UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 40-F

[Check one]

¨ **REGISTRATION STATEMENT PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934**

or

x **ANNUAL REPORT PURSUANT TO SECTION 13(a) OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended October 31, 2016

Commission File Number 002-09048

THE BANK OF NOVA SCOTIA

(Exact name of Registrant as specified in its charter)

CANADA
(Province or other jurisdiction of incorporation or organization)

6029
(Primary Standard Industrial Classification Code Number (if applicable))

Not Applicable
(I.R.S. Employer Identification Number (if applicable))

44 King St. West, Scotia Plaza, 8 th floor,
Toronto, Ontario, Canada M5H 1H1
(416) 866-3672
(Address and telephone number of Registrant's principal executive offices)

The Bank of Nova Scotia, 250 Vesey Street,
New York, N.Y., U.S.A. 10281
Attention: Richard Agata
(212) 225-5000
(Name, address (including zip code) and telephone number (including area code) of agent for service in the United States)

Securities registered or to be registered pursuant to Section 12(b) of the Act.

Title of each class	Name of each exchange on which registered
Common	New York Stock Exchange

Securities registered or to be registered pursuant to Section 12(g) of the Act.

Not applicable
(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.

Not applicable
(Title of Class)

For annual reports, indicate by check mark the information filed with this Form:

x Annual information form x Audited annual financial statements

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

Common Shares	1,207,893,604
Preferred Shares, Series 16	13,800,000
Preferred Shares, Series 17	9,200,000
Preferred Shares, Series 18	7,497,663
Preferred Shares, Series 19	6,302,337
Preferred Shares, Series 20	8,039,268
Preferred Shares, Series 21	5,960,732
Preferred Shares, Series 22	9,376,944
Preferred Shares, Series 23	2,623,056
Preferred Shares, Series 30	6,142,738
Preferred Shares, Series 31	4,457,262
Preferred Shares, Series 32	11,161,422
Preferred Shares, Series 33	5,184,345
Preferred Shares, Series 34 (Non-Viability Contingent Capital)	14,000,000
Preferred Shares, Series 36 (Non-Viability Contingent Capital)	20,000,000
Preferred Shares, Series 38 (Non-Viability Contingent Capital)	20,000,000

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days.

Yes x No ¨

Indicate by check mark whether the Registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files).

Yes ¨ No ¨

DISCLOSURE CONTROLS AND PROCEDURES

Management's responsibility for financial information contained in the Annual Report is described on page 130 of Exhibit 99.3, 2016 Consolidated Financial Statements. In addition, the Bank's Audit and Conduct Review Committee of the Board of Directors has reviewed, and the Board of Directors has reviewed and approved, the 2016 Consolidated Financial Statements and Management's Discussion and Analysis prior to release. Scotiabank is committed to providing timely, accurate and balanced disclosure of all material information and to providing fair and equal access to such information. The Bank's disclosure policies and practices are published on its website.

Disclosure Controls and Procedures

The Bank's disclosure controls and procedures are designed to provide reasonable assurance that information is accumulated and communicated to the Bank's management, including the Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), as appropriate, to allow timely decisions regarding required disclosure.

As of October 31, 2016, the Bank's management, with the participation of the CEO and CFO, evaluated the effectiveness of its disclosure controls and procedures, as defined under the rules adopted by the United States Securities and Exchange Commission ("SEC") and the Canadian securities regulatory authorities, and have concluded that the Bank's disclosure controls and procedures are effective.

Internal control over financial reporting

Management of the Bank is responsible for establishing and maintaining adequate internal control over financial reporting. These controls include policies and procedures that: (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Bank; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board, and that receipts and expenditures are being made only in accordance with authorizations of management and directors of the Bank; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Bank's assets that could have a material effect on the financial statements.

All control systems contain inherent limitations, no matter how well designed. As a result, the Bank's management acknowledges that its internal control over financial reporting will not prevent or detect all misstatements due to error or fraud. In addition, management's evaluation of controls can provide only reasonable, not absolute, assurance that all control issues that may result in material misstatements, if any, have been detected.

Management assessed the effectiveness of internal control over financial reporting, using the Committee of Sponsoring Organizations of the Treadway Commission (COSO) 2013 framework, and based on that assessment concluded that internal control over financial reporting was effective as of October 31, 2016.

Changes in internal control over financial reporting

There have been no changes in the Bank's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Bank's internal control over financial reporting during the year ended October 31, 2016.

MANAGEMENT'S INTERNAL CONTROL OVER FINANCIAL REPORTING

Management's Report on Internal Control over Financial Reporting and the Report of Independent Registered Public Accounting Firm are provided in Exhibit 99.4.

AUDIT COMMITTEE FINANCIAL EXPERT

All of the members of the Bank's Audit and Conduct Review Committee of the Board of Directors ("audit committee") are financially literate and independent, and one or more members of the audit committee meet the definition of a financial expert. The Bank's Board of Directors has determined that Paul D. Sobey, Guillermo E. Babatz, William R. Fatt, Thomas C. O'Neill, Una M. Power and L. Scott Thomson are audit committee financial experts and are independent, as that term is defined by the New York Stock Exchange's corporate governance standards applicable to the Bank.

The SEC has indicated that the designation of a person as an audit committee financial expert does not impose on such person any duties, obligations or liability that are greater than the duties, obligations and liability imposed on such person as a member of the audit committee and board of directors in the absence of such designation.

CODE OF ETHICS

The Bank has adopted a code of ethics, entitled "Scotiabank Code of Conduct" (the "Code of Conduct"). The Code of Conduct was formerly named the Scotiabank Guidelines for Business Conduct (the 'Guidelines"). The Code of Conduct has been in place for many years and applies to all directors, officers and employees of the Bank. A copy of the Code of Conduct was most recently filed as an exhibit to Form 6-K filed with the SEC (EDGAR Company Filings) on November 29, 2016. The Code of Conduct is also available on the Bank's website at www.scotiabank.com, in the Corporate Governance section, and is available in print to any person, without charge, upon written request to the Secretary of the Bank at the Toronto executive office address shown above. A supplement to the Code of Conduct, the Whistleblower Policy and Procedures, is also posted on the Bank's website. Amendments to the Code of Conduct and waivers, if any, for directors and executive officers will be disclosed on the Bank's website. There were no such waivers under the Guidelines granted in fiscal 2016.

PRINCIPAL ACCOUNTANT FEES AND SERVICES

The disclosure provided in Table 81 "Fees paid to the shareholders' auditors" on page 118 of Exhibit 99.2, Management's Discussion and Analysis, is incorporated by reference herein. The nature of these services is as follows:

- Audit services generally relate to the statutory audits and review of financial statements, regulatory required attestation reports, as well as services associated with registration statements, prospectuses, periodic reports and other documents filed with securities regulatory bodies or other documents issued in connection with securities offerings.
- Audit-related services include special attest services not directly linked to the financial statements, review of controls and procedures related to regulatory reporting, audits of employee benefit plans and consultation and training on accounting and financial reporting.
- Tax services outside of the audit scope relate primarily to specified review procedures required by local tax authorities, attestation on tax returns of certain subsidiaries as required by local tax authorities, and review to determine compliance with an agreement with the tax authorities.
- Other non-audit services are primarily for the review and translation of English language financial statements into other languages and other services.

None of the above services were approved pursuant to an exemption under paragraph (c)(7)(i)(C) of Rule 2-01 of Regulation S-X from the requirement that the audit committee pre-approve the services. The majority of the hours expended on the audits of the 2016 and 2015 consolidated financial statements were attributable to work performed by the full-time permanent employees of the Bank's independent auditors, KPMG LLP or its affiliates. The audit committee's pre-approval policies and procedures, as revised effective March 5, 2007, were attached as Exhibit 7 to the Form 40-F filed on December 19, 2007 for the fiscal year ended October 31, 2007. The pre-approval policies and procedures have been subsequently approved without any major changes at each annual review.

OFF-BALANCE SHEET ARRANGEMENTS

The disclosure provided under "Off-balance Sheet Arrangements" on pages 42 to 44 and "Structured entities" on pages 42 to 44 of Exhibit 99.2, Management's Discussion and Analysis, is incorporated by reference herein. Additional information from note 3 on pages 139 to 151, note 6 on pages 153 to 158, note 9 on pages 161 to 165, note 13 on page 173, note 14 on pages 174 to 176, note 22 on page 181, note 23 on pages 182 to 185, note 34 on pages 200 to 202 and note 35 on pages 202 to 210 of Exhibit 99.3, 2016 Consolidated Financial Statements, is incorporated by reference into "Off-balance Sheet Arrangements" in Management's Discussion and Analysis.

CONTRACTUAL OBLIGATIONS

The disclosure provided under “Contractual maturities and obligations” on pages 93 to 95 of Exhibit 99.2, Management’s Discussion and Analysis, is incorporated by reference herein. Additional information from note 6 on pages 153 to 158, note 19 on page 180, note 27 on pages 190 to 194, note 34 on pages 200 to 202 and note 35 on pages 202 to 210 of Exhibit 99.3, 2016 Consolidated Financial Statements, is incorporated by reference into “Contractual Obligations” in Management’s Discussion and Analysis.

IDENTIFICATION OF THE AUDIT COMMITTEE

The Bank’s audit committee is composed of the following directors: Paul D. Sobey (Chair and financial expert), Guillermo E. Babatz (financial expert), Scott B. Bonham, Charles H. Dallara, William R. Fatt (financial expert), Tiff Macklem, Thomas C. O’Neill (financial expert), Una M. Power (financial expert) and L. Scott Thomson (financial expert).

SUMMARY OF SIGNIFICANT CORPORATE GOVERNANCE DIFFERENCES

A summary of significant ways corporate governance practices followed by the Bank differ from corporate governance practices required to be followed by U.S. domestic companies under the New York Stock Exchange’s listing standards (disclosure required by Section 303A.11 of the NYSE Listed Company Manual) is available on the Bank’s website at www.scotiabank.com/corporategovernance.

DISCLOSURE PURSUANT TO SECTION 13(r) OF THE EXCHANGE ACT

Pursuant to section 13(r) of the Exchange Act, the Bank is required to disclose certain activities, transactions or dealings related to both the Islamic Republic of Iran (“Iran”) and certain persons listed on the Specially Designated National and Blocked Persons list maintained by the United States Department of Treasury Office of Foreign Assets Control, during the year ended October 31, 2016. Disclosure of these certain activities, transactions or dealings is generally required even if conducted in compliance with applicable law and regulations.

The Bank has established a robust enterprise-wide global sanctions compliance program to ensure compliance with applicable sanctions laws. In February 2016, the Bank processed an incoming Canadian dollar wire transfer for one of its customers in Canada that originated from a bank in Kuwait. The Bank has learned that the wire transfer represented payment from a private company based in Iran that is not named on the OFAC sanctions lists, for oil and gas exploration and extraction equipment that the customer supplied to that entity. After review of the underlying transaction, the Bank has no reason to believe that the wire transfer or the transaction violated any applicable sanctions. Although the Bank believes that its activity in processing the incoming payment is not required to be disclosed under Section 13(r), the underlying transaction, which involved the supply of oil and gas exploration and extraction equipment, potentially could be required to be disclosed under Section 13(r); accordingly, the Bank is including disclosure of this activity in this report. This customer’s banking accounts were closed in August 2016**.** It is not possible to accurately determine the precise net profit attributable to such wire transfer, and even if revenues and profits from these were calculated, they would be negligible.

Undertaking

Registrant undertakes to make available, in person or by telephone, representatives to respond to inquiries made by the Commission staff, and to furnish promptly, when requested to do so by the Commission staff, information relating to: the securities registered pursuant to Form 40-F; the securities in relation to which the obligation to file an annual report on Form 40-F arises; or transactions in said securities.

Signatures

Pursuant to the requirements of the Exchange Act, the Registrant certifies that it meets all of the requirements for filing on Form 40-F and has duly caused this annual report to be signed on its behalf by the undersigned, thereto duly authorized.

Registrant: **THE BANK OF NOVA SCOTIA**

By: /s/ Sean D. McGuckin
Name: Sean D. McGuckin
Title: Group Head and Chief Financial Officer

Date: November 29, 2016

EXHIBIT INDEX

Exhibit No.	Description
99.1	Annual Information Form dated November 29, 2016
99.2	Management's Discussion and Analysis (pages 11 through 127 of the 2016 Annual Report)
99.3	2016 Consolidated Financial Statements (pages 129 through 210 of the 2016 Annual Report)
99.4	Management's Report on Internal Control over Financial Reporting and Report of Independent Registered Public Accounting Firm (page 128 of the 2016 Annual Report)
99.5	Corporate Governance
99.6	Consent of Independent Registered Public Accounting Firm
99.7	Certifications required by Rule 13a-14(a) or Rule 15d-14(a), pursuant to Section 302 of the U.S. Sarbanes-Oxley Act of 2002
99.8	Certifications required by Rule 13a-14(b) or Rule 15d-14(b) and 18 U.S.C. Section 1350, as enacted pursuant to Section 906 of the U.S. Sarbanes-Oxley Act of 2002

Exhibit 99.1

The Bank of Nova Scotia

ANNUAL INFORMATION FORM

NOVEMBER 29, 2016



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Distribution Notice

When this Annual Information Form is provided to security holders or other interested parties, it must be accompanied by copies of all the documents (or excerpts thereof) incorporated herein by reference. Portions of this Annual Information Form of The Bank of Nova Scotia (the "Bank", "Scotiabank", "we" or "our") dated November 29, 2016 (the "AIF"), are disclosed in the Management's Discussion and Analysis for the year ended October 31, 2016 (the "MD&A"). The MD&A is also available on SEDAR at www.sedar.com.

Financial Data

Except as otherwise noted, all information is given at or for the year ended October 31, 2016. Amounts are expressed in Canadian dollars. Financial information is presented in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board, unless otherwise noted.

Forward-looking Statements

Our public communications often include oral or written forward-looking statements. Statements of this type are included in this document, and may be included in other filings with Canadian securities regulators or the United States ("U.S.") Securities and Exchange Commission ("SEC"), or in other communications. All such statements are made pursuant to the "safe harbor" provisions of the U.S. Private Securities Litigation Reform Act of 1995 and any applicable Canadian securities legislation. Forward-looking statements may include, but are not limited to, statements made in this document, the MD&A in the Bank's 2016 Annual Report under the headings "Overview – Outlook," for Group Financial Performance "Outlook," for each business segment "Outlook" and in other statements regarding the Bank's objectives, strategies to achieve those objectives, the regulatory environment in which the Bank operates, anticipated financial results (including those in the area of risk management), and the outlook for the Bank's businesses and for the Canadian, U.S. and global economies. Such statements are typically identified by words or phrases such as "believe," "expect," "anticipate," "intent," "estimate," "plan," "may increase," "may fluctuate," and similar expressions of future or conditional verbs, such as "will," "may", "should," "would" and "could."

By their very nature, forward-looking statements involve numerous assumptions, inherent risks and uncertainties, both general and specific, and the risk that predictions and other forward-looking statements will not prove to be accurate. Do not unduly rely on forward-looking statements, as a number of important factors, many of which are beyond the Bank's control and the effects of which can be difficult to predict, could cause actual results to differ materially from the estimates and intentions expressed in such forward-looking statements. These factors include, but are not limited to: the economic and financial conditions in Canada and globally; fluctuations in interest rates and currency values; liquidity and funding; significant market volatility and interruptions; the failure of third parties to comply with their obligations to the Bank and its affiliates; changes in monetary policy; legislative and regulatory developments in Canada and elsewhere, including changes to, and interpretations of tax laws and risk-based capital guidelines and reporting instructions and liquidity regulatory guidance; changes to the Bank's credit ratings; operational (including technology) and infrastructure risks; reputational risks; the risk that the Bank's risk management models may not take into account all relevant factors; the accuracy and completeness of information the Bank receives on customers and counterparties; the timely development and introduction of new products and services in receptive markets; the Bank's ability to expand existing distribution channels and to develop and realize revenues from new distribution channels; the Bank's ability to complete and integrate acquisitions and its other growth strategies; critical accounting estimates and the effects of changes in accounting policies and methods used by the Bank (See "Controls and Accounting Policies – Critical accounting estimates" in the Bank's 2016 Annual Report, as updated by quarterly reports); global capital markets activity; the Bank's ability to attract and retain key executives; reliance on third parties to provide components of the Bank's business infrastructure; unexpected changes in consumer spending and saving habits; technological developments; fraud or other criminal behaviour by internal or external parties, including the use of new technologies in unprecedented ways to defraud the Bank or its customers; increasing cyber security risks which may include theft of assets, unauthorized access to sensitive information or operational disruption; anti-money laundering; consolidation in the Canadian financial services sector; competition, both from new entrants and established competitors, including through internet and mobile banking; judicial and regulatory proceedings; natural disasters, including, but not limited to, earthquakes and hurricanes, and disruptions to public infrastructure, such as transportation, communication, power or water supply; the possible impact of international conflicts and other developments, including terrorist activities and war; the effects of disease or illness on local, national or international economies; and the Bank's anticipation of and success in managing the risks implied by the foregoing. A

substantial amount of the Bank's business involves making loans or otherwise committing resources to specific companies, industries or countries. Unforeseen events affecting such borrowers, industries or countries could have a material adverse effect on the Bank's financial results, businesses, financial condition or liquidity. These and other factors may cause the Bank's actual performance to differ materially from that contemplated by forward-looking statements. For more information, see the "Risk Management" section starting on page 60 of the Bank's 2016 Annual Report.

Material economic assumptions underlying the forward-looking statements contained in this document are set out in the 2016 Annual Report under the heading "Overview – Outlook," as updated by quarterly reports; and for each business segment "Outlook". The "Outlook" sections are based on the Bank's views and the actual outcome is uncertain. Readers should consider the above-noted factors when reviewing these sections.

The preceding list of factors is not exhaustive of all possible risk factors and other factors could also adversely affect the Bank's results. When relying on forward-looking statements to make decisions with respect to the Bank and its securities, investors and others should carefully consider the preceding factors, other uncertainties and potential events. The Bank does not undertake to update any forward-looking statements, whether written or oral, that may be made from time to time by or on its behalf.

CORPORATE STRUCTURE

Name, Address and Place of Incorporation

The Bank was granted a charter under the laws of the Province of Nova Scotia in 1832 and commenced operations in Halifax, Nova Scotia in that year. Since 1871, the Bank has been a chartered bank under the Bank Act (Canada) (the "Bank Act"). The Bank is a Schedule I bank under the Bank Act and the Bank Act is its charter. The head office of the Bank is located at 1709 Hollis Street, Halifax, Nova Scotia, B3J 1W1 and its executive offices are at Scotia Plaza, 44 King Street West, Toronto, Ontario, M5H 1H1. A copy of the Bank's by-laws is available on www.sedar.com.

Intercorporate Relationships

Each international principal subsidiary of the Bank is incorporated or established and existing under the laws of the jurisdiction in which its principal office is located, with the exceptions of Scotia Holdings (US) Inc. and Scotiabanc Inc., which are incorporated and existing under the laws of the State of Delaware. Each Canadian principal subsidiary of the Bank is incorporated or established and existing under the laws of Canada, with the exception of: HollisWealth Inc., 1832 Asset Management L.P., Scotia Capital Inc. and Scotia Securities Inc. which are incorporated or established and existing under the laws of the Province of Ontario.

The Bank's principal subsidiaries are listed on Schedule "A".

GENERAL DEVELOPMENT OF THE BANK'S BUSINESS

Three-Year History

The Bank is Canada's international bank and a leading financial services provider in North America, Latin America, the Caribbean and Central America, and Asia-Pacific. With a team of more than 88,000 employees, we are dedicated to helping our 23 million customers become better off through a broad range of advice, products and services, including personal and commercial banking, wealth management and private banking, corporate and investment banking and capital markets.

As reported in accordance with IFRS, for the fiscal year ended October 31, 2016, the Bank's net income attributable to common shareholders was $6,987 million, an increase of $90 million or 1.3% from $6,897 million in 2015. The Bank's net income attributable to common shareholders was $6,916 million in 2014. Earnings per share (on a diluted basis) for the fiscal year ended October 31, 2016 was $5.77, compared to $5.67 in 2015 and $5.66 in 2014. The 2016 results included a restructuring charge of $378 million (pre-tax) that had a $0.23 impact on diluted earnings per share. The 2014 results included a number of notable items (see MD&A, Table 15, page 26) that had a $0.23 impact on the diluted earnings per share.

Return on equity for the fiscal year ended October 31, 2016 was 13.8%, compared to 14.6% in 2015 and 16.1% in 2014. In fiscal 2016, the Bank's actual dividend payout ratio was 49.6%, compared to 47.7% in 2015 and 45.0% in 2014.

On February 1, 2016, the Bank completed the acquisition of Citigroup's retail and commercial business in Costa Rica and Panama, for approximately US$360 million. This transaction has strengthened our core Central American franchise, including our credit card businesses in both Costa Rica and Panama, as well as providing strong revenue growth and product diversification.

On November 16, 2015, the Bank acquired a $1,700 million credit card portfolio and platform from JP Morgan Chase. The acquisition aligned with our strategy of growing our Canadian credit card business and customer base, while expanding our product portfolio to become the first bank in Canada to offer customers Visa, AMEX and MasterCard credit card alternatives.

On May 1, 2015, the Bank acquired a 51% interest in Cencosud S.A.'s financial services business for approximately US$280 million, as part of a 15-year strategic alliance. This partnership provided our customers with more credit card options, making Scotiabank one of the largest credit card providers in Chile. This transaction is aligned with our strategy to attract new customers, build scale, and increase market share across our priority markets.

On May 1, 2015, the Bank's subsidiary in Peru acquired the retail and commercial banking operations of Citibank in Peru for $380 million. This transaction is consistent with the Bank's focus on increasing scale in Peru, Mexico, Colombia and Chile.

Effective November 1, 2014, the Bank's global wealth and insurance businesses were integrated into the Bank's Canadian Banking, International Banking and Global Banking and Markets businesses.

On October 1, 2014, the Bank acquired a 20% equity stake in Canadian Tire Financial Services for $500 million. The exclusive partnership supports the Bank's strategy to grow our Canadian credit card business, while increasing value to new customers.

On June 17, 2014, the Bank completed a secondary offering of 82,800,000 common shares of CI Financial at a price of $31.60 per common share, for gross proceeds of $2,616 million.

DESCRIPTION OF THE BANK'S BUSINESS

General Summary

A profile of each of the Bank's major business lines is discussed below and additional information on the Bank's business lines is available in the MD&A, on pages 47 to 59 inclusive, and those pages are herein incorporated by reference.

Canadian Banking

Canadian Banking provides a full suite of financial advice and banking solutions, supported by an excellent customer experience, to over 10 million Retail, Small Business, Commercial Banking, and Wealth Management customers. It serves these customers through its network of 980 branches and more than 3,500 automated banking machines (ABMs), as well as internet, mobile and telephone banking and specialized sales teams. Canadian Banking also provides an alternative self-directed banking solution to over two million Tangerine Bank customers. Canadian Banking is comprised of the following areas:

- Retail and Small Business Banking provides financial advice and solutions and day-to-day banking products, including debit cards, chequing accounts, credit cards, investments, mortgages, loans and related creditor insurance products, to individuals and small businesses. Tangerine Bank provides day-to-day banking products, including chequing and saving accounts, credit cards, and investments to self-directed customers.
- Commercial Banking delivers advice and a full suite of lending, deposit, cash management and trade finance solutions to medium and large businesses, including automotive dealers and their customers to whom we provide retail automotive financing solutions.
- Wealth Management provides a suite of investment and wealth management advice, services, products and solutions to customers, as well as advisors. The asset management business is focused on developing investment solutions for both retail and institutional investors. The customer facing wealth businesses, including private customer, online brokerage,

full-service brokerage, pensions, institutional customer services and an independent advisor channel, are focused on providing a full suite of wealth management solutions to our customers.

International Banking

International Banking (IB) has a well-established, diversified franchise that serves more than 14 million Retail, Corporate, and Commercial customers across our footprint. These customers are supported by over 50,000 employees, 1,800+ branches, and a network of contact and business support centres. IB is focused on Latin America, including the Pacific Alliance countries of Mexico, Peru, Chile and Colombia, and the Caribbean and Central America.

Global Banking and Markets

Global Banking and Markets (GBM) conducts the Bank's wholesale banking and capital markets business with corporate, government and institutional investor clients. GBM is a full-service wholesale bank and investment dealer in Canada and Mexico, and offers a range of products and services in the U.S., Latin America (excluding Mexico), and in select markets in Europe, Asia and Australia. More specifically, GBM provides clients with: corporate lending; transaction banking (including trade finance and cash management); investment banking (including corporate finance and mergers & acquisitions); fixed income and equity underwriting, sales, trading and research; prime services (prime brokerage and stock lending); foreign exchange sales and trading; commodity derivatives; precious and base metals sales, trading, financing and physical services; and collateral management. Scotiabank took steps to refocus its Asia business this year. This included the establishment of a fully-licensed branch in Australia, the closing of our representative offices in Vietnam and Thailand, and the closing of our branches in Taiwan and Dubai.

Competition

The Canadian banking system consists of numerous banks and other financial institutions. Certain large Canadian banks are required by law to be widely held because their equity exceeds a threshold of $12 billion. These banks compete nationwide through extensive branch networks, ABMs, telephone, internet and mobile banking offerings. In total, the Canadian system includes 30 domestic banks, 55 foreign banks and about 620 credit unions and caisses populaires. More broadly, the Canadian financial services industry includes thousands of institutions such as life insurance companies, property and casualty insurers, consumer finance companies, independent investment dealers and independent retail mutual fund management companies.

Scotiabank is Canada's international bank and a leading financial services provider in North America, Latin America, the Caribbean and Central America, and Asia-Pacific. The bank provides customers a broad range of advice, products and services, including personal and commercial banking, wealth management and private banking, corporate and investment banking, and capital markets. In providing these services and products, Scotiabank competes with local and international banks and other financial institutions.

Competition is reflected in the range of products and services offered, innovation in features, services, technology and delivery and the different pricing adopted. Canada ranks 7th in the world in terms of its financial market development, according to the 2016-17 Global Competitiveness survey of the World Economic Forum. Additionally, a greater number of service providers in the Canadian marketplace are offering alternative channels and competition in the payments space. The increased number of new entrants into the financial services sector in recent years has also underscored an enhanced level of competition.

Supervision and Regulation in Canada

As a Canadian Schedule I Bank, the Bank's activities in Canada are governed by the Bank Act, which is one of four main federal statutes governing the financial services industry in Canada. The other three statutes cover trust and loan companies, insurance companies and co-operative credit associations.

In accordance with the Bank Act, an organization may engage in and carry on the business of banking and such business generally as pertains to the business of banking. The Bank Act grants Canadian chartered banks broad powers of investment in the securities of other corporations and entities, but imposes limits upon substantial investments. Under the Bank Act, generally a bank has a substantial investment in a body corporate when (a) voting rights attached to the voting

shares beneficially owned by the bank and by entities controlled by the bank exceed 10% of the voting rights attached to the outstanding voting shares of the body corporate, or (b) the total number of shares of the body corporate that are beneficially owned by the bank and entities controlled by the bank represent more than 25% of the total shareholders' equity of the body corporate. In addition, under the Bank Act, a bank has a substantial investment in an unincorporated entity where the ownership interests in such entity beneficially owned by that bank and by entities controlled by that bank exceed 25% of all ownership interests in such entity. A Canadian chartered bank is permitted to have a substantial investment in entities whose activities are consistent with those of certain prescribed permitted substantial investments. In general, a bank will be permitted to invest in an entity that carries on any financial services activity. Further, a bank may generally invest in entities that carry on commercial activities that are related to the promotion, sale, delivery or distribution of a financial product or service. A bank may also invest in entities that provide professional investment management to closed-end funds and mutual funds, engage in the distribution of mutual funds and provide consulting and agency services for real property or service financial institutions and the bank may have downstream holding companies to hold these investments. In certain cases, the approval of the Minister of Finance (the "Minister") or the Superintendent of Financial Institutions Canada (the "Superintendent") is required prior to making the investment and/or the bank is required to control the entity. Canadian chartered banks may offer through their branch network credit or charge-card related insurance, creditors' disability insurance, creditors' life insurance, creditors' loss of employment insurance, creditors' vehicle inventory insurance, export credit insurance, mortgage insurance and travel insurance. Outside bank branches, a bank may offer insurance only in the limited circumstances prescribed by the Bank Act.

Without Minister approval, no person or group of associated persons may own more than 10% of any class of shares of the Bank. No person may be a major shareholder of a bank if the bank has equity of $12 billion or more (which includes the Bank). A person is a major shareholder of a bank if: (a) the aggregate of shares of any class of voting shares beneficially owned by that person and that are beneficially owned by any entities controlled by that person is more than 20% of that class of voting shares; or (b) the aggregate of shares of any class of non-voting shares beneficially owned by that person and that are beneficially owned by any entities controlled by that person is more than 30% of that class of non-voting shares. Ownership of the Bank's shares by Canadian or foreign governments is prohibited under the Bank Act. However, in 2009 certain amendments were made to the Bank Act that provide for limited circumstances in which the Canadian federal government may be permitted to acquire shares of a bank, including the Bank, if the Minister and Governor in Council were to conclude that to do so would promote stability in the financial system. While the government holds any shares of a bank, including the Bank, the Minister may impose certain terms and conditions, including conditions on the payment by the Bank of dividends on any of its shares.

The Superintendent is responsible to the Minister for the administration of the Bank Act. The Superintendent is required to make an annual examination of each bank to ensure compliance with the Bank Act and to ensure that each bank is in sound financial condition. The report of the Superintendent's examination is submitted to the Minister. The Bank is also required to disclose certain financial information. The Bank is subject to regulation by the Canada Deposit Insurance Corporation and the Financial Consumer Agency of Canada, and the activities of the Bank in Canada are subject to various other federal statutory provisions, including the Proceeds of Crime (Money Laundering) and Terrorist Financing Act which applies to all of the Bank's businesses in Canada. The activities of the Bank's trust subsidiaries and insurance subsidiaries are regulated in Canada under the Trust and Loan Companies Act and the Insurance Companies Act, respectively, and under provincial laws in respect of their activities in the provinces. Certain activities of the Bank and its subsidiaries acting as securities brokers, dealers (including investment and mutual fund dealers), underwriters and advisors (including investment counsel and portfolio managers) are regulated in Canada under provincial securities legislation and, in some cases, by self-regulatory organizations, such as the Investment Industry Regulatory Organization of Canada for broker dealers and the Mutual Fund Dealers Association for mutual fund dealers.

International Supervision and Regulation

Capital adequacy for Canadian banks is regulated by the Office of the Superintendent of Financial Institutions ("OSFI") and subject to the revised capital adequacy requirements as published by the Basel Committee on Banking Supervisions (BCBS) and commonly referred to as Basel III. Additional information on the regulatory capital of the Bank and developments facing the Bank are described under the headings "Regulatory capital" and "Regulatory developments related to capital" on pages 31 and 32 of the MD&A, respectively, and those sections are incorporated herein by reference.

Foreign Account Tax Compliance Act (“FATCA”)

FATCA is U.S. legislation designed to prevent U.S. taxpayers from using accounts held outside of the U.S. to evade taxes. FATCA and in some countries, related local regulations now require financial institutions to report annually on specified accounts held outside of the U.S. by U.S. taxpayers. This reporting is made available to the U.S. Internal Revenue Service either directly or through local regulatory agencies. Under an initiative known as Global FATCA, more than 100 OECD member countries have committed to automatic exchange of information relating to accounts held by tax residents of signatory countries, using a Common Reporting Standard (CRS). Implementation of the CRS commenced in January 2016 in countries that signed on as “early adopters.” More than 40 countries where the Bank has a presence have now signed on to the CRS, and 17 of these signed on as early adopters. Draft legislation to implement the CRS in Canada was released by the Department of Finance on October 14, 2016. Under the guidance of an enterprise program office, dedicated project teams in each of the Bank’s business lines are working to meet all FATCA and CRS related obligations worldwide while minimizing negative impact on the client experience. The Bank will meet all obligations imposed under FATCA, CRS, and other tax information exchange regimes, in accordance with local law.

Supervision and Regulation Outside Canada – Key Jurisdictions

United States

The activities of the Bank and its subsidiaries in the U.S. are subject to federal and state supervision, regulation and examination by bank regulatory and other governmental agencies. The Bank is subject to the Bank Holding Company Act of 1956 (“BHCA”) and the International Banking Act of 1978 and associated regulations of the Board of Governors of the Federal Reserve System (the “Federal Reserve Board”). The Federal Reserve Board and other banking regulators oversee the operation of the Bank’s branches, offices and subsidiaries in the U.S. The SEC, state securities regulators and self-regulatory organizations, such as the Financial Industry Regulatory Authority, regulate its broker-dealer subsidiary and the Commodity Futures Trading Commission (“CFTC”) oversees the Bank’s swaps and commodities trading and clearing businesses.

The Bank is a “financial holding company” under the BHCA. This status allows a broad range of financial activities to be undertaken in the U.S. In addition, the Bank owns a commercial and retail bank in the Commonwealth of Puerto Rico that

is subject to various laws and regulation and examination by the Commonwealth of Puerto Rico and federal regulators and is a Federal Deposit Insurance Corporation-insured depository institution. Provisions of the Federal Reserve Act place certain limitations and restrictions on the transactions that the Bank's U.S. branches, agencies and subsidiary bank can engage in with affiliates of the Bank.

The Bank, as a non-U.S. bank with U.S. operations, is required by the U.S. Bank Secrecy Act as amended by the USA PATRIOT Act of 2001, to take certain steps to prevent, detect and report individuals and entities involved in international money laundering and the financing of terrorism. Failure of a financial institution to comply with these requirements could have serious legal and reputational consequences for the institution.

On December 10, 2013, the Federal Reserve Board approved a final rule implementing Section 619 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"), commonly known as the Volcker Rule. The Volcker Rule impacts our global activities as its reach extends to the Bank and each of its subsidiaries and affiliates (subject to certain exceptions and exclusions). The Volcker Rule imposes prohibitions and restrictions on banking entities and their affiliates in connection with proprietary trading and investing in or sponsoring of hedge funds or private equity funds. The Bank has developed an enterprise wide compliance program to meet the requirements of the Volcker Rule, which became effective on July 21, 2015. These impacts are not expected to materially affect the Bank's overall financial results.

On February 18, 2014, the Federal Reserve Board approved the final rule to implement the enhanced prudential standards and early remediation requirements of sections 165 and 166 of the Dodd-Frank Act (the FBO Rule) for bank holding companies and foreign banking organizations. Regulation YY implements certain provisions of section 165 that require the Federal Reserve Board to establish enhanced prudential standards for bank holding companies and foreign banking organizations with total consolidated assets of $50 billion or more. With respect to foreign banking organizations, the overall intent of Section 165 and Regulation YY is to strengthen the regulation of the U.S. operations of foreign banking organizations by requiring home country capital certification consistent with the Basel capital framework, home country capital stress tests comparable to U.S. standards, maintenance of a liquidity buffer for U.S. branches and agencies and establishment of a U.S. risk committee with the appointment of a U.S. Chief Risk Officer. The Bank has appointed a Chief Risk Officer for the U.S., has established a U.S. Risk Committee and has taken other steps to help ensure compliance with the final rule, which became effective in July 2016. The Bank is not currently required to form a U.S. intermediate holding company under the final rule.

The SEC has taken several steps toward completing its regulatory framework for security-based swap dealers and majority security-based swap participants, as required under the Dodd-Frank Act. The SEC unanimously adopted final rules providing the registration process for security-based swap dealers and majority security-based swap participants, including the detailed forms that registrants will be required to file. The Bank, which is currently registered as a swap dealer with the CFTC, anticipates that it will be required to register as a security-based swap dealer with the SEC.

Mexico

Grupo Financiero Scotiabank Inverlat, S.A. de C.V. is an "affiliate holding company" pursuant to the Law for the Regulation of Financial Groups of Mexico and the Rules for the Establishment of Foreign Affiliate Financial Institutions of Mexico. The governing authority is the Ministry of Finance of Public Credit of Mexico and the supervising and regulatory authorities are the Central Bank of Mexico, the National Banking and Securities Commission and the National Commission for the Protection of the Users of Financial Services.

Peru

Scotiabank Peru S.A.A. is a "banking company" pursuant to the Law of the Banking System, Insurance and Private Pension Funds Administrators and applicable rules for financial groups enacted by the Superintendency of Banking System, Insurance and Private Pension Funds Administrators ("SBS") and the Superintendency of Securities Market ("SMV"). Beside SBS and SMV, the other governing authorities are the Central Bank of Peru, and the National Institution for the Defense of Competition and Intellectual Property ("Indecopi"), in charge, among other functions, of the protection of consumers of financial services.

Pursuant to SBS and SMV regulations on ownership and control of supervised companies, Scotiabank Peru S.A.A. also reports on its holding company shareholders, Scotia Peru Holdings S.A. and NW Holdings Ltd.

Chile

Scotiabank Chile is a special stock corporation governed by the provisions of the General Banking Act and by the provisions applicable to listed corporations contained in the Corporations Act. It is supervised by the Superintendency of Banks and Financial Institutions ("SBIF"), which is an autonomous institution related to the Chilean Government through the Ministry of Finance. Scotiabank Chile is also governed by the Central Bank of Chile and the National Consumer Service (Sernac), the latter being responsible for, among other functions, consumer protection with regards to financial services, in accordance with the provisions of the Financial Consumer Protection Act. Scotiabank Chile's subsidiaries are supervised by the SBIF or by the Superintendency of Securities and Insurances (SVS), according to their respective business lines.

Colombia

Banco Colpatria Multibanca Colpatria S.A. ("Banco Colpatria"), a subsidiary of the Bank, is a bank incorporated in compliance with the regulations of the Financial Superintendence of Colombia (Superintendencia Financiera de Colombia or "SFC"). The SFC is the supervisor of the national banking, insurance, pension funds, and securities markets under Colombian laws, with the purpose of assuring their stability, efficiency and transparency, as well as maintaining and fostering a sound and balanced development of the financial system as a whole, while protecting the interests of the public in Colombia. The SFC is responsible for inspecting, supervising and controlling Banco Colpatria. Additionally, the SFC promotes, organizes and develops regulations in order to ensure the protection of investors, depositors, shareholders and stakeholders. The SFC is also responsible for financial customer protection.

Other Jurisdictions

The Bank has been authorized in the United Kingdom by the Prudential Regulation Authority ("PRA") and its London Branch is subject to limited prudential supervision by the PRA and conduct of business, market conduct and anti-money laundering supervision by the Financial Conduct Authority ("FCA"). The PRA also authorizes Scotiabank Europe plc, a wholly owned subsidiary of the Bank which is a United Kingdom incorporated deposit taker. Scotiabank Europe plc's prudential supervisor is the PRA and its conduct supervisor is the FCA. Outside of the U.S., Mexico, Peru, Chile, Colombia and the United Kingdom, each of the Bank's branches, agencies and subsidiaries, many of which are banks in their own right, is also subject to the regulatory requirements of the jurisdiction in which it conducts its business.

Certain regulatory developments facing the Bank are described on pages 106 to 107 inclusive of the MD&A and those pages are incorporated herein by reference.

Social and Environmental Policies

Each year the Bank publishes its Corporate Social Responsibility Report, which provides details of the Bank's social, environmental and governance policies and strategies. This document and additional information can be found in the Corporate Social Responsibility section of the Bank's website at www.scotiabank.com/csr.

Risk Factors

The risks faced by the Bank are described on pages 68 to 98 inclusive of the MD&A and those pages are incorporated herein by reference.

DIVIDENDS

Restrictions on Dividend Payments

Under the Bank Act, the Bank is prohibited from declaring any dividends on its common shares or preferred shares when the Bank is, or would be placed by such a declaration, in contravention of the capital adequacy, liquidity or any other regulatory directives issued under the Bank Act. In addition, common share dividends cannot be paid unless all dividends

to which preferred shareholders are then entitled have been paid or sufficient funds have been set aside to do so. In fiscal 2016, the Bank paid all of the non-cumulative preferred share dividends.

In the event that applicable cash distributions on any of the Scotiabank Trust Securities (meaning securities issued by Scotiabank Capital Trust and Scotiabank Tier 1 Trust) are not paid on a regular distribution date, the Bank has undertaken not to declare dividends of any kind on its preferred shares or common shares. Similarly, should the Bank fail to declare regular dividends on any of its directly issued outstanding preferred shares or common shares, cash distributions will also not be made on any of the Scotiabank Trust Securities.

Currently, these limitations do not restrict the payment of dividends on preferred shares or common shares.

The Bank's preferred shares are entitled to preference over the common shares and over any other shares of the Bank ranking junior to the preferred shares with respect to the payment of dividends.

Dividend Payments

In fiscal 2016, the Bank's actual common share dividend payout ratio was 49.6%, compared to 47.7% in 2015. The Bank has declared and paid the following dividends on its common shares and preferred shares over the past three completed financial years:

	2016	2015	2014
Common Shares	$ 2.88	$ 2.72	$ 2.56
Series 13[1]	—	—	$ 0.90
Series 14[2]	$ 0.5625	$ 1.125	$ 1.125
Series 15[3]	$0.843750	$ 1.125	$ 1.125
Series 16	$ 1.3125	$ 1.3125	$ 1.3125
Series 17	$ 1.40	$ 1.40	$ 1.40
Series 18[4]	$ 0.8375	$ 0.8375	$ 0.8375
Series 19[4]	$0.628938	$0.697813	$ 0.7435
Series 20[5]	$ 0.9025	$ 0.9025	$ 0.9025
Series 21[5]	$0.541438	$0.610313	$ 0.6560
Series 22[6]	$0.957500	$0.957500	$1.030625
Series 23[6]	$0.586438	$0.655313	$0.521875
Series 24[7]	—	—	$ 0.3906
Series 26[8]	—	—	$ 0.78125
Series 28[9]	—	—	$ 0.78125
Series 30	$0.455000	$0.708750	$ 0.9625
Series 31[10]	$0.366438	—	—
Series 32[11]	$0.638235	$ 0.9250	$ 0.9250
Series 33[12]	$0.334959	—	—
Series 34[13]	$1.184800	—	—
Series 36[14]	$0.852350	—	—
Series 38[15]	—	—	—

1 On July 29, 2014, the Bank redeemed all of its issued and outstanding Preferred Shares, Series 13.
2 On April 27, 2016, the Bank redeemed all of its issued and outstanding Preferred Shares, Series 14.
3 On July 27, 2016, the Bank redeemed all of its issued and outstanding Preferred Shares, Series 15.
4 On April 26, 2013, 6,302,337 shares of Preferred Shares, Series 18 were converted to Preferred Shares, Series 19.
5 On October 26, 2013, 5,960,732 shares of Preferred Shares, Series 20 were converted to Preferred Shares, Series 21.
6 On January 26, 2014, 2,623,056 shares of Preferred Shares, Series 22 were converted to Preferred Shares, Series 23.
7 On January 26, 2014, the Bank redeemed all of its issued and outstanding Preferred Shares, Series 24.
8 On April 26, 2014, the Bank redeemed all of its issued and outstanding Preferred Shares, Series 26.
9 On April 26, 2014, the Bank redeemed all of its issued and outstanding Preferred Shares, Series 28.
10 On April 26, 2015, 4,457,262 Preferred Shares, Series 30 were converted to Preferred Shares, Series 31.
11 On February 1, 2011, 16,345,767 Preferred Shares, Series 32 were issued.
12 On February 2, 2016, 5,184,345 Preferred Shares, Series 32 were converted to Preferred Shares, Series 33.
13 On December 17, 2015, 14,000,000 Preferred Shares, Series 34 were issued.
14 On March 14, 2016, 20,000,000 Preferred Shares, Series 36 were issued.
15 No dividends were declared and paid on Preferred Shares, Series 38 in fiscal 2016

DESCRIPTION OF THE BANK'S CAPITAL STRUCTURE

The following summary of the Bank's share capital is qualified in its entirety by the Bank's by-laws and the actual terms and conditions of such shares. For more details on the Bank's capital structure, see pages 31 to 37 of the MD&A and notes 23 and 24 of the consolidated financial statements for the year ended October 31, 2016. The Bank incorporates those pages and notes by reference.

Common Shares

The authorized common share capital of the Bank consists of an unlimited number of common shares, without nominal or par value, of which 1,207,893,604 common shares were issued and outstanding as at October 31, 2016.

Holders of the Bank's common shares are entitled to vote at all meetings of the shareholders of the Bank except meetings at which only the holders of preferred shares of the Bank are entitled to vote. Common shareholders are entitled to receive dividends, as and when declared on the common shares.

After the payment to the holders of the preferred shares of the amount or amounts to which they may be entitled, the holders of the Bank's common shares shall be entitled to receive the remaining property of the Bank upon liquidation, dissolution or winding-up thereof.

Preferred Shares – General

The authorized preferred share capital of the Bank consists of an unlimited number of preferred shares without nominal or par value issuable in series. The term "Preferred Shares" shall refer to all authorized preferred shares of the Bank.

As at October 31, 2016, Non-cumulative Preferred Shares, Series 16, 17, 18, 19, 20, 21, 22, 23, 30, 31, 32, 33, 34, 36 and 38 were outstanding. In addition, Non-cumulative Preferred Shares, Series 35, 37 and 39 were authorized but are not currently outstanding.

The Preferred Shares are entitled to preference over the common shares and over any other shares of the Bank ranking junior to the Preferred Shares with respect to the payment of dividends and upon any distribution of assets in the event of liquidation, dissolution or winding-up of the Bank.

The Bank may not create, without the approval of the holders of Preferred Shares, any other class of shares ranking prior to or on a parity with the Preferred Shares, increase the authorized number of Preferred Shares or amend the provisions attaching to the Preferred Shares.

Any approval to be given by the holders of the Preferred Shares may be given by a resolution carried by the affirmative vote of not less than 66 2/3% of the votes cast at a meeting of holders of Preferred Shares at which a majority of the outstanding Preferred Shares is represented or, if no quorum is present at such meeting, at any adjourned meeting at which no quorum requirements would apply.

Effective January 1, 2013, in accordance with capital adequacy requirements adopted by OSFI, non-common capital instruments issued after January 1, 2013, including Preferred Shares, must include terms providing for the full and permanent conversion of such securities into common shares upon the occurrence of certain trigger events relating to financial viability (the Non-Viability Contingent Capital or NVCC requirements) in order to qualify as regulatory capital. As of January 1, 2013, all outstanding capital instruments that do not meet the NVCC requirement will be considered non-qualifying capital instruments and will be phased out beginning January 1, 2013. Preferred Shares, Series 34, 35, 36, 37, 38 and 39 satisfy NVCC requirements as they were all issued or authorized after January 1, 2013.

Certain Provisions of the Preferred Shares

Dividends

The holders of the Preferred Shares will be entitled to receive either a fixed or floating rate quarterly non-cumulative preferential cash dividend, as and when declared by the Board of Directors of the Bank, subject to the provisions of the Bank Act, on the third last business day of each of January, April, July and October in each year at the rate specified in the terms of each series. If the Board of Directors of the Bank does not declare the dividends, or any part thereof, on a series of Preferred Shares on or before the dividend payment date for a particular quarter, then the entitlement of the holders of such series of Preferred Shares to receive such dividends, or to any part thereof, for such quarter shall be forever extinguished.

The holders of the Preferred Shares, Series 16 and 17 are entitled to receive fixed quarterly, non-cumulative cash dividends at the quarterly rate set forth in the terms for each series, as and when declared by the Board of Directors of the Bank.

The holders of the Preferred Shares, Series 18, 20, 22, 30, 32, 34, 36 and 38 are entitled to receive fixed quarterly, non-cumulative cash dividends, as and when declared by the Board of Directors of the Bank, for the specified initial period as set out in the terms of each series, and thereafter the dividend rate for each series will reset every five years at the rate specified in the terms for such series.

The holders of the Preferred Shares, Series 19, 21, 23, 31, 33, 35, 37 and 39 are entitled to receive floating rate quarterly, non-cumulative cash dividends, as and when declared by the Board of Directors of the Bank. No Preferred Shares, Series 35, 37 or 39 are currently outstanding.

Redemption

The Preferred Shares currently outstanding will not be redeemable prior to the date specified in the terms for each series. On and after such dates for the Preferred Shares specified in the foregoing sentence and for all other series of Preferred Shares issued and outstanding as at October 31, 2016, subject to the provisions of the Bank Act and to the prior consent of the Superintendent and to certain conditions being met, the Bank may redeem at the time specified in the terms of each series all or any part of an outstanding series of Preferred Shares at the Bank's option without the consent of the holder, by the payment of an amount in cash for each such share so redeemed as specified in the terms of each series.

Notice of any redemption of any series of Preferred Shares will be given by the Bank at least 30 days and not more than 60 days prior to the date fixed for redemption. If less than all the outstanding Preferred Shares in any series are at any time to be redeemed, the shares to be redeemed will be redeemed *pro rata*, disregarding fractions.

Rights Upon Dissolution or Winding-Up

In the event of the liquidation, dissolution or winding-up of the Bank, the holders of each series of the Preferred Shares shall be entitled to receive $25.00 per Preferred Share, together with all dividends declared and unpaid to the date of payment before any amount shall be paid or any assets of the Bank distributed to the holders of any shares ranking junior to the Preferred Shares. The holders of each series of the Preferred Shares shall not be entitled to share in any further distribution of the assets of the Bank.

Restrictions on Dividends and Retirement of Shares

So long as any shares of a series of Preferred Shares are outstanding, the Bank will not, without the approval of the holders of the relevant series of Preferred Shares given as specified below:

(a) declare, pay or set apart for payment any dividends on the common shares of the Bank or any other shares ranking junior to the series of Preferred Shares (other than stock dividends payable in shares ranking junior to the series of Preferred Shares);

(b) redeem, purchase or otherwise retire any common shares or any other shares ranking junior to the series of Preferred Shares (except out of the net cash proceeds of a substantially concurrent issue of shares ranking junior to the series of Preferred Shares);

(c) redeem, purchase or otherwise retire less than all of the series of Preferred Shares; or

(d) except pursuant to any purchase obligation, sinking fund, retraction privilege or mandatory redemption provisions attaching to any series of Preferred Shares of the Bank, redeem, purchase or otherwise retire any other shares ranking on a parity with the series of Preferred Shares;

unless, in each case, all dividends up to and including those payable on the dividend payment date for the last completed period for which dividends shall be payable shall have been declared and paid or set apart for payment in respect of each series of cumulative preferred shares of the Bank then issued and outstanding and on all other cumulative shares ranking on a parity with the preferred shares of the Bank and there shall have been paid or set apart for payment all declared dividends in respect of each series of non-cumulative preferred shares of the Bank (including the series of Preferred Shares) then issued and outstanding and on all other non-cumulative shares ranking on a parity with the Preferred Shares of the Bank.

Purchase for Cancellation

Subject to the provisions of the Bank Act, the prior consent of the Superintendent and certain conditions being met, the Bank may at any time purchase for cancellation any series of Preferred Shares outstanding, in the open market at the lowest price or prices at which in the opinion of the Board of Directors of the Bank such shares are obtainable.

Issuance of Other Series of Preferred Shares

The Bank may issue other series of preferred shares ranking on parity with the Preferred Shares without the authorization of the holders of the Preferred Shares.

Voting Rights

Subject to the provisions of the Bank Act, the holders of a series of Preferred Shares as such will not be entitled to receive notice of, attend, or vote at, any meeting of the shareholders of the Bank unless and until the first time at which the Board of Directors of the Bank has not declared the whole dividend on such series of Preferred Shares in respect of any quarter. In that event, the holders of such Preferred Shares will be entitled to receive notice of, and to attend, meetings of shareholders at which directors of the Bank are to be elected and will be entitled to one vote for each Preferred Share held. The voting rights of the holders of such series of Preferred Shares shall forthwith cease upon payment by the Bank of the first dividend on the series of Preferred Shares to which the holders are entitled subsequent to the time such voting rights first arose until such time as the Bank may again fail to declare the whole dividend on such series of Preferred Shares in any quarter, in which event such voting rights shall become effective again and so on from time to time.

Constraints on Ownership of the Bank's Shares

The Bank Act contains restrictions on the issue, transfer, acquisition, beneficial ownership and voting of all shares of a chartered bank. Please refer to the section above entitled "Description of the Bank's Business – General Summary – Supervision and Regulation in Canada" for a summary of these restrictions.

Credit Ratings of Securities and Liquidity

Credit ratings affect the Bank's access to capital markets and borrowing costs, as well as the terms on which the Bank can conduct derivative and hedging transactions. The following ratings have been assigned to the Bank's securities by the rating agencies noted below, which are independent third parties. Credit ratings, including stability or provisional ratings, are not recommendations to purchase, sell or hold a security as they do not comment on market price or suitability for a particular investor. Ratings may not reflect the potential impact of all risks on the value of securities. In addition, real or anticipated changes in the rating assigned to a security will generally affect the market value of that security. Ratings are

subject to revision or withdrawal at any time by the rating agency. Each rating listed in the chart below should be evaluated independently of any other rating applicable to the Bank's debt and Preferred Shares.

	Moody's Investor Service (Moody's)		Standard & Poor's Ratings Services (S&P)		Fitch Ratings (Fitch)		DBRS Limited (DBRS)	
	Rating	Rank[1]	Rating	Rank[1]	Rating	Rank[1]	Rating	Rank[1]
Senior long-term debt/ deposits	Aa3	2 of 9	A+	3 of 10	AA-	2 of 10	AA	2 of 10
Short-term deposits/commercial paper	P-1	1 of 4	A-1	1 of 6	F1+	1 of 6	R-1(high)	1 of 10
Subordinated debt	A3	3 of 9	A-	3 of 10	A+	3 of 10	AA (low)	2 of 10
Subordinated debt (NVCC)[2]	Baa1	4 of 9	BBB+	4 of 10	N/A	N/A	A(low)	3 of 10
Non-cumulative Preferred Shares	Baa2	4 of 9	BBB/P-2[3]	3 of 9 / 2 of 8	N/A	N/A	Pfd-2(high)	2 of 6
Non-cumulative Preferred Shares (NVCC)[2]	Baa2	4 of 9	P-2(low)[3]	2 of 8	N/A	N/A	Pfd-2	2 of 6
Outlook	Negative	N/A	Stable	N/A	Stable	N/A	Negative	N/A

(1) Rank, according to each rating agency's public website, refers to the assigned ratings ranking of all major assignable ratings for each debt of share class, 1 being the highest. Each assignable major rating may be modified further (+/-, high/low, 1/2/3) to show relative standing within the major rating categories.

(2) Non-Viability Contingent Capital (NVCC)

(3) Canadian Scale

On December 11, 2015, S&P changed the Bank's outlook, along with the outlook of other Canadian banks, to stable from negative. The outlook change was predicated on S&P's belief that the potential negative ratings impact from the proposed bail-in regime has subsided, with a view that the implementation timetable could be two years or more to 2018 or later.

On October 7, 2016, S&P affirmed the Bank's A+ rating for Deposits and Senior Debt, as well as the A-1 rating for short-term instruments.

On January 25, 2016, Moody's downgraded the Bank's long-term ratings by one notch to Aa3 from Aa2, while affirming the Bank's short-term deposit rating of P-1. On August 5, 2016, Moody's published a semi-annual update, affirming the Bank's Aa3 rating.

On August 22, 2016, DBRS confirmed the Bank's AA rating.

On October 28, 2016, Fitch affirmed the Bank's respective long and short-term rating of AA- and F1+.

Fitch and S&P have a stable outlook on the Bank. Meanwhile, DBRS and Moody's continue to maintain their negative outlook for all Canadian banks citing the uncertainty around the Federal government's proposed new bail-in regime for senior unsecured debt, to reflect the greater likelihood that such debt may incur losses in the unlikely event of a distress scenario.

The Bank makes payments in the ordinary course to the credit rating agencies for the rating services associated with the assignment of the credit ratings noted above. In addition, the Bank made customary payments in respect of certain other services provided to the Bank by the aforementioned credit rating agencies.

A definition of the categories of each rating as at November 28, 2016 has been obtained from the respective rating agency's website and is outlined in Schedule B, and a more detailed explanation may be obtained from the applicable rating agency.

MARKET FOR SECURITIES OF THE BANK

The Bank's common shares are listed under the stock symbol "BNS" on the TSX and the New York Stock Exchange ("NYSE"). The Preferred Shares are listed on the TSX under the stock symbols "BNS.PR.N" for the Preferred Shares, Series 16, "BNS.PR.O" for the Preferred Shares, Series 17, "BNS.PR.P" for the Preferred Shares, Series 18, "BNS.PR.A" for the Preferred Shares, Series 19, "BNS.PR.Q" for the Preferred Shares, Series 20, "BNS.PR.B" for the Preferred Shares, Series 21, "BNS.PR.R" for the Preferred Shares, Series 22, "BNS.PR.C" for the Preferred Shares, Series 23, "BNS.PR.Y" for the Preferred Shares, Series 30, "BNS.PR.D" for the Preferred Shares, Series 31, "BNS.PR.Z" for the Preferred Shares, Series 32, "BNS.PR.F" for the Preferred Shares, Series 33, "BNS PR.E" for the Preferred Shares, Series 34, "BNS PR.G" for the Preferred Shares, Series 36 and "BNS PR.H" for the Preferred Shares, Series 38. From time to time, the Bank also has deposit notes and other securities listed on the London Stock Exchange, Singapore Stock Exchange, Swiss Stock Exchange, Taipei Exchange and the Tokyo Stock Exchange.

Trading Price and Volume

The following table sets out the price range and trading volume of the Bank's securities on the TSX (as reported by Bloomberg) for the periods indicated:

		Preferred Shares							
	Common Shares	Series 14[1]	Series 15[2]	Series 16	Series 17	Series 18	Series 19	Series 20	Series 21
November 2015									
-High Price ($)	$ 62.32	$25.19	$25.25	$25.98	$25.86	$24.86	$24.14	$24.80	$23.25
-Low Price ($)	$ 58.79	$24.90	$25.00	$25.38	$25.55	$24.25	$22.98	$24.02	$22.38
-Volume ('000)	51,198	126	181	113	190	146	127	191	244
December 2015									
-High Price ($)	$ 61.33	$25.14	$25.19	$25.89	$25.90	$25.41	$23.45	$24.80	$23.07
-Low Price ($)	$ 55.27	$24.30	$24.38	$24.87	$25.44	$23.14	$22.33	$22.33	$20.98
-Volume ('000)	82,023	358	413	151	120	221	645	124	121
January 2016									
-High Price ($)	$ 57.39	$24.71	$24.95	$25.63	$25.70	$25.00	$22.99	$24.45	$22.21
-Low Price ($)	$ 51.16	$23.42	$23.57	$24.51	$24.93	$22.01	$21.67	$21.51	$20.36
-Volume ('000)	112,596	565	254	231	136	113	267	113	82
February 2016									
-High Price ($)	$ 57.34	$24.50	$24.71	$25.49	$25.87	$24.34	$22.99	$24.03	$21.80
-Low Price ($)	$ 51.57	$23.65	$23.65	$24.71	$25.16	$23.51	$22.37	$22.30	$20.14
-Volume ('000)	82,096	100	145	190	161	87	57	62	37
March 2016									
-High Price ($)	$ 64.13	$25.27	$25.25	$25.46	$25.75	$24.43	$24.14	$23.38	$21.34
-Low Price ($)	$ 55.96	$23.86	$23.85	$24.93	$25.41	$23.45	$22.66	$22.42	$20.32
-Volume ('000)	99,042	390	115	230	172	78	120	344	89
April 2016									
-High Price ($)	$ 65.97	$25.00	$25.15	$25.29	$25.46	$24.39	$23.79	$23.65	$22.20
-Low Price ($)	$ 60.95	$24.97	$24.51	$25.01	$25.21	$23.33	$22.89	$22.39	$20.86
-Volume ('000)	81,300	1,264	130	127	143	81	47	91	84
May 2016									
-High Price ($)	$ 65.92	—	$25.19	$25.65	$25.70	$24.07	$23.18	$23.43	$21.66
-Low Price ($)	$ 61.20	—	$24.99	$25.23	$25.30	$23.00	$22.61	$22.45	$21.12
-Volume ('000)	99,811	—	134	240	293	41	29	56	22
June 2016									
-High Price ($)	$ 67.40	—	$25.30	$25.98	$25.87	$24.42	$23.16	$23.25	$21.92
-Low Price ($)	$ 62.35	—	$24.98	$25.51	$25.47	$23.75	$22.54	$22.64	$21.26
-Volume ('000)	107,120	—	799	198	141	96	175	113	79
July 2016									
-High Price ($)	$ 66.70	—	$25.05	$25.80	$25.79	$24.47	$23.44	$24.07	$22.15
-Low Price ($)	$ 62.42	—	$24.98	$25.34	$25.54	$23.95	$22.67	$22.95	$21.24
-Volume ('000)	53,589	—	766	130	184	110	181	143	63
August 2016									
-High Price ($)	$ 70.25	—	—	$25.76	$25.98	$24.88	$23.85	$24.40	$22.90
-Low Price ($)	$ 65.09	—	—	$25.36	$25.60	$24.31	$23.18	$23.88	$22.20
-Volume ('000)	79,071	—	—	248	241	125	95	213	73
September 2016									
-High Price ($)	$ 71.26	—	—	$25.58	$25.78	$24.55	$23.61	$24.24	$22.97
-Low Price ($)	$ 68.27	—	—	$25.17	$25.39	$24.00	$22.97	$23.52	$22.21
-Volume ('000)	62,875	—	—	627	329	57	77	130	42
October 2016									
-High Price ($)	$ 72.50	—	—	$25.27	$25.49	$24.89	$23.83	$24.49	$23.37
-Low Price ($)	$ 69.05	—	—	$25.17	$25.36	$24.06	$23.10	$23.75	$22.35
-Volume ('000)	85,369	—	—	189	82	82	99	308	81

[1] The Preferred Shares, Series 14 were fully redeemed on April 27, 2016.
[2] The Preferred Shares, Series 15 were fully redeemed on July 27, 2016.

	Preferred Shares								
	Series 22	Series 23	Series 30	Series 31	Series 32	Series 33[3]	Series 34[4]	Series 36[5]	Series 38[6]
November 2015									
-High Price ($)	$24.98	$23.22	$20.90	$20.14	$21.27	—	—	—	—
-Low Price ($)	$24.15	$22.64	$20.21	$19.28	$20.29	—	—	—	—
-Volume ('000)	437	154	174	95	450	—	—	—	—
December 2015									
-High Price ($)	$24.90	$23.12	$20.90	$19.85	$21.25	—	$25.95	—	—
-Low Price ($)	$22.53	$21.41	$18.57	$17.50	$17.87	—	$25.12	—	—
-Volume ('000)	356	263	246	83	468	—	1,508	—	—
January 2016									
-High Price ($)	$24.66	$22.72	$20.84	$19.61	$20.85	—	$25.89	—	—
-Low Price ($)	$21.95	$20.95	$18.77	$17.60	$18.17	—	$25.14	—	—
-Volume ('000)	330	23	162	83	676	—	1,655	—	—
February 2016									
-High Price ($)	$24.40	$22.35	$19.66	$18.45	$19.52	$18.51	$25.75	—	—
-Low Price ($)	$22.58	$20.66	$18.17	$17.05	$18.05	$17.60	$25.00	—	—
-Volume ('000)	76	57	209	49	432	12	1,132	—	—
March 2016									
-High Price ($)	$23.95	$21.81	$19.29	$18.01	$19.28	$19.51	$26.35	$26.18	—
-Low Price ($)	$22.74	$20.71	$18.57	$17.08	$18.51	$17.51	$25.17	$25.20	—
-Volume ('000)	197	97	207	79	439	120	559	1,884	—
April 2016									
-High Price ($)	$23.95	$22.32	$20.52	$19.36	$21.09	$19.99	$26.30	$26.34	—
-Low Price ($)	$22.67	$21.10	$19.06	$17.73	$19.06	$18.36	$25.70	$25.80	—
-Volume ('000)	74	33	183	45	389	18	394	1,216	—
May 2016									
-High Price ($)	$23.70	$21.76	$20.85	$19.08	$20.80	$19.55	$26.39	$27.01	—
-Low Price ($)	$22.75	$21.33	$19.50	$18.50	$19.50	$19.01	$26.00	$26.12	—
-Volume ('000)	104	22	84	24	122	5	394	341	—
June 2016									
-High Price ($)	$24.02	$22.22	$20.77	$18.96	$20.79	$19.38	$26.74	$26.77	—
-Low Price ($)	$22.90	$21.50	$19.50	$18.59	$19.51	$18.30	$26.08	$26.16	—
-Volume ('000)	113	62	108	67	164	10	264	679	—
July 2016									
-High Price ($)	$24.54	$22.70	$20.48	$19.34	$20.30	$19.96	$27.00	$27.20	—
-Low Price ($)	$23.22	$21.63	$19.56	$18.38	$19.51	$17.94	$26.34	$26.30	—
-Volume ('000)	113	19	51	39	151	27	187	735	—
August 2016									
-High Price ($)	$24.80	$23.19	$20.93	$19.74	$20.95	$20.40	$27.48	$27.44	—
-Low Price ($)	$24.12	$22.55	$20.10	$18.96	$20.00	$19.55	$26.65	$26.70	—
-Volume ('000)	129	71	133	75	239	37	435	416	—
September 2016									
-High Price ($)	$24.60	$23.25	$20.84	$20.13	$20.57	$20.32	$27.09	$27.00	$25.88
-Low Price ($)	$23.98	$22.58	$20.39	$19.24	$20.20	$19.45	$26.50	$26.50	$25.41
-Volume ('000)	95	34	91	95	132	50	204	264	5,777
October 2016									
-High Price ($)	$24.87	$23.54	$21.01	$19.97	$21.00	$20.21	$26.89	$26.93	$25.99
-Low Price ($)	$24.06	$22.59	$20.28	$19.11	$20.30	$19.25	$26.54	$26.49	$25.63
-Volume ('000)	533	157	130	58	178	41	296	269	2,275

[3] The Preferred Shares, Series 33 were converted from Series 32 on February 2, 2016.
[4] The Preferred Shares, Series 34 began trading on December 17, 2015.
[5] The Preferred Shares, Series 36 began trading on March 14, 2016.
[6] The Preferred Shares, Series 38 began trading on September 16, 2016.

Prior Sales

In fiscal 2016, the Bank did not issue any shares or subordinated debentures that are not listed or quoted on a marketplace. From time to time, the Bank issues principal at risk notes, which are securities issued by the Bank for which the amount payable at maturity is determined by reference to the price, value or level of an underlying interest, including an index, exchange traded fund or a notional basket of equities or other securities. For a list of all subordinated indebtedness of the Bank see note 20 to the Bank's consolidated financial statements for the year ended October 31, 2016, which is incorporated herein by reference.

DIRECTORS AND EXECUTIVE OFFICERS OF THE BANK

Directors and Board Committees of the Bank

The following table sets out the Bank's directors as of November 29, 2016. The term of office of each director expires at the close of the Bank's next annual meeting of shareholders. Information concerning the nominees proposed by management for election as directors at the annual meeting of shareholders will be contained in the Bank's 2017 Management Proxy Circular.

Name and Place of Residence	Board Committee Memberships	Principal Occupation
Nora A. Aufreiter Toronto, Ontario, Canada (Director since August 25, 2014)	CGC HRC	Corporate Director and a former Senior Partner and leader of McKinsey & Company's Toronto office
Guillermo E. Babatz Mexico City, Mexico (Director since January 28, 2014)	ACRC RC	Managing Partner of Atik Capital, S.C., an advisory firm specializing in structured finance
Scott B. Bonham Atherton, California, U.S.A. (Director since January 25, 2016)	ACRC CGC	Corporate Director and co-founder of Intentional Capital, a privately held real estate asset management company
Ronald A. Brenneman Calgary, Alberta, Canada (Director since March 28, 2000)	RC – Chair HRC	Corporate Director and retired Executive Vice-Chairman, Suncor Energy Inc., an integrated energy company
Charles H. Dallara, Ph.D. Oak Hill, Virginia, U.S.A. (Director since September 23, 2013)	ACRC RC	Executive Vice Chairman of the Board of Directors of Partners Group Holding AG and Chairman of the Americas, a firm that provides investment advisory and management services in the private markets spectrum
William R. Fatt Toronto, Ontario, Canada (Director since January 27, 2015)	ACRC HRC	Corporate Director and former Chairman and Chief Executive Officer of FRHI Hotels & Resorts

Name and Place of Residence	Board Committee Memberships	Principal Occupation
Tiff Macklem, Ph.D. Toronto, Ontario, Canada (Director since June 22, 2015)	ACRC RC	Dean of the Rotman School of Management at the University of Toronto
Thomas C. O'Neill Toronto, Ontario, Canada (Director since May 26, 2008)	ACRC CGC HRC RC	Chairman of the Board of the Bank and Corporate Director
Eduardo Pacheco Bogota, Colombia (Director since September 25, 2015)	RC	Chief Executive Officer and director of Mercantil Colpatria S.A.
Brian J. Porter Toronto, Ontario, Canada (Director since April 9, 2013)	None	President and Chief Executive Officer of the Bank
Una M. Power Calgary, Alberta, Canada (Director since April 12, 2016)	ACRC HRC	Corporate Director and former Chief Financial Officer of Nexen Energy ULC, an energy company
Aaron W. Regent Toronto, Ontario, Canada (Director since April 9, 2013)	HRC – Chair RC	Founding Partner of Magris Resources Inc., a private equity firm that acquires, develops and operates mining assets on a global basis
Indira V. Samarasekera, O.C., Ph.D. Vancouver, British Columbia, Canada (Director since May 26, 2008)	CGC HRC	Senior Advisor at Bennett Jones LLP, a law firm, and Corporate Director
Susan L. Segal New York, New York, U.S.A. (Director since December 2, 2011)	CGC – Chair RC	President and Chief Executive Officer of the Americas Society, an organization dedicated to education, debate and dialogue in the Americas and of the Council of the Americas, an international business organization for companies in the western hemisphere
Paul D. Sobey Chance Harbour, Pictou County, Nova Scotia, Canada (Director since August 31, 1999)	ACRC – Chair RC	Corporate Director and the former President and Chief Executive Officer of Empire Company Limited, a Canadian company whose key businesses include food retailing and related real estate
Barbara S. Thomas Belleair, Florida, U.S.A. (Director since September 28, 2004)	CGC HRC	Corporate Director
L. Scott Thomson Vancouver, British Columbia, Canada (Director since April 12, 2016)	ACRC CGC	President and Chief Executive Officer of Finning International Inc., the world's largest Caterpillar equipment dealer.

Notes:

ACRC – Audit and Conduct Review Committee
CGC – Corporate Governance Committee
HRC – Human Resources Committee
RC – Risk Committee

All directors have held the positions, or other executive positions with the same, predecessor or associated firms, set out in this AIF for the past five years with the exception of: Guillermo E. Babatz, who, prior to December 2012 was Executive Chairman of Comisión Nacional Bancaria y de Valores in Mexico; Scott B. Bonham, who, prior to June 2015 was the co-founder of GGV Capital; Charles H. Dallara, who, prior to February 2013 was Managing Director and Chief Executive

Officer of the Institute of International Finance Inc., a global association of financial institutions; Tiff Macklem, who prior to June 2014, was Senior Deputy Governor of the Bank of Canada; Aaron W. Regent, who, prior to June 2012, was President and Chief Executive Officer of Barrick Gold Corporation, a company engaged in the production and sale of gold, as well as related activities such as exploration and mine development; Indira V. Samarasekera, who prior to July 2015, was President and Vice-Chancellor of the University of Alberta; and L. Scott Thomson, who prior to June 2013 was the Chief Financial Officer of Talisman Energy Inc.

Brian Porter is non-independent, due to his position as President and Chief Executive Officer. Eduardo Pacheco is also non-independent, due to his business relationships with the Bank and its subsidiary, Banco Colpatria.

Executive Officers of the Bank

The following are the Bank's executive officers, their titles and places of residence in Canada (except as otherwise noted) as of November 29, 2016:

Name and Principal Occupation	Place of Residence
Brian J. Porter President and Chief Executive Officer	Toronto, Ontario
Ignacio "Nacho" Deschamps Group Head, International Banking and Digital Transformation	New York, New York, U.S.A.
Dieter W. Jentsch Group Head, Global Banking and Markets	King City, Ontario
Barbara F. Mason Group Head and Chief Human Resources Officer	Toronto, Ontario
Sean D. McGuckin Group Head and Chief Financial Officer	Mississauga, Ontario
James O'Sullivan Group Head, Canadian Banking	Toronto, Ontario
Deborah M. Alexander Executive Vice-President and General Counsel	Toronto, Ontario
Andrew H.W. Branion Executive Vice-President and Group Treasurer	Toronto, Ontario
John Doig Executive Vice-President and Chief Marketing Officer	Toronto, Ontario
Terry K. Fryett Executive Vice-President and Chief Credit Officer	Toronto, Ontario
Stephen P. Hart Chief Risk Officer	Toronto, Ontario
Marianne Hasold-Schilter Executive Vice-President and Chief Administrative Officer, International Banking	Aurora, Ontario
Michael Henry Executive Vice-President, Retail Payments, Deposits and Unsecured Lending	Mississauga, Ontario
Marian Lawson Executive Vice-President, Global Financial Institutions and Transaction Banking	Toronto, Ontario
Kyle McNamara Executive Vice-President and Co-Head Information Technology, Business Systems	Toronto, Ontario
James I. McPhedran Executive Vice-President, Canadian Banking	Toronto, Ontario
Daniel Moore Executive Vice-President and Chief Market Risk Officer	Toronto, Ontario
James Neate Executive Vice-President, International Corporate and Commercial Banking	Mississauga, Ontario
Dan Rees Executive Vice-President, Operations	Toronto, Ontario
Gillian Riley Executive Vice-President, Canadian Commercial Banking	Toronto, Ontario
Shawn Rose Executive Vice-President, Digital Banking	Toronto, Ontario
Maria Theofilaktidis Executive Vice-President, Retail Distribution	Toronto, Ontario
Michael Zerbs Executive Vice-President and Co-Head Information Technology, Enterprise Technology	Markham, Ontario

All of the executive officers of the Bank have been actively engaged for more than five years in the affairs of the Bank in executive or senior management capacities, except: Ignacio Deschamps, who prior to June 2015, was Chief Executive Officer of BBVA Bancomer; Shawn Rose, who prior to June 2016, was Group Chief Product Officer at Moneysupermarket (MSM) Group PLC and prior to that, was a Manager at Egy Rose LLC and prior to that, was a Vice-President at Pearson LLC; and Michael Zerbs, who prior to May 2014, was Vice-President, Risk Analytics at IBM and prior to that, was the President and Chief Operating Officer at Algorithmics.

Cease Trade Orders, Bankruptcies, Penalties or Sanctions

To the best of the Bank's knowledge, after having made due inquiry, the Bank confirms that as at the date hereof, no director or executive officer of the Bank:

(a) is, as at the date of this AIF or has been within the last 10 years, a director, chief executive officer or chief financial officer of any company that was the subject of a cease trade order or similar order or an order that denied the relevant company access to any exemption under securities legislation, for a period of more than 30 consecutive days that was issued:

  (i) while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer; or

  (ii) after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer;

(b) is, as at the date of this AIF, or has been within the last 10 years, a director or executive officer of any company that, while that person was acting in that capacity or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or

(c) has, or within 10 years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director or executive officer,

except Ms. Thomas who was, until September 2, 2009, a director of Spectrum Brands, Inc., which filed for bankruptcy protection under Chapter 11 of the U.S. Bankruptcy Code in February 2009 and emerged as a solvent private company on September 2, 2009.

To the best of the Bank's knowledge, after due inquiry, none of the directors or executive officers of the Bank have been subject to (a) any penalties or sanctions imposed by a court relating to Canadian securities legislation or by a Canadian securities regulatory authority or have entered into a settlement agreement with a Canadian securities regulatory authority; or (b) any other penalties or sanctions imposed by a court or a regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

Shareholdings of Management

To the knowledge of the Bank, the directors and executive officers of the Bank as a group own, or exercise control or direction over, less than one per cent of the outstanding common shares of the Bank. The Bank's directors or executive officers own, or exercise control or direction over, less than one percent of the outstanding shares of any of the Bank's subsidiaries.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

In the ordinary course of business, the Bank and its subsidiaries are routinely defendants in, or parties to a number of pending and threatened legal actions and regulatory proceedings, including actions brought on behalf of various classes of claimants. In view of the inherent difficulty of predicting the outcome of such matters, the Bank cannot state what the eventual outcome of such matters will be. However, based on current knowledge, management does not believe that liabilities, if any, arising from pending litigation or regulatory proceedings will have a material adverse effect on the Consolidated Statement of Financial Position or results of operations of the Bank.

Legal provisions are established when it becomes probable that the Bank will incur an expense related to a legal action and the amount can be reliably estimated. Such provisions are recorded at the best estimate of the amount required to settle any obligation related to these legal actions as at the balance sheet date, taking into account the risks and uncertainties surrounding the obligation. Management and internal and external experts are involved in estimating any amounts that may be required. The actual costs of resolving these claims may vary significantly from the amount of the legal provisions. The Bank's estimate involves significant judgement, given the varying stages of the proceedings, the fact that the Bank's liability, if any, has yet to be determined and the fact that the underlying matters will change from time to time. As such, there is a possibility that the ultimate resolution of those legal actions may be material to the Bank's consolidated results of operations for any particular reporting period.

Furthermore, the Bank and its subsidiaries may be subject to penalties or sanctions imposed by regulatory authorities or enter into settlement agreements with regulatory authorities from time to time. As the Bank and its subsidiaries are subject to numerous regulatory authorities around the world, fees, administrative penalties and sanctions may be categorized differently by each regulator. Any such penalties imposed under these categories against the Bank and its subsidiaries, however, are not material, nor would they likely be considered important to a reasonable investor in making an investment decision, and would include penalties such as late filing fees. The Bank and its subsidiaries have not entered into any material settlement agreements with a court relating to securities legislation or with a securities regulatory authority.[16]

On November 5, 2015, the Bank and its New York Agency entered a written agreement (the "Agreement") with the Federal Reserve Bank of New York and the New York State Department of Financial Services. Through the Agreement, the Bank and the New York Agency have committed to, among other things, improving the overall Bank Secrecy Act/Anti-Money Laundering and sanctions framework for the Bank's U.S. operations. The Agreement also requires the Bank to conduct a review of wire transactions that took place during a specified six-month period. The Bank has hired an external consultant to assist with its remediation efforts. The Bank is not required to engage an independent monitor to assess its compliance with the Agreement. The terms of the Agreement do not include a monetary fine. The Bank has committed significant resources to addressing the findings in the Agreement and enhancing its Bank Secrecy Act/anti-money laundering and sanctions program.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

To the best of the Bank's knowledge, the Bank confirms that there are no directors or executive officers or any associate or affiliate of a director or executive officer with a material interest in any transaction within the three most recently completed financial years or during the current financial year that has materially affected or will materially affect the Bank.

[16] National Instrument 14-101 limits the meaning of "securities legislation" to Canadian provincial and territorial legislation and "securities regulatory authority" to Canadian provincial and territorial securities regulatory authorities.

TRANSFER AGENT AND REGISTRAR

Computershare Trust Company of Canada is the Bank's transfer agent and registrar at the following addresses: Computershare Trust Company of Canada, 100 University Avenue, 8th Floor, Toronto, Ontario, M5J 2Y1 and Computershare Trust Company N.A., 250 Royall Street, Canton, Massachusetts, 02021, U.S.

CONFLICTS OF INTEREST

To the knowledge of the Bank, no director or executive officer of the Bank has an existing or potential material conflict of interest with the Bank or any of its subsidiaries.

EXPERTS

The Bank's Shareholders' Auditors are KPMG LLP, Bay Adelaide Centre, 333 Bay Street, Suite 4600, Toronto, Ontario, M5H 2S5. KPMG LLP is independent of the Bank within the meaning of the Rules of Professional Conduct / Code of Ethics of various Canadian provincial institutes/ordre and within the meaning of the relevant rules and related interpretations prescribed by the relevant professional bodies and any applicable legislation or regulation.

THE BANK'S AUDIT AND CONDUCT REVIEW COMMITTEE

A copy of the Bank's Audit and Conduct Review Committee charter is attached to this AIF as Schedule "C" and can also be found on the Bank's website at www.scotiabank.com in the Corporate Governance section.

The following directors are members of the Audit and Conduct Review Committee as of November 29, 2016: Paul D. Sobey (Chair and financial expert), Guillermo E. Babatz (financial expert), Scott B. Bonham, Charles H. Dallara, William R. Fatt (financial expert), Tiff Macklem, Thomas C. O'Neill (financial expert), Una M. Power (financial expert) and L. Scott Thomson (financial expert). All of the members of the Committee are financially literate and independent, and six members of the Committee have been designated as financial experts. The Bank's Board of Directors has designated each of Paul D. Sobey, Guillermo E. Babatz, William R. Fatt, Thomas C. O'Neill, Una M. Power and L. Scott Thomson as an audit committee financial expert, as that term is defined by the NYSE's corporate governance standards applicable to the Bank. The SEC has indicated that the designation of a person as an audit committee financial expert does not impose on such person any duties, obligations or liability that are greater than the duties, obligations and liability imposed on such persons as members of the Audit and Conduct Review Committee and Board of Directors of the Bank in the absence of such designation.

The education and related experience (as applicable) of each Audit and Conduct Review Committee member is described below.

Paul D. Sobey (Chair) – Mr. Sobey is a corporate director and the former President and Chief Executive Officer of Empire Company Limited, a food distributor, real estate and investment company, serving in that capacity from July 1998 to December 2013. He received his B.Comm. from Dalhousie University, attended the Harvard Business School, Advanced Management Program in 1996 and is a chartered accountant. He is a Fellow of the Institute of Chartered Accountants of Nova Scotia.

Guillermo E. Babatz – Mr. Babatz is the Managing Partner of Atik Capital, S.C., an advisory firm that specializes in structuring financial solutions for its clients. Previously, he was the Executive Chairman of Comisión Nacional Bancaria y de Valores in Mexico from July 2007 to December 2012. He holds a B.A. (Economics) from the Instituto Tecnológico Autónomo de México (ITAM) in Mexico City, and a Ph.D. in Economics from Harvard University.

Scott B. Bonham – Mr. Bonham is a corporate director and the co-founder of Intentional Capital, a privately held real estate asset management company. Mr. Bonham is also an active board member of the C100, an association that connects Canadian entrepreneurs and companies with its Silicon Valley network. From 2000 to 2015, he was co-founder of GGV Capital, an expansion stage venture capital firm with investments in the U.S. and China. Prior to GGV Capital, he served as Vice President of the Capital Group Companies, where he managed technology investments across several mutual funds from 1996 to 2000. Mr. Bonham has a B.Sc. (in electrical engineering) from Queen's University and a M.B.A. from Harvard Business School.

Charles H. Dallara – Dr. Dallara is the Executive Vice Chairman of the Board of Directors of Partners Group Holding AG and Chairman of the Americas, based in New York. He has 40 years of industry experience. Prior to joining Partners Group in 2013, Dr. Dallara was the Managing Director and Chief Executive Officer of the Institute of International Finance Inc., a global association of financial institutions from 1993 to 2013. Previously, he was a Managing Director at J.P. Morgan & Co. In addition, Dr. Dallara has held senior positions in the U.S. Department of the Treasury and with the IMF. He holds a bachelor's degree in Economics from the University of South Carolina, a M.A., a M.A. in Law & Diplomacy and a Ph.D. from the Fletcher School of Law and Diplomacy at Tufts University.

William Fatt – Mr. Fatt is a corporate director and the former Chairman and Chief Executive Officer of FRHI Hotels & Resorts. Mr. Fatt has over 30 years of finance, investment, capital markets and international experience. He has held senior executive roles throughout his career, including Vice-President of Finance and Accounting and Chief Financial Officer at Canadian Pacific Limited. Mr. Fatt has also served as a director at several Canadian public issuers over his distinguished carrer. He is currently a member of the board of directors of The Jim Pattison Group Inc. He has a B.A. (Economics) from York University.

Tiff Macklem – Dr. Macklem is Dean of the Rotman School of Management at the University of Toronto. Previously, he served as Senior Deputy Governor and Chief Operating Officer of the Bank of Canada (from July 2010 to May 2014). Prior to his appointment at the Bank of Canada, Dr. Macklem served as Associate Deputy Minister of the federal Department of Finance and Canada's finance deputy at the G7 and G20. He also served as Chair of the Standing Committee on Standards Implementation of the Financial Stability Board. Dr. Macklem holds a B.A. (Honours) in Economics from Queen's University, and a M.A. and a Ph.D. in Economics from the University of Western Ontario.

Thomas C. O'Neill – Mr. O'Neill is a Chairman of the Board of the Bank. He is the retired Chair of the Board of PwC Consulting. He was formerly Chief Executive Officer of PwC Consulting, Chief Operating Officer of PricewaterhouseCoopers LLP, Global, Chief Executive Officer of PricewaterhouseCoopers LLP, Canada and Chair of the Board and Chief Executive Officer of Price Waterhouse Canada. He holds a B.Comm. from Queen's University and is a chartered accountant and a Fellow of the Institute of Chartered Accountants of Ontario ("CPA Ontario"). In September 2013, Mr. O'Neill received the ICAO Award of Outstanding Merit from CPA Ontario, which is CPA Ontario's highest honour.

Una M. Power – Ms. Power is a corporate director and the former Chief Financial Officer of Nexen Energy ULC, a former publicly-traded energy company that is a wholly-owned subsidiary of CNOOC Limited. During her 24 year career with Nexen, Ms. Power held various executive positions with responsibility for financial and risk management, strategic planning and budgeting, business development, energy marketing and trading, information technology and capital investment. Ms. Power holds a B.Comm. (Honours) from Memorial University and CPA, CA and CFA designations. She has completed executive development programs at Wharton Business School and INSEAD.

L. Scott Thomson – Mr. Thomson is the President and Chief Executive Officer of Finning International Inc., the world's largest Caterpillar equipment dealer. Prior to joining Finning in 2013, Mr. Thomson was Chief Financial Officer of Talisman Energy Inc. with responsibility for finance, tax, treasury, investor relations, marketing, business development and strategy, planning and performance management from 2008 to 2013. Prior to Talisman, Mr. Thomson held several executive positions with Bell Canada Enterprises from 2003 to 2008 including the role of Executive Vice President, Corporate Development. Prior to Bell, Mr. Thomson was a Vice President at Goldman, Sachs & Co. Mr. Thomson holds a B.A. (in economics and political science) from Queen's University and a M.B.A. from the University of Chicago.

Shareholders' Auditors

Please refer to Table 81 on page 118 of the MD&A, which is incorporated herein by reference, for disclosure relating to the fees paid by the Bank to the Bank's Shareholders' Auditors, KPMG LLP in each of the last three fiscal years. The nature of these services is described below:

- Audit services generally relate to the statutory audits and review of financial statements, regulatory required attestation reports, as well as services associated with registration statements, prospectuses, periodic reports and other documents filed with securities regulatory bodies or other documents issued in connection with securities offerings.

- Audit-related services include special attest services not directly linked to the financial statements, review of controls and procedures related to regulatory reporting, audits of employee benefit plans and consultation and training on accounting and financial reporting.
- Tax services outside of the audit scope relate primarily to specified review procedures required by local tax authorities, attestation on tax returns of certain subsidiaries as required by local tax authorities, and review to determine compliance with an agreement with the tax authorities.
- Other non-audit services are primarily for the review and translation of English language financial statements into other languages and other services.

The Audit and Conduct Review Committee has adopted policies and procedures (the "Policies") for the pre-approval of services performed by the Bank's Shareholders' Auditors. The objective of the Policies is to specify the scope of services permitted to be performed by the Bank's Shareholders' Auditors and to ensure the independence of the Bank's Shareholders' Auditors is not compromised through engaging them for other services. The Policies state that the Audit and Conduct Review Committee shall pre-approve the following: audit services (all such engagements provided by the Bank's Shareholders' Auditors as well as all such engagements provided by any other registered public accounting firm); and other permitted services to be provided by the Bank's Shareholders' Auditors (primarily audit and audit-related services). The Bank's Shareholders' Auditors shall not be engaged in the provision of tax or other non-audit services, without the pre-approval of the Audit and Conduct Review Committee. The Policies also enumerate pre-approved services including specific audit, audit-related and other limited non-audit services that are consistent with the independence requirements of the U.S. Sarbanes-Oxley Act of 2002, Canadian independence standards for auditors and applicable legal requirements. The Policies are applicable to the Bank, its subsidiaries and entities that are required to be consolidated by the Bank. The Audit and Conduct Review Committee shall review and approve the Policies on at least an annual basis. The Policies do not delegate any of the Audit and Conduct Review Committee's responsibilities to management of the Bank.

ADDITIONAL INFORMATION

Additional information relating to the Bank may be found on the SEDAR website at www.sedar.com and on the SEC's website at www.sec.gov. Additional information, including directors' and officers' compensation, indebtedness and options to purchase securities, principal holders of the Bank's securities and interests of insiders in material transactions, where applicable, is contained in the Management Proxy Circular. Additional financial information is provided in the Bank's consolidated financial statements and MD&A for the year ended October 31, 2016. A copy of such documents may be obtained upon request from the Executive Vice-President and General Counsel of the Bank at Scotia Plaza, 44 King Street West, Toronto, Ontario, M5H 1H1.

Schedule A

Principal subsidiaries[1]

The following table presents the principal subsidiaries the Bank owns, directly or indirectly. All of these subsidiaries are included in the Bank's consolidated financial statements.

As at October 31 ($ millions)	Principal office	Carrying value of shares 2016	2015
Canadian			
1832 Asset Management L.P.	Toronto, Ontario	**$ 1,762**	$ 1,241
BNS Investments Inc.	Toronto, Ontario	**13,733**	12,746
Montreal Trust Company of Canada	Montreal, Quebec		
Hollis Canadian Bank	Toronto, Ontario	**411**	392
HollisWealth Inc.	Toronto, Ontario	**3,499**	3,632
National Trustco Inc.	Toronto, Ontario	**650**	608
The Bank of Nova Scotia Trust Company	Toronto, Ontario		
National Trust Company	Stratford, Ontario		
RoyNat Inc.	Calgary, Alberta	**175**	58
Scotia Capital Inc.	Toronto, Ontario	**1,194**	1,598
Scotia Dealer Advantage Inc.	Burnaby, British Columbia	**509**	445
Scotia Life Insurance Company	Toronto, Ontario	**166**	206
Scotia Mortgage Corporation	Toronto, Ontario	**941**	797
Scotia Securities Inc.	Toronto, Ontario	**80**	53
Tangerine Bank	Toronto, Ontario	**3,489**	3,443
International			
Banco Colpatria Multibanca Colpatria S.A. (51%)	Bogota, Colombia	**1,302**	1,259
The Bank of Nova Scotia Berhad	Kuala Lumpur, Malaysia	**311**	288
The Bank of Nova Scotia International Limited	Nassau, Bahamas	**17,815**	16,310
BNS Asia Limited	Singapore		
The Bank of Nova Scotia Trust Company (Bahamas) Limited	Nassau, Bahamas		
Grupo BNS de Costa Rica, S.A.	San Jose, Costa Rica		
Scotiabank & Trust (Cayman) Ltd.	Grand Cayman, Cayman Islands		
Scotiabank (Bahamas) Limited	Nassau, Bahamas		
Scotiabank (British Virgin Islands) Limited	Road Town, Tortola, B.V.I.		
Scotiabank (Hong Kong) Limited	Hong Kong, China		
Scotiabank (Ireland) Designated Activity Company	Dublin, Ireland		
Scotiabank (Turks and Caicos) Ltd.	Providenciales, Turks and Caicos Islands		
Grupo Financiero Scotiabank Inverlat, S.A. de C.V. (97.4%)	Mexico, D.F., Mexico	**3,141**	2,986
Nova Scotia Inversiones Limitada	Santiago, Chile	**3,200**	2,585
Scotiabank Chile (99.6%)	Santiago, Chile		
Scotia Holdings (US) Inc.[2]	Houston, Texas		
Scotiabanc Inc.	Houston, Texas		
Scotia Capital (USA) Inc.[2][3]	New York, New York		
Scotia International Limited	Nassau, Bahamas	**387**	899
Scotiabank Anguilla Limited	The Valley, Anguilla		
Scotiabank Brasil S.A. Banco Multiplo	Sao Paulo, Brazil	**225**	145
Scotiabank Caribbean Holdings Ltd.	Bridgetown, Barbados	**1,658**	1,311
Scotia Group Jamaica Limited (71.8%)	Kingston, Jamaica		
The Bank of Nova Scotia Jamaica Limited	Kingston, Jamaica		
Scotia Investments Jamaica Limited (77.0%)	Kingston, Jamaica		
Scotiabank (Belize) Ltd.	Belize City, Belize		
Scotiabank Trinidad and Tobago Limited (50.9%)	Port of Spain, Trinidad and Tobago		
Scotiabank de Puerto Rico	San Juan, Puerto Rico	**1,371**	1,316
Scotiabank El Salvador, S.A. (99.6%)	San Salvador, El Salvador	**646**	597
Scotiabank Europe plc	London, United Kingdom	**2,546**	2,472
Scotiabank Peru S.A.A. (98.05%)	Lima, Peru	**4,046**	3,418

(1) The Bank (or immediate parent of an entity) owns 100% of the outstanding voting shares of each subsidiary unless otherwise noted.
(2) The carrying value of this subsidiary is included with that of its parent, BNS Investments Inc.
(3) The carrying value of this subsidiary is included with that of its parent, Scotia Holdings (US) Inc.

Subsidiaries may have a different reporting date from that of the Bank of October 31. Dates may differ for a variety of reasons including local reporting requirements or tax laws. In accordance with our accounting policies, for the purpose of inclusion in the consolidated financial statements of the Bank, adjustments are made where significant for subsidiaries with different reporting dates.

Schedule B

Moody's

Moody's short-term ratings are assigned to obligations with an original maturity of thirteen months or less and reflect both on the likelihood of a default on contractually promised payments and the expected financial loss suffered in the event of default. The "P-1" rating indicates that an issuer has a superior ability to repay short-term debt obligations.

Moody's long-term ratings are assigned to issuers or obligations with an original maturity of one year or more and reflect both on the likelihood of a default on contractually promised payments and the expected financial loss suffered in the event of default. Obligations rated "Aa" are judged to be of high quality and are subject to very low credit risk. Obligations rated "A" are judged to be upper-medium grade and are subject to low credit risk. Obligations rated "Baa" are judged to be medium-grade and subject to moderate credit risk and as such may possess certain speculative characteristics. The numerical modifiers (1), (2) and (3) indicate that the obligation ranks in the higher end, mid-range or lower end, respectively, of that generic rating category.

Additionally, a *(hyb)* indicator is appended to all ratings of hybrid securities issued by banks, insurers, finance companies, and securities firm.

The Moody's rating outlook is an opinion regarding the likely rating direction over the medium term. The "Negative" rating outlook indicates a higher likelihood of a rating change over the medium-term.

S&P

S&P short-term issue credit ratings are generally assigned to those obligations considered short-term in the relevant market. Short-term ratings are also used to indicate the creditworthiness of an obligor with respect to put features on long-term obligations. A short-term obligation rated "A-1" is rated in the highest category and indicates S&P's view that the Bank's capacity to meet its financial commitments on these obligations is strong.

S&P long-term issue credit ratings are based, in varying degrees, on the following considerations: likelihood of payment—capacity and willingness of the obligor to meet its financial commitment on an obligation in accordance with the terms of the obligation; nature of and provisions of the obligation; and protection afforded by, and relative position of, the obligation in the event of bankruptcy, reorganization, or other arrangement under the laws of bankruptcy and other laws affecting creditors' rights. A rating in the "A" category means the obligation is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher-rated categories, however, the obligor's capacity to meet its financial commitment on the obligation is still strong. An obligation rated in the "BBB" category indicates that the obligation exhibits adequate protection parameters, however, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation. Ratings from AA to CCC may be modified by the addition of a plus (+) or minus (–) sign to show relative standing within the major rating categories.

An S&P preferred share rating on the Canadian scale is a forward-looking opinion about the creditworthiness of an obligor with respect to a specific preferred share obligation issued in the Canadian market, relative to preferred shares issued by other issuers in the Canadian market. The Canadian scale rating is fully determined by the applicable global scale rating, and there are no additional analytical criteria associated with the determination of ratings on the Canadian scale. A reference to "high" or "low" reflects the relative strength within the rating category, and the absence of either a "high" or "low" designation indicates the rating is in the middle of the category.

A rating outlook assesses the potential direction of a long-term credit rating over the intermediate term (typically six months to two years). The "Stable" rating outlook means that a rating is not likely to change.

Fitch

A short-term issuer or obligation rating is based on the short-term vulnerability to default of the rated entity or security stream and relates to the capacity to meet financial obligations in accordance with the documentation governing the relevant obligation. Short-Term Ratings are assigned to obligations whose initial maturity is viewed as “short term” based on market convention. A rating of “F1+” indicates the strongest intrinsic capacity for the timely payment of financial commitments. The added “+” denotes an exceptionally strong credit feature.

Long-term credit ratings are used as a benchmark measure of probability of default and are formally described as an Issuer Default Rating (“IDR”). IDRs opine on an entity’s relative vulnerability to default on financial obligations. A rating of “AA” denotes expectation of very low default risk and indicates very strong capacity for payment of financial commitments; this capacity is not significantly vulnerable to foreseeable events. A rating of “A” denotes expectations of low default risk and the capacity for payment of financial commitments is considered strong; this capacity may, nevertheless, be more vulnerable to adverse business or economic conditions than is the case for higher ratings. Within some of the rating levels, Fitch further differentiates the rankings by adding the modifiers “+” or “-” to denote relative status within major rating categories.

Rating Outlooks indicate the direction a rating is likely to move over a one-to-two year period. The “Stable” rating outlook means that the rating is not likely to change over a one to two-year period.

DBRS

The DBRS short-term debt rating scale provides an opinion on the risk that an issuer will not meet its short-term financial obligations in a timely manner. The R-1 and R-2 rating categories are further denoted by the subcategories “high”, “middle” and “low”. An obligation rated R-1(high) is of the highest credit quality and indicates the capacity for the payment of short-term financial obligations as they fall due is exceptionally high; unlikely to be adversely affected by future events.

The DBRS long-term rating scale provides an opinion on the risk of default. That is, the risk that an issuer will fail to satisfy its financial obligations in accordance with the terms under which the obligations have been issued. All rating categories other than AAA and D also contain subcategories “(high)” and “(low)”. The absence of either a “(high)” or “(low)” designation indicates the rating is in the middle of the category. Long-term financial obligations rated “AA” are of superior credit quality and capacity for the payment is considered high; credit quality differs from AAA only to a small degree; unlikely to be significantly vulnerable to future events. Long-term financial obligations rated “A” are of good credit quality and capacity for payment is considered substantial, but of lesser credit quality than AA; and may be vulnerable to future events, but qualifying negative factors are considered manageable.

The DBRS preferred share rating scale is used in the Canadian securities market and is meant to give an indication of the risk that a borrower will not fulfill its full obligations in a timely manner, with respect to both dividend and principal commitments. Each rating category is denoted by the subcategories “high” and “low”. The absence of either a “high” or “low” designation indicates the rating is in the middle of the category. The Pfd-2 rating indicates that the preferred shares are of satisfactory credit quality.

Rating trends provide guidance in respect of DBRSs opinion regarding outlook for the rating in question. The “Negative” rating trend represents an indication that there is a greater likelihood that the rating could change in the future than would be the case if the rating trend was “Stable”.

Schedule C

CHARTER

THE BANK OF NOVA SCOTIA

AUDIT AND CONDUCT REVIEW COMMITTEE OF THE BOARD

The Audit and Conduct Review Committee of the Board of Directors (the "Committee") has the responsibilities and duties as outlined below:

AUDIT

A. Mandate

1. To perform such duties as may be required by:
   - the Bank Act (the "Bank Act"), the regulations thereunder and guidelines of the Office of the Superintendent of Financial Institutions Canada ("OSFI"); and
   - other applicable legislation and regulations, including those of the Ontario Securities Commission and the Canadian Securities Administrators, the Toronto Stock Exchange, the New York Stock Exchange ("NYSE"), the Securities and Exchange Commission and the Sarbanes-Oxley Act, 2002,

   as more fully described under the heading "**Duties**" below.
2. To assist the Board of Directors (the "Board") in fulfilling its oversight responsibilities for:
   - the integrity of the Bank's consolidated financial statements and related quarterly results press releases;
   - the Bank's compliance with legal and regulatory requirements;
   - the system of internal control, including internal control over financial reporting and disclosure controls and procedures ("internal controls");
   - the external auditor's qualifications, independence and performance; and
   - the Bank's internal audit, finance, compliance and anti-money laundering functions.
3. To perform such other duties as may from time to time be assigned to the Committee by the Board.
4. To act as the audit committee for any federally chartered Canadian financial institution beneficially owned by the Bank as determined by the Board.

B. Authority

The Committee has authority to:

- conduct or authorize investigations into any matters within its scope of responsibility;
- retain, as appropriate and at the Bank's expense, independent counsel, accountants or others to advise the Committee or assist in the conduct of an investigation;
- meet with Bank officers, the external auditor or outside counsel, as necessary;
- determine appropriate funding for independent advisors;
- communicate directly with the internal and external auditors;
- receive all material correspondence between the external auditor and management related to audit and interim review findings; and
- call a meeting of the Board to consider any matter of concern to the Committee.

C. Duties

The Committee shall:

Financial Information

- review the quarterly and annual consolidated financial statements of the Bank prior to approval by the Board and disclosure to the public, and satisfy itself that the financial statements present fairly the financial position, results of operations and cash flows of the Bank;
    - review should include discussion with management and the external auditor of significant issues, including significant accounting policies, regarding the financial results, accounting principles, practices and management estimates and judgments;
- satisfy itself that the Bank's accounting practices are prudent and appropriate;
- review the quarterly and annual Management's Discussion & Analysis of Financial Condition and Results of Operations ("MD&A") prior to review and approval by the Board;
- review any material proposed changes in accounting standards and securities policies or regulation relevant to the Bank's consolidated financial statements and approve any material changes in accounting policies related to the Bank's consolidated financial statements;
- be satisfied that adequate procedures are in place for the review of the Bank's public disclosure of all consolidated financial statements, related quarterly results press releases and financial information extracted or derived from the Bank's consolidated financial statements and periodically assess the adequacy of these procedures;
- review material financial press releases prior to public disclosure;
- review earnings press releases, as well as financial information and earnings guidance provided to analysts and rating agencies prior to public disclosure;
- review investments and transactions that could adversely affect the well-being of the Bank brought to its attention by the external auditor or by any officer of the Bank;
- discuss significant financial risk exposures and the steps management of the Bank has taken to monitor, control and report such exposures;
- review the Annual Information Form and Form 40-F; and
- review the process relating to and the certifications of the Chief Executive Officer and the Chief Financial Officer on the integrity of the Bank's quarterly and annual consolidated financial statements.

Internal Controls

- require Bank management to implement and maintain appropriate internal control procedures including anti-fraud controls and review, evaluate and approve these procedures, including the Bank's Internal Control Policy, as part of the Bank's overall internal control framework;
- receive and review reports from management and internal audit on the design and operating effectiveness of internal controls and any significant control breakdowns, including any reports concerning significant deficiencies and material weaknesses in the design or operation of internal controls which are reasonably likely to adversely affect the Bank's ability to record, process, summarize and report financial information, and any fraud involving management or other employees who have a significant role in the Bank's internal controls;
    - as part of this review, the Committee should discuss with management whether any deficiencies identified may be systemic or pervasive;
- receive and review the external auditor's audit report on the Bank's internal controls over financial reporting as of the Bank's year end; and
- require management to establish procedures and review and approve the procedures established for the receipt, retention, treatment and resolution of complaints received by the Bank regarding accounting, internal accounting controls or auditing matters, including confidential, anonymous submissions from employees, as part of the Bank's Whistleblower Policy and Procedures, and carry out the Committee's responsibilities under the Bank's Whistleblower Policy and Procedures, as required.

Finance Function

- oversee the Finance Department, having regard to its independence, by:
    - reviewing and approving the appointment and/or removal of the Chief Financial Officer of the Bank;

- annually reviewing and approving the mandate of the Chief Financial Officer and the charter of the Finance Department;
- annually reviewing and approving the organizational structure of the Finance Department;
- annually reviewing and approving the Finance Department's resources and budget;
- annually assessing the effectiveness of the Chief Financial Officer and the effectiveness of the Finance Department, and annually approving the performance review of the Chief Financial Officer, taking into consideration any regulatory findings with respect to the finance function;
    - conveying its views to the Human Resources Committee on the following matters:
    - the assessment of the effectiveness and performance review of the Chief Financial Officer;
    - considerations to be factored into the total compensation to be paid to the Chief Financial Officer; and
    - succession planning for the role of Chief Financial Officer;
- overseeing that the finance function has unfettered access and a functional reporting line to the Committee;
- periodically requesting independent reviews of the Finance Department, reviewing the results of such reviews and reporting such results to the Board; and

- overseeing that deficiencies identified related to the Finance Department are remedied within an appropriate time frame and reporting to the Board on the progress of necessary corrective actions.

Compliance

- receive reports from management on the Bank's compliance with legal and regulatory requirements and the adequacy and effectiveness of the Bank's compliance controls, including:
    - review the annual and other periodic reports of Global Compliance, including compliance with the Bank's Guidelines for Business Conduct and any instances of material deviation therefrom with corrective actions taken;
    - review the periodic reports on litigation matters; and
    - follow up with management on plans to remediate any deficiencies identified in reports and on any regulatory recommendations or findings, and discuss if weaknesses may exist elsewhere;
- review the annual letter of certification from the Chief Executive Officer on the Bank's compliance with the Guidelines for Business Conduct;
- meet, on its own or with the Board, with representatives of OSFI to discuss OSFI's supervisory results;
- meet with Bank management to review and discuss the Bank's response to OSFI's recommendations and suggestions pursuant to their supervisory activities;
- review such returns as specified by OSFI;
- oversee the Global Compliance Department, having regard to its independence, by:
    - reviewing and approving the appointment and/or removal of the Chief Compliance and Regulatory Officer;
    - annually reviewing and approving the job description for the Chief Compliance and Regulatory Officer and the mandate of the Global Compliance Department;
    - annually reviewing and approving the organizational structure of the Global Compliance Department;
    - annually reviewing and approving the Global Compliance Department's resources and budget;
    - annually assessing the effectiveness of the Chief Compliance and Regulatory Officer and the effectiveness of the Global Compliance Department, and annually approving the performance review of the Chief Compliance and Regulatory Officer, taking into consideration any regulatory findings with respect to the Global Compliance Department;
    - conveying its view to the Executive Vice-President and General Counsel and the Human Resources Committee on the following matters:
        - the assessment of the effectiveness and performance review of the Chief Compliance and Regulatory Officer;
        - considerations to be factored into the total compensation to be paid to the Chief Compliance and Regulatory Officer; and
        - succession planning for the role of Chief Compliance and Regulatory Officer;

- overseeing that Global Compliance has unfettered access and a functional reporting line to the Committee;
- periodically requesting independent reviews of the Global Compliance Department, reviewing the results of such reviews and reporting such results to the Board; and
- overseeing that deficiencies identified related to Global Compliance are remedied within an appropriate time frame and reporting to the Board on the progress of necessary corrective actions.

Anti-Money Laundering and Anti-Terrorist Financing Program

- oversee the Bank's Anti-Money Laundering and Anti-Terrorist Financing and Sanctions program;
- review and approve the Bank's Anti-Money Laundering/Anti-Terrorist Financing and Sanctions Policy and any significant changes thereto;
- receive reports on the Bank's compliance with legal and regulatory anti-money laundering requirements;
- regularly meet with the Chief Anti-Money Laundering Officer to discuss the effectiveness of the Bank's Anti-Money Laundering and Anti-Terrorist Financing and Sanctions program; and
- oversee the Anti-Money Laundering function, having regard to its independence, by:
  - reviewing and approving the appointment and/or removal of the Global Chief Anti-Money Laundering Officer;
  - annually reviewing and approving the job description of the Global Chief Anti-Money Laundering Officer and the mandate of the Anti-Money Laundering function;
  - annually reviewing and approving the organizational structure of the Anti-Money Laundering function;
  - annually reviewing and approving the Anti-Money Laundering function's resources and budget;
  - annually assessing the effectiveness of the Global Chief Anti-Money Laundering Officer and the effectiveness of the Anti-Money Laundering function, and annually approving the performance review of the Global Chief Anti-Money Laundering Officer, taking into consideration any regulatory findings with respect to the Anti-Money Laundering function;
  - conveying its view to the Executive Vice-President and General Counsel and the Human Resources Committee on the following matters:
    - the assessment of the effectiveness and performance review of the Global Chief Anti-Money Laundering Officer;
    - considerations to be factored into the total compensation to be paid to the Global Chief Anti-Money Laundering Officer; and
    - succession planning for the role of Global Chief Anti-Money Laundering Officer;
  - overseeing that the Anti-Money Laundering function has unfettered access and a functional reporting line to the Committee;
  - periodically requesting independent reviews of the Anti-Money Laundering function, reviewing the results of such reviews and reporting such results to the Board; and
- overseeing that deficiencies identified related to the Anti-Money Laundering function are remedied within an appropriate time frame and reporting to the Board on the progress of necessary corrective actions.

Internal Audit

- review the quarterly and other reports of the Chief Internal Auditor;
- regularly meet with the Chief Internal Auditor with and/or without management, to discuss the effectiveness of the Bank's internal control, risk management and governance processes;
- oversee the Audit Department, having regard to its independence, by:
  - reviewing and approving the appointment and/or removal of the Chief Internal Auditor;
  - annually reviewing and approving the job description of the Chief Internal Auditor and the charter of the Audit Department;
  - annually reviewing and approving the organizational structure of the Audit Department;
  - annually reviewing and approving the annual audit plan, overall risk assessment methodology, budgets and resources of the Audit Department;
  - annually assessing the effectiveness of the Chief Internal Auditor and the Audit Department, taking into consideration the objectivity and independence of the Bank's internal audit function, and annually approving the performance review of the Chief Internal Auditor, taking into consideration any regulatory findings with respect to the Audit Department;

- conveying its view to the President and Chief Executive Officer and the Human Resources Committee on the following matters:
    - the assessment of the effectiveness and performance review of the Chief Internal Auditor;
    - considerations to be factored into the total compensation to be paid to the Chief Internal Auditor; and
    - succession planning for the role of Chief Internal Auditor;
- periodically requesting independent reviews of the Audit Department, reviewing the results of such reviews and reporting such results to the Board; and
- overseeing that deficiencies identified related to the Audit Department are remedied within an appropriate time frame and reporting to the Board on the progress of necessary corrective actions;

- ensure the Audit Department has a direct and independent reporting line to the Committee;
- provide for an open avenue of communication between the Audit Department and the Board; and
- ensure that the Audit Department's recommendations are adequately considered and acted on, by providing the Audit Department with the authority to follow-up on observations and recommendations.

External Auditor

- have responsibility for the oversight of the external auditor who reports directly to the Committee;
- recommend to the Board the retention or termination of the Bank's external auditor, subject to shareholder ratification;
- review and approve the annual audit plan and letter(s) of engagement, and as part of such review, satisfy itself that the Bank's audit plan is risk based and covers all relevant activities over a measurable cycle;
- annually review the external auditor's opinion on the annual financial statements;
- review and evaluate the external auditor's qualifications, performance and independence, including a review and evaluation of the lead audit partner, taking into consideration the opinions of management and the Bank's Audit Department in such evaluation and any concerns raised by OSFI or other stakeholders about the external auditor's independence;
- consistent with the Committee's annual assessment and periodic comprehensive review of the external auditors, the Committee shall establish a policy that stipulates the criteria for the Bank tendering the contract for the role of the Bank's external auditor;
    - as part of this policy and any review undertaken by the Committee, the Committee should periodically consider whether to put the external auditor contract out for tender, taking into consideration the length of the current external auditor's tenure and the risks that tenure may pose to the external auditor's objectivity and independence;
- review the CPAB's annual public report, along with any notices required to be communicated by the external auditor to the Committee, including those required by CPAB, OSFI and PCAOB;
- review and recommend to the Board the annual fee for the audit of the Bank's consolidated financial statements;
    - as part of this review, the Committee should satisfy itself that the level of audit fees is commensurate with the scope of work undertaken;
- review and pre-approve in accordance with established pre-approval policy, all services to be provided by the external auditor, including audit and audit related services and permitted tax and non-audit services;
- delegate the authority to pre-approve non-audit services to a member of the Committee;
- review external auditor services pre-approved by the delegate of the Committee;
- review annually the total fees paid to the external auditor by required categories;
- at least annually, obtain and review reporting from the external auditor describing:
    - the firm's internal quality-control procedures;
    - any material issues raised by the most recent internal quality-control review, or peer review, of the firm, or by any inquiry or investigation by governmental or professional authorities, within the preceding five years, regarding one or more independent audits carried out by the firm, and any steps taken to deal with any such issues;
    - the skill and resources (amount and type) of the firm; and

- an assessment of all relationships between the external auditor and the Bank that pertain to independence;
- review the rotation plan for partners on the engagement;
- meet with the external auditor and with management to discuss the quarterly and the annual consolidated financial statements and the Bank's disclosure under MD&A;
- review with management and the external auditor all matters required to be communicated to the Committee under generally accepted auditing standards;
- review with the external auditor any audit problems or difficulties and management's response;
- discuss with the external auditor the OSFI returns, investments or transactions reviewed by the Committee pursuant to the Compliance responsibilities in this charter;
- resolve any disputes between the external auditor and management; and
- review and approve policies for the Bank's employment of current and former employees or partners of the current or former external auditor.

Other Duties

- provide for an open avenue of communication between internal audit, the external auditor and the Board;
- annually, review the charter for the Committee and evaluate the Committee's effectiveness in fulfilling its mandate;
- annually, approve a core plan of reports to be presented to the Committee on matters within its mandate;
- prepare a committee report for inclusion in the Bank's management proxy circular; and
- institute and oversee special investigations as needed.

CONDUCT REVIEW

D. Mandate

1. To perform the duties with respect to the Bank's procedures for ensuring its transactions with its related parties comply with Part XI of the Bank Act and any regulations thereunder as more fully described under the heading "**Duties**" below.
2. In the event a widely held bank holding company or insurance holding company has a significant interest in any class of shares of the Bank:
   - to establish policies for entering into transactions referred to in subsection 495.1(1) of the Bank Act, including transactions with a holding company or any other related party of the Bank that is an entity in which the holding company has a substantial investment; and
   - to review certain of the Bank's transactions that are referred to in subsection 495.3(1) of the Bank Act including any transaction with a widely held insurance or bank holding company or any other related party in which they hold a substantial investment.
3. To perform such duties as are required by the Bank Act to be dealt with by a committee of the Board concerning the monitoring of adherence to procedures for identifying potential conflicts of interest and for resolving such conflicts of interest, for restricting the use of confidential information, for providing disclosure of information to customers and for dealing with customer complaints as required under subsection 455(1) of the Bank Act, and as more fully described under the heading "**Duties**" below.
4. To perform such other duties as are required under the Bank Act or by OSFI, or as may from time to time be assigned by the Board.
5. To monitor and fulfill the compliance requirements of the Bank in respect of the Financial Consumer Agency of Canada.
6. To act as the Conduct Review Committee for any federally chartered Canadian financial institution beneficially owned by the Bank as determined by the Board.

E. Duties

1. Establish criteria for determining whether the value of transactions with related parties of the Bank is nominal or immaterial to the Bank;
2. Approve the terms and conditions of:
    - loans, other than margin loans, to senior officers of the Bank on terms and conditions more favourable to the senior officers than those offered to the public; and
    - loans to spouses of senior officers of the Bank on the security of mortgages of the principal residences of such spouses on terms and conditions more favourable than those offered to the public;
3. Approve the practice of the Bank making financial services, other than loans or guarantees, available to senior officers of the Bank or to spouses, or children who are less than 18 years of age of senior officers of the Bank, on terms and conditions more favourable than those offered to the public, provided the financial services are offered by the Bank to its employees on those favourable terms and conditions;
4. Require Bank management to establish procedures to enable the Bank to verify that its transactions with related parties of the Bank comply with Part XI of the Bank Act and to review those procedures and their effectiveness. These procedures should, among other things, enable management to verify that:
    - all related party transactions are on terms and conditions at least as favourable to the Bank as market terms and conditions, other than transactions referred to in clauses 2 and 3 above;
    - loans to full-time senior officers, other than margin loans and mortgages on their principal residences, do not exceed the greater of twice their annual salaries and $100,000;
    - aggregate loans or guarantees to, and investments in the securities of any related party (subject to certain exceptions) do not exceed 2% of the Bank's regulatory capital unless the approval of 2/3 of the Board has been obtained; and
    - aggregate loans or guarantees to, and investments in the securities of all related parties (subject to certain exceptions) do not exceed 50% of the Bank's regulatory capital;
5. Review the practices of the Bank to identify any transactions with related parties of the Bank that may have a material effect on the stability or solvency of the Bank;
6. Monitor the procedures established by the Board to resolve conflicts of interest, including techniques for the identification of potential conflict situations, and to restrict the use of confidential information; and
7. Monitor the procedures established by the Board to provide disclosure to customers of the Bank of information that is required to be disclosed by the Bank Act, and for dealing with and reporting complaints made by customers of the Bank who have requested or received products or services in Canada and to satisfy itself that these procedures are being adhered to by the Bank.

COMMITTEE OPERATIONS

F. Reporting

After each meeting of the Committee, the Committee is required to report to the Board on matters reviewed by the Committee. The Committee shall also report as required to the Risk Committee on relevant issues.

The Chair of the Committee shall review, for completeness, the Board's report to OSFI with respect to conduct review matters on the Committee's activities during the year. This report must be filed within 90 days after the Bank's financial year-end.

The Committee shall review and assess the adequacy of this Charter on an annual basis and report the results of this review to the Corporate Governance Committee of the Board.

G. Composition

Structure

The Committee shall consist of a minimum of 3 Directors. No member of the Committee may serve on more than three audit committees of public company boards without the consent of the Corporate Governance Committee and the Board.

Each member must be financially literate or become financially literate within a reasonable period of time subsequent to his/her appointment to the Committee. At least one member must be a financial expert and at all times a majority of members must be financially literate.

Independence

The Committee is composed entirely of independent directors as defined in applicable laws, rules and regulations and as determined pursuant to the Director Independence Standards approved by the Board for Committee members.

No member of the Committee may be an officer or employee of the Bank or of any of its subsidiaries or affiliates. No member may be a person who is affiliated with the Bank.

Directors' fees are the only compensation a member of the Committee may be paid by the Bank.

Appointment of Committee Members

Members of the Committee are appointed or reappointed annually by the Board, upon the recommendation of the Corporate Governance Committee, such appointments to take effect immediately following the annual meeting of the shareholders of the Bank. Members of the Committee shall hold office until their successors are appointed, or until they cease to be Directors of the Bank.

Vacancies

Vacancies may be filled for the remainder of the current term of appointment of members of the Committee by the Board, subject to the requirements under the headings "Structure" and "Independence" above.

Appointment and Qualifications of Committee Chair

The Board shall appoint from the Committee membership, a Chair for the Committee to preside at meetings. In the absence of the Chair, one of the other members of the Committee present shall be chosen by the Committee to preside at that meeting.

The Chair for the Committee must have all of the qualifications for Committee membership and have accounting or related financial management expertise.

H. Meetings

Calling of Meetings

Meetings of the Committee may be called by the Chair, by any member of the Committee or the external auditor. Members may participate in meetings in person or by telephone, electronic or other communications facilities.

Written resolutions in lieu of a meeting are permitted, solely in accordance with the Bank Act.

The Committee shall hold an in camera session immediately prior to and/or following the conclusion of the regular agenda matters. The Committee shall also hold in camera sessions, separately at each Committee meeting, with each of the Chief Financial Officer, Chief Internal Auditor, Chief Compliance and Regulatory Officer and the external auditor. The Committee shall also meet separately, at least quarterly, with management.

To facilitate communication between the Committee and the Risk Committee, the Chair of the Risk Committee shall receive notice of all Committee meetings and may attend Committee meetings by invitation as a non-voting observer.

The Committee may invite any director, officer or employee or any other person to attend meetings to assist the Committee with its deliberations.

Notice of Meetings

Notice of meeting of the Committee shall be sent by prepaid mail, by personal delivery or other means of transmitted or recorded communication or by telephone at least 12 hours before the meeting to each member of the Committee at the member's address or communication number last recorded with the Secretary. A Committee member may in any manner waive notice of a meeting of the Committee and attendance at a meeting is a waiver of notice of the meeting, except where a member attends for the express purpose of objecting to the transaction of any business on the ground that the meeting is not lawfully called.

Notice to the Internal Auditor and External Auditor

The Chief Internal Auditor and the external auditor are entitled to receive notice of every meeting of the Committee and, at the expense of the Bank, to attend and be heard at each meeting and to have the opportunity to discuss matters with the independent directors, without the presence of management.

Frequency

The Committee shall meet at least quarterly.

Quorum

The quorum for a meeting of the Committee shall be a majority of its members, subject to a minimum of 2 members.

Secretary and Minutes

The Secretary or, in the absence of the Secretary, an Assistant Secretary of the Bank shall act as Secretary of the Committee.

Minutes of meetings of the Committee shall be recorded and maintained by the Secretary and subsequently presented to the Committee and to the Board, if required by the Board.

This Charter was last reviewed and approved by the Board on June 28, 2016.

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FORWARD LOOKING STATEMENTS

Our public communications often include oral or written forward-looking statements. Statements of this type are included in this document, and may be included in other filings with Canadian securities regulators or the U.S. Securities and Exchange Commission, or in other communications. All such statements are made pursuant to the "safe harbor" provisions of the U.S. Private Securities Litigation Reform Act of 1995 and any applicable Canadian securities legislation. Forward-looking statements may include, but are not limited to, statements made in this document, the Management's Discussion and Analysis in the Bank's 2016 Annual Report under the headings "Overview-Outlook," for Group Financial Performance "Outlook," for each business segment "Outlook" and in other statements regarding the Bank's objectives, strategies to achieve those objectives, the regulatory environment in which the Bank operates, anticipated financial results (including those in the area of risk management), and the outlook for the Bank's businesses and for the Canadian, U.S. and global economies. Such statements are typically identified by words or phrases such as "believe," "expect," "anticipate," "intent," "estimate," "plan," "may increase," "may fluctuate," and similar expressions of future or conditional verbs, such as "will," "may," "should," "would" and "could."

By their very nature, forward-looking statements involve numerous assumptions, inherent risks and uncertainties, both general and specific, and the risk that predictions and other forward-looking statements will not prove to be accurate. Do not unduly rely on forward-looking statements, as a number of important factors, many of which are beyond the Bank's control and the effects of which can be difficult to predict, could cause actual results to differ materially from the estimates and intentions expressed in such forward-looking statements. These factors include, but are not limited to: the economic and financial conditions in Canada and globally; fluctuations in interest rates and currency values; liquidity and funding; significant market volatility and interruptions; the failure of third parties to comply with their obligations to the Bank and its affiliates; changes in monetary policy; legislative and regulatory developments in Canada and elsewhere, including changes to, and interpretations of tax laws and risk-based capital guidelines and reporting instructions and liquidity regulatory guidance; changes to the Bank's credit ratings; operational (including technology) and infrastructure risks; reputational risks; the risk that the Bank's risk management models may not take into account all relevant factors; the accuracy and completeness of information the Bank receives on customers and counterparties; the timely development and introduction of new products and services in receptive markets; the Bank's ability to expand existing distribution channels and to develop and realize revenues from new distribution channels; the Bank's ability to complete and integrate acquisitions and its other growth strategies; critical accounting estimates and the effects of changes in accounting policies and methods used by the Bank as described in the Bank's annual financial statements (See "Controls and Accounting Policies – Critical accounting estimates" in the Bank's 2016 Annual Report) and updated by this document; global capital markets activity; the Bank's ability to attract and retain key executives; reliance on third parties to provide components of the Bank's business infrastructure; unexpected changes in consumer spending and saving habits; technological developments; fraud or other criminal behavior by internal or external parties, including the use of new technologies in unprecedented ways to defraud the Bank or its customers; increasing cyber security risks which may include theft of assets, unauthorized access to sensitive information or operational disruption; anti-money laundering; consolidation in the financial services sector in Canada and globally; competition, both from new entrants and established competitors including through internet and mobile banking; judicial and regulatory proceedings; natural disasters, including, but not limited to, earthquakes and hurricanes, and disruptions to public infrastructure, such as transportation, communication, power or water supply; the possible impact of international conflicts and other developments, including terrorist activities and war; the effects of disease or illness on local, national or international economies; and the Bank's anticipation of and success in managing the risks implied by the foregoing. A substantial amount of the Bank's business involves making loans or otherwise committing resources to specific companies, industries or countries. Unforeseen events affecting such borrowers, industries or countries could have a material adverse effect on the Bank's financial results, businesses, financial condition or liquidity. These and other factors may cause the Bank's actual performance to differ materially from that contemplated by forward-looking statements. For more information, see the "Risk Management" section Bank's 2016 Annual Report.

Material economic assumptions underlying the forward-looking statements contained in this document are set out in the 2016 Annual Report under the heading "Overview-Outlook," as updated by this document; and for each business segment "Outlook". The "Outlook" sections are based on the Bank's views and the actual outcome is uncertain. Readers should consider the above-noted factors when reviewing these sections. The preceding list of factors is not exhaustive of all possible risk factors and other factors could also adversely affect the Bank's results. When relying on forward-looking statements to make decisions with respect to the Bank and its securities, investors and others should carefully consider the preceding factors, other uncertainties and potential events. The Bank does not undertake to update any forward-looking statements, whether written or oral, that may be made from time to time by or on its behalf.

Additional information relating to the Bank, including the Bank's Annual Information Form, can be located on the SEDAR website at www.sedar.com and on the EDGAR section of the SEC's website at www.sec.gov.

November 29, 2016

MANAGEMENT'S DISCUSSION & ANALYSIS

The Management's Discussion and Analysis (MD&A) is provided to enable readers to assess the Bank's financial condition and results of operations as at and for the year ended October 31, 2016. The MD&A should be read in conjunction with the Bank's 2016 Consolidated Financial Statements and Notes. This MD&A is dated November 29, 2016.

Additional information relating to the Bank, including the Bank's 2016 Annual Report, are available on the Bank's website at www.scotiabank.com. As well, the Bank's 2016 Annual Report and Annual Information Form are available on SEDAR at www.sedar.com and on the EDGAR section of the SEC's website at www.sec.gov.

Non-GAAP Measures

The Bank uses a number of financial measures to assess its performance. Some of these measures are not calculated in accordance with Generally Accepted Accounting Principles (GAAP), which are based on International Financial Reporting Standards (IFRS), are not defined by GAAP and do not have standardized meanings that would ensure consistency and comparability among companies using these measures. The Bank believes that certain non-GAAP measures are useful in assessing underlying ongoing business performance and provide readers with a better understanding of how management assesses performance. These non-GAAP measures are used throughout this report and defined below.

T1 Impact of the 2016 restructuring charge

The table below reflects the impact of the 2016 restructuring charge of $378 million pre-tax ($278 million after tax) (1).

For the year ended October 31, 2016 ($ millions)	**Reported**	Impact of the restructuring charge	**Adjusting for the restructuring charge**
Net income ($ millions)	**$ 7,368**	$ 278	**$ 7,646**
Diluted earnings per share	**$ 5.77**	$ 0.23	**$ 6.00**
Return on equity	**13.8%**	0.5%	**14.3%**
Productivity ratio	**55.2%**	(1.5)%	**53.7%**
Operating leverage	**(1.9)%**	2.9%	**1.0%**

(1) Calculated using the statutory tax rates of the various jurisdictions.

T2 Adjusted diluted earnings per share

The adjusted diluted earnings per share (EPS) is calculated as follows:

	2016		2015		2014	
For the year ended October 31 ($ millions)		**Diluted EPS(1)**		Diluted EPS(1)		Diluted EPS(1)
Net income attributable to common shareholders (diluted) (refer to Note 33)	**$ 7,070**	**$ 5.77**	$ 6,983	$ 5.67	$ 6,924	$ 5.66
Restructuring charge	**278**	**0.23**	–	–	110	0.09
Net income attributable to common shareholders (diluted) adjusting for restructuring charge	**7,348**	**6.00**	6,983	5.67	7,034	5.75
Other 2014 notable items(2)	**–**	**–**	–	–	(400)	(0.32)
Net income attributable to common shareholders (diluted) adjusting for restructuring charge and other notable items	**7,348**	**6.00**	6,983	5.67	6,634	5.43
Amortization of intangible assets, excluding software	**76**	**0.05**	65	0.05	62	0.06
Adjusted net income attributable to common shareholders (diluted)	**$ 7,424**	**$ 6.05**	$ 7,048	$ 5.72	$ 6,696	$ 5.49
Weighted average number of diluted common shares outstanding (millions)	**1,226**		1,232		1,222	

(1) Adjusted diluted earnings per share calculations are based on full dollar and share amounts.
(2) Refer to T15 Notable items.

Core banking assets

Core banking assets are average earning assets excluding bankers' acceptances and average trading assets within Global Banking and Markets.

Core banking margin

This ratio represents net interest income divided by average core banking assets.

T3 Financial highlights

As at and for the years ended October 31	**2016**	2015	2014
Operating results ($ millions)			
Net interest income	**14,292**	13,092	12,305
Non-interest income	**12,058**	10,957	11,299
Total revenue	**26,350**	24,049	23,604
Provision for credit losses	**2,412**	1,942	1,703
Non-interest expenses	**14,540**	13,041	12,601
Income tax expense	**2,030**	1,853	2,002
Net income	**7,368**	7,213	7,298
Net income attributable to common shareholders	**6,987**	6,897	6,916
Operating performance			
Basic earnings per share ($)	**5.80**	5.70	5.69
Diluted earnings per share ($)	**5.77**	5.67	5.66
Adjusted diluted earnings per share ($)[1][2]	**6.05**	5.72	5.49
Return on equity (%)	**13.8**	14.6	16.1
Productivity ratio (%)[3]	**55.2**	54.2	53.4
Operating leverage (%)[3]	**(1.9)**	(1.6)	2.8
Core banking margin (%)[1][3]	**2.38**	2.39	2.39
Financial position information ($ millions)			
Cash and deposits with financial institutions	**46,344**	73,927	56,730
Trading assets	**108,561**	99,140	113,248
Loans	**480,164**	458,628	424,309
Total assets	**896,266**	856,497	805,666
Deposits	**611,877**	600,919	554,017
Common equity	**52,657**	49,085	44,965
Preferred shares	**3,594**	2,934	2,934
Assets under administration	**472,817**	453,926	427,547
Assets under management	**192,702**	179,007	164,820
Capital and liquidity measures			
Common Equity Tier 1 (CET1) capital ratio (%)	**11.0**	10.3	10.8
Tier 1 capital ratio (%)	**12.4**	11.5	12.2
Total capital ratio (%)	**14.6**	13.4	13.9
Leverage ratio (%)	**4.5**	4.2	N/A
CET1 risk-weighted assets ($ millions)[4]	**364,048**	357,995	312,473
Liquidity coverage ratio (LCR) (%)	**127**	124	N/A
Credit quality			
Net impaired loans ($ millions)[5]	**2,446**	2,085	2,002
Allowance for credit losses ($ millions)	**4,626**	4,197	3,641
Net impaired loans as a % of loans and acceptances[5]	**0.49**	0.44	0.46
Provision for credit losses as a % of average net loans and acceptances	**0.50**	0.43	0.40
Common share information			
Closing share price ($)(TSX)	**72.08**	61.49	69.02
Shares outstanding (millions)			
Average – Basic	**1,204**	1,210	1,214
Average – Diluted	**1,226**	1,232	1,222
End of period	**1,208**	1,203	1,217
Dividends per share ($)	**2.88**	2.72	2.56
Dividend yield (%)[6]	**4.7**	4.4	3.8
Market capitalization ($ millions)(TSX)	**87,065**	73,969	83,969
Book value per common share ($)	**43.59**	40.80	36.96
Market value to book value multiple	**1.7**	1.5	1.9
Price to earnings multiple (trailing 4 quarters)	**12.4**	10.8	12.1
Other information			
Employees	**88,901**	89,214	86,932
Branches and offices	**3,113**	3,177	3,288

(1) Refer to page 13 for a discussion of Non-GAAP measures.
(2) Refer to T2 Adjusted diluted earnings per share.
(3) Effective 2016, the taxable equivalent adjustment is no longer included in the calculation. Prior period amounts have been restated.
(4) As at October 31, 2016, credit valuation adjustment (CVA) risk-weighted assets were calculated using scalars of 0.64, 0.71 and 0.77 to compute CET1, Tier 1 and Total Capital ratios, respectively.
(5) Excludes loans acquired under the Federal Deposit Insurance Corporation (FDIC) guarantee related to the acquisition of R-G Premier Bank of Puerto Rico.
(6) Based on the average of the high and low common share price for the year.

Overview

Financial Results

The Bank's net income for the year was $7,368 million, up 2% from $7,213 million last year and diluted earnings per share (EPS) were $5.77 compared to $5.67 last year. Return on equity was 13.8% in 2016 compared to 14.6% last year.

The Bank recorded a restructuring charge of $378 million pre-tax, or $278 million after tax, in 2016 (refer T1). Adjusting for the restructuring charge, net income was $7,646 million, up 6% and diluted earnings per share rose 6% to $6.00 compared to last year. Return on equity was 14.3% compared to 14.6% last year.

Current year net income was positively impacted by increases in net interest income and non-interest income, as well as acquisitions and the favourable impact of foreign currency translation. Partially offsetting were higher provision for credit losses, non-interest expenses and income taxes.

Net interest income increased $1,200 million or 9% to $14,292 million, driven by growth in core banking assets across all business lines and acquisitions. The core banking margin was 2.38%, down one basis point from last year.

Non-interest income increased $1,101 million or 10% to $12,058 million from the prior year. Strong growth in banking and trading revenues, acquisitions and the favourable impact of foreign currency translation contributed to the increase. Also contributing to the increase was a gain on sale of a non-core lease financing business in Canada, while gains on sale of real estate this year were largely offset by lower net gains on investment securities.

The total provision for credit losses was $2,412 million, up $470 million from last year. Contributing to this increase were higher provisions related to energy exposures in Global Banking and Markets, higher commercial provisions in International Banking, and higher retail provisions in Canadian Banking, primarily in credit cards and automotive loans, generally in line with volume growth. Partially offsetting were higher acquisition-related benefits this year.

Non-interest expenses were $14,540 million this year, an increase of $1,499 million or 11% over last year. Adjusting for the restructuring charge (refer T1), expenses increased 9%. The increase reflects the impact of acquisitions, higher performance-based compensation, as well as higher business initiative and volume-driven costs including technology and professional fees, software amortization, and deposit insurance. As well, last year benefited from lower pension benefit costs of $204 million related to modifications made to the Bank's main pension plan partly offset by the costs relating to the reorganization of Canadian shared services of $61 million. Operating leverage was negative 1.9% on a reported basis, or positive 1.0% adjusting for the restructuring charge (refer T1).

The provision for income taxes was $2,030 million, an increase of $177 million from last year. The Bank's overall effective tax rate for the year was 21.6% compared to 20.4% in 2015. The increase in the effective tax rate was due primarily to lower tax-exempt income and higher taxes in foreign jurisdictions this year.

The all-in Basel III Common Equity Tier 1 ratio was 11.0% as at October 31, 2016, compared to 10.3% last year, and remained well above the regulatory minimum.

Economic Outlook

The United States will be the reference point for economic developments in the year ahead owing to the potentially large shifts brought about by the results of the November 2016 elections. After an initial period of uncertainty as the priorities of the new American administration are clarified, we expect U.S. economic activity to continue picking up as additional fiscal stimulus, delivered through tax cuts and infrastructure spending, accelerates the recovery in U.S. domestic demand that has already been buoyed by reasonably strong gains in employment, consumer spending, and residential construction.

Canadian output growth is rebounding owing to the rebuilding of Fort McMurray after the devastating wildfires in early May, a resumption of crude oil shipments from Alberta post-fire, and a modest pick-up in non-energy exports. Although uncertainty about the new U.S. government's approach to trade policy may temporarily dampen investment growth in early 2017, capital spending should pick up again as Canada's federal stimulus package and U.S. demand growth both take hold later in the year. Consumer demand should be reasonably well supported in the year ahead by recent employment gains and the anticipated impact of the Canada Child Benefit. A number of downside risks to Canada's economy remain, including stretched valuations in the Vancouver and Toronto housing markets and high household indebtedness, but these appear well-managed.

The outlook for the Pacific Alliance countries remains closely tied to the U.S. economy. Some country-specific risks will remain salient in the year ahead, but the medium-term outlook for the region remains strong. We are positive about Mexico's underlying strengths, and we also anticipate further economic rebound in Brazil.

Across the Atlantic, most economic indicators in the U.K. point to much stronger than expected growth in the aftermath of the 'Brexit' vote as currency movements provide a cushion for real activity. Despite this unanticipated resilience, we continue to expect the U.K. economy to slow as the British government moves towards negotiations on withdrawal from the E.U. The knock-on effects in Europe, alongside financial sector challenges and local political uncertainty, are likely to provide a drag on growth across the Continent. Japan's recovery will probably remain muted as the authorities strive to make new monetary and fiscal measures effective. The pace of growth throughout the rest of the Pacific Rim will be favourable, with indicators pointing to a pick-up in China's industrial activity.

Shareholder Returns

In fiscal 2016, the total shareholder return on the Bank's shares was 22.5%, which outperformed the 12.6% total return of the S&P/TSX Composite Index.

The total compound annual shareholder return on the Bank's shares over the past five years was 11.1%, and 8.2% over the past 10 years. This exceeded the total return of the S&P/TSX Composite Index, which was 7.0% over the past five years and 4.8% over the last ten years, as shown in chart C2.

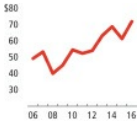
Quarterly dividends were raised twice during the year – a two cent increase effective the second quarter and a further two cent increase effective in the fourth quarter. As a result, dividends per share totaled $2.88 for the year, up 6% from 2015. The Bank was within its target payout range of 40-50%, with a payout ratio of 49.6% for the year.

T4 Shareholder returns

For the years ended October 31	**2016**	2015	2014
Closing market price per common share ($)	**72.08**	61.49	69.02
Dividends paid ($ per share)	**2.88**	2.72	2.56
Dividend yield (%) (1)	**4.7**	4.4	3.8
Increase (decrease) in share price (%)	**17.2**	(10.9)	8.9
Total annual shareholder return (%) (2)	**22.5**	(7.0)	13.2

(1) Dividend yield is calculated as the dividend paid divided by the average of the high and low common share price for the year.
(2) Total annual shareholder return assumes reinvestment of quarterly dividends, and therefore may not equal the sum of dividend and share price returns in the table.

C1 Closing common share price
as at October 31



C2 Return to common shareholders
Share price appreciation plus dividends reinvested, 2006=100



Impact of Foreign Currency Translation

The impact of foreign currency translation on net income is shown in T5.

T5 Impact of foreign currency translation

For the fiscal years	2016 Average exchange rate	2016 % Change	2015 Average exchange rate	2015 % Change	2014 Average exchange rate	2014 % Change
U.S. dollar/Canadian dollar	**0.754**	**(6.4)%**	0.806	(12.2)%	0.918	(6.5)%
Mexican Peso/Canadian dollar	**13.666**	**10.3%**	12.386	2.8%	12.049	(3.7)%
Peruvian Sol/Canadian dollar	**2.539**	**1.3%**	2.505	(3.0)%	2.582	(1.3)%
Colombian Peso/Canadian dollar	**2,307**	**10.8%**	2,082	16.4%	1,789	(1.4)%
Chilean Peso/Canadian dollar	**514.549**	**0.5%**	512.203	0.2%	511.261	6.8%

Impact on net income[1] ($ millions except EPS)	2016 vs. 2015	2015 vs. 2014	2014 vs. 2013
Net interest income	**$ (51)**	$ 232	$ 191
Non-interest income[2]	**182**	243	195
Non-interest expenses	**86**	(151)	(134)
Other items (net of tax)	**(34)**	(62)	(70)
Net income	**$ 183**	$ 262	$ 182
Earnings per share (diluted)	**$ 0.15**	$ 0.21	$ 0.15
Impact by business line ($ millions)			
Canadian Banking	**$ 14**	$ 20	$ 8
International Banking[2]	**44**	84	80
Global Banking and Markets	**65**	110	85
Other[2]	**60**	48	9
	$ 183	$ 262	$ 182

(1) Includes impact of all currencies
(2) Includes the impact of foreign currency hedges.

GROUP FINANCIAL PERFORMANCE

Net Income

Net income was $7,368, up 2% compared to $7,213 last year. Included in this year's results is a restructuring charge of $378 million pre-tax, or $278 million after tax (refer T1). Adjusting for the restructuring charge, net income increased $433 million or 6%.

Net Interest Income

Net interest income was $14,292 million, an increase of $1,200 million or 9% from the prior year. This increase was driven by a 9% growth in core earning assets, including acquisitions, as the core banking margin was in line with last year.

Canadian Banking's net interest income was up $608 million or 9% driven by strong asset and deposit growth, expansion in margin, and the impact of an acquisition. Net interest income increased $652 million or 11% in International Banking primarily due to strong asset growth and the impact of acquisitions. Global Banking and Markets net interest income increased $222 million or 21% driven by an increase in both average earning assets and margin. Partially offsetting these increases were lower contribution from asset/liability management activities reflected in the Other segment.

Core banking assets increased $50 billion to $598 billion. The increase was driven by strong growth in both retail and commercial loans in International Banking, corporate loans in Global Banking and Markets, automotive and credit card loans in Canadian Banking and higher volume of assets held for liquidity purposes in the Other segment. Also contributing to the asset increase was the positive impact of foreign currency translation.

The core banking margin of 2.38% was in line with the previous year. The margin increase in Canadian Banking was offset by lower contribution from asset/liability management activities reflected in the Other segment.

Outlook

Net interest income is expected to increase in 2017 mainly due to growth in core banking assets across all business lines. The total margin is expected to be in line with 2016, as improvements from business mix, both on the asset and deposit side, are generally offset by continued deposit margin compression in an expected low interest rate environment.

T6 Net interest income and core banking margin [1]

	2016			2015			2014		
($ billions, except percentage amounts)	Average balance	Interest	Average rate	Average balance	Interest	Average rate	Average balance	Interest	Average rate
Total average assets and net interest income	**$ 913.8**	**$ 14.3**		$ 860.6	$ 13.1		$ 795.6	$ 12.3	
Less: total assets in Capital Markets [1]	**259.4**	**–**		258.1	–		232.5	–	
Banking margin on average total assets	**$ 654.4**	**$ 14.3**	**2.18%**	$ 602.5	$ 13.1	2.18%	$ 563.1	$ 12.3	2.19%
Less: non-earning assets and customers' liability under acceptances	**56.6**			54.4			48.0		
Core banking assets and margin	**$ 597.8**	**$ 14.3**	**2.38%**	$ 548.1	$ 13.1	2.39%	$ 515.1	$ 12.3	2.39%

(1) Net interest income from Capital Markets trading assets is recorded in trading revenues in non-interest income.

T7 Average balance sheet[1] and net interest income

For the fiscal years ($ billions)	2016 Average balance	2016 Interest	2016 Average rate	2015 Average balance	2015 Interest	2015 Average rate	2014 Average balance	2014 Interest	2014 Average rate
Assets									
Deposits with financial institutions	**$ 67.8**	**$ 0.4**	**0.58%**	$ 71.1	$ 0.3	0.41%	$ 60.1	$ 0.3	0.44%
Trading assets	**107.2**	**0.2**	**0.16%**	111.2	0.2	0.17%	113.3	0.1	0.12%
Securities purchased under resale agreements and securities borrowed	**99.8**	**0.1**	**0.16%**	99.9	0.2	0.16%	91.1	0.2	0.20%
Investment securities	**67.8**	**1.1**	**1.57%**	43.7	0.7	1.69%	41.2	0.8	1.91%
Loans:									
Residential mortgages	**218.6**	**7.4**	**3.37%**	214.4	7.5	3.51%	210.9	7.6	3.60%
Personal and credit cards	**96.8**	**7.3**	**7.57%**	87.5	6.6	7.52%	79.6	6.1	7.61%
Business and government	**161.4**	**5.5**	**3.41%**	142.2	4.6	3.25%	128.5	4.3	3.39%
Allowance for credit losses	**(4.6)**			(4.0)			(3.6)		
Total loans	**$ 472.2**	**$ 20.2**	**4.28%**	$ 440.1	$ 18.7	4.26%	$ 415.4	$ 18.0	4.34%
Total earning assets	**$ 814.8**	**$ 22.0**	**2.70%**	$ 766.0	$ 20.1	2.63%	$ 721.1	$ 19.4	2.69%
Customers' liability under acceptances	**11.4**			11.4			10.4		
Other assets	**87.6**			83.2			64.1		
Total assets	**$ 913.8**	**$ 22.0**	**2.41%**	$ 860.6	$ 20.1	2.34%	$ 795.6	$ 19.4	2.43%
Liabilities and equity									
Deposits:									
Personal	**$ 195.1**	**$ 2.4**	**1.22%**	$ 181.4	$ 2.3	1.27%	$ 172.6	$ 2.4	1.42%
Business and government	**384.7**	**3.9**	**1.01%**	368.1	3.4	0.91%	339.7	3.5	1.02%
Financial institutions	**42.8**	**0.4**	**1.03%**	37.3	0.3	0.85%	38.4	0.3	0.77%
Total deposits	**$ 622.6**	**$ 6.7**	**1.08%**	$ 586.8	$ 6.0	1.02%	$ 550.7	$ 6.2	1.13%
Obligations related to securities sold under repurchase agreements and securities lent	**99.1**	**0.2**	**0.19%**	90.7	0.2	0.26%	87.3	0.3	0.32%
Subordinated debentures	**7.5**	**0.2**	**3.10%**	5.6	0.2	3.33%	5.3	0.2	3.84%
Other interest-bearing liabilities	**54.9**	**0.6**	**1.04%**	50.1	0.6	1.20%	50.2	0.4	0.72%
Total interest-bearing liabilities	**$ 784.1**	**$ 7.7**	**0.98%**	$ 733.2	$ 7.0	0.96%	$ 693.5	$ 7.1	1.02%
Other liabilities including acceptances	**74.4**			75.9			54.4		
Equity[2]	**55.3**			51.5			47.7		
Total liabilities and equity	**$ 913.8**	**$ 7.7**	**0.84%**	$ 860.6	$ 7.0	0.81%	$ 795.6	$ 7.1	0.89%
Net interest income		**$ 14.3**			$ 13.1			$ 12.3	

(1) Average of daily balances.
(2) Includes non-controlling interests of $1.5 in 2016, $1.3 in 2015 and $1.2 in 2014.

T8 Non-interest income

For the fiscal years ($ millions)	2016	2015	2014	2016 versus 2015
Banking				
Card revenues	$ 1,359	$ 1,089	$ 933	25%
Deposit and payment services				
Deposit services	949	928	901	2
Other payment services	330	307	282	7
	$ 1,279	$ 1,235	$ 1,183	4%
Credit fees				
Commitment and other credit fees	870	787	778	11
Acceptance fees	284	266	236	7
	$ 1,154	$ 1,053	$ 1,014	10%
Other	436	406	379	7
Banking fee related expenses	559	423	339	32
Total banking revenues	$ 3,669	$ 3,360	$ 3,170	9%
Wealth management				
Mutual funds	$ 1,624	$ 1,619	$ 1,468	–%
Brokerage fees	1,010	1,006	942	–
Investment management and trust				
Investment management and custody	443	440	419	1
Personal and corporate trust	205	204	194	–
	648	644	613	1
Total wealth management revenues	$ 3,282	$ 3,269	$ 3,023	–%
Underwriting and other advisory	$ 594	$ 525	$ 712	13%
Non-trading foreign exchange	540	492	420	10
Trading revenues	1,403	1,185	1,114	18
Net gain on investment securities	534	639	741	(16)
Net income from investments in associated corporations	414	405	428	2
Insurance underwriting income, net of claims	603	556	474	8
Other	1,019	526	1,217	94
Total non-interest income	$ 12,058	$ 10,957	$ 11,299	10%

C3 Sources of non-interest income



Non-Interest Income

Non-interest income was $12,058 million, up $1,101 million or 10%, primarily from growth in banking and trading revenues and higher underwriting and advisory fees. The positive impact of acquisitions, foreign currency translation and hedging activities, and gain from the sale of a non-core lease finance business also contributed to the increase. Gains on sales of real estate were generally offset by lower net gains on investment securities.

Banking revenues, excluding related expenses, grew $445 million or 12% to $4,228 million reflecting strong growth in card revenues of 25% due to higher fee income and the impact from acquisitions in Canadian Banking and International Banking. Credit fees were up $101 million or 10% mainly from growth in Global Banking and Markets, as well as contributions from Canadian Banking and International Banking. Banking fee related expenses rose $136 million or 32%, primarily due to card expenses in Canadian Banking and International Banking, reflecting higher transaction volumes as well as acquisitions.

Underwriting and other advisory fees were up $69 million or 13%, mainly due to higher new issue activity and investment advisory fees in Global Banking and Markets.

Non-trading foreign exchange revenues rose $48 million or 10% to $540 million, primarily in Latin America and the Caribbean.

Trading revenues of $1,403 million were higher by $218 million or 18% (refer to T9) from the prior year mainly related to fixed income. Higher commodities and foreign exchange trading revenues were offset by lower equity trading revenues.

Insurance underwriting income was up $47 million or 8%, mostly from strong premium growth in Canada and the Caribbean.

Other income increased significantly by $493 million to $1,019 million primarily due to the gain on sale of a non-core lease financing business, the impact of acquisitions, and gains on sale of real estate.

Outlook

Non-interest income is expected to reflect continued growth in 2017 benefiting from higher card revenues, mutual fund management fees and brokerage revenues. Gains on investment securities, primarily recorded in the Other segment, are expected to be lower than 2016.

T9 Trading revenues

For the fiscal years ($ millions)	**2016**	2015	2014
By trading products:			
Interest rate and credit	**$ 613**	$ 400	$ 415
Equities	**101**	177	92
Commodities	**376**	345	359
Foreign exchange	**262**	201	208
Other	**51**	62	40
Total trading revenues	**1,403**	1,185	1,114
% of total revenues	**5.3%**	4.9%	4.7%

Provision for Credit Losses

The total provision for credit losses was $2,412 million, up $470 million from last year net of acquisition-related benefits of $152 million. The provision for credit losses ratio was 50 basis points compared to 43 basis points in the prior year.

In Canadian Banking, the provision for credit losses was $832 million, an increase of $145 million. The provision for credit losses was higher due to growth in retail portfolios, primarily in credit cards and auto loans, with additional increases from commercial provisions. The provision for credit losses ratio was 28 basis points, up five basis points from the prior year.

The provision for credit losses in International Banking increased $153 million to $1,281 million. Retail provisions were flat compared to 2015. Increases from acquisitions and higher provisions for credit losses in Latin America from strong retail loan growth were offset by favourable foreign currency translation. In the commercial portfolio, provisions were higher in Colombia, primarily the energy sector, and in Puerto Rico. Overall, the provision for credit losses ratio was 126 basis points, up two basis points from last year.

The provision for credit losses in Global Banking and Markets was $249 million, an increase of $182 million from last year due to higher provisions in the United States and Europe, primarily in the energy sector, and also in Asia. The provision for credit losses ratio was up 20 basis points to 30 basis points.

Outlook

The quality of the Bank's credit portfolio is expected to remain strong given its broad global diversification. The total provision for credit losses ratio is expected to reduce in 2017. In Canadian Banking, the retail provision for credit losses ratio is expected to increase from changes in the business mix while the commercial ratio is expected to normalize in relation to historical experience. In International Banking, the retail provision for credit losses ratio is expected to be in line with last year after accounting for the integration of prior acquisitions while the commercial ratio should improve. In Global Banking and Markets, the provision for credit losses ratio is expected to decline driven by lower energy related issues. Overall, provision levels in 2017 will be within the Bank's risk appetite and aligned with strategy.

T10 Provisions against impaired loans by business line

For the fiscal years ($ millions)	**2016**	2015	2014
Canadian Banking			
Retail	**$ 770**	$ 642	$ 607
Commercial	**62**	45	56
	$ 832	$ 687	$ 663
International Banking			
Caribbean and Central America	**$ 250**	$ 184	$ 248
Latin America			
Mexico	**224**	260	240
Peru	**317**	265	267
Chile	**112**	108	74
Colombia	**320**	247	146
Other Latin America	**58**	64	49
Total Latin America	**1,031**	944	776
	$ 1,281	$ 1,128	$ 1,024
Global Banking and Markets			
Canada	**$ 43**	$ 42	$ 3
U.S.	**113**	4	2
Asia and Europe	**93**	21	11
	$ 249	$ 67	$ 16
Total	**$ 2,362**	$ 1,882	$ 1,703

T11 Provision for credit losses as a percentage of average net loans and acceptances

For the fiscal years (%)	2016	2015	2014
Canadian Banking			
Retail	**0.29%**	0.25%	0.24%
Commercial	**0.15**	0.12	0.17
	0.28	0.23	0.23
International Banking			
Retail	**2.08**	2.33	2.13
Commercial	**0.52**	0.26	0.51
	1.26	1.24	1.27
Global Banking and Markets	**0.30**	0.10	0.03
Provisions against impaired loans	**0.49**	0.42	0.40
Provisions against performing loans	**0.01**	0.01	0.00
Total	**0.50%**	0.43%	0.40%

T12 Net charge-offs[1] as a percentage of average loans and acceptances

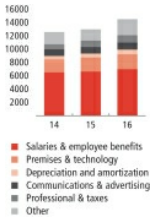
For the fiscal years (%)	2016	2015	2014
Canadian Banking			
Retail	**0.26%**	0.26%	0.21%
Commercial	**0.16**	0.20	0.24
	0.24	0.25	0.21
International Banking			
Retail	**1.90**	1.99	1.66
Commercial	**0.31**	0.30	0.14
	1.06	1.10	0.70
Global Banking and Markets	**0.21**	0.01	0.11
Total	**0.41%**	0.39%	0.33%

(1) Write-offs net of recoveries.

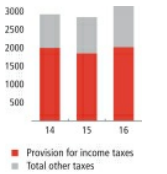
T13 Non-interest expenses and productivity

For the fiscal years ($ millions)	2016	2015	2014	2016 versus 2015
Salaries and employee benefits				
Salaries	$ 4,071	$ 4,019	$ 3,680	1%
Performance-based compensation	1,538	1,438	1,473	7
Share-based payments	243	220	270	10
Other employee benefits	1,173	1,004	1,124	17
	$ 7,025	$ 6,681	$ 6,547	5%
Premises and technology				
Premises				
Net rent	428	433	392	(1)
Property taxes	89	89	82	–
Other premises costs	431	421	415	2
	$ 948	$ 943	$ 889	1%
Technology	$ 1,290	$ 1,143	$ 1,047	13%
	$ 2,238	$ 2,086	$ 1,936	7%
Depreciation and amortization				
Depreciation	325	303	297	7
Amortization of intangible assets	359	281	229	28
	$ 684	$ 584	$ 526	17%
Communications	$ 442	$ 434	$ 417	2%
Advertising and business development	$ 617	$ 592	$ 571	4%
Professional	$ 693	$ 548	$ 471	27%
Business and capital taxes				
Business taxes	356	319	276	12
Capital taxes	47	42	38	12
	$ 403	$ 361	$ 314	12%
Other	$ 2,438	$ 1,755	$ 1,819	39%
Total non-interest expenses	$ 14,540	$ 13,041	$ 12,601	11%
Productivity ratio	55.2%	54.2%	53.4%	

C4 Non-interest expenses
$ millions



C5 Direct and indirect taxes
$ millions



Non-Interest Expenses

Non-interest expenses were $14,540 million, an increase of $1,499 million or 11% from the prior year.

The Bank took a restructuring charge this year of $378 million (refer T1). The restructuring will enable the Bank to enhance its customer experience, drive a digital transformation and improve its productivity. The restructuring charge, recorded in the Other segment, arises from a structural cost reduction program that relates primarily to changes in Canadian Banking and organization-wide structural changes. These strategic efforts will better position the Bank for long-term growth.

Adjusting for the restructuring charge, the increase was $1,121 million or 9%. The increase was driven by acquisitions, higher performance-based compensation, as well as initiative and volume-driven growth in technology, software amortization, professional fees, and deposit insurance. There were also higher employee pension and benefit expenses as last year benefited from lower pension benefit costs related to modifications made to the Bank's main pension plan. These were partly offset by net savings of $55 million realized from structural cost reduction initiatives related to this year's restructuring charge, as well as the reorganization cost incurred in 2015.

The productivity ratio was 55.2%, or 53.7% on an adjusted basis (refer T1), compared to 54.2% in 2015.

Operating leverage was negative 1.9%. Adjusting for the restructuring charge, it was positive 1.0% (refer T1).

Outlook

Non-interest expenses are expected to rise in 2017, after adjusting for the 2016 restructuring charge. This is driven by business growth, ongoing strategic and technology investments as well as higher pension and benefit expenses. The growth will be partly offset by savings from structural cost reduction initiatives.

Income Taxes

The provision for income taxes was $2,030 million, an increase from $1,853 million last year. The Bank's overall effective tax rate for the year was 21.6% compared to 20.4% for 2015. The increase in the effective tax rate was due primarily to lower tax-exempt income and higher taxes in foreign jurisdictions this year.

Outlook

The Bank's consolidated effective tax rate is expected to be in the range of 22% to 25% in 2017.

Financial Results Review: 2015 vs. 2014

In order to identify key business trends between 2015 and 2014, commentary and the related financial results are below.

Net income

The Bank had net income of $7,213 million in 2015, compared to $7,298 million in 2014 and diluted earnings per share (EPS) of $5.67 compared to $5.66 in 2014. Return on equity was 14.6% compared to 16.1% in 2014.

The 2015 net income was positively impacted by an increase in net interest income, the favourable impact of foreign currency translation and lower income taxes. Mostly offsetting these positive impacts were higher provision for credit losses and higher non-interest expenses. The 2015 net income included the following, largely offsetting items, comprised of a reduction in the pension benefit accrual related to modifications made to the Bank's main pension plan of $204 million pre-tax ($151 million after tax; approximately 3% of the pension liability), an increase to the collective allowance against performing loans of $60 million pre-tax ($44 million after tax) to support the growing loan portfolio, and reorganization costs related to the consolidation of Canadian shared services operations of $61 million pre-tax ($45 million after tax). These items were recorded in the Other segment. The 2014 net income was impacted by several notable items (refer T15) totaling a net benefit of $301 million pre-tax or $290 million after tax, or approximately 23 cents per share.

Net interest income

Net interest income increased $787 million or 6% to $13,092 million in 2015, primarily from growth in core banking assets and the favourable impact of foreign currency translation. The core banking margin was stable at 2.39%.

Non-interest income

Non-interest income was $10,957 million, a decrease of $342 million from $11,299 million. The 2014 non-interest income was positively impacted by notable items of $566 million (refer T15). In 2015, increases in wealth management and banking revenues and the positive impact of foreign currency translation were partly offset by lower underwriting and advisory fees and lower net gains on investment securities.

Provision for credit losses

The total provision for credit losses was $1,942 million in 2015, up $239 million from 2014. This was primarily from increased provisions in the Canadian and International retail portfolios, as well as higher Global Banking and Markets corporate loan provisions in Canada and Europe. These higher provisions were partially offset by lower commercial provisions in Canadian Banking. The 2015 provision also included a $60 million increase in the collective allowance against performing loans. The 2014 provision included a notable item of $62 million related to a change in write-off policy on unsecured bankrupt retail accounts in Canada.

Non-interest expenses

Non-interest expenses were $13,041 million in 2015, an increase of $440 million or 3% over 2014. The increase reflects higher technology, business development and reorganization costs and the negative impact of foreign currency translation. These were partly offset by lower pension benefit costs. The 2014 non-interest expenses included notable items of $203 million (refer T15). Operating leverage was negative 1.5% on a reported basis, or negative 0.7% after adjusting for the 2014 notable items.

Provision for income taxes

The provision for income taxes was $1,853 million, a decrease of $149 million from 2014. The Bank's overall effective tax rate for 2015 was 20.4% compared to 21.5% in 2014. The decrease in the effective tax rate was due primarily to higher tax-exempt income and lower earnings in higher tax jurisdictions, partially offset by a lower tax rate on the notable gain in the prior year.

T14 Financial Results Review

For the year ended October 31, 2015 ($ millions) [1]	Canadian Banking	International Banking	Global Banking and Markets	Other[2]	**Total**
Net interest income	$ 6,415	$ 5,706	$ 1,071	$ (100)	**$ 13,092**
Non-interest income	4,832	3,137	2,953	35	**10,957**
Total revenue	$ 11,247	$ 8,843	$ 4,024	$ (65)	**$ 24,049**
Provision for credit losses	687	1,128	67	60	**1,942**
Non-interest expenses	6,014	5,095	1,846	86	**13,041**
Income tax expense	1,202	568	558	(475)	**1,853**
Net income	$ 3,344	$ 2,052	$ 1,553	$ 264	**$ 7,213**
Net income attributable to non-controlling interests	–	199	–	–	**199**
Net income attributable to equity holders of the Bank	$ 3,344	$ 1,853	$ 1,553	$ 264	**$ 7,014**

(1) Taxable equivalent basis. Refer to Glossary.
(2) Includes all other smaller operating segments, including Group Treasury, and corporate adjustments, such as the elimination of the tax-exempt income gross-up reported in net interest income, non-interest income and provision for income taxes for the year ended October 31, 2015 – $390 to arrive at the amounts reported in Consolidated Statement of income, and differences in the actual amount of costs incurred and charged to the operating segments.

For the year ended October 31, 2014 ($ millions) [1]	Canadian Banking	International Banking	Global Banking and Markets	Other[2]	Total
Net interest income	$ 5,996	$ 5,155	$ 1,064	$ 90	**$ 12,305**
Non-interest income	5,263	2,945	3,167	(76)	**11,299**
Total revenue	$ 11,259	$ 8,100	$ 4,231	$ 14	**$ 23,604**
Provision for credit losses	663	1,024	16	–	**1,703**
Non-interest expenses	5,799	4,690	1,880	232	**12,601**
Income tax expense	1,113	544	665	(320)	**2,002**
Net income	$ 3,684	$ 1,842	$ 1,670	$ 102	**$ 7,298**
Net income attributable to non-controlling interests	1	226	–	–	**227**
Net income attributable to equity holders of the Bank	$ 3,683	$ 1,616	$ 1,670	$ 102	**$ 7,071**

(1) Taxable equivalent basis. Refer to Glossary.
(2) Includes all other smaller operating segments, including Group Treasury and corporate adjustments, such as the elimination of the tax-exempt income gross-up reported in net interest income, non-interest income and provision for income taxes for the year ended October 31, 2014 – $354 million to arrive at the amounts reported in Consolidated Statement of Income, and differences in the actual amount of costs incurred and charged to the operating segments.

2014 Notable Items

There were several notable items in 2014 totaling a net benefit of $290 million ($301 million pre-tax), or approximately 23 cents per share as outlined in the table below.

T15 2014 Notable items

		2014		
For the year ended October 31 ($ millions, except EPS)	Notes	Pre-tax	After-tax	EPS Impact
Gain on sale				
Sale of holdings in CI Financial Corp.	1	$ 643	$ 555	$ 0.45
Provision for credit losses				
Unsecured bankrupt retail accounts in Canada	2	(62)	(46)	(0.04)
Valuation adjustments				
Funding valuation adjustment	3	(30)	(22)	(0.02)
Revaluation of monetary assets in Venezuela	4	(47)	(47)	(0.04)
Legal provisions	5	(55)	(40)	(0.03)
Sub-total		449	400	0.32
Restructuring charges	6	(148)	(110)	(0.09)
Total		$ 301	$ 290	$ 0.23
By Business line				
Canadian Banking		$ 506	$ 453	
International Banking		(81)	(74)	
Global Banking and Markets		(38)	(27)	
Other		(86)	(62)	
Total		$ 301	$ 290	$ 0.23
By Consolidated Statement of Income line				
Trading revenues		$ (30)	$ (22)	
Other income		596	508	
Non-interest income		566	486	
Provision for credit losses		(62)	(46)	
Non-interest expenses		(203)	(150)	
Total		$ 301	$ 290	$ 0.23

Notes

Q3 2014 items

(1) Sale of majority of Bank's holding in CI Financial Corp.

The Bank sold a majority of its holding in CI Financial Corp. resulting in a $643 million pre-tax gain ($555 million after tax), or 45 cents per share. This included an unrealized gain of $174 million pre-tax, or $152 million after tax, on the reclassification of the Bank's remaining investment to available-for-sale securities.

Q4 2014 items

(2) Provision for credit losses

The Bank changed its write-off policy on unsecured bankrupt retail accounts in Canada in order to accelerate write-offs upon notification of a bankruptcy filing. As a result, a charge of $62 million ($46 million after tax) was recorded.

(3) Funding valuation adjustment

The Bank enhanced the fair value methodology and recognized a funding valuation adjustment (FVA) charge of $30 million ($22 million after tax), to reflect the implied funding cost on uncollateralized derivative instruments.

(4) Venezuela

Venezuela was designated as hyper-inflationary and measures of exchange controls have been imposed by the Venezuelan government. These restrictions have limited the Bank's ability to repatriate cash and dividends out of Venezuela.

The Bank's Venezuelan Bolivar (VEF) exposures include its investment in Banco del Caribe, and unremitted dividends and other cash amounts ("monetary assets") in Venezuela. As at October 31, 2014, the Bank remeasured its net investment and monetary assets at the SICAD II rate (1 USD to 50 VEF). As a result, the Bank recorded a charge of $47 million in the Consolidated Statement of Income representing the revaluation impact on the monetary assets and a reduction in carrying value of the net investment of $129 million has been charged to Other Comprehensive Income.

(5) Legal provision

The Bank recorded a legal provision of approximately $55 million ($40 million after tax) related to certain ongoing legal claims.

(6) Restructuring charges

The Bank recorded a restructuring charge of $148 million ($110 million after tax), the majority relating to employee severance charges. These charges will drive greater operational efficiencies. In Canada, the charges relate to recent initiatives to centralize and automate several mid-office branch functions, as well as reductions in required wealth management operational support. In International Banking, the charges are primarily for closing or downsizing approximately 120 branches, which will allow us to focus on high-growth markets, minimize branch overlap, and realize synergies resulting from recent acquisitions. The Bank also made a series of changes to simplify its leadership structure and operating model, recorded in the Other segment.

Fourth Quarter Review

T16 Fourth Quarter Financial Results

	For the three months ended		
($ millions)	**October 31 2016**	July 31 2016	October 31 2015
Net Interest income	**$ 3,653**	$ 3,602	$ 3,371
Non-interest income	**3,098**	3,038	2,754
Total revenue	**6,751**	6,640	6,125
Provision for credit losses	**550**	571	551
Non-interest expenses	**3,650**	3,505	3,286
Income tax expense	**540**	605	445
Net income	**$ 2,011**	$ 1,959	$ 1,843
Net income attributable to non-controlling interests in subsidiaries	**$ 72**	$ 62	$ 60
Net income attributable to equity holders of the Bank	**$ 1,939**	$ 1,897	$ 1,783
Preferred shareholders	**31**	37	29
Common shareholders	**$ 1,908**	$ 1,860	$ 1,754

Q4 2016 vs. Q4 2015

Net income

Net income was $2,011 million, an increase of $168 million or 9%. Strong asset growth and higher capital markets revenues were partly offset by higher non-interest expenses and income taxes.

Net interest income

Net interest income was $3,653 million, an increase of $282 million or 8%. The increase was attributable primarily to growth in retail and commercial loans in International Banking, credit cards, automotive loans and residential mortgages in Canadian Banking, and corporate loans in Global Banking and Markets.

The core banking margin was 2.40%, up five basis points driven by higher margins across all business lines, partially offset by lower contribution from asset/liability management activities in the Other segment.

Non-interest income

Non-interest income of $3,098 million was up $344 million or 12%. This was driven by higher banking fees, wealth management and trading revenues, underwriting and other advisory fees and net income from investments in associated corporations. Gains on sale of real estate were largely offset by lower net gains on investment securities.

Provision for credit losses

The provision for credit losses was $550 million, down $1 million. Last year's increase in collective allowance against performing loans of $60 million was mostly offset by higher provisions in Canadian Banking and International Banking.

Non-interest expenses

Non-interest expenses increased by $364 million or 11% to $3,650 million. Last year benefited from lower pension benefit costs, partly offset by the reorganization costs relating to Canadian shared services. The increase was primarily due to higher performance and stock-based compensation, acquisitions and continued investments in the business, including technology and professional expenses. This was partly offset by the favourable impact of foreign currency translation and savings from structural cost reduction initiatives.

The productivity ratio was 54.1%, compared to 53.6%.

Income taxes

The tax rate was 21.2% compared to 19.4%, due primarily to lower tax-exempt income.

Q4 2016 vs. Q3 2016

Net income

Net income was $2,011 million, an increase of $52 million or 3% over the prior quarter. Higher revenues, lower provision for credit losses and lower income taxes, were partly offset by higher non-interest expenses.

Net interest income

Net interest income was $3,653 million, an increase of $51 million or 1%. The increase was attributable to asset growth primarily in residential mortgages and automotive loans in Canadian Banking, and retail loans in International Banking.

The core-banking margin was 2.40%, up two basis points, mostly from higher margins in Canadian Banking and Global Banking and Markets.

Non-interest income

Non-interest income was $3,098 million, up $60 million or 2%. Higher banking and wealth management revenues and contributions from associated corporations were partly offset by lower underwriting and advisory fees. Gains on sale of real estate were offset by lower net gains on investment securities.

Provision for credit losses

The provision for credit losses was $550 million, a decline from $571 million, due primarily to lower provisions in International Banking.

Non-interest expenses and productivity

Non-interest expenses were up $145 million or 4%. This was mainly due to continued investments in the business, including technology and professional fees, and higher seasonal marketing expenses.

The productivity ratio was 54.1% compared to 52.8%.

Income taxes

The effective tax rate was 21.2% compared to 23.6%, due primarily to higher taxes in certain foreign jurisdictions in the previous quarter.

Trending Analysis

T17 Quarterly financial highlights

	For the three months ended							
($ millions)	**October 31 2016**	July 31 2016	April 30 2016	January 31 2016	October 31 2015	July 31 2015	April 30 2015	January 31 2015
Net interest income	**$ 3,653**	$ 3,602	$ 3,518	$ 3,519	$ 3,371	$ 3,354	$ 3,198	$ 3,169
Non-interest income	**3,098**	3,038	3,076	2,846	2,754	2,770	2,739	2,694
Total revenue	**$ 6,751**	$ 6,640	$ 6,594	$ 6,365	$ 6,125	$ 6,124	$ 5,937	$ 5,863
Provision for credit losses	**550**	571	752	539	551	480	448	463
Non-interest expenses	**3,650**	3,505	3,817	3,568	3,286	3,334	3,224	3,197
Income tax expense	**540**	605	441	444	445	463	468	477
Net income	**$ 2,011**	$ 1,959	$ 1,584	$ 1,814	$ 1,843	$ 1,847	$ 1,797	$ 1,726
Basic earnings per share ($)	**1.58**	1.55	1.24	1.44	1.46	1.46	1.43	1.36
Diluted earnings per share ($)	**1.57**	1.54	1.23	1.43	1.45	1.45	1.42	1.35

Net income

The Bank recorded strong net income over the past eight quarters. The second quarter of 2016 was impacted by a restructuring charge of $378 million pre-tax, or $278 million after tax.

Net interest income

Net interest income rose throughout the year. Core banking assets increased steadily during 2016 from continuing growth in Latin America, and retail loan growth in Canadian Banking, corporate loan growth in Global Banking and Markets, as well as the benefit from the impact of foreign currency translation. The average balance of low-spread deposits with banks has declined since the fourth quarter of last year.

The core banking margin for the year was 2.38%, a one basis point decrease from last year. The margin was stable for the first three quarters, and increased by five basis points in the fourth quarter.

Canadian Banking's margin improved during the year mainly from growth in higher spread products, including credit cards and consumer automotive. International Banking's margin increased in each of the first three quarters, but declined slightly in the fourth quarter due to lower spreads in Chile, Peru and the Caribbean. The banking margin in Global Banking and Markets increased each quarter during the year mainly due to higher deposit interest and loan amortization fees, partly offset by lower spreads in the U.S. and Asia corporate loan portfolios. Lower contributions from asset/liability management activities and higher funding costs in the Other segment had a dampening effect on the margin.

Non-interest income

Non-interest revenues grew during the first two quarters, declined in the third and rebounded in the fourth quarter. Banking revenues trended upward during the year with strong growth in card fees in Canadian and International Banking. Mutual fund fees and retail brokerage fees were strong in the first quarter, but dropped back in the second before climbing steadily through the second half of the year. Trading revenues recovered in the last three quarters of the year, from the low levels experienced at the end of last year and the first quarter of the current year. The level of net gains on investment securities reflected market opportunities.

Provision for credit losses

Provision for credit losses peaked in the second quarter, primarily in the energy sector, with declines in the third and fourth quarters. Loan loss ratios in Canadian Banking increased slightly in the first three quarters, and declined by one basis point in the last quarter of the year. Overall provisions were up slightly from last year due mainly to an increased mix of consumer loan and credit card volumes. International Banking provisions peaked in the second quarter, and then declined in both the third and fourth quarters. The provision for credit losses in Global Banking and Markets was impacted by softness in the energy sector, with increases in both the first and second quarters, before returning to more normalized levels in the second half of the year.

Non-interest expenses

Non-interest expenses increased during the year. This was in part due to the impact of acquisitions, continued investment in growth initiatives, and volume-related technology expenses. The restructuring charge taken in the second quarter and timing-related expenses, such as share and performance-based compensation as well as advertising and business development costs, contributed to the quarterly fluctuations.

Income taxes

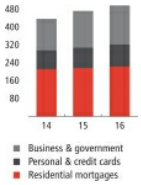
The effective tax rate ranged between 19.4% and 23.6% reflecting different levels of income earned in lower tax jurisdictions, as well as the fluctuation of tax-exempt dividend income.

GROUP FINANCIAL CONDITION

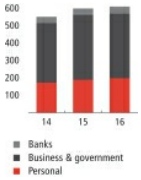
T18 Condensed statement of financial position

As at October 31 ($ billions)	2016	2015	2014
Assets			
Cash, deposits with financial institutions and precious metals	**$ 54.8**	$ 84.5	$ 64.0
Trading assets	**108.6**	99.1	113.2
Securities purchased under resale agreements and securities borrowed	**92.1**	87.3	93.9
Investment securities	**72.9**	43.2	38.7
Loans	**480.2**	458.6	424.3
Other	**87.7**	83.8	71.6
Total assets	**$ 896.3**	$ 856.5	$ 805.7
Liabilities			
Deposits	**$ 611.9**	$ 600.9	$ 554.0
Obligations related to securities sold under repurchase agreements and securities lent	**97.1**	77.0	89.0
Other liabilities	**121.8**	118.9	108.6
Subordinated debentures	**7.6**	6.2	4.9
Total liabilities	**$ 838.4**	$ 803.0	$ 756.5
Equity			
Common equity	**52.7**	49.1	45.0
Preferred shares	**3.6**	2.9	2.9
Non-controlling interests in subsidiaries	**1.6**	1.5	1.3
Total equity	**$ 57.9**	$ 53.5	$ 49.2
Total liabilities and shareholders' equity	**$ 896.3**	$ 856.5	$ 805.7

C6 Loan portfolio
loans & acceptances, $ billions, as at October 31



C7 Deposits
$ billions, as at October 31



Statement of Financial Position

Assets

The Bank's total assets as at October 31, 2016 were $896 billion, up $40 billion or 5% from October 31, 2015. This growth was primarily in loans and trading assets, while higher investment securities were offset by lower deposits with financial institutions.

Cash and deposits with financial institutions decreased $28 billion due primarily to lower balances with the U.S. Federal Reserve. Securities purchased under resale agreements and securities borrowed increased $5 billion.

Trading assets increased $9 billion or 10% from October 31, 2015, due primarily to an increase in trading securities from higher holdings of Canadian and U.S. government debt and common equities.

Investment securities increased $30 billion or 69% from October 31, 2015, due primarily to an increase in held-to-maturity securities. As of October 31, 2016, the unrealized gain on available-for-sale securities, after the impact of qualifying hedges, decreased $241 million to $26 million due mainly to realized gains on disposals.

Loans increased $22 billion or 5% from October 31, 2015. Residential mortgages increased $5 billion, mainly in Canada and Latin America. Personal and credit card loans rose $8 billion, due mainly to organic growth in Canada and Latin America and the acquisition of the Canadian credit card portfolio from JPMorgan Chase Bank. Business and government loans were up $9 billion across all business lines.

Liabilities

Total liabilities were $838 billion as at October 31, 2016, up $35 billion or 4% from October 31, 2015.

Total deposits increased $11 billion. Personal deposits grew by $9 billion mainly in Canada and Latin America.

Obligations related to securities sold under repurchase agreements and securities lent increased by $20 billion, mostly in line with higher trading securities and securities purchased under resale agreements.

Equity

Total shareholders' equity increased $4,342 million from October 31, 2015. This increase was driven by current year earnings of $7,368 million, the issuance of common shares of $391 million mainly through the Dividend Reinvestment Plan and the exercise of options, and a net increase in preferred shares of $660 million. This was partially offset by dividends paid of $3,598 million, distributions to non-controlling interests of $116 million, other comprehensive loss of $229 million due primarily to an increase in the net pension obligation from a lower rate environment, as well as, the repurchase and cancellation of approximately 1.5 million common shares for $80 million under the Normal Course Issuer Bid program.

Outlook

Assets and deposits are expected to continue to grow in 2017 across all business lines. In Canada, while growth in residential mortgages is expected to remain moderate, other retail and commercial lending should continue to have good growth. Internationally, lending assets and personal deposits are expected to grow with stronger growth in the Pacific Alliance countries.

Capital Management

Overview

Scotiabank is committed to maintaining a strong capital base to support the risks associated with its diversified businesses. Strong capital levels contribute to safety for the Bank's customers, foster investor confidence and support strong credit ratings. It also allows the Bank to take advantage of growth opportunities as they arise and enhance shareholder returns through increased dividends. The Bank's capital management framework includes a comprehensive internal capital adequacy assessment process (ICAAP), aimed at ensuring that the Bank's capital is adequate to meet current and future risks and achieve its strategic objectives. Key components of the Bank's ICAAP include sound corporate governance; creating a comprehensive risk appetite for the Bank; managing and monitoring capital, both currently and prospectively; and utilizing appropriate financial metrics which relate risk to capital, including internal capital and regulatory capital measures.

Governance and oversight

The Bank has a sound capital management framework to measure, deploy and monitor its available capital and assess its adequacy. Capital is managed in accordance with the Board-approved Capital Management Policy. In addition, the Board reviews and approves the Bank's annual capital plan. The Asset-Liability Committee and senior executive management provide governance over the capital management process. The Bank's Finance, Treasury and Global Risk Management groups take a coordinated approach to implementing the Bank's capital plan.

Risk appetite

The risk appetite framework that establishes enterprise wide risk tolerances in addition to capital targets are detailed in the Risk Management section "Risk appetite framework". The framework encompasses medium term targets with respect to regulatory capital thresholds, earnings and other risk-based parameters. These targets ensure the Bank achieves the following overall objectives: exceed regulatory and internal capital targets, manage capital levels commensurate with the risk profile of the Bank, maintain strong credit ratings and provide the Bank's shareholders with acceptable returns.

Regulatory capital

Effective November 1, 2012, Canadian banks are subject to the revised capital adequacy requirements as published by the Basel Committee on Banking Supervision (BCBS) and commonly referred to as Basel III. Basel III builds on the "International Convergence of Capital Measurement and Capital Standards: A Revised Framework" (Basel II). Under Basel III, there are three primary risk-based regulatory capital ratios used to assess capital adequacy; Common Equity Tier 1 (CET1), Tier 1 and Total capital ratios, which are determined by dividing those capital components by risk-weighted assets. Basel III also provides guidance on non-viability contingent capital (NVCC). The guidance stipulates that in order to qualify as regulatory capital, non-common share capital instruments must be convertible into common equity upon a trigger event as defined within the guidance. All non-common share capital instruments issued after December 31, 2012, are required to meet these NVCC requirements to qualify as regulatory capital.

To enable banks to meet the new standards, the BCBS Basel III rules contain transitional arrangements commencing January 1, 2013, through January 1, 2019. Transitional requirements result in a five year phase-in of new deductions and additional components to common equity. Non-qualifying non-common capital instruments are being phased-out over 10 years and the capital conservation buffer is being phased-in over four years. As of January 2019, banks will be required to meet new minimum requirements related to risk-weighted assets of: CET1 ratio of 4.5% plus a capital conservation buffer of 2.5%, collectively 7%, minimum Tier 1 ratio of 8.5%, and Total capital ratio of 10.5%.

The Office of the Superintendent of Financial Institutions, Canada (OSFI) has issued guidelines, reporting requirements and disclosure guidance which are consistent with the Basel III reforms, except for its deferral of the Basel III credit valuation adjustment (CVA) related capital charges, requiring they be phased-in over a five year period, beginning January 2014. In accordance with OSFI's requirements, during 2016, the scalars for CVA risk-weighted assets of 0.64, 0.71 and 0.77 were used to compute the CET1, Tier 1 and Total capital ratios, respectively (October 31, 2015 – scalars of 0.64, 0.71 and 0.77, respectively). The scalars will increase to 0.72, 0.77 and 0.81, respectively, effective in the first quarter of 2017.

Commencing the first quarter of 2013, OSFI required Canadian deposit-taking institutions to fully implement the 2019 Basel III reforms, without the transitional phase-in provisions for capital deductions (referred to as 'all-in') and achieve minimums of 7%, 8.5% and 10.5% for CET1, Tier 1 and Total Capital ratios, respectively. OSFI has also designated the Bank a domestic systemically important bank (D-SIB), increasing its minimum capital ratio requirements by 1% across all tiers of capital effective January 1, 2016, in line with the requirements for global systemically important banks.

Regulatory developments related to capital

In addition to risk-based capital requirements, the Basel III reforms introduced a simpler, non risk-based Leverage ratio requirement to act as a supplementary measure to its risk-based capital requirements. The Leverage ratio is defined as a ratio of Basel III Tier 1 capital to a leverage exposure measure which includes on-balance sheet assets and off-balance sheet commitments, derivatives and securities financing transactions, as defined within the requirements. In January 2014, the BCBS issued revisions to the Basel III Leverage ratio framework noting that the final calibration of the Leverage ratio will be completed by 2017.

In 2014, OSFI released its Basel III Leverage Ratio Requirements Guideline and Public Disclosure Requirements which outlines the application and disclosure of the Basel III Leverage ratio in Canada and the replacement of the former Assets-to-Capital Multiple (ACM), effective the first quarter of 2015. Institutions are expected to maintain a material operating buffer above the 3% minimum.

In April 2016, OSFI published a consultative paper proposing updates to the capital requirements for residential mortgage loans in response to evolving risks, such as risks associated with elevated house prices in certain markets, and increasing levels of household debt. The proposed changes include a risk sensitive floor for loss given default (LGD) that will be tied to increases in local property prices and/or to house prices that are high relative to borrower income. This will apply to banks using the advanced internal ratings-based approach to determining risk-weighted assets for residential real estate secured lending. The proposed changes are published as draft requirements and are expected to be implemented in the first quarter of 2017. New mortgage originations, refinances and mortgage renewals will be subject to the new rules on a go-forward basis.

Planning, managing and monitoring capital

Capital is managed and monitored based on planned changes in the Bank's strategy, identified changes in its operating environment or changes in its risk profile. As part of the Bank's comprehensive ICAAP, sources and uses of capital are continuously measured and monitored through financial metrics, including regulatory thresholds, and internal capital. These results are used in capital planning and strategic decision-making.

The Bank's assessment of capital adequacy is in the context of its current position and its expected future risk profile and position relative to its internal targets while considering the potential impact of various stress scenarios. Specific scenarios are selected based on the current economic conditions and business events facing the Bank. In addition, the Bank's forward looking capital adequacy assessment includes a consideration of the results of more severe multi-risk scenarios within its enterprise-wide stress testing. This testing is used to determine the extent to which severe, but plausible events, impact the Bank's capital.

The Bank sets internal regulatory capital targets to ensure the Bank's available capital is sufficient within the context of its risk appetite.

The Bank's internal target includes an adequate buffer over the regulatory minimum ensuring sufficient flexibility for future capital deployment and in consideration of the Bank's risk appetite, the volatility of planning assumptions, the results from stress testing and contingency planning.

The Bank has a comprehensive risk management framework to ensure that the risks taken while conducting its business activities are consistent with its risk appetite, its impact on capital relative to internal targets, and that there is an appropriate balance between risk and return. Refer to the Risk Management section on page 60 for further discussion on the Bank's risk management framework. In managing the Bank's capital base, close attention is paid to the cost and availability of the various types of capital, desired leverage, changes in the assets and risk-weighted assets, and the opportunities to profitably deploy capital. The amount of capital required for the business risks being assumed, and to meet regulatory requirements, is balanced against the goal of generating an appropriate return for the Bank's shareholders.

Capital generation

Capital is generated internally through net earnings after dividend payments. As well, capital is generated by the issuance of common shares, preferred shares, and subordinated debentures, net of redemptions.

Capital utilization

The Bank deploys capital to support sustainable, long-term revenue and net income growth. The growth can be through existing businesses by attracting new customers, increasing cross-selling activities to existing customers, adding new products and enhancing sales productivity, or through acquisitions. All major initiatives to deploy capital are subject to rigorous analysis, validation of business case assumptions and evaluation of expected benefits. Key financial criteria include impact on earnings per share, capital ratios, return on invested capital, expected payback period and internal rate of return based on discounted cash flows. Any potential business acquisitions, investments or strategic initiatives are reviewed and approved by the Bank's Strategic Transaction Executive Committee, to ensure effective deployment of capital.

Regulatory capital ratios

The Bank continues to maintain strong, high quality capital levels which positions it well for future business growth. The Basel III all-in Common Equity Tier 1 (CET1) ratio as at October 31, 2016 was 11.0%. Increases in the CET1 ratio from 2015 were primarily from strong internal capital generation and the prudent management of asset growth during the year.

The Bank's Basel III all-in Tier 1 and Total Capital ratios were 12.4% and 14.6%, respectively, as at October 31, 2016. Tier 1 and Total Capital also benefited from capital issuances during the year.

The Bank's capital ratios continue to be well in excess of OSFI's minimum capital ratio requirements for 2016 (including the 1% D-SIB surcharge) of 8%, 9.5% and 11.5% for CET1, Tier 1 and Total Capital, respectively.

Outlook

The Bank will continue to have a strong capital position in 2017. Capital will be prudently managed to support: organic growth initiatives; selective acquisitions that enhance shareholder returns; and higher capital requirements from evolving accounting and regulatory changes.

T19 Regulatory capital[1]

As at October 31 ($ millions)	Basel III All-in 2016	2015	2014
Common Equity Tier 1 capital			
Total Common Equity	**$ 52,657**	$ 49,085	$ 44,965
Qualifying non-controlling interest in common equity of subsidiaries	**597**	557	514
Goodwill and non-qualifying intangibles, net of deferred tax liabilities[2]	**(11,589)**	(11,018)	(10,482)
Threshold related deductions	**(435)**	(664)	(305)
Net deferred tax assets (excluding those arising from temporary differences)	**(484)**	(539)	(620)
Other Common Equity Tier 1 capital deductions[3]	**(757)**	(456)	(330)
Common Equity Tier 1	**39,989**	36,965	33,742
Preferred shares[4]	**3,594**	2,934	2,934
Capital instrument liabilities – trust securities[4]	**1,400**	1,400	1,400
Other Tier 1 capital adjustments[5]	**83**	67	(3)
Net Tier 1 capital	**45,066**	41,366	38,073
Tier 2 capital			
Subordinated debentures, net of amortization[4]	**7,633**	6,182	4,871
Eligible collective allowance for inclusion in Tier 2 and excess allowance (re: IRB approach)	**528**	486	468
Qualifying non-controlling interest in Tier 2 capital of subsidiaries	**103**	196	180
Other Tier 2 capital adjustments	**–**	–	–
Tier 2 capital	**8,264**	6,864	5,519
Total regulatory capital	**53,330**	48,230	43,592
Risk-weighted assets ($ billions)			
Credit risk	**314.8**	308.0	261.9
Market risk	**10.6**	14.4	17.3
Operational risk	**38.6**	35.6	33.3
CET1 risk-weighted assets[6]	**$ 364.0**	$ 358.0	$ 312.5
Capital ratios[7]			
Common Equity Tier 1	**11.0%**	10.3%	10.8%
Tier 1	**12.4%**	11.5%	12.2%
Total	**14.6%**	13.4%	13.9%
Leverage:			
Leverage exposures[8]	**$ 1,010,987**	$ 980,212	N/A
Leverage ratio[8]	**4.5%**	4.2%	N/A

(1) Effective November 1, 2012, regulatory capital ratios are determined in accordance with Basel III rules on an all-in basis (refer to page 31). Prior period amounts have not been restated for new and amended IFRS standards as they represent the actual amounts reported in that period for regulatory purposes.
(2) Reported amounts are based on OSFI's requirements that goodwill relating to investments in associates be classified as goodwill for regulatory reporting purposes beginning Q3 2014.
(3) Other CET1 capital deductions under Basel III all-in include gains/losses due to changes in own credit risk on fair valued liabilities, pension plan assets and other items.
(4) Non-qualifying Tier 1 and Tier 2 capital instruments are subject to a phase-out period of 10 years.
(5) Other Tier 1 capital adjustments under the all-in approach include eligible non-controlling interests in subsidiaries.
(6) As at October 31, 2016, CVA risk-weighted assets were calculated using scalars of 0.64, 0.71, and 0.77 to compute CET1 , Tier 1 and Total capital ratios, respectively, (scalars of 0.64, 0.71, and 0.77 in 2015).
(7) OSFI designated the Bank as a domestic systemically important bank (D-SIB), increasing its minimum capital ratio requirements by 1% for the identified D-SIBs. This 1% surcharge was applicable to all minimum capital ratio requirements for CET1, Tier 1 and Total Capital, by January 1, 2016, in line with the requirements for global systemically important banks.
(8) Effective November 1, 2014, the leverage ratio replaced the assets-to-capital multiple.

T20 Changes in regulatory capital[1]

For the fiscal years ($ millions)	Basel III All-in 2016	2015	2014
Total capital, beginning of year	**$ 48,230**	$ 43,592	$ 38,841
Changes in Common Equity Tier 1			
Net income attributable to common equity holders of the Bank	**6,987**	6,897	6,916
Dividends paid to equity holders of the Bank	**(3,468)**	(3,289)	(3,110)
Shares issued	**391**	104	771
Shares repurchased/redeemed	**(80)**	(955)	(320)
Gains/losses due to changes in own credit risk on fair valued liabilities	**(2)**	(158)	
Movements in accumulated other comprehensive income, excluding cash flow hedges	**(472)**	1,451	410
Change in non-controlling interest in common equity of subsidiaries	**40**	43	35
Change in goodwill and other intangible assets (net of related tax liability) [2]	**(571)**	(535)	(710)
Other changes including regulatory adjustments below:	**199**	(335)	3,391
– Deferred tax assets that rely on future profitability (excluding those arising from temporary differences)	**55**	81	132
– Significant investments in the common equity of other financial institutions (amount above 10% threshold)	**61**	(317)	2,583
– Other capital deductions	**126**	44	941
– Other	**(43)**	(143)	(265)
Changes in Common Equity Tier 1	**$ 3,024**	$ 3,223	$ 7,383
Changes in Additional Tier 1 Capital			
Issued	**1,350**	–	–
Redeemed	**(690)**	–	(1,150)
Other changes including regulatory adjustments and phase-out of non-qualifying instruments	**16**	70	(74)
Changes in Additional Tier 1 Capital	**$ 676**	$ 70	$ (1,224)
Changes in Tier 2 Capital			
Issued	**2,502**	1,250	–
Redeemed	**(1,035)**	–	(970)
Collective allowances eligible for inclusion in Tier 2 and Excess Allowance under AIRB	**42**	17	(502)
Other changes including regulatory adjustments and phase-out of non-qualifying instruments	**(109)**	78	64
Changes in Tier 2 Capital	**$ 1,400**	$ 1,345	$ (1,408)
Total capital generated (used)	**$ 5,100**	$ 4,638	$ 4,751
Total capital, end of year	**$ 53,330**	$ 48,230	$ 43,592

(1) Effective November 1, 2012, regulatory capital ratios are determined in accordance with Basel III rules on an all-in basis (refer to page 31). Prior period amounts have not been restated for new and amended IFRS standards as they represent the actual amounts reported in that period for regulatory capital.
(2) Reported amounts are based on OSFI's requirements that goodwill relating to investments in associates be classified as goodwill for regulatory reporting purposes beginning Q3 2014.

Regulatory capital components

The Bank's regulatory capital is divided into three components – Common Equity Tier 1 (CET1), Tier 1 capital and Tier 2 capital, depending on their degree of permanency and loss absorbency. All components of capital provide support for banking operations and protect depositors.

CET1 consists primarily of common shareholders' equity, a proration of non-controlling interests, and regulatory deductions. These regulatory deductions include goodwill, intangible assets (net of deferred tax liabilities), deferred tax assets that rely on future profitability, defined-benefit pension fund net assets, shortfall of allowance for credit losses to expected losses and significant investments in the common equity of other financial institutions.

Additional Tier 1 capital consists primarily of qualifying non-cumulative preferred shares or non-qualifying preferred shares and innovative Tier 1 instruments subject to phase-out. Tier 2 capital consists mainly of qualifying or non-qualifying subordinated debentures subject to phase-out and the eligible allowances for credit losses.

The Bank's Common Equity Tier 1 capital was $40.0 billion as at October 31, 2016, an increase of $3.0 billion from the prior year primarily from:

- $3.5 billion growth from internal capital generation;
- $0.3 billion from net common share issuances under the Bank's dividend reinvestment, employee share purchase, and stock option plans; and,
- $0.2 billion from decreases in other regulatory capital adjustments, including capital deductions.

Partly offset by:

- $0.6 billion increases in goodwill and intangibles (net of related tax liability) including the impacts from the acquisition of JP Morgan Canadian Credit Card Business, Citibank Costa Rica and Panama Retail Banking Operations.
- $0.5 billion decrease from movements in Accumulated Other Comprehensive Income, excluding cash flow hedges, primarily from employee benefits and available-for-sale securities partly offset by impacts from foreign currency translation.

The Bank's Tier 1 and Total capital ratios were also impacted by the above changes and the issuances of $1.35 billion of NVCC preferred shares, partly offset by the redemption of $690 million of non-NVCC preferred shares during the year. In addition, Total capital increased mainly due to the issuance of approximately $2.5 billion of NVCC subordinated debentures, partly offset by the $1.0 billion redemption of non-NVCC subordinated debentures during the year.

Dividends

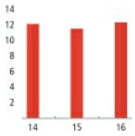
The strong earnings and capital position allowed the Bank to increase its dividends twice in 2016. The annual dividend in 2016 was $2.88, compared to $2.72 in 2015, an increase of 6%. The dividend payout ratio was 49.6% in line with the Bank's Board approved target dividend payout ratio of 40-50%.

T21 Selected capital management activity

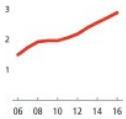
For the fiscal years ($ millions)	2016	2015	2014
Dividends			
Common	**$ 3,468**	$ 3,289	$ 3,110
Preferred	**130**	117	155
Common shares issued [1][2]	**391**	104	771
Common shares repurchased for cancellation under the Normal Course Issuer Bid [2]	**80**	955	320
Preferred shares issued	**1,350**	–	–
Preferred shares redeemed	**690**	–	1,150
Subordinated debentures issued	**2,502**	1,250	–
Maturity, redemption and repurchase of subordinated debentures	**1,035**	20	1,000

(1) Represents primarily cash received for stock options exercised during the year, common shares issued pursuant to the Dividend and Share Purchase Plan and shares issued for acquisitions.
(2) Represents reduction to Common shares and Retained earnings (refer to the Consolidated Statement of Changes in Equity). Prior period amounts have been restated to conform with current period presentation.

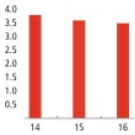
C8 CET1 capital
%, as at October 31



C9 Dividend growth
dollars per share



C10 Internally generated capital
$ billions, for years ended October 31



Normal Course Issuer Bid

During the year ended October 31, 2016, under normal course issuer bids, the Bank repurchased and cancelled approximately 1.5 million common shares (2015 –15.5 million) at an average price of $52.34 per share (2015 – $61.64) for a total amount of approximately $80 million (2015 – $955 million).

On May 31, 2016, the Bank announced that OSFI and the Toronto Stock Exchange (TSX) approved a normal course issuer bid pursuant to which it may repurchase for cancellation up to 12 million of the Bank's common shares, which represented approximately 1% of the Bank's common shares issued and outstanding as of May 26, 2016. Purchases under the new bid commenced on June 2, 2016, and will end on the earlier of June 1, 2017, or the date on which the Bank completes its purchases. On a quarterly basis, the Bank will consult with OSFI prior to making purchases. Under this bid, the Bank has not repurchased any common shares.

On May 29, 2015, the Bank announced that OSFI and the TSX approved its normal course issuer bid pursuant to which it may repurchase for cancellation up to 24 million of the Bank's common shares, which represented approximately 2% of the Bank's common shares issued and outstanding as of May 25, 2015. The bid ended on June 1, 2016. Under this bid, the Bank repurchased and cancelled approximately 9.5 million common shares at an average price of $58.94 per share.

Share data and other capital instruments

The Bank's common and preferred share data, as well as other capital instruments, are shown in T22. Further details, including exchangeability features, are discussed in Note 20 and Note 23 of the Consolidated Financial Statements.

T22 Shares and other instruments

As at October 31, 2016

Share data	Amount ($ millions)	Dividends declared per share	Number outstanding (000s)
Common shares[1]	$ 15,513	$ 2.88	1,207,894
Preferred shares			
Preferred shares Series 16[2]	345	1.312500	13,800
Preferred shares Series 17[2]	230	1.400000	9,200
Preferred shares Series 18[2][3][4]	187	0.837500	7,498
Preferred shares Series 19[2][3][5]	158	0.628938	6,302
Preferred shares Series 20[2][3][6]	201	0.902500	8,039
Preferred shares Series 21[2][3][7]	149	0.541438	5,961
Preferred shares Series 22[2][3][8]	234	0.957500	9,377
Preferred shares Series 23[2][3][9]	66	0.586438	2,623
Preferred shares Series 30[2][3][10]	154	0.455000	6,143
Preferred shares Series 31[2][3][11]	111	0.366438	4,457
Preferred shares Series 32[2][3][12]	279	0.638235	11,162
Preferred shares Series 33[2][3][13]	130	0.334959	5,184
Preferred shares Series 34[2][3][14][15]	350	1.184800	14,000
Preferred shares Series 36[2][3][14][16]	500	0.852350	20,000
Preferred shares Series 38[2][3][14][17]	500	–	20,000

Trust securities	Amount ($ millions)	Distribution	Yield (%)	Number outstanding (000s)
Scotiabank Trust Securities – Series 2006-1 issued by Scotiabank Capital Trust [18a,c,d]	$ 750	28.25	5.650	750
Scotiabank Tier 1 Securities – Series 2009-1 issued by Scotiabank Tier 1 Trust [18b,c,d]	650	39.01	7.802	650

NVCC subordinated debentures	Amount ($ millions)	Interest Rate (%)
Subordinated debentures due March 2027	$ 1,250	2.58
Subordinated debentures due December 2025[19]	750	3.37
Subordinated debentures due December 2025[20]	US$ 1,250	4.50

Options	Number outstanding (000s)
Outstanding options granted under the Stock Option Plans to purchase common shares [1][21]	19,852

(1) Dividends on common shares are paid quarterly, if and when declared. As at November 18, 2016, the number of outstanding common shares and options was 1,208,151 thousand and 19,594 thousand, respectively.
(2) These preferred shares are entitled to non-cumulative preferential cash dividends payable quarterly.
(3) These preferred shares have conversion features (refer to Note 23 of the Consolidated Financial Statements for further details).
(4) Subsequent to the initial five-year fixed rate period which ended on April 25, 2013, and resetting every five years thereafter, the dividends, if and when declared, will be determined by the sum of the five-year Government of Canada Yield plus 2.05%, multiplied by $25.00.
(5) Dividends, if and when declared, are determined by the sum of the three-month Government of Canada Treasury Bill Yield plus 2.05%, multiplied by $25.00, which will be reset quarterly.
(6) Subsequent to the initial five-year fixed rate period which ended on October 25, 2013, and resetting every five years thereafter, the dividends, if and when declared, will be determined by the sum of the five-year Government of Canada Yield plus 1.70%, multiplied by $25.00.
(7) Dividends, if and when declared, are determined by the sum of the three-month Government of Canada Treasury Bill Yield plus 1.70%, multiplied by $25.00, which will be reset quarterly.
(8) Subsequent to the initial five-year fixed rate period which ended on January 25, 2014, and resetting every five years thereafter, the dividends, if and when declared, will be determined by the sum of the five-year Government of Canada Yield plus 1.88%, multiplied by $25.00.
(9) Dividends, if and when declared, are determined by the sum of the three-month Government of Canada Treasury Bill Yield plus 1.88%, multiplied by $25.00, which will be reset quarterly.
(10) Subsequent to the initial five-year fixed rate period which ended on April 25, 2015, and resetting every five years thereafter, the dividends, if and when declared, will be determined by the sum of the five-year Government of Canada Yield plus 1.00%, multiplied by $25.00.
(11) Dividends, if and when declared, are determined by the sum of the three-month Government of Canada Treasury Bill Yield plus 1.00%, multiplied by $25.00, which will be reset quarterly.
(12) Subsequent to the initial five-year fixed rate period which ended on February 1, 2016, and resetting every five years thereafter, the dividends, if and when declared, will be determined by the sum of the five-year Government of Canada Yield plus 1.34%, multiplied by $25.00.
(13) Dividends, if and when declared, are determined by the sum of the three-month Government of Canada Treasury Bill Yield plus 1.34%, multiplied by $25.00, which will be reset quarterly.
(14) These preferred shares contain Non-Viability Contingent Capital (NVCC) provisions necessary for the shares to qualify as Tier 1 regulatory capital under Basel III. Refer to Note 23 of the Consolidated Financial Statements.
(15) On December 17, 2015, the Bank issued 14,000 thousand Non-cumulative 5-Year Rate Reset Preferred Shares Series 34 (NVCC) for $350 million. Dividends, if and when declared, are for the initial five-year period ending on April 25, 2021. Subsequent to the initial five-year fixed rate period, and resetting every five years thereafter, the dividends will be determined by the sum of the five-year Government of Canada Yield plus 4.51%, multiplied by $25.00.
(16) On March 14, 2016, the Bank issued 20,000 thousand Non-cumulative 5-Year Rate Reset Preferred Shares Series 36 (NVCC) for $500 million. Dividends, if and when declared, are for the initial five-year period ending on July 25, 2021. Subsequent to the initial five-year fixed rate period, and resetting every five years thereafter, the dividends will be determined by the sum of the five-year Government of Canada Yield plus 4.72%, multiplied by $25.00.
(17) On September 16, 2016, the Bank issued 20,000 thousand Non-cumulative 5-Year Rate Reset Preferred Shares Series 38 (NVCC) for $500 million. The initial dividend, if and when declared, will be payable on January 27, 2017. Dividends, if and when declared are for the initial five-year period ending on January 26, 2022. Subsequent to the initial five-year fixed rate period, and resetting every five years thereafter, the dividends will be determined by the sum of the five-year Government of Canada Yield plus 4.19%, multiplied by $25.00.
(18)(a) On September 28, 2006, Scotiabank Capital Trust issued 750,000 Scotiabank Trust Securities – Series 2006-1 (Scotia BaTS II Series 2006-1). The holders of Scotia BaTS II Series 2006-1 are entitled to receive non-cumulative fixed cash distributions payable semi-annually in an amount of $28.25 per security. With regulatory approval, these securities may be redeemed in whole upon the occurrence of certain tax or regulatory capital changes, or in whole or in part on December 30, 2011 and on any distribution date thereafter at the option of Scotiabank Capital Trust. The holder has the right at any time to exchange their security into Non-cumulative Preferred Shares Series S of the Bank. The Series S shares will be entitled to cash dividends payable semi-annually in an amount of $0.4875 per $25.00 share [refer to Note 23 – Restrictions on dividend payments]. Under the circumstances outlined in 18(c) below, the Scotia BaTS II Series 2006-1 would be automatically exchanged without the consent of the holder, into Non-cumulative Preferred Shares Series T of the Bank. The Series T shares will be entitled to non-cumulative cash dividends payable semi-annually in an amount of $0.625 per $25.00 share. If there is an automatic exchange of the Scotia BaTS II Series 2006-1 into Preferred Shares Series T of the Bank, then the Bank would become the sole beneficiary of the Trust.
(18)(b) On May 7, 2009, Scotiabank Tier 1 Trust issued 650,000 Scotiabank Tier 1 Securities Series 2009-1 (Scotia BaTS III Series 2009-1). Interest is payable semi-annually in an amount of $39.01 per Scotia BaTS III Series 2009-1 on the last day of June and December until June 30, 2019. After June 30, 2019 and on every fifth anniversary thereafter until June 30, 2104, the interest rate on the Scotia BaTS III Series 2009-1 will be reset at an interest rate per annum equal to the then prevailing 5-year Government of Canada Yield plus 7.05%. On or after June 30, 2014, the Trust may, at its option redeem the Scotia BaTS III Series 2009-1, in whole or in part, subject to regulatory approval. Under the circumstances outlined in 18(c) below, the Scotia BaTS III Series 2009-1, including accrued and unpaid interest thereon, would be exchanged automatically without the consent of the holder, into newly issued Non-cumulative Preferred Shares Series R of the Bank. In addition, in certain circumstances, holders of Scotia BaTS III Series 2009-1 may be required to invest interest paid on the Scotia BaTS III Series 2009-1 in a series of newly-issued preferred shares of the Bank with non-cumulative dividends (each such series is referred to as Bank Deferral Preferred Shares). If there is an automatic exchange of the Scotia BaTS Preferred Shares, then the Bank would become the sole beneficiary of the Trust.

(18)(c) The Scotia BaTS II Series 2006-1 and Scotia BaTS III Series 2009-1 may be automatically exchanged, without the consent of the holder, into Non-cumulative Preferred Shares of the Bank in the following circumstances: (i) proceedings are commenced for the winding-up of the Bank; (ii) the Superintendent takes control of the Bank or its assets; (iii) the Bank has a Tier 1 Capital ratio of less than 5% or a Total Capital ratio of less than 8%; or (iv) the Superintendent has directed the Bank to increase its capital or provide additional liquidity and the Bank elects such automatic exchange or the Bank fails to comply with such direction.

(18)(d) No cash distributions will be payable on the Scotia BaTS II Series 2006-1 and Scotia BaTS III Series 2009-1 in the event that the regular dividend is not declared on the Bank's preferred shares and, if no preferred shares are outstanding, the Bank's common shares. In such a circumstance the net distributable funds of the Trust will be payable to the Bank as the holder of the residual interest in the Trust. Should the Trust fail to pay the semi-annual distributions on the Scotia BaTS II Series 2006-1 and Scotia BaTS III Series 2009-1 in full, the Bank will not declare dividends of any kind on any of its preferred or common shares for a specified period of time [refer to Note 23 – Restrictions on dividend payments].

(19) On December 8, 2015, the Bank issued $750 million subordinated debentures (NVCC) due December 8, 2025.

(20) On December 16, 2015, the Bank issued US$1.25 billion subordinated debentures (NVCC) due December 16, 2025.

(21) Included are 57,800 stock options with tandem stock appreciation rights (Tandem SAR) features.

Credit ratings

Credit ratings are one of the factors that affect the Bank's access to capital markets and borrowing costs, as well as the terms on which the Bank can conduct derivatives and hedging transactions and obtain related borrowings. The credit ratings and outlook that the rating agencies assign to the Bank are based on their own views and methodologies.

The Bank continues to have strong credit ratings and is rated AA by DBRS, Aa3 by Moody's, AA- by Fitch and A+ by Standard and Poor's (S&P).

On December 11, 2015, S&P affirmed the Bank's A+ rating for deposits and senior debt, as well as the A-1 rating for short-term instruments. The Bank's outlook was changed to stable from negative. The outlook change was predicated on S&P's belief that the potential negative ratings impact from the proposed bail-in regime has subsided, with a view that the implementation timetable could be two years or more to 2018 or later.

On January 25, 2016, Moody's downgraded the Bank's long-term ratings by one notch to Aa3 from Aa2, while affirming the Bank's short-term deposit rating of P-1.

On August 22, 2016, DBRS confirmed the Bank's long and short-term rating of AA and R-1 (high), respectively.

On October 27, 2016, Fitch affirmed the Bank's long and short-term rating of AA- and F1+, respectively.

Fitch and S&P have a stable outlook on the Bank. Meanwhile, DBRS and Moody's continue to maintain their negative outlook for all Canadian banks citing the uncertainty around the federal government's proposed new bail-in regime for senior unsecured debt, to reflect the greater likelihood that such debt may incur losses in the unlikely event of a distress scenario.

Risk-weighted assets

Regulatory capital requirements are based on OSFI's target minimum percentage of risk-weighted assets (RWA). RWA represent the Bank's exposure to credit, market and operational risk and are computed by applying a combination of the OSFI approved Bank's internal risk models and OSFI prescribed risk-weights to on- and off-balance sheet exposures. Common Equity Tier 1 (CET1), Tier 1 and Total Capital RWA were $364.0, $364.5 and $364.9 billion, respectively at year end, representing increases from 2015 of approximately $6.0 billion. The increases are due to higher credit risk RWA of approximately $6.8 billion (including the impact of foreign currency translation of $2.7 billion) and operational risk RWA of $3.0 billion, partly offset by lower market risk RWA of $3.8 billion.

CET1 Credit risk-weighted assets

As shown in T23, CET1 credit risk-weighted assets increased by $6.8 billion to $314.8 billion primarily due to the following components:

- Book quality changes increased RWA by $10.5 billion.
- The implementation of the Internal Modeling Method for the determination of counterparty credit risk and credit valuation adjustment RWA decreased RWA by $3.2 billion.
- Implementation of methodology and policy changes during the year decreased RWA by $2.8 billion.
- Higher RWA from acquisitions, net of divestitures, of $1.7 billion were mainly due to the acquisitions of JP Morgan Canadian Credit Card Business, Citibank Costa Rica and Panama Retail Banking Operations.
- The impact of foreign exchange translation increased RWA by $2.7 billion.

T23 Flow statement for Basel III All-in credit risk-weighted assets ($ millions)

	2016		2015	
Credit risk-weighted assets movement by key driver [1] ($ millions)	**Credit risk**	**Of which counterparty credit risk**	**Credit risk**	**Of which counterparty credit risk**
CET1 Credit risk-weighted assets as at beginning of year	**$ 308,035**	**$ 22,940**	$ 261,887	$ 17,935
Book size [2]	**1,781**	**(4,082)**	24,339	1,988
Book quality [3]	**10,542**	**740**	3,575	181
Model updates [4]	**(3,214)**	**(3,214)**	843	–
Methodology and policy [5]	**(2,849)**	**–**	892	892
Acquisitions and disposals	**1,672**	**–**	1,340	–
Foreign exchange movements	**2,731**	**48**	15,159	1,944
Other	**(3,876)**	**–**	–	–
CET1 Credit risk-weighted assets as at end of year [6]	**$ 314,822**	**$ 16,432**	**$ 308,035**	**$ 22,940**
Tier 1 CVA scalar	**456**	**456**	785	785
Tier 1 Credit risk-weighted assets as at end of year [6]	**315,278**	**16,888**	308,820	23,725
Total CVA scalar	**390**	**390**	673	673
Total Credit risk-weighted assets as at end of year [6]	**$ 315,668**	**$ 17,278**	**$ 309,493**	**$ 24,398**

(1) Includes counterparty credit risk.
(2) Book size is defined as organic changes in book size and composition (including new business and maturing loans).
(3) Book quality is defined as quality of book changes caused by experience such as underlying customer behaviour or demographics, including changes through model calibrations/realignments.
(4) Model updates are defined as model implementation, change in model scope or any change to address model enhancement.
(5) Methodology and policy is defined as methodology changes to the calculations driven by regulatory policy changes, such as new regulation (e.g. Basel III).
(6) As at October 31, 2016, risk-weighted assets were calculated using scalars of 0.64, 0.71, and 0.77 to compute CET1, Tier 1, and Total capital ratios, respectively, (scalars of 0.64, 0.71, and 0.77 in 2015).

T24 Internal rating scale[1] and mapping to external rating agencies

Equivalent Rating **External Rating – S&P**	**External Rating – Moody's**	**External Rating – DBRS**	**Grade**	**IG Code**	**PD Range[2]**
AAA to AA+	Aaa to Aa1	AAA to AA (high)		99-98	0.0000% – 0.0510%
AA to A+	Aa2 to A1	AA to A (high)	Investment	95	0.0510% – 0.1321%
A to A-	A2 to A3	A to A (low)	grade	90	0.0618% – 0.1517%
BBB+	Baa1	BBB (high)		87	0.0969% – 0.2429%
BBB	Baa2	BBB		85	0.1381% – 0.3383%
BBB-	Baa3	BBB (low)		83	0.1969% – 0.4714%
BB+	Ba1	BB (high)		80	0.3059% – 0.5239%
BB	Ba2	BB	Non-Investment	77	0.4751% – 0.5822%
BB-	Ba3	BB (low)	grade	75	0.5822% – 0.7380%
B+	B1	B (high)		73	0.7380% – 1.4180%
B to B-	B2 to B3	B to B (low)		70	1.4180% – 2.7248%
CCC+	Caa1	–		65	2.7248% – 9.9903%
CCC	Caa2	–	Watch list	60	9.9903% – 19.0626%
CCC- to CC	Caa3 to Ca	–		40	19.0626% – 35.9847%
–	–	–		30	35.9847% – 59.9872%
Default			Default	27-21	100%

(1) Applies to non-retail portfolio.
(2) PD ranges overlap across IG codes as the Bank utilizes two risk rating systems for its AIRB portfolios, and each risk rating system has its own separate IG to PD mapping.

T25 Non-retail AIRB portfolio exposure by internal rating grade [1][2]

As at October 31 ($ millions)		2016					2015				
Grade	IG Code	Exposure at default ($)[4]	RWA ($)	PD (%)[5][8]	LGD (%)[6][8]	RW (%)[7][8]	Exposure at default ($)[4]	RWA ($)	PD (%)[5][8]	LGD (%)[6][8]	RW (%)[7][8]
Investment grade[3]	99-98	66,127	878	0.01	18	1	80,227	423	0.00	16	1
	95	45,031	6,458	0.06	30	14	40,068	7,673	0.07	37	19
	90	52,357	8,540	0.07	37	16	48,131	9,144	0.08	37	19
	87	42,398	10,326	0.13	37	24	43,056	10,137	0.14	36	24
	85	40,162	14,189	0.18	41	35	33,413	12,819	0.19	42	38
	83	37,926	16,704	0.25	44	44	38,499	20,036	0.31	46	52
Non-Investment grade	80	36,135	20,502	0.36	46	57	33,036	18,735	0.41	44	57
	77	23,941	14,955	0.51	43	62	20,340	14,158	0.55	45	70
	75	15,941	11,830	0.74	46	74	19,589	14,102	0.80	41	72
	73	7,307	6,063	1.42	40	83	8,737	7,414	1.54	40	85
	70	4,692	4,682	2.73	43	100	4,804	3,855	2.97	34	80
Watch list	65	1,297	2,078	9.99	41	160	991	1,679	10.55	44	169
	60	1,221	2,447	19.05	40	200	1,101	2,287	19.42	40	208
	40	2,465	4,901	28.77	37	199	1,454	3,267	30.14	43	225
	30	100	178	59.28	43	178	3	5	69.10	45	167
Default[9]	27-21	2,520	8,106	100	42	322	1,093	3,786	100	52	346
Total, excluding residential mortgages		379,620	132,837	1.20	36	35	374,542	129,520	0.76	35	35
Government guaranteed residential mortgages		100,869	–	–	25	–	86,832	–	–	15	–
Total		480,489	132,837	0.95	34	28	461,374	129,520	0.62	31	28

(1) Refer to the Bank's Supplementary Regulatory Capital Disclosures for a more detailed breakdown by asset class, exposure at default, probability at default, loss given default and risk weighting.
(2) Excludes securitization exposures.
(3) Excludes government guaranteed residential mortgages of $100.9 billion ($86.8 billion in 2015).
(4) After credit risk mitigation.
(5) PD – Probability of Default.
(6) LGD – Loss Given Default.
(7) RW – Risk Weight.
(8) Exposure at default used as basis for estimated weightings.
(9) Gross defaulted exposures, before any related allowances.

Credit risk-weighted assets – non-retail

Credit risk measures the risk that a borrower or counterparty will fail to honour its financial or contractual obligations to the Bank. The Bank uses the Advanced Internal Ratings Based (AIRB) approach under Basel III to determine minimum regulatory capital requirements for its domestic, U.S. and European credit portfolios, and certain international non-retail portfolios. The remaining credit portfolios are subject to the Standardized approach, which relies on the external credit ratings of borrowers, if available, to compute regulatory capital for credit risk. For AIRB portfolios, the key risk measures used in the quantification of regulatory capital for credit risk include probability of default (PD), loss given default (LGD) and exposure at default (EAD).

- Probability of default (PD) measures the likelihood that a borrower, with an assigned Internal Grade (IG) code, will default within a one-year time horizon. IG codes are a component of the Bank's risk rating system. Each of the Bank's internal borrower IG codes is mapped to a PD estimate.

- Loss given default (LGD) measures the severity of loss on a facility in the event of a borrower's default. The Bank's internal LGD grades are mapped to ranges of LGD estimates. LGD grades are assigned based on facility characteristics such as seniority, collateral type, collateral coverage and other structural elements. LGD for a defaulted exposure is based on the concept of economic loss and is calculated using the present value of repayments, recoveries and related direct and indirect expenses.
- Exposure at default (EAD) measures the expected exposure on a facility at the time of default.

All three risk measures are estimated using the Bank's historical data, as well as available external benchmarks, and are updated on a regular basis. The historical data used for estimating these risk measures exceeds the minimum five-year AIRB requirement for PD estimates and the minimum seven-year AIRB requirement for LGD and EAD estimates. Further analytical adjustments, as required under the Basel III Framework and OSFI's requirements set out in its Domestic Implementation Notes, are applied to average estimates obtained from historical data. These analytical adjustments incorporate the regulatory requirements pertaining to:

- Long-run estimation of PD, which requires that PD estimates capture average default experience over a reasonable mix of high-default and low-default years of the economic cycle;
- Downturn estimation for LGD, which requires that LGD estimates appropriately reflect conditions observed during periods where credit losses are substantially higher than average; and
- Downturn estimation for EAD, which requires that EAD estimates appropriately reflect conditions observed during periods of economic downturn; and
- The addition of a margin of conservatism, which is related to the likely range of errors based on the identification and quantification of the various sources of uncertainty inherent in historical estimates.

These risk measures are used in the calculation of regulatory capital requirements based on formulas specified by the Basel framework. The credit quality distribution of the Bank's AIRB non-retail portfolio is shown in T25.

The risk measures are subject to a rigorous back-testing framework which uses the Bank's historical data to ensure that they are appropriately calibrated. Based on results obtained from the back-testing process, risk measures are reviewed, re-calibrated and independently validated on at least an annual basis to ensure that they reflect the implications of new data, technical advances and other relevant information.

- As PD estimates represent long-run parameters, back-testing is performed using historical data spanning at least one full economic cycle. Realized PDs are back-tested using pre-defined confidence intervals, and the results are then aggregated to provide an overall assessment of the appropriateness of each PD estimate;
- The back-testing for LGD and EAD estimates is conducted from both long-run and downturn perspectives, in order to ensure that these estimates are adequately conservative to reflect both long-run and downturn conditions.

Portfolio-level back-testing results, based on a comparison of estimated and realized parameters for the four-quarter period ended at July 31, 2016, are shown in T26.

T26 Portfolio-level comparison of estimated and actual non-retail percentages

	Estimated[1]	Actual
Average PD	0.85	0.69
Average LGD	41.26	24.63
Average CCF[2]	49.94	16.08

(1) Estimated parameters are based on portfolio averages at Q3/15, whereas actual parameters are based on averages of realized parameters during the subsequent four quarters.
(2) EAD back-testing is performed through Credit Conversion Factor (CCF) back-testing, as EAD is computed using the sum of the drawn exposure and the committed undrawn exposure multiplied by the estimated CCF.

Credit risk-weighted assets – Canadian retail

The AIRB approach is used to determine minimum regulatory capital requirements for the retail credit portfolio. The retail portfolio is comprised of the following Basel-based pools:

- Residential real estate secured exposures consists of conventional and high ratio residential mortgages and all other products opened under the Scotia Total Equity Plan (STEP), such as loans, credit cards and secured lines of credit;
- Qualifying revolving retail exposures consists of all unsecured credit cards and lines of credit;
- Other retail consists of term loans (secured and unsecured), as well as credit cards and lines of credit which are secured by assets other than real estate.

For the AIRB portfolios, the following models and parameters are estimated:

- Probability of default (PD) is the likelihood that the facility will default within the next 12 months.
- Loss Given Default (LGD) measures the economic loss as a proportion of the defaulted balance.
- Exposure at Default (EAD) is the portion of expected exposures at time of default.

The data observation period used for PD/EAD/LGD estimates meets the five year minimum. Various statistical techniques including predictive modeling and decision trees were used to develop models. The models assign accounts into homogenous segments using internal and external borrower/facility-level credit experience. Every month, exposures are automatically re-rated based on risk and loss characteristics. PD, LGD and EAD estimates are then assigned to each of these segments incorporating the following regulatory requirements:

- PD incorporates the average long run default experience over an economic cycle. This long run average includes a mix of high and low default years.
- LGD is adjusted to appropriately reflect economic downturn conditions.
- EAD may also be adjusted to reflect downturn conditions when PD and EAD are highly correlated.
- Sources of uncertainty are reviewed regularly to ensure uncertainties are identified, quantified and included in calculations so that all parameter estimates reflect appropriate levels of conservatism.

The table below summarizes the credit quality distribution of the Bank's AIRB retail portfolio as at October 31, 2016.

T27 Retail AIRB portfolio exposure by PD range [1][2]

As at October 31 ($ millions)		2016					2015				
Category	PD Range	Exposure at default ($)[2]	RWA ($)	PD (%)[3][6]	LGD (%)[4][6]	RW (%)[5][6]	Exposure at default ($)[2]	RWA ($)	PD (%)[3][6]	LGD (%)[4][6]	RW (%)[5][6]
Exceptionally low	0.0000% – 0.0499%	**44,356**	**964**	**0.04**	**30**	**2**	49,414	1,154	0.04	28	2
Very low	0.0500% – 0.1999%	**59,509**	**4,417**	**0.15**	**31**	**7**	59,484	4,064	0.14	28	7
Low	0.2000% – 0.9999%	**52,261**	**12,483**	**0.54**	**42**	**24**	53,094	12,507	0.54	41	24
Medium low	1.0000% – 2.9999%	**20,851**	**10,961**	**1.75**	**53**	**53**	21,545	11,558	1.80	53	54
Medium	3.0000% – 9.9999%	**6,265**	**6,028**	**5.34**	**61**	**96**	5,551	5,533	5.69	65	100
High	10.0000% – 19.9999%	**1,997**	**2,926**	**10.77**	**67**	**147**	2,213	3,261	11.36	63	147
Extremely high	20.0000% – 99.9999%	**2,312**	**3,682**	**35.12**	**56**	**159**	2,521	3,914	35.28	52	155
Default[7]	100%	**677**	**–**	**100.00**	**74**	**–**	611	–	100.00	72	–
Total		**188,228**	**41,461**	**1.48**	**38**	**22**	194,433	41,991	1.46	36	22

(1) Refer to the Bank's Supplementary Regulatory Capital Disclosures for a more detailed breakdown by asset class, exposure at default, probability at default, loss given default and risk-weighting.
(2) After credit risk mitigation.
(3) PD – Probability of Default.
(4) LGD – Loss Given Default.
(5) RW – Risk Weight.
(6) Exposure at default used as basis for estimated weightings.
(7) Gross defaulted exposures, before any related allowances.

All AIRB models and parameters are monitored on a quarterly basis and independently validated annually by the Global Risk Management group. These models are tested to ensure rank ordering and back testing of parameters is appropriate. Comparison of estimated and actual loss parameters for the period ended July 31, 2016 are shown in Table T28. During this period the actual experience was significantly better than the estimated risk parameters.

T28 Estimated and actual loss parameters [1]

($ millions)	Average estimated PD (%)[2][7]	Actual default rate (%)[2][5]	Average estimated LGD (%)[3][7]	Actual LGD (%)[3][6]	Estimated EAD ($)[4][7]	Actual EAD ($)[4][5]
Residential real estate secured						
Residential mortgages						
Insured mortgages[8]	1.01	0.46	–	–	–	–
Uninsured mortgages	0.54	0.25	19.37	11.54	–	–
Secured lines of credit	0.77	0.25	29.53	20.47	89	79
Qualifying revolving retail exposures	2.02	1.78	77.74	65.66	656	573
Other retail	1.95	1.32	58.88	49.85	6	5

(1) Estimates and Actual Values are restated to align with new models implemented during the period.
(2) Account weighted aggregation.
(3) Default weighted aggregation.
(4) EAD is estimated for revolving products only.
(5) Actual based on accounts not at default as at four quarters prior to reporting date.
(6) Actual LGD calculated based on 24 month recovery period after default and therefore excludes any recoveries received after the 24 month period.
(7) Estimates are based on the four quarters prior to the reporting date.
(8) Actual and Estimated LGD for insured mortgages are not shown. Actual LGD includes the insurance benefit, whereas estimated LGD may not.

Credit risk-weighted assets – International retail

International retail credit portfolios follow the Standardized approach and consist of the following components:

- Residential real estate secured lending;
- Qualifying revolving retail exposures consisting of all credit cards and lines of credit;
- Other retail consisting of term loans.

Under the standardized approach, in general, residential real estate secured lending products are risk-weighted 35% and other retail products receive a 75% risk-weight.

Market risk

Market risk is the risk of loss from changes in market prices including interest rates, credit spreads, equity prices, foreign exchange rates, and commodity prices, the correlations between them, and their levels of volatility.

For all material trading portfolios, the Bank applies its internal models to calculate the market risk capital charge. OSFI has approved the Bank's internal VaR, Stressed VaR, Incremental Risk Charge and Comprehensive Risk Measure models for the determination of market risk capital. The attributes and parameters of these models are described in the Risk Measurement Summary.

For some non-material trading portfolios, the Bank applies the Standardized Approach for calculating market risk capital. The standardized method uses a "building block" approach, with the capital charge for each risk category calculated separately.

Below are the market risk requirements as at October 31, 2016 and 2015:

T29 Total market risk capital

($ millions)	2016	2015
All-Bank VaR	**$ 105**	$ 141
All-Bank stressed VaR	**209**	246
Incremental risk charge	**407**	488
Comprehensive risk measure	**77**	201
Standardized approach	**48**	72
Total market risk capital [1]	**$ 846**	$ 1,148

(1) Equates to $10,571 of market risk-weighted assets (2015 – $14,350).

T30 Risk-weighted assets movement by key drivers

	Market risk	
($ millions)	2016	2015
RWA as at beginning of the year	**$ 14,350**	$ 17,251
Movement in risk levels [1]	**(5,018)**	2,004
Model updates [2]	**1,239**	(2,723)
Methodology and policy [3]	**–**	(2,182)
RWA as at end of the year	**$ 10,571**	$ 14,350

(1) Movement in risk levels are defined as changes in risk due to position changes and market movements. Foreign exchange movements are imbedded within Movement in risk levels.
(2) Model updates are defined as updates to the model to reflect recent experience, change in model scope.
(3) Methodology and policy is defined as methodology changes to the calculations driven by regulatory policy changes (eg. Basel III).

Market risk-weighted assets decreased by $3.8 billion to $10.6 billion as shown in T30 primarily due to movements in risk levels.

Operational risk

Operational risk is the risk of loss, whether direct or indirect, to which the Bank is exposed due to external events, human error, or the inadequacy or failure of processes, procedures, systems or controls. The Bank currently applies the Standardized Approach for calculating operational risk capital as per applicable Basel Standards. Total capital is determined as the sum of capital for each of eight Basel defined business activities. The capital for each activity is the product of the relevant risk factor, as defined by Basel, applied to the gross income of each respective business activity.

The Bank has received approval from OSFI to use the Advanced Measurement Approach (AMA) commencing the first quarter of 2017. Under AMA, regulatory capital measurement will more directly reflect the Bank's operational risk environment through the use of a loss distribution approach model which will use internal loss events, external loss events, scenario analysis and other adjustments to arrive at a final operational risk regulatory capital calculation. No significant capital increase is expected under AMA.

Operational risk-weighted assets increased by $3.0 billion during the year to $38.6 billion primarily due to organic growth in gross income and acquisitions which closed during the year.

Internal capital

The Bank utilizes economic capital methodologies and measures to calculate internal capital. Internal capital is a measure of the unexpected losses inherent in the Bank's business activities. The calculation of internal capital relies on models that are subject to independent vetting and validation as required by the Bank's Model Risk Management Policy.

Management assesses its risk profile to determine those risks for which the Bank should attribute internal capital. The major risk categories included in internal capital are:

- Credit risk measurement is based on the Bank's internal credit risk ratings for derivatives, corporate and commercial loans, and credit scoring for retail loans. It is also based on the Bank's actual experience with recoveries and takes into account differences in term to maturity, probabilities of default, expected severity of loss in the event of default, and the diversification benefits of certain portfolios.
- Market risk for internal capital incorporates models consistent with the regulatory basis, with some exclusions, and calibrated to a higher 99.95% confidence interval, and models of other market risks, mainly structural interest rate and foreign exchange risks.
- Operational risk for internal capital is based on a model incorporating actual losses, adjusted for an add-on for regulatory capital.
- Other risks include additional risks for which internal capital is attributed, such as business risk, significant investments, insurance risk and real estate risk.

In addition, the Bank's measure of internal capital includes a diversification benefit which recognizes that all of the above risks will not occur simultaneously. The Bank also includes the full amount of goodwill and intangible assets in the internal capital amount.

For further discussion on risk management and details on credit, market and operational risks, refer to the Risk Management section.

Off-Balance Sheet Arrangements

In the normal course of business, the Bank enters into contractual arrangements with entities that are either consolidated or not required to be consolidated in its financial statements, but could have a current or future impact on the Bank's financial performance or financial condition. These arrangements can be classified into the following categories: structured entities, securitizations, guarantees and other commitments.

Structured entities

Arrangements with structured entities include structured entities that are used to provide a wide range of services to customers, such as structured entities established to allow clients to securitize their financial assets while facilitating cost-efficient financing, and to provide certain investment opportunities. The Bank creates, administers and manages personal and corporate trusts on behalf of its customers. The Bank also sponsors and actively manages certain structured entities (see discussion on other unconsolidated structured entities on page 44).

All structured entities are subject to a rigorous review and approval process to ensure that all significant risks are properly identified and addressed. For many of the structured entities that are used to provide services to customers, the Bank does not guarantee the performance of the structured entities' underlying assets, and does not absorb any related losses. For other structured entities, such as securitization and investment vehicles, the Bank may be exposed to credit, market, liquidity or operational risks. The Bank earns fees based on the nature of its association with a structured entity.

Consolidated structured entities

The Bank controls its U.S.-based multi-seller conduit and certain funding and other vehicles, and consolidates these structured entities in the Bank's consolidated financial statements.

As at October 31, 2016, total assets of consolidated structured entities were $59 billion, compared to $47 billion at the end of 2015. The change was primarily due to asset purchases by Scotiabank Covered Bond Guarantor Limited Partnership. More details of the Bank's consolidated structured entities are provided in Note 14(a) to the consolidated financial statements.

Unconsolidated structured entities

There are two primary types of association the Bank has with unconsolidated structured entities:

- Canadian multi-seller conduits administered by the Bank, and
- Structured finance entities.

The Bank earned total fees of $23 million in 2016 (October 31, 2015 – $18 million) from certain structured entities in which it had a significant interest at the end of the year but did not consolidate. More information with respect to the Bank's involvement with these unconsolidated structured entities, including details of liquidity facilities and maximum loss exposure by category is provided below and in Note 14(b) to the consolidated financial statements.

Canadian multi-seller conduits administered by the Bank

The Bank sponsors two Canadian-based multi-seller conduits that are not consolidated. The Bank earned commercial paper issuance fees, program management fees, liquidity fees and other fees from these multi-seller conduits, which totaled $22 million in 2016, compared to $17 million in 2015. These multi-seller conduits purchase high-quality financial assets and finance these assets through the issuance of highly-rated commercial paper.

As further described below, the Bank's exposure to these off-balance sheet conduits primarily consists of liquidity support and temporary holdings of commercial paper. Although the Bank has power over the relevant activities of the conduits, it has limited exposure to variability in returns, which results in the Bank not consolidating the two Canadian conduits. The Bank has a process to monitor these exposures and significant events impacting the conduits to ensure there is no change in control, which could require the Bank to consolidate the assets and liabilities of the conduits at fair value.

A significant portion of the conduits' assets have been structured to receive credit enhancements from the sellers, including overcollateralization protection and cash reserve accounts. Each asset purchased by the conduits is supported by a backstop liquidity facility provided by the Bank in the form of a liquidity asset purchase agreement (LAPA). The primary purpose of the backstop liquidity facility is to provide an alternative source of financing in the event the conduits are unable to access the commercial paper market. Under the terms of the LAPA, in most cases, the Bank is not obliged to purchase defaulted assets.

The Bank's primary exposure to the Canadian-based conduits is the liquidity support provided, with total liquidity facilities of $5.8 billion as at October 31, 2016 (October 31, 2015 – $3.9 billion). The year-over-year increase was due to normal business operations. As at October 31, 2016, total commercial paper outstanding for the Canadian-based conduits was $4.4 billion (October 31, 2015 – $2.5 billion) and the Bank held less than 0.1% of the total commercial paper issued by these conduits. Table T31 presents a summary of assets purchased and held by the Bank's two Canadian multi-seller conduits as at October 31, 2016 and 2015, by underlying exposure.

All of the funded assets have at least an equivalent rating of AA– or higher based on the Bank's internal rating program. Assets held in these conduits were investment grade as at October 31, 2016. Approximately 75% of the funded assets have final maturities falling within four years, and the weighted-average repayment period, based on cash flows, approximates 1.8 years.

T31 Assets held by Scotiabank-sponsored Canadian-based multi-seller conduits

	2016			2015		
As at October 31 ($ millions)	**Funded assets[1]**	**Unfunded commitments**	**Total exposure[2]**	Funded assets[1]	Unfunded commitments	Total exposure[2]
Auto loans/leases	**$ 3,168**	**$ 601**	**$ 3,769**	$ 1,200	$ 573	$ 1,773
Trade receivables	**131**	**618**	**749**	131	614	745
Canadian residential mortgages	**1,081**	**194**	**1,275**	1,082	193	1,275
Equipment loans/leases	**21**	**–**	**21**	78	2	80
Total[3]	**$ 4,401**	**$ 1,413**	**$ 5,814**	$ 2,491	$ 1,382	$ 3,873

(1) Funded assets are reflected at original cost, which approximates estimated fair value.
(2) Exposure to the Bank is through global-style liquidity facilities.
(3) These assets are substantially sourced from Canada.

Structured finance entities

The Bank has interests in structured finance entities used to assist corporate clients in accessing cost-efficient financing through their securitization structures. The Bank's maximum exposure to loss from structured finance entities was $2,326 million as at October 31, 2016, (October 31, 2015 – $2,330 million).

Other unconsolidated structured entities

The Bank sponsors unconsolidated structured entities in which it has insignificant or no interest at the reporting date. The Bank is a sponsor when it is significantly involved in the design and formation at inception of the structured entity, and the Bank's name is used by the structured entity to create an awareness of the instruments being backed by the Bank's reputation and obligation. The Bank also considers other factors, such as its continuing involvement and obligations to determine if, in substance, the Bank is a sponsor. The Bank earned $1,968 million income from its involvement with the unconsolidated Bank-sponsored structured entities for the year ended October 31, 2016 (for the year ended October 31, 2015 – $1,977 million).

Securitizations

The Bank securitizes fully insured residential mortgage loans, Bank originated and others, through the creation of mortgage backed securities (MBS) that are sold to Canada Housing Trust (CHT) and/or third party investors. The sale of such mortgages does not qualify for derecognition with the exception of social housing mortgage pools. The outstanding amount of off-balance sheet securitized social housing pools was $1,237 million as at October 31, 2016, compared to $1,366 million last year. The transferred mortgages sold to CHT and/or third party investors continue to be recognized on balance sheet along with the proceeds from sale treated as secured borrowings. More details have been provided in Note 13 to the consolidated financial statements on page 173.

The Bank securitizes a portion of its Canadian lines of credit and credit card receivables (receivables) through two Bank-sponsored structured entities. The receivables are comprised of unsecured personal lines of credit, securitized through Hollis Receivables Term Trust II (Hollis), and personal and small business credit card receivables, securitized through Trillium Credit Card Trust II (Trillium). Hollis and Trillium issue Class A notes to third-party investors and subordinated notes to the Bank, and the proceeds of such issuances are used to purchase co-ownership interests in the respective receivables originated by the Bank. The sale of such co-ownership interests does not qualify for derecognition and therefore the receivables continue to be recognized on the Consolidated Statement of Financial Position. Recourse of the note holders is limited to the purchased co-ownership interests. During the year, no receivables were securitized through Hollis (2015 – $1,145 million) and $1,242 million were securitized through Trillium. The subordinated notes issued by Hollis of $297 million (2015 – $399 million) and Trillium of $99 million, both held by the Bank, are eliminated on consolidation.

The Bank securitizes a portion of its Canadian auto loan receivables (receivables) through Securitized Term Auto Receivables Trust 2016-1 (START), a Bank-sponsored structured entity. START issues multiple series of Class A notes to third-party investors and subordinated notes to the Bank, and the proceeds of such issuances are used to purchase a discrete pool of retail indirect auto loan receivables from the Bank on a fully serviced basis. The sale of such pool does not qualify for derecognition and therefore the receivables continue to be recognized on the Consolidated Statement of Financial Position. Recourse of the note holders is limited to the receivables. During the year, $740 million of assets were securitized through START. The subordinated notes issued by START of $45 million, held by the Bank, are eliminated on consolidation.

Guarantees and other commitments

Guarantees and other commitments are fee-based products that the Bank provides to its customers. These products can be categorized as follows:

- Standby letters of credit and letters of guarantee. As at October 31, 2016, these amounted to $35 billion, compared to $31 billion last year. These instruments are issued at the request of a Bank customer to secure the customer's payment or performance obligations to a third party. The year-over-year increase reflects a general increase in customer activity and the impact of foreign currency translation;
- Liquidity facilities. These generally provide an alternate source of funding to asset-backed commercial paper conduits in the event a general market disruption prevents the conduits from issuing commercial paper or, in some cases, when certain specified conditions or performance measures are not met;
- Indemnification contracts. In the ordinary course of business, the Bank enters into many contracts where it may indemnify contract counterparties for certain aspects of its operations that are dependent on other parties' performance, or if certain events occur. The Bank cannot estimate, in all cases, the maximum potential future amount that may be payable, nor the amount of collateral or assets available under recourse provisions that would mitigate any such payments. Historically, the Bank has not made any significant payments under these indemnities;
- Loan commitments. The Bank has commitments to extend credit, subject to specific conditions, which represent undertakings to make credit available in the form of loans or other financings for specific amounts and maturities. As at October 31, 2016, these commitments amounted to $174 billion, compared to $166 billion last year. The year-over-year increase primarily reflects an increase in foreign currency denominated business activity.

These guarantees and loan commitments may expose the Bank to credit or liquidity risks, and are subject to the Bank's standard review and approval processes. For the guaranteed products, the dollar amounts represent the maximum risk of loss in the event of a total default by the guaranteed parties, and are stated before any reduction for recoveries under recourse provisions, insurance policies or collateral held or pledged.

Fees from the Bank's guarantees and loan commitment arrangements, recorded as credit fees in other income in the Consolidated Statement of Income, were $574 million in 2016, compared to $489 million in the prior year. Detailed information on guarantees and loan commitments is disclosed in Note 35 to the consolidated financial statements.

Financial Instruments

Given the nature of the Bank's main business activities, financial instruments make up a substantial portion of the Bank's financial position and are integral to the Bank's business. Assets that are financial instruments include cash resources, securities, securities purchased under resale agreements, loans and customers' liability under acceptances. Financial instrument liabilities include deposits, acceptances, obligations related to securities sold under repurchase agreements, obligations related to securities sold short, subordinated debentures and capital instrument liabilities. In addition, the Bank uses derivative financial instruments for both trading and hedging purposes.

Financial instruments are generally carried at fair value, except for non-trading loans and receivables, certain securities and most financial liabilities, which are carried at amortized cost unless designated as fair value through profit or loss at inception.

Unrealized gains and losses on the following items are recorded in other comprehensive income:

- available-for-sale securities, net of related hedges,
- derivatives designated as cash flow hedges, and
- net investment hedges.

Gains and losses on available-for-sale securities are recorded in the Consolidated Statement of Income when realized. Gains and losses on cash flow hedges and net investment hedges are recorded in the Consolidated Statement of Income when the hedged item affects income.

All changes in the fair value of derivatives, including embedded derivatives that must be separately accounted for, are recorded in the Consolidated Statement of Income, other than those designated as cash flow and net investment hedges which flow through other comprehensive income. The Bank's accounting policies for derivatives and hedging activities are further described in Note 3 to the consolidated financial statements.

Interest income and expense on non-trading interest-bearing financial instruments are recorded in the Consolidated Statement of Income as part of net interest income. Credit losses resulting from loans are recorded in the provision for credit losses. Interest income and expense, as well as gains and losses, on trading securities and trading loans are recorded in other operating income – trading revenues. Realized gains and losses and write-downs for impairment on available-for-sale debt or equity instruments are recorded in net gain on investment securities within other operating income.

Several risks arise from transacting financial instruments, including credit risk, liquidity risk, operational risk and market risk. The Bank manages these risks using extensive risk management policies and practices, including various Board-approved risk management limits.

A discussion of the Bank's risk management policies and practices can be found in the Risk Management section on pages 60 to 98. In addition, Note 35 to the consolidated financial statements presents the Bank's exposure to credit risk, liquidity risk and market risks arising from financial instruments as well as the Bank's corresponding risk management policies and procedures.

There are various measures that reflect the level of risk associated with the Bank's portfolio of financial instruments. For example, the interest rate risk arising from the Bank's financial instruments can be estimated by calculating the impact of a 100 basis point increase or decrease in interest rates on annual income, and the economic value of shareholders' equity, as described on page 83. For trading activities, T50 discloses the average one-day Value at Risk by risk factor. For derivatives, based on the Bank's maturity profile of derivative instruments, only 16% (2015 – 14%) had a term to maturity greater than five years.

Note 9 to the consolidated financial statements provides details about derivatives used in trading and hedging activities, including notional amounts, remaining term to maturity, credit risk and fair values.

The fair value of the Bank's financial instruments is provided in Note 6 to the consolidated financial statements along with a description of how these amounts were determined.

The fair value of the Bank's financial instruments was favourable when compared to their carrying value by $2,148 million as at October 31, 2016 (October 31, 2015 – favourable $2,410 million). This difference relates mainly to loan assets, deposit liabilities, subordinated debentures and other liabilities. The year-over-year change in the fair value over carrying value arose mainly from changes in interest rates since origination. Fair value estimates are based on market conditions as at October 31, 2016, and may not be reflective of future fair values. Further information on how fair values are estimated is contained in the section on critical accounting estimates on page 99.

Disclosures specific to certain financial instruments designated at fair value through profit or loss can be found in Note 8 to the consolidated financial statements. These designations were made primarily to significantly reduce accounting mismatches.

Selected Credit Instruments – Publically Known Risk Items

Mortgage-backed securities

Total mortgage-backed securities held in the non-trading and trading portfolios are shown in T32.

T32 Mortgage-backed securities

	2016		2015	
As at October 31 Carrying value ($ millions)	Non-trading portfolio	Trading portfolio	Non-trading portfolio	Trading portfolio
Canadian NHA mortgage-backed securities[1]	**$ 1,591**	**$ 1,546**	$ 137	$ 1,335
Commercial mortgage-backed securities	**–**	**57**	2	113
Other residential mortgage-backed securities	**521**	**–**	206	3
Total	**$ 2,112**	**$ 1,603**	$ 345	$ 1,451

(1) Canada Mortgage and Housing Corporation provides a guarantee of timely payment to NHA mortgage-backed security investors.

Collateralized debt obligations and collateralized loan obligations

Non-trading portfolio

The Bank has collateralized loan obligation (CLO) investments in its non-trading portfolio. CLOs generally achieve their structured credit exposure by investing and holding corporate loans or bonds. Cash-based CLOs are classified as loans and are carried at amortized cost. These are assessed for impairment like all other loans.

As at October 31, 2016, the carrying value of cash-based CLOs reported as loans on the Consolidated Statement of Financial Position was $14 million (October 31, 2015 – $34 million). The fair value was $7 million (October 31, 2015 – $28 million). The year-over-year decline was due to paydowns. None of these cash-based CLOs are classified as impaired loans. Substantially all of the referenced assets of the Bank's CLOs are corporate exposures, without any U.S. mortgage-backed securities.

Trading portfolio

The Bank also holds synthetic CDOs in its trading portfolio as a result of structuring and managing transactions with clients and other financial institutions. To hedge its trading exposure, the Bank purchases or sells CDOs to other financial institutions, along with purchasing and/or selling index tranches or single name credit default swaps (CDSs). The main driver of the value of CDOs and CDSs is changes in credit spreads. Total CDOs purchased and sold in the trading portfolio are shown in T33 below.

T33 Collateralized debt obligations (CDOs)

	2016		2015	
As at October 31 Outstanding ($ millions)	Notional Amount	Positive/ (negative) fair value	Notional Amount	Positive/ (negative) fair value
CDOs – sold protection	**$ 142**	**$ 4**	$ 1,977	$ 24
CDOs – purchased protection	**$ –**	**$ –**	$ 1,776	$ (8)

The change in the notional amount and fair value of CDOs were due mainly to trades that matured or were unwound during the year. The change in fair value of CDOs was due to the reduction of probability of deals experiencing defaults as they approach maturity. Based on positions held at October 31, 2016, a 50 basis point widening of relevant credit spreads in this portfolio would result in a pre-tax decrease of approximately $2.0 million in net income.

The referenced assets underlying the trading book CDOs are substantially all corporate exposures, with no mortgage-backed securities.

Other

As at October 31, 2016, the Bank has insignificant exposure to highly leveraged loans awaiting syndication, auction-rate securities, Alt-A type loans, monoline insurance and investments in structured investment vehicles.

BUSINESS LINE OVERVIEW

Business line results are presented on a taxable equivalent basis, adjusting for the following:

- The Bank analyzes revenue on a taxable equivalent basis (TEB) for business lines. This methodology grosses up tax-exempt income earned on certain securities reported in either net interest income or non-interest income to an equivalent before tax basis. A corresponding increase is made to the provision for income taxes; hence, there is no impact on net income. Management believes that this basis for measurement provides a uniform comparability of net interest income and non-interest income arising from both taxable and non-taxable sources and facilitates a consistent basis of measurement. While other banks also use TEB, their methodology may not be comparable to the Bank's methodology. A segment's revenue and provision for income taxes are grossed up by the taxable equivalent amount. The elimination of the TEB gross up is recorded in the Other segment.
- For business line performance assessment and reporting, net income from associated corporations, which is an after-tax number, is adjusted to normalize for income taxes. The tax normalization adjustment grosses up the amount of net income from associated corporations and normalizes the effective tax rate in the business lines to better present the contribution of the associated corporations to the business line results.

Below are the results of the Bank's three business operating segments for 2016:

CANADIAN BANKING

Canadian Banking reported net income to equity holders of $3,736 million, up 12% from last year. Solid asset and deposit growth, along with increasing margin driven by credit cards and deposits, gain on sale of a non-core lease financing business and higher non-interest income contributed to this increase. This was partially offset by higher provision for credit losses and non-interest expenses. Return on equity was 22.0% compared to 21.0% last year.

INTERNATIONAL BANKING

International Banking had net income attributable to equity holders of $2,079 million, up $226 million or 12% from last year. Results benefited from strong asset and fee growth and the positive impact of foreign currency translation. This was partly offset by higher provision for credit losses. Return on equity was 12.8%, compared to 13.0% last year.

GLOBAL BANKING AND MARKETS

Global Banking and Markets reported net income attributable to equity holders of $1,571 million, an increase of $18 million from last year. Strong revenue performances in the fixed income, corporate lending and commodities businesses, were mainly offset by higher provision for credit losses and lower results in equities. Return on equity was 12.6% compared to 13.0% last year.

KEY PERFORMANCE INDICATORS FOR ALL BUSINESS LINES

Management uses a number of key metrics to monitor business line performance:

- Net income
- Return on equity
- Productivity ratio
- Provision for credit losses ratio
- Employee engagement

T34 2016 Financial performance

($ millions)	Canadian Banking	International Banking	Global Banking and Markets	Other[1]	Total
Net interest income[2]	$ 7,024	$ 6,359	$ 1,293	$ (384)	**$ 14,292**
Non-interest income[2]	5,164	3,482	3,139	273	**12,058**
Total revenue[2]	12,188	9,841	4,432	(111)	**26,350**
Provision for credit losses	832	1,281	249	50	**2,412**
Non-interest expenses	6,324	5,523	2,040	653	**14,540**
Income tax expense[2]	1,296	707	572	(545)	**2,030**
Net income	$ 3,736	$ 2,330	$ 1,571	$ (269)	**$ 7,368**
Net income attributable to non-controlling interests in subsidiaries	–	251	–	–	**251**
Net income attributable to equity holders of the Bank	$ 3,736	$ 2,079	$ 1,571	$ (269)	**$ 7,117**
Return on equity (%)[3]	22.0%	12.8%	12.6%	–%	**13.8%**
Average assets ($ billions)	$ 309	$ 143	$ 351	$ 111	**$ 914**
Average liabilities ($ billions)	$ 232	$ 109	$ 270	$ 247	**$ 858**

(1) The Other category represents smaller operating segments, including Group Treasury, and other corporate adjustments that are not allocated to an operating segment. Corporate adjustments include the net residual in matched maturity transfer pricing, the elimination of the tax-exempt income gross-up reported in net interest income, non-interest income and provision for income taxes, changes in the collective allowance on performing loans, and differences in the actual amount of costs incurred and charged to the operating segments.
(2) Taxable equivalent basis.
(3) Refer to Glossary.

Canadian Banking

Canadian Banking provides a full suite of financial advice and banking solutions, supported by an excellent customer experience, to retail, small business, commercial and wealth management customers in Canada.

2016 Achievements

- **Delivered an industry-leading customer experience across our businesses and channels.**
  - Launched two new customer-focused branch formats – **Scotiabank Express** in Guelph and Montreal and **Scotiabank Solutions** in Guelph and Kitchener. Also, launched the **Network Transformation Wave Pilot** to improve the customer and employee experience.
  - Scotiabank received a record nine awards in the **2016 Ipsos Best Banking Awards**, placing 2nd among the Big Five Banks for Overall Service Quality.
  - Tangerine earned the highest ranking in customer satisfaction among mid-sized banks for the fifth straight year in the **2016 J.D. Power Canadian Retail Banking Customer Satisfaction Study**.
  - For the eleventh year in a row, Tangerine was recognized as a customer service leader in the **Ipsos Best Banking Awards.**
  - Contact centres for Scotiabank (Halifax) and ScotiaLife Financial both received **Contact Centre World Class First Call Resolution (FCR) Certification** from the Service Quality Management (SQM) Group.
  - **Delivered industry-leading solutions to enhance the customer experience**, including best-in-class processes for mortgage, credit card, small business loan applications and branch onboarding.
  - **Launched new Scotia Wealth Management brand – "Enriched Thinking"** – one unified voice, one strong brand, and one integrated approach to serving client needs.
  - HollisWealth ranking moved up from fourth place in 2015 to secure third place in the **J.D. Power 2016 Canadian Full Service Investor Satisfaction Study.**
- **Further optimized our business mix by growing our higher margin assets, building sticky core deposits, and earning higher fee income.**
  - Two popular co-brand credit cards from Scotiabank – the Scotiabank GM Visa Infinite card and the Scotiabank SCENE Visa card – were recognized with highest honours in the **2015 MoneySense Annual Credit Cards Ranking**.
  - Launched the **Scotiabank More Rewards Visa** in partnership with Western Canada based grocer Overwaitea Food Group.
  - Successfully completed the acquisition of the **JPMorgan Chase MasterCard portfolio**.
  - Completed the sale of Roynat's non-core lease financing business.
  - Tangerine won the **2016 Product of the Year** award for the Tangerine Money-Back Credit Card.
  - Scotiabank iTRADE selected by MoneySense Magazine as a **Top 3 pick in best online brokerages in Canada.**
  - **Record year for life insurance revenue** driven by Private Banking, Private Investment Counsel, and stronger partnership with Financial Planning specialists.
  - Dynamic Funds won five **Fundata FundGrade A+ Awards**.
- **Made significant investments to become a digital banking leader**.
  - Named the **2016 World's Best Consumer Digital Bank in Canada** by Global Finance Magazine.
  - Tied for highest overall score in the **2016 Canadian Mobile Banking Functionality Benchmark** by Forrester Research.
  - Tied for third place overall in the **2016 Global Mobile Banking Functionality Benchmark** by Forrester Research.
  - Tangerine named the industry leader in **Canadian Mobile Banking Services** according to Surviscor's 2015 Mobile Banking scorecard Review. Scotiabank came in at #2.
  - Launched **Apple Pay**. All Scotiabank customers can now use mobile payments through Apple Pay (for iPhone) and My Mobile Wallet (for Android and Blackberry).

Business Profile

Canadian Banking provides a full suite of financial advice and banking solutions, supported by an excellent customer experience, to over 10 million Retail, Small Business, Commercial Banking, and Wealth Management customers. It serves these customers through its network of 980 branches and more than 3,500 automated banking machines (ABMs), as well as internet, mobile and telephone banking and specialized sales teams. Canadian Banking also provides an alternative self-directed banking solution to over two million Tangerine Bank customers. Canadian Banking is comprised of the following areas:

- Retail and Small Business Banking provides financial advice and solutions and day-to-day banking products, including debit cards, chequing accounts, credit cards, investments, mortgages, loans and related creditor insurance products, to individuals and small businesses. Tangerine Bank provides day-to-day banking products, including chequing and saving accounts, credit cards, and investments to self-directed customers.
- Commercial Banking delivers advice and a full suite of lending, deposit, cash management and trade finance solutions to medium and large businesses, including automotive dealers and their customers to whom we provide retail automotive financing solutions.
- Wealth Management provides a suite of investment and wealth management advice, services, products and solutions to customers, as well as advisors. The asset management business is focused on developing investment solutions for both retail and institutional investors. The customer-facing wealth businesses, including private customer, online brokerage, full-service brokerage, pensions, institutional customer services and an independent advisor channel, are focused on providing a full suite of wealth management solutions to our customers.

Strategy

Canadian Banking continues to execute on a long term strategy to deliver a best-in-class customer experience, grow its primary banking relationships, and outperform competitors in earnings growth through customer experience, business mix, operational improvements and digital transformation.

2017 Priorities

- **Customer experience:** Deliver an excellent customer experience across our businesses and channels.
- **Business mix:** Optimize our business mix by growing higher margin assets, building core deposits, and earning higher fee income.
- **Operational improvement:** Reduce structural costs to build the capacity to invest in our businesses and technology.
- **Digital transformation:** Enhance our digital offering and e-commerce capabilities to drive digital sales and engagement.

T35 Canadian Banking financial performance

($ millions)	2016	2015	2014
Net interest income[1]	**$ 7,024**	$ 6,415	$ 5,996
Non-interest income[1][2]	**5,164**	4,832	5,263
Total revenue[1]	**12,188**	11,247	11,259
Provision for credit losses	**832**	687	663
Non-interest expenses	**6,324**	6,014	5,799
Income tax expense[1]	**1,296**	1,202	1,113
Net income	**$ 3,736**	$ 3,344	$ 3,684
Net income attributable to non-controlling interests	**–**	–	1
Net income attributable to equity holders of the Bank	**$ 3,736**	$ 3,344	$ 3,683
Key ratios			
Return on equity[3]	**22.0%**	21.0%	22.8%
Productivity[1]	**51.9%**	53.5%	51.5%
Net interest margin[4]	**2.38%**	2.23%	2.14%
Provision for credit losses as a percentage of loans and acceptances	**0.28%**	0.23%	0.23%
Selected Consolidated Statement of Financial Position data (average balances)			
Earning assets	**$ 302,648**	$ 293,460	$ 284,966
Total assets	**309,232**	299,929	291,549
Deposits	**224,006**	210,241	202,088
Total liabilities	**232,498**	217,753	208,354
Other ($ billions) as at October 31			
Assets under administration	**$ 318**	$ 310	$ 296
Assets under management	**$ 145**	$ 135	$ 124

(1) Taxable equivalent basis.
(2) Includes net income from investments in associated corporations of $78 (2015 – $66; 2014 – $157).
(3) Refer to Glossary.
(4) Net interest income (TEB) as % of average earning assets excluding bankers acceptances.

Financial Performance

Canadian Banking's net income attributable to equity holders was $3,736 million in 2016, an increase of $392 million or 12%. The gain on the sale of a non-core lease financing business ("the gain on sale") of $116 million pre-tax or $100 million after tax contributed 3% growth to net income. Strong performance from retail and small business banking, commercial banking and wealth management, as well as the impact of the credit card portfolio acquired from JPMorgan Chase Bank ("the acquisition") contributed to the growth.

Assets and liabilities

Average assets rose $9 billion or 3% to $309 billion. Adjusting for the impact of the Tangerine broker-originated and white-label mortgage run-off portfolios, assets increased $14 billion or 5%. The growth reflected $6 billion or 8% in personal loans primarily in consumer automotive lending and credit cards, $5 billion or 3% in residential mortgages, as well as $3 billion or 9% in business loans and acceptances.

Average liabilities rose $14 billion or 7% to $232 billion. Retail banking experienced solid growth in chequing accounts of $2 billion or 9% and savings deposits of $8 billion or 14%. There was also growth of $2 billion or 4% in small business and commercial banking business operating accounts and $4 billion or 25% in wealth management deposits. Partially offsetting was a decline in lower spread GICs of $2 billion or 2%.

Assets under management (AUM) and assets under administration (AUA)

AUM of $145 billion increased $10 billion or 7% driven by market appreciation and net sales. AUA increased $8 billion or 3% to $318 billion driven by market appreciation.

Revenues

Canadian Banking reported total revenues of $12,188 million in 2016, up $941 million from last year, including the gain on sale.

Net interest income increased $609 million or 9% to $7,024 million. The increase was driven by a 15 basis point increase in the margin to 2.38%, strong growth in assets and deposits, and the impact of the acquisition. The increase in margin was primarily driven by growth in higher margin credit cards, margin expansion in deposits, the run-off of lower spread Tangerine mortgages, and the acquisition.

Non-interest income increased $332 million or 7% to $5,164 million. The increase was driven by strong growth in credit cards, retail and commercial banking, insurance and wealth management businesses and includes gains on sale of real estate and the non-core lease financing business.

Retail & Small Business Banking

Total retail and small business banking revenues were $6,843 million, up $607 million or 10%. Net interest income grew $428 million or 9%, primarily driven by a 16 basis point improvement in the margin and solid growth in credit card products and deposits. Non-interest income increased $179 million or 11%, primarily due to growth in credit card revenues, deposit payment service fees and insurance revenues.

Commercial Banking

Total commercial banking revenues increased $274 million or 15% to $2,133 million, including the gain on sale. Net interest income rose $135 million or 9% due mainly to growth in loans and business operating accounts and a margin expansion of six basis points. Non-interest income increased $139 million or 33% mainly driven by the gain on sale and higher acceptance fees.

Wealth Management

Total wealth management revenues were $3,212 million, an increase of $60 million or 2%. Net interest income rose $46 million or 15% mainly due to growth in deposits and loans. Non-interest revenues increased $13 million from higher investment management fees and growth in mutual funds revenues as a result of net sales and market appreciation. Partly offsetting these increases was lower transaction based brokerage fees.

Non-interest expenses

Non-interest expenses were $6,324 million, an increase of $310 million or 5%, primarily reflecting the impact of the acquisition, technology and project spending, partially offset by benefits realized from cost reduction initiatives. Operating leverage was positive 3.2%, or 2.2% adjusting for the gain on sale.

Provision for credit losses

The provision for credit losses in Canadian Banking was $832 million, an increase of $145 million. The provision for credit losses was higher due to growth in retail portfolios, primarily in credit cards and auto loans, with additional increases from commercial provisions, partly offset by acquisition-related benefits. The provision for credit losses ratio was 28 basis points, compared to 23 basis points in the prior year due to growth in higher margin products.

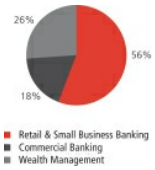
Provision for income taxes

The effective tax rate decreased to 25.8%, compared to 26.4% in the previous year.

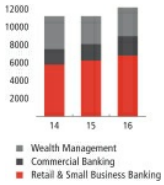
Outlook

Canadian Banking's growth in 2017 will be driven in part by an improving economic outlook for Canada. Assets are projected to grow across retail mortgages, automotive, commercial loans and credit cards. Deposits are also expected to grow across retail chequing and savings, small business and commercial deposits. Margins are expected to be stable to slightly increasing during 2017. Provisions for credit losses will rise reflecting primarily a changing asset mix. Wealth management is expected to see continued growth in 2017. Expense management continues to be a focus that will lead to further improvements in productivity.

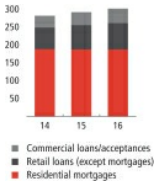
C11 Total revenue
$ millions



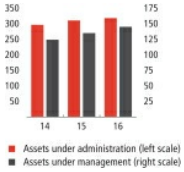
C12 Total revenue by sub-segment
$ millions



C13 Average loans and acceptances
$ billions



C14 Canadian wealth management assets
$ billions, as at October 31



International Banking

International Banking provides a full range of financial products, solutions and advice to retail and commercial customers in select regions outside of Canada.

2016 Achievements

- Improved customer experience across our businesses and channels.
  - Developed 4 new retail branch prototypes in Mexico City to focus on improving customer experience.
  - Launched the Net Promoter System (NPS) to build customer advocacy across the Pacific Alliance and Canada.
  - Named Scotiabank "World's Best Emerging Market Bank 2016" in the Bahamas, Barbados, Costa Rica, Trinidad & Tobago, Turks & Caicos and The U.S. Virgin Islands by Global Finance Magazine.
  - Achieved Service Quality Measurement World Class Certification and recognition at the 2015 SQM Conference Awards for our contact centres in Mexico, Jamaica and the Dominican Republic.
- Further optimized our business mix by growing high-yielding assets, building sticky core deposits, and earning higher fee income.
  - Introduced new Premium Banking Model in eight branches in Peru.
  - Achieved leading bookrunner by volume in Latin America (Thomson Reuters).
  - Renewed partnership with Cencosud in Colombia to target new credit card customers.
  - Extended ATM alliance to Mifel and Actiniver (regional financial services providers) in Mexico to provide customers with access to a broader self-service network.
- Made significant investments to become a digital banking leader.
  - Launched the Global Digital Banking Organization including stand-alone Digital Banking Units in Mexico, Peru, Chile and Colombia.
  - Launched significant enhancements to Online and Mobile Banking platforms in Mexico.
  - Redeployed new Online and Mobile Banking platforms in the Caribbean.
  - Recognized as the #1 Global Bank with the Best Digital Strategy for 2016 by Retail Banker International.
  - Named the "World's Best Consumer Digital Bank 2016" in Latin America, the Caribbean and Canada for 2016 by Global Finance magazine.
  - Launched fintech partnership with Kabbage in Mexico and Canada to provide customers with real-time credit adjudication.

Business Profile

International Banking (IB) has a well-established, diversified franchise that serves more than 14 million Retail, Corporate, and Commercial customers across our footprint. These customers are supported by over 50,000 employees, 1,800+ branches, and a network of contact and business support centres. IB is focused on Latin America, including the Pacific Alliance countries of Mexico, Peru, Chile and Colombia, and the Caribbean and Central America.

We believe the Pacific Alliance countries offer excellent opportunities for growth with young demographics, low banking penetration, growing economies, low consumer indebtedness and stable banking systems. The Caribbean and Central American markets are more mature and have lower growth, but are still very profitable.

Strategy

International Banking continues to pursue: (i) a growth strategy in the Pacific Alliance countries and (ii) an optimization strategy in the Caribbean and Central American countries.

Our strategy is organized around five key areas:

- **Customer focus** – Increase the number of primary customers in target segments by creating a simpler and more compelling digital customer experience, and a systematic approach to gathering and acting upon customer feedback.
- **Digital transformation** – Drive digital adoption and sales for customers through digital customer-facing and internal processes and increase our operational efficiency.
- **Business mix alignment** – Optimize the business mix by growing core deposits, targeting more profitable products, balancing portfolio growth, and closely managing our usage of wholesale funding.
- **Structural costs transformation** – Optimize the operating model and footprint to lower structural costs, reduce complexity, digitize processes, leverage scale and ultimately improve productivity.
- **Leadership** – Make leadership a competitive advantage by actively acquiring, developing and engaging a diverse pool of leaders to deepen bench strength and reflect our growth markets.

2017 Priorities

Aligned to our strategy and in addition to the growth in our core business, our primary focus is on the following key growth initiatives over the next 3-5 years:

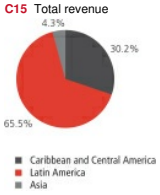
1. **Customer focus:** Launch Net Promoter System (NPS) across Peru, Chile, Colombia and Mexico to provide our employees and leadership with timely and specific customer feedback.
2. **Digital transformation:** Establish digital banking organizations within our Pacific Alliance operations to drive greater digital adoption and sales.
3. **Business mix:** Enhance business mix by growing core deposits to reduce funding costs along with growing in targeted profitable segments/products.
4. **Structural costs transformation:** Continue cost reduction programs to lower expenses and use the savings to fund strategic initiatives, make investments in technology, and improve productivity.

T36 International Banking financial performance

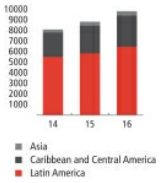
($ millions)	2016	2015	2014
Net interest income[1]	**$ 6,359**	$ 5,706	$ 5,155
Non-interest income[1][2]	**3,482**	3,137	2,945
Total revenue[1]	**9,841**	8,843	8,100
Provision for credit losses	**1,281**	1,128	1,024
Non-interest expenses	**5,523**	5,095	4,690
Income tax expense[1]	**707**	568	544
Net income	**$ 2,330**	$ 2,052	$ 1,842
Net income attributable to non-controlling interests	**251**	199	226
Net income attributable to equity holders of the Bank	**$ 2,079**	$ 1,853	$ 1,616
Key ratios			
Return on equity[3]	**12.8%**	13.0%	11.7%
Productivity[1]	**56.1%**	57.6%	57.9%
Net interest margin[4]	**4.71%**	4.71%	4.75%
Provision for credit losses as a percentage of loans and acceptances	**1.26%**	1.24%	1.27%
Selected Consolidated Statement of Financial Position data (average balances)			
Earning assets	**$ 135,167**	$ 121,130	$ 108,717
Total assets	**142,582**	128,248	114,996
Deposits	**87,508**	73,946	65,025
Total liabilities	**109,302**	94,340	84,969
Other ($ millions as at October 31)			
Assets under administration	**$ 85,888**	$ 80,606	$ 71,587
Assets under management	**$ 47,287**	$ 43,560	$ 41,125

(1) Taxable equivalent basis.
(2) Includes net income from investments in associated corporations of $473 (2015 – $476; 2014 – $411).
(3) Refer to Glossary.
(4) Net interest income (TEB) as % of average earning assets excluding bankers acceptances.

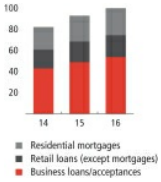
C15 Total revenue



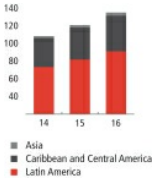
C16 Total revenue by region
$ millions



C17 Average loans and acceptances
$ billions



C18 Average earning assets[1] by region
$ billions



(1) Average earning assets excluding bankers acceptances

Financial Performance

Net income attributable to equity holders was $2,079 million, an increase of $226 million or 12%. Earnings from strong asset and fee growth, including the positive impact of foreign currency translation, were partly offset by higher provision for credit losses. Strong underlying asset and fee growth in Latin America and a solid contribution from Caribbean & Central America, were complemented by earnings in Asia.

Assets and Liabilities

Average assets of $143 billion increased $14 billion or 11%, driven by strong retail and commercial loan growth of 11% and 12% respectively. Latin America primarily drove the growth in lending assets with retail and commercial assets increasing 11% and 14%, respectively. Caribbean and Central America saw retail assets increase by 12% with commercial assets up 6%. Average liabilities increased $15 billion or 16% to $109 billion largely due to 18% growth in deposits, including demand and savings deposits up 16%, partly offset by lower securities sold under repurchase agreements down 20%.

Revenues

Total revenues of $9,841 million increased $998 million or 11%. Net interest income increased 11% driven by strong loan growth and recent acquisitions. The net interest margin was stable at 4.71%. Non-interest income increased $345 million or 11%. This increase was largely driven by higher net fee and commission revenues which increased 10% to $2,579 million with higher banking and wealth management fees across Latin America and the Caribbean. Other operating income rose by $104 million or 14% due mainly to foreign exchange hedge related gains, higher acquisition benefits, and insurance revenues, partly offset by lower net gains on investment securities.

Latin America

Total revenues of $6,455 million increased 10% from last year, or 16% adjusting for the negative impact of foreign currency translation. Non-interest income was up $191 million or 10%. Net interest income increased $418 million or 11%, reflecting the impact of strong asset growth and a stable net interest margin. Net fee and commission revenues increased by $174 million or 10% largely driven by higher transaction, credit card fees, wealth management fees, and foreign exchange fees. Other non-interest income increased by $17 million, due mainly to foreign exchange hedge related gains, higher acquisition-related benefits, and trading revenues, partly offset lower net gains on investment securities.

Caribbean and Central America

Total revenues were $2,967 million, up 14% versus last year or 7% adjusting for the positive impact of foreign currency translation. Net interest income increased $234 million or 13%, driven by positive foreign currency translation and acquisitions of Citi Central America. Non-interest income including net fees and commissions was up 16%, or 7% adjusting for foreign currency translation, as a result of strong growth in banking, credit card and foreign exchange fees, and higher insurance revenues, and hedge gains vs losses last year.

Asia

Total revenues were $419 million, up 6% versus last year, or down 3% adjusting for the positive impact of foreign currency translation. This was primarily driven by a lower contribution from Thanachart Bank, partly offset by a higher contribution from Bank of Xi'an.

Non-interest expenses

Non-interest expenses of $5,523 million increased $428 million or 8% from last year. The increase reflected the impact of acquisitions, business volume growth and inflationary increases, partly offset by the positive impact of foreign currency translation. Operating leverage was a positive 2.9%.

Provision for credit losses

The provision for credit losses increased $153 million or 14% to $1,281 million. Retail provisions were flat compared to 2015. Increases from acquisitions and higher provisions for credit losses in Latin America from strong retail growth were offset by favourable foreign currency translation. Commercial provisions for credit losses increased mainly in Colombia, primarily the energy sector, and Puerto Rico. Overall, the provision for credit losses ratio was stable, up two basis points to 1.26% relative to last year.

Provision for income taxes

The effective tax rate was 23.3% compared to 21.7% last year due primarily to lower tax benefits in Mexico and the Caribbean.

Outlook

International Banking's growth in 2017 will be achieved through leveraging its diversified footprint, with particular focus on the Pacific Alliance countries. Despite moderation of economic growth in the Pacific Alliance countries, we expect to continue to deliver low double digit loan growth in this region. Margins and credit quality are expected to remain stable. Expense management and delivering positive operating leverage remains a key business priority, with strategic investments in optimizing the business structure and delivering a stronger customer experience being funded through internal structural cost reduction programs. While the primary business focus is on organic growth, acquisition opportunities will continue to be considered that are strategically aligned and complement current operations within the existing footprint.

Global Banking and Markets

Global Banking and Markets (GBM) provides clients with corporate banking, investment banking, capital markets and transaction banking solutions. GBM's products and services are offered to corporate, government and institutional clients in Canada, the U.S., Latin America, Europe, Asia and Australia.

2016 Achievements

- Enhanced customer focus and leveraged our global footprint and our core sector expertise to deliver value-added solutions and superior service to clients. Examples include:
  - US$11.8 billion acquisition by Fortis Inc. of ITC Holdings Corp. Scotiabank acted as financial advisor and provided financing to Fortis. This transaction made Fortis one of the top 15 North American public utilities by enterprise value. Scotiabank was also exclusive financial advisor to Fortis on its US$1.2 billion sale of a 19.9% equity interest in ITC to GIC Private Limited, Singapore's sovereign wealth fund.
  - $3.2 billion sale of RONA Inc. to Lowe's Companies Inc. Scotiabank acted as exclusive financial advisor to RONA. Together, RONA and Lowe's Canada stores created Canada's leading home improvement retailer.
  - Mandated lead arranger, underwriter, book-runner and swaps provider on the three largest debt transactions in Australia over the past year: A$12.8 billion debt facility for the acquisition of the Ausgrid electricity network; A$5.9 billion debt facility for the acquisition of the TransGrid electricity network; and A$4.2 billion debt facility for the acquisition of the Port of Melbourne. The Ausgrid financing was the largest ever AUD corporate loan transaction.
  - US$900 million sale by Glencore plc of silver production from the Antamina mine in Peru to Silver Wheaton Corp., and US$500 million sale of gold and silver production from its Antapaccay mine in Peru to Franco-Nevada Corp. Scotiabank was sole financial advisor to Glencore, one of the world's largest diversified natural resource companies. Joint book-runner on a US$920 million bought deal by Franco-Nevada, largely aimed for the acquisition from Glencore. Franco-Nevada is the leading precious metals royalty and streaming company by both gold revenue and number of precious metal assets.
  - US$525 million acquisition by Gran Tierra Energy Inc. of PetroLatina Energy Ltd. Scotiabank acted as lead financial advisor, sole lead arranger for a US$130 million bridge credit facility and top left book-runner in two equity offerings for a total of US$303 million. Gran Tierra is an oil and gas exploration and production company based in Canada with operations in South America, mainly Colombia.
  - $1.9 billion inaugural Scotiabank lead bond underwriting for the Province of Alberta on its September 2021 offering, the largest Canadian bond underwriting for a province in history.
  - JPY 6 billion 30-year bond deal for the Province of Manitoba, Scotiabank's inaugural JPY transaction for a Canadian province. Scotiabank was joint lead underwriter and sole hedge provider on this deal, named as the 2016 Deal of the Year for Asia-Pacific from mtn-i awards.
  - Scotiabank's Equity Research team earned eleven #1 industry rankings and 17 top-tier sector rankings in the 2016 Canadian Equity Investors Study by Greenwich Associates. Additionally, the team ranked joint second overall in the 2016 Thomson Reuters Analyst Awards for Canada, recognizing analysts' performance based on their stock picking ability and accuracy of their earnings estimates.
  - Implemented a new client segmentation and coverage model to improve customer experience and better align our resources and capabilities to meet our clients' needs.
  - First Canadian bank to offer Bulk Interac e-Transfer, making it easier for businesses to send refunds or payments to customers online.
- Further optimized our business mix, including growing our Latin America business and repositioning our business in Asia and Australia.
  - Obtained all licenses required to operate as a branch of The Bank of Nova Scotia in Australia. This allows Scotiabank to extend our offerings to Australian-based customers and better serve Canadian and international customers with business interests in Australia.
  - Named Best Foreign Exchange Provider in Canada, Peru and Costa Rica, Global Finance (2016).
  - Hired new staff to support our Investment Banking coverage in the Pacific Alliance.
- Strengthened our customer data and analytics capabilities by enhancing our customer relationship management system and data quality and by introducing new client planning tools.
- Following the creation of the GBM Diversity & Inclusion (D&I) Office in late 2015, we have made good progress towards making GBM a more diverse and inclusive workplace, including creating steering committees in each region in which we operate to advance our D&I initiatives globally.

Business Profile

Global Banking and Markets (GBM) conducts the Bank's wholesale banking and capital markets business with corporate, government and institutional investor clients. GBM is a full-service wholesale bank and investment dealer in Canada and Mexico, and offers a range of products and services in the U.S., Latin America (excluding Mexico), and in select markets in Europe, Asia and Australia.

More specifically, GBM provides clients with: corporate lending; transaction banking (including trade finance and cash management); investment banking (including corporate finance and mergers & acquisitions); fixed income and equity underwriting, sales, trading and research; prime services (prime brokerage and stock lending); foreign exchange sales and trading; commodity derivatives; precious and base metals sales, trading, financing and physical services; and collateral management.

Scotiabank took steps to refocus its Asia business this year. This included the establishment of a fully-licensed branch in Australia, the closing of our representative offices in Vietnam and Thailand, and the closing of our branches in Taiwan and Dubai.

Strategy

GBM aims to be a leading wholesale bank in Canada and the Pacific Alliance and maintain a focused presence in other regions to support multi-regional customers and leverage GBM's strengths in its core markets and sectors.

We will achieve this objective by:

- Enhancing our customer focus to strengthen customer relationships;
- Making the required investments in our platform and technology;

- Executing on cost control strategies; and
- Directing capital and resources to businesses which optimize profitability and align with our customer-focused strategies.

2017 Priorities

- **Improve customer focus** – Improve our customer coverage and deepen relationships with our most important customers. Increase our emphasis on investment banking and other fee-based activities that strengthen customer relationships. Leverage our global platforms to serve the strategic and financial objectives of our customers.
- **Align business mix** – Shift our business mix to more closely align with our customer-focused strategy and other priorities by: (i) increasing fee-based revenue as a percentage of total revenue; (ii) improving sector diversification; and (iii) shifting more focus and resources to our Pacific Alliance operations.
- **Improve resource productivity** – Improve productivity and achieve cost efficiencies through: (i) structural cost management and the re-purposing of our cost base; (ii) further reduction in costs and risks through enhanced client on-boarding processes; and (iii) re-alignment of global wholesale operations.
- **Further digital transformation** – Improve automation and embrace disruptive technologies to improve the customer experience and reduce costs. Invest in advanced analytics to drive revenues and optimize the use of capital and funding.

T37 Global Banking and Markets financial performance

($ millions)	2016	2015	2014
Net interest income[1]	**$ 1,293**	$ 1,071	$ 1,064
Non-interest income[1]	**3,139**	2,953	3,167
Total revenue[1]	**4,432**	4,024	4,231
Provision for credit losses	**249**	67	16
Non-interest expenses	**2,040**	1,846	1,880
Income tax expense[1]	**572**	558	665
Net income	**$ 1,571**	$ 1,553	$ 1,670
Net income attributable to non-controlling interests in subsidiaries	**–**	–	–
Net income attributable to equity holders of the Bank	**$ 1,571**	$ 1,553	$ 1,670
Key ratios			
Return on equity[2]	**12.6%**	13.0%	15.2%
Productivity[1]	**46.0%**	45.9%	44.4%
Net interest margin[3]	**1.67%**	1.65%	1.69%
Provision for credit losses as a percentage of loans and acceptances	**0.30%**	0.10%	0.03%
Selected Consolidated Statement of Financial Position data (average balances)			
Trading assets	**$ 103,316**	$ 108,137	$ 110,869
Loans and acceptances	**81,662**	70,103	63,818
Earning assets	**298,664**	290,482	274,386
Total assets	**350,627**	342,389	311,021
Deposits	**77,261**	63,308	59,273
Total liabilities	**269,755**	239,628	217,408

(1) Taxable equivalent basis.
(2) Refer to Glossary.
(3) Net interest income (TEB) as % of average earning assets excluding bankers' acceptances.

Financial Performance

Global Banking and Markets reported net income attributable to equity holders of $1,571 million in 2016, an increase of $18 million or 1% from last year. Stronger results in the fixed income, corporate lending and commodities businesses, as well as the positive impact of foreign currency translation, were mainly offset by higher provision for credit losses and lower results in equities.

Average assets

Average assets increased by $9 billion or 3% to $351 billion this year. Adjusting for the positive impact of foreign currency translation, average assets decreased by $4 billion or 1%, due primarily to a decrease of $7 billion in trading assets and $3 billion in securities purchased under resale agreements. This was partly offset by growth of $6 billion in corporate loans and acceptances.

Average liabilities

Average liabilities increased by $30 billion or 13% to $270 billion this year. Adjusting for the impact of foreign currency translation, the increase was $19 billion or 8%, mainly due to growth of $12 billion in deposits and $6 billion in securities sold under repurchase agreements.

Net interest income

Net interest income increased by 21% to $1,293 million, mainly due to higher lending volumes and loan origination fees in Canada, U.S. and Europe, and the positive impact of foreign currency translation. The net interest margin was 1.67%, which was two basis points higher than 2015.

Non-interest income

Non-interest income of $3,139 million increased by $186 million or 6%. Stronger fixed income and commodities trading revenues, higher underwriting and advisory fees and higher banking fees all contributed to the growth. This was partly offset by lower revenues in equities.

Non-interest expenses

Non-interest expenses increased by $194 million or 11% to $2,040 million in 2016. This was due to higher performance-related and share-based compensation, higher technology, compliance and regulatory costs, volume-driven securities expenses, and the negative impact of foreign currency translation. Operating leverage was negative 0.4%.

Provision for credit losses

The provision for credit losses was $249 million, up $182 million from last year, due to higher provisions in the U.S., Europe and Asia, primarily in the energy sector. The provision for credit losses ratio was up 20 basis points to 30 basis points.

Provision for income taxes

The effective tax rate of 26.7% was 0.3% higher than the prior year.

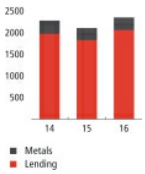
Outlook

Global Banking and Markets expects business conditions and financial results to continue to moderately improve in 2017, as volatility driven by political (US election, Brexit) and monetary (Fed policy) events influence investor and business confidence. Improved focus client revenues, growth in deposits, improved Corporate Banking results and strong performance from Investment Banking will be partly offset by lower other capital markets' activities. Expense management is expected to provide benefits in 2017 with expenses down from 2016 from benefits from the recent structural cost initiatives, partly offset by higher technology costs. Provisions for credit losses are expected to moderate to longer term average levels. The U.S. and Canada are expected to drive the bulk of growth in 2017 as Europe suffers from Brexit uncertainty and high regulatory costs, and Asia begins to grow from a lower asset base after recent repositioning.

C19 Total revenue



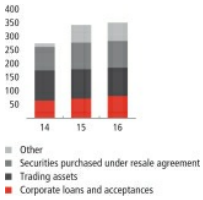
C20 Business banking revenue
$ millions



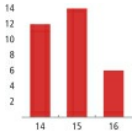
C21 Capital markets revenue by business line
$ millions



C22 Composition of average earning assets
$ billions



C23 Trading loss days



Other

The Other segment includes Group Treasury, smaller operating segments, business line elimination items and other corporate items which are not allocated to a business line.

Financial Performance

Net interest income, non-interest income, and income taxes in each period include the elimination of tax-exempt income gross-up. This amount is included in the operating segments, which are reported on a taxable equivalent basis. The elimination was $299 million in 2016, compared to $390 million in 2015.

Net income from investments in associated corporations and the provision for income taxes in each period include the tax normalization adjustments related to the gross-up of income from associated corporations. This adjustment normalizes the effective tax rate in the divisions to better present the contribution of the associated corporations to the divisional results.

The Other segment had a net loss attributable to equity holders of $269 million in 2016. Adjusting for the restructuring charge of $378 million ($278 million after tax; refer T1), net income was $9 million this year.

The prior year included a number of largely offsetting items, comprised of a reduction in pension benefit accrual related to modifications made to the Bank's main pension plan of $204 million pre-tax ($151 million after tax), an increase to the collective allowance for credit losses against performing loans due to the increase in the loan portfolio of $60 million pre-tax ($44 million after tax), and reorganization costs related to Canadian Banking's shared services operations of $61 million pre-tax ($45 million after tax).

Revenues

Revenues declined by $46 million mainly due to lower contributions from asset/liability management activities. Partly offsetting were lower taxable equivalent basis offsets and the positive impact of foreign currency translation. Gains on sale of real estate were largely offset by lower net gains on investment securities.

Provision for credit losses

The increase in collective allowance for credit losses on performing loans was $50 million this year compared to $60 million last year.

Non-interest expenses

Non-interest expenses increased by $567 million to $653 million. The increase was largely due to the restructuring charge of $378 million and increased costs relating to strategic and technology initiatives. There were also higher employee pension and benefit expenses in 2016 as last year included lower pension expenses from a reduction in pension benefit accrual, partially offset by reorganization costs related to Canadian Banking's shared service operations in the prior year.

T38 Other financial performance

($ millions)	**2016**	2015	2014
Net interest income[1]	**$ (384)**	$ (100)	$ 90
Non-interest income[1][2]	**273**	35	(76)
Total revenue[1]	**(111)**	(65)	14
Provision for credit losses	**50**	60	–
Non-interest expenses	**653**	86	232
Income tax expense[1]	**(545)**	(475)	(320)
Net income	**$ (269)**	$ 264	$ 102
Net income attributable to equity holders of the bank	**$ (269)**	$ 264	$ 102

(1) Includes the net residual in matched maturity transfer pricing and the elimination of the tax-exempt income gross-up reported in net interest income, non-interest income and provision for income taxes in the business segments.
(2) Includes net income from investments in associated corporations of $(137) in 2016; (2015 – $(137); 2014 – $(140)).

Financial Performance of Business Lines: 2015 vs. 2014

Canadian Banking

Canadian Banking's net income attributable to equity holders was $3,344 million in 2015, a decrease of $339 million or 9% primarily from changes in the Canadian tax legislation and the gain on sale of the Bank's investment in CI Financial Corp. in 2014 (refer T15). Retail and small business banking and wealth management generated strong performances. This year's results were positively impacted by good asset and deposit growth and an eight basis point increase in the margin to 2.23%. Also contributing was the full year impact of the Bank's investment in Canadian Tire Financial Services. Return on equity was 21.0% versus 22.8% in 2014.

International Banking

Net income attributable to equity holders was $1,853 million in 2015, an increase of $237 million or 15% resulting from the favourable impact of foreign currency translation, strong asset and fee growth, and acquisitions partly offset by lower securities gains and higher provisions for credit losses. The 2014 results were negatively impacted by the revaluation of monetary assets in Venezuela and the restructuring charge, totaling $74 million (refer T15), which also contributed to the year-over-year increase. Return on equity was 13.0%, up from 11.7% in 2014.

Global Banking and Markets

Global Banking and Markets reported net income attributable to equity holders of $1,553 million in 2015, a decrease of $117 million from 2014. Lower results in investment banking, Asia lending and precious metals, as well as lower securities gains in U.S. were only partly offset by growth in other businesses. The 2014 results were also impacted primarily by the restructuring charge (refer T15).
Return on equity decreased to 13.0% from 15.2% in 2014.

Other

The Other segment had net income attributable to equity holders of $264 million in 2015, up $162 million from last year. The 2015 net income included the following largely offsetting items, comprised of a reduction in the pension benefit accrual related to modifications made to the Bank's main pension plan of $204 million pre-tax ($151 million after tax), an increase to the collective allowance against performing loans due to the relative increase in the loan portfolio of $60 million pre-tax ($44 million after tax), and reorganization costs related to the consolidation of Canadian shared services of $61 million pre-tax ($45 million after tax). Included in the 2014 results were additional legal provisions and a restructuring charge (refer T15), totaling $62 million.

RISK MANAGEMENT

Effective risk management is fundamental to the success of the Bank, and is recognized as a core deliverable in the Bank's overall approach to strategy management. Scotiabank has a strong, disciplined risk management culture where risk management is a responsibility shared by all of the Bank's employees.

Risk Management Framework

The primary goals of risk management are to ensure that the outcomes of risk-taking activities are consistent with the Bank's strategies and risk appetite, and that there is an appropriate balance between risk and reward in order to maximize shareholder value. Scotiabank's Enterprise-Wide Risk Management Framework (the Framework) articulates the foundation for achieving these goals.

This Framework is subject to constant evaluation to ensure that it meets the challenges and requirements of the global markets in which the Bank operates, including regulatory standards and industry best practices. The risk management programs of the Bank's subsidiaries conform in all material respects to the Bank's risk management framework, although the actual execution of their programs may be different.



The Bank's risk management framework is applied on an enterprise-wide basis and consists of five key elements:

1. Risk Governance,
2. Risk Appetite,
3. Risk Management Tools,
4. Risk Identification and Assessment, and
5. Risk Culture.

The Types of Risk

The Bank ensures that risk-taking activities are consistent with the Bank's strategies and risk appetite by favouring businesses that generate sustainable, consistent and predictable earnings over the business cycle. In order to mitigate risk, the Bank seeks to avoid excessive risk concentrations through a diversified mix of businesses, products, geographies, currencies and customers. The Framework provides an overview of each principal risk type that can materially impact the Bank and how each principal risk type is managed. Scotiabank's principal risk types include: Credit, Market, Liquidity, Operational, Reputational, Strategic, Insurance and Environmental.

Risk Management Principles

Risk-taking and risk management activities across the enterprise are guided by the following principles:

Risk and reward – business decisions are consistent with strategies and risk appetite, and there is an appropriate balance between risk and reward in order to maximize shareholder value.

Understand the risks – the Bank limits its risk taking activities to those that are well understood, and where there is sufficient expertise, resources and infrastructure to effectively measure and manage the risks – all material risks are identified, measured and managed.

Forward thinking – forward thinking and the use of stress testing are utilized to proactively identify emerging risks and potential vulnerabilities.

Everyone is a risk manager – within the Bank's risk governance structure, it is the shared responsibility of every employee to manage risk.

Protect our brand – all risk taking activities must be in line with the Bank's risk appetite, Scotiabank's Code of Conduct, Values and policy principles which are established to guide risk taking behaviors and protect the Bank's brand.

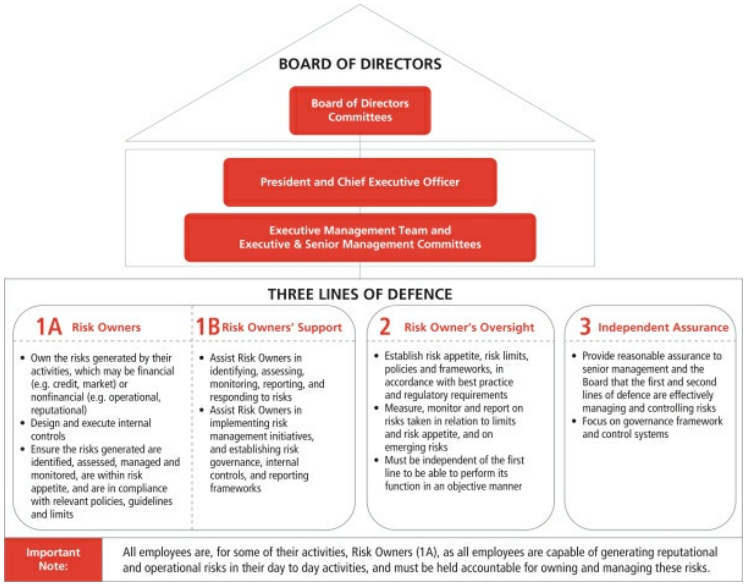
Compensation – compensation plan design and decisions are aligned with the Bank's strategy and risk culture and support appropriate risk behaviors.

Risk Governance

Effective risk management begins with effective risk governance.

The Bank has a well-established risk governance structure, with an active and engaged Board of Directors supported by an experienced executive management team. Decision-making is highly centralized through a number of senior and executive risk management committees.

The Bank's risk management framework is predicated on the three-lines-of-defence model. Within this model, the First Line of Defence (typically comprised of the business lines and most corporate functions) incur and own the risks, while the Second Line of Defence (typically comprised of control functions such as Global Risk Management, Compliance, and Finance) provide independent oversight and objective challenge to the First Line of Defence, as well as monitoring and control of risk. Internal Audit Department (the Third Line of Defence) provides enterprise-wide independent assurance over the design and operation of the Bank's internal control, risk management and governance processes throughout the first and second lines of defence. In this risk governance structure, employees in every area of the organization are responsible for risk management.



The Board of Directors: as the top of the Bank's risk management governance structure, provides oversight, either directly or through its committees, to satisfy itself that decision making is aligned with the Bank's strategies and risk appetite. The Board receives regular updates on the key risks of the Bank – including a quarterly comprehensive summary of the Bank's risk profile and performance of the portfolio against defined limits – and approves key risk policies, limits, the Risk Appetite Framework and the Credit Risk Appetite.

The Risk Committee of the Board: assists the Board by providing oversight to the risk management function at the Bank. This includes periodically reviewing and approving the Bank's key risk management policies, frameworks and limits and satisfying itself that management is operating within the Bank's Risk Appetite Framework. The Committee also oversees the risk management function's independence from the Business Lines and oversees the effectiveness of the Chief Risk Officer and risk management function.

The Audit and Conduct Review Committee of the Board: assists the Board by providing oversight on the effectiveness of the Bank's system of internal controls. The Committee oversees the integrity of the Bank's consolidated financial statements and related quarterly results. The Committee oversees the Bank's compliance with legal and regulatory requirements and oversees the Compliance, Finance, Audit, and Anti-Money Laundering/Anti-Terrorist Financing functions at the Bank.

Human Resources Committee of the Board: in conjunction with the Risk Committee of the Board, satisfies itself that adequate procedures are in place to identify, assess and manage the risks associated with the Bank's material compensation programs and that such procedures are consistent with the Bank's risk management programs. The Committee has further responsibilities relating to leadership, succession planning and total rewards.

Corporate Governance Committee of the Board: acts in an advisory capacity to the Board to enhance the Bank's corporate governance through a continuing assessment of the Bank's approach to corporate governance and makes policy recommendations.

President and Chief Executive Officer (CEO): reports directly to the Board and is responsible for defining, communicating and implementing the strategic direction, goals and core values for Scotiabank that maximize long term shareholder value. The CEO oversees the establishment of the Bank's risk appetite, in collaboration with the CRO and CFO, which is consistent with the Bank's short and long term strategy, business and capital plans, as well as compensation programs.

Chief Risk Officer (CRO): is responsible for the overall management of Global Risk Management. The CRO has unfettered access to the Risk Committee of the Board to ensure independence of GRM. As a senior member of the Bank's executive management team, the CRO participates in strategic decisions related to where and how the Bank will deploy its various resources sources of capital to meet the performance targets of the business lines and the Bank's Balanced Scorecard. The CRO reports directly to the CEO and the Risk Committee of the Board.

Executive Committees:

Operating Committee: serves as a forum for the President and Chief Executive Officer (the "CEO") to discuss key strategic issues and the long-term direction of the Bank with senior executives. Through the Operating Committee, the CEO may solicit views and advice and counsel from senior

executives on issues pertinent to the CEO and the direction of the Bank. Meetings of the Operating Committee also consider "tone from the top" matters, enabling its members to shape, reinforce and role-model the Bank's desired operating style and organizational culture. The Operating Committee may discuss topics including: setting the Bank's key strategies and, upon approval by the Board, directing the execution of those strategies and the execution of the Bank's overall risk strategy; and monitoring and evaluating how risks are managed across the Bank.

Asset-Liability Committee (ALCO): is chaired by the CEO and consists of the executive and senior management of the Bank, including members from Group Treasury, Finance, Global Banking & Markets, Canadian Banking, International Banking and GRM. The purpose of the committee is to provide high level oversight and strategic direction for the management of funding, foreign exchange risk, hedging stock based compensation, and economic forecasts. This committee also reviews monthly economic updates and the performance of the key topics discussed.

Additionally, the Committee reviews balance sheet management topics, such as: deposits, liquidity, net interest margin, and capital management topics. The committee's focus is on business line activity (i.e. mortgages and deposits) as well as funding aspects. The committee reviews high level strategies, monitors progress and discusses various trends and key issues. As well, the committee reviews quarterly capital plans, capital allocation and capital risk indicators.

Strategic Transaction Investment Committee (STIC): is chaired by the CEO and provides advice, counsel and decisions on effective allocation and prioritization of resources with respect to the Bank's portfolio of businesses, strategic investments including mergers and acquisitions (M&A), and divestitures. The committee's objectives include review and approval of the Bank's business mix guidelines, review of the Bank's portfolio of businesses and post-acquisition assessments at 12 and 24-36 month benchmarks.

Risk Policy Committee (RPC): is chaired by the CEO and includes the CRO and the heads of the business lines, Group Treasury and GRM. It is responsible for policies, limits, proposals, and other issues covering credit, market, reputational, legal and operational risk, as well as adjudicating on issues referred by the senior management committees. The committee's accountabilities include reviewing and adjudicating on the mandates of its subcommittees.

Human Capital Committee (HCC): is chaired by the Group Head & Chief Human Resources Officer and includes the President and CEO, the CRO, and the heads of the business lines, among others. The committee reviews and approves all major new and changing Bank-wide Human Resources objectives, strategies, policies and programs including all compensation matters. As well, the committee reviews and approves all senior management appointments and the staffing of key positions.

Systems Planning and Policy Committee (SPPC): is chaired by the CEO and consists of the executive and senior management of the Bank, including Canadian Banking, Global Banking & Markets, International Banking, and GRM. This committee reviews and approves major business initiatives involving human and computing facilities, and reviews and adjudicates on submissions in excess of designated executive approval limits.

Senior Management Committees:

Stress Testing Committee (STC): is chaired by the Senior Vice President & Chief Market Risk Officer. It consists of senior management from GRM, Executive Offices (E.O.) Audit, E.O. Finance, Group Treasury, Economics, Enterprise Strategy, and the Group Head and Chief Financial Officers (CFO) of the business lines. The purpose of the committee is to provide high level oversight of stress testing; serve as the most senior point of management that establishes and enhances policies to develop, review, challenge and communicate stress testing results; and promote consistent, collaborative application of the stress testing program Bank-wide.

Senior Credit Committees (SCCs): consist of three non-retail Senior Credit Committees (Corporate, Commercial, and International) which are chaired by the Executive Vice President & Chief Credit Officer (with the Chief Risk Officer as alternate chair), and two Senior Credit Committees (Canadian Banking and International) for Retail, Small Business and Wealth Management which is chaired by the Chief Risk Officer (with the Executive Vice President & Chief Credit Officer as the alternate chair). The Senior Vice President & Chief Market Risk Officer is also an alternate for Corporate SCC. Other voting members of each committee include the Senior Vice Presidents of the relevant credit units, and the Managing Director and Heads of the relevant business lines. A quorum must include the chair or alternate chair, and a member from the relevant business line.

Market Risk Management and Policy Committee (MRMPC): is chaired by the Senior Vice President & Chief Market Risk Officer. It consists of executive and senior management of the Bank including representatives from GRM (Chief Risk Officer and Executive Vice President & Chief Credit Officer), Group Treasury, International Banking and Global Banking & Markets. The MRMPC is responsible for overseeing and establishing standards for market, liquidity and insurance risk management processes within the Bank. For subsidiaries, the MRMPC provides advice and counsel to ensure that their limits are consistent with the overall objectives and strategic direction of the Bank. The MRMPC may delegate in writing the authority to approve specified types of transactions and changes to approved limits to staff in GRM and other departments (Delegated Authorities).

Reputational Risk Committee (RRC): is chaired by the Executive Vice President, General Counsel. It consists of senior management from Audit, Finance, GRM, Group Treasury, Global Compliance, Legal and Public Corporate & Government Affairs as well as senior management from Canadian Banking, International Banking and Global Banking & Markets. The mandate of the RRC is to promote conduct consistent with high ethical standards and protect the reputation of the Bank, by recommending reputational risk policies and procedures as may be necessary to the Board; overseeing the implementation of Board-approved reputational risk policies and procedures; approving additions or exceptions to policies and procedures as may be reserved to the RRC; and upon referral to the RRC from the various business line divisions, risk committees or sub-committees, reviewing business activities, initiatives, products, services, transactions or processes which the sponsor believes may embody a degree of reputational risk, and recommending either for or against proceeding or proceeding subject to conditions, based on an assessment of the reputational risk involved.

Operational Risk Committee (ORC): is chaired by the Chief Risk Officer. It consists of executive and senior management, including the CFO, and the heads of the business lines and key functional areas. The committee provides high level oversight of operational risk, and promotes an enterprise-wide operational risk framework to ensure risks are understood, communicated, and appropriate actions are taken to mitigate related losses. In particular, the committee reviews the Bank's top operational risks, including those arising in new products and initiatives and in existing products and programs where the risk profile may be changing due to internal or external factors.

Risk Rating Governance Committee (RRGC): provides oversight of the Bank's Non-retail credit risk rating system, including policies governing the development, validation, approval and ongoing maintenance of the Bank's Non-retail credit risk rating models and parameter estimates. RRGC also acts as a forum that provides an opportunity for executive/senior management discussion on various aspects of the Non-retail credit risk rating system,

including potential refinements and enhancements. As part of its mandate, RRGC is responsible for reviewing, updating and approving the Bank's Non-retail credit risk rating system. RRGC membership includes the Bank's Chief Risk Officer, the Executive Vice-President and Chief Credit Officer, the Senior Vice-President and Chief Market Risk Officer, as well as other executive/senior management representatives from risk management, banking and internal audit.

Business Line and Corporate Functions: as the first line of defence in the Three Lines of Defence model, are accountable for effective management of the risks within their business lines and functions through identifying, assessing, mitigating and monitoring the risks. Business lines and corporate functions actively implement effective internal controls to manage risk and maintain activities within risk appetite and policies. Further, business lines have processes to be able to effectively identify, monitor and report against allocated risk appetite limits.

Global Risk Management (GRM): supports the Bank's objectives and is mandated to maintain an ongoing and effective enterprise-wide risk management framework that resonates through all levels of the Bank. GRM is responsible for providing reasonable assurance to executive management, the Board of Directors and shareholders that risks are actively identified, managed and communicated to all key stakeholders – this is achieved through timely and relevant reporting. GRM's mission is to ensure that the outcomes of risk taking activities are consistent with the Bank's strategies and risk appetite, and that there is an appropriate balance between risk and reward in order to maximize shareholder value.

Global Compliance: on an enterprise-wide basis, promotes ethical conduct and compliance generally throughout Scotiabank; and supports directors, officers and employees of the Bank and its subsidiaries in managing compliance risk. Compliance is ultimately the responsibility of line management, supported by compliance officers. Together, they comprise the compliance network by which compliance activities are managed throughout Scotiabank. Global Compliance acts as a consultant and educator on regulatory and internal policies and procedures and in this role may establish, or assist with the establishment of, various compliance risk management related programs, sources of written policy, procedures or guidance, training programs or systems as may be necessary or appropriate.

Global Finance: leads enterprise-wide financial strategies which support the Bank's ability to maximize sustainable shareholder value, and actively manages the reliable and timely reporting of financial information to management, the Board of Directors and shareholders, as well as other stakeholders. This reporting includes the Bank's consolidated financial statements and related quarterly and annual results. Global Finance executes the Bank's financial and capital management strategies with appropriate governance and control, while ensuring its processes are efficient and effective.

Internal Audit: reports independently to the Board through the Audit and Conduct Review Committee on the design and operating effectiveness of the Bank's risk governance and risk management framework. The mission of the audit department is to provide enterprise-wide independent, objective assurance over the design and operation of the Bank's controls and operational processes and to provide advisory services designed to improve the Bank's operations.

Risk Appetite

Effective risk management requires clear articulation of the Bank's risk appetite and how the Bank's risk profile will be managed in relation to that appetite.

The Bank's Risk Appetite Framework consists of the identification of 1) risk capacity, the maximum level of risk the Bank can assume before breaching key constraints, 2) risk appetite, the level and types of risk the Bank is willing to assume within its risk capacity to achieve its strategic objectives, and 3) key risk appetite measures, quantitative metrics that capture the Bank's risk appetite. Together, the application of these components helps to ensure the Bank stays within appropriate risk boundaries. Scotiabank's risk appetite is integrated into the strategic and capital planning process and is reviewed annually by senior management who recommend it to the Board for approval. Business lines and control functions develop their own Risk Appetite Frameworks, which are in alignment with the risk appetite and strategies articulated in the Bank's Risk Appetite Framework. Scotiabank actively communicates the Bank's risk appetite, and how it relates to Scotiabankers, to further promote a sound risk culture.

- The Bank's Risk Appetite Framework combines qualitative and quantitative terms of reference to guide the Bank in determining the amount and types of risk it wishes to prudently undertake in pursuing the Bank's strategic and financial objectives.



The Bank's risk appetite is aligned with its enterprise strategy, where the most notable strategic choice is to have highly diversified, well-balanced and sustainable operations within a clearly defined, global footprint.

Key risk appetite measures provide clear risk limits, which are critical in implementing effective risk management. For major risks (credit, market, liquidity, and operational), the key risk appetite measures are supported by management level limit structures and controls. Management's dedicated attention to these risks creates a focus on forward-looking activities that keeps the Bank within its risk appetite on an on-going basis. Other components of Scotiabank's key risk appetite measures include measures that:

- Set risk capacity and appetite in relation to regulatory constraints
- Use stress testing to provide forward-looking metrics
- Ensure Scotiabank's credit rating remains strong
- Minimize earnings volatility
- Limit exposure to operational events that can have an impact on earnings, including regulatory fines
- Ensure reputational risk is top of mind and strategy is being executed within operating parameters

Risk Management Tools

Effective risk management includes tools that are guided by the Bank's Risk Appetite Framework and integrated with the Bank's strategies and business planning processes.

Scotiabank's risk management framework is supported by a variety of risk management tools that are used together to manage bank-wide risks. Risk management tools are regularly reviewed and updated to ensure consistency with risk-taking activities, and relevance to the business and financial strategies of the Bank.

Policies & limits

The Bank develops and implements its key risk policies in consultation with the Board. Such policies (which include appetites and frameworks) are also subject to the requirements and guidelines of the Office of the Superintendent of Financial Institutions (OSFI), the Bank Act, and the Canada Deposit Insurance Corporation (CDIC). Policy development and implementation reflect best governance practices which the Bank strives to adhere to at all times. The Bank also provides advice and counsel to its subsidiaries in respect of their risk policies to ensure alignment with the Bank's policies, subject to the local regulatory requirements of each subsidiary.

Policies apply to specific types of risk or to the activities that are used to measure and control risk exposure. They are based on recommendations from risk management, internal audit, business lines, and senior executive management. Industry best practices and regulatory requirements are also factored into the policies. Policies are guided by the Bank's Risk Appetite, and set the limits and controls within which the Bank and its subsidiaries can operate.

Limits control risk-taking activities within the appetite and tolerances established by the Board and executive management. Limits also establish accountability for key tasks in the risk-taking process and establish the level or conditions under which transactions may be approved or executed.

Guidelines, processes and standards

Guidelines are the directives provided to implement policies as set out above. Generally, they describe the facility types, aggregate facility exposures and conditions under which the Bank is prepared to do business. Guidelines ensure the Bank has the appropriate knowledge of clients, products and markets, and that it fully understands the risks associated with the business it underwrites. Guidelines may change from time to time, due to market or other circumstances.

Processes are the activities associated with identifying, evaluating, documenting, reporting and controlling risk.

Standards define the breadth and quality of information required to make a decision, and the expectations in terms of quality of analysis and presentation. Processes and standards are documented in a series of policies, manuals and handbooks.

Measurement, monitoring, and reporting

Risk measurement tools include the use of models. The Bank uses models for a range of purposes including:

- valuing transactions,
- measuring risk exposures,
- determining credit risk ratings and parameters, and
- calculating economic and regulatory capital.

The use of quantitative risk methodologies and models is balanced by a strong governance framework and includes the application of sound and experienced judgment. The development, independent review, and approval of models is subject to formalized policies such as the Model Risk Management Policy and oversight of senior management committees such as the Model Review Committee (for market risk, counterparty credit risk, and liquidity risk models). Key models used in the calculation of credit and market risk regulatory capital on an enterprise basis are OSFI approved. These models are incorporated into the Bank's framework for governance and control of model risk to ensure that they continue to perform in line with regulatory requirements.

The Bank continuously monitors its risk exposures to ensure business activities are operating within approved limits or guidelines, and the Bank's strategies and risk appetite. Breaches, if any, of these limits or guidelines are reported to senior management and/or the Board depending on the limit or guideline.

Risk Reports aggregate measures of risk across products and businesses, and are used to ensure compliance with risk policies, limits, and guidelines. They also provide a clear statement of the amounts, types, and sensitivities of the various risks in the portfolio. Senior management and the Board use this information to understand the Bank's risk profile and the performance of the portfolios. A comprehensive summary of the Bank's risk profile and performance of the portfolio is presented quarterly to the Risk Committee of the Board.

Stress testing

Stress testing programs at both the enterprise-wide level and individual risk level allow the Bank to estimate the potential impact on the Bank's income and capital as a result of significant changes in market conditions, credit environment, liquidity demands, or other risk factors. Enterprise-wide stress testing is also integrated with both the strategic and financial planning processes, as well as crisis management planning. The development, approval and on-going review of the Bank's stress testing programs are subject to policy, and the oversight of the Stress Testing Committee. Where appropriate, the Board of Directors or the Risk Committee of the Board approves stress testing limits for certain risk factors, and receives reports on performance regularly. Each stress testing program is developed with input from a broad base of stakeholders, and results are integrated into management decision-making processes for capital, funding, market risk limits, and credit risk appetite. The stress testing programs are designed to capture a number of enterprise-wide stress scenarios with differing severities and time horizons.

Risk Culture

Effective risk management requires a strong, robust, and pervasive risk management culture where every Bank employee is a risk manager and is responsible for managing risks.

The Bank's risk governance structure, risk appetite, and risk management tools influence – and are in turn influenced by – the Bank's risk culture. This symbiotic inter-relationship ensures a strong alignment exists between strategy, risk culture, and the key components of the Bank's risk management framework.

The following are the foundational support on which the Bank's risk culture is built upon:

- Tone from the top – Clear and consistent communication from leaders on risk behavior expectations and the importance of Scotiabank's values.
- Accountability – All Scotiabankers in every business function are held accountable for risk ownership and their actions in accordance with the Three Lines of Defence model.
- Incentives – Motivate and reward key risk takers for identifying, managing and promoting a sound risk culture within their environment.
- Effective challenge – Effective challenge, alternative views and open dialogue are promoted when identifying risks – Scotiabankers are encouraged and expected to "Raise a hand".

Other elements of Scotiabank's strong risk culture:

- Compensation: programs are structured to discourage behaviours that are not aligned with the Bank's values or Scotiabank's Code of Conduct, and ensure that such behaviors will not be rewarded. Higher risk behaviors are also discouraged and there are reduced opportunities for significant one-time rewards. The Bank's material compensation programs are structured to reflect the Bank's risk appetite, with a substantial portion deferred for material risk takers in order to achieve stronger alignment with the results of risk-taking activities.
- Risk appetite: the Bank uses a variety of communication channels to build and sustain employee awareness of the qualitative and quantitative constraints (i.e. the "boundaries") that apply to each and every employee's activities.
- Reporting: reputational & operational risk dashboards and other key metrics are monitored and reported. The Bank also seeks out employee feedback through a variety of surveys.
- Training: risk education programs are available to employees in the business lines and control functions. Scotiabank continually reinforces risk culture by providing effective and informative mandatory and non-mandatory training modules for all employees, as well as presentations, videos, and other training media on a variety of risk management topics.
- Decision-making on risk issues is highly centralized: The membership of senior and executive management committees responsible for the review, approval and monitoring of transactions and the related risk exposures (whether global or local) includes business line heads and senior risk officers from GRM. The flow of information and transactions to these committees keeps senior and executive management well informed of the risks the Bank faces, and ensures that transactions and risks are aligned with the Bank's risk appetite.

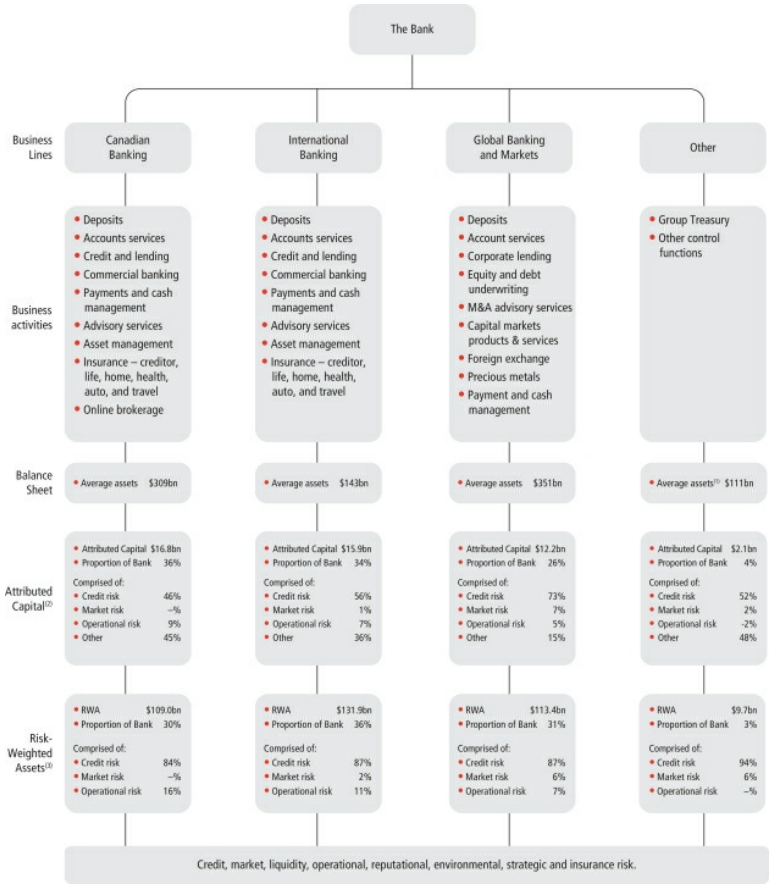
Risk culture is a component of the Bank's organizational culture. Key elements that support the Bank's organizational culture are as follows:

- Scotiabank's Code of Conduct: stringent guidelines to which all staff must attest on an annual basis
- Values: Integrity – Act With Honour; Respect – Value Every Voice; Accountability – Make It Happen; Passion – Be Your Best
- Organizational fit: cultural behaviours are considered in hiring and promotional processes. Assessment of organizational fit is increasingly considered when evaluating new business opportunities and hiring practices

Principal Risk Types

Risk Type	Governing Documentation	Application to Risk Appetite
Credit Risk	Credit Risk Policy Credit Risk Appetite Industry Concentration Framework Collective Allowance Policy for Performing Loans Residential Mortgage Underwriting Policy	Quantitative limits: • Exposure to a single counterparty or group of related parties (limits differentiated by counterparty type, customer risk rating and security cover); • Country risk (exposure limits to control transfer/cross-border and sovereign default risks); and • Industry concentrations (exposure and risk adjusted concentration limits).
Market Risk	Market and Structural Risk Management Policy	Quantitative limits, such as various value at risk (VaR), stress test results, equity and debt investment exposures, and structural interest rate and foreign exchange exposures.
Liquidity Risk	Liquidity Risk and Collateral Management Policy	Quantitative limits: • Minimum Liquidity Coverage Ratio (LCR); • Appropriate levels of unencumbered high quality liquid assets that can be readily sold or pledged; • Limits to control the maximum net cash outflow over specified short-term horizon; and • Diversification of funding by source, type of depositor, instrument, term and geographic market.
Operational Risk	Operational Risk Management Policy and Framework Internal Control Policy Fiduciary Risk Management Policy Model Risk Management Policy New Products and Services Risk Management Policy Global Fraud Policy Third Party Risk Management Policy	• Systematic identification, measurement, mitigation and monitoring of operational risk, regardless of whether the risk is internal to the Bank or outsourced to a third party; • Minimization of residual operational risk; and • Expressed quantitatively by an aggregate loss event limit, a single event loss limit, and a variety of limits for individual categories of operational risk.
Reputational Risk	Reputational Risk Policy Scotiabank's Code of Conduct Compliance Policy KYC Policy	Low appetite for reputational, legal, or taxation risk arising in business activities, initiatives, products, services, transactions or processes, or from a lack of suitability of products for clients.
Environmental Risk	Environmental Policy	Consistent with the Equator Principles, to which the Bank is a signatory, the Bank provides project finance loans and project-related corporate loans only to those projects whose borrowers can demonstrate their ability and willingness to comply with comprehensive processes aimed at ensuring that the projects are developed in a socially responsible manner and according to sound environmental management practices.
Strategic Risk	Annual Strategy Report to the Board of Directors	Strategy report considers linkages between the Bank's Risk Appetite Framework with the enterprise strategy, business line strategies and corporate function strategies; also incorporates linkages to measuring progress against strategic priorities and implementation.
Insurance Risk	Insurance Risk Policy Insurance Risk Management Framework	The Bank will limit its insurance risk-taking activities to those that are well understood and where there is sufficient expertise, resources and infrastructure to effectively measure and manage the risks and to earn commensurate returns. Where insurance risks are taken, it is on a selective basis to achieve stable and sustainable earnings; and the risk assumed is diversified geographically and by product.

T39 Exposure to risks arising from the activities of the Bank's businesses



(1) Average assets for the Other segment include certain non-earning assets related to the business lines.
(2) Attributed Capital is a combination of regulatory: (i) Risk-based capital and (ii) Leverage capital. Attributed Capital is reported on an average basis.
(3) Risk-weighted assets (RWA) are as at October 31, 2016 as measured for regulatory purposes in accordance with the Basel III all-in approach.

Top and emerging risks

The Bank is exposed to a variety of top and emerging risks. These risks can potentially adversely affect the Bank's business, financial performance, reputation and business strategies. As part of our risk management approach, we proactively identify, assess, review, monitor and manage a broad range of top and emerging risks so that appropriate risk mitigation strategies can be taken. Every quarter, a listing and a brief discussion of selected top and emerging risks is presented to Senior Management and the Board of Directors.

The Bank's top and emerging risks are as follows:

Geopolitical risk

Geopolitical risks could affect volatility in foreign exchange and capital markets globally. This affects all participants in these markets. In the short run, a market shock could potentially impact the Bank's trading and non-trading market activities and revenues. Over a longer period of time, the more broadly based macroeconomic effects could potentially impact the Bank's exposures to customers and market segments impacted by those shocks. Although it is difficult to predict where new geopolitical disruption will occur, the Bank's stress testing program assists in evaluating the potential impact of severe conditions, whether caused by geopolitical or other circumstances. Management's strong understanding of the local political landscapes and macroeconomic environments in which the Bank operates, combined with the Bank's business model and diversified geographic footprint, serve as ongoing mitigants to this risk.

Legal and regulatory compliance risk

The Bank is subject to extensive regulation in the jurisdictions in which it operates. Although the Bank continually monitors and evaluates the potential impact of regulatory developments to assess the impact on our businesses and to implement any necessary changes, regulators and private parties may challenge our compliance. Failure to comply with legal and regulatory requirements may result in fines, penalties, litigation, regulatory sanctions, enforcement actions and limitations or prohibitions from engaging in business activities, all of which may negatively impact the Bank's financial performance and its reputation. In addition, day-to-day compliance with existing laws and regulations, has involved and will continue to involve significant resources, including requiring the Bank to take actions or incur greater costs than anticipated, which may negatively impact the Bank's financial performance. Such changes could also adversely impact the Bank's business strategies or limit its product or service offerings, or enhance the ability of the Bank's competitors to offer their own products and services that rival the Bank's.

Anti-money laundering

Money laundering and terrorist financing are receiving significant attention as nations attempt to deal with the harmful legal, economic, and social consequences of illegal activities. Governments, law enforcement agencies, and regulators around the world employ a variety of means, including establishing regulatory requirements on financial institutions, to curtail the ability of criminal and terrorist elements to profit from, or finance, their activities. It is widely recognized that financial institutions are uniquely positioned and possess the necessary infrastructure to assist in the fight against money laundering, terrorist financing, and criminal activity through prevention, detection, and the exchange of information.

Money laundering, terrorist financing and economic sanctions violations represent regulatory, legal, financial and reputational risk to the Bank. Scotiabank is subject to a number of expanding and constantly evolving anti-money laundering/anti-terrorist financing (AML/ATF) and economic sanctions laws and regulations internationally given the Bank's global footprint.

The Bank is committed to sustaining secure financial systems in the countries around the world in which it maintains operations by taking the necessary action, using a risk-based approach. The Bank's AML program includes policies and internal controls with respect to client identification and due diligence, transaction monitoring, investigating and reporting of suspicious activity, and evaluation of new products and services to prevent and/or detect activities that may pose AML risk to the Bank. The AML program also facilitates an annual enterprise-wide AML/ATF risk assessment process and ensures that all employees, including the Board of Directors, undergo initial and ongoing AML/ATF training.

Technology and Information Security Risk

Technology and information security risks have become increasingly prevalent in business in general and for financial institutions in particular. Globally these risks have increased as a result of the sophistication and constant evolution of new technologies and attack methodologies. The Bank's technologies, systems and networks, and those of our customers and the third parties providing services to us, may be subject to attacks, breaches or other compromises. With any such attack, breach, compromise, or weakness of technology or information systems, hardware or related processes, the Bank may experience, among other things: financial loss; a loss of customers or business opportunities; disruption to operations; misappropriation or unauthorized release of confidential, financial or personal information; damage to computers or systems of the Bank and those of its customers and counterparties; violations of applicable privacy and other laws; litigation; regulatory penalties or intervention, remediation, investigation or restoration cost; increased costs to maintain and update our operational and security systems and infrastructure; and reputational damage. The Bank actively monitors and manages these technology and information security risks. Through enterprise-wide programs, industry best practices, and robust threat and vulnerability assessments and responses, the Bank dynamically adapts its information technology operations, protocols, and governance standards against these proliferating risks and their potential impacts.

Technology disruption

Technology continues to impact the banking industry and its customers. Non-traditional new participants are entering certain segments of the financial industry which, in some cases, reduced regulatory requirements or other oversight. New entrants may use new technologies, advanced data and analytical tools, lower cost to market and/or faster processes to challenge traditional financial institutions. The scope and breadth of technology disruption is difficult to anticipate and has the potential to impact revenues and costs in certain of the Bank's businesses. To mitigate this risk, the Bank continues to adapt and employs a number of strategies to ensure its continuing competitiveness against disruptive technologies, including using data and analytical tools to understand and respond swiftly to customer needs, and investing in technology and innovation. The Bank also considers the use of partnerships to appropriately meet the pace of innovation in financial services products and delivery channels. Failure to properly implement and deploy key technological innovations could adversely affect the Bank's operating results or financial position.

Low commodity prices / energy exposure

Oil prices have continued their weakness well into 2016. The protracted low oil price has challenged many businesses, and with forecasts calling for modest price increases into 2017, continued stress can be expected on vulnerable companies in this sector. Weak performance in the energy sector is also having a negative impact on Canadian tax revenues and has contributed to softness in Alberta's housing market. The Bank has taken a number of actions to prudently manage loan exposures in this sector and in related consumer loan segments, and according to the Bank's stress test scenarios, losses are expected to be manageable.

Canadian consumer indebtedness

Canadian household indebtedness continues to outpace growth in disposable income fueled by persistently low interest rates and stable national employment levels. In such an environment, higher consumer indebtedness contributed to an upward trend in mortgage credit growth and strong home sales. In light of these trends, multiple levels of government implemented new legislation to introduce additional safeguards to the housing market. These include the foreign buyer tax in British Columbia and changes on a national basis to tighten origination criteria for insured mortgages. While interest rates are expected to remain at relatively low in the mid to long term, the risks of an external shock, such as higher unemployment rates, could impact Canadians' ability to repay their loans and consequently drive a correction in the housing market.

We actively manage our lending portfolios and stress test them against various scenarios. For further discussion relating to our retail portfolio, refer to the Credit Risk Summary section.

Credit Risk

Credit risk is the risk of loss resulting from the failure of a borrower or counterparty to honour its financial or contractual obligations to the Bank. Credit risk arises in the Bank's direct lending operations, and in its funding, investment and trading activities where counterparties have repayment or other obligations to the Bank. Credit risk includes settlement risk, suitability risk and wrong way risk.

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Credit risk summary

- Loans and acceptances (Retail and Non-Retail) remained diversified by region, industry and customer. Regional exposure is spread across our key markets (Canada 66.1%, United States 7.7%, Mexico 4.2% and Other 22%). Financial Services, constitutes 3.9% of overall gross exposures (before consideration of collateral) and was $20 billion, a decrease of $1 billion from October 31, 2015. These exposures are predominately to highly rated counterparties and are generally collateralized.
- The Bank's overall loan book as of October 31, 2016 increased to $497 billion versus $473 billion as of October 31, 2015, with growth reflected in Personal, and Business and Government lending. Residential mortgages were $223 billion as of October 31, 2016, with 87% in Canada. The corporate loan book, which accounts for 35% of the total loan book, is composed of 53% of loans with an investment grade rating as of October 31, 2016, down from 55% as of October 31, 2015.

The effective management of credit risk requires the establishment of an appropriate credit risk culture. Key credit risk policies and appetite statements are important elements used to create this culture.

The Board of Directors, either directly or through the Risk Committee (the Board), reviews and approves the Bank's Credit Risk Appetite annually and Credit Risk Policy biennially.

- The objectives of the Credit Risk Appetite are to ensure that:
  - target markets and product offerings are well defined at both the enterprise-wide and business line levels;
  - the risk parameters for new underwritings and for the portfolios as a whole are clearly specified; and
  - transactions, including origination, syndication, loan sales and hedging, are managed in a manner that is consistent with the Bank's risk appetite.
- The Credit Risk Policy articulates the credit risk management framework, including:
  - key credit risk management principles;
  - delegation of authority;
  - the credit risk management program;
  - counterparty credit risk management for trading and investment activities; and
  - aggregate limits, beyond which credit applications must be escalated to the Board for approval.

Global Risk Management develops the credit risk management framework and policies that detail, among other things, the credit risk rating systems and associated parameter estimates; the delegation of authority for granting credit; the calculation of the allowance for credit losses; and the authorization of write-offs.

Corporate and commercial credit exposures are segmented by country and by major industry group. Aggregate credit risk limits for each of these segments are also reviewed and approved annually by the Board. Portfolio management objectives and risk diversification are key factors in setting these limits.

Consistent with the Board-approved limits, borrower limits are set within the context of established lending criteria and guidelines for individual borrowers, particular industries, countries and certain types of lending, to ensure the Bank does not have excessive concentration in any single borrower, or related group of borrowers, particular industry sector or geographic region. Through the portfolio management process, loans may be syndicated to reduce overall exposure to a single name. For certain segments of the portfolio, credit derivative contracts are also used to mitigate the risk of loss due to borrower default. Risk is also mitigated through the selective sale of loans.

Banking units and Global Risk Management regularly review the various segments of the credit portfolio on an enterprise-wide basis to assess the impact of economic trends or specific events on the performance of the portfolio, and to determine whether corrective action is required. These reviews include the examination of the risk factors for particular products, industries and countries. The results of these reviews are reported to the Risk Policy Committee and, when significant, to the Board.

Risk measures

The credit risk rating systems support the determination of key credit risk parameter estimates which measure credit and transaction risk. These risk parameters – probability of default, loss given default and exposure at default are transparent and may be replicated in order to provide consistency of credit adjudication, as well as minimum lending standards for each of the risk rating categories. The parameters are an integral part of enterprise-wide policies and procedures encompassing governance, risk management, and control structure, and are used in various internal and regulatory credit risk quantification calculations.

The Bank's credit risk rating system is subject to a rigorous validation, governance and oversight framework. The objectives of this framework are to ensure that:

- Credit risk rating methodologies and parameters are appropriately designed and developed, independently validated, and regularly reviewed; and
- The review and validation processes represent an effective challenge to the design and development process.

Non-retail credit risk rating methodologies and parameters are reviewed and validated at least annually. Units within Global Risk Management are responsible for design and development, validation and review, and are functionally independent from the business units responsible for originating transactions. Within Global Risk Management, they are also independent from the units involved in risk rating approval and credit adjudication.

Internal credit risk ratings and associated risk parameters affect loan pricing, computation of the collective allowance for credit losses, and return on equity.

Corporate and commercial

Corporate and commercial credit exposure arises in Canadian Banking, International Banking and Global Banking and Markets business lines.

Risk ratings

The Bank's risk rating system utilizes internal grade (IG) codes – an 18 point scale used to differentiate the risk of default of borrowers and the risk of loss on facilities. The general relationship between the Bank's internal borrower IG codes and external agency ratings is shown in T24.

IG codes are also used to define credit adjudication authority levels appropriate to the size and risk of each credit application. Lower-rated credits require increasingly more senior management involvement depending upon the aggregate exposure. Where the decision is beyond their authority

levels, credit units will refer the request – with its recommendation – to a senior credit committee for adjudication. Senior credit committees also have defined authority levels and, accordingly, forward certain requests to the Risk Policy Committee. In certain cases, these must be referred to the Risk Committee of the Board of Directors.

Adjudication

Credit adjudication units within Global Risk Management analyze and evaluate all significant credit requests for corporate and commercial credit exposures, to ensure that risks are adequately assessed, properly approved, continually monitored and actively managed. The decision-making process begins with an assessment of the credit risk of the individual borrower or counterparty. Key factors considered in the assessment include:

- The borrower's management;
- The borrower's current and projected financial results and credit statistics;
- The industry in which the borrower operates;
- Economic trends; and
- Geopolitical risk.

Based on this assessment, a risk rating is assigned to the individual borrower or counterparty, using the Bank's risk rating systems. A separate risk rating is also assigned at the facility level, taking into consideration additional factors, such as security, seniority of claim, structure, term and any other forms of credit risk mitigation that affect the amount of potential loss in the event of a default of the facility. Security typically takes the form of charges over inventory, receivables, real estate, and operating assets when lending to corporate and commercial borrowers; and cash or treasuries for trading lines such as securities lending, repurchase transactions, and derivatives. The types of acceptable collateral, and related valuation processes are documented in risk management policies and manuals.

Other forms of credit risk mitigation include third party guarantees and, in the case of derivatives facilities, master netting agreements.

Internal borrower and facility risk ratings are assigned when a facility is first authorized, and are promptly re-evaluated and adjusted, if necessary, as a result of changes to the customer's financial condition or business prospects. Re-evaluation is an ongoing process, and is done in the context of general economic changes, specific industry prospects, and event risks, such as revised financial projections, interim financial results and extraordinary announcements.

The internal credit risk ratings are also considered as part of the Bank's adjudication limits, as guidelines for hold levels are tied to different risk ratings. Single borrower limits are much lower for higher risk borrowers than low risk borrowers.

The credit adjudication process also uses a risk-adjusted return on equity profitability model to ensure that the client and transaction structure offers an appropriate return for a given level of risk. For the corporate portfolio, and the large borrowers in International, the Loan Portfolio Management Group reviews the profitability model results, together with external benchmarks, and provides an opinion on the relative return and pricing of each transaction above a minimum threshold.

Individual credit exposures are regularly monitored by both the business line units and Global Risk Management for any signs of deterioration. In addition, a review and risk analysis of each borrower is conducted annually, or more frequently for higher-risk borrowers. If, in the judgement of management, an account requires the expertise of specialists in workouts and restructurings, it will be transferred to a special accounts group for monitoring and resolution.

Credit Risk Mitigation – Collateral/Security

Traditional Non-Retail Products (e.g. Operating lines of Credit, Term Loans)

Collateral values are accurately identified at the outset and throughout the tenure of a transaction by using standard evaluation methodologies. Collateral valuation estimates are conducted at a frequency that is appropriate to the frequency by which the market value fluctuates, using the collateral type and the Borrower risk profile.

In addition, when it is not cost effective to monitor highly volatile collateral (e.g. accounts receivable, inventory), appropriate lending margins are applied to compensate (e.g. accounts receivable are capped at 80% of value, inventory at 50%). The frequency of collateral valuations is also increased when early warning signals of a Borrower's deteriorating financial condition are identified.

Borrowers are required to confirm adherence to covenants including confirmation of collateral values on a periodic basis, which are used by the Bank to provide early warning signals of collateral value deterioration. Periodic inspections of physical collateral are performed where appropriate and where reasonable means of doing so are available.

Bank procedures require verification including certification by Banking officers during initial, annual, and periodic reviews, that collateral values/margins/etc. have been assessed and, where necessary, steps have been taken to mitigate any decreased collateral values.

The Bank does not use automated valuation models (AVMs) for valuation purposes. Global Risk Management (GRM) performs its own valuations of companies based on various factors such as book value, discounted book value, enterprise value etc.

Commercial/Corporate Real Estate

New or updated appraisals are generally obtained at inception of a new facility, as well as during Loan Modifications, Loan Workouts and Troubled Debt Restructure. The primary reason for requiring a new appraisal is if, in the reasonable opinion of the Banking Execution Unit, or GRM Real Estate, there has been a material change in value. Additionally, none of the appraisal guidelines contained within the policies should dissuade the Bank from requesting an appraisal more frequently if an adverse change in market conditions, sponsorship, credit worthiness, of other underwriting assumptions is realized or expected.

Appraisals must be in writing and must contain sufficient information and analysis to support the Bank's decision to make the loan. Moreover, in rendering an opinion of the property's market value, third party appraisers are responsible for establishing the scope of work necessary to develop credible assignment results. The appraisal must meet the regulatory and industry requirements which, depending on the type of property being appraised, contain any or all of the following three approaches to value:

i. comparable sales approach
ii. replacement cost approach
iii. income approach

The appraiser should disclose the rationale for the omission of any valuation approach. Furthermore, the appraiser must disclose whether the subject property was physically inspected and whether anyone provided significant assistance to the person signing the appraisal report. The report should contain a presentation and explanation of the assumptions used in determining value under each of the above mentioned approaches.

Review of every appraisal is conducted by the banking units and GRM Real Estate to confirm that the appraisal identifies all of the relevant issues for the specific asset class, location and economic environment and incorporates all appropriate valuation methodologies and assumptions. In most cases, the banking units also include comparable properties in addition to what is included in the appraisal to further justify value.

When third party assessors are used, they must be accredited and satisfactory to the Bank. In addition, GRM validates any third party valuations via internal desktop estimates either based on comparables or discounted income valuations.

Traded products

Traded products are transactions such as derivatives, foreign exchange, commodities, repurchase/reverse repurchase agreements, and securities lending/borrowing. Credit risks arising from traded products cannot be determined with certainty at the outset, because during the tenure of a transaction the dollar value of the counterparty's obligation to the Bank will be affected by changes in the capital markets (such as changes in stock prices, interest rates, and exchange rates). The Bank adjudicates credit exposures arising from transacting in traded products by considering their current fair value plus an additional component to reflect potential future changes in their mark-to-market value. The credit adjudication process also includes an evaluation of potential wrong way risk, which arises when the exposure to a counterparty is positively correlated to the probability of default of that counterparty.

Credit risk associated with traded products is managed within the same credit adjudication process as the lending business. The Bank considers the credit risk arising from lending activities, as well as the potential credit risk arising from transacting in traded products with that counterparty.

Credit risk mitigation – collateral/security

Derivatives are generally transacted under industry standard International Swaps and Derivatives Association (ISDA) master netting agreements, which allow for a single net settlement of all transactions covered by that agreement in the event of a default or early termination of the transactions. ISDA agreements are frequently accompanied by an ISDA Credit Support Annex (CSA), the terms of which may vary according to each party's view of the other party's creditworthiness. CSAs can require one party to post initial margin at the onset of each transaction. CSAs also allow for variation margin to be called if total uncollateralized mark-to-market exposure exceeds an agreed upon threshold. Such variation margin provisions can be one-way (only one party will ever post collateral) or bilateral (either party may post depending upon which party is in-the-money). The CSA will also detail the types of collateral that are acceptable to each party, and the haircuts that will be applied against each collateral type. The terms of the ISDA master netting agreements and CSAs are taken into consideration in the calculation of counterparty credit risk exposure.

For derivative transactions, investment grade counterparties account for approximately 86% of the credit risk. Approximately 30% of the Bank's derivative counterparty exposures are to bank counterparties. After taking into consideration, where applicable, netting and collateral arrangements, no net credit risk amount arising from traded products transactions with any single counterparty was considered material to the financial position of the Bank as at October 31, 2016. No individual exposure to an investment grade bilateral counterparty exceeded $1,002 million and no individual exposure to a corporate counterparty exceeded $293 million.

Retail

Retail credit exposures arise in the Canadian Banking and International Banking business lines.

Adjudication

The decision-making process for retail loans ensures that credit risks are adequately assessed, properly approved, continually monitored and actively managed. Generally, credit decisions on consumer loans are processed by proprietary adjudication software and are based on risk ratings, which are generated using predictive credit scoring models.

The Bank's credit adjudication and portfolio management methodologies are designed to ensure consistent underwriting and early identification of problem loans. The Bank's rigorous credit underwriting methodology and retail risk modeling is more customer focused than product focused. The Bank's view is that a customer-centric approach provides better risk assessment than product-based approaches, and should result in lower loan losses over time.

All credit scoring and policy changes are initiated by units within Global Risk Management that are functionally independent from the business units responsible for retail portfolios. Risk models and parameters are also subject to independent validation and review from the units involved in the design and development of models. The review process includes referral to the appropriate Senior Credit Committee for approval, where required. Consumer credit portfolios are reviewed monthly to identify emerging trends in loan quality and to assess whether corrective action is required.

Risk ratings

The Bank's consumer risk rating systems are oriented to borrower or transaction risk. Each retail exposure is assigned a risk grade based on the customer's credit history and/or internal credit score. The Bank's automated risk rating systems assess the ongoing credit-worthiness of individual customers on a monthly basis. This process provides for meaningful and timely identification and management of problem loans.

The overall risk ratings system under AIRB approach is subject to regular review with ongoing performance monitoring of key components. Risk model validations are conducted independently from the areas responsible for rating system development and implementation, to ensure effective independence.

Customer behavior characteristics which are used as inputs within the Bank's Basel III AIRB models are consistent with those used by the Bank's Canadian consumer risk rating systems. The International portfolios are subject to the Standardized approach at this time.

Credit risk mitigation – collateral/security

The property values for residential real estate secured exposures are confirmed at origination through a variety of validation methodologies, including AVM and full appraisal's (in-person inspection). The appraisal is completed by a third party, Bank approved appraiser. For monitoring of material portfolios, property values are indexed quarterly to house prices. For loan impairment within the material portfolios, residential property values are re-confirmed using third party AVM's.

Where AVM values are used, these AVM values are subject to routine validation through a continuous random sampling process that back-tests AVM values against available property appraisals (primarily third party AVMs). Where third party appraisals are obtained, the Bank relies on the professional industry accreditation of the appraiser. Samples of approved appraisal reports are reviewed by the Bank's senior appraisers to ensure consistent appraisal quality and satisfactory appraisal values. The third party appraisers are selected from a pre-approved list of Bank-vetted appraisers.

Credit quality

T40 Impaired loans by business line [1]

As at October 31 ($ millions)	2016 Gross impaired loans	2016 Allowance for credit losses	2016 Net impaired loans	2015 Gross impaired loans	2015 Allowance for credit losses	2015 Net impaired loans
Canadian Banking						
Retail	**$ 1,003**	**$ (656)**	**$ 347**	$ 843	$ (543)	$ 300
Commercial	**228**	**(160)**	**68**	208	(157)	51
	$ 1,231	**$ (816)**	**$ 415**	$ 1,051	$ (700)	$ 351
International Banking						
Caribbean and Central America	**$ 1,540**	**$ (648)**	**$ 892**	$ 1,588	$ (647)	$ 941
Latin America						
Mexico	**301**	**(215)**	**86**	271	(186)	85
Peru	**764**	**(501)**	**263**	603	(422)	181
Chile	**499**	**(237)**	**262**	405	(175)	230
Colombia	**381**	**(239)**	**142**	356	(235)	121
Other Latin America	**143**	**(136)**	**7**	117	(117)	–
Total Latin America	**2,088**	**(1,328)**	**760**	1,752	(1,135)	617
	$ 3,628	**$ (1,976)**	**$ 1,652**	$ 3,340	$ (1,782)	$ 1,558
Global Banking and Markets						
Canada	**$ 27**	**$ (7)**	**$ 20**	$ 138	$ (39)	$ 99
U.S.	**210**	**(47)**	**163**	11	(6)	5
Asia and Europe	**298**	**(102)**	**196**	118	(46)	72
	$ 535	**$ (156)**	**$ 379**	$ 267	$ (91)	$ 176
Totals	**$ 5,394**	**$ (2,948)**	**$ 2,446**	$ 4,658	$ (2,573)	$ 2,085
Allowance for credit losses against performing loans		**$ (1,444)**			$ (1,404)	

Impaired loan metrics

As at October 31 ($ millions)	Net impaired loans 2016[1]	Net impaired loans 2015[1]
Net impaired loans as a % of loans and acceptances	**0.49%**	0.44%
Allowance against impaired loans as a % of gross impaired loans	**55%**	55%

(1) Excludes loans acquired under the Federal Deposit Insurance Corporation (FDIC) guarantee related to the acquisition of R-G Premier Bank of Puerto Rico.

Allowance for credit losses

The total allowance for credit losses was up $415 million to $4,392 million as at October 31, 2016 (excluding $234 million related to loans acquired under FDIC guarantee related to the acquisition of R-G Premier Bank of Puerto Rico), from $3,977 million (excluding $220 million related to R-G Premier Bank) last year.

Allowances in Canadian Banking increased by $116 million to $816 million, in line with the increases in gross impaired loans.

In International Banking, allowances increased by $194 million to $1,976 million mainly in Peru, Chile, and Mexico.

Global Banking and Markets allowances increased by $65 million to $156 million, reflecting the increase in gross impaired loans.

The collective allowance against performing loans increased by $40 million to $1,444 million due to a $50 million increase in the collective allowance against performing loans and partially offset by a $10 million re-allocation to the reserves against unfunded commitments and other off-balance sheet items.

Impaired loans

Gross impaired loans increased to $5,394 million as at October 31, 2016 (excluding $100 million related to loans purchased under FDIC guarantee related to the acquisition of R-G Premier Bank of Puerto Rico), from $4,658 million (excluding $157 million related to R-G Premier Bank of Puerto Rico) last year.

Impaired loans in Canadian Banking increased by $180 million, primarily in the retail portfolio.

In International Banking, impaired loans increased by $288 million due to increases in Latin America region, primarily in Peru and Chile.

Impaired loans in Global Banking and Markets increased by $268 million, primarily in the United States and Asia.

Net impaired loans, after deducting the allowance for credit losses, were $2,446 million as at October 31, 2016, an increase of $361 million from a year ago. Net impaired loans as a percentage of loans and acceptances were 0.49% as at October 31, 2016, an increase of five basis points from a year ago.

Acquisition-related purchased loans

All purchased loans are initially measured at fair value on the date of acquisition, with no allowance for credit losses recorded in the Consolidated Statement of Financial Position on the date of acquisition. Consequently, none of the purchased loans are considered to be impaired on the date of acquisition. In arriving at the fair value, the Bank considers interest rate mark and credit rate mark adjustments.

The interest rate mark on the date of acquisition is principally set up for fixed interest rate loans and captures the impact of the interest rate differential between the contractual rate of interest on the loan and the prevailing interest rate on the loan on the date of acquisition for the remaining term. The interest rate mark is fully amortized into interest income in the Consolidated Statement of Income over the expected life of the loan using the effective interest method.

The credit mark captures management's best estimate of cash flow shortfalls on the loans over their lifetime as determined at the date of acquisition. Changes to the expected cash flows of these loans are recorded as a charge/recovery in the provision for credit losses in the Consolidated Statement of Income.

The total credit mark remaining on all acquired loans in Canadian Banking and International Banking as at October 31, 2016 was $259 million (October 31, 2015 – $148 million).

Adjusting for the impact of foreign currency translation, the utilization of incurred and expected losses in the credit mark during the year was $244 million (for the year ended October 31, 2015 – $68 million). The net benefit to net income attributable to common shareholders from the credit mark on acquired loans this year was $123 million (for the year ended October 31, 2015 – $23 million).

Portfolio review

Canadian Banking

Gross impaired loans in the retail portfolio increased by $160 million to $1,003 million. Provision for credit losses in the retail portfolio were $770 million, up $128 million from last year driven by growth in relatively higher spread loans. In the commercial loan portfolio, gross impaired loans increased by $20 million to $228 million and the provision for credit losses was $62 million, up $17 million from last year.

International Banking

In retail, gross impaired loans increased by $70 million to $2,227 million during the year, with an increase attributable mainly to Peru. Retail provisions were flat compared to 2015. Increases from acquisitions and higher provisions for credit losses in Latin America from strong retail loan growth were offset by favourable foreign currency translation. In commercial banking, gross impaired loans were $1,401 million, an increase of $218 million over the prior year. The provision for credit losses in the commercial portfolio was $274 million in 2016, versus $126 million in 2015. The increase was attributable to higher provisions in the energy sector, primarily in Colombia, and in Puerto Rico.

Global Banking and Markets

Gross impaired loans in Global Banking and Markets increased by $268 million in 2016 to $535 million primarily in the energy sector. The provision for credit losses was $249 million in 2016, versus $67 million in 2015. The provisions this year were primarily in the energy sector.

Risk diversification

The Bank's exposures to various countries and types of borrowers are well diversified (see T64 on page 110 and T68 on page 112). Chart C24 shows loans and acceptances by geography. Ontario represents the largest Canadian exposure at 31.5% of the total. Latin America was 10.7% of the total exposure and the U.S. was 7.7%.

C25 shows loans and acceptances by type of borrower (see T68 on page 112). Excluding loans to households, the largest industry exposures were wholesale and retail (4.5%), real estate and construction (4.5%), financial services (3.9% including banks and non-banks), and energy (3.1%).

Risk mitigation

To mitigate exposures in its performing corporate portfolios, the Bank uses diversification by company, industry, and country, with loan sales and credit derivatives used sparingly. In 2016, loan sales totaled $42 million, compared to $143 million in 2015. The largest volume of loan sales in 2016 related to loans in the energy industry. As at October 31, 2016, credit derivatives used to mitigate exposures in the portfolios totaled $24 million (notional amount), compared to $39 million as at October 31, 2015.

The Bank actively monitors industry and country concentrations. As is the case with all industry exposures, the Bank continues to closely follow developing trends and takes additional steps to mitigate risk as warranted. Energy, mining, and shipping portfolios are being closely managed.

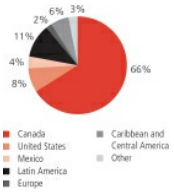
Overview of loan portfolio

The Bank has a well-diversified portfolio by product, business and geography. Details of certain portfolios of current focus are highlighted below.

Energy

The Bank's outstanding loan exposure to commercial and corporate companies in the energy sector was $15.6 billion as at October 31, 2016 (October 31, 2015 – $16.5 billion), reflecting approximately 3.1% (October 31, 2015 – 3.5%) of the Bank's total loan portfolio. In addition, the Bank has related undrawn energy loan commitments amounting to $11.1 billion as at October 31, 2016 (October 31, 2015 – $14.3 billion). The decline in undrawn loan commitments is primarily driven by the upstream and midstream sub-sectors. Exposure in the upstream sub-sector declined by $2.2 billion since October 31, 2015. Approximately 59% of the Bank's outstanding energy loan exposure and associated undrawn commitments are investment grade, after taking into account the benefit of collateral and guarantees.

C24 Well diversified in Canada and internationally… loans and acceptances, October 2016



C25 … and in household and business lending loans & acceptances, October 2016

As expected, retail delinquencies are tracking higher in Alberta. The outstanding loan exposures are primarily secured. The Bank continues to consider the impact of lower energy prices in its ongoing stress testing program. Results continue to be within our risk tolerance.

Real estate secured lending

A large portion of the Bank's lending portfolio is comprised of residential mortgages and consumer loans, which are well diversified by borrower. As at October 31, 2016, these loans accounted for $322 billion or 65% of the Bank's total loans and acceptances outstanding (October 31, 2015 – $309 billion or 65%). Of these, $242 billion or 75% are real estate secured loans (October 31, 2015 – $236 billion or 76%). The tables below provide more details by portfolios.

Insured and uninsured residential mortgages and home equity lines of credit

The following table presents amounts of insured and uninsured residential mortgages and home equity lines of credit (HELOCs), by geographic area.

T41 Insured and uninsured residential mortgages and home equity lines of credit (HELOCs), by geographic areas

	2016											
	Residential mortgages						Home equity lines of credit					
As at October 31	Insured[1]		Uninsured		Total		Insured[1]		Uninsured		Total	
($ millions)	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Canada:[2]												
Atlantic provinces	$ 7,034	3.7	$ 4,901	2.5	$ 11,935	6.2	$ 1	–	$ 1,259	6.6	$ 1,260	6.6
Quebec	8,346	4.3	7,150	3.7	15,496	8.0	–	–	999	5.2	999	5.2
Ontario	52,230	27.0	41,935	21.7	94,165	48.7	2	–	9,646	50.6	9,648	50.6
Manitoba & Saskatchewan	5,857	3.0	3,236	1.7	9,093	4.7	2	–	840	4.4	842	4.4
Alberta	19,551	10.1	10,828	5.6	30,379	15.7	3	0.1	3,027	15.8	3,030	15.9
British Columbia & Territories	16,929	8.8	15,306	7.9	32,235	16.7	–	–	3,294	17.3	3,294	17.3
Canada[3]	$109,947	56.9%	$ 83,356	43.1%	$193,303	100%	$ 8	0.1%	$19,065	99.9%	$19,073	100%
International	–	–	29,585	100	29,585	100	–	–	–	–	–	–
Total	$109,947	49.3%	$112,941	50.7%	$222,888	100%	$ 8	0.1%	$19,065	99.9%	$19,073	100%
	2015											
Canada[3]	$ 92,802	48.8%	$ 97,321	51.2%	$190,123	100%	$ 9	0.1%	$18,627	99.9%	$18,636	100%
International	–	–	27,375	100	27,375	100	–	–	–	–	–	–
Total	$ 92,802	42.7%	$124,696	57.3%	$217,498	100%	$ 9	0.1%	$18,627	99.9%	$18,636	100%

(1) Default insurance is contractual coverage for the life of eligible facilities whereby the Bank's exposure to real estate secured lending is protected against potential shortfalls caused by borrower default. This insurance is provided by either government-backed entities or private mortgage insurers.
(2) The province represents the location of the property in Canada.
(3) Includes multi-residential dwellings (4+ units) of $2,376 (October 31, 2015 – $2,104) of which $1,392 are insured (October 31, 2015 – $1,005).

Amortization period ranges for residential mortgages

The following table presents the distribution of residential mortgages by amortization periods, and by geographic areas.

T42 Distribution of residential mortgages by amortization periods, and by geographic areas

	2016					
	Residential mortgages by amortization					
As at October 31	Less than 20 years	20-24 years	25-29 years	30-34 years	35 years and greater	Total residential mortgages
Canada	35.2%	36.3%	26.7%	1.7%	0.1%	100%
International	67.7%	19.0%	11.5%	1.7%	0.1%	100%
	2015					
Canada	35.6%	35.6%	25.7%	3.0%	0.1%	100%
International	66.4%	20.4%	11.4%	1.6%	0.2%	100%

Loan to value ratios

The Canadian residential mortgage portfolio is 43% uninsured (October 31, 2015 – 51%). The average loan-to-value (LTV) ratio of the uninsured portfolio is 50% (October 31, 2015 – 53%).

The following table presents the weighted average LTV ratio for total newly originated uninsured residential mortgages and home equity lines of credit during the year, which include mortgages for purchases, refinances with a request for additional funds and transfer from other financial institutions, by geographic areas.

T43 Loan to value ratios

	Uninsured LTV ratios[1]	
	For the year ended October 31, 2016	
	Residential mortgages LTV%	Home equity lines of credit[2] LTV%
Canada:		
Atlantic provinces	**68.1%**	**59.4%**
Quebec	**63.0**	**68.8**
Ontario	**62.4**	**64.6**
Manitoba & Saskatchewan	**67.6**	**64.4**
Alberta	**66.7**	**69.3**
British Columbia & Territories	**60.7**	**61.7**
Canada	**62.9%**	**64.5%**
International	**69.1%**	**N/A**
	For the year end October 31, 2015	
Canada	62.5%	65.7%
International	68.3%	N/A

(1) The province represents the location of the property in Canada.
(2) Includes only home equity lines of credit (HELOC) under Scotia Total Equity Plan. LTV is calculated based on the sum of residential mortgages and the authorized limit for related HELOCs, divided by the value of the related residential property, and presented on a weighted average basis for newly originated mortgages and HELOCs.

Potential impact on residential mortgages and real estate home equity lines of credit in the event of an economic downturn

The Bank performs stress testing on its portfolio to assess the impact of increased levels of unemployment, rising interest rates, reduction in property values and changes in other relevant macro-economic variables. Potential losses in the mortgage portfolio under such economic downturn scenarios are considered manageable given the diversified composition of the portfolio, the high percentage of insured exposures, and the low LTV in the portfolio. This is further supported by sound risk management oversight and pro-active risk mitigation strategies.

Loans to Canadian condominium developers

With respect to loans to Canadian condominium developers, the Bank had loans outstanding of $956 million as at October 31, 2016 (October 31, 2015 – $927 million). This is a high quality portfolio with well-known developers who have long-term relationships with the Bank.

European exposures

As a result of the Bank's broad international operations, the Bank has sovereign credit risk exposure to a number of countries. The Bank actively manages this sovereign risk, including the use of risk limits calibrated to the credit worthiness of the sovereign exposure.

The Bank believes that its European exposures are manageable, are sized appropriately relative to the credit worthiness of the counterparties (83% of the exposures are to investment grade counterparties based on a combination of internal and external ratings), and are modest relative to the capital levels of the Bank. The Bank's European exposures are carried at amortized cost or fair value using observable inputs, with negligible amounts valued using models with unobservable inputs (Level 3). There were no significant events in the quarter that have materially impacted the Bank's exposures.

The current European exposure is provided in T44 below.

T44 European exposure

As at October 31	**2016**						2015
	Loans and loan equivalents			Other			
($ millions)	Loans and acceptances[1]	Letters of credit and guarantees[2]	Undrawn commitments[3]	Securities and deposits with financial institutions[4]	Securities Financing Transactions (SFT) and derivatives[5]	Total European exposure	Total European exposure
Gross exposures	**$ 11,858**	**$ 2,890**	**$ 12,472**	**$ 10,823**	**$ 3,554**	**$ 41,597**	$ 39,231
Less: Undrawn commitments	**–**	**–**	**12,472**	**–**	**–**	**12,472**	12,409
Net funded exposure	**$ 11,858**	**$ 2,890**	**$ –**	**$ 10,823**	**$ 3,554**	**$ 29,125**	$ 26,822

(1) Individual allowances for credit loss are $37.7.
(2) Letters of credit and guarantees are included as funded exposure as they have been issued.
(3) Undrawn commitments represent an estimate of the contractual amount that may be drawn upon by the obligor.
(4) Exposures for securities are calculated taking into account derivative positions where the security is the underlying reference asset and short trading positions.
(5) SFT comprise of securities purchased under resale agreements, obligations related to securities sold under repurchase agreements and securities lending and borrowing transactions. Gross and net funded exposures represent all net positive positions after taking into account collateral. Collateral held against derivatives was $2,547 and collateral held against SFT was $7,714.

Below are the funded exposures related to all European countries:

T45 Funded exposures

As at October 31	2016				2015
($ millions)	Sovereign[1]	Bank	Corporate[2]	Total	Total
Greece	$ –	$ –	$ 311	$ 311	$ 339
Ireland	27	37	286	350	428
Italy	(1)	181	11	191	509
Portugal	–	–	–	–	(2)
Spain	111	181	307	599	505
Total GIIPS	$ 137	$ 399	$ 915	$ 1,451	$ 1,779
U.K.	$ 1,163	$ 2,304	$ 7,561	$ 11,028	$ 12,895
Germany	1,799	306	1,975	4,080	2,847
France	1,947	1,196	599	3,742	2,569
Netherlands	452	398	1,255	2,105	974
Switzerland	239	309	1,051	1,599	1,042
Other	1,599	246	3,275	5,120	4,716
Total Non-GIIPS	$ 7,199	$ 4,759	$ 15,716	$ 27,674	$ 25,043
Total Europe	$ 7,336	$ 5,158	$ 16,631	$ 29,125	$ 26,822
Total Europe as at October 31, 2015	$ 6,214	$ 5,480	$ 15,128	$ 26,822	

(1) Includes $1,959 (October 31, 2015 – $667) in exposures to supra-national agencies.
(2) Corporate includes financial institutions that are not banks.

The Bank's exposure are distributed as follows:

T46 Bank's exposure distribution by country

As at October 31	2016					2015
($ millions)	Loans and loan equivalents	Deposits with financial institutions	Securities	SFT and derivatives	Total	Total
Greece	$ 311	$ –	$ –	$ –	$ 311	$ 339
Ireland	99	27	55	169	350	428
Italy	213	–	(22)	–	191	509
Portugal	–	–	–	–	–	(2)
Spain	486	–	103	10	599	505
Total GIIPS	$ 1,109	$ 27	$ 136	$ 179	$ 1,451	$ 1,779
U.K.	$ 6,090	$ 1,620	$ 1,279	$ 2,039	$ 11,028	$ 12,895
Germany	1,371	204	2,389	116	4,080	2,847
France	754	517	2,251	220	3,742	2,569
Netherlands	1,090	85	600	330	2,105	974
Switzerland	1,102	23	158	316	1,599	1,042
Other	3,232	43	1,491	354	5,120	4,716
Total Non-GIIPS	$ 13,639	$ 2,492	$ 8,168	$ 3,375	$ 27,674	$ 25,043
Total Europe	$ 14,748	$ 2,519	$ 8,304	$ 3,554	$ 29,125	$ 26,822
As at October 31, 2015	$ 14,547	$ 2,709	$ 6,669	$ 2,897	$ 26,822	

The Bank's exposure to certain European countries of focus – Greece, Ireland, Italy, Portugal and Spain (GIIPS) – is not significant. As of October 31, 2016, the Bank's current funded exposure to the GIIPS sovereign entities, as well as banks and non-bank financial institutions and corporations domiciled in these countries, totaled approximately $1.5 billion, down from $1.8 billion last year. Of the $1.5 billion, $1.1 billion was related to loans and loan equivalents.

Specific to sovereign exposures to GIIPS, the Bank's exposure to Ireland included central bank deposits of $26 million and $1 million in trading book securities. The Bank was net long securities in sovereign exposures to Spain ($111 million) and net short to Italy (-$1 million). The Bank had no sovereign securities holdings of Greece and Portugal.

The Bank had exposures to Italian banks of $181 million, as at October 31, 2016 (October 31, 2015 – $187 million), primarily related to short-term precious metals trading. Greek exposure of $311 million (October 31, 2015 – $339 million) related primarily to secured loans to shipping companies.

Securities exposures to European sovereigns and banks (excluding GIIPS) were $6.0 billion as at October 31, 2016 (October 31, 2015 – $5.3 billion), predominantly related to issuers in France, Germany, Luxembourg, the Netherlands and the United Kingdom. Securities are carried at fair value and substantially all holdings have strong market liquidity.

The majority of funded credit exposure is in the form of funded loans which are recorded on an accrual basis. As well, credit exposure to clients arises from client-driven derivative transactions and securities financing transactions (reverse repurchase agreements, repurchase agreements, and securities lending and borrowing). OTC derivative counterparty exposures are recorded on a fair value basis and security financing transactions are recorded on an accrual basis. As at October 31, 2016, credit exposure to banks in the form of issued letters of credit amounted to $1.4 billion (October 31, 2015 – $1.2 billion).

Undrawn commitments of $12.5 billion (October 31, 2015 – $12.4 billion) are comprised of unfunded loan commitments and commitments to issue letters of credit on behalf of other banks in a syndicated bank lending arrangement. Total unfunded loan commitments to corporations in Europe (excluding GIIPS) were $9.1 billion as at October 31, 2016 (October 31, 2015 – $8.6 billion). As at October 31, 2016, commitments related to letters of credit with banks amounted to $2.7 billion (October 31, 2015 – $3.3 billion). Unfunded commitments are detailed further by country in T47.

The Bank's indirect exposure is also detailed in the table below and is defined as:

- Securities where the exposures are to non-European entities whose parent company is domiciled in Europe, and;
- Letters of credit or guarantees (included as loan equivalents in the above table).

Included in the indirect exposure was securities exposure of $485 million related to GIIPS, $75 million to Germany and $25 million to the United Kingdom. Indirect exposure by way of letters of credit totaled $2,890 million at October 31, 2016 (October 31, 2015 – $2,593 million), of which $184 million (October 31, 2015 – $62 million) was indirect exposure to GIIPS. Indirect exposure is managed through the Bank's credit risk management framework, with a robust assessment of the counterparty.

In addition to the total indirect exposures detailed further below, the Bank had Euro-denominated collateral held for non-European counterparties of $295 million (October 31, 2015 – $555 million).

The Bank may on occasion use credit default swaps (CDS) to partially offset its banking book exposure. As part of the trading portfolio, the Bank may purchase or sell CDS. Specific to GIIPS as at October 31, 2016, the Bank had no CDS protection on funded loan exposures. All exposures, including CDS, are subject to risk limits and ongoing monitoring by the Bank's independent risk management department.

Like other banks, the Bank also provides settlement and clearing facilities for a variety of clients in these countries and actively monitors and manages these intra-day exposures. However, the Bank has no funded exposure in these countries to retail customers or small businesses.

T47 Undrawn commitments and indirect exposure

As at October 31	Undrawn Commitments		Indirect Exposure [1]	
($ millions)	**2016**	2015	**2016**	2015
Greece	**$ –**	$ –	**$ –**	$ –
Ireland	**421**	256	**35**	(1)
Italy	**49**	53	**73**	6
Portugal	**–**	–	**–**	–
Spain	**172**	180	**561**	420
Total GIIPS	**$ 642**	$ 489	**$ 669**	$ 425
U.K.	**$ 4,958**	$ 5,526	**$ 1,270**	$ 1,365
Germany	**798**	607	**154**	161
France	**1,583**	1,599	**459**	338
Netherlands	**1,364**	1,188	**291**	210
Switzerland	**701**	740	**146**	144
Other	**2,426**	2,260	**463**	554
Total Non-GIIPS	**$ 11,830**	$ 11,920	**$ 2,783**	$ 2,772
Total Europe	**$ 12,472**	$ 12,409	**$ 3,452**	$ 3,197

(1) Amounts in brackets represent net short positions arising from trading transactions.

Market Risk

Market risk is the risk of loss from changes in market prices and rates (including interest rates, credit spreads, equity prices, foreign exchange rates and commodity prices), the correlations between them, and their levels of volatility. Below is an index of market risk disclosures:

Index of all market risk disclosures

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Market risk factors

Interest rate risk

The risk of loss due to changes in the level and/or the volatility of interest rates. This risk affects instruments such as, but not limited to, debt securities, loans, mortgages, deposits and derivatives.

Interest rate risks are managed through sensitivity, gap, stress testing, annual income and VaR limits and mitigated through portfolio diversification and hedges using interest rate derivatives and debt securities.

Credit spread risk

The risk of loss due to changes in the market price and volatility of credit, or the creditworthiness of issuers. This risk is mainly concentrated in loan and debt securities portfolios. Risk is managed through sensitivity, jump-to-default, stress testing and VaR limits and mitigated through hedges using credit derivatives.

Foreign currency risk

The risk of loss resulting from changes in currency exchange rates and exchange rate volatility. Foreign currency denominated debt and other securities as well as future cash flows in foreign currencies are exposed to this type of risk. Risk is managed through maximum net trading position, sensitivity, stress testing and VaR limits and mitigated through hedges using foreign exchange positions or derivatives.

Equity risk

The risk of loss due to changes in prices, volatility or any other equity related risk factor of individual equity or equity linked securities. This risk affects instruments such as, but not limited to, equities, exchange traded funds, mutual funds, derivatives and other equity linked products. Risk is managed through sensitivity, stress testing and VaR limits and mitigated through hedges using physical equity and derivative instruments.

Commodity risk

The risk of loss due to changes in prices or volatility of precious metal, base metal, energy and agriculture products. Both physical commodity and derivative positions are exposed to this risk. Risk is managed through aggregate and net trading position, sensitivity, stress testing and VaR limits and mitigated through hedges using physical commodity and derivative positions.

The following maps risk factors to trading and non-trading activities:

Non-trading Funding	**Investments**	**Trading**
Interest rate risk	Interest rate risk	Interest rate risk
Foreign currency risk	Credit spread risk	Credit spread risk
	Foreign currency risk	Foreign currency risk
	Equity risk	Equity risk
		Commodity risk

Market risk governance

Overview

The Board of Directors reviews and approves market risk policies and limits annually. The Bank's Asset-Liability Committee (ALCO) and Market Risk Management and Policy Committee (MRMPC) oversee the application of the framework set by the Board, and monitor the Bank's market risk exposures and the activities that give rise to these exposures. The MRMPC establishes specific operating policies and sets limits at the product, portfolio, business unit and business line levels, and for the Bank in total. Limits are reviewed at least annually.

Global Risk Management provides independent oversight of all significant market risks, supporting the MRMPC and ALCO with analysis, risk measurement, monitoring, reporting, proposals for standards and support for new product development. To ensure compliance with policies and limits, market risk exposures are independently monitored on a continuing basis, either by Global Risk Management, the back offices, or Finance. They provide senior management, business units, the ALCO, and the MRMPC with a series of daily, weekly and monthly reports of market risk exposures by business line and risk type.

The Bank uses a variety of metrics and models to measure and control market risk exposures. These measurements are selected based on an assessment of the nature of risks in a particular activity. The principal measurement techniques are Value at Risk (VaR), Incremental Risk Charge, Comprehensive Risk Measure, stress testing, sensitivity analysis and gap analysis. The use and attributes of each of these techniques are noted in the Risk Measurement Summary.

Risk measurement summary

Value at risk (VaR)

VaR is a statistical method of measuring potential loss due to market risk based upon a common confidence interval and time horizon. The Bank calculates VaR daily using a 99% confidence level, and a one-day holding period for its trading portfolios. This means that once in every 100 days, the trading positions are expected to lose more than the VaR estimate. VaR has two components: general market risk and debt specific risk. The Bank calculates general market risk VaR using historical simulation based on 300 days of market data. Obligor specific risk on debt instruments and credit derivatives not captured in general market risk VaR is calculated through the debt specific risk VaR, which uses historical resampling. In addition, the Bank calculates a Stressed VaR measure which follows the same basic methodology as VaR but is calibrated to a one year stressed period. The stressed period is determined based on analysis of the trading book's risk profile against historical market data. Stressed VaR complements VaR in that it evaluates the impact of market volatility that is outside the VaR's historical set.

All material risk factors are captured in VaR. Where historical data is not available, proxies are used to establish the relevant volatility for VaR and Stressed VaR until sufficient data is available. Changes in VaR between reporting periods are generally due to changes in positions, volatilities and/or correlations between asset classes. VaR is also used to evaluate risks arising in certain funding and investment portfolios. Backtesting is also an important and necessary part of the VaR process. The Bank backtests the actual trading profit or loss against the VaR result to validate the quality and accuracy of the Bank's VaR model. The Board reviews VaR and backtesting results quarterly.

Incremental Risk Charge (IRC) and Comprehensive Risk Measure (CRM)

Basel market risk capital requirements include IRC and CRM which capture the following:

Default risk: This is the potential for direct losses due to an obligor's (equity/bond issuer or counterparty) default.

Credit migration risk: This is the potential for direct losses due to a credit rating downgrade or upgrade.

A Monte Carlo model is used to perform default and migration simulations for the obligors underlying credit derivative and bond portfolios. In addition, for CRM in correlation trading there is a market simulation model to capture historical price movements. Both IRC and CRM are calculated at the 99.9th percentile with a one year liquidity horizon. The Board reviews IRC and CRM results quarterly.

Stress testing

A limitation of VaR and Stressed VaR is that they only reflect the recent history of market volatility and a specific one year stressed period, respectively. To complement these measures, stress testing examines the impact that abnormally large changes in market factors and periods of prolonged inactivity might have on trading portfolios. Stress testing scenarios are designed to include large shifts in risk factors as well as historical and theoretical multi risk market events. Historical scenarios capture severe movements over periods that are significantly longer than the one-day holding period captured in VaR, such as the 2008 Credit Crisis or the 1998 Russian Financial Crisis. Similar to Stressed VaR, stress testing provides management with information on potential losses due to tail events. In addition, the results from the stress testing program are used to verify that the Bank's market risk capital is sufficient to absorb these potential losses.

The Bank subjects its trading portfolios to a series of daily, weekly and monthly stress tests. The Bank also evaluates risk in its investment portfolios monthly, using stress tests based on risk factor sensitivities and specific market events. The stress testing program is an essential component of the Bank's comprehensive risk management framework which complements the VaR methodology and other risk measures and controls employed by the Bank. The Board reviews stress testing results quarterly.

Sensitivity analysis

In trading portfolios, sensitivity analysis is used to measure the effect of changes in risk factors, including prices and volatility, on financial products and portfolios. These measures apply across product types and geographies and are used for limit monitoring and management reporting.

In non-trading portfolios, sensitivity analysis assesses the effect of changes in interest rates on current earnings and on the economic value of shareholders' equity. It is applied globally to each of the major currencies within the Bank's operations. The Bank's sensitivity analysis for limit and disclosure purposes is measured through positive and negative parallel shifts in the underlying interest rate curves. The Bank also performs sensitivity analysis using various non-parallel interest rate curve shifts, for example: curve steepeners, curve flatteners and curve twists. The Board reviews sensitivity results quarterly.

Gap analysis

Gap analysis is used to assess the interest rate sensitivity of re-pricing mismatches in the Bank's non-trading operations. Under gap analysis, interest rate sensitive assets, liabilities and off-balance sheet instruments are assigned to defined time periods based on expected re-pricing dates. Products with a contractual maturity are assigned an interest rate gap term based on the shorter of the contractual maturity date and the next re-pricing date. Products with no contractual maturity are assigned an interest rate gap based on observed historical consumer behaviour.

Validation of market risk models

Prior to the implementation of new market risk models, rigorous validation and testing is conducted. Validation is conducted when the model is initially developed and when any significant changes are made to the model. The models are also subject to ongoing validation, the frequency of which is determined by model risk ratings. Models may also be triggered for earlier revalidation when there have been significant structural changes in the market or changes to the composition of the portfolio. Model validation includes backtesting, and additional analysis such as:

- Theoretical review or tests to demonstrate whether assumptions made within the internal model are appropriate;
- Impact tests including stress testing that would occur under historical and hypothetical market conditions;
- The use of hypothetical portfolios to ensure that the model is able to capture concentration risk that may arise in an undiversified portfolio.

The validation process is governed by the Bank's Model Risk Management Policy.

Non-trading market risk

Funding and investment activities

Market risk arising from the Bank's funding and investment activities is identified, managed and controlled through the Bank's asset-liability management processes. The Asset-Liability Committee meets biweekly to review risks and opportunities, and evaluate performance including the effectiveness of hedging strategies.

Interest rate risk

Interest rate risks in the non-trading portfolios are predominately driven by the interest rate mismatch (i.e. repricing frequency) in the asset and liability exposures. The largest exposures in the non-trading book arise from retail banking operations in Canada. The largest component of this risk is from positions related to the retail mortgage book. T48 shows a summary of the interest rate gaps for the Bank's non-trading positions.

Interest rate risk arising from the Bank's lending, funding and investment activities is managed in accordance with Board-approved policies and global limits, which are designed to control the risk to net interest income and economic value of shareholders' equity. The annual income limit measures the effect of a specified change in interest rates on the Bank's annual net interest income over the next twelve months, while the economic value limit measures the impact of a specified change in interest rates on the present value of the Bank's net assets. These limits are set according to the documented risk appetite of the Bank. Board-level limit utilization is reported to both the Asset-Liability Committee and the Board on a regular basis. Any limit exceptions are reported according to the Limit Monitoring and Compliance Policy of the Bank.

Net interest income and the economic value of equity result from the differences between yields earned on the Bank's non-trading assets and interest rate paid on its liabilities. The difference in yields partly reflects mismatch between the maturity and re-pricing characteristics of the assets and liabilities. This mismatch is inherent in the non-trading operations of the Bank and exposes it to adverse changes in the level of interest rates. The Asset-Liability Committee provides strategic direction for the management of structural interest rate risk within the risk appetite framework authorized by the Board of Directors. The asset/liability management strategy is executed by Group Treasury with the objective of enhancing net interest income within established risk tolerances.

Gap analysis, simulation modeling, sensitivity analysis and VaR are used to assess exposures and for limit monitoring and planning purposes. The Bank's interest rate risk exposure calculations are generally based on the earlier of contractual re-pricing or maturity of on-balance sheet and off-balance sheet assets and liabilities, although certain assets and liabilities such as credit cards and deposits without a fixed maturity are assigned a maturity profile based on the longevity of the exposure. Expected prepayments from loans and cashable investment products are also incorporated into the exposure calculations.

T49 shows the after-tax impact of an immediate and sustained 100 basis point shock over a one year period on annual income and economic value of shareholders' equity. The interest rate sensitivities tabulated are based on a static balance sheet. There are no assumptions made for management actions that may mitigate risk. Based on the Bank's interest rate positions at year-end 2016, an immediate and sustained 100 basis point rise in interest rates across all currencies and maturities would decrease after-tax net income by approximately $32 million over the next 12 months. The Bank is relatively balanced from an earnings perspective, with positive near-term earnings sensitivity to rising rates in the US and most other Foreign currencies, and positive medium-term earnings sensitivity to rising rates in Canada. During fiscal 2016, this measure ranged between $(55) million and $160 million.

This same increase in interest rates would result in an after-tax decrease in the present value of the Bank's net assets of approximately $785 million. During fiscal 2016, this measure ranged between $(263) million and $(805) million. The directional sensitivity of these two key metrics is largely determined by the difference in time horizons (annual income captures the impact over the next twelve months only, whereas economic value considers the potential impact of interest rate changes on the present value of all future cash flows). The annual income and economic value results are compared to the authorized Board limits. There were no limit breaches in the reporting period.

C26 Interest rate gap
$ billions, one-year interest rate gap



T48 Interest rate gap

Interest rate sensitivity position[1] As at October 31, 2016 ($ billions)	Within 3 months	3 to 12 months	Over 1 year	Non-interest rate sensitive	Total
Canadian dollars					
Assets	$ 208.7	$ 46.8	$ 146.0	$ 6.8	**$ 408.3**
Liabilities	$ 231.5	$ 49.0	$ 113.0	$ 14.8	**$ 408.3**
Gap	$ (22.8)	$ (2.2)	$ 33.0	$ (8.0)	**$ –**
Foreign currencies					
Assets	$ 311.7	$ 28.0	$ 68.4	$ 79.9	**$ 488.0**
Liabilities	$ 296.8	$ 38.8	$ 43.3	$ 109.1	**$ 488.0**
Gap	$ 14.9	$ (10.8)	$ 25.1	$ (29.2)	**$ –**
Total					
Gap	$ (7.9)	$ (13.0)	$ 58.1	$ (37.2)	**$ –**
As at October 31, 2015					
Gap	$ 24.4	$ (29.1)	$ 37.7	$ (33.0)	**$ –**

(1) The above figures reflect the inclusion of off-balance sheet instruments, as well as an estimate of prepayments on consumer and mortgage loans and cashable GICs. The off-balance sheet gap is included in liabilities.

T49 Structural interest sensitivity

	2016		2015	
As at October 31 ($ millions)	**Economic Value of Shareholders' Equity**	**Annual Income**	Economic Value of Shareholders' Equity	Annual Income
After-Tax Impact of				
100bp increase in rates				
Non-trading risk	**$ (785)**	**$ (32)**	$ (488)	$ 242
100bp decrease in rates[1]				
Non-trading risk	**$ 650**	**$ 32**	$ 418	$ (240)

(1) The annual income sensitivity for CAD, USD, EUR, and GBP exposures is now measured using a 100 basis point decline. Prior period items have been restated to reflect this change.

Foreign currency risk

Foreign currency risk in the Bank's unhedged funding and investment activities arises primarily from the Bank's net investments in foreign operations as well as foreign currency earnings in its domestic and remitting foreign branch operations.

The Bank's foreign currency exposure to its net investments in foreign operations is controlled by a Board-approved limit. This limit considers factors such as potential volatility to shareholders' equity as well as the potential impact on capital ratios from foreign exchange fluctuations. On a quarterly basis, the Asset-Liability Committee reviews the Bank's foreign currency net investment exposures and determines the appropriate hedging strategies. These may include funding the investments in the same currency or using other financial instruments, including derivatives.

Foreign currency translation gains and losses from net investments in foreign operations, net of related hedging activities and tax effects, are recorded in accumulated other comprehensive income within shareholders' equity. However, the Bank's regulatory capital ratios are not materially affected by these foreign exchange fluctuations because the risk-weighted assets of the foreign operations tend to move in a similar direction.

The Bank is also subject to foreign currency translation risk on the earnings of its domestic and remitting foreign branch operations. The Bank forecasts foreign currency revenues and expenses, which are primarily denominated in U.S. dollars, over a number of future fiscal quarters. The Asset-Liability Committee also assesses economic data trends and forecasts to determine if some or all of the estimated future foreign currency revenues and expenses should be hedged. Hedging instruments normally include foreign currency spot and forward contracts, as well as foreign currency options and swaps. Certain of these economic hedges may not qualify for hedge accounting resulting in a potential for a mismatch in the timing of the recognition of economic hedge gains/losses and the underlying foreign earnings translation gains/losses. In accordance with IFRS, foreign currency translation gains and losses relating to monetary and non-monetary items are recorded directly in earnings.

As at October 31, 2016, a one per cent increase (decrease) in the Canadian dollar against all currencies in which the Bank operates decreases (increases) the Bank's before-tax annual earnings by approximately $60 million (October 31, 2015 – $60 million) in the absence of hedging activity, primarily from the exposure to U.S. dollars.

Investment portfolio risks

The Bank holds investment portfolios to meet liquidity and statutory reserve requirements and for investment purposes. These portfolios expose the Bank to interest rate, foreign currency, credit spread and equity risks. Debt investments primarily consist of government, agency, and corporate bonds. Equity investments include common and preferred shares, as well as a diversified portfolio of third-party managed funds. The majority of these securities are valued using prices obtained from external sources. These portfolios are controlled by a Board-approved policy and limits.

Trading market risk

The Bank's policies, processes and controls for trading activities are designed to achieve a balance between pursuing profitable trading opportunities and managing earnings volatility within a framework of sound and prudent practices. Trading activities are primarily customer focused.

Market risk arising from the Bank's trading activities is managed in accordance with Board-approved policies, and aggregate VaR and stress testing limits. The quality of the Bank's VaR is validated by regular backtesting analysis, in which the VaR is compared to both theoretical profit or loss results based on fixed end of day positions and actual reported profit or loss. A VaR at the 99% confidence interval is an indication of a 1% probability that losses will exceed the VaR if positions remain unchanged during the next business day. Trading positions are however managed dynamically and, as a result, actual profit/loss backtesting exceptions are uncommon.

In fiscal 2016, the total one-day VaR for trading activities averaged $12.6 million, compared to $11.3 million in 2015.

T50 Total one-day VaR by risk factor

	2016				2015			
($ millions)	Year end	Avg	High	Low	Year end	Avg	High	Low
Credit Spread plus Interest Rate	**$ 10.6**	**$ 10.6**	**$ 16.4**	**$ 7.5**	$ 10.6	$ 9.0	$ 15.2	$ 6.3
Credit Spread	**8.0**	**8.3**	**13.6**	**4.5**	8.1	7.8	10.1	5.8
Interest Rate	**8.5**	**6.4**	**10.0**	**3.0**	4.3	4.4	7.9	2.7
Equities	**2.0**	**2.7**	**6.4**	**0.8**	4.1	2.5	10.7	1.1
Foreign Exchange	**2.1**	**1.3**	**2.9**	**0.6**	0.8	1.1	3.2	0.4
Commodities	**2.0**	**2.4**	**3.9**	**1.3**	2.0	4.0	5.6	1.9
Debt Specific	**4.2**	**6.3**	**12.6**	**3.7**	7.4	5.5	20.7	3.9
Diversification Effect	**(7.6)**	**(10.7)**	**N/A**	**N/A**	(12.9)	(10.8)	N/A	N/A
All-Bank VaR	**$ 13.2**	**$ 12.6**	**$ 20.3**	**$ 8.7**	$ 11.9	$ 11.3	$ 23.0	$ 8.2
All-Bank Stressed VaR	**$ 21.2**	**$ 27.6**	**$ 37.4**	**$ 18.0**	$ 22.3	$ 24.4	$ 36.9	$ 17.4

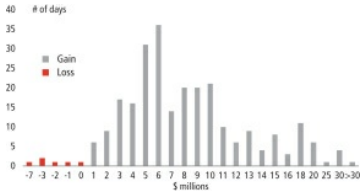
The Bank also calculates a Stressed VaR which uses the same basic methodology as the VaR. However, Stressed VaR is calculated using market volatility from a one-year time period identified as stressful, given the risk profile of the trading portfolio. The current period is the 2008/2009 credit crisis surrounding the collapse of Lehman Brothers. In fiscal 2016, the total one-day Stressed VaR for trading activities averaged $27.6 million compared to $24.4 million in 2015.

Basel market risk capital requirements include IRC and CRM which capture obligor default and migration risk. On October 31, 2016 the market risk capital requirements for IRC and CRM were $407 million and $77 million, respectively.

Description of trading revenue components and graphical comparison of VaR to daily P&L

Chart C27 shows the distribution of daily trading revenue for fiscal 2016 and Chart C28 compares that distribution to daily VaR results. Trading revenue includes changes in portfolio value as well as the impact of new trades, commissions, fees and reserves. Some components of revenue which are calculated less frequently are pro-rated. Trading revenue averaged $6.5 million per day, compared to $6.1 million for 2015. Revenue was positive on 98% of trading days during the year, an increase from 95% in 2015. During the year, the largest single day trading loss was $8.0 million which occurred on May 2, 2016, and was smaller than the total VaR of $9.7 million on the same day.

C27 Trading revenue distribution
Year ended October 31, 2016



C28 Daily trading revenue vs. VaR
$ millions, November 1, 2015 to October 31, 2016



Market risk linkage to Consolidated Statement of Financial Position

Trading assets and liabilities are marked to market daily and included in trading risk measures such as VaR. Derivatives risk related to Global Banking and Markets' activities is captured under trading risk measures while derivatives used in asset/liability management are in the non-trading risk category. A comparison of Consolidated Statement of Financial Position items which are covered under the trading and non-trading risk measures is provided in the table below.

T51 Market risk linkage to Consolidated Statement of Financial Position of the Bank

		Market Risk Measure			
As at October 31, 2016 ($ millions)	Consolidated Statement of Financial Position	Trading Risk	Non-trading risk	Not subject to market risk	Primary risk sensitivity of non-trading risk
Precious metals	**$ 8,442**	**$ 8,442**	**$ –**	**$ –**	**n/a**
Trading assets	**108,561**	**108,561**	**–**	**–**	**n/a**
Financial instruments designated at fair value through profit or loss	**221**	**–**	**221**	**–**	**Interest rate**
Derivative financial instruments	**41,657**	**36,401**	**5,256**	**–**	**Interest rate, FX, equity**
Investment securities	**72,919**	**–**	**72,919**	**–**	**Interest rate, equity**
Loans	**480,164**	**–**	**480,164**	**–**	**Interest rate, FX**
Assets not subject to market risk [1]	**184,302**	**–**	**–**	**184,302**	**n/a**
Total assets	**$ 896,266**	**$ 153,404**	**$ 558,560**	**$ 184,302**	
Deposits	**$ 611,877**	**$ –**	**$ 580,814**	**$ 31,063**	**Interest rate, FX, equity**
Financial instruments designated at fair value through profit or loss	**1,459**	**–**	**1,459**	**–**	**Interest rate, equity**
Obligations related to securities sold short	**23,312**	**23,312**	**–**	**–**	**n/a**
Derivative financial instruments	**42,387**	**38,213**	**4,174**	**–**	**Interest rate, FX, equity**
Trading liabilities [2]	**8,430**	**8,430**	**–**	**–**	**n/a**
Retirement and other benefit liabilities	**3,011**	**–**	**3,011**	**–**	**Interest rate, credit spread**
Liabilities not subject to market risk [3]	**147,969**	**–**	**–**	**147,969**	**n/a**
Total liabilities	**$ 838,445**	**$ 69,955**	**$ 589,458**	**$ 179,032**	

(1) Includes goodwill, intangibles, other assets and securities purchased under resale agreements and securities borrowed.
(2) Gold and silver certificates and bullion included in other liabilities.
(3) Includes obligations related to securities sold under repurchase agreements and securities lent and other liabilities.

		Market Risk Measure			
As at October 31, 2015 ($ millions)	Consolidated Statement of Financial Position	Trading Risk	Non-trading risk	Not subject to market risk	Primary risk sensitivity of non-trading risk
Precious metals	$ 10,550	$ 10,550	$ –	$ –	n/a
Trading assets	99,140	99,140	–	–	n/a
Financial instruments designated at fair value through profit or loss	320	–	320	–	Interest rate
Derivative financial instruments	41,003	36,131	4,872	–	Interest rate, FX, equity
Investment securities	43,216	–	43,216	–	Interest rate, equity
Loans	458,628	–	458,628	–	Interest rate, FX
Assets not subject to market risk [1]	203,640	–	–	203,640	n/a
Total assets	$ 856,497	$ 145,821	$ 507,036	$ 203,640	
Deposits	$ 600,919	$ –	$ 572,766	$ 28,153	Interest rate, FX, equity
Financial instruments designated at fair value through profit or loss	1,486	–	1,486	–	Interest rate, equity
Obligations related to securities sold short	20,212	20,212	–	–	n/a
Derivative financial instruments	45,270	41,988	3,282	–	Interest rate, FX, equity
Trading liabilities [2]	7,812	7,812	–	–	n/a
Retirement and other benefit liabilities	2,054	–	2,054	–	Interest rate, credit spread
Liabilities not subject to market risk [3]	125,265	–	–	125,265	n/a
Total liabilities	$ 803,018	$ 70,012	$ 579,588	$ 153,418	

(1) Includes goodwill, intangibles, other assets and securities purchased under resale agreements and securities borrowed.
(2) Gold and silver certificates and bullion included in other liabilities.
(3) Includes obligations related to securities sold under repurchase agreements and securities lent and other liabilities.

Derivative instruments and structured transactions

Derivatives

The Bank uses derivatives to meet customer needs, generate revenues from trading activities, manage market and credit risks arising from its lending, funding and investment activities, and to lower its cost of capital. The Bank uses several types of derivative products, including interest rate swaps, futures and options, to hedge interest rate risk exposure. Forward contracts, swaps and options are used to manage foreign currency risk exposures. Credit exposures in its lending and investment books are managed using credit default swaps. As a dealer, the Bank markets a range of derivatives to its customers, including interest rate, foreign exchange, equity, commodity and credit derivatives.

Market risk arising from derivatives transactions is subject to the control, reporting and analytical techniques noted above. Additional controls and analytical techniques are applied to address certain market-related risks that are unique to derivative products.

Structured transactions

Structured transactions are specialized transactions that may involve combinations of cash, other financial assets and derivatives designed to meet the specific risk management or financial requirements of customers. These transactions are carefully evaluated by the Bank to identify and address the

credit, market, legal, tax, reputational and other risks, and are subject to a cross-functional review and sign-off by Trading Management, Global Risk Management, Taxation, Finance and Legal departments. Large structured transactions are also subject to review by senior risk management committees and evaluated in accordance with the procedures described below in Reputational Risk.

The market risk in these transactions is usually minimal, and returns are earned by providing structuring expertise and by taking credit risk. Once executed, structured transactions are subject to the same ongoing credit reviews and market risk analysis as other types of derivatives transactions. This review and analysis includes careful monitoring of the quality of the reference assets, and ongoing valuation of the derivatives and reference assets.

Liquidity Risk

Liquidity risk is the risk that the Bank is unable to meet its financial obligations in a timely manner at reasonable prices. Financial obligations include liabilities to depositors, payments due under derivative contracts, settlement of securities borrowing and repurchase transactions, and lending and investment commitments.

Effective liquidity risk management is essential to maintain the confidence of depositors and counterparties, manage the Bank's cost of funds and to support core business activities, even under adverse circumstances.

Liquidity risk is managed within the framework of policies and limits that are approved by the Board of Directors. The Board receives reports on risk exposures and performance against approved limits. The Asset-Liability Committee (ALCO) provides senior management oversight of liquidity risk.

The key elements of the liquidity risk framework are:

- Measurement and modeling – the Bank's liquidity model measures and forecasts cash inflows and outflows, including off-balance sheet cash flows on a daily basis. Risk is managed by a set of key limits over the maximum net cash outflow by currency over specified short-term horizons (cash gaps), a minimum level of core liquidity, and liquidity stress tests.
- Reporting – Global Risk Management provides independent oversight of all significant liquidity risks, supporting the ALCO with analysis, risk measurement, stress testing, monitoring and reporting.
- Stress testing – the Bank performs liquidity stress testing on a regular basis, to evaluate the effect of both industry-wide and Bank-specific disruptions on the Bank's liquidity position. Liquidity stress testing has many purposes including:
  - Helping the Bank to understand the potential behavior of various on-balance sheet and off-balance sheet positions in circumstances of stress; and
  - Based on this knowledge, facilitating the development of risk mitigation and contingency plans.

  The Bank's liquidity stress tests consider the effect of changes in funding assumptions, depositor behavior and the market value of liquid assets. The Bank performs industry standard stress tests, the results of which are reviewed at senior levels of the organization and are considered in making liquidity management decisions.
- Contingency planning – the Bank maintains a liquidity contingency plan that specifies an approach for analyzing and responding to actual and potential liquidity events. The plan outlines an appropriate governance structure for the management and monitoring of liquidity events, processes for effective internal and external communication, and identifies potential counter measures to be considered at various stages of an event. A contingency plan is maintained both at the parent-level as well as for major subsidiaries.
- Funding diversification – the Bank actively manages the diversification of its deposit liabilities by source, type of depositor, instrument, term and geography.
- Core liquidity – the Bank maintains a pool of highly liquid, unencumbered assets that can be readily sold or pledged to secure borrowings under stressed market conditions or due to Bank-specific events. The Bank also maintains liquid assets to support its intra-day settlement obligations in payment, depository and clearing systems.

Liquid assets

Liquid assets are a key component of liquidity management and the Bank holds these types of assets in sufficient quantity to meet potential needs for liquidity management.

Liquid assets can be used to generate cash either through sale, repurchase transactions or other transactions where these assets can be used as collateral to generate cash, or by allowing the asset to mature. Liquid assets include deposits at central banks, deposits with financial institutions, call and other short-term loans, marketable securities, precious metals and securities received as collateral from securities financing and derivative transactions. Liquid assets do not include borrowing capacity from central bank facilities.

Marketable securities are securities traded in active markets, which can be converted to cash within a timeframe that is in accordance with the Bank's liquidity management framework. Assets are assessed considering a number of factors, including the expected time it would take to convert them to cash.

Marketable securities included in liquid assets are comprised of securities specifically held as a liquidity buffer or for asset liability management purposes; trading securities, which are primarily held by Global Banking and Markets; and collateral received for securities financing and derivative transactions.

The Bank maintains large holdings of unencumbered liquid assets to support its operations. These assets generally can be sold or pledged to meet the Bank's obligations. As at October 31, 2016, unencumbered liquid assets were $183 billion (October 31, 2015 – $201 billion). Securities including NHA mortgage-backed securities, comprised 74% of liquid assets (October 31, 2015 – 62%). Other unencumbered liquid assets, comprising cash and deposits with central banks, deposits with financial institutions, precious metals and call and short loans, was 26% (October 31, 2015 – 38%). The decrease in liquid assets was mainly attributable to a decrease in cash and deposits with central banks, partly offset by an increase in unencumbered government securities.

The carrying values outlined in the liquid asset table are consistent with the carrying values in the Bank's Statement of Financial Position as at October 31, 2016. The liquidity value of the portfolio will vary under different stress events as different assumptions are used for the stress scenarios.

The Bank's liquid asset pool is summarized in the following table:

T52 Liquid asset pool

As at October 31, 2016 ($ millions)	Bank-owned liquid assets	Securities received as collateral from securities financing and derivative transactions	Total liquid assets	Encumbered liquid assets: Pledged as collateral	Encumbered liquid assets: Other[1]	Unencumbered liquid assets: Available as collateral	Unencumbered liquid assets: Other
Cash and deposits with central banks	**$ 35,396**	**$ –**	**$ 35,396**	**$ –**	**$ 7,917**	**$ 27,479**	**$ –**
Deposits with financial institutions	**10,948**	**–**	**10,948**	**–**	**196**	**10,752**	**–**
Precious metals	**8,442**	**–**	**8,442**	**–**	**115**	**8,327**	**–**
Securities							
Canadian government obligations	**45,825**	**12,482**	**58,307**	**27,187**	**–**	**31,120**	**–**
Foreign government obligations	**50,761**	**36,822**	**87,583**	**58,680**	**–**	**28,903**	**–**
Other securities	**58,833**	**60,745**	**119,578**	**76,394**	**–**	**43,184**	**–**
Loans							
NHA mortgage-backed securities[2]	**33,072**	**–**	**33,072**	**1,993**	**–**	**31,079**	**–**
Call and short loans	**1,673**	**–**	**1,673**	**–**	**–**	**1,673**	**–**
Total	**$ 244,950**	**$ 110,049**	**$ 354,999**	**$ 164,254**	**$ 8,228**	**$ 182,517**	**$ –**

As at October 31, 2015 ($ millions)	Bank-owned liquid assets	Securities received as collateral from securities financing and derivative transactions	Total liquid assets	Encumbered liquid assets: Pledged as collateral	Encumbered liquid assets: Other[1]	Unencumbered liquid assets: Available as collateral	Unencumbered liquid assets: Other
Cash and deposits with central banks	$ 63,228	$ –	$ 63,228	$ –	$ 8,700	$ 54,528	$ –
Deposits with financial institutions	10,699	–	10,699	–	293	10,406	–
Precious metals	10,550	–	10,550	–	117	10,433	–
Securities							
Canadian government obligations	24,198	21,206	45,404	22,242	–	23,162	–
Foreign government obligations	39,525	29,989	69,514	44,547	–	24,967	–
Other securities	52,396	55,752	108,148	65,405	–	42,743	–
Loans							
NHA mortgage-backed securities[2]	36,409	–	36,409	2,847	–	33,562	–
Call and short loans	1,352	–	1,352	–	–	1,352	–
Total	$ 238,357	$ 106,947	$ 345,304	$ 135,041	$ 9,110	$ 201,153	$ –

(1) Assets which are restricted from being used to secure funding for legal or other reasons.
(2) These mortgage-backed securities, which are available for sale, are reported as residential mortgage loans on the balance sheet.

A summary of total unencumbered liquid assets held by the parent bank and its branches, and domestic and foreign subsidiaries, is presented below:

T53 Total unencumbered liquid assets held by the parent bank and its branches, and domestic and foreign subsidiaries

As at October 31 ($ millions)	2016	2015
Bank of Nova Scotia (Parent)	**$ 135,335**	$ 154,830
Bank domestic subsidiaries	**13,871**	20,374
Bank foreign subsidiaries	**33,311**	25,949
Total	**$ 182,517**	$ 201,153

The Bank's liquidity pool is held across major currencies, mostly comprised of Canadian and U.S. dollar holdings. As shown above, the vast majority (82%) of liquid assets are held by the Bank's corporate office, branches of the Bank, and Canadian subsidiaries of the Bank. To the extent a liquidity reserve held in a foreign subsidiary of the Bank is required for regulatory purposes, it is assumed to be unavailable to the rest of the Group. Other liquid assets held by a foreign subsidiary are assumed to be available only in limited circumstances. The Bank monitors and ensures compliance in relation to minimum levels of liquidity required and assets held within each entity, and/or jurisdiction.

Encumbered assets

In the course of the Bank's day-to-day activities, securities and other assets are pledged to secure an obligation, participate in clearing or settlement systems, or operate in a foreign jurisdiction. Securities may also be pledged under repurchase agreements. A summary of encumbered and unencumbered assets is presented below:

T54 Asset Encumbrance

				Encumbered assets		Unencumbered assets	
As at October 31, 2016 ($ millions)	Bank-owned assets	Securities received as collateral from securities financing and derivative transactions	Total assets	Pledged as collateral	Other[1]	Available as collateral[2]	Other[3]
Cash and deposits with central banks	**$ 35,396**	**$ –**	**$ 35,396**	**$ –**	**$ 7,917**	**$ 27,479**	**$ –**
Deposits with financial institutions	**10,948**	**–**	**10,948**	**–**	**196**	**10,752**	**–**
Precious metals	**8,442**	**–**	**8,442**	**–**	**115**	**8,327**	**–**
Liquid securities:							
Canadian government obligations	**45,825**	**12,482**	**58,307**	**27,187**	**–**	**31,120**	**–**
Foreign government obligations	**50,761**	**36,822**	**87,583**	**58,680**	**–**	**28,903**	**–**
Other liquid securities	**58,833**	**60,745**	**119,578**	**76,394**	**–**	**43,184**	**–**
Other securities	**5,007**	**4,149**	**9,156**	**3,615**	**–**	**–**	**5,541**
Loans classified as liquid assets:							
NHA mortgage-backed securities	**33,072**	**–**	**33,072**	**1,993**	**–**	**31,079**	**–**
Call and short loans	**1,673**	**–**	**1,673**	**–**	**–**	**1,673**	**–**
Other loans	**464,840**	**–**	**464,840**	**5,934**	**60,311**	**11,596**	**386,999**
Other financial assets[4]	**151,916**	**(84,399)**	**67,517**	**5,316**	**–**	**–**	**62,201**
Non-financial assets	**29,553**	**–**	**29,553**	**–**	**–**	**–**	**29,553**
Total	**$ 896,266**	**$ 29,799**	**$ 926,065**	**$ 179,119**	**$ 68,539**	**$ 194,113**	**$ 484,294**

				Encumbered assets		Unencumbered assets	
As at October 31, 2015 ($ millions)	Bank-owned assets	Securities received as collateral from securities financing and derivative transactions	Total assets	Pledged as collateral	Other[1]	Available as collateral[2]	Other[3]
Cash and deposits with central banks	$ 63,228	$ –	$ 63,228	$ –	$ 8,700	$ 54,528	$ –
Deposits with financial institutions	10,699	–	10,699	–	293	10,406	–
Precious metals	10,550	–	10,550	–	117	10,433	–
Liquid securities:							
Canadian government obligations	24,198	21,206	45,404	22,242	–	23,162	–
Foreign government obligations	39,525	29,989	69,514	44,547	–	24,967	–
Other liquid securities	52,396	55,752	108,148	65,405	–	42,743	–
Other securities	5,797	3,313	9,110	2,806	–	–	6,304
Loans classified as liquid assets:							
NHA mortgage-backed securities	36,409	–	36,409	2,847	–	33,562	–
Call and short loans	1,352	–	1,352	–	–	1,352	–
Other loans	439,207	–	439,207	2,915	49,481	9,134	377,677
Other financial assets[4]	145,063	(80,907)	64,156	5,299	–	–	58,857
Non-financial assets	28,073	–	28,073	–	–	–	28,073
Total	$ 856,497	$ 29,353	$ 885,850	$ 146,061	$ 58,591	$ 210,287	$ 470,911

(1) Assets which are restricted from being used to secure funding for legal or other reasons.
(2) Assets that are readily available in the normal course of business to secure funding or meet collateral needs including central bank borrowing immediately available.
(3) Other unencumbered assets are not subject to any restrictions on their use to secure funding or as collateral but the Bank would not consider them to be readily available. These include loans, a portion of which may be used to access central bank facilities outside of the normal course or to raise secured funding through the Bank's secured funding programs.
(4) Securities received as collateral against other financial assets are included within liquid securities and other securities.

As of October 31, 2016 total encumbered assets of the Bank were $248 billion (October 31, 2015 – $205 billion). Of the remaining $678 billion (October 31, 2015 – $681 billion) of unencumbered assets, $194 billion (October 31, 2015 – $210 billion) are considered readily available in the normal course of business to secure funding or meet collateral needs as detailed above.

In some over-the-counter derivative contracts, the Bank would be required to post additional collateral in the event its credit rating was downgraded. The Bank maintains access to sufficient collateral to meet these obligations in the event of a downgrade of its ratings by one or more of the rating agencies. In the event of a one-notch or two-notch downgrade of the Bank's rating below its lowest current rating, the Bank has to provide an additional $98 million or $218 million of collateral, respectively, to meet contractual derivative funding or margin requirements.

Encumbered liquid assets are not considered to be available for liquidity management purposes. Liquid assets which are used to hedge derivative positions in trading books or for hedging purposes are considered to be available for liquidity management provided they meet the criteria discussed in liquid assets above.

Regulatory developments relating to liquidity

The Net Stable Funding Ratio (NSFR) is expected to become a minimum standard in OSFI's liquidity framework by November 1, 2017, following a consultation process with banks and the public. The NSFR is aimed at reducing structural funding risk by requiring banks to fund their activities with sufficiently stable sources of funding.

Liquidity coverage ratio

The Liquidity Coverage Ratio (LCR) measure is based on a 30 day liquidity stress scenario, with assumptions defined in the OSFI Liquidity Adequacy Requirements (LAR) Guideline. The LCR is calculated as the ratio of high quality liquid assets (HQLA) to net cash outflows. The Bank is subject to a regulatory minimum LCR of 100%.

OSFI's LAR stipulates that banks must maintain an adequate level of unencumbered HQLA that can be converted into cash to meet liquidity needs over a 30 calendar day horizon under a pre-defined significantly severe liquidity stress scenario. The LCR-prescribed liquidity stress scenario includes assumptions for asset haircuts, deposit run-off, wholesale rollover rates, and outflow rates for commitments.

The HQLA are grouped into three categories: Level 1, Level 2A and Level 2B, based on guidelines from the LAR. Level 1 HQLA receive no haircuts, and includes cash, deposits with central banks, central bank reserves available to the Bank in times of stress, and securities with a 0% risk weight. Level 2A and 2B include HQLA of lesser quality and attracts haircuts ranging from 15%-50%.

The total weighted values for net cash outflows for the next 30 days are derived by applying the assumptions specified in the LAR Guideline to specific items, including loans, deposits, maturing debt, derivative transactions and commitments to extend credit.

The following table presents the Bank's average LCR for the quarter ended October 31, 2016, based on month-end LCR calculations for August, September and October.

T55 Bank's average LCR

For the quarter ended October 31, 2016 ($ millions)	Total unweighted value (Average)[1]	Total weighted value (Average)[2]
High-quality liquid assets		
Total high-quality liquid assets (HQLA)	*	**$ 136,401**
Cash outflows		
Retail deposits and deposits from small business customers, of which:	160,438	11,070
Stable deposits	73,193	2,346
Less stable deposits	87,245	8,724
Unsecured wholesale funding, of which:	155,616	82,996
Operational deposits (all counterparties) and deposits in networks of cooperative banks	37,039	8,957
Non-operational deposits (all counterparties)	96,196	51,658
Unsecured debt	22,381	22,381
Secured wholesale funding	*	37,940
Additional requirements, of which:	169,782	42,806
Outflows related to derivative exposures and other collateral requirements	17,134	17,097
Outflows related to loss of funding on debt products	5,681	5,681
Credit and liquidity facilities	146,967	20,028
Other contractual funding obligations	3,002	1,292
Other contingent funding obligations[3]	426,203	7,182
Total cash outflows	*	**$ 183,286**
Cash inflows		
Secured lending (e.g. reverse repos)	$ 105,477	$ 34,145
Inflows from fully performing exposures	21,534	13,291
Other cash inflows	28,028	28,028
Total cash inflows	**$ 155,039**	**$ 75,464**

		Total adjusted value[4]
Total HQLA	*	**$ 136,401**
Total net cash outflows	*	**$ 107,822**
Liquidity coverage ratio (%)	*	**127%**

For the quarter ended October 31, 2015 ($ millions)		Total adjusted value[4]
Total HQLA	*	$ 145,859
Total net cash outflows	*	$ 117,474
Liquidity coverage ratio (%)	*	124%

* Disclosure is not required under regulatory guideline.
(1) Unweighted values represent outstanding balances maturing or callable within the next 30 days.
(2) Weighted values represent balances calculated after the application of HQLA haircuts or inflow and outflow rates, as prescribed by the OSFI LAR guidelines.
(3) Total unweighted value includes uncommitted credit and liquidity facilities, guarantees and letters of credit, outstanding debt securities with remaining maturity greater than 30 days, and other contractual cash outflows.
(4) Total adjusted value represents balances calculated after the application of both haircuts and inflow and outflow rates and any applicable caps.

HQLA continues to be substantially comprised of Level 1 assets (as defined in the LAR guideline). The increase in the Bank's average LCR for the quarter ended October 31, 2016 versus the average for the quarter ended October 31, 2015 was attributable to normal business activity.

The Bank's significant operating currencies are Canadian and U.S. dollars. The Bank monitors its significant currency exposures in accordance with its liquidity risk management framework and risk appetite.

Funding

The Bank ensures that its funding sources are well diversified. Funding concentrations are regularly monitored and analyzed by type. The sources of funding are capital, deposits from retail and commercial clients sourced through the Canadian and international branch network, deposits from financial institutions as well as wholesale debt issuance.

Capital and personal deposits are key components of the Bank's core funding and these amounted to $266 billion as at October 31, 2016 (October 31, 2015 – $251 billion). The increase since October 31, 2015, was due primarily to personal deposits, internal capital generation and the issuance of NVCC subordinated debentures and preferred shares, net of redemptions. A portion of commercial deposits, particularly those of an operating or relationship nature, would be considered part of the Bank's core funding. Furthermore, core funding is augmented by longer term wholesale debt issuances (original maturity over 1 year) of $141 billion (October 31, 2015 – $137 billion). Longer term wholesale debt issuances include medium-term notes, deposit notes, mortgage securitization, asset-backed securities and covered bonds. The increase since October 31, 2015, was primarily due to foreign exchange movement.

The Bank operates in many different currencies and countries. From a funding perspective, the most significant currencies are Canadian and U.S. dollars. With respect to the Bank's operations outside Canada, there are different funding strategies depending on the nature of the activities in a country. For those countries where the Bank operates a branch banking subsidiary, the strategy is for the subsidiary to be substantially self-funding in its local market. For other subsidiaries or branches outside Canada where local deposit gathering capability is not sufficient, funding is provided through the wholesale funding activities of the Bank.

From an overall funding perspective the Bank's objective is to achieve an appropriate balance between the cost and the stability of funding. Diversification of funding sources is a key element of the funding strategy.

The Bank's wholesale debt diversification strategy is primarily executed via the Bank's main wholesale funding centres, located in Toronto, New York, London and Singapore. The majority of these funds are sourced in Canadian and U.S. dollars. Where required, these funds are swapped to fund assets in different currencies. The funding strategy deployed by wholesale funding centres and the management of associated risks, such as geographic and currency risk, are managed centrally within the framework of policies and limits that are approved by the Board of Directors.

In the normal course, the Bank uses a mix of unsecured and secured wholesale funding instruments across a variety of markets. The choice of instruments and markets is based on a number of factors, including relative cost and market capacity as well as an objective of maintaining a diversified mix of sources of funding. Market conditions can change over time, impacting cost and capacity in particular markets or instruments. Changing market conditions can include periods of stress where the availability of funding in particular markets or instruments is constrained. In these circumstances the Bank would increase its focus on sources of funding in functioning markets and secured funding instruments. Should a period of extreme stress exist such that all wholesale funding sources are constrained, the Bank maintains a pool of liquid assets to mitigate its liquidity risk. This pool includes cash, deposits with central banks and securities.

In Canada, the Bank raises short- and longer-term wholesale debt through the issuance of senior unsecured deposit notes. Additional longer-term wholesale debt is generated through the Bank's Canadian Debt and Equity Shelf and the securitization of Canadian insured residential mortgages through CMHC securitization programs (such as Canada Mortgage Bonds), uninsured residential mortgages through the Bank's Covered Bond Program, unsecured personal lines of credit through the Hollis Receivables Term Trust II Shelf and retail credit card receivables through the Trillium Credit Card Trust II Shelf. While the Bank includes CMHC securitization programs in its view of wholesale debt issuance, this source of funding does not entail the same type of run-off risk that can be experienced in funding raised from capital markets.

Outside of Canada, short-term wholesale debt is raised through the issuance of negotiable certificates of deposit in the United States, Hong Kong and Australia and the issuance of commercial paper in the United States. The Bank operates longer-term wholesale debt issuance registered programs in the United States, such as its SEC Registered Debt and Equity Shelf and non-registered programs, such as the securitization of retail indirect auto loan receivables through Securitized Term Auto Receivables Trust 2016-1. The Bank's Covered Bond Program is listed with the U.K. Listing Authority, and the Bank may issue under the program in Europe, the United States, Australia and Switzerland. The Bank also raises longer-term funding across a variety of currencies through its Australian Medium Term Note Programme, European Medium Term Note Programme and Singapore Medium Term Note Programme. The Bank's European Medium Term Note Programme is listed with the U.K. Listing Authority, Swiss Stock Exchange and the Tokyo Pro-Bond Market. The Bank's Singapore Medium Term Note Programme is listed with the Singapore Exchange and the Taiwan Exchange.

The table below provides the remaining contractual maturities of funding raised through wholesale funding. In the Statement of Financial Position, these liabilities are primarily included in Business & Government Deposits.

T56 Wholesale funding [1]

As at October 31, 2016 ($ millions)	**Less than 1 month**	**1-3 months**	**3-6 months**	**6-9 months**	**9-12 months**	**Sub-Total < 1 Year**	**1-2 years**	**2-5 years**	**>5 years**	**Total**
Deposits from banks [2]	**$ 2,958**	**$ 571**	**$ 187**	**$ 148**	**$ 31**	**$ 3,895**	**$ 103**	**$ 149**	**$ –**	**$ 4,147**
Bearer deposit notes, commercial paper and certificate of deposits	**11,434**	**16,838**	**25,324**	**8,181**	**7,357**	**69,134**	**3,151**	**333**	**–**	**72,618**
Asset-backed commercial paper [3]	**2,625**	**3,978**	**1,906**	**–**	**–**	**8,509**	**–**	**–**	**–**	**8,509**
Medium term notes and deposit notes	**1,573**	**5,700**	**4,576**	**3,681**	**3,962**	**19,492**	**21,935**	**31,195**	**7,576**	**80,198**
Asset-backed securities	**–**	**451**	**25**	**26**	**189**	**691**	**1,218**	**1,555**	**417**	**3,881**
Covered bonds	**–**	**3,353**	**2,707**	**–**	**–**	**6,060**	**3,413**	**19,160**	**1,381**	**30,014**
Mortgage securitization [4]	**–**	**1,376**	**663**	**950**	**1,063**	**4,052**	**2,102**	**7,834**	**3,782**	**17,770**
Subordinated debentures [5]	**22**	**30**	**62**	**1**	**3**	**118**	**–**	**109**	**8,767**	**8,994**
Total wholesale funding sources	**$ 18,612**	**$ 32,297**	**$ 35,450**	**$ 12,987**	**$ 12,605**	**$ 111,951**	**$ 31,922**	**$ 60,335**	**$ 21,923**	**$ 226,131**
Of Which:										
Unsecured funding	**$ 15,987**	**$ 23,139**	**$ 30,149**	**$ 12,011**	**$ 11,353**	**$ 92,639**	**$ 25,189**	**$ 31,786**	**$ 16,343**	**$ 165,957**
Secured funding	**2,625**	**9,158**	**5,301**	**976**	**1,252**	**19,312**	**6,733**	**28,549**	**5,580**	**60,174**

As at October 31, 2015 ($ millions)	Less than 1 month	1-3 months	3-6 months	6-9 months	9-12 months	Sub-Total < 1 Year	1-2 years	2-5 years	>5 years	Total
Deposits from banks [2]	$ 3,553	$ 904	$ 343	$ 211	$ 122	$ 5,133	$ 88	$ 80	$ –	$ 5,301
Bearer deposit notes, commercial paper and certificate of deposits	15,006	20,128	42,633	13,417	3,671	94,855	4,195	964	36	100,050
Asset-backed commercial paper [3]	1,720	3,920	1,648	–	–	7,288	–	–	–	7,288
Medium term notes and deposit notes	390	2,365	7,565	6,149	1,837	18,306	16,926	33,674	9,929	78,835
Asset-backed securities	–	1	–	–	500	501	661	1,042	440	2,644
Covered bonds	–	–	–	–	2,615	2,615	5,909	11,359	2,473	22,356
Mortgage securitization [4]	–	1,208	794	997	829	3,828	4,100	6,214	5,632	19,774
Subordinated debentures [5]	19	59	64	3	6	151	–	20	6,626	6,797
Total wholesale funding sources	$ 20,688	$ 28,585	$ 53,047	$ 20,777	$ 9,580	$ 132,677	$ 31,879	$ 53,353	$ 25,136	$ 243,045
Of Which:										
Unsecured funding	$ 18,968	$ 23,456	$ 50,605	$ 19,780	$ 5,636	$ 118,445	$ 21,209	$ 34,738	$ 16,591	$ 190,983
Secured funding	1,720	5,129	2,442	997	3,944	14,232	10,670	18,615	8,545	52,062

(1) Wholesale funding sources exclude repo transactions and bankers acceptances, which are disclosed in T57 Contractual maturities. Amounts are based on remaining term to maturity.
(2) Only includes commercial bank deposits raised by Group Treasury.
(3) Wholesale funding sources also exclude asset-backed commercial paper issued by certain ABCP conduits that are not consolidated for financial reporting purposes.
(4) Represents residential mortgages funded through Canadian Federal Government agency sponsored programs. Funding accessed through such programs does not impact the funding capacity of the Bank in its own name.
(5) Although subordinated debentures are a component of regulatory capital, they are included in this table in accordance with EDTF recommended disclosures.

Wholesale funding generally bears a higher risk of run-off in a stressed environment than other sources of funding. The Bank mitigates this risk through funding diversification, ongoing engagement with investors and by maintaining a large holding of unencumbered liquid assets. Unencumbered liquid assets of $183 billion as at October 31, 2016 (October 31, 2015 – $201 billion) were well in excess of wholesale funding sources that mature in the next twelve months.

Contractual maturities and obligations

The table below provides the maturity of assets and liabilities as well as the off-balance sheet commitments as at October 31, 2016, based on the contractual maturity date.

From a liquidity risk perspective the Bank considers factors other than contractual maturity in the assessment of liquid assets or in determining expected future cash flows. In particular, for securities with a fixed maturity date, the ability and time horizon to raise cash from these securities is more relevant to liquidity management than contractual maturity. For other assets and deposits the Bank uses assumptions about rollover rates to assess liquidity risk for normal course and stress scenarios. Similarly, the Bank uses assumptions to assess the potential drawdown of credit commitments in various scenarios.

The Bank's contractual obligations include contracts and purchase obligations, including agreements to purchase goods and services that are enforceable, legally binding on the Bank and affect the Bank's liquidity and capital resource needs. The Bank leases a large number of its branches, offices and other locations. The majority of these leases are for a term of five years, with options to renew. The total cost of these leases, net of rental income from subleases, was $428 million in 2016 (2015 – $433 million). The decrease reflects cost reductions resulting from structural cost transformation initiatives, partially offset by unfavourable forex impact.

Two major outsourcing contracts have been entered into by the Bank. Both are cancellable with notice.

The largest is a contract with IBM Canada entered into in 2001 to manage the Bank's domestic computer operations, including data centres, branches, Automated Banking Machines, and desktop computing environment. The contract was expanded in 2005 to also include the computer operations for the Caribbean & Central America, and Mexico. The contract for the Canadian operations, Mexico and Caribbean & Central America was renewed earlier in 2013, for a further five year period.

The second is with Symcor Inc. consisting of two contracts (a 2 year term and a 5 year term with a renewal option) to manage the Bank's cheque and bill payment processing, including associated statement and report printing activities and cheque services across Canada.

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	As at October 31, 2016									
($ millions)	Less than one month	One to three months	Three to six months	Six to nine months	Nine to twelve months	One to two years	Two to five years	Over five years	No specific maturity	Total
Assets										
Cash and deposits with financial institutions and precious metals	$ 37,703	$ 1,071	$ 320	$ 237	$ 1,198	$ 932	$ 537	$ 38	$ 12,750	$ 54,786
Trading assets	8,579	7,984	2,485	2,754	2,762	4,683	17,149	20,109	42,056	108,561
Financial instruments designated at fair value through profit or loss	–	–	–	–	205	–	16	–	–	221
Securities purchased under resale agreement and securities borrowed	70,343	13,250	6,156	1,541	839	–	–	–	–	92,129
Derivative financial instruments	2,311	3,041	1,210	1,218	900	3,694	9,986	19,297	–	41,657
Investment securities – available-for-sale	1,933	4,088	3,265	2,641	1,301	5,666	23,587	5,945	2,083	50,509
Investment securities – held-to-maturity	207	439	1,162	522	1,003	4,347	14,434	296	–	22,410
Loans	23,431	24,057	26,091	25,375	26,331	81,473	190,391	31,851	51,164	480,164
Residential mortgages	3,382	5,485	8,771	12,693	10,796	48,038	112,675	19,265	1,783[1]	222,888
Personal and credit cards	2,790	2,484	2,902	3,154	2,777	10,277	20,914	5,813	48,391	99,502
Business and government	17,259	16,088	14,418	9,528	12,758	23,158	56,802	6,773	5,616[2]	162,400
Allowance for credit losses	–	–	–	–	–	–	–	–	(4,626)	(4,626)
Customers' liabilities under acceptances	9,899	1,816	248	9	6	–	–	–	–	11,978
Other assets	–	–	–	–	–	–	–	–	33,851	33,851
Liabilities and equity										
Deposits	$ 55,066	$ 59,091	$ 55,977	$ 24,792	$ 22,794	$ 50,504	$ 75,096	$ 13,125	$ 255,432	$ 611,877
Personal	6,944	8,892	9,131	7,392	6,501	15,206	16,317	549	128,370	199,302
Non-personal	48,122	50,199	46,846	17,400	16,293	35,298	58,779	12,576	127,062	412,575
Financial instruments designated at fair value through profit or loss	–	4	–	–	3	110	1,038	304	–	1,459
Acceptances	9,899	1,816	248	9	6	–	–	–	–	11,978
Obligations related to securities sold short	80	200	388	897	22	2,755	4,544	9,039	5,387	23,312
Derivative financial instruments	1,711	2,237	1,399	1,399	1,035	4,267	10,473	19,866	–	42,387
Obligations related to securities sold under repurchase agreements and securities lent	87,130	7,050	215	335	2,352	1	–	–	–	97,083
Subordinated debentures	–	–	–	–	–	–	–	7,633	–	7,633
Other liabilities	568	819	591	316	550	1,434	2,432	4,094	31,912	42,716
Total equity	–	–	–	–	–	–	–	–	57,821	57,821
Off-Balance sheet commitments										
Operating leases	$ 28	$ 60	$ 88	$ 85	$ 83	$ 291	$ 631	$ 536	$ –	$ 1,802
Credit commitments[3]	5,081	5,170	12,498	15,381	20,870	15,723	93,842	5,680	–	174,245
Financial guarantees[4]	–	–	–	–	–	–	–	–	35,297	35,297
Outsourcing obligations	17	35	50	49	49	197	114	–	1	512

(1) Includes primarily impaired mortgages.
(2) Includes primarily overdrafts and impaired loans.
(3) Includes the undrawn component of committed credit and liquidity facilities.
(4) Includes outstanding balances of guarantees, standby letters of credit and commercial letters of credit which may expire undrawn.

	As at October 31, 2015									
($ millions)	Less than one month	One to three months	Three to six months	Six to nine months	Nine to twelve months	One to two years	Two to five years	Over five years	No specific maturity	Total
Assets										
Cash and deposits with financial institutions and precious metals	$ 65,315	$ 1,367	$ 477	$ 593	$ 567	$ 593	$ 892	$ 7	$ 14,666	$ 84,477
Trading assets	6,595	6,148	4,580	3,467	1,177	6,599	12,665	19,759	38,150	99,140
Financial instruments designated at fair value through profit or loss	–	–	66	–	–	–	16	–	238	320
Securities purchased under resale agreement and securities borrowed	65,182	11,121	5,738	2,003	3,268	–	–	–	–	87,312
Derivative financial instruments	2,789	2,412	1,580	1,168	1,479	3,761	9,541	18,273	–	41,003
Investment securities – available-for-sale	1,292	2,215	3,941	2,059	2,136	7,423	16,185	4,291	3,023	42,565
Investment securities – held-to-maturity	–	–	65	–	4	111	463	8	–	651
Loans	25,763	24,120	27,190	23,976	24,561	71,989	181,600	32,772	46,657	458,628
Residential mortgages	3,120	5,695	11,584	11,690	11,570	43,088	108,597	20,366	1,788[1]	217,498
Personal and credit cards	2,456	1,732	2,577	2,607	2,500	10,146	19,563	5,719	44,177	91,477
Business and government	20,187	16,693	13,029	9,679	10,491	18,755	53,440	6,687	4,889[2]	153,850
Allowance for credit losses	–	–	–	–	–	–	–	–	(4,197)	(4,197)
Customers' liabilities under acceptances	7,987	2,120	146	37	6	–	–	–	–	10,296
Other assets	–	–	–	–	–	–	–	–	32,105	32,105
Liabilities and equity										
Deposits	$ 54,015	$ 50,230	$ 67,936	$ 33,177	$ 19,993	$ 50,181	$ 68,116	$ 17,118	$ 240,153	$ 600,919
Personal	6,506	7,960	8,938	8,303	7,186	15,762	16,646	326	118,417	190,044
Non-personal	47,509	42,270	58,998	24,874	12,807	34,419	51,470	16,792	121,736	410,875
Financial instruments designated at fair value through profit or loss	–	18	–	–	7	9	648	804	–	1,486
Acceptances	7,987	2,120	146	37	6	–	–	–	–	10,296
Obligations related to securities sold short	52	50	208	162	223	2,530	5,425	7,851	3,711	20,212
Derivative financial instruments	3,767	2,196	1,912	1,182	1,241	3,786	11,109	20,077	–	45,270
Obligations related to securities sold under repurchase agreements and securities lent	60,814	8,232	4,483	332	3,154	–	–	–	–	77,015
Subordinated debentures	–	–	–	–	–	–	–	6,182	–	6,182
Other liabilities	867	1,535	358	533	307	878	2,444	3,803	30,913	41,638
Total equity	–	–	–	–	–	–	–	–	53,479	53,479
Off-Balance sheet commitments										
Operating leases	$ 27	$ 57	$ 83	$ 81	$ 80	$ 285	$ 595	$ 546	$ –	$ 1,754
Credit commitments[3]	6,633	6,588	16,985	16,264	18,052	20,335	76,660	4,878	5	166,400
Financial guarantees[4]	–	–	–	–	–	–	–	–	31,865	31,865
Outsourcing obligations	19	36	51	50	50	183	225	4	1	619

(1) Includes primarily impaired mortgages.
(2) Includes primarily overdrafts and impaired loans.
(3) Includes the undrawn component of committed credit and liquidity facilities.
(4) Includes outstanding balances of guarantees, standby letters of credit and commercial letters of credit which may expire undrawn.

Other Risks

Operational Risk

Operational risk is the risk of loss, whether direct or indirect, to which the Bank is exposed due to inadequate or failed internal processes or systems, human error, or external events. Operational risk includes legal and regulatory risk, business process and change risk, fiduciary or disclosure breaches, technology failure, financial crime and environmental risk. It exists in some form in every Bank business and function. Operational risk can not only result in financial loss, but also regulatory sanctions and damage to the Bank's reputation. The Bank is very successful at managing operational risk with a view to safeguarding client assets and preserving shareholder value.

In fiscal 2016, operational risk losses continue to be within the Bank's risk appetite.

Governance and organization

The Bank has developed policies, processes and assessment methodologies to ensure that operational risk is appropriately identified and managed with effective controls. The governing principles of the Bank's Operational Risk Management Framework include:

- The three lines of defence model helps to ensure proper accountability and clearly defines the roles and responsibilities for operational risk management. The first line of defence is the business units, who own the risks in their businesses and operations. The second line of defence is led by a central risk management unit within Global Risk Management, with support from control and stewardship functions across the Bank. The third line of defence is Internal Audit.
- The individual business lines are accountable for the identification, management and control of the significant operational risks to which they are exposed.

The Bank has a governance and organizational structure through which there is effective oversight and in which operational risk is managed to an established risk appetite, including:

- The Board of Directors is responsible for sound corporate governance and approves biennially the Bank's Operational Risk Management Policy;
- A senior level Operational & Compliance Risk Committee comprised of Heads of business lines and key control functions, and chaired by the Chief Risk Officer. This Committee provides consistent, Bank-wide oversight of operational and compliance risk management;
- Business-line level committees are in place to ensure operational risk issues are known, discussed, managed and escalated, as needed and in a timely manner;
- Executive management with clearly defined areas of responsibility;
- A central unit in Global Risk Management responsible for: developing methods to identify, assess, manage and monitor operational risks; and reporting on risks as well as actual loss events and to play a challenge role to the business units in their assessment and management of operational risk;
- Independent specialist units responsible for developing methods to mitigate specific components of operational risk, including codifying policies and processes required to control those specific risks;
- Separation of duties between key functions; and
- An independent internal audit department responsible for verifying that significant risks are identified and assessed, and for testing controls to ensure that overall risk is at an acceptable level. The Internal Audit department is also responsible for auditing and assessing the Bank's Operational Risk Management Framework, including its design and effectiveness.

Operational Risk Management Framework

The Bank's Operational Risk Management Framework sets out an integrated approach to identify, assess, control, mitigate and report operational risks across the Bank. The following are key components of the Bank's Operational Risk Management Framework:

- The Bank's risk and control assessment program, which includes formal reviews of significant units, operations and processes to identify and assess operational risks. This program provides a basis for management to ensure that key risks have been identified and that controls are functioning effectively. Business line management attests to the accuracy of each assessment and develops action plans to mitigate residual risk exposure, as appropriate. Results of these reviews are summarized and reported to executive management and the Board of Directors.
- The Bank has a standard inventory of operational risks which are discussed and considered in each risk assessment.
- The Bank's scenario analysis program provides a forward looking view of key risks and provides management with insights into how plausible but highly unlikely operational risk events might occur. Scenario analysis will also assist in the selection of severity distributions in the Bank's Advanced Measurement Approach (AMA) capital model (discussed below).
- The Bank's Key Risk Indicator (KRI) program provides information on the level of exposure to a given operational risk to a particular point in time and can help to monitor potential shifts in risk conditions or new emerging risk and/or measure residual risk exposure and effectiveness of controls. KRIs exist within the business lines and at the enterprise level.
- The Business Environment and Internal Control Factors (BEICF) program incorporates the impact of key business environment and internal control factors into the regulatory capital allocated to divisions by utilizing a BEICF scorecard. The scorecard will be used to potentially adjust capital calculations produced using the Bank's AMA capital model and due to its forward-looking nature, it also assists with identifying new trends and emerging risks.
- The Bank's centralized operational loss event database, which is managed and maintained by the central operational risk unit within Global Risk Management, captures key information on operational losses. This data is analyzed, benchmarked against industry loss data and significant metrics, then reported to executive management and the Board of Directors to provide insight into operational risk exposures, appetites and trends.
- Operational risk is difficult to quantify in a fulsome and accurate manner, due to the nature of operational risk itself. Operational risk is often included with or is a by-product of another form of risk and is not taken on intentionally. Tools for operational risk management and measurement continue to evolve across the global financial services industry. There are two methods for the calculation of operational risk regulatory capital available to the Bank under Basel framework – The Standardized Approach and the Advanced Measurement Approach (AMA). The Bank was approved by OSFI in August 2016 to use AMA; implementation is planned for FY2017.
- Operational risk reporting is provided to the Bank's senior executive management and the Board of Directors, and includes information relating to key events, results, trends and themes across the operational risk tools. The combination of these information sources provides both a backward and forward-looking view of operational risk at the Bank.

- The Bank is a member of the Operational Riskdata Exchange Association (ORX), an international consortium of banks that share anonymized loss data. This industry data is used to support risk identification, assessment and will be used as an input to the Bank's AMA capital model. Discussion forums within ORX also help to ensure that the Bank is current of all industry best practices and developments.
- The Bank's Fraud Management Office, which identifies threats of financial crime, implements systems and processes to mitigate loss and reports on fraud loss activity to senior management.
- The Bank's monitoring of industry events, identifies significant losses incurred at other financial institutions and provides a reference for reviewing and assessing the Bank's own risk exposure.
- The compliance risk management program led by Global Compliance through an established network and associated processes that include: monitoring regulatory changes; conducting compliance risk assessments; implementing policies and procedures; training; monitoring and resolving issues; and reporting on the status of compliance and compliance controls to executive management, the Board of Directors, and regulators as required.
- The Bank's New Products and Services Risk Management Policy which describes the general principles applicable to the review, approval and implementation of new products and services within Scotiabank and is intended to provide overarching guidance. Processes are in place at the all-Bank level and in each business line for evaluation of risk in new businesses, services and products.
- The Bank's Business Continuity Management Department is responsible for governance and oversight of the Bank's business continuity, and monitors units to ensure compliance with these policies. The Bank's business continuity management policy requires that all business units develop business continuity capabilities for their respective functions.
- The Bank is exposed to ever increasing cyber risks, which may include theft of assets, unauthorized access to sensitive information, or operational disruption such as breaches or denials of service attacks, and has implemented a robust and continuously evolving cyber security program in response. While the Bank's computer systems continue to be subject to cyber-attack attempts, the countermeasures in place remain effective. Scotiabank has not experienced material breaches of cyber security. The Bank continues to actively monitor this risk, leveraging external threat intelligence, internal monitoring, reviewing best practices and implementing additional controls as required, to mitigate these risks.
- The Bank's Model Risk Management Policy, which provides the framework for model review and approval under the oversight of the Operational Risk Committee.
- The Bank's training programs, including the mandatory Anti-Money Laundering, Operational Risk and Information Security courses and examinations which ensure employees are aware and equipped to safeguard our customers' and the Bank's assets.
- Risk mitigation programs, which use insurance policies to transfer the risk of high severity losses, where feasible and appropriate.

Reputational Risk

Reputational risk is the risk that negative publicity regarding Scotiabank's conduct, business practices or associations, whether true or not, will adversely affect its revenues, operations or customer base, or require costly litigation or other defensive measures.

Negative publicity about an institution's business practices may involve any aspect of its operations, but usually relates to questions of business ethics and integrity, or quality of products and services. Negative publicity and attendant reputational risk frequently arise as a by-product of some other kind of risk management control failure.

Reputational risk is managed and controlled throughout the Bank by codes of conduct, governance practices and risk management programs, policies, procedures and training. Many relevant checks and balances are outlined in greater detail under other risk management sections, particularly Operational Risk, where reference is made to the Bank's well-established compliance program. All directors, officers and employees have a responsibility to conduct their activities in accordance with Scotiabank's Code of Conduct, and in a manner that minimizes reputational risk. While all employees, officers and directors are expected to protect the reputation of Scotiabank by complying with Scotiabank's Code of Conduct, the activities of the Legal, Corporate Secretary, Public, Corporate and Government Affairs and Compliance departments, and the Reputational Risk Committee, are particularly oriented to the management of reputational risk.

In providing credit, advice, or products to customers, or entering into associations, the Bank considers whether the transaction, relationship or association might give rise to reputational risk. The Bank has an established, Board-approved Reputational Risk Policy, as well as policy and procedures for managing reputational and legal risk related to structured finance transactions. Global Risk Management plays a significant role in the identification and management of reputational risk related to credit underwriting. In addition, the Reputational Risk Committee is available to support Global Risk Management, as well as other risk management committees and business units, with their assessment of reputational risk associated with transactions, business initiatives, and new products and services.

The Reputational Risk Committee considers a broad array of factors when assessing transactions, so that the Bank meets, and will be seen to meet, high ethical standards. These factors include the extent, and outcome, of legal and regulatory due diligence pertinent to the transaction; the economic intent of the transaction; the effect of the transaction on the transparency of a customer's financial reporting; the need for customer or public disclosure; conflicts of interest; fairness issues; and public perception.

The Committee may impose conditions on customer transactions, including customer disclosure requirements to promote transparency in financial reporting, so that transactions meet Bank standards. In the event the Committee recommends not proceeding with a transaction and the sponsor of the transaction wishes to proceed, the transaction is referred to the Risk Policy Committee.

Environmental Risk

Environmental risk refers to the possibility that environmental concerns involving Scotiabank or its customers could affect the Bank's performance.

To safeguard the Bank and the interests of its stakeholders, Scotiabank has an environmental policy, which is approved by the Bank's Board of Directors. The policy guides day-to-day operations, lending practices, supplier agreements, the management of real estate holdings and external reporting practices. It is supplemented by specific policies and practices relating to individual business lines.

Environmental risks associated with the business operations of each borrower and any real property offered as security are considered in the Bank's credit evaluation procedures. This includes an environmental assessment where applicable, and commentary on the impact of climate (including regulatory, physical or reputational impacts) on the borrower. Global Risk Management has primary responsibility for establishing the related policies, processes and standards associated with mitigating environmental risk in the Bank's lending activities. Decisions are taken in the context of the risk management framework.

In the area of project finance, the Equator Principles have been integrated into the Bank's internal processes and procedures since 2006. The Equator Principles help financial institutions determine, assess, manage and report environmental and social risk. The principles apply to project finance loans and advisory assignments where total capital costs exceed US$10 million, and to certain project-related corporate loans. The Equator Principles provide safeguards for sensitive projects to ensure protection of natural habitats and the rights of indigenous peoples, as well as safeguards against the use of child and forced labour.

Environmental concerns also play a prominent role in shaping the Bank's real estate practices and purchasing decisions. The Real Estate Department adheres to an Environmental Compliance Policy to ensure responsible management of the Bank's real estate holdings from an environmental perspective. In addition, recycling and resource management programs are in place in the Bank's corporate offices and branch networks. Internal tracking systems are in place with respect to energy use, greenhouse gas emissions (GHG) and paper consumption. Since 2012, GHG emissions data for the branch network and corporate offices has been externally verified. A variety of reduction measures are in place for energy, paper and waste. In order to further reduce the Bank's environmental footprint, it is guided by an Environmental Paper Policy.

To ensure it continues to operate in an environmentally responsible manner, the Bank monitors policy and legislative requirements through ongoing dialogue with government, industry and stakeholders in countries where it operates. Scotiabank has been meeting with environmental organizations, industry associations and socially responsible investment organizations with respect to the role that banks can play to help address issues such as climate change, protection of biodiversity, promotion of sustainable forestry practices, and other environmental issues important to its customers and communities where it operates. The Bank has an ongoing process of reviewing its practices in these areas.

Scotiabank has a number of environmentally related products and services to meet demand and promote the "green" economy. These include: an EcoEnergy Financing program designed to support personal and small business customers who wish to install small-scale renewable energy projects; an auto loan product for hybrid, electric and clean diesel vehicles; an Energy and Agriculture Commodities group, which assists corporate clients by providing liquidity and hedge solutions in the carbon market; and an eco-home renovation program.

Environmental Reporting

Scotiabank is also a signatory to, and participant in the Carbon Disclosure Project, which provides corporate disclosure to the investment community on greenhouse gas emissions and climate change management. Further information is available in the Bank's annual Corporate Social Responsibility Report.

Insurance Risk

The Bank is both a distributor of third party insurance products and underwriter of insurance risk. As a distributor of third party insurance products, the Bank earns fees but bears no insurance risk. The Bank bears insurance risk in its role as an underwriter, either through direct underwriting or via reinsurance.

Insurance risk is the risk of potential financial loss due to actual experience being different from that assumed in the pricing process of the insurance products.

Insurance by nature involves the distribution of products that transfer individual risks to the issuer with the expectation of a return built into the insurance premiums earned. The Bank is exposed to insurance risk primarily through its creditor, life and select property and casualty insurance and reinsurance products.

The insurance governance and risk management frameworks are calibrated within each insurance subsidiary commensurate with the nature and materiality of risk assumed. Senior management within the insurance business subsidiaries has primary responsibility for managing insurance risk, with oversight by Global Risk Management through the Insurance Risk Committee. The insurance subsidiaries have their own boards of directors, as well as independent appointed actuaries who provide additional risk management oversight.

The insurance subsidiaries maintain a number of policies and practices to manage insurance risk. Sound product design is an essential element. The vast majority of risks insured are short-term in nature, that is, they do not involve long-term pricing guarantees. Geographic diversification and product-line diversification are important elements as well. Reinsurance is commonly used as an effective tool to manage the insurance risk exposures. Insurance risk is also managed through effective underwriting and claim adjudication practices, ongoing monitoring of experience, and stress-testing scenario analysis.

Strategic Risk

Strategic risk is the risk that the Bank's business strategies are ineffective, being poorly executed, or insufficiently resilient to changes in the business environment.

The Board of Directors is ultimately responsible for oversight of strategic risk, by adopting a strategic planning process and approving, on an annual basis, a strategic plan for the Bank.

The Bank manages its strategic planning process through a series of coordinated efforts between the Executive Management Team, the Business Lines and the Corporate Functions. These efforts address a wide range of relevant considerations including capital and resource allocation, business initiatives, strategic transactions and investments, stress testing and alignment with the Bank's Risk Appetite Framework. These considerations are reviewed in a consistent and disciplined manner. The process involves input from the entire Executive Management Team and from the Board of Directors.

On an annual basis, a comprehensive Strategy Report is prepared that summarizes the Bank's key strategic considerations, and is presented by the President and Chief Executive Officer to the Board of Directors for their review and approval.

The execution and evaluation of strategic plans within the Bank is critically important to the Bank's enterprise-wide risk management framework. The Bank makes continuous efforts to ensure that all employees are aware of the Bank's overall strategic direction, and that employees are also aware of the strategies and objectives for their respective business line or corporate function. On an ongoing basis, the business lines and corporate functions identify, manage and assess the internal and external considerations – including risk factors – that could affect the achievement of their strategic objectives. These matters are considered on an enterprise-wide basis by the Bank's Executive Management Team, which makes adjustments, as required.

CONTROLS AND ACCOUNTING POLICIES

Controls and Procedures

Management's responsibility for financial information contained in this annual report is described on page 130.

Disclosure controls and procedures

The Bank's disclosure controls and procedures are designed to provide reasonable assurance that information is accumulated and communicated to the Bank's management, including the President and Chief Executive Officer and the Group Head and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

As of October 31, 2016, the Bank's management, with the participation of the President and Chief Executive Officer and Group Head and Chief Financial Officer, evaluated the effectiveness of its disclosure controls and procedures, as defined under the rules adopted by the U.S. Securities and Exchange Commission (SEC) and the Canadian securities regulatory authorities, and have concluded that the Bank's disclosure controls and procedures are effective.

Internal control over financial reporting

Management of the Bank is responsible for establishing and maintaining adequate internal control over financial reporting. These controls include policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Bank;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB), and that receipts and expenditures are being made only in accordance with authorizations of management and directors of the Bank; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Bank's assets that could have a material effect on the financial statements.

All control systems contain inherent limitations, no matter how well designed. As a result, the Bank's management acknowledges that its internal control over financial reporting will not prevent or detect all misstatements due to error or fraud. In addition, management's evaluation of controls can provide only reasonable, not absolute, assurance that all control issues that may result in material misstatements, if any, have been detected.

Management assessed the effectiveness of internal control over financial reporting, using the Internal Control-Integrated Framework 2013 issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and based on that assessment concluded that internal control over financial reporting was effective as at October 31, 2016.

Changes in internal control over financial reporting

There have been no changes in the Bank's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Bank's internal control over financial reporting during the year ended October 31, 2016.

Critical Accounting Estimates

The Bank's accounting policies are integral to understanding and interpreting the financial results reported in this annual report. Note 3 summarizes the significant accounting policies used in preparing the Bank's consolidated financial statements. Certain of these policies require management to make estimates, assumptions and subjective judgements that are difficult, complex, and often relate to matters that are inherently uncertain. The policies discussed below are considered to be particularly important to the presentation of the Bank's financial position and results of operations, because changes in the estimates, assumptions and judgements could have a material impact on the Bank's consolidated financial statements. These estimates, assumptions and judgements are adjusted in the normal course of business to reflect changing underlying circumstances.

Allowance for credit losses

The allowance for credit losses represents management's best estimate of the probable credit losses in the portfolio of deposits with other institutions, loans to borrowers and acceptances. Management undertakes regular reviews of credit quality to assess the adequacy of the allowance for credit losses. This process requires the use of estimates, assumptions and subjective judgements at many levels. These subjective judgements include identifying credits that are impaired, and considering factors specific to individual credits, as well as portfolio characteristics and risks. Changes to these estimates or use of other reasonable judgements and estimates could directly affect the provision for credit losses.

The allowance for credit losses is comprised of collective and individually assessed allowances.

Allowances in respect of individually significant credit exposures are an estimate of probable incurred losses related to existing impaired loans. In establishing these allowances applicable to individual credit exposures, management individually assesses each loan for objective indicators of impairment and forms a judgement as to whether the loan is impaired. Loan impairment is recognized when, in management's opinion, there is no longer reasonable assurance that interest and principal payments will be collected based on original contractual terms. Once a loan is determined to be impaired, management estimates its net realizable value by making judgements relating to the timing of future cash flow amounts, the fair value of any underlying security pledged as collateral, costs of realization, observable market prices, and expectations about the future prospects of the borrower and any guarantors.

Individual provisions were higher in 2016 than in 2015 across all business lines.

Management estimates allowances on a collective basis for exposures in certain homogenous portfolios, including residential mortgages, credit card loans and most personal loans. This collective assessment for these positions involves estimating the probable losses inherent in the portfolio by using a formulaic method that considers recent loss experience.

An allowance is also determined in respect of probable incurred losses that are inherent in the portfolio, of performing loans, but have not yet been specifically identified on an individual basis. Management establishes this allowance on a collective basis through an assessment of quantitative and qualitative factors. Using an internally developed methodology, management arrives at an initial quantitative estimate of the collective allowance for the performing portfolio based on numerous factors, including historical average default probabilities, loss given default rates and exposure at default

factors. Material changes in any of these parameters or assumptions would affect the range of expected credit losses and, consequently, could affect the collective allowance level. For example, if either the probability of default or the loss given default rates for the non-retail portfolio were independently increased or decreased by 10%, the methodology would indicate an increase or decrease to the quantitative estimate of approximately $71 million (2015 – $73 million).

A qualitative assessment of the collective allowance is made based on observable data, such as: economic trends and business conditions, portfolio concentrations, risk migrations and recent trends in volumes and severity of delinquencies, and a component for the imprecision inherent in the methodology and parameters. Management reviews the collective allowance quarterly to assess whether the allowance is at the appropriate level in relation to the size of the portfolio, inherent credit risks and trends in portfolio quality.

The total collective allowance for credit losses as at October 31, 2016, was $3,498 million, an increase of $238 million from a year earlier. This year included an increase in collective allowance against performing loans of $50 million primarily related to the energy sector. Of the collective allowance amount, $662 million is attributable to business and government performing loans (2015 - $644 million), with the remainder allocated to personal lending and credit cards of $2,258 million (2015 - $1,941 million) and residential mortgages of $578 million (2015 - $675 million). These amounts for personal lending and credit cards, and for residential mortgages include allowances for both performing and impaired loans.

As noted above, the individual allowance for credit losses for personal loans, credit cards and mortgages is formula-based and also reflects incurred but not yet identified losses.

Fair value of financial instruments

All financial instruments are measured at fair value on initial recognition. Subsequent measurement of a financial instrument depends on its classification. Non-trading loans and receivables, certain securities and most financial liabilities are carried at amortized cost unless classified or designated as fair value through profit or loss or available-for-sale at inception. All other financial instruments, including those designated as fair value through profit or loss at inception, are carried at fair value.

Fair value of a financial asset or liability is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants in the principal, or in its absence, the most advantageous market to which the Bank has access at the measurement date.

The best evidence of fair value for a financial instrument is the quoted price in an active market. Quoted market prices represent a Level 1 valuation. Quoted prices are not always available for over-the-counter transactions, as well as transactions in inactive or illiquid markets. In these instances, internal models that maximize the use of observable inputs are used to estimate fair value. The chosen valuation technique incorporates all the factors that market participants would take into account in pricing a transaction. When all significant inputs are observable, the valuation is classified as Level 2. Financial instruments traded in a less active market have been valued using indicative market prices, present value of cash-flows or other valuation techniques. Fair value estimates normally do not consider forced or liquidation sales. Where financial instruments trade in inactive markets or when using models where observable parameters do not exist, greater management judgement is required for valuation purposes. Valuations that require the significant use of unobservable inputs are considered Level 3. The calculation of estimated fair value is based on market conditions at a specific point in time and therefore may not be reflective of future fair values.

The Bank has controls and processes in place to ensure that the valuation of financial instruments is appropriately determined. Global Risk Management (GRM) is responsible for the design and application of the Bank's risk management framework. GRM is independent from the Bank's business units and is overseen by Executive Management and the Board of Directors. Senior management committees within GRM oversee and establish standards for risk management processes that are critical in ensuring that appropriate valuation methodologies and policies are in place for determining fair value.

Where possible, valuations are based on quoted prices or observable inputs obtained from active markets. GRM oversees a monthly Independent Price Verification (IPV) process in order to assess the reliability and accuracy of prices and inputs used in the determination of fair value. The IPV process is performed by price verification groups that are independent from the business. The Bank maintains an approved list of pricing sources that are used in the IPV process. These sources include, but are not limited to, brokers, dealers and consensus pricing services. The valuation policies relating to the IPV process require that all pricing or rate sources used be external to the Bank. On a periodic basis, an independent assessment of pricing or rate sources is also performed by GRM to determine market presence or market representative levels.

Where quoted prices are not readily available, such as for transactions in inactive or illiquid markets, internal models that maximize the use of observable inputs are used to estimate fair value. An independent senior management committee within GRM oversees the vetting, approval and ongoing validation of valuation models used in determining fair value. Risk policies associated with model development are approved by Executive Management and/or key risk committees.

In determining fair value for certain instruments or portfolios of instruments, valuation adjustments or reserves may be required to arrive at a more accurate representation of fair value. The Bank's policy of applying valuation reserves to a portfolio of instruments is approved by a senior management committee. These reserves include adjustments for credit risk, bid-offer spreads, unobservable parameters, constraints on prices in inactive or illiquid markets and when applicable funding costs. The methodology for the calculation of valuation reserves are reviewed at least annually by senior management.

Valuation adjustments recorded against the fair value of financial assets and financial liabilities totaled $119 million as at October 31, 2016, (2015 – $27 million), net of any write-offs. These valuation adjustments are due mainly to credit risk considerations and bid-offer spreads on derivative transactions.

As at October 31, 2016, a funding valuation adjustment (FVA) of $92 million pre-tax (2015 – $42 million) was recorded relating to uncollateralized derivative instruments.

The Bank discloses the classification of all financial instruments carried at fair value in a hierarchy based on the determination of fair value. The valuation hierarchy is as follows:

- Level 1 – fair value is based on unadjusted quoted prices in active markets for identical instruments,
- Level 2 – fair value is based on models using significant market-observable inputs other than quoted prices for the instruments, or
- Level 3 – fair value is based on models using significant inputs that are not based on observable market data.

The Bank's assets and liabilities which are carried at fair value as classified by the valuation hierarchy are reflected in Note 6. The percentage of each asset and liability category by fair value hierarchy level are outlined as follows:

T58 Fair value hierarchy of financial instruments carried at fair value

	Assets			Liabilities	
Fair value hierarchy As at October 31, 2016	Trading assets (incl. precious metals)	Available-for-sale securities	Derivatives	Obligations related to securities sold short	Derivatives
Level 1	56%	62%	2%	85%	1%
Level 2	43%	36%	98%	15%	98%
Level 3	1%	2%	–%	–%	1%
	100%	100%	100%	100%	100%

Impairment of investment securities

Investment securities are evaluated for impairment at the end of each reporting date, or more frequently, if events or changes in circumstances indicate the existence of objective evidence of impairment.

In the case of equity instruments classified as available-for-sale, a significant or prolonged decline in the fair value of the security below its original cost is considered in determining whether impairment exists. In the case of debt instruments classified as available-for-sale and held-to-maturity investment securities, the criteria for assessment of impairment is consistent with the criteria for impairment of loans.

When a decline in value of available-for-sale debt or equity instrument is due to impairment, the value of the security is written down to fair value. The losses arising from impairment are reclassified from accumulated other comprehensive income and included in net gain on investment securities within other operating income in the Consolidated Statement of Income.

The losses arising from impairment of held-to-maturity investment securities are recognized in net gain on investment securities within other operating income in the Consolidated Statement of Income.

Reversals of impairment losses on available-for-sale debt instruments resulting from increases in fair value related to events occurring after the date of impairment are included in net gain on investment securities within other operating income in the Consolidated Statement of Income, to a maximum of the original impairment charge. Reversals of impairment on available-for-sale equity instruments are not recognized in the Consolidated Statement of Income; increases in fair value of such instruments after impairment are recognized in equity.

Reversals of impairment losses on held-to-maturity investment securities are included in net gain on investment securities within other operating income in the Consolidated Statement of Income, to a maximum of the amortized cost of the investment before the original impairment charge.

As at October 31, 2016, the gross unrealized gains on available-for-sale securities recorded in accumulated other comprehensive income were $740 million (2015 – $1,058 million), and the gross unrealized losses were $285 million (2015 – $291 million). Net unrealized gains were therefore $455 million (2015 – $767 million) before hedge amounts. The net unrealized gains after hedge amounts were $26 million (2015 – $267 million).

At October 31, 2016, the unrealized loss recorded in accumulated other comprehensive income relating to securities in an unrealized loss position for more than 12 months was $206 million (2015 – $191 million). This unrealized loss was comprised of $11 million (2015 – $24 million) in debt securities, $160 million (2015 – $164 million) related to preferred shares and $35 million (2015 – $3 million) related to common shares. The unrealized losses on the debt securities arose primarily from changes in interest rates and credit spreads. For debt securities, based on a number of considerations, including underlying credit of the issuers, the Bank expects that future interest and principal payments will continue to be received on a timely basis in accordance with the contractual terms of the security.

Employee benefits

The Bank sponsors various pension and other benefit plans for eligible employees in Canada, the U.S., and other international operations. The pension benefits are generally based on years of service and average earnings at retirement. Other benefits generally include post-retirement health care, dental care and life insurance, along with other long-term employee benefits such as long-term disability.

Employee benefit expense and the related benefit obligation are calculated using actuarial methods and certain actuarial assumptions. These assumptions are based on management's best estimate and are reviewed and approved annually. The management assumptions with the greatest potential impact are the discount rates. These rates are used for measuring the benefit obligation, service cost and interest cost. The discount rate used to determine the defined benefit obligation is based on the yield at the reporting date on high quality corporate bonds that have durations that match the terms of the Bank's obligations. Prior to 2016, the discount rate used to determine the annual benefit expense was the same as the rate used to determine the defined benefit obligation. Beginning in 2016, separate discount rates were used to determine the annual benefit expense in Canada and the U.S. These rates were determined with reference to the yields on high quality corporate bonds with durations that match the various components of the annual defined benefit expense. The discount rate used to determine the annual benefit expense for all other plans continues to be same as the rate used to determine the defined benefit obligation. If the assumed discount rates were 1% lower, the benefit expense for 2016 would have been $116 million higher. Other key assumptions include future compensation, health care costs, employee turnover, retirement age and mortality. When making these estimates, management considers expectations of future economic trends and business conditions, including inflation rates as well as other factors, such as plan specific experience and best practices.

The Bank uses a measurement date of October 31, and based on this measurement date, the Bank reported a deficit of $1,369 million in its principal pension plans as at October 31, 2016, as disclosed in Note 27 to the consolidated financial statements.

Actual experience that differs from assumptions made by management will result in a net actuarial gain or loss recognized immediately in other comprehensive income.

Note 27 contains details of the Bank's employee benefit plans, such as the disclosure of pension and other benefit amounts, management's key assumptions, and a sensitivity analysis of changes in these assumptions on the employee benefit obligation and expense.

Corporate income taxes

Management exercises judgment in determining the provision for income taxes and deferred income tax assets and liabilities. The provision is based on management's expectations regarding the income tax consequences of transactions and events during the period. Management interprets the tax

legislation for each jurisdiction in which the Bank operates and makes assumptions about the expected timing of the reversal of deferred income tax assets and liabilities. If management's interpretations of the legislation differ from those of the tax authorities or if the actual timing of the reversals of the deferred income tax assets and liabilities is not as anticipated, the provision for income taxes could increase or decrease in future periods.

Total deferred tax assets related to the Bank's unused income tax losses from operations arising in prior years were $484 million as at October 31, 2016 (2015 – $539 million). The tax related to temporary differences, unused tax losses and unused tax credits for which no deferred tax asset is recognized in the Consolidated Statement of Financial Position amounted to $55 million (2015 – $166 million). The amount related to unrecognized tax losses was $14 million, which will expire as follows: $13 million in 2018 and beyond and $1 million have no fixed expiry date.

The Bank maintains provisions for uncertain tax positions that it believes appropriately reflect the risk of tax positions under discussion, audit, dispute, or appeal with tax authorities, or which are otherwise considered to involve uncertainty. These provisions are made using the Bank's best estimate of the amount expected to be paid based on an assessment of all relevant factors, which are reviewed at the end of each reporting period.

In November 2016 the Bank received a federal reassessment of $179 million for tax and interest as a result of the Canada Revenue Agency denying the tax deductibility of certain Canadian dividends received during the 2011 taxation year. The circumstances of the dividends subject to the reassessment are similar to those prospectively addressed by recently enacted rules which had been introduced in the 2015 Canadian federal budget. The Bank is confident that its tax filing position was appropriate and in accordance with the relevant provisions of the Income Tax Act (Canada), and intends to vigorously defend its position.

Note 26 of the 2016 consolidated financial statements contains further details with respect to the Bank's provisions for income taxes.

Structured entities

In the normal course of business, the Bank enters into arrangements with structured entities on behalf of its customers and for its own purposes. These structured entities can be generally categorized as multi-seller commercial paper conduits, Bank funding vehicles and structured finance entities. Further details are provided in the off-balance sheet arrangements section.

Management is required to exercise judgement to determine whether a structured entity should be consolidated. This evaluation involves understanding the arrangements, determining whether decisions about the relevant activities are made by means of voting rights or other contractual arrangements and determining whether the Bank controls the structured entity.

The Bank controls an investee when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. The three elements of control are:

- power over the investee;
- exposure, or rights, to variable returns from involvement with the investee; and
- the ability to use power over the investee to affect the amount of the investor's returns.

This definition of control applies to circumstances:

- when voting rights or similar rights give the Bank power, including situations where the Bank holds less than a majority of voting rights or involving potential voting rights;
- when an investee is designed so that voting rights are not the dominant factor in deciding who controls the investee (i.e., relevant activities are directed by contractual arrangements);
- involving agency relationships; and
- when the Bank has control over specified assets of an investee.

The Bank does not control an investee when it is acting in an agent's capacity. The Bank assesses whether it is an agent by determining whether it is primarily engaged to act on behalf and for the benefit of another party or parties. Factors that the Bank considers in this assessment include the scope of its decision-making authority over the investee, the rights held by other parties, the remuneration to which it is entitled, and the Bank's exposure to variability of returns from other interests that it holds in the investee.

The analysis uses both qualitative and quantitative analytical techniques and involves the use of a number of assumptions about the business environment in which the structured entity operates and the amount and timing of future cash flows.

The Bank reassesses whether it controls an investee if facts and circumstances indicate that one or more of the three elements of control change.

Management is required to exercise judgement to determine if a change in control event has occurred.

During 2016, there were no change in control events that caused the Bank to change its control conclusion of its multi-seller conduits or other structured entities.

As described in Note 14 to the consolidated financial statements and in the discussion of off-balance sheet arrangements, the Bank does not control the two Canadian-based multi-seller conduits that it sponsors and they are not required to be consolidated on the Bank's Consolidated Statement of Financial Position. The Bank controls its U.S.-based multi-seller conduit and consolidates it on the Bank's Consolidated Statement of Financial Position.

Goodwill

For the purpose of impairment testing, goodwill acquired in a business combination is, on the acquisition date, allocated to each of the Bank's group of cash-generating units (CGU) that are expected to benefit from the particular acquisition.

Goodwill is not amortized but tested for impairment annually and when circumstances indicate that the carrying value may be impaired.

Goodwill is reviewed at each reporting date to determine whether there is any indication of impairment. Each CGU to which goodwill is allocated for impairment testing purposes reflects the lowest level at which goodwill is monitored for internal management purposes.

The Bank determines the carrying value of the CGU using a regulatory capital approach based on credit, market, and operational risks, and leverage, consistent with the Bank's capital attribution for business line performance measurement. An impairment loss is recognized if the carrying amount of a CGU exceeds its recoverable amount. The recoverable amount is the greater of fair value less costs of disposal and value in use. If either fair value less costs of disposal or value in use exceeds the carrying amount, there is no need to determine the other. The recoverable amount for the CGU has been determined using the fair value less costs of disposal method. In arriving at such value an appropriate valuation model is used which considers various factors including normalized net income, price earnings multiples and control premium. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded subsidiaries or other available fair value indicators. An impairment loss, in respect of goodwill, is not reversed.

Significant judgement is applied in determining the recoverable amounts of the CGU and assessing whether certain events or circumstances constitute objective evidence of impairment.

Goodwill was assessed for annual impairment based on the methodology as at July 31, 2016, and no impairment was determined to exist.

Indefinite life intangible assets

Intangible assets with indefinite useful lives are not amortized but tested for impairment annually and when circumstances indicate that the carrying value may be impaired. Intangible assets are reviewed at each reporting date to determine whether there is any indication of impairment.

The recoverable amount is the greater of fair value less costs of disposal and value in use. If either fair value less costs of disposal or value in use exceeds the carrying amount, there is no need to determine the other. Value in use method is used by the Bank to determine the recoverable amount of the intangible asset. In determining value in use, an appropriate valuation model is used which considers factors such as management-approved cash flow projections, discount rate and terminal growth rate. An impairment loss is recognized if the carrying amount of the intangible asset exceeds its recoverable amount. Impairment losses recognized in prior periods are reassessed at each reporting period for any indication that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the intangible asset's carrying amount does not exceed the carrying amount that would have been determined if no impairment loss had been recognized.

The recoverable amount is significantly impacted by the discount rate and the terminal value. Significant judgement is applied in determining the intangible asset's recoverable amount and assessing whether certain events or circumstances constitute objective evidence of impairment.

Intangible assets were assessed for annual impairment based on the methodology as at July 31, 2016, and no impairment was determined to exist.

Provisions

According to IFRS, the Bank should recognize a provision if, as a result of a past event, the Bank has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Probable in this context means more likely than not.

Off-balance sheet credit risks

The provisions for off-balance sheet credit risks relates primarily to off-balance sheet credit risks such as undrawn lending commitments, letters of credit and letters of guarantee. These are collectively assessed in a manner consistent with the collective allowance for performing on-balance sheet credit risks.

Restructuring

Certain of the Banks provisions relate to restructuring as part of the Bank's efforts to enhance the customer experience, drive digital transformation and improve productivity. Restructuring provisions are primarily related to employee severance and require managements best estimate of the amount required to settle the obligation. Uncertainty exists with respect to when the obligation will be settled and the amounts ultimately paid, as this will largely depend upon individual facts and circumstances. The restructuring provision is expected to be utilized in line with the approved plans; the actual utilization will be assessed quarterly and may lead to changes in the provision amount recorded.

Litigation and other

In the ordinary course of business, the Bank and its subsidiaries are routinely defendants in, or parties to a number of pending and threatened legal actions and regulatory proceedings, including actions brought on behalf of various classes of claimants. In view of the inherent difficulty of predicting the outcome of such matters, the Bank cannot state what the eventual outcome of such matters will be. However, based on current knowledge, management does not believe that liabilities, if any, arising from pending litigation or regulatory proceedings will have a material adverse effect on the Consolidated Statement of Financial Position or results of operations of the Bank.

Legal provisions are established when it becomes probable that the Bank will incur an expense related to a legal action and the amount can be reliably estimated. Such provisions are recorded at the best estimate of the amount required to settle any obligation related to these legal actions as at the balance sheet date, taking into account the risks and uncertainties surrounding the obligation. Management and internal and external experts are involved in estimating any amounts that may be required. The actual costs of resolving these claims may vary significantly from the amount of the legal provisions. The Bank's estimate involves significant judgement, given the varying stages of the proceedings, the fact that the Bank's liability, if any, has yet to be determined and the fact that the underlying matters will change from time to time. As such, there is a possibility that the ultimate resolution of those legal actions may be material to the Bank's consolidated results of operations for any particular reporting period.

Future Accounting Developments

The Bank actively monitors developments and changes in accounting standards from the IASB as well as regulatory requirements from the Canadian Securities Administrators and OSFI.

Effective November 1, 2017

IFRS 9 *Financial instruments*

On July 24, 2014, the IASB issued IFRS 9 *Financial Instruments* ("the Standard"), which will replace IAS 39. The Standard covers three broad topics: Classification and Measurement, Impairment and Hedging. In line with OSFI's advisory, all Canadian D-SIBs, including the Bank are required to early adopt IFRS 9 effective November 1, 2017.

In June 2016, OSFI issued "IFRS 9 Financial Instruments and Disclosures" which provides guidance on the application of IFRS 9 that is consistent with the BCBS guidance issued in 2015.

In light of IASB and FASB's new standards on expected credit loss ("ECL") accounting, the Basel Committee appointed the Task Force on Provisioning (TFP) to consider the implications of this change in accounting for regulatory capital. The TFP published in October 2016:

- A Consultative Document outlining the Committee's proposal in the interim along with possible transitional arrangements – this document proposes to retain in the interim the current regulatory treatment of provisions in each jurisdiction. There are three approaches that all propose to transition the impact over a number of years.
- The TFP also issued for discussion a document that assesses regulatory capital policy options for the longer-term.

Governance and project management

The adoption of IFRS 9 is a significant initiative for the Bank that commenced in 2014, involving substantial finance, risk management and technology resources. The project is managed through a governance structure that includes an Executive Steering Committee (EC) comprised of senior levels of management from risk management, finance, technology, and the business units. Periodic reporting on the progress against plan is provided to the Executive Steering committee and Bank senior management.

To date, as per the plan, the Bank's efforts have largely been focused on updating accounting policies to address key aspects of the Standard, developing risk models and associated methodologies, and conducting training sessions to impacted internal stakeholders. The Bank will complete the development and validation of the impairment models for the calculation of expected credit losses in 2017 to support a parallel run during 2017. The Bank will update accounting policy manuals, internal control documents, implement changes to business and financial reporting processes and systems, and enhance the Bank's existing governance process to support the high quality implementation of the Standard by November 1, 2017.

The following is a summary of some of the more significant items that are likely to be important in understanding the impact of the implementation of IFRS 9:

Classification and measurement, and hedging

The Standard introduces new requirements to determine the measurement basis of financial assets, involving the cash flow characteristics of assets and the business models under which they are managed. Accordingly, the basis of measurement for the Bank's financial assets may change. The Bank is currently completing detailed reviews of its business models and the cash flow characteristics of its portfolio holdings. This Standard affects the accounting for available-for-sale equity securities, requiring a designation, by portfolio, between recording both unrealized and realized gains either through (i) OCI or (ii) Income Statement. As a result, the amount of equity securities gains recorded through income is expected to be lower than current levels and levels recorded in recent years. For other financial instruments, based on assessments completed to date, the Bank does not expect the implementation will result in a significant change in the classification and measurement of the Bank's financial assets, between Amortized cost, Fair Value through OCI and Fair Value through Income Statement.

The Standard expands the scope of eligible hedged items and aims to better align the accounting with risk management activities. The Bank is permitted to adopt the hedge accounting requirements of IFRS 9 concurrently or to defer the adoption of the hedge accounting requirements of the standard to a future period. The Bank is currently considering deferring the adoption of these requirements, although it will implement the revised hedge accounting disclosures.

Impairment

The adoption of IFRS 9 will have a significant impact on the Bank's impairment methodology. The IFRS 9 expected credit loss (ECL) model is forward looking compared to the current incurred loss approach. Expected credit losses under IFRS 9 are the present value of all cash shortfalls related to default events either (i) over the following twelve months or (ii) over the expected life of a financial instrument depending on credit deterioration from inception. ECL should reflect an unbiased, probability-weighted outcome as opposed to the single best estimate allowed under the current approach. The probability-weighted outcome considers multiple scenarios based on reasonable and supportable forecasts.

The Bank's approach leverages the existing regulatory capital models and processes to the extent possible. New models and systems are being developed to meet the requirements of IFRS 9. While most of the Bank's loan portfolios use the existing Advanced Internal Ratings Based (AIRB) credit models for Basel purposes and can be leveraged for developing IFRS 9 models, for other Standardized portfolios the Bank will develop new methodologies and models taking into account the relative size, quality and complexity of the portfolios.

IFRS 9 considers the calculation of ECL by multiplying the Probability of default (PD), Loss Given Default (LGD) and Exposure at Default (EAD).

IFRS 9 Impairment model uses a three stage approach based on the extent of credit deterioration since origination:

Stage 1 – 12-month ECL applies to all financial assets that have not experienced a significant increase in credit risk (SIR) since origination and are not credit impaired. The ECL will be computed using a 12-month PD that represents the probability of default occurring over the next 12 months or less in line with the maturity profile of the asset. This is different than the current approach which estimates a collective allowance to recognize losses that have been incurred but not reported on performing loans.

Stage 2 – When a financial asset experiences a SIR since origination but is not credit impaired, it is considered to be in Stage 2. This requires the computation of ECL based on lifetime PD that represents the probability of default occurring over the remaining lifetime of the financial asset. Provisions are higher in this stage because of an increase in risk and the impact of a longer time horizon being considered compared to 12 months in Stage 1.

Stage 3 – Financial assets that have an objective evidence of impairment will be included in this stage. Similar to stage 2, the allowance for credit losses will continue to capture the lifetime expected credit losses for such loans. As the Bank's definition of default is not likely to change materially and will align with the regulatory definition, the treatment of loans in stage 3 remains substantially the same as the current treatment of impaired loans under IAS 39.

Some of the key concepts in IFRS 9 that have the most significant impact and require a high level of judgement are:

Assessment of Significant Increase in Credit Risk

The assessment of a significant increase in credit risk is done on a relative basis. To assess whether the credit risk on a financial asset has increased significantly since origination, the Bank will compare the risk of default at the reporting date to the risk of default at origination, using key risk indicators that are used in the Bank's existing risk management processes. At each reporting date, the assessment of a change in credit risk will be individually assessed for those considered individually significant and at the segment level for retail exposures. This assessment is symmetrical in nature, allowing credit risk of financial assets to move back to Stage 1 if the increase in credit risk since origination has reduced and is no longer deemed to be significant.

Macroeconomic Factors, Forward Looking Information (FLI) and Multiple Scenarios

IFRS 9 requires an unbiased and probability weighted estimate of credit losses by evaluating a range of possible outcomes that incorporates forecasts of future economic conditions.

Macroeconomic factors and FLI are required to be incorporated into the measurement of ECL as well as the determination of whether there has been a significant increase in credit risk since origination. Measurement of ECLs at each reporting period should reflect reasonable and supportable information at the reporting date about past events, current conditions and forecasts of future economic conditions. The assessment of whether there has been a SIR is to be performed at each reporting date.

The Bank will use multiple scenarios that will be probability weighted to determine ECL, leveraging its existing Enterprise Wide Stress Testing modeling framework.

Expected Life

When measuring ECL, the Bank must consider the maximum contractual period over which the Bank is exposed to credit risk. All contractual terms should be considered when determining the expected life, including prepayment options and extension and rollover options.

For certain revolving credit facilities, such as credit cards which qualify for a narrow exception under IFRS 9, the expected life is extended beyond the contractual period and is estimated based on the period over which the Bank is exposed to credit risk and where the credit losses would not be mitigated by management actions.

Definition of Default and Write-off

The Bank's definition of default described in Note 3 is not expected to be materially different and will align with the regulatory definition of default upon implementation of IFRS 9. The Bank does not expect to rebut the presumption in IFRS 9 that loans which are 90 days past due are in default for retail loans. The policy on the write-off of loans is expected to remain unchanged.

The main adjustments to the regulatory capital risk components are summarized in the following chart:

	Regulatory capital	**IFRS 9**
PD	Through the cycle (represents long-run average PD throughout a full economic cycle) 12 month PD is used.	Point in time (based on current conditions, adjusted to take into account estimates of future conditions that will impact PD). 12 month PD for Stage 1 ECL and Lifetime PD for Stage 2 and Stage 3 ECL.
LGD	Downturn LGD based on losses that would be expected in an economic downturn and subject to certain regulatory floors. Both direct and indirect collection costs are considered.	Expected LGD based on historical charge-off events and recovery payments, current information about attributes specific to borrower, and direct costs. Forward-looking macroeconomic variables and expected cash flows from credit enhancements will be incorporated as appropriate and excludes floors and undue conservatism.
EAD	Based on the drawn balance plus expected utilization of any undrawn portion prior to default, and cannot be lower than the drawn balance.	EAD represents the expected balance at default over the lifetime and is conditional on forward looking expectations.
Discounting factors	Not applicable	Expected credit losses are discounted from default date to the reporting date

Transition and impact

The new requirements will be applied retrospectively by adjusting the opening balance sheet for the transition impact at November 1, 2017 with no requirement to restate comparative periods. The impact of IFRS 9 on the Bank's consolidated financial results at the time of adoption is dependent upon prevailing market factors and economic conditions at that time, as well as future forecasts of macro-economic factors and forward looking information. The Bank will disclose the impact on transition to the balance sheet and regulatory capital, when reliable estimates are available and this will be no later than in the annual report of 2017.

At transition, we expect the existing Collective Allowances against performing loans to contribute a significant component of allowance levels required for Stage 1 and Stage 2 assets under IFRS 9 at transition. The existing Specific Allowances and Collective Allowances against impaired loans should not change significantly for Stage 3 assets under IFRS 9 at transition. Under the existing accounting practice by the Bank, the change to Collective Allowance against performing loans is recorded in the Other business segment on a periodic basis as risk changes and/or if volumes change over a period of time. Under IFRS 9, the change in allowances on performing loans (Stage 1 and Stage 2) will now be recorded in the Bank's three main business lines on a regular quarterly basis.

For a description of the changes in requirements please refer to Note 4 of the 2016 consolidated financial statements.

Effective November 1, 2018

Revenue from contracts with customers

On May 28, 2014, the IASB issued IFRS 15 *Revenue from Contracts with Customers*, which provides a single principle based framework to be applied to all contracts with customers. IFRS 15 replaces the previous revenue standard IAS 18 *Revenue*, and the related Interpretations on revenue recognition. The standard scopes out contracts that are considered to be lease contracts, insurance contracts and financial instruments, and as such will impact the businesses that earn fee and commission revenues. The new standard is a control based model as compared to the existing revenue standard which is primarily focused on risks and rewards. Under the new standard revenue is recognized when a customer obtains control of a good or service. Transfer of control occurs when the customer has the ability to direct the use of and obtain the benefits of the good or service. The standard is effective for the Bank on November 1, 2018, with early adoption permitted, using either a full retrospective approach or a modified retrospective approach. A majority of the Bank's revenue generating instruments meet the definition of financial instruments and remain out of scope. The areas of focus for the Bank's assessment will be fees and commission revenues from wealth management and other banking services.

On April 12, 2016, the IASB issued amendments to the revenue standard, IFRS 15 *Revenue From Contracts with Customers*. The amendments provide additional clarification on the identification of a performance obligation in a contract, determining the principal and agent in an agreement, and determining whether the licensing revenues should be recognized at a point in time or over a specific period. The amendments also provide additional practical expedients upon transition to IFRS 15. The amendments are effective for the Bank on November 1, 2018, consistent with the effective date of the standard.

Effective November 1, 2019

Leases

On January 13, 2016, the IASB issued IFRS 16 *Leases*, which requires a lessee to recognize an asset for the right to use the leased item and a liability for the present value of its future lease payments. IFRS 16 will result in leases being recorded on the Bank's balance sheet, including those currently classified as operating leases except for short-term leases and leases with low value of the underlying asset. IFRS 16 substantially carries forward the lessor accounting requirements in IAS 17.

IFRS 16 is effective for the Bank on November 1, 2019, with early adoption permitted from the date the Bank applies IFRS 15 *Revenue from Contracts with Customers* on or before the date of initial application of IFRS 16. On transition there are practical expedients available whereby the Bank will not need to reassess whether a contract is, or contains a lease, or reassess the accounting of sale leaseback transactions recognized prior to the date of initial application.

A lessee will apply IFRS 16 to its leases either retrospectively to each prior reporting period presented; or retrospectively with the cumulative effect of initially applying IFRS 16 being recognized at the date of initial application.

Regulatory Developments

The Bank continues to respond to global regulatory developments, such as capital and liquidity requirements under the Basel Committee on Banking Supervision global standards (Basel III), over-the-counter derivatives reform, consumer protection measures and specific financial reforms, such as the *Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank Act")* . The Bank continues to monitor these and other developments and is working to ensure business impacts, if any, are minimized.

Bank recapitalization regime

On June 22, 2016, the Federal Government passed legislation to implement a "bail-in" regime, in accordance with regulations to the Canada Deposit Insurance Corporation Act that have not yet been prescribed (the "CDIC Act Regulations"), for the largest six Canadian banks, including The Bank of Nova Scotia, designated as domestic systemically important banks (D-SIBs). The legislation aims to enhance the resolution toolkit for D-SIBs, including the framework for the conversion of certain eligible shares and liabilities of the D-SIB into common equity of the bank (or any of its affiliates) in the event the D-SIB becomes non-viable. This bail-in regime is aimed at ensuring that in the unlikely event of a failure of a D-SIB, it is the D-SIB's shareholders and creditors that are responsible for the institution's risks and not the taxpayers. The types of eligible shares and liabilities subject to the statutory conversion power will be set out in the CDIC Act Regulations, and while these regulations have not yet been prescribed, in its previous consultation paper, the Federal Government had proposed that certain unsecured debt would be subject to the conversion power and customer deposits would be excluded. D-SIBs would also be subject to minimum loss absorbency requirements to ensure they can withstand significant losses and emerge from a conversion well capitalized, as well as comprehensive disclosure and reporting requirements. The regime would apply only to eligible shares and liabilities issued after the implementation of the proposed regime with no retroactive application to existing debt. The proposed "bail-in" regime has not yet been finalized, much of the detail will be set out in the CDIC Act Regulations, and timing for implementation has yet to be determined, but these proposed changes could adversely impact the Bank's cost of funding.

Synthetic Equity Arrangement Rules

Proposed tax rules for synthetic equity arrangements, which impact the tax deductibility of Canadian dividends in certain circumstances, have been enacted. These rules are not expected to materially affect the Bank's overall financial results.

Dodd-Frank Act

The Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") was enacted in the U.S. in July 2010. The Dodd-Frank Act contains many broad reforms impacting the financial services industry. These reforms impact every financial institution in the U.S. and many financial institutions that operate outside the U.S. Certain portions of the Dodd-Frank Act became effective immediately, and many are now effective following transition periods or final rulemakings, while the effectiveness of some other portions is still subject to final rulemakings by U.S. government agencies, or the expiration of transition periods.

The Bank is subject to a number of specific requirements, including, among other things, mandatory clearing, trade reporting and registration of OTC derivative trading activities, heightened capital liquidity and prudential standards, such as the enhanced prudential standards and early remediation requirements under Sections 165 and 166 of the Dodd-Frank Act, and restrictions on proprietary trading, private equity and hedge fund activities, commonly known as the Volcker Rule. The Bank continues to devote resources necessary to ensure that it implements the requirements in compliance with all applicable regulations under the Dodd-Frank Act. The Bank continually monitors developments to prepare for rulemakings that have the potential to impact its operations in the U.S. and elsewhere.

More recently, on April 14, 2016, the SEC adopted final rules requiring securities-based swap dealers (SBSDs) to establish a supervisory regime for their securities-based swaps activities, including designating a Chief Compliance Officer. The final rule also requires SBSDs to disclose risks, conflicts, and other material information about a swap to a counterparty, and ensure any recommendations made to a counterparty are suitable. Most recently, on August 12, 2016, the SEC adopted amendments and guidance related to rules regarding the regulatory reporting and public dissemination of security-based swap transactions, known as Regulation SBSR.

On May 31, 2016, the U.S. Commodity Futures Trading Commission (CFTC) issued a final rule establishing margin requirements for uncleared cross-border swaps (to the extent not already covered by its previously adopted uncleared swaps rules), and is expected to issue final rules on algorithmic trading by the end of 2016. The CFTC is also considering the adoption of final rules that would impose limits on the size of positions that may be entered into in certain derivatives contracts.

The Bank does not expect costs and restrictions associated with the new regulations to have a material impact on our financial results.

Over-the-counter derivatives reform

In March 2015, the Basel Committee on Banking Supervision and the International Organization of Securities Commissions published a framework establishing minimum standards for margin requirements for non-centrally cleared derivatives for financial firms and systemically important non-financial entities ("BCBS Framework"). On February 29, 2016, the Office of the Superintendent of Financial Institutions ("OSFI") issued the final version of Guideline E-22 to implement the BCBS Framework for federally regulated financial institutions. The Guideline is effective September 1, 2016 with compliance to be phased in over the next four years in accordance with the BCBS Framework. The regulatory dates for the Bank are March 1, 2017 for variation margin and September 1, 2019 for initial margin. Margin requirements are designed to be coordinated with the rules established in the U.S., the European Union and other relevant jurisdictions with respect to cross-border activities. The Bank expects to meet all obligations imposed by the Guideline as the relevant requirements come into effect.

The Foreign Account Tax Compliance Act (FATCA) and Common Reporting Standard (CRS)

FATCA is U.S. legislation designed to prevent U.S. taxpayers from using accounts held outside of the U.S. to evade taxes. FATCA and in some countries, related local regulations now require financial institutions to report annually on specified accounts held outside of the U.S. by U.S. taxpayers. This reporting is made available to the U.S. Internal Revenue Service either directly or through local regulatory agencies. Under an initiative known as Global FATCA, more than 100 OECD member countries have committed to automatic exchange of information relating to accounts held by tax residents of signatory countries, using a CRS. Implementation of the CRS commenced in January 2016 in countries that signed on as "early adopters." Draft legislation to implement the CRS in Canada was released by the Department of Finance on October 14, 2016. More than 40 countries where the Bank has a presence have now signed on to the CRS, and 17 of these signed on as early adopters. Under the guidance of an enterprise program office, dedicated project teams in each of the Bank's business lines are working to meet all FATCA and CRS related obligations worldwide while minimizing negative impact on the client experience.

The Bank will meet all obligations imposed under FATCA, CRS, and other tax information exchange regimes, in accordance with local law.

United Kingdom's Membership in the European Union (Brexit)

On June 23, 2016, the United Kingdom (UK) held a referendum to decide on its membership in the European Union. The resulting vote was to leave the European Union. There are a number of uncertainties in connection with the future of the UK and its relationship with the European Union, including the terms of the agreement it reaches in relation to its withdrawal from the European Union. The negotiation of the UK's exit terms is likely to take a number of years. Until the terms and timing of the UK's exit from the European Union are clearer, it is not possible to determine the longer term impact that the referendum, the UK's departure from the European Union and/or any related matters may have on the Bank or its business. UK's exit from the European Union may result in significant changes in law, which may include changes in statutory, tax and regulatory regimes in the UK and in Europe. Such changes may impact the Bank's business, financial condition and results of operations and could adversely impact the Bank's cost of funding in Europe. The Bank continually monitors developments to prepare for changes that have the potential to impact its operations in the UK and elsewhere in Europe.

Related Party Transactions

Compensation of key management personnel

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the Bank, directly or indirectly, and comprise the directors of the Bank, the President and Chief Executive Officer, certain direct reports of the President and Chief Executive Officer and Group Heads.

T59 Compensation of the Bank key management personnel

For the year ended October 31 ($ millions)	**2016**	2015
Salaries and cash incentives[1]	**$ 20**	$ 13
Equity-based payment[2]	**24**	20
Pension and other benefits[1]	**3**	3
Total	**$ 47**	$ 36

(1)Expensed during the year.
(2)Awarded during the year.

Directors can use some or all of their director fees earned to buy common shares of the Bank at market rates through the Directors' Share Purchase Plan. Non-officer directors may elect to receive all or a portion of their fees in the form of deferred stock units which vest immediately. Refer to Note 25 – Share-based payments for further details of these plans.

T60 Loans and deposits of key management personnel

Loans are currently granted to key management personnel at market terms and conditions.

As at October 31 ($ millions)	**2016**	2015
Loans	**$ 6**	$ 5
Deposits	**$ 11**	$ 5

The Bank's committed credit exposure to companies controlled by directors totaled $99.5 million as at October 31, 2016 (October 31, 2015 – $182.9 million) while actual utilized accounts were $3.9 million (October 31, 2015 – $6.7 million).

Transactions with associates and joint ventures

In the ordinary course of business, the Bank provides normal banking services and enters into transactions with its associated and other related corporations on terms similar to those offered to non-related parties. If these transactions are eliminated on consolidation, they are not disclosed as related party transactions. Transactions between the Bank and its associated companies and joint ventures also qualify as related party transactions and are as follows:

T62 Transactions with associates and joint ventures

As at and for the year ended October 31 ($ millions)	**2016**	2015
Net income / (loss)	**$ (45)**	$ (27)
Loans	**788**	747
Deposits	**338**	187
Guarantees and commitments	**$ 99**	$ 84

Scotiabank principal pension plan

The Bank manages assets of $1.9 billion (October 31, 2015 – $2.0 billion) which is a portion of the Scotiabank principal pension plan assets and earned $4 million (October 31, 2015 – $4 million) in fees.

Oversight and governance

The oversight responsibilities of the Audit and Conduct Review Committee (ACRC) with respect to related party transactions include reviewing policies and practices for identifying transactions with related parties that may materially affect the Bank, and reviewing the procedures for ensuring compliance with the Bank Act for related party transactions. The Bank Act requirements encompass a broader definition of related party transactions than is set out in IFRS. The Bank has various procedures in place to ensure that related party information is identified and reported to the ACRC on a semi-annual basis. The ACRC is provided with detailed reports that reflect the Bank's compliance with its established procedures.

The Bank's Internal Audit department carries out audit procedures as necessary to provide the ACRC with reasonable assurance that the Bank's policies and procedures to identify, authorize and report related party transactions are appropriately designed and operating effectively.

SUPPLEMENTARY DATA

Geographic information

T63 Net income by geographic segment

For the fiscal years ($ millions)	2016								2015								2014							
	Canada	**U.S.**	**Mexico**	**Peru**	**Chile**	**Colombia**	**Other International**	**Total**	Canada	U.S.	Mexico	Peru	Chile	Colombia	Other International	Total	Canada	U.S.	Mexico	Peru	Chile	Colombia	Other International	Total
Net interest income	**$ 7,022**	**$479**	**$ 1,224**	**$1,231**	**$763**	**$ 674**	**$ 2,950**	**$14,343**	$ 6,458	$472	$1,246	$1,077	$554	$ 677	$ 2,631	$13,115	$ 6,219	$440	$1,180	$935	$407	$ 726	$ 2,443	$12,350
Non-interest income	**6,893**	**871**	**554**	**600**	**325**	**419**	**2,409**	**12,071**	6,272	882	561	601	231	372	2,163	11,082	7,071	810	599	534	226	391	2,049	11,680
Provision for credit losses	**876**	**112**	**225**	**315**	**113**	**320**	**401**	**2,362**	728	6	260	266	108	246	268	1,882	662	6	240	267	74	145	309	1,703
Non-interest expenses	**7,339**	**633**	**1,121**	**740**	**605**	**550**	**3,036**	**14,024**	6,936	507	1,160	744	431	541	2,745	13,064	6,986	513	1,154	645	348	556	2,495	12,697
Income tax expense	**1,235**	**155**	**69**	**201**	**45**	**89**	**497**	**2,291**	1,038	267	27	195	24	84	401	2,036	1,156	237	35	175	16	141	340	2,100
Total	**$ 4,465**	**$450**	**$ 363**	**$ 575**	**$325**	**$ 134**	**$ 1,425**	**$ 7,737**	$ 4,028	$574	$ 360	$ 473	$222	$ 178	$ 1,380	$ 7,215	$ 4,486	$494	$ 350	$382	$195	$ 275	$ 1,348	$ 7,530
Corporate adjustments								**(369)**								(2)								(232)
Net Income								**$ 7,368**								$ 7,213								$ 7,298

T64 Loans and acceptances by geography [1]

As at October 31 ($ billions)	2016	2015	2014	Percentage mix 2016	Percentage mix 2014
Canada					
Atlantic provinces	**$ 26.7**	$ 25.6	$ 25.5	**5.4%**	5.8%
Quebec	**29.7**	28.5	27.7	**6.0**	6.3
Ontario	**156.7**	150.7	145.1	**31.5**	33.1
Manitoba and Saskatchewan	**17.0**	16.5	15.1	**3.4**	3.4
Alberta	**50.8**	49.6	46.3	**10.2**	10.6
British Columbia	**47.6**	44.5	43.0	**9.6**	9.8
	328.5	315.4	302.7	**66.1**	69.0
U.S.	**38.5**	30.2	23.5	**7.7**	5.4
Mexico	**20.8**	18.6	16.0	**4.2**	3.7
Peru	**17.8**	17.0	13.3	**3.6**	3.0
Chile	**19.4**	16.4	13.9	**3.9**	3.2
Colombia	**9.3**	8.7	9.1	**1.9**	2.1
Other International					
Latin America	**6.4**	6.7	5.3	**1.3%**	1.2%
Europe	**8.4**	9.3	6.3	**1.7**	1.5
Caribbean and Central America	**32.6**	31.8	27.7	**6.6**	6.3
Asia and Other	**15.0**	19.0	20.0	**3.0**	4.6
	62.4	66.8	59.3	**12.6**	13.6
	$ 496.7	$ 473.1	$ 437.8	**100.0%**	100.0%
Total allowance for loan losses [2]	**(4.6)**	(4.2)	(3.6)		
Total loans and acceptances net of allowance for loan losses	**$ 492.1**	$ 468.9	$ 434.2		

(1) Prior periods have been restated to reflect the current period presentation.
(2) Total allowance includes a collective allowance on performing loans of $1,444 million in 2016 and $1,404 million in 2015. The increase reflects an overall increase in the collective allowance of $50 million and a $10 million reallocation to reserves against unfunded commitments and other off-balance-sheet items.

T65 Gross impaired loans by geographic segment

As at October 31 ($ millions)	2016[1]	2015[1]	2014[1]
Canada	**$ 1,258**	$ 1,189	$ 1,116
U.S.	**210**	11	11
Mexico	**301**	271	314
Peru	**764**	603	423
Chile	**499**	405	381
Colombia	**381**	356	332
Other International	**1,981**	1,823	1,623
Total	**$ 5,394**	$ 4,658	$ 4,200

(1) Excludes loans acquired under the Federal Deposit Insurance Corporation (FDIC) guarantee related to the acquisition of R-G Premier Bank of Puerto Rico.

T66 Provision against impaired loans by geographic segment

For the fiscal years ($ millions)	2016	2015	2014
Canada	**$ 876**	$ 727	$ 662
U.S.	**112**	6	6
Mexico	**224**	260	240
Peru	**317**	265	267
Chile	**112**	108	74
Colombia	**320**	247	146
Other International	**401**	269	308
Total	**$ 2,362**	$ 1,882	$ 1,703

T67 Cross-border exposure to select countries[1]

As at October 31 ($ millions)	Loans	Trade	Interbank deposits	Government and other securities	Investment in subsidiaries and affiliates	Other	**2016 Total**	2015 Total
Asia								
China	$ 2,893	$ 938	$ 414	$ 206	$ 685	$ 69	**$ 5,205**	$ 8,248
India	1,641	231	–	–	–	21	**1,893**	3,144
Thailand	143	4	476	–	2,612	14	**3,249**	3,074
South Korea	1,213	70	–	–	–	281	**1,564**	2,626
Hong Kong	1,468	178	38	–	–	52	**1,736**	1,827
Malaysia	793	–	1	–	311	3	**1,108**	1,423
Japan	324	11	114	1,273	–	34	**1,756**	730
Taiwan	112	16	72	37	–	32	**269**	1,173
Others[2]	1,101	247	51	–	–	5	**1,404**	1,460
Total	$ 9,688	$ 1,695	$ 1,166	$ 1,516	$ 3,608	$ 511	**$ 18,184**	$ 23,705
Latin America								
Chile	$ 2,479	$ 276	$ –	$ 200	$ 3,312	$ 47	**$ 6,314**	$ 6,387
Mexico	2,772	367	–	144	3,141	40	**6,464**	6,374
Brazil	3,132	1,024	–	99	225	718	**5,198**	6,050
Peru	2,310	139	–	205	4,046	60	**6,760**	6,112
Colombia	1,122	216	–	6	1,592	4	**2,940**	2,476
Others[3]	80	7	–	–	545	–	**632**	667
Total	$ 11,895	$ 2,029	$ –	$ 654	$ 12,861	$ 869	**$ 28,308**	$ 28,066
Caribbean and Central America								
Panama	$ 4,025	$ 126	$ 45	$ –	$ 297	$ 2	**$ 4,495**	$ 3,646
Costa Rica	1,543	131	–	–	1,090	3	**2,767**	2,213
El Salvador	788	26	–	–	646	–	**1,460**	1,209
Dominican Republic	961	69	81	–	–	2	**1,113**	892
Jamaica	51	2	–	–	690	–	**743**	747
Others[4]	1,638	72	1	9	463	–	**2,183**	2,267
Total	$ 9,006	$ 426	$ 127	$ 9	$ 3,186	$ 7	**$ 12,761**	$ 10,974
As at October 31, 2016	**$ 30,589**	**$ 4,150**	**$ 1,293**	**$ 2,179**	**$ 19,655**	**$ 1,387**	**$ 59,253**	
As at October 31, 2015	$ 33,509	$ 7,602	$ 1,292	$ 1,723	$ 17,304	$ 1,316	$ 62,745	

(1) Cross-border exposure represents a claim, denominated in a currency other than the local one, against a borrower in a foreign country on the basis of ultimate risk.
(2) Includes Indonesia, Macau, Singapore, Vietnam and Turkey.
(3) Includes Venezuela and Uruguay
(4) Includes other English and Spanish Caribbean countries, such as Bahamas, Barbados, British Virgin Islands, Trinidad & Tobago, Turks & Caicos.

Credit Risk

T68 Loans and acceptances by type of borrower

As at October 31 ($ billions)	2016 Balance	2016 % of total	2015[4]	2014[4]
Residential mortgages	$ 222.9	44.9%	$ 217.5	$ 212.6
Personal loans and credit cards	99.5	20.0	91.5	84.2
Personal	$ 322.4	64.9%	$ 309.0	$ 296.8
Financial services				
Non-bank	$ 16.1	3.2%	$ 14.3	$ 13.4
Bank[1]	3.7	0.7	6.7	8.9
Wholesale and retail	22.1	4.5	21.5	16.6
Real estate and construction	22.6	4.5	19.5	15.5
Energy	15.6	3.1	16.5	12.8
Transportation	9.0	1.8	9.1	8.1
Automotive	11.5	2.3	10.4	8.1
Agriculture	8.8	1.8	8.1	7.1
Hospitality and leisure	3.5	0.7	3.6	3.6
Mining	5.4	1.1	4.5	3.2
Metals refinery and processing	2.5	0.5	2.8	2.8
Utilities	7.8	1.6	5.8	5.9
Health care	5.2	1.1	5.0	3.5
Technology and media	11.8	2.4	9.1	5.4
Chemical	1.6	0.3	2.0	1.4
Food and beverage	4.9	1.0	4.9	3.9
Forest products	2.5	0.5	1.7	1.3
Other[2]	14.7	3.0	13.6	15.3
Sovereign[3]	5.0	1.0	5.0	4.2
Business and government	$ 174.3	35.1%	$ 164.1	$ 141.0
	$ 496.7	100.0%	$ 473.1	$ 437.8
Total allowance for loan losses	(4.6)		(4.2)	(3.6)
Total loans and acceptances net of allowance for loan losses	$ 492.1		$ 468.9	$ 434.2

(1) Deposit taking institutions and securities firms.
(2) Other related to $3.2 in financing products, $2.4 in services and $2.0 in wealth management (2015 – $2.3, $1.5, and $1.5 respectively).
(3) Includes central banks, regional and local governments, and supra-national agencies.
(4) 2015 and 2014 numbers have been restated to reflect the separate Mining and Metals Refinery and Processing.

T69 Off-balance sheet credit instruments

As at October 31 ($ billions)	2016	2015	2014
Commitments to extend credit[1]	$ 174.2	$ 166.4	$ 137.3
Standby letters of credit and letters of guarantee	34.5	30.9	26.0
Securities lending, securities purchase commitments and other	40.0	42.8	38.9
Total	$ 248.7	$ 240.1	$ 202.2

(1) Excludes commitments which are unconditionally cancellable at the Bank's discretion at any time.

T70 Changes in net impaired loans[1]

For the fiscal years ($ millions)	2016	2015	2014
Gross impaired loans			
Balance at beginning of year	**$ 4,658**	$ 4,200	$ 3,701
Net additions			
New additions	**4,684**	3,763	3,767
Declassifications	**(24)**	(13)	(32)
Payments	**(1,344)**	(1,254)	(1,295)
Sales	**(95)**	(11)	(141)
	3,221	2,485	2,299
Write-offs			
Residential mortgages	**(201)**	(109)	(69)
Personal loans	**(1,279)**	(1,310)	(1,027)
Credit cards	**(671)**	(490)	(463)
Business and government	**(428)**	(319)	(338)
	(2,579)	(2,228)	(1,897)
Foreign exchange and other	**94**	201	97
Balance at end of year	**$ 5,394**	$ 4,658	$ 4,200
Allowance for credit losses on impaired loans			
Balance at beginning of year	**$ 2,573**	$ 2,198	$ 1,893
Provision for credit losses	**2,362**	1,916	1,668
Write-offs	**(2,579)**	(2,228)	(1,897)
Recoveries			
Residential mortgages	**20**	35	68
Personal loans	**305**	260	224
Credit cards	**217**	82	107
Business and government	**40**	52	93
	582	429	492
Foreign exchange and other	**10**	258	42
Balance at end of year	**$ 2,948**	$ 2,573	$ 2,198
Net impaired loans			
Balance at beginning of year	**$ 2,085**	$ 2,002	$ 1,808
Net change in gross impaired loans	**736**	458	499
Net change in allowance for credit losses on impaired loans	**(375)**	(375)	(305)
Balance at end of year	**$ 2,446**	$ 2,085	$ 2,002

(1) Excludes loans acquired under the Federal Deposit Insurance Corporation (FDIC) guarantee related to the acquisition of R-G Premier Bank of Puerto Rico.

T71 Provision for credit losses

For the fiscal years ($ millions)	2016	2015	2014
Gross provisions	**$ 3,072**	$ 2,435	$ 2,312
Reversals	**(110)**	(68)	(99)
Recoveries	**(600)**	(485)	(510)
Net provisions for credit losses on impaired loans	**2,362**	1,882	1,703
Collective provision (reversals) on performing loans	**50**	60	–
Total net provisions for credit losses	**$ 2,412**	$ 1,942	$ 1,703

T72 Provision for credit losses against impaired loans by type of borrower

For the fiscal years ($ millions)	2016	2015	2014
Residential mortgages	$ 100	$ 118	$ –
Personal loans and credit cards	1,677	1,526	1,414
Personal	$ 1,777	$ 1,644	$ 1,414
Financial services			
Non-bank	(1)	(1)	5
Bank	2	(1)	–
Wholesale and retail	61	62	58
Real estate and construction	34	30	61
Energy	290	48	3
Transportation	45	23	12
Automotive	28	9	1
Agriculture	14	12	7
Hospitality and leisure	25	1	44
Mining	6	7	13
Metals refinery and processing	11	4	(1)
Utilities	20	–	24
Health care	9	9	15
Technology and media	14	4	32
Chemical	(7)	4	–
Food and beverage	6	16	9
Forest products	1	4	–
Other	23	6	6
Sovereign	4	1	–
Business and government	$ 585	$ 238	$ 289
Total provisions against impaired loans	$ 2,362	$ 1,882	$ 1,703

T73 Impaired loans by type of borrower

	2016[1]			2015[1]		
As at October 31 ($ millions)	Gross	Allowance for credit losses	Net	Gross	Allowance for credit losses	Net
Residential mortgages	$ 1,608	$ 458	$ 1,150	$ 1,668	$ 529	$ 1,139
Personal loans and credit cards	1,622	1,596	26	1,332	1,327	5
Personal	$ 3,230	$ 2,054	$ 1,176	$ 3,000	$ 1,856	$ 1,144
Financial services						
Non-bank	23	8	15	21	9	12
Bank	2	2	–	–	–	–
Wholesale and retail	290	193	97	260	174	86
Real estate and construction	234	105	129	266	120	146
Energy	324	89	235	165	61	104
Transportation	214	84	130	152	43	109
Automotive	70	38	32	35	12	23
Agriculture	75	37	38	95	39	56
Hospitality and leisure	83	27	56	60	8	52
Mining	14	6	8	7	4	3
Metals refinery and processing	159	25	134	20	13	7
Utilities	252	53	199	274	30	244
Health care	49	29	20	46	30	16
Technology and media	32	28	4	18	14	4
Chemical	15	6	9	23	23	–
Food and beverage	110	44	66	64	37	27
Forest products	23	6	17	19	5	14
Other	150	108	42	123	91	32
Sovereign	45	6	39	10	4	6
Business and government	$ 2,164	$ 894	$ 1,270	$ 1,658	$ 717	$ 941
Total	$ 5,394	$ 2,948	$ 2,446	$ 4,658	$ 2,573	$ 2,085

(1) Excludes loans acquired under the Federal Deposit Insurance Corporation (FDIC) guarantee related to the acquisition of R-G Premier Bank of Puerto Rico.

T74 Total credit risk exposures by geography [1][2]

	2016					2015
	Non-Retail					
As at October 31 ($ millions)	Drawn	Undrawn	Other exposures[3]	Retail	Total	Total
Canada	$ 89,894	$ 32,953	$ 42,208	$ 303,868	$ 468,923	$ 435,953
U.S.	79,932	27,951	35,925	–	143,808	153,285
Mexico	15,331	1,183	1,725	8,634	26,873	23,808
Peru	16,693	1,413	2,984	7,238	28,328	27,007
Chile	10,384	782	1,374	10,970	23,510	19,777
Colombia	4,891	186	518	5,348	10,943	9,899
Other International						
Europe	23,164	5,936	12,425	–	41,525	40,048
Caribbean and Central America	19,048	1,704	1,564	18,852	41,168	39,831
Latin America (other)	7,258	522	495	633	8,908	8,962
Other	23,971	4,115	2,843	–	30,929	36,052
Total	$ 290,566	$ 76,745	$ 102,061	$ 355,543	$ 824,915	$ 794,622
As at October 31, 2015	$ 280,942	$ 72,434	$ 105,581	$ 335,665	$ 794,622	

(1) Geographic segmentation is based upon the location of the ultimate risk of the credit exposure. Includes all credit risk portfolios and excludes available-for-sale equities and other assets.
(2) Amounts represent exposure at default.
(3) Includes off-balance sheet lending instruments such as letters of credit, letters of guarantee, derivatives, securitization and repo-style transactions after collateral.

T75 AIRB credit risk exposures by maturity [1][2]

	2016				2015
Residual maturity as at October 31 ($ millions)	Drawn	Undrawn	Other exposures[3]	Total	Total
Non-retail					
Less than 1 year	$ 109,752	$ 22,766	$ 62,851	$ 195,369	$ 213,600
One to 5 years	112,975	46,971	28,805	188,751	163,961
Over 5 years	10,351	1,239	7,290	18,880	17,937
Total non-retail	$ 233,078	$ 70,976	$ 98,946	$ 403,000	$ 395,498
Retail					
Less than 1 year	$ 28,829	$ 15,386	$ –	$ 44,215	$ 45,368
One to 5 years	167,999	–	–	167,999	160,660
Over 5 years	20,243	–	–	20,243	20,682
Revolving credits[4]	37,177	21,108	–	58,285	54,555
Total retail	$ 254,248	$ 36,494	$ –	$ 290,742	$ 281,265
Total	$ 487,326	$ 107,470	$ 98,946	$ 693,742	$ 676,763
As at October 31, 2015	$ 475,832	$ 98,446	$ 102,485	$ 676,763	

(1) Remaining term to maturity of the credit exposure. Includes all credit risk portfolios and excludes available-for-sale equities and other assets.
(2) Exposure at default, before credit risk mitigation.
(3) Off-balance sheet lending instruments, such as letters of credit, letters of guarantee, securitization, derivatives and repo-style transactions after collateral.
(4) Credit cards and lines of credit with unspecified maturity.

T76 Total credit risk exposures and risk-weighted assets

As at October 31 ($ millions)	2016						2015	
	AIRB		Standardized[1]		Total		Total	
	Exposure at Default[2]	CET1 risk-weighted assets[3]	Exposure at Default[2]	CET1 risk-weighted assets[3]	Exposure at Default[2]	CET1 risk-weighted assets[3]	Exposure at Default[2]	CET1 risk-weighted assets[3]
Non-retail								
Corporate								
Drawn	$ 128,742	$ 71,771	$ 47,042	$ 45,407	$ 175,784	$ 117,178	$ 157,514	$ 112,836
Undrawn	67,990	28,839	5,721	5,660	73,711	34,499	58,915	29,035
Other[4]	37,024	13,455	2,919	2,901	39,943	16,356	40,425	15,476
	233,756	114,065	55,682	53,968	289,438	168,033	256,854	157,347
Bank								
Drawn	23,978	5,211	2,044	1,356	26,022	6,567	27,165	8,344
Undrawn	1,944	334	38	34	1,982	368	11,386	3,726
Other[4]	12,979	2,371	196	196	13,175	2,567	14,906	3,253
	38,901	7,916	2,278	1,586	41,179	9,502	53,457	15,323
Sovereign								
Drawn	80,358	3,861	8,402	1,300	88,760	5,161	96,263	4,203
Undrawn	1,042	112	10	7	1,052	119	2,133	355
Other[4]	497	12	–	–	497	12	1,016	36
	81,897	3,985	8,412	1,307	90,309	5,292	99,412	4,594
Total Non-retail								
Drawn	233,078	80,843	57,488	48,063	290,566	128,906	280,942	125,383
Undrawn	70,976	29,285	5,769	5,701	76,745	34,986	72,434	33,116
Other[4]	50,500	15,838	3,115	3,097	53,615	18,935	56,347	18,765
	$ 354,554	$ 125,966	$ 66,372	$ 56,861	$ 420,926	$ 182,827	$ 409,723	$ 177,264
Retail[5]								
Retail residential mortgages								
Drawn	$ 190,052	$ 10,228	$ 30,865	$ 14,800	$ 220,917	$ 25,028	$ 215,590	$ 24,967
	190,052	10,228	30,865	14,800	220,917	25,028	215,590	24,967
Secured lines of credit								
Drawn	19,233	4,497	–	–	19,233	4,497	18,804	4,197
Undrawn	14,587	1,359	–	–	14,587	1,359	12,631	1,133
	33,820	5,856	–	–	33,820	5,856	31,435	5,330
Qualifying retail revolving exposures								
Drawn	16,717	9,463	–	–	16,717	9,463	16,910	10,031
Undrawn	21,108	2,656	–	–	21,108	2,656	17,705	2,241
	37,825	12,119	–	–	37,825	12,119	34,615	12,272
Other retail								
Drawn	28,246	13,055	33,936	24,951	62,182	38,006	53,313	32,002
Undrawn	799	203	–	–	799	203	712	178
	29,045	13,258	33,936	24,951	62,981	38,209	54,025	32,180
Total retail								
Drawn	254,248	37,243	64,801	39,751	319,049	76,994	304,617	71,197
Undrawn	36,494	4,218	–	–	36,494	4,218	31,048	3,552
	$ 290,742	$ 41,461	$ 64,801	$ 39,751	$ 355,543	$ 81,212	$ 335,665	$ 74,749
Securitization exposures	25,025	2,613	–	–	25,025	2,613	21,000	2,759
Trading derivatives	23,421	6,599	–	–	23,421	6,599	28,234	8,232
CVA derivatives	–	–	–	4,165	–	4,165	–	7,183
Subtotal	$ 693,742	$ 176,639	$ 131,173	$ 100,777	$ 824,915	$ 277,416	$ 794,622	$ 270,187
Equities	2,042	2,042	–	–	2,042	2,042	2,985	2,985
Other assets	–	–	49,829	24,659	49,829	24,659	50,873	24,265
Total credit risk, before scaling factor	$ 695,784	$ 178,681	$ 181,002	$ 125,436	$ 876,786	$ 304,117	$ 848,480	$ 297,437
Add-on for 6% scaling factor[6]	–	10,705	–	–	–	10,705	–	10,597
Total credit risk	$ 695,784	$ 189,386	$ 181,002	$ 125,436	$ 876,786	$ 314,822	$ 848,480	$ 308,034

(1) Net of specific allowances for credit losses.
(2) Outstanding amount for on-balance sheet exposures and loan equivalent amount for off-balance sheet exposures, before credit risk mitigation.
(3) As at October 31, 2016, CVA risk-weighted assets were calculated using scalars of 0.64, 0.71 and 0.77 for the CET1, Tier 1 and Total capital ratios, respectively (scalars of 0.64, 0.71 and 0.77 in 2015).
(4) Other exposures include off-balance sheet lending instruments, such as letters of credit, letters of guarantee, non-trading derivatives and repo-style exposures, after collateral.
(5) During the year ended October 31, 2015, the Bank implemented new retail probability of default and loss given default models for mortgages and term loans.
(6) Basel Committee imposed a scaling factor (6%) on risk-weighted assets for Internal Ratings-Based credit risk portfolios.

Revenues and Expenses

T77 Volume/rate analysis of change in net interest income

($ millions)	Increase (decrease) due to change in: 2016 versus 2015			Increase (decrease) due to change in: 2015 versus 2014		
	Average volume	**Average rate**	**Net change**	Average volume	Average rate	Net change
Net interest income						
Total earning assets	**$ 1,859**	**$ 13**	**$ 1,872**	$ 1,304	$ (558)	$ 746
Total interest-bearing liabilities	**515**	**157**	**672**	428	(466)	(38)
Change in net interest income	**$ 1,344**	**$ (144)**	**$ 1,200**	$ 876	$ (92)	$ 784
Assets						
Deposits with banks	**$ (14)**	**$ 116**	**$ 102**	$ 48	$ (19)	$ 29
Trading assets	**(7)**	**(6)**	**(13)**	(2)	52	50
Securities purchased under resale agreements	**–**	**(4)**	**(4)**	17	(34)	(17)
Investment securities	**407**	**(79)**	**328**	46	(95)	(49)
Loans:						
Residential mortgages	**147**	**(311)**	**(164)**	127	(195)	(68)
Personal loans and credit cards	**701**	**44**	**745**	597	(77)	520
Business and government	**625**	**253**	**878**	471	(190)	281
Total loans	**1,473**	**(14)**	**1,459**	1,195	(462)	733
Total earning assets	**$ 1,859**	**$ 13**	**$ 1,872**	$ 1,304	$ (558)	$ 746
Liabilities						
Deposits:						
Personal	**$ 174**	**$ (95)**	**$ 79**	$ 125	$ (261)	$ (136)
Business and government	**151**	**359**	**510**	290	(393)	(103)
Banks	**47**	**79**	**126**	(8)	28	20
Total deposits	**372**	**343**	**715**	407	(626)	(219)
Obligations related to securities sold under repurchase agreements	**22**	**(64)**	**(42)**	11	(53)	(42)
Subordinated debentures	**62**	**(17)**	**45**	11	(28)	(17)
Other interest-bearing liabilities	**59**	**(105)**	**(46)**	(1)	241	240
Total interest-bearing liabilities	**$ 515**	**$ 157**	**$ 672**	$ 428	$ (466)	$ (38)

T78 Provision for income taxes

For the fiscal years ($ millions)	**2016**	2015	2014	**2016 versus 2015**
Income taxes				
Income tax expense	**$2,030**	$ 1,853	$ 2,002	**10%**
Other taxes				
Payroll taxes	**347**	329	312	**6**
Business and capital taxes	**403**	361	314	**12**
Harmonized sales tax and other	**363**	310	295	**17**
Total other taxes	**1,113**	1,000	921	**11**
Total income and other taxes[1]	**$3,143**	$ 2,853	$ 2,923	**10%**
Net income before income taxes	**$9,398**	$ 9,066	$ 9,300	**4%**
Effective income tax rate (%)	**21.6**	20.4	21.5	**1.2**
Total tax rate (%)[2]	**29.9**	28.3	28.6	**1.6**

(1)Comprising $1,742 of Canadian taxes (2015 – $1,849; 2014 – $1,679) and $1,401 of foreign taxes (2015 – $1,004; 2014 – $1,244).
(2)Total income and other taxes as a percentage of net income before income and other taxes.

T79 Assets under administration and management

($ billions)	2016	2015	2014
Assets under administration			
Personal			
Retail brokerage	**$ 163.5**	$ 155.9	$ 148.8
Investment management and trust	**106.4**	100.2	95.1
	269.9	256.1	243.9
Mutual funds	**139.2**	130.7	122.5
Institutional	**63.7**	67.1	61.1
Total	**$ 472.8**	$ 453.9	$ 427.5
Assets under management			
Personal	**$ 47.9**	$ 43.0	$ 35.7
Mutual funds	**125.1**	117.7	110.6
Institutional	**19.7**	18.3	18.5
Total	**$ 192.7**	$ 179.0	$ 164.8

T80 Assets under administration and management

As at October 31 ($ billions)	2016	2015	2014
Assets under administration			
Balance at beginning of year	**$ 453.9**	$ 427.5	$ 377.8
Net inflows (outflows) [1]	**4.3**	14.3	22.0
Impact of market changes, including foreign currency translation	**14.6**	12.1	27.7
Balance at end of year	**$ 472.8**	$ 453.9	$ 427.5

(1) Includes impact of business acquisitions/dispositions of nil (2015 – nil; 2014 – $(0.9)).

As at October 31 ($ billions)	2016	2015	2014
Assets under management			
Balance at beginning of year	**$ 179.0**	$ 164.8	$ 145.5
Net inflows (outflows) [1]	**6.6**	8.2	6.5
Impact of market changes, including foreign currency translation	**7.1**	6.0	12.8
Balance at end of year	**$ 192.7**	$ 179.0	$ 164.8

(1) Includes impact of business acquisitions/dispositions of nil (2015 – nil; 2014 – $(0.9)).

T81 Fees paid to the shareholders' auditors

For the fiscal years ($ millions)	2016	2015	2014
Audit services	**$ 26.1**	$ 25.5	$ 24.6
Audit-related services	**0.7**	0.9	0.6
Tax services outside of the audit scope	**–**	–	–
Other non-audit services	**0.4**	0.4	0.7
Total	**$ 27.2**	$ 26.8	$ 25.9

Selected Quarterly Information

T82 Selected quarterly information

	2016				2015			
As at and for the quarter ended	**Q4**	**Q3**	**Q2**	**Q1**	Q4	Q3	Q2	Q1
Operating results ($ millions)								
Net interest income	**3,653**	**3,602**	**3,518**	**3,519**	3,371	3,354	3,198	3,169
Non-interest income	**3,098**	**3,038**	**3,076**	**2,846**	2,754	2,770	2,739	2,694
Total revenue	**6,751**	**6,640**	**6,594**	**6,365**	6,125	6,124	5,937	5,863
Provision for credit losses	**550**	**571**	**752**	**539**	551	480	448	463
Non-interest expenses	**3,650**	**3,505**	**3,817**	**3,568**	3,286	3,334	3,224	3,197
Income tax expense	**540**	**605**	**441**	**444**	445	463	468	477
Net income	**2,011**	**1,959**	**1,584**	**1,814**	1,843	1,847	1,797	1,726
Net income attributable to common shareholders	**1,908**	**1,860**	**1,489**	**1,730**	1,754	1,767	1,727	1,649
Operating performance								
Basic earnings per share ($)	**1.58**	**1.55**	**1.24**	**1.44**	1.46	1.46	1.43	1.36
Diluted earnings per share ($)	**1.57**	**1.54**	**1.23**	**1.43**	1.45	1.45	1.42	1.35
Adjusted diluted earnings per share ($)[1]	**1.58**	**1.55**	**1.48**	**1.44**	1.46	1.47	1.43	1.36
Return on equity (%)	**14.7**	**14.8**	**12.1**	**13.8**	14.2	14.7	15.1	14.2
Productivity ratio (%)[2]	**54.1**	**52.8**	**57.9**	**56.1**	53.6	54.4	54.3	54.5
Core banking margin (%) [1][2]	**2.40**	**2.38**	**2.38**	**2.38**	2.35	2.40	2.41	2.41
Financial position information ($ billions)								
Cash and deposits with financial institutions	**46.3**	**69.8**	**61.2**	**75.3**	73.9	82.8	60.7	65.9
Trading assets	**108.6**	**103.9**	**101.4**	**104.3**	99.1	103.7	113.1	109.6
Loans	**480.2**	**472.8**	**466.8**	**476.6**	458.6	451.0	436.0	439.9
Total assets	**896.3**	**906.8**	**895.0**	**919.6**	856.5	863.1	837.2	851.9
Deposits	**611.9**	**631.3**	**609.3**	**630.9**	600.9	602.8	575.3	584.6
Common equity	**52.7**	**50.8**	**48.9**	**50.9**	49.1	48.7	46.7	46.9
Preferred shares	**3.6**	**3.1**	**3.4**	**3.3**	2.9	2.9	2.9	2.9
Assets under administration	**472.8**	**464.9**	**453.5**	**452.6**	453.9	459.8	445.8	440.8
Assets under management	**192.7**	**187.9**	**179.4**	**179.0**	179.0	182.9	176.8	173.8
Capital and liquidity measures								
Common Equity Tier 1 (CET1) capital ratio (%)	**11.0**	**10.5**	**10.1**	**10.1**	10.3	10.4	10.6	10.3
Tier 1 capital ratio (%)	**12.4**	**11.8**	**11.4**	**11.2**	11.5	11.6	11.9	11.5
Total capital ratio (%)	**14.6**	**14.1**	**13.6**	**13.4**	13.4	13.5	13.9	13.2
Leverage ratio (%)	**4.5**	**4.2**	**4.1**	**4.0**	4.2	4.1	4.1	4.1
CET1 risk-weighted assets ($ billions) [3]	**364.0**	**357.7**	**356.9**	**374.5**	358.0	348.0	328.7	335.2
Liquidity coverage ratio (LCR)(%)	**127**	**125**	**121**	**124**	124	127	123	N/A
Credit quality								
Net impaired loans ($ millions) [4]	**2,446**	**2,491**	**2,347**	**2,335**	2,085	2,096	2,172	2,266
Allowance for credit losses ($ millions)	**4,626**	**4,542**	**4,402**	**4,354**	4,197	4,125	3,694	3,788
Net impaired loans as a % of loans and acceptances [4]	**0.49**	**0.51**	**0.49**	**0.48**	0.44	0.45	0.48	0.50
Provision for credit losses as a % of average net loans and acceptances (annualized)	**0.45**	**0.47**	**0.64**	**0.45**	0.47	0.42	0.41	0.42
Common share information								
Closing share price ($) (TSX)	**72.08**	**66.33**	**65.80**	**57.39**	61.49	64.19	66.53	61.06
Shares outstanding (millions)								
Average – Basic	**1,206**	**1,203**	**1,203**	**1,203**	1,205	1,210	1,210	1,215
Average – Diluted	**1,226**	**1,222**	**1,228**	**1,225**	1,227	1,231	1,231	1,220
End of period	**1,208**	**1,205**	**1,203**	**1,203**	1,203	1,208	1,210	1,210
Dividends per share ($)	**0.74**	**0.72**	**0.72**	**0.70**	0.70	0.68	0.68	0.66
Dividend yield (%) [5]	**4.3**	**4.5**	**4.9**	**4.9**	4.8	4.3	4.2	4.0
Market capitalization ($ billions) (TSX)	**87.1**	**79.9**	**79.1**	**69.0**	74.0	77.5	80.5	73.9
Book value per common share ($)	**43.59**	**42.14**	**40.70**	**42.32**	40.80	40.30	38.61	38.75
Market value to book value multiple	**1.7**	**1.6**	**1.6**	**1.4**	1.5	1.6	1.7	1.6
Price to earnings multiple (trailing 4 quarters)	**12.4**	**11.7**	**11.8**	**9.9**	10.8	12.0	11.6	10.7

(1) Refer to page 13 for a discussion of non-GAAP measures.
(2) Effective Q3, 2016 the tax equivalent adjustment was no longer included in the calculation. Prior period amounts have been restated.
(3) Credit valuation adjustment (CVA) risk-weighted assets were calculated using scalars of 0.64, 0.71 and 0.77 to compute CET1, Tier 1 and Total capital ratios, respectively in 2016.
(4) Excludes loans acquired under the Federal Deposit Insurance Corporation (FDIC) guarantee related to the acquisition of R-G Premier Bank of Puerto Rico.
(5) Based on the average of the high and low common share price for the period.

Eleven-Year Statistical Review

T83 Consolidated Statement of Financial Position

				IFRS		
As at October 31 ($ millions)	**2016**	2015	2014	2013[1]	2012[1]	2011
Assets						
Cash and deposits with financial institutions	**$ 46,344**	$ 73,927	$ 56,730	$ 53,338	$ 47,337	$ 38,723
Precious metals	**8,442**	10,550	7,286	8,880	12,387	9,249
Trading assets						
Securities	**87,287**	78,380	95,363	84,196	74,639	62,192
Loans	**19,421**	18,341	14,508	11,225	12,857	13,607
Other	**1,853**	2,419	3,377	1,068	100	–
	108,561	99,140	113,248	96,489	87,596	75,799
Financial instruments designated at fair value through profit or loss	**221**	320	111	106	197	375
Securities purchased under resale agreements and securities borrowed	**92,129**	87,312	93,866	82,533	66,189	47,181
Derivative financial instruments	**41,657**	41,003	33,439	24,503	30,338	37,322
Investment securities	**72,919**	43,216	38,662	34,319	33,376	30,176
Loans						
Residential mortgages	**222,888**	217,498	212,648	209,865	175,630	161,685
Personal and credit cards	**99,502**	91,477	84,204	76,008	68,277	63,317
Business and government	**162,400**	153,850	131,098	119,615	111,648	96,743
	484,790	462,825	427,950	405,488	355,555	321,745
Allowance for credit losses	**4,626**	4,197	3,641	3,273	2,977	2,689
	480,164	458,628	424,309	402,215	352,578	319,056
Other						
Customers' liability under acceptances	**11,978**	10,296	9,876	10,556	8,932	8,172
Property and equipment	**2,520**	2,286	2,272	2,214	2,218	2,504
Investments in associates	**4,299**	4,033	3,461	5,326	4,791	4,434
Goodwill and other intangible assets	**12,141**	11,449	10,884	10,704	8,692	7,639
Deferred tax assets	**2,021**	2,034	1,763	1,938	2,273	2,214
Other assets	**12,870**	12,303	9,759	10,523	11,321	11,579
	45,829	42,401	38,015	41,261	38,227	36,542
	$ 896,266	$ 856,497	$ 805,666	$ 743,644	$ 668,225	$ 594,423
Liabilities						
Deposits						
Personal	**$ 199,302**	$ 190,044	$ 175,163	$ 171,048	$ 138,051	$ 133,025
Business and government	**372,303**	375,144	342,367	313,820	293,460	262,833
Financial institutions	**40,272**	35,731	36,487	33,019	34,178	25,376
	611,877	600,919	554,017	517,887	465,689	421,234
Financial instruments designated at fair value through profit or loss	**1,459**	1,486	465	174	157	101
Other						
Acceptances	**11,978**	10,296	9,876	10,556	8,932	8,172
Obligations related to securities sold short	**23,312**	20,212	27,050	24,977	18,622	15,450
Derivative financial instruments	**42,387**	45,270	36,438	29,267	35,323	40,236
Obligations related to securities sold under repurchase agreements and securities lent	**97,083**	77,015	88,953	77,508	56,968	38,216
Subordinated debentures	**7,633**	6,182	4,871	5,841	10,143	6,923
Capital instruments	**–**	–	–	–	–	2,003
Other liabilities	**42,716**	41,638	34,785	32,047	32,726	29,848
	225,109	200,613	201,973	180,196	162,714	140,848
	838,445	803,018	756,455	698,257	628,560	562,183
Equity						
Common equity						
Common shares	**15,513**	15,141	15,231	14,516	13,139	8,336
Retained earnings	**34,752**	31,316	28,609	25,068	21,775	18,421
Accumulated other comprehensive income (loss)	**2,240**	2,455	949	388	(745)	(497)
Other reserves	**152**	173	176	193	166	96
Total common equity	**52,657**	49,085	44,965	40,165	34,335	26,356
Preferred shares	**3,594**	2,934	2,934	4,084	4,384	4,384
Total equity attributable to equity holders of the Bank	**56,251**	52,019	47,899	44,249	38,719	30,740
Non-controlling interests						
Non-controlling interests in subsidiaries	**1,570**	1,460	1,312	1,138	946	626
Capital instrument equity holders	**–**	–	–	–	–	874
Total equity	**57,821**	53,479	49,211	45,387	39,665	32,240
	$ 896,266	$ 856,497	$ 805,666	$ 743,644	$ 668,225	$ 594,423

(1) Certain prior period amounts are retrospectively adjusted to reflect the adoption of new and amended IFRS standards (IFRS 10 and IAS 19) in 2014.

T84 Consolidated Statement of Income

		IFRS				
For the year ended October 31 ($ millions)	**2016**	2015	2014	2013[1]	2012[1]	2011
Revenue						
Interest income						
Loans	**$ 20,419**	$ 18,912	$ 18,176	$ 17,359	$ 15,606	$ 14,373
Securities	**1,237**	922	921	1,000	1,045	986
Securities purchased under resale agreements and securities borrowed	**158**	161	180	190	221	221
Deposits with financial institutions	**394**	292	263	279	287	275
	22,208	20,287	19,540	18,828	17,159	15,855
Interest expense						
Deposits	**6,793**	6,070	6,173	6,397	6,117	5,589
Subordinated debentures	**232**	187	204	339	381	369
Capital instruments	**–**	–	–	–	–	138
Other	**891**	938	858	742	691	745
	7,916	7,195	7,235	7,478	7,189	6,841
Net interest income	**14,292**	13,092	12,305	11,350	9,970	9,014
Non-interest income	**12,058**	10,957	11,299	9,949	9,676	8,296
Total revenue	**26,350**	24,049	23,604	21,299	19,646	17,310
Provision for credit losses	**2,412**	1,942	1,703	1,288	1,252	1,076
Non-interest expenses	**14,540**	13,041	12,601	11,664	10,436	9,481
Income before taxes	**9,398**	9,066	9,300	8,347	7,958	6,753
Income tax expense	**2,030**	1,853	2,002	1,737	1,568	1,423
Net income	**$ 7,368**	$ 7,213	$ 7,298	$ 6,610	$ 6,390	$ 5,330
Net income attributable to non-controlling interests	**$ 251**	$ 199	$ 227	$ 231	$ 196	$ 149
Non-controlling interests in subsidiaries	**251**	199	227	231	196	91
Capital instrument equity holders	**–**	–	–	–	–	58
Net income attributable to equity holders of the Bank	**$ 7,117**	$ 7,014	$ 7,071	$ 6,379	$ 6,194	$ 5,181
Preferred shareholders	**130**	117	155	217	220	216
Common shareholders	**$ 6,987**	$ 6,897	$ 6,916	$ 6,162	$ 5,974	$ 4,965
Earnings per common share (in dollars)						
Basic	**$ 5.80**	$ 5.70	$ 5.69	$ 5.15	$ 5.27	$ 4.63
Diluted	**$ 5.77**	$ 5.67	$ 5.66	$ 5.11	$ 5.18	$ 4.53
Dividends per common share (in dollars)	**$ 2.88**	$ 2.72	$ 2.56	$ 2.39	$ 2.19	$ 2.05

(1) Certain amounts are retrospectively adjusted to reflect the adoption of new and amended IFRS standards (IFRS 10 and IAS 19) in 2014.

T83A Consolidated Balance Sheet – CGAAP

As at October 31 ($ millions)	CGAAP 2010	2009	2008	2007	2006
Assets					
Cash resources	$ 46,027	$ 43,278	$ 37,318	$ 29,195	$ 23,376
Securities					
Trading	64,684	58,067	48,292	59,685	62,490
Available-for-sale	47,228	55,699	38,823	28,426	–
Investment	–	–	–	–	32,870
Equity accounted investments	4,651	3,528	920	724	142
	116,563	117,294	88,035	88,835	95,502
Securities purchased under resale agreements	27,920	17,773	19,451	22,542	25,705
Loans					
Residential mortgages	120,482	101,604	115,084	102,154	89,590
Personal and credit cards	62,548	61,048	50,719	41,734	39,058
Business and government	103,981	106,520	125,503	85,500	76,733
	287,011	269,172	291,306	229,388	205,381
Allowance for credit losses	2,787	2,870	2,626	2,241	2,607
	284,224	266,302	288,680	227,147	202,774
Other					
Customers' liability under acceptances	7,616	9,583	11,969	11,538	9,555
Derivative instruments	26,852	25,992	44,810	21,960	12,098
Land, buildings and equipment	2,450	2,372	2,449	2,061	2,103
Other assets	15,005	13,922	14,913	8,232	7,893
	51,923	51,869	74,141	43,791	31,649
	$ 526,657	$ 496,516	$ 507,625	$ 411,510	$ 379,006
Liabilities and shareholders' equity					
Deposits					
Personal	$ 128,850	$ 123,762	$ 118,919	$ 100,823	$ 93,450
Business and government	210,687	203,594	200,566	161,229	141,072
Banks	22,113	23,063	27,095	26,406	29,392
	361,650	350,419	346,580	288,458	263,914
Other					
Acceptances	7,616	9,583	11,969	11,538	9,555
Obligations related to securities sold under repurchase agreements	40,286	36,568	36,506	28,137	33,470
Obligations related to securities sold short	21,519	14,688	11,700	16,039	13,396
Derivative instruments	31,990	28,806	42,811	24,689	12,869
Other liabilities	28,947	24,682	31,063	21,138	24,799
	130,358	114,327	134,049	101,541	94,089
Subordinated debentures	5,939	5,944	4,352	1,710	2,271
Capital instrument liabilities	500	500	500	500	750
Shareholders' equity					
Preferred shares	3,975	3,710	2,860	1,635	600
Common shareholders' equity					
Common shares and contributed surplus	5,775	4,946	3,829	3,566	3,425
Retained earnings	21,932	19,916	18,549	17,460	15,843
Accumulated other comprehensive income (loss)	(4,051)	(3,800)	(3,596)	(3,857)	(2,321)
Total common shareholders' equity	23,656	21,062	18,782	17,169	16,947
Total equity attributable to equity holders of the Bank	27,631	24,772	21,642	18,804	17,547
Non-controlling interests	579	554	502	497	435
Total shareholders' equity	28,210	25,326	22,144	19,301	17,982
	$ 526,657	$ 496,516	$ 507,625	$ 411,510	$ 379,006

T84A Consolidated Statement of Income – CGAAP

	CGAAP				
For the year ended October 31 ($ millions)	2010	2009	2008	2007	2006
Interest income					
Loans	$ 12,171	$ 13,973	$ 15,832	$ 13,985	$ 11,575
Securities	4,227	4,090	4,615	4,680	4,124
Securities purchased under resale agreements	201	390	786	1,258	1,102
Deposits with banks	292	482	1,083	1,112	881
	16,891	18,935	22,316	21,035	17,682
Interest expense					
Deposits	6,768	8,339	12,131	10,850	8,589
Subordinated debentures	289	285	166	116	130
Capital instrument liabilities	37	37	37	53	53
Other	1,176	1,946	2,408	2,918	2,502
	8,270	10,607	14,742	13,937	11,274
Net interest income	8,621	8,328	7,574	7,098	6,408
Provision for credit losses	1,239	1,744	630	270	216
Net interest income after provision for credit losses	7,382	6,584	6,944	6,828	6,192
Other income	6,884	6,129	4,302	5,392	4,800
Net interest and other income	14,266	12,713	11,246	12,220	10,992
Non-interest expenses					
Salaries and employee benefits	4,647	4,344	4,109	3,983	3,768
Other	3,535	3,575	3,187	3,011	2,675
	8,182	7,919	7,296	6,994	6,443
Income before income taxes	6,084	4,794	3,950	5,226	4,549
Provision for income taxes	1,745	1,133	691	1,063	872
Net income	$ 4,339	$ 3,661	$ 3,259	$ 4,163	$ 3,677
Net income attributable to non-controlling interests	$ 100	$ 114	$ 119	$ 118	$ 98
Net income attributable to equity holders of the Bank	4,239	3,547	3,140	4,045	3,579
Preferred shareholders	201	186	107	51	30
Common shareholders	$ 4,038	$ 3,361	$ 3,033	$ 3,994	$ 3,549
Average number of common shares outstanding (millions)					
Basic	1,032	1,013	987	989	988
Diluted	1,034	1,016	993	997	1,001
Earnings per common share (in dollars)[1]					
Basic	$ 3.91	$ 3.32	$ 3.07	$ 4.04	$ 3.59
Diluted	$ 3.91	$ 3.31	$ 3.05	$ 4.01	$ 3.55
Dividends per common share (in dollars)	$ 1.96	$ 1.96	$ 1.92	$ 1.74	$ 1.50

(1)The calculation of earnings per share is based on full dollar and share amounts.

T85 Consolidated Statement of Changes in Equity

	IFRS					
For the year ended October 31 ($ millions)	**2016**	2015	2014	2013[1]	2012[1]	2011
Common shares						
Balance at beginning of year	**$ 15,141**	$ 15,231	$ 14,516	$ 13,139	$ 8,336	$ 5,750
Issued	**391**	104	771	1,377	4,803	2,586
Purchased for cancellation	**(19)**	(194)	(56)	–	–	–
Balance at end of year	**$ 15,513**	$ 15,141	$ 15,231	$ 14,516	$ 13,139	$ 8,336
Retained earnings						
Balance at beginning of year	**31,316**	28,609	25,315	21,978	18,421	21,932
IFRS adjustment	**–**	–	(247)	(203)	(144)	(6,248)
Restated balances	**31,316**	28,609	25,068	21,775	18,277	15,684
Adjustments	**–**	–	–	–	–	–
Net income attributable to common shareholders of the Bank[4]	**6,987**	6,897	6,916	6,162	5,974	4,965
Dividends: Preferred[5]	**–**	–	–	–	–	–
Common	**(3,468)**	(3,289)	(3,110)	(2,858)	(2,493)	(2,200)
Purchase of shares for cancellation and premium on redemption	**(61)**	(761)	(264)	–	–	–
Other	**(22)**	(140)[6]	(1)	(11)	17	(28)
Balance at end of year	**$ 34,752**	$ 31,316	$ 28,609	$ 25,068	$ 21,775	$ 18,421
Accumulated other comprehensive income (loss)						
Balance at beginning of year	**2,455**	949	545	(31)	(497)	(4,051)
IFRS adjustment	**–**	–	(157)	(714)	32	4,320
Restated balances	**2,455**	949	388	(745)	(465)	269
Cumulative effect of adopting new accounting policies	**–**	(5)[7]	–	–	–	–
Other comprehensive income (loss)	**(215)**	1,511	561	1,133	(280)	(766)
Balance at end of year	**$ 2,240**	$ 2,455	$ 949	$ 388	$ (745)	$ (497)
Other reserves[9]						
Balance at beginning of year	**173**	176	193	166	96	25
Share-based payments	**7**	14	30	36	38	46
Other	**(28)**	(17)	(47)	(9)	32	25
Balance at end of year	**$ 152**	$ 173	$ 176	$ 193	$ 166	$ 96
Total common equity	**$ 52,657**	$ 49,085	$ 44,965	$ 40,165	$ 34,335	$ 26,356
Preferred shares						
Balance at beginning of year	**2,934**	2,934	4,084	4,384	4,384	3,975
Net income attributable to preferred shareholders of the Bank[4]	**130**	117	155	217	220	216
Preferred dividends[5]	**(130)**	(117)	(155)	(217)	(220)	(216)
Issued	**1,350**	–	–	–	–	409
Redeemed	**(690)**	–	(1,150)	(300)	–	–
Balance at end of year	**$ 3,594**	$ 2,934	$ 2,934	$ 4,084	$ 4,384	$ 4,384
Non-controlling interests						
Balance at beginning of year	**1,460**	1,312	1,155	1,743	1,500	579
IFRS adjustment	**–**	–	(17)	(797)	(891)	936
Restated balances	**1,460**	1,312	1,138	946	609	1,515
Net income attributable to non-controlling interests	**251**	199	227	231	196	149
Distributions to non-controlling interests	**(116)**	(86)	(76)	(80)	(44)	(181)
Effect of foreign exchange and others	**(25)**	35	23	41	185	17
Balance at end of year	**$ 1,570**	$ 1,460	$ 1,312	$ 1,138	$ 946	$ 1,500
Total equity at end of year	**$ 57,821**	$ 53,479	$ 49,211	$ 45,387	$ 39,665	$ 32,240

(1)Certain prior period amounts are retrospectively adjusted to reflect the adoption of new and amended IFRS standards (IFRS 10 and IAS 19) in 2014.
(2)Relates to the adoption of new financial instruments accounting standards under CGAAP.
(3)Relates to the adoption of new stock-based compensation accounting standard under CGAAP.
(4)Under CGAAP, net income attributable to preferred shareholders was included in retained earnings.
(5)Under IFRS, preferred dividends are recorded as a reduction to preferred shareholders' equity. Under CGAAP, dividends are a reduction to retained earnings.
(6)Includes retrospective adjustments primarily related to foreign currency translation on Allowance for Credit Losses with respect to periods prior to 2013 ($152).
(7)To reflect the adoption of the own credit risk provisions of IFRS 9 pertaining to financial liabilities designated at fair value through profit or loss.
(8)Relates to the adoption of the new accounting standard for impairment and classification of financial instruments under CGAAP.
(9)Under CGAAP, amounts represent Contributed Surplus.

T86 Consolidated Statement of Comprehensive Income

	IFRS					
For the year ended October 31 ($ millions)	**2016**	2015	2014	2013[1]	2012[1]	2011
Net income	**$ 7,368**	$ 7,213	$ 7,298	$ 6,610	$ 6,390	$ 5,330
Other comprehensive income (loss), net of income taxes:						
Items that will be reclassified subsequently to net income						
Net change in unrealized foreign currency translation gains (losses)	**396**	1,855	889	346	149	(697)
Net change in unrealized gains (losses) on available-for-sale securities	**(172)**	(480)	(38)	110	151	(169)
Net change in gains (losses) on derivative instruments designated as cash flow hedges	**258**	55	(6)	93	116	105
Other comprehensive income from investments in associates	**31**	(9)	60	20	25	–
Items that will not be reclassified subsequently to net income						
Net change in remeasurement of employee benefit plan asset and liability	**(716)**	(1)	(320)	563	(747)	–
Net change in fair value due to change in own credit risk on financial liabilities designated under the fair value option [2]	**(16)**	15	N/A	N/A	N/A	N/A
Other comprehensive income from investments in associates	**(10)**	1	(2)	–	–	–
Other comprehensive income (loss)	**(229)**	1,436	583	1,132	(306)	(761)
Comprehensive income	**$ 7,139**	$ 8,649	$ 7,881	$ 7,742	$ 6,084	$ 4,569
Comprehensive income attributable to:						
Common shareholders of the Bank	**$ 6,772**	$ 8,408	$ 7,477	$ 7,298	$ 5,694	$ 4,199
Preferred shareholders of the Bank	**130**	117	155	217	220	216
Non-controlling interests in subsidiaries	**237**	124	249	227	170	96
Capital instrument equity holders	**–**	–	–	–	–	58
	$ 7,139	$ 8,649	$ 7,881	$ 7,742	$ 6,084	$ 4,569

(1)Certain prior period amounts are retrospectively adjusted to reflect the adoption of new and amended IFRS standards (IFRS 10 and IAS 19) in 2014.
(2)In accordance with the transition requirements for the own credit risk provisions of IFRS 9, prior year comparatives have not been restated for the adoption of this standard in 2015.

CGAAP				
2010	2009	2008	2007	2006
$ 4,946	$ 3,829	$ 3,566	$ 3,425	$ 3,316
804	1,117	266	184	135
–	–	(3)	(43)	(26)
$ 5,750	$ 4,946	$ 3,829	$ 3,566	$ 3,425
19,916	18,549	17,460	15,843	14,126
–	–	–	–	–
19,916	18,549	17,460	15,843	14,126
–	–	–	(61)[2]	(25)[3]
4,239	3,547	3,140	4,045	3,579
(201)	(186)	(107)	(51)	(30)
(2,023)	(1,990)	(1,896)	(1,720)	(1,483)
–	–	(37)	(586)	(324)
1	(4)	(11)	(10)	–
$ 21,932	$ 19,916	$ 18,549	$ 17,460	$ 15,843
(3,800)	(3,596)	(3,857)	(2,321)	(1,961)
–	–	–	–	–
(3,800)	(3,596)	(3,857)	(2,321)	(1,961)
–	595[8]	–	683	–
(251)	(799)	261	(2,219)	(360)
$ (4,051)	$ (3,800)	$ (3,596)	$ (3,857)	$ (2,321)
–	–	–	–	1
25	–	–	–	(1)
–	–	–	–	–
$ 25	$ –	$ –	$ –	$ –
$ 23,656	$ 21,062	$ 18,782	$ 17,169	$ 16,947
3,710	2,860	1,635	600	600
–	–	–	–	–
–	–	–	–	–
265	850	1,225	1,035	–
–	–	–	–	–
$ 3,975	$ 3,710	$ 2,860	$ 1,635	$ 600
554	502	N/A	N/A	N/A
–	–	–	–	–
554	502	N/A	N/A	N/A
100	114	N/A	N/A	N/A
(35)	(36)	N/A	N/A	N/A
(40)	(26)	N/A	N/A	N/A
$ 579	$ 554	$ 502	$ 497	$ 435
$ 28,210	$ 25,326	$ 22,144	$ 19,301	$ 17,982

CGAAP				
2010	2009	2008	2007	2006
$ 4,339	$ 3,661	$ 3,259	$ 4,163	$ 3,677
(591)	(1,736)	2,368	(2,228)	(360)
278	894	(1,588)	(67)	–
62	43	(519)	76	–
–	–	–	–	–
–	–	–	–	–
N/A	N/A	N/A	N/A	N/A
–	–	–	–	–
(251)	(799)	261	(2,219)	(360)
$ 4,088	$ 2,862	$ 3,520	$ 1,944	$ 3,317
$ 3,787	$ 2,562	$ 3,294	$ 1,775	$ 3,189
201	186	107	51	30
100	114	119	118	98
–	–	–	–	–
$ 4,088	$ 2,862	$ 3,520	$ 1,944	$ 3,317

T87 Other statistics

	IFRS					
For the year ended October 31	**2016**	2015	2014	2013[1]	2012[1]	2011
Operating performance						
Basic earnings per share ($)	**5.80**	5.70	5.69	5.15	5.27	4.63
Diluted earnings per share ($)	**5.77**	5.67	5.66	5.11	5.18	4.53
Return on equity (%)	**13.8**	14.6	16.1	16.6	19.9	20.3
Productivity ratio (%) [2]	**55.2**	54.2	53.4	54.8	53.1	54.8
Return on assets (%)	**0.81**	0.84	0.92	0.88	0.97	0.91
Core banking margin (%) [2][3]	**2.38**	2.39	2.39	2.31	2.31	2.32
Net interest margin on total average assets (%)	**N/A**	N/A	N/A	N/A	N/A	N/A
Capital measures[4]						
Common Equity Tier 1 (CET1) capital ratio (%)	**11.0**	10.3	10.8	9.1	N/A	N/A
Tier 1 capital ratio (%)	**12.4**	11.5	12.2	11.1	13.6	12.2
Total capital ratio (%)	**14.6**	13.4	13.9	13.5	16.7	13.9
Leverage ratio (%)	**4.5**	4.2	N/A	N/A	N/A	N/A
Common share information						
Closing share price ($)(TSX)	**72.08**	61.49	69.02	63.39	54.25	52.53
Number of shares outstanding (millions)	**1,208**	1,203	1,217	1,209	1,184	1,089
Dividends per share ($)	**2.88**	2.72	2.56	2.39	2.19	2.05
Dividend yield (%) [5]	**4.7**	4.4	3.8	4.1	4.2	3.7
Price to earnings multiple (trailing 4 quarters)	**12.4**	10.8	12.1	12.3	10.3	11.3
Book value per common share ($)	**43.59**	40.80	36.96	33.23	28.99	24.20
Other information						
Average total assets ($ millions)	**913,844**	860,607	795,641	748,901	659,538	586,101
Number of branches and offices	**3,113**	3,177	3,288	3,330	3,123	2,926
Number of employees	**88,901**	89,214	86,932	86,690	81,497	75,362
Number of automated banking machines	**8,144**	8,191	8,732	8,471	7,341	6,260

(1)Certain prior period amounts are retrospectively adjusted to reflect the adoption of new and amended IFRS standards (IFRS 10 and IAS 19) in 2014. Capital measures have not been restated for the new IFRS standards as they represent the actual amounts in the period for regulatory purposes.
(2)Effective 2016, the taxable equivalent adjustment was no longer included in the calculation. Prior period amounts have been restated.
(3)Refer to page 13 for a discussion of non-GAAP measures.
(4)Effective November 1, 2012, regulatory capital ratios are determined in accordance with Basel III rules as an all-in basis. Comparative amounts for periods 2012-2007 were determined in accordance with Basel II rules. Amounts prior to 2007 were determined in accordance with Basel I rules and have not been restated.
(5)Based on the average of the high and low common share price for the year.

CGAAP				
2010	2009	2008	2007	2006
3.91	3.32	3.07	4.04	3.59
3.91	3.31	3.05	4.01	3.55
18.3	16.7	16.7	22.0	22.1
52.8	54.8	61.4	56.0	57.5
0.84	0.71	0.72	1.03	1.05
N/A	N/A	N/A	N/A	N/A
1.67	1.62	1.66	1.76	1.83
N/A	N/A	N/A	N/A	N/A
11.8	10.7	9.3	9.3	10.2
13.8	12.9	11.1	10.5	11.7
N/A	N/A	N/A	N/A	N/A
54.67	45.25	40.19	53.48	49.30
1,043	1,025	992	984	990
1.96	1.96	1.92	1.74	1.50
3.9	5.4	4.3	3.4	3.3
14.0	13.6	13.1	13.2	13.7
22.68	20.55	18.94	17.45	17.13
515,991	513,149	455,539	403,475	350,709
2,784	2,686	2,672	2,331	2,191
70,772	67,802	69,049	58,113	54,199
5,978	5,778	5,609	5,283	4,937

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Management's Responsibility for Financial Information

The management of The Bank of Nova Scotia (the Bank) is responsible for the integrity and fair presentation of the financial information contained in this Annual Report. The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board. The consolidated financial statements also comply with the accounting requirements of the Bank Act.

The consolidated financial statements, where necessary, include amounts which are based on the best estimates and judgment of management. Financial information presented elsewhere in this Annual Report is consistent with that shown in the consolidated financial statements.

Management has always recognized the importance of the Bank maintaining and reinforcing the highest possible standards of conduct in all of its actions, including the preparation and dissemination of statements fairly presenting the financial condition of the Bank. In this regard, management has developed and maintains a system of accounting and reporting which provides for the necessary internal controls to ensure that transactions are properly authorized and recorded, assets are safeguarded against unauthorized use or disposition, and liabilities are recognized. The system is augmented by written policies and procedures, the careful selection and training of qualified staff, the establishment of organizational structures providing an appropriate and well-defined division of responsibilities, and the communication of policies and guidelines of Scotiabank's Code of Conduct throughout the Bank.

Management, under the supervision of and the participation of the President and Chief Executive Officer and the Chief Financial Officer, have a process in place to evaluate disclosure controls and procedures and internal control over financial reporting in line with Canadian and U.S. securities regulations.

The system of internal controls is further supported by a professional staff of internal auditors who conduct periodic audits of all aspects of the Bank's operations. As well, the Bank's Chief Auditor has full and free access to, and meets periodically with the Audit and Conduct Review Committee of the Board of Directors. In addition, the Bank's compliance function maintains policies, procedures and programs directed at ensuring compliance with regulatory requirements, including conflict of interest rules.

The Office of the Superintendent of Financial Institutions Canada, which is mandated to protect the rights and interests of the depositors and creditors of the Bank, examines and enquires into the business and affairs of the Bank, as deemed necessary, to determine whether the provisions of the Bank Act are being complied with, and that the Bank is in a sound financial condition.

The Audit and Conduct Review Committee, composed entirely of outside directors, reviews the consolidated financial statements with both management and the independent auditors before such statements are approved by the Board of Directors and submitted to the shareholders of the Bank.

The Audit and Conduct Review Committee reviews and reports its findings to the Board of Directors on all related party transactions that may have a material impact on the Bank.

KPMG LLP, the independent auditors appointed by the shareholders of the Bank, have audited the consolidated financial position of the Bank as at October 31, 2016 and October 31, 2015 and its consolidated financial performance and its consolidated cash flows for each of the years in the three-year period ended October 31, 2016 prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board in accordance with Canadian Generally Accepted Auditing Standards and the standards of the Public Company Accounting Oversight Board (United States) and the effectiveness of internal control over financial reporting and have expressed their opinions upon completion of such audits in the following report to the shareholders. The Shareholders' Auditors have full and free access to, and meet periodically with, the Audit and Conduct Review Committee to discuss their audits, including any findings as to the integrity of the Bank's accounting, financial reporting and related matters.

Brian J. Porter
President and Chief Executive Officer

Sean McGuckin
Chief Financial Officer

Toronto, Canada
November 29, 2016

Independent Auditors' Report of Registered Public Accounting Firm

To the Shareholders of The Bank of Nova Scotia

We have audited the accompanying consolidated financial statements of The Bank of Nova Scotia, which comprise the consolidated statements of financial position as at October 31, 2016 and October 31, 2015, the consolidated statements of income, comprehensive income, changes in equity and cash flows for each of the years in the three-year period ended October 31, 2016, and notes, comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements
Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility
Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards and the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Bank's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

Opinion
In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of The Bank of Nova Scotia as at October 31, 2016 and October 31, 2015 and its consolidated financial performance and its consolidated cash flows for each of the years in the three-year period ended October 31, 2016 in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board.

Other Matter
We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), The Bank of Nova Scotia's internal control over financial reporting as of October 31, 2016, based on the criteria established in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated November 29, 2016 expressed an unmodified (unqualified) opinion on the effectiveness of The Bank of Nova Scotia's internal control over financial reporting.



Chartered Professional Accountants, Licensed Public Accountants
Toronto, Canada
November 29, 2016

Consolidated Statement of Financial Position

As at October 31 ($ millions)	Note	2016	2015
Assets			
Cash and deposits with financial institutions	5	**$ 46,344**	$ 73,927
Precious metals		**8,442**	10,550
Trading assets			
Securities	7(a)	**87,287**	78,380
Loans	7(b)	**19,421**	18,341
Other		**1,853**	2,419
		108,561	99,140
Financial instruments designated at fair value through profit or loss	8	**221**	320
Securities purchased under resale agreements and securities borrowed		**92,129**	87,312
Derivative financial instruments	9	**41,657**	41,003
Investment securities	11	**72,919**	43,216
Loans			
Residential mortgages	12	**222,888**	217,498
Personal and credit cards	12	**99,502**	91,477
Business and government	12	**162,400**	153,850
		484,790	462,825
Allowance for credit losses	12(d)	**4,626**	4,197
		480,164	458,628
Other			
Customers' liability under acceptances		**11,978**	10,296
Property and equipment	15	**2,520**	2,286
Investments in associates	16	**4,299**	4,033
Goodwill and other intangible assets	17	**12,141**	11,449
Deferred tax assets	26(c)	**2,021**	2,034
Other assets	18	**12,870**	12,303
		45,829	42,401
		$ 896,266	$ 856,497
Liabilities			
Deposits			
Personal	19	**$ 199,302**	$ 190,044
Business and government	19	**372,303**	375,144
Financial institutions	19	**40,272**	35,731
		611,877	600,919
Financial instruments designated at fair value through profit or loss	8	**1,459**	1,486
Other			
Acceptances		**11,978**	10,296
Obligations related to securities sold short		**23,312**	20,212
Derivative financial instruments	9	**42,387**	45,270
Obligations related to securities sold under repurchase agreements and securities lent		**97,083**	77,015
Subordinated debentures	20	**7,633**	6,182
Other liabilities	21	**42,716**	41,638
		225,109	200,613
		838,445	803,018
Equity			
Common equity			
Common shares	23(a)	**15,513**	15,141
Retained earnings		**34,752**	31,316
Accumulated other comprehensive income (loss)		**2,240**	2,455
Other reserves		**152**	173
Total common equity		**52,657**	49,085
Preferred shares	23(b)	**3,594**	2,934
Total equity attributable to equity holders of the Bank		**56,251**	52,019
Non-controlling interests in subsidiaries	30(b)	**1,570**	1,460
		57,821	53,479
		$ 896,266	$ 856,497

Thomas C. O'Neill
Chairman of the Board

Brian J. Porter
President and Chief Executive Officer

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

Consolidated Statement of Income

For the year ended October 31 ($ millions)	Note	2016	2015	2014
Revenue				
Interest income				
Loans		**$ 20,419**	$ 18,912	$ 18,176
Securities		**1,237**	922	921
Securities purchased under resale agreements and securities borrowed		**158**	161	180
Deposits with financial institutions		**394**	292	263
		22,208	20,287	19,540
Interest expense				
Deposits		**6,793**	6,070	6,173
Subordinated debentures		**232**	187	204
Other		**891**	938	858
		7,916	7,195	7,235
Net interest income		**14,292**	13,092	12,305
Non-interest income				
Banking	31	**3,669**	3,360	3,170
Wealth management	31	**3,282**	3,269	3,023
Underwriting and other advisory		**594**	525	712
Non-trading foreign exchange		**540**	492	420
Trading revenues	32	**1,403**	1,185	1,114
Net gain on sale of investment securities	11(e)	**534**	639	741
Net income from investments in associated corporations	16	**414**	405	428
Insurance underwriting income, net of claims		**603**	556	474
Other		**1,019**	526	1,217
		12,058	10,957	11,299
Total revenue		**26,350**	24,049	23,604
Provision for credit losses	12(d)	**2,412**	1,942	1,703
		23,938	22,107	21,901
Non-interest expenses				
Salaries and employee benefits		**7,025**	6,681	6,547
Premises and technology		**2,238**	2,086	1,936
Depreciation and amortization		**684**	584	526
Communications		**442**	434	417
Advertising and business development		**617**	592	571
Professional		**693**	548	471
Business and capital taxes		**403**	361	314
Other		**2,438**	1,755	1,819
		14,540	13,041	12,601
Income before taxes		**9,398**	9,066	9,300
Income tax expense		**2,030**	1,853	2,002
Net income		**$ 7,368**	$ 7,213	$ 7,298
Net income attributable to non-controlling interests in subsidiaries	30(b)	**$ 251**	$ 199	$ 227
Net income attributable to equity holders of the Bank		**$ 7,117**	$ 7,014	$ 7,071
Preferred shareholders		**130**	117	155
Common shareholders		**$ 6,987**	$ 6,897	$ 6,916
Earnings per common share (in dollars)				
Basic	33	**$ 5.80**	$ 5.70	$ 5.69
Diluted	33	**$ 5.77**	$ 5.67	$ 5.66
Dividends per common share (in dollars)	23(a)	**$ 2.88**	$ 2.72	$ 2.56

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

Consolidated Statement of Comprehensive Income

For the year ended October 31 ($ millions)	2016	2015	2014
Net income	**$ 7,368**	$ 7,213	$ 7,298
Other comprehensive income (loss)			
Items that will be reclassified subsequently to net income			
Net change in unrealized foreign currency translation gains (losses):			
Net unrealized foreign currency translation gains (losses)	**614**	3,145	1,607
Net gains (losses) on hedges of net investments in foreign operations	**(300)**	(1,677)	(943)
Income tax expense (benefit):			
Net unrealized foreign currency translation gains (losses)	**(3)**	46	25
Net gains (losses) on hedges of net investments in foreign operations	**(79)**	(433)	(250)
	396	1,855	889
Net change in unrealized gains (losses) on available-for-sale securities:			
Net unrealized gains (losses) on available-for-sale securities	**308**	386	801
Reclassification of net (gains) losses to net income[1]	**(549)**	(966)	(934)
Income tax expense (benefit):			
Net unrealized gains (losses) on available-for-sale securities	**82**	161	186
Reclassification of net (gains) losses to net income	**(151)**	(261)	(281)
	(172)	(480)	(38)
Net change in gains (losses) on derivative instruments designated as cash flow hedges:			
Net gains (losses) on derivative instruments designated as cash flow hedges	**(7)**	1,519	441
Reclassification of net (gains) losses	**357**	(1,444)	(447)
Income tax expense (benefit):			
Net gains (losses) on derivative instruments designated as cash flow hedges	**9**	450	137
Reclassification of net (gains) losses	**83**	(430)	(137)
	258	55	(6)
Other comprehensive income (loss) from investments in associates	**31**	(9)	60
Items that will not be reclassified subsequently to net income			
Net change in remeasurement of employee benefit plan asset and liability:			
Actuarial gains (losses) on employee benefit plans	**(972)**	(3)	(432)
Income tax expense (benefit)	**(256)**	(2)	(112)
	(716)	(1)	(320)
Net change in fair value due to change in own credit risk on financial liabilities designated under the fair value option:			
Change in fair value due to change in own credit risk on financial liabilities designated under the fair value option	**(23)**	20	–
Income tax expense (benefit)	**(7)**	5	–
	(16)	15	–
Other comprehensive income (loss) from investments in associates	**(10)**	1	(2)
Other comprehensive income (loss)	**(229)**	1,436	583
Comprehensive income	**$ 7,139**	$ 8,649	$ 7,881
Comprehensive income attributable to non-controlling interests	**$ 237**	$ 124	$ 249
Comprehensive income attributable to equity holders of the Bank	**$ 6,902**	$ 8,525	$ 7,632
Preferred shareholders	**130**	117	155
Common shareholders	**$ 6,772**	$ 8,408	$ 7,477

(1) Includes amounts related to qualifying hedges.

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

Consolidated Statement of Changes in Equity

($ millions)	Common shares (Note 23)	Retained earnings[1]	Accumulated other comprehensive income (loss): Foreign currency translation	Available-for-sale securities	Cash flow hedges	Other[2]	Other reserves[3]	Total common equity	Preferred shares (Note 23)	Total common and preferred equity	Non-controlling interests: Non-controlling interests in subsidiaries (Note 30(b))	Capital instrument equity holders	Total
Balance as at November 1, 2015	**$ 15,141**	**$ 31,316**	**$ 2,633**	**$ 194**	**$ 7**	**$ (379)**	**$ 173**	**$ 49,085**	**$ 2,934**	**$ 52,019**	**$ 1,460**	**$ –**	**$ 53,479**
Net income	**–**	**6,987**	**–**	**–**	**–**	**–**	**–**	**6,987**	**130**	**7,117**	**251**	**–**	**7,368**
Other comprehensive income (loss)	**–**	**–**	**422**	**(180)**	**257**	**(714)**	**–**	**(215)**	**–**	**(215)**	**(14)**	**–**	**(229)**
Total comprehensive income	**$ –**	**$ 6,987**	**$ 422**	**$ (180)**	**$ 257**	**$ (714)**	**$ –**	**$ 6,772**	**$ 130**	**$ 6,902**	**$ 237**	**$ –**	**$ 7,139**
Shares issued	**391**	**–**	**–**	**–**	**–**	**–**	**(28)**	**363**	**1,350**	**1,713**	**–**	**–**	**1,713**
Shares repurchased/redeemed	**(19)**	**(61)**	**–**	**–**	**–**	**–**	**–**	**(80)**	**(690)**	**(770)**	**–**	**–**	**(770)**
Common dividends paid	**–**	**(3,468)**	**–**	**–**	**–**	**–**	**–**	**(3,468)**	**–**	**(3,468)**	**–**	**–**	**(3,468)**
Preferred dividends paid	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**(130)**	**(130)**	**–**	**–**	**(130)**
Distributions to non-controlling interests	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**(116)**	**–**	**(116)**
Share-based payments	**–**	**–**	**–**	**–**	**–**	**–**	**7**	**7**	**–**	**7**	**–**	**–**	**7**
Other	**–**	**(22)**	**–**	**–**	**–**	**–**	**–**	**(22)**	**–**	**(22)**	**(11)[4]**	**–**	**(33)**
Balance as at October 31, 2016	**$ 15,513**	**$ 34,752**	**$ 3,055**	**$ 14**	**$ 264**	**$ (1,093)**	**$ 152**	**$ 52,657**	**$ 3,594**	**$ 56,251**	**$ 1,570**	**$ –**	**$ 57,821**
Balance as at November 1, 2014	$ 15,231	$ 28,609	$ 700	$ 664	$ (48)	$ (367)	$ 176	$ 44,965	$ 2,934	$ 47,899	$ 1,312	$ –	$ 49,211
Net income	–	6,897	–	–	–	–	–	6,897	117	7,014	199	–	7,213
Other comprehensive income (loss)	–	–	1,933	(470)	55	(7)	–	1,511	–	1,511	(75)	–	1,436
Total comprehensive income	$ –	$ 6,897	$ 1,933	$ (470)	$ 55	$ (7)	$ –	$ 8,408	$ 117	$ 8,525	$ 124	$ –	$ 8,649
Shares issued	104	–	–	–	–	–	(17)	87	–	87	–	–	87
Share repurchased/redeemed	(194)	(761)	–	–	–	–	–	(955)	–	(955)	–	–	(955)
Common dividends paid	–	(3,289)	–	–	–	–	–	(3,289)	–	(3,289)	–	–	(3,289)
Preferred dividends paid	–	–	–	–	–	–	–	–	(117)	(117)	–	–	(117)
Distributions to non-controlling interests	–	–	–	–	–	–	–	–	–	–	(86)	–	(86)
Share-based payments	–	–	–	–	–	–	14	14	–	14	–	–	14
Other	–	(140)[5]	–	–	–	(5)[6]	–	(145)	–	(145)	110[4]	–	(35)
Balance as at October 31, 2015	$ 15,141	$ 31,316	$ 2,633	$ 194	$ 7	$ (379)	$ 173	$ 49,085	$ 2,934	$ 52,019	$ 1,460	$ –	$ 53,479
Balance as reported November 1, 2013	$ 14,516	$ 25,315	$ (173)	$ 705	$ (42)	$ 55	$ 193	$ 40,569	$ 4,084	$ 44,653	$ 1,155	$ 743	$ 46,551
Opening adjustment[7]	–	(247)	–	–	–	(157)	–	(404)	–	(404)	(17)	(743)	(1,164)
Restated balances	14,516	25,068	(173)	705	(42)	(102)	193	40,165	4,084	44,249	1,138	–	45,387
Net income	–	6,916	–	–	–	–	–	6,916	155	7,071	227	–	7,298
Other comprehensive income (loss)	–	–	873	(41)	(6)	(265)	–	561	–	561	22	–	583
Total comprehensive income	$ –	$ 6,916	$ 873	$ (41)	$ (6)	$ (265)	$ –	$ 7,477	$ 155	$ 7,632	$ 249	$ –	$ 7,881
Shares issued	771	3	–	–	–	–	(34)	740	–	740	–	–	740
Shares repurchased/redeemed	(56)	(264)	–	–	–	–	–	(320)	(1,150)	(1,470)	–	–	(1,470)
Common dividends paid	–	(3,110)	–	–	–	–	–	(3,110)	–	(3,110)	–	–	(3,110)
Preferred dividends paid	–	–	–	–	–	–	–	–	(155)	(155)	–	–	(155)
Distributions to non-controlling interests	–	–	–	–	–	–	–	–	–	–	(76)	–	(76)
Share-based payments	–	–	–	–	–	–	30	30	–	30	–	–	30
Other	–	(4)	–	–	–	–	(13)[8]	(17)	–	(17)	1[4]	–	(16)
Balance as at October 31, 2014	$ 15,231	$ 28,609	$ 700	$ 664	$ (48)	$ (367)	$ 176	$ 44,965	$ 2,934	$ 47,899	$ 1,312	$ –	$ 49,211

(1) Includes undistributed retained earnings of $63 (2015 – $61; 2014 – $52) related to a foreign associated corporation, which is subject to local regulatory restriction.
(2) Includes Share from associates, Employee benefits and Own credit risk.
(3) Represents amounts on account of share-based payments (refer to Note 25).
(4) Includes changes to non-controlling interests arising from business combinations and other.
(5) Includes retrospective adjustments primarily related to foreign currency translation on Allowance for Credit Losses with respect to periods prior to 2013 ($152).
(6) Represents retrospective adjustments to reflect the adoption of the own credit risk provisions of IFRS 9 pertaining to financial liabilities designated at fair value through profit or loss in 2015.
(7) Certain prior period amounts are retrospectively adjusted to reflect the adoption of new and amended IFRS standards (IFRS 10 and IAS 19) in 2014.
(8) Includes impact of Tandem SARs voluntarily renounced by certain employees while retaining their corresponding option for shares.

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

Consolidated Statement of Cash Flows

Sources (uses) of cash flows for the year ended October 31 ($ millions)	2016	2015	2014
Cash flows from operating activities			
Net income	**$ 7,368**	$ 7,213	$ 7,298
Adjustment for:			
Net interest income	**(14,292)**	(13,092)	(12,305)
Depreciation and amortization	**684**	584	526
Provisions for credit losses	**2,412**	1,942	1,703
Equity-settled share-based payment expense	**7**	14	30
Net gain on sale of investment securities	**(534)**	(639)	(741)
Net gain on disposition of business	**(116)**	–	–
Realized gain on sale of an investment in an associate	**–**	–	(469)
Unrealized gain on reclassification of an investment in an associate	**–**	–	(174)
Net income from investments in associated corporations	**(414)**	(405)	(428)
Income tax expense	**2,030**	1,853	2,002
Restructuring charge	**378**	–	148
Changes in operating assets and liabilities:			
Trading assets	**(10,044)**	20,302	(13,848)
Securities purchased under resale agreements and securities borrowed	**(5,363)**	13,991	(7,526)
Loans	**(20,355)**	(22,942)	(16,785)
Deposits	**6,702**	13,915	20,224
Obligations related to securities sold short	**4,007**	(8,101)	1,506
Obligations related to assets sold under repurchase agreements and securities lent	**20,865**	(18,982)	7,306
Net derivative financial instruments	**(3,806)**	2,442	(1,147)
Other, net	**1,856**	4,707	7,033
Dividends received	**873**	1,147	1,063
Interest received	**21,099**	19,145	18,438
Interest paid	**(7,787)**	(7,262)	(7,509)
Income tax paid	**(1,471)**	(1,985)	(1,401)
Net cash from/(used in) operating activities	**4,099**	13,847	4,944
Cash flows from investing activities			
Interest-bearing deposits with financial institutions	**28,447**	(8,448)	213
Purchase of investment securities	**(94,441)**	(44,684)	(47,328)
Proceeds from sale and maturity of investment securities	**65,069**	41,649	44,876
Acquisition/sale of subsidiaries, associated corporations or business units, net of cash acquired	**(1,050)**	(701)	2,045
Property and equipment, net of disposals	**(348)**	(282)	(277)
Other, net	**(431)**	(1,053)	(115)
Net cash from/(used in) investing activities	**(2,754)**	(13,519)	(586)
Cash flows from financing activities			
Proceeds from issue of subordinated debentures	**2,465**	1,248	–
Redemption/repayment of subordinated debentures	**(1,035)**	(18)	(1,000)
Proceeds from common shares issued	**391**	101	753
Proceeds from preferred shares issued	**1,350**	–	–
Redemption of preferred shares	**(690)**	–	(1,150)
Common shares purchased for cancellation	**(80)**	(955)	(320)
Cash dividends paid	**(3,598)**	(3,406)	(3,265)
Distributions to non-controlling interests	**(116)**	(86)	(76)
Other, net	**117**	3,379	872
Net cash from/(used in) financing activities	**(1,196)**	263	(4,186)
Effect of exchange rate changes on cash and cash equivalents	**(18)**	305	207
Net change in cash and cash equivalents	**131**	896	379
Cash and cash equivalents at beginning of year[1]	**6,724**	5,828	5,449
Cash and cash equivalents at end of year[1]	**$ 6,855**	$ 6,724	$ 5,828

(1) Represents cash and non-interest bearing deposits with financial institutions (refer to Note 5).

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

NOTES TO THE 2016 CONSOLIDATED FINANCIAL STATEMENTS

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1 Reporting Entity

The Bank of Nova Scotia (the Bank) is a chartered schedule I bank under the Bank Act (Canada) (the Bank Act) and is regulated by the Office of the Superintendent of Financial Institutions (OSFI). The Bank is a global financial services provider offering a diverse range of products and services, including personal, commercial, corporate and investment banking. The head office of the Bank is located at 1709 Hollis Street, Halifax, Nova Scotia, Canada and its executive offices are at Scotia Plaza, 44 King Street West, Toronto, Canada. The common shares of the Bank are listed on the Toronto Stock Exchange and the New York Stock Exchange.

2 Basis of Preparation

Statement of compliance

These consolidated financial statements were prepared in accordance with International Financial Reporting Standards (IFRS) as issued by International Accounting Standards Board (IASB) and accounting requirements of OSFI in accordance with Section 308 of the Bank Act. Section 308 states that, except as otherwise specified by OSFI, the financial statements are to be prepared in accordance with IFRS.

The consolidated financial statements for the year ended October 31, 2016 have been approved by the Board of Directors for issue on November 29, 2016.

Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis except for the following material items that are measured at fair value in the Consolidated Statement of Financial Position:

- Financial assets and liabilities held-for-trading
- Financial assets and liabilities designated at fair value through profit or loss
- Derivative financial instruments
- Available-for-sale investment securities

Functional and presentation currency

These consolidated financial statements are presented in Canadian dollars, which is the Bank's functional currency. All financial information presented in Canadian dollars has been rounded to the nearest million unless otherwise stated.

Management's use of estimates, assumptions and judgments

The Bank's accounting policies require estimates, assumptions and judgments that relate to matters that are inherently uncertain. The Bank has established procedures to ensure that accounting policies are applied consistently. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the year in which the estimates are revised and in any future years affected.

Use of estimates and assumptions

The preparation of these consolidated financial statements, in conformity with IFRS, requires management to make estimates and assumptions that affect the reported amount of assets and liabilities at the date of the consolidated financial statements, and income and expenses during the reporting period. Estimates made by management are based on historical experience and other assumptions that are believed to be reasonable. Key areas of estimation uncertainty include those relating to the allowance for credit losses, the fair value of financial instruments (including derivatives), corporate income taxes, employee benefits, goodwill, provisions, the fair value of all identifiable assets and liabilities as a result of business combinations, impairment of investment securities, impairment of non-financial assets and derecognition of financial assets and liabilities. While management makes its best estimates and assumptions, actual results could differ from these and other estimates.

Significant judgments

In the preparation of these consolidated financial statements, management is required to make significant judgments in the classification and presentation of transactions and instruments and accounting for involvement with other entities.

Significant estimates, assumptions and judgments have been made in the following areas and are discussed as noted in the consolidated financial statements:

Allowance for credit losses	Note 3 Note 12(d)
Fair value of financial instruments	Note 3 Note 6
Corporate income taxes	Note 3 Note 26
Employee benefits	Note 3 Note 27
Goