. This agreement is subject to the approval of the Court in each of those jurisdictions.

It is impossible to determine the outcome of the claims instituted or which may be instituted against the Bank and its subsidiaries. The Bank estimates, based on the information at its disposal, that while the amount of contingent liabilities pertaining to these claims, taken individually or in the aggregate, could have a material impact on the Bank's consolidated operating income for a particular period, it would not have a material adverse impact on the Bank's consolidated financial position.

NOTE 28 – STRUCTURED ENTITIES

A structured entity is an entity created to accomplish a narrow and well-defined objective and is designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when any voting rights relate solely to administrative tasks and the relevant activities are directed by means of contractual arrangements. Structured entities are assessed for consolidation in accordance with the accounting treatment described in Note 1. The Bank's maximum exposure to loss resulting from its interests in these structured entities consists primarily of the investments in these entities, the fair value of derivative financial instrument contracts entered into with them, and the backstop liquidity and credit enhancement facilities granted to certain structured entities.

In the normal course of business, the Bank may enter into financing transactions with third-party structured entities, including commercial loans, reverse repurchase agreements, prime brokerage margin lending, and similar collateralized lending transactions. While such transactions expose the Bank to the counterparty credit risk of the structured entities, this exposure is mitigated by the collateral related to these transactions. The Bank typically has neither power nor significant variable returns resulting from financing transactions with structured entities and does not consolidate such entities. Financing transactions with third-party-sponsored structured entities are included in the Bank's consolidated financial statements and are not included in the table accompanying this note.

Non-Consolidated Structured Entities

Multi-Seller Conduits

The Bank administers multi-seller conduits that purchase financial assets from clients and finance those purchases by issuing commercial paper backed by the assets acquired. Clients use these multi-seller conduits to diversify their funding sources and reduce borrowing costs, while continuing to manage the financial assets and providing some amount of first-loss protection. Notes issued by the conduits and held by third parties provide additional credit loss protection. The Bank acts as a financial agent and provides these conduits with administrative and transaction structuring services as well as backstop liquidity and credit enhancement facilities under the commercial paper program. These facilities are presented and described in Note 27. The Bank has concluded derivative financial instrument contracts with these conduits, the fair value of which is presented on the Bank's Consolidated Balance Sheet. Although the Bank has the ability to direct the relevant activities of these conduits, it cannot use its power to affect the amount of the returns it obtains, as it acts as an agent. Consequently, the Bank does not control these conduits and does not consolidate them.

Master Asset Vehicles (MAV)

The MAVs are structured entities created for the purpose of grouping the restructured notes stemming from asset-backed commercial paper held by Canadian corporate investors. The Bank held economic interests in MAVs in the form of restructured notes and the margin funding facility. The Bank did not have the ability to direct the relevant activities of the MAVs. Consequently, it did not control these MAVs and did not consolidate them. During fiscal 2017, the restructured notes were repaid and the Bank ceased its commitment to contribute to the margin funding facility of the MAV conduits.

Investment Funds

The Bank enters into derivative or other financial instrument contracts with third parties to provide them with the desired exposure to certain investment funds. The Bank economically hedges the risks related to these derivatives by investing in those investment funds. The Bank can also hold economic interests in certain investment funds as part of its investing activities. The Bank does not control the funds where its holdings are not significant as in these circumstances, the Bank either acts only as an agent or does not have any power over the relevant activities. In both cases, it does not have significant exposure to the variable returns of the funds. Therefore, the Bank does not consolidate these funds.

Private Investments

As part of its investment banking operations, the Bank invests in several limited liability partnerships and other incorporated entities. These investment companies in turn invest in operating companies with a view to reselling these investments at a profit over the medium or long term. The Bank does not intervene in the operations of these entities; its only role is that of an investor. Consequently, it does not control these companies and does not consolidate them.

Asset-Backed Structured Entities

The Bank invested in certain asset-backed structured entities. The underlying assets consist of residential mortgages, consumer loans, equipment loans and leases. The Bank does not have the ability to direct the relevant activities of these structured entities and has no exposure to their variable returns, other than the right to receive interest income and dividend income from its investments. Consequently, the Bank does not control these structured entities and does not consolidate them.

(millions of Canadian dollars)

NOTE 28 – STRUCTURED ENTITIES (cont.)

The following table presents the carrying amounts of the assets and liabilities relating to the Bank's interests in non-consolidated structured entities, the Bank's maximum exposure to loss from these interests, as well as the total assets of these structured entities. The structured entity Canada Housing Trust is not presented. For additional information, see Note 8.

					As at October 31, 2017
	Multi-seller conduits[(1)]	Master asset vehicles[(2)]	Investment funds[(3)]	Private investments[(4)]	Asset-backed structured entities[(5)]
Assets on the Consolidated Balance Sheet					
Securities at fair value through profit or loss	6	–	29	–	–
Available-for-sale securities	–	–	29	70	–
Held-to-maturity securities	–	–	–	–	1,306
	6	–	58	70	1,306
As at October 31, 2016	10	619	86	97	503
Liabilities on the Consolidated Balance Sheet					
Derivative financial instruments	13	–	–	–	–
	13	–	–	–	–
As at October 31, 2016	–	–	–	–	–
Maximum exposure to loss					
Securities	6	–	58	70	1,306
Liquidity, credit enhancement facilities and commitments	2,721	–	–	–	216
	2,727	–	58	70	1,522
As at October 31, 2016	2,883	1,419	86	97	503
Total assets of the structured entities	2,768	–	277	437	3,201
As at October 31, 2016	2,912	–	303	2,650	813

(1) The main underlying assets, located in Canada, are residential mortgages, automobile loans, automobile inventory financings, and other receivables. As at October 31, 2017, the notional committed amount of the global-style liquidity facilities totalled $2.7 billion ($2.9 billion as at October 31, 2016), representing the total amount of commercial paper outstanding. The Bank also provides series-wide credit enhancement facilities for a notional committed amount of $30 million ($30 million as at October 31, 2016). The maximum exposure to loss cannot exceed the amount of commercial paper outstanding. As at October 31, 2017, the Bank held $6 million in commercial paper ($4 million as at October 31, 2016) and, consequently, the maximum potential amount of future payments as at October 31, 2017 is limited to $2.7 billion ($2.9 billion as at October 31, 2016), which represents the undrawn liquidity and credit enhancement facilities.

(2) As at October 31, 2017, the carrying value of the restructured notes of the master asset vehicle (MAV) conduits and of the other restructured notes held by the Bank was nil ($619 million as at October 31, 2016). The change in the carrying value of the restructured notes of the MAV conduits during the year ended October 31, 2017 was mainly attributable to capital repayments. During fiscal 2017, given the repayment of the restructured notes, the Bank ceased its commitment to contribute to the margin funding facility of the MAV conduits. The undrawn margin funding facility stood at $800 million as at October 31, 2016.

(3) The underlying assets are various financial instruments and are presented on a net asset basis. Certain investment funds are in a trading portfolio.

(4) The underlying assets are private investments. The amount of total assets of the structured entities corresponds to the amount for the most recent available period.

(5) The underlying assets are residential mortgages, consumer loans, equipment loans and leases.

Consolidated Structured Entities

Securitization Entity for the Bank's Credit Card Receivables

In April 2015, the Bank set up Canadian Credit Card Trust II (CCCT II) to continue its credit card securitization program on a revolving basis and to use the entity for capital management and funding purposes.

The Bank provides first-loss protection against the losses since it retains the excess spread from the portfolio of sold receivables. The excess spread represents the residual net interest income after all the expenses related to this structure have been paid. The Bank also provides second-loss protection as it holds subordinated notes issued by CCCT II. In addition, the Bank acts as an administrative agent and servicer and as such is responsible for the daily administration and management of CCCT II's credit card receivables. The Bank therefore has the ability to direct the relevant activities of CCCT II and can exercise its power to affect the amount of returns it obtains. Consequently, the Bank controls CCCT II and consolidates it.

Investment Funds

The Bank enters into derivative or other financial instrument contracts with third parties to provide them with the desired exposure to certain investment funds. The Bank economically hedges the risks related to these derivatives by investing in those investment funds. The Bank can also hold economic interests in certain investment funds as part of its investing activities. The Bank controls the relevant activities of these funds through its involvement as an investor and its significant exposure to their variable returns. Therefore, the Bank consolidates these funds.

(millions of Canadian dollars)

Covered Bonds

NBC Covered Bond Guarantor (Legislative) Limited Partnership

In December 2013, the Bank established the covered bond legislative program under which covered bonds are issued. It therefore created NBC Covered Bond Guarantor (Legislative) Limited Partnership (the Guarantor) to guarantee payment of the principal and interest owed to the bondholders. The Bank sold uninsured residential mortgages to the Guarantor and granted it loans to facilitate the acquisition of these assets. The Bank acts as manager of the partnership and has decision-making authority over its relevant activities in accordance with the contractual terms governing the covered bond legislative program. In addition, the Bank is able, in accordance with the contractual terms governing the covered bond legislative program, to affect the variable returns of the partnership, which are directly related to the return on the mortgage loan portfolio and the interest on the loans from the Bank. Consequently, the Bank controls the partnership and consolidates it.

NBC Asset Trust

The Bank created NBC Asset Trust for its funding and capital management needs. The securities issued by this trust constitute innovative capital instruments and are eligible as additional Tier 1 capital, but because these instruments do not satisfy the non-viability contingent capital requirements, they are to be phased out at a rate of 10% per year between 2013 and 2022. For additional information, see Note 20. The issuance proceeds were used to acquire, from the Bank, residential mortgage loans. The Bank continues to administer these loans and is committed to repurchase from NBC Asset Trust the capital balance and unpaid accrued interest on any loan that is more than 90 days past due. The Bank also manages day-to-day operations and holds the special voting securities of the trust. After the distribution has been paid to the holders of the trust capital securities, the Bank, as the sole holder of the special trust securities, is entitled to receive the balance of net residual funds. Therefore, the Bank has the ability to direct the relevant activities of NBC Asset Trust and can use its power to affect the amount of returns it obtains. Consequently, the Bank controls this trust and consolidates it.

Third-Party Structured Entities

In 2015, the Bank, through one of its subsidiaries, acquired interests in portions of a third-party structured entity. Each portion of the structured entity is a deemed separate entity since all of the following criteria are met: 1) specified assets of the entity are the only source of payment for specified liabilities of (or specified other interests in) the entity; 2) parties other than those with the specified liabilities do not have rights or obligations related to the specified assets or to residual cash flows from those assets. The Bank controls and therefore consolidates the deemed separate entities, as it has the ability to direct their relevant activities through its kick-out rights over the servicer of their assets and because it is also exposed to the variability of their returns.

The following table presents the Bank's investments and other assets in the consolidated structured entities as well as the total assets of these entities.

As at October 31		2017		2016
	Investments and other assets	**Total assets[1]**	Investments and other assets	Total assets[1]
Consolidated structured entities				
Securitization entity for the Bank's credit card receivables[2][3]	**863**	**1,784**	343	1,882
Investment funds[4]	**205**	**217**	156	199
Covered bonds[5]	**15,605**	**15,891**	13,908	14,176
Building[6]	**61**	**54**	66	59
NBC Asset Trust[7]	**1,350**	**2,122**	1,350	2,121
Third-party structured entities[8]	**74**	**74**	867	867
	18,158	**20,142**	16,690	19,304

(1) There are restrictions that stem mainly from regulatory requirements, corporate or securities laws and contractual arrangements that limit the ability of certain consolidated structured entities to transfer funds to the Bank.
(2) The underlying assets are credit card receivables.
(3) The Bank's investment is presented net of third-party holdings.
(4) The underlying assets are various financial instruments and are presented on a net asset basis. Certain investment funds are in a trading portfolio.
(5) The underlying assets are uninsured residential mortgage loans of the Bank. The average maturity of these underlying assets is three years. As at October 31, 2017, the total amount of transferred mortgage loans was $15.6 billion ($13.9 billion as at October 31, 2016), and the total amount of covered bonds of $7.0 billion was recognized in *Deposits* on the Consolidated Balance Sheet ($6.7 billion as at October 31, 2016). For additional information, see Note 13.
(6) The underlying asset is a building located in Canada.
(7) The underlying assets are insured and uninsured residential mortgage loans of the Bank. As at October 31, 2017, insured loans amounted to $82 million ($148 million as at October 31, 2016). The average maturity of the underlying assets is two years. For additional information, see Note 20.
(8) The underlying assets consist of equipment leased under operating leases.

(millions of Canadian dollars)

NOTE 29 – RELATED PARTY DISCLOSURES

In the normal course of business, the Bank provides various banking services to related parties and enters into contractual agreements and other operations with related parties. The Bank considers the following to be related parties.

- Its key officers and directors and members of their immediate family, i.e., spouses and children under 18 living in the same household.
- Entities over which its key officers and directors and their immediate family have control and/or significant influence through their significant voting power.
- The Bank's associates and joint ventures.
- The Bank's pension plans (for additional information, see Note 24).

According to the established definition, the Bank's key officers are those persons having authority and responsibility for planning, directing and controlling the Bank's activities, directly or indirectly.

Related Party Transactions

As at October 31

	Key officers and directors(1)		Related entities	
	2017	2016(2)	**2017**	2016
Assets				
Mortgage loans and other loans(3)	**30**	34	**364** (4)	789 (4)
Other	**–**	–	**21**	43
Liabilities				
Deposits	**43**	38	**789** (5)	628 (5)
Other	**–**	–	**23**	19

(1) As at October 31, 2017, key officers, directors and their immediate family members were holding $46 million of the Bank's common and preferred shares ($29 million as at October 31, 2016).
(2) For the year ended October 31, 2016, certain amounts have been revised from those previously reported.
(3) The Bank did not record any allowance or provisions for credit losses in fiscal years 2017 and 2016.
(4) As at October 31, 2017, mortgage loans and other loans consisted of: (i) $28 million in loans to the Bank's associates and joint ventures ($190 million as at October 31, 2016), and (ii) $336 million in loans to entities whose key officers, directors and their immediate family members exercise control or significant influence through significant voting power ($599 million as at October 31, 2016).
(5) As at October 31, 2017, deposits consisted of: (i) $285 million in deposits from the Bank's associates and joint ventures ($321 million as at October 31, 2016) and (ii) $504 million in deposits from entities whose key officers, directors and their immediate family members exercise control or significant influence through significant voting power ($307 million as at October 31, 2016).

The contractual agreements and other transactions with related entities as well as with directors and key officers are entered into under conditions similar to those offered to non-related third parties. These agreements did not have a significant impact on the Bank's results. The Bank also offers a deferred stock unit plan to directors who are not Bank employees. For additional information, see Notes 9, 23 and 28.

Compensation of Key Officers and Directors

Year ended October 31	**2017**	2016
Compensation and other short-term and long-term benefits	**24**	19
Share-based payments	**21**	19

(millions of Canadian dollars)

Principal Subsidiaries of the Bank[1]

			As at October 31, 2017	
Name	Business activity	Principal office address	Voting shares[2]	Investment at cost
Canada and United States				
National Bank Acquisition Holding Inc.	Holding company	Montreal, Canada	100%	772
National Bank Group Inc.	Holding company	Montreal, Canada	100%	
National Bank Financial Inc.	Investment dealer	Montreal, Canada	100%	
NBCN Inc.	Investment dealer	Toronto, Canada	100%	
National Bank Financial Ltd.	Investment dealer	Montreal, Canada	100%	
NBF International Holdings Inc.	Holding company	Montreal, Canada	100%	
Credigy International Holdings Inc.	Holding company	Montreal, Canada	80%	
National Bank of Canada Financial Group Inc.	Holding company	New York, NY, United States	100%	
Credigy Ltd.	Holding company	Atlanta, GA, United States	80%	
National Bank of Canada Financial Inc.	Investment dealer	New York, NY, United States	100%	
National Bank Life Insurance Company	Insurance	Montreal, Canada	100%	
Natcan Trust Company	Trustee	Montreal, Canada	100%	238
National Bank Trust Inc.	Trustee	Montreal, Canada	100%	195
National Bank Realty Inc.	Real estate	Montreal, Canada	100%	13
National Bank Investments Inc.	Mutual funds dealer	Montreal, Canada	100%	585
National Bank Direct Brokerage Inc.	Investment dealer	Montreal, Canada	100%	38
NatBC Holding Corporation	Holding company	Hollywood, FL, United States	100%	31
Natbank, National Association	Banking	Hollywood, FL, United States	100%	
Other countries				
Natcan Global Holdings Ltd.	Holding company	Sliema, Malta	100%	22
NBC Global Finance Limited	Investment services	Dublin, Ireland	100%	
NBC Financial Markets Asia Limited	Investment dealer	Hong Kong, China	100%	5
Advanced Bank of Asia Limited	Commercial bank	Phnom Penh, Cambodia	90%	283
ATA IT Ltd.	Information technology	Bangkok, Thailand	100%	3

(1) Excluding consolidated structured entities. See Note 28.
(2) The Bank's percentage of voting rights in these subsidiaries.

NOTE 30 – MANAGEMENT OF THE RISKS ASSOCIATED WITH FINANCIAL INSTRUMENTS

The Bank is exposed to credit risk, market risk, liquidity risk and financing risk. The Bank's objectives, policies and procedures for managing risk and the risk measurement methods are presented in the Risk Management section of the MD&A for the year ended October 31, 2017. Text in grey shading and tables identified with an asterisk (*) in the Risk Management section of the MD&A are an integral part of these consolidated financial statements.

Residual Contractual Maturities of Balance Sheet Items and Off-Balance-Sheet Commitments

The following tables present balance sheet items and off-balance-sheet commitments by residual contractual maturity as at October 31, 2017 and 2016. The information gathered from this maturity analysis is a component of liquidity and funding management. However, this maturity profile does not represent how the Bank manages its interest rate risk nor its liquidity risk and funding needs. The Bank considers factors other than contractual maturity in the assessment of liquid assets or in determining expected future cash flows.

In the normal course of business, the Bank enters into various off-balance-sheet commitments. The credit instruments used to meet the funding needs of its clients represent the maximum amount of additional credit the Bank could be obligated to extend if the commitments were fully drawn.

The Bank also has future minimum commitments under leases for premises as well for other contracts, mainly contracts for outsourced information technology services. Most of the lease commitments are related to operating leases.

(millions of Canadian dollars)

NOTE 30 – MANAGEMENT OF THE RISKS ASSOCIATED WITH FINANCIAL INSTRUMENTS (cont.)

Assets

									As at October 31, 2017	
	1 month or less	Over 1 month to 3 months	Over 3 months to 6 months	Over 6 months to 9 months	Over 9 months to 12 months	Over 1 year to 2 years	Over 2 years to 5 years	Over 5 years	No specified maturity	Total
Cash and deposits with financial institutions	6,181	534	23	1	1	4	–	–	2,058	8,802
Securities										
At fair value through profit or loss	467	1,182	931	1,623	909	3,413	8,166	4,502	26,343	47,536
Available-for-sale	–	67	19	29	30	419	3,973	3,496	519	8,552
Held-to-maturity	25	–	–	–	603	388	7,181	1,058	–	9,255
	492	1,249	950	1,652	1,542	4,220	19,320	9,056	26,862	65,343
Securities purchased under reverse repurchase agreements and securities borrowed	8,235	2,717	1,534	129	19	3,677	770	–	3,708	20,789
Loans and acceptances[1]										
Residential mortgage	758	1,039	1,428	2,735	2,046	7,944	33,029	1,525	14	50,518
Personal and credit card	227	343	550	873	680	2,893	9,557	2,779	19,061	36,963
Business and government	7,576	2,493	2,014	2,192	1,840	4,636	9,946	2,718	8,275	41,690
Customers' liability under acceptances	5,030	865	96	–	–	–	–	–	–	5,991
Allowances for credit losses									(719)	(719)
	13,591	4,740	4,088	5,800	4,566	15,473	52,532	7,022	26,631	134,443
Other										
Derivative financial instruments	546	861	402	255	180	903	2,070	3,177	29	8,423
Purchased receivables									2,014	2,014
Investments in associates and joint ventures									631	631
Premises and equipment									558	558
Goodwill									1,409	1,409
Intangible assets									1,239	1,239
Other assets[1]	381	109	71	85	36	83	79	109	1,223	2,176
	927	970	473	340	216	986	2,149	3,286	7,103	16,450
	29,426	10,210	7,068	7,922	6,344	24,360	74,771	19,364	66,362	245,827

(1) Amounts collectible on demand are considered to have no specified maturity.

(millions of Canadian dollars)

Liabilities, Equity and Off-Balance-Sheet Commitments

									As at October 31, 2017	
	1 month or less	Over 1 month to 3 months	Over 3 months to 6 months	Over 6 months to 9 months	Over 9 months to 12 months	Over 1 year to 2 years	Over 2 years to 5 years	Over 5 years	No specified maturity	Total
Deposits[1][2]										
Personal	944	1,829	2,410	2,083	2,578	4,641	8,463	2,255	28,516	53,719
Business and government	10,689	5,744	6,423	2,539	2,032	7,762	10,601	4,843	46,938	97,571
Deposit-taking institutions	2,252	495	134	–	–	–	–	53	2,447	5,381
	13,885	8,068	8,967	4,622	4,610	12,403	19,064	7,151	77,901	156,671
Other										
Acceptances	5,030	865	96	–	–	–	–	–	–	5,991
Obligations related to securities sold short[3]	1,243	472	259	118	99	578	6,147	4,553	1,894	15,363
Obligations related to securities sold under repurchase agreements and securities loaned	5,652	932	3,049	3,315	–	–	–	–	8,819	21,767
Derivative financial instruments	408	919	448	303	255	826	1,541	1,906	6	6,612
Liabilities related to transferred receivables[4]	–	1,873	448	1,081	–	3,486	9,272	3,938	–	20,098
Securitization – Credit card[5]	–	–	–	–	–	36	873	–	–	909
Other liabilities – Other items[1][5]	327	85	231	55	51	75	130	163	3,732	4,849
	12,660	5,146	4,531	4,872	405	5,001	17,963	10,560	14,451	75,589
Subordinated debt	–	–	–	–	–	–	–	9	–	9
Equity									13,558	13,558
	26,545	13,214	13,498	9,494	5,015	17,404	37,027	17,720	105,910	245,827
Off-balance-sheet commitments										
Letters of guarantee and documentary letters of credit	240	848	648	906	408	892	40	2	–	3,984
Credit card receivables[6]									7,688	7,688
Backstop liquidity and credit enhancement facilities[7]	–	2,736	2,298	15	–	–	–	–	–	5,049
Commitments to extend credit[8]	3,841	3,532	3,214	4,100	3,303	3,584	6,730	124	23,963	52,391
Lease commitments and other contracts	79	147	199	195	190	676	1,431	425	–	3,342

(1) Amounts payable upon demand or notice are considered to have no specified maturity.
(2) The *Deposits* item is presented in greater detail than it is on the Consolidated Balance Sheet.
(3) Amounts are disclosed according to the remaining contractual maturity of the underlying security.
(4) These amounts mainly include liabilities related to the securitization of mortgage loans.
(5) The *Other liabilities* item is presented in greater detail than it is on the Consolidated Balance Sheet.
(6) These amounts are unconditionally revocable at the Bank's discretion at any time.
(7) In the event of payment on one of the backstop liquidity facilities, the Bank will receive as collateral government bonds in an amount up to $2.3 billion.
(8) These amounts include $39.6 billion that is unconditionally revocable at the Bank's discretion at any time.

(millions of Canadian dollars)

NOTE 30 – MANAGEMENT OF THE RISKS ASSOCIATED WITH FINANCIAL INSTRUMENTS (cont.)

Assets

As at October 31, 2016

	1 month or less	Over 1 month to 3 months	Over 3 months to 6 months	Over 6 months to 9 months	Over 9 months to 12 months	Over 1 year to 2 years	Over 2 years to 5 years	Over 5 years	No specified maturity	Total
Cash and deposits with financial institutions	5,487	199	21	22	7	–	–	–	2,447	8,183
Securities										
At fair value through profit or loss	1,066	1,207	2,646	702	935	4,800	7,864	5,641	21,103	45,964
Available-for-sale	108	177	134	76	63	365	7,553	5,580	552	14,608
Held-to-maturity	–	–	–	–	472	30	3,263	204	–	3,969
	1,174	1,384	2,780	778	1,470	5,195	18,680	11,425	21,655	64,541
Securities purchased under reverse repurchase agreements and securities borrowed	4,842	2,320	2,846	1,532	10	456	–	–	1,942	13,948
Loans and acceptances(1)										
Residential mortgage	874	1,155	1,607	2,389	1,839	7,764	32,034	1,193	13	48,868
Personal and credit card	873	413	592	724	570	2,235	8,797	2,041	17,719	33,964
Business and government	6,266	2,116	1,937	2,321	1,731	4,684	8,578	2,275	7,778	37,686
Customers' liability under acceptances	5,633	718	90	–	–	–	–	–	–	6,441
Allowances for credit losses									(781)	(781)
	13,646	4,402	4,226	5,434	4,140	14,683	49,409	5,509	24,729	126,178
Other										
Derivative financial instruments	569	730	457	293	219	838	2,628	4,682	–	10,416
Purchased receivables									1,858	1,858
Investments in associates and joint ventures									645	645
Premises and equipment									1,338	1,338
Goodwill									1,412	1,412
Intangible assets									1,140	1,140
Other assets(1)(2)	294	122	71	77	92	123	90	125	1,553	2,547
	863	852	528	370	311	961	2,718	4,807	7,946	19,356
	26,012	9,157	10,401	8,136	5,938	21,295	70,807	21,741	58,719	232,206

(1) Amounts collectible on demand are considered to have no specified maturity.
(2) The *Due from clients, dealers and brokers* amount of $843 million presented separately on the Consolidated Balance Sheet as at October 31, 2016 is now reported in *Other assets*.

(millions of Canadian dollars)

Liabilities, Equity and Off-Balance-Sheet Commitments

As at October 31, 2016

	1 month or less	Over 1 month to 3 months	Over 3 months to 6 months	Over 6 months to 9 months	Over 9 months to 12 months	Over 1 year to 2 years	Over 2 years to 5 years	Over 5 years	No specified maturity	Total
Deposits(1)(2)										
Personal(3)	978	1,905	2,827	1,824	1,499	4,448	9,208	1,776	28,056	52,521
Business and government(3)(4)	9,493	4,210	4,591	1,981	3,419	5,880	9,012	6,343	38,976	83,905
Deposit-taking institutions(3)	3,466	222	310	31	7	–	–	61	1,543	5,640
	13,937	6,337	7,728	3,836	4,925	10,328	18,220	8,180	68,575	142,066
Other										
Acceptances	5,631	719	91	–	–	–	–	–	–	6,441
Obligations related to securities sold short(5)	84	201	50	41	53	586	4,652	5,629	2,911	14,207
Obligations related to securities sold under repurchase agreements and securities loaned	11,992	1,505	3,555	4,260	–	–	–	–	1,324	22,636
Derivative financial instruments	661	693	486	303	182	740	1,608	3,052	–	7,725
Liabilities related to transferred receivables(6)	–	1,341	324	1,107	548	2,465	9,795	4,551	–	20,131
Securitization – Credit card(7)	424	–	–	–	–	–	873	–	–	1,297
Other liabilities – Other items(1)(4)(7)	470	296	127	19	77	43	88	197	3,272	4,589
	19,262	4,755	4,633	5,730	860	3,834	17,016	13,429	7,507	77,026
Subordinated debt	–	–	1,003	–	–	–	–	9	–	1,012
Equity									12,102	12,102
	33,199	11,092	13,364	9,566	5,785	14,162	35,236	21,618	88,184	232,206
Off-balance-sheet commitments										
Letters of guarantee and documentary letters of credit	145	614	288	286	282	693	741	212	–	3,261
Credit card receivables(8)									7,187	7,187
Backstop liquidity and credit enhancement facilities(9)	–	2,056	3,898	15	–	–	–	–	–	5,969
Commitments to extend credit(10)	1,149	1,293	1,012	1,927	1,685	8,525	10,565	550	21,109	47,815
Lease commitments and other contracts	87	169	243	236	221	718	1,526	520	–	3,720

(1) Amounts payable upon demand or notice are considered to have no specified maturity.
(2) The *Deposits* item is presented in greater detail than it is on the Consolidated Balance Sheet.
(3) Certain amounts have been revised from those previously reported.
(4) An amount of $2,699 million reported in *Due to clients, dealers and brokers* on the Consolidated Balance Sheet as at October 31, 2016 is now reported in *Deposits – Business and government* ($2,159 million) and in *Other liabilities – Other items* ($540 million).
(5) Amounts have been disclosed according to the remaining contractual maturity of the underlying security.
(6) These amounts mainly include liabilities related to the securitization of mortgage loans.
(7) The *Other liabilities* item is presented in greater detail than it is on the Consolidated Balance Sheet.
(8) These amounts are unconditionally revocable at the Bank's discretion at any time.
(9) In the event of payment on one of the backstop liquidity facilities, the Bank will receive as collateral government bonds in an amount up to $2.3 billion.
(10) These amounts include $21.1 billion that is unconditionally revocable at the Bank's discretion at any time.

(millions of Canadian dollars)

NOTE 31 – INTEREST RATE SENSITIVITY

The Bank offers a range of financial products whose cash flows are sensitive to interest rate fluctuations. Interest rate risk arises from on- and off-balance-sheet cash flow mismatches. The degree of exposure is based on the magnitude and direction of interest rate movements and on the extent of the mismatch of the maturities. Analyzing interest rate sensitivity gaps is one of the techniques used by the Bank to manage interest rate risk.

The following table presents the sensitivity of the Bank's Consolidated Balance Sheet items to interest rate fluctuations.

As at October 31							2017	2016
	Floating rate	3 months or less	Over 3 months to 12 months	Over 1 year to 5 years	Over 5 years	Non-interest sensitive	Total	Total
Assets								
Cash and deposits with financial institutions	1,149	6,797	–	–	–	856	8,802	8,183
Effective yield		0.9 %	– %	– %	– %			
Securities	1,706	2,782	3,992	21,170	8,838	26,855	65,343	64,541
Effective yield		0.9 %	1.5 %	1.6 %	2.6 %			
Loans and acceptances, net of allowances(1)	54,831	36,357	16,391	41,636	2,303	3,714	155,232	140,126
Effective yield		1.7 %	2.9 %	2.8 %	7.1 %			
Other	8,620	–	–	–	–	7,830	16,450	19,356
	66,306	45,936	20,383	62,806	11,141	39,255	245,827	232,206
Liabilities and equity								
Deposits(2)	61,201	28,773	16,659	28,313	3,374	18,351	156,671	142,066
Effective yield		1.2 %	1.5 %	1.7 %	0.5 %			
Obligations related to securities sold short and related to securities sold under repurchase agreements and securities loaned	7,562	8,279	5,870	6,719	4,504	4,196	37,130	36,843
Effective yield		1.3 %	1.5 %	1.5 %	2.4 %			
Subordinated debt	–	–	–	–	9	–	9	1,012
Effective yield		– %	– %	– %	1.5 %			
Acceptances and other liabilities(2)	11,675	6,478	695	8,585	3,801	7,225	38,459	40,183
Equity	–	200	–	1,450	400	11,508	13,558	12,102
	80,438	43,730	23,224	45,067	12,088	41,280	245,827	232,206
On-balance-sheet gap	(14,132)	2,206	(2,841)	17,739	(947)	(2,025)	–	–
Position in Canadian dollars	(4,972)	6,415	4,034	21,618	(1,832)	(11,843)	13,420	7,505
Position in foreign currency	(9,160)	(4,209)	(6,875)	(3,879)	885	9,818	(13,420)	(7,505)
On-balance-sheet gap	(14,132)	2,206	(2,841)	17,739	(947)	(2,025)	–	–

(1) Includes securities purchased under reverse repurchase agreements and securities borrowed.
(2) Certain amounts have been revised from those previously reported, particularly an amount of $2,159 million, representing amounts due to clients, dealers and brokers, classified in the *Other liabilities* item of this table as at October 31, 2016 that is now reported in *Deposits*.

The effective yield represents the weighted average effective yield based on the earlier of contractual repricing and maturity dates.

NOTE 32 – SEGMENT DISCLOSURES

The Bank carries out its activities in four business segments, which are defined below. For presentation purposes, other activities are grouped in the *Other* heading. Each reportable segment is distinguished by services offered, type of clientele and marketing strategy.

The presentation of segment disclosures is consistent with the presentation adopted by the Bank for the fiscal year beginning November 1, 2016. This presentation reflects the fact that the activities of subsidiary Credigy Ltd., which had previously been presented in the Financial Markets segment, and that the activities of subsidiary Advanced Bank of Asia Limited (ABA Bank) and of other international investments, which had previously been presented in the *Other* heading, are now presented in the U.S. Specialty Finance and International (USSF&I) segment. The Bank made this change to better align the monitoring of its activities with its management structure.

Personal and Commercial
The Personal and Commercial segment encompasses the banking, financing, and investing services offered to individuals and businesses as well as insurance operations.

Wealth Management
The Wealth Management segment comprises investment solutions, trust services, banking services, lending services and other wealth management solutions offered through internal and third-party distribution networks.

Financial Markets
The Financial Markets segment encompasses banking services, investment banking services and financial solutions for large and mid-size corporations, public sector organizations, and institutional investors. The segment is also active in proprietary trading and investment activities for the Bank.

U.S. Specialty Finance and International (USSF&I)
The USSF&I segment encompasses the specialty finance expertise provided by subsidiary Credigy Ltd.; the activities of subsidiary ABA Bank, which offers financial products and services to individuals and businesses in Cambodia; and the activities of targeted investments in certain emerging markets.

Other
This heading encompasses Treasury activities, including the Bank's asset and liability management, liquidity management and funding operations, certain non-recurring items and the unallocated portion of corporate services.

The segment disclosures have been prepared in accordance with the accounting policies described in Note 1, except for the net interest income, non-interest income and income taxes (recovery) of the operating segments, which are presented on a taxable equivalent basis. Taxable equivalent basis is a calculation method that consists in grossing up certain tax-exempt income by the amount of income tax that would have otherwise been payable. The effect of these adjustments is reversed under the *Other* heading. Head office expenses are allocated to each operating segment presented in the business segment results. The Bank assesses performance based on the net income attributable to the Bank's shareholders. Intersegment revenues are recognized at the exchange amount. Segment assets correspond to average assets used in segment operations.

(millions of Canadian dollars)

NOTE 32 – SEGMENT DISCLOSURES (cont.)

Results by Business Segment

Year ended October 31[1]

	Personal and Commercial		Wealth Management		Financial Markets		USSF&I		Other		Total	
	2017	2016	**2017**	2016	**2017**	2016	**2017**	2016	**2017**	2016	**2017**	2016
Net interest income[2]	**2,071**	1,955	**431**	372	**782**	938	**262**	71	**(314)**	(344)	**3,232**	2,992
Non-interest income[2]	**990**	945	**1,173**	1,069	**848**	375	**279**	340	**87**	119	**3,377**	2,848
Total revenues	**3,061**	2,900	**1,604**	1,441	**1,630**	1,313	**541**	411	**(227)**	(225)	**6,609**	5,840
Non-interest expenses	**1,646**	1,662	**1,036**	999	**658**	615	**225**	207	**292**	392	**3,857**	3,875
Contribution	**1,415**	1,238	**568**	442	**972**	698	**316**	204	**(519)**	(617)	**2,752**	1,965
Provisions for credit losses[3]	**153**	475	**3**	5	**–**	–	**48**	4	**40**	–	**244**	484
Income before income taxes (recovery)	**1,262**	763	**565**	437	**972**	698	**268**	200	**(559)**	(617)	**2,508**	1,481
Income taxes (recovery)[2]	**337**	206	**149**	116	**260**	213	**84**	53	**(346)**	(363)	**484**	225
Net income	**925**	557	**416**	321	**712**	485	**184**	147	**(213)**	(254)	**2,024**	1,256
Non-controlling interests	**–**	–	**–**	–	**–**	–	**29**	20	**55**	55	**84**	75
Net income attributable to the Bank's shareholders	**925**	557	**416**	321	**712**	485	**155**	127	**(268)**	(309)	**1,940**	1,181
Average assets	**96,261**	92,234	**11,652**	11,006	**95,004**	87,504	**7,519**	5,319	**37,915**	39,850	**248,351**	235,913

(1) For the year ended October 31, 2016, certain amounts have been revised from those previously reported, particularly in the Personal and Commercial segment, where an amount of $36 million reported in *Non-interest income* was reclassified to *Net interest income*.
(2) For the year ended October 31, 2017, *Net interest income* was grossed up by $209 million ($231 million in 2016), *Non-interest income* was grossed up by $35 million ($4 million in 2016), and an equivalent amount was recognized in *Income taxes (recovery)*. The effect of these adjustments is reversed under the *Other* heading.
(3) During the year ended October 31, 2017, the Bank reversed, by $40 million, the sectoral provision on non-impaired loans recorded for the oil and gas producer and service company loan portfolio presented in the Personal and Commercial segment, and the $40 million in provisions for credit losses in the *Other* heading reflects an increase in the collective allowance for credit risk on non-impaired loans. For the year ended October 31, 2016, the *Provisions for credit losses* item had included a $250 million sectoral provision on non-impaired loans recorded for the oil and gas producer and service company loan portfolio, reported in the Personal and Commercial segment.

Results by Geographic Segment

Year ended October 31

	Canada		United States		Other		Total	
	2017	2016	**2017**	2016	**2017**	2016	**2017**	2016
Net interest income[1]	**2,748**	2,839	**255**	110	**229**	43	**3,232**	2,992
Non-interest income[1]	**2,992**	2,430	**340**	337	**45**	81	**3,377**	2,848
Total revenues	**5,740**	5,269	**595**	447	**274**	124	**6,609**	5,840
Non-interest expenses	**3,571**	3,601	**209**	235	**77**	39	**3,857**	3,875
Contribution	**2,169**	1,668	**386**	212	**197**	85	**2,752**	1,965
Provisions for credit losses	**196**	480	**44**	4	**4**	–	**244**	484
Income before income taxes	**1,973**	1,188	**342**	208	**193**	85	**2,508**	1,481
Income taxes	**354**	162	**107**	56	**23**	7	**484**	225
Net income	**1,619**	1,026	**235**	152	**170**	78	**2,024**	1,256
Non-controlling interests	**61**	57	**23**	18	**–**	–	**84**	75
Net income attributable to the Bank's shareholders	**1,558**	969	**212**	134	**170**	78	**1,940**	1,181
Average assets	**212,946**	209,414	**18,479**	18,325	**16,926**	8,174	**248,351**	235,913

(1) For the year ended October 31, 2016, certain amounts have been revised from those previously reported, particularly an amount of $36 million reported in *Non-interest income* was reclassified to *Net interest income* to better reflect the nature of the income.

NOTE 33 – ACQUISITION

Acquisition of Advanced Bank of Asia Limited

On May 16, 2016, the Bank completed the acquisition of Advanced Bank of Asia Limited (ABA Bank), a major Cambodian financial institution that offers financial products and services to individuals and businesses. This acquisition is part of the Bank's international growth strategy and, upon completion, brought the Bank's common share equity interest in ABA Bank to 90%. The sum of the $119 million cash purchase price, of the fair value of the previously held interest, and of the estimated value of the non-controlling interest established at the acquisition date exceeded the fair value of the net assets acquired by $129 million. This excess amount was recorded on the Consolidated Balance Sheet as goodwill and mainly represents ABA Bank's expected business growth in Cambodia. The goodwill from this acquisition was not deductible for tax purposes. The acquired receivables, consisting mainly of personal and commercial loans, had an estimated acquisition-date fair value of $754 million. This amount also represents the gross contractual amounts receivable that the Bank expects to fully recover.

During the year ended October 31, 2016, the Bank also recognized a $41 million non-taxable gain on the revaluation of its previously held equity interest in ABA Bank in the *Non-interest income – Other* item of the Consolidated Statement of Income. For business segment disclosure purposes, this gain and ABA Bank's financial results have been included in the USSF&I segment. ABA Bank's results have been consolidated in the Bank's financial statements since May 17, 2016.

NOTE 34 – EVENT AFTER THE CONSOLIDATED BALANCE SHEET DATE

Redemption of Preferred Shares

On November 15, 2017, the Bank redeemed all the issued and outstanding Non-Cumulative 5-Year Rate-Reset Series 28 First Preferred Shares. Pursuant to the share conditions, the redemption price was $25.00 per share plus the periodic dividend declared and unpaid. The Bank redeemed 8,000,000 Series 28 preferred shares for a total amount of $200 million, which will reduce *Preferred share capital*.

SUPPLEMENTARY INFORMATION

STATISTICAL REVIEW

As at October 31[1] (millions of Canadian dollars)	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Consolidated Balance Sheet data										
Cash and deposits with financial institutions	**8,802**	8,183	7,567	8,086	3,596	3,249	2,851	2,274	2,228	3,660
Securities	**65,343**	64,541	56,040	52,953	53,744	54,898	56,592	54,268	50,233	46,185
Securities purchased under reverse repurchase agreements and securities borrowed	**20,789**	13,948	17,702	24,525	21,449	15,529	12,507	10,878	7,637	7,868
Loans and acceptances	**134,443**	126,178	115,238	106,169	97,338	90,922	80,758	63,134	58,370	56,015
Other assets	**16,450**	19,356	19,543	13,696	12,092	13,305	14,146	14,748	13,670	15,604
Total assets	**245,827**	232,206	216,090	205,429	188,219	177,903	166,854	145,302	132,138	129,332
Deposits[2]	**156,671**	142,066	130,458	119,883	102,111	93,474	85,787	81,785	75,170	76,022
Other liabilities[2]	**75,589**	77,026	72,755	73,163	74,729	73,948	71,791			
Other liabilities and non-controlling interests								54,276	48,474	45,546
Subordinated debt	**9**	1,012	1,522	1,881	2,426	2,470	2,000	2,033	2,017	2,255
Share capital										
Preferred	**2,050**	1,650	1,023	1,223	677	762	762	1,089	1,089	774
Common	**2,768**	2,645	2,614	2,293	2,160	2,054	1,970	1,804	1,729	1,656
Contributed surplus	**58**	73	67	52	58	58	46	66	48	31
Retained earnings	**7,706**	6,706	6,705	5,850	5,055	4,091	3,366	4,081	3,515	3,110
Accumulated other comprehensive income (loss)	**168**	218	145	289	214	255	337	168	96	(62)
Non-controlling interests	**808**	810	801	795	789	791	795			
Total liabilities and equity	**245,827**	232,206	216,090	205,429	188,219	177,903	166,854	145,302	132,138	129,332
Average assets	**248,351**	235,913	222,929	206,680	193,509	181,344	165,942	140,360	140,978	128,319
Net impaired loans[3]	**206**	281	254	248	183	179	175	162	223	169
Consolidated Statement of Income data										
Net interest income[4]	**3,232**	2,992	2,717	2,584	2,478	2,365	2,318	1,933	1,961	1,772
Non-interest income[4]	**3,377**	2,848	3,029	2,880	2,673	2,936	2,336	2,351	2,172	2,062
Total revenues	**6,609**	5,840	5,746	5,464	5,151	5,301	4,654	4,284	4,133	3,834
Provisions for credit losses	**244**	484	228	208	181	180	184	144	305	144
Non-interest expenses	**3,857**	3,875	3,665	3,423	3,206	3,207	2,952	2,822	2,662	2,695
Income taxes	**484**	225	234	295	252	317	264	221	252	167
Non-controlling interests								63	60	52
Net income	**2,024**	1,256	1,619	1,538	1,512	1,597	1,254	1,034	854	776
Non-controlling interests	**84**	75	70	69	63	61	60			
Net income attributable to the Bank's shareholders	**1,940**	1,181	1,549	1,469	1,449	1,536	1,194			

(1) The figures for 2010 and prior years are presented in accordance with previous Canadian GAAP, and certain amounts from fiscal years 2013, 2012 and 2011 have been adjusted to reflect changes to the accounting standards in 2014.

(2) Certain amounts have been revised from those previously reported, particularly an amount of $2,159 million representing amounts due to clients, dealers and brokers, classified in *Other liabilities* in this table as at October 31, 2016, that is now reported in *Deposits* ($1,628 million as at October 31, 2015). Figures as at October 31, 2014 and preceding years were not adjusted to reflect those modifications.

(3) Includes customers' liability under acceptances.

(4) The figures for fiscal years 2012 to 2016 have been adjusted to reflect the reclassification of certain amounts between the *Non-interest income – Credit fees* and the *Net interest income* items and thereby better reflect the nature of the income reported in the Personal and Commercial segment.

As at October 31[1]	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Number of common shares[2]										
(thousands)	**339,592**	338,053	337,236	329,297	325,983	322,617	320,948	325,544	322,402	318,894
Number of common										
shareholders on record	**21,542**	21,966	22,152	22,394	22,737	23,180	23,588	23,598	23,970	24,354
Basic earnings										
per share[2]	**$ 5.44**	$ 3.31	$ 4.56	$ 4.36	$ 4.34	$ 4.63	$ 3.41	$ 3.00	$ 2.48	$ 2.35
Diluted earnings										
per share[2]	**$ 5.38**	$ 3.29	$ 4.51	$ 4.32	$ 4.31	$ 4.58	$ 3.37	$ 2.97	$ 2.47	$ 2.34
Dividend per share[2]	**$ 2.28**	$ 2.18	$ 2.04	$ 1.88	$ 1.70	$ 1.54	$ 1.37	$ 1.24	$ 1.24	$ 1.24
Share price[2]										
High	**$ 62.74**	$ 47.88	$ 55.06	$ 53.88	$ 45.24	$ 40.64	$ 40.72	$ 33.94	$ 31.04	$ 27.32
Low	**$ 46.83**	$ 35.83	$ 40.75	$ 41.60	$ 36.18	$ 31.64	$ 32.43	$ 27.23	$ 12.81	$ 21.13
Close	**$ 62.61**	$ 47.88	$ 43.31	$ 52.68	$ 45.24	$ 38.59	$ 35.57	$ 33.57	$ 28.20	$ 22.61
Book value[2]	**$ 31.51**	$ 28.52	$ 28.26	$ 25.76	$ 22.97	$ 20.02	$ 17.82	$ 18.80	$ 16.72	$ 14.85
Dividends on preferred										
shares										
Series 15	**–**	–	–	–	$ 0.2444	$ 1.4625	$ 1.4625	$ 1.4625	$ 1.4625	$ 1.4625
Series 16	**–**	–	–	$ 1.2125	$ 1.2125	$ 1.2125	$ 1.2125	$ 1.2125	$ 1.2125	$ 1.2125
Series 20	**–**	–	$ 1.5000	$ 1.5000	$ 1.5000	$ 1.5000	$ 1.5000	$ 1.5000	$ 1.5000	$ 0.8692
Series 21	**–**	–	–	–	$ 1.0078	$ 1.3438	$ 1.3438	$ 1.3438	$ 1.3438	$ 0.5596
Series 24	**–**	–	–	$ 0.4125	$ 1.6500	$ 1.6500	$ 1.6500	$ 1.6500	$ 1.3765	–
Series 26	**–**	–	–	$ 0.4125	$ 1.6500	$ 1.6500	$ 1.6500	$ 1.6500	$ 1.3042	–
Series 28	**$ 0.9500**	$ 0.9500	$ 0.9500	$ 0.9500	$ 0.9728	–	–	–	–	–
Series 30	**$ 1.0250**	$ 1.0250	$ 1.0250	$ 0.7849	–	–	–	–	–	–
Series 32	**$ 0.9750**	$ 0.9750	$ 1.0760	–	–	–	–	–	–	–
Series 34	**$ 1.4000**	$ 1.1373	–	–	–	–	–	–	–	–
Series 36	**$ 1.3500**	$ 0.5733	–	–	–	–	–	–	–	–
Series 38	**$ 0.4724**	–	–	–	–	–	–	–	–	–
Financial ratios										
Return on common										
shareholders' equity	**18.1 %**	11.7 %	16.9 %	17.9 %	20.1 %	24.1 %	19.8 %	17.0 %	15.6 %	16.4 %
Return on average assets	**0.81 %**	0.53 %	0.73 %	0.74 %	0.78 %	0.88 %	0.76 %	0.74 %	0.61 %	0.60 %
Regulatory ratios under Basel III										
Capital ratios[3]										
CET1[4]	**11.2 %**	10.1 %	9.9 %	9.2 %	8.7 %	7.3 %	7.6 %			
Tier 1[4][5]	**14.9 %[6]**	13.5 %	12.5 %[7]	12.3 %[8]	11.4 %	10.1 %	10.8 %	14.0 %	10.7 %	9.4 %
Total[4][5]	**15.1 %[6]**	15.3 %	14.0 %[9]	15.1 %[8]	15.0 %	14.1 %	14.3 %	17.5 %	14.3 %	13.2 %
Leverage ratio[4]	**4.0 %**	3.7 %	3.7 %							
Other information										
Number of employees[10][11]	**20,584**	20,600	19,026	18,725	16,675	16,636	16,217	15,298	14,851	14,420
Branches in Canada	**429**	450	452	452	453	451	448	442	445	446
Banking machines in Canada	**931**	938	930	935	937	923	893	869	866	858

(1) The figures for 2010 and prior years are presented in accordance with previous Canadian GAAP, and certain amounts from fiscal years 2013, 2012 and 2011 have been adjusted to reflect changes to the accounting standards in 2014.
(2) The figures for 2014 and prior years have been adjusted to reflect the stock dividend paid in 2014.
(3) The October 31, 2013, 2012 and 2011 ratios have not been adjusted to reflect changes in accounting standards.
(4) Since October 31, 2013, the capital ratios were calculated using the "all-in" methodology and the October 31, 2012 and 2011 ratios are presented on a pro forma basis.
(5) In 2008, the Bank adopted the rules of the Basel II Accord and, since November 1, 2009, it has been applying the AIRB Approach for credit risk, whereas prior to that date, it had been using the Standardized Approach.
(6) Taking into account the redemption of the Series 28 preferred shares on November 15, 2017.
(7) Taking into account the redemption of the Series 20 preferred shares on November 15, 2015.
(8) Taking into account the redemption of the Series 16 preferred shares on November 15, 2014.
(9) Taking into account the redemption of the Series 20 preferred shares on November 15, 2015 and the $500 million redemption of notes on November 2, 2015.
(10) Full-time equivalent.
(11) Number of employees includes employees from Credigy Ltd. and Advanced Bank of Asia Limited for fiscal years 2014 to 2017.

GLOSSARY OF FINANCIAL TERMS

Acceptances
Acceptances constitute a guarantee of payment by a bank and can be traded in the money market. The Bank earns a "stamping fee" for providing this guarantee.

Allowances for credit losses
Allowances for credit losses are management's best estimate of losses in its credit portfolio as at the balance sheet date. These allowances are primarily related to loans but may also cover the credit risk associated with deposits with financial institutions, loan substitute securities, credit instruments such as acceptances, and off-balance-sheet items such as commitments to extend credit, letters of guarantee and letters of credit. The allowances are increased by the provisions for credit losses, which are charged to income and decreased by the amount of write-offs, net of recoveries in the period.

Assets under administration
Assets in respect of which a financial institution provides administrative services such as custodial services, collection of investment income, settlement of purchase and sale transactions and record-keeping. Assets under administration, which are beneficially owned by clients, are not reported on the balance sheet of the institution offering such services.

Assets under management
Assets managed by a financial institution that are beneficially owned by clients. Management services are more comprehensive than administrative services, and include selecting investments or offering investment advice. Assets under management, which may also be administered by the financial institution, are not reported on the financial institution's balance sheet.

Average interest-bearing assets
Average interest-bearing assets include deposits with financial institutions, certain interest-bearing cash items, securities, securities purchased under reverse repurchase agreements and securities borrowed, and loans but excludes other assets. The average is calculated based on the daily averages for the year.

Basis point
Unit of measure equal to one one-hundredth of a percentage point (0.01%).

Common Equity Tier 1 (CET1) capital ratio
Common Equity Tier 1 capital consists of common shareholders' equity less goodwill, intangible assets and other capital deductions. Common Equity Tier 1 capital ratio is calculated by dividing Common Equity Tier 1 capital by the corresponding risk-weighted assets.

Derivative financial instruments
Derivative financial instruments are financial contracts whose value is derived from an underlying interest rate, exchange rate or equity, commodity or credit instrument or index. Examples of derivatives include swaps, options, forward rate agreements and futures. The notional amount of the derivative is the contract amount used as a reference point to calculate the payments to be exchanged between the two parties, and the notional amount itself is generally not exchanged by the parties.

Dividend payout ratio
Common dividends as a percentage of net income after preferred share dividends.

Economic capital
Economic capital is the internal measure used by the Bank to determine the capital required for its solvency and to pursue its business operations. Economic capital takes into consideration the credit, market, operational, business and other risks to which the Bank is exposed, as well as the risk diversification effect among them and among the business segments. Economic capital thus helps the Bank to determine the capital required to protect itself against such risks and ensure its long-term viability.

Efficiency ratio
Non-interest expenses as a percentage of total revenue, the efficiency ratio measures the efficiency of the Bank's operations.

Fair value
The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction in the principal market at the measurement date under current market conditions (i.e., an exit price).

Hedging
The purpose of a hedging transaction is to modify the Bank's exposure to one or more risks by creating an offset between changes in the fair value of, or the cash flows attributable to, the hedged item and the hedging instrument.

Impaired loan
A loan, except credit card receivables, is considered impaired if there is objective evidence of impairment and, in management's best estimate, the timely collection of principal and interest is no longer reasonably assured, or when a payment is contractually 90 days past due, unless the loan is fully secured and collection efforts are reasonably expected to result in repayment of the debt within 180 days. Loans that are insured or fully guaranteed by a Canadian government (federal or provincial) or by a Canadian government agency are considered impaired when they are more than 365 days in arrears.

Leverage ratio
The leverage ratio is calculated by dividing Tier 1 capital by total exposure. Total exposure is defined as the sum of on-balance-sheet assets (including derivative exposures and securities financing transaction exposures) and off-balance-sheet items.

Liquidity coverage ratio
The liquidity coverage ratio is a measure designed to ensure that the Bank has sufficient high-quality liquid assets to cover net cash outflows given a severe, 30-day liquidity crisis.

Master netting agreement
Legal agreement between two parties that have multiple derivative contracts with each other that provides for the net settlement of all contracts through a single payment, in the event of default, insolvency or bankruptcy.

Net interest margin
Net interest income as a percentage of average interest-bearing assets.

Office of the Superintendent of Financial Institutions (Canada) (OSFI)
The mandate of the Office of the Superintendent of Financial Institutions (OSFI) is to regulate and supervise financial institutions and private pension plans subject to federal oversight, to help minimize undue losses to depositors and policyholders and, thereby, to contribute to public confidence in the Canadian financial system.

Operating leverage
Operating leverage is the difference between the growth rate for total revenues and the growth rate for non-interest expenses.

Provisions for credit losses
The amount charged to income necessary to bring the allowances for credit losses to a level determined appropriate by management. This includes provisions for impaired loans and non-impaired loans.

Return on common shareholders' equity (ROE)
Net income, less dividends on preferred shares, expressed as a percentage of the average value of common shareholders' equity.

Risk-weighted assets
Assets are risk weighted according to the guidelines established by OSFI. In the Standardized calculation approach, factors are applied to the face value of certain assets in order to reflect comparable risk levels. In the Advanced Internal Rating-Based (AIRB) approach, risk-weighted assets are derived from the Bank's internal models, which represent the Bank's own assessment of the risks it incurs. Off-balance-sheet instruments are converted to balance sheet (or credit) equivalents by adjusting the notional values before applying the appropriate risk-weighting factors.

Securities purchased under reverse repurchase agreements
Securities purchased by the Bank from a client pursuant to an agreement under which the securities will be resold to the same client on a specified date and at a specified price. Such an agreement is a form of short-term collateralized lending.

Securities sold under repurchase agreements
Financial obligations related to securities sold pursuant to an agreement under which the securities will be repurchased on a specified date and at a specified price. Such an agreement is a form of short-term funding.

Structured entity
A structured entity is an entity created to accomplish a narrow and well-defined objective and is designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when voting rights relate solely to administrative tasks and the relevant activities are directed by means of contractual arrangements.

Taxable equivalent basis
Taxable equivalent basis is a calculation method that consists in grossing up certain tax-exempt income by the amount of income tax that would have otherwise been payable.

Tier 1 capital ratio
Tier 1 capital ratio consists of Common Equity Tier 1 capital and Additional Tier 1 instruments, namely, eligible non-cumulative preferred shares and the eligible amount of innovative instruments. Tier 1 capital ratio is calculated by dividing Tier 1 capital, less regulatory adjustments, by the corresponding risk-weighted assets.

Total capital ratio
Total capital is the sum of Tier 1 and Tier 2 capital. Tier 2 capital consists of the eligible portion of subordinated debt and certain loan loss allowances. Total capital ratio is calculated by dividing total capital, less regulatory adjustments, by the corresponding risk-weighted assets.

Total shareholder return
The total shareholder return (TSR) represents the average total return on an investment in the Bank's common shares. The return includes changes in share price and assumes that the dividends received were reinvested in additional common shares of the Bank.

Value-at-Risk (VaR)
VaR is a statistical measure of risk that is used to quantify market risks across products, per types of risks and aggregate risk on a portfolio basis. VaR is defined as the maximum loss at a specific confidence level over a certain horizon under normal market conditions. The VaR method has the advantage of providing a uniform measurement of financial instrument-related market risks based on a single statistical confidence level and time horizon.

INFORMATION FOR SHAREHOLDERS

Description of Share Capital

The authorized share capital of the Bank consists of an unlimited number of common shares, without par value, an unlimited number of first preferred shares, without par value, issuable for a maximum aggregate consideration of $5 billion, and 15 million second preferred shares, without par value, issuable for a maximum aggregate consideration of $300 million. As at October 31, 2017, the Bank had a total of 339,591,965 common shares and 82,000,000 first preferred shares issued and outstanding.

Stock Exchange Listings

The Bank's common shares and Series 28, 30, 32, 34, 36 and 38 First Preferred Shares are listed on the Toronto Stock Exchange in Canada.

Issue or class	Ticker symbol	Newspaper abbreviation
Common shares	NA	Nat Bk or Natl Bk
First Preferred Shares		
Series 28[(1)]	NA.PR.Q	Nat Bk s28 or Natl Bk s28
Series 30	NA.PR.S	Nat Bk s30 or Natl Bk s30
Series 32	NA.PR.W	Nat Bk s32 or Natl Bk s32
Series 34	NA.PR.X	Nat Bk s34 or Natl Bk s34
Series 36	NA.PR.A	Nat Bk s36 or Natl Bk s36
Series 38	NA.PR.C	Nat Bk s38 or Natl Bk s38

(1) On November 15, 2017, the Bank redeemed all the issued and outstanding Non-Cumulative 5-Year Rate-Reset Series 28 First Preferred Shares. Pursuant to the share conditions, the redemption price was $25.00 per share plus the periodic dividend declared and unpaid. The Bank redeemed 8,000,000 Series 28 preferred shares for a total amount of $200 million.

Number of Registered Shareholders

As at October 31, 2017, there were 21,542 common shareholders recorded in the Bank's common share register.

Dividends

Dividend Dates in Fiscal 2018
(subject to approval by the Board of Directors of the Bank)

Ex-dividend date	Record date	Payment date
Common shares		
December 22, 2017	December 27, 2017	February 1, 2018
March 22, 2018	March 26, 2018	May 1, 2018
June 22, 2018	June 26, 2018	August 1, 2018
September 20, 2018	September 24, 2018	November 1, 2018
Preferred shares, Series 30, 32, 34, 36 and 38		
January 3, 2018	January 5, 2018	February 15, 2018
April 6, 2018	April 9, 2018	May 15, 2018
July 5, 2018	July 9, 2018	August 15, 2018
October 4, 2018	October 9, 2018	November 15, 2018

Dividends Declared on Common Shares During Fiscal 2017

Ex-dividend date	Record date	Payment date	Dividend per share ($)
December 22, 2016	December 28, 2016	February 1, 2017	0.56
March 23, 2017	March 27, 2017	May 1, 2017	0.56
June 22, 2017	June 26, 2017	August 1, 2017	0.58
September 21, 2017	September 25, 2017	November 1, 2017	0.58

Dividends Declared on Preferred Shares During Fiscal 2017

			Dividend per share ($)					
Ex-dividend date	Record date	Payment date	Series 28	Series 30	Series 32	Series 34	Series 36	Series 38
Dec. 30, 16	Jan. 4, 17	Feb. 15, 17	0.2375	0.2563	0.2438	0.3500	0.3375	–
Apr. 6, 17	Apr. 10, 17	May 15, 17	0.2375	0.2562	0.2437	0.3500	0.3375	–
Jul. 6, 17	Jul. 10, 17	Aug. 15, 17	0.2375	0.2563	0.2438	0.3500	0.3375	–
Oct. 5, 17	Oct. 10, 17	Nov. 15, 17	0.2375	0.2562	0.2437	0.3500	0.3375	0.4724

Dividends paid are "eligible dividends" in accordance with the *Income Tax Act* (Canada).

Dividend Reinvestment and Share Purchase Plan

National Bank has a Dividend Reinvestment and Share Purchase Plan for Canadian holders of its common and preferred shares under which they can acquire common shares of the Bank without paying commissions or administration fees. Canadian participants acquire common shares through the reinvestment of cash dividends paid on the shares they hold or through optional cash payments of at least $500 per payment, up to a maximum of $5,000 per quarter.

For additional information, shareholders may contact National Bank's registrar and transfer agent, Computershare Trust Company of Canada, at 1-888-838-1407. To participate in the plan, National Bank's beneficial or non-registered common shareholders must contact their financial institution or broker.

Direct Deposit
Shareholders may elect to have their dividend payments deposited directly via electronic funds transfer to their bank account at any financial institution that is a member of the Canadian Payments Association. To do so, they must send a written request to the Transfer Agent, Computershare Trust Company of Canada.

Head Office
National Bank of Canada
National Bank Tower
600 De La Gauchetière Street West, 4th Floor
Montreal, Quebec H3B 4L2 Canada

Telephone: 514-394-5000
Website: nbc.ca

Annual Meeting
The Annual Meeting of Holders of Common Shares of the Bank will be held on Friday, April 20, 2018, at the Drummondville Centrexpo, in Drummondville, Quebec, Canada.

Public Accountability Statement
The 2017 Social Responsibility Report will be available in March 2018 on the Bank's website at nbc.ca.

Communication with Shareholders
For information about stock transfers, address changes, dividends, lost certificates, tax forms and estate transfers, shareholders of record may contact the Transfer Agent at the following address:

Computershare Trust Company of Canada
Share Ownership Management
1500 Robert-Bourassa Boulevard, 7th Floor
Montreal, Quebec H3A 3S8 Canada

Telephone: 1-888-838-1407
Fax: 1-888-453-0330
E-mail: *service@computershare.com*
Website: computershare.com

Shareholders whose shares are held by a market intermediary are asked to contact the market intermediary concerned.

Other shareholder inquiries can be addressed to:
Investor Relations
National Bank of Canada
National Bank Tower
600 De La Gauchetière Street West, 7th Floor
Montreal, Quebec H3B 4L2 Canada

Telephone: 1-866-517-5455
Fax: 514-394-6196
E-mail: investorrelations@nbc.ca
Website: nbc.ca/investorrelations

Caution Regarding Forward-Looking Statements
From time to time, National Bank of Canada makes written and oral forward-looking statements, including in this Annual Report, in other filings with Canadian regulators, in reports to shareholders, in press releases and in other communications. All such statements are made pursuant to the Canadian and American securities legislation and the provisions of the United States *Private Securities Litigation Reform Act of 1995*.

Additional information about these statements can be found on page 9 of this Annual Report.

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Legal Deposit
ISBN 978-2-921835-55-8
Legal deposit – Bibliothèque et Archives nationales du Québec, 2017
Legal deposit – Library and Archives Canada, 2017

Printing
L'Empreinte

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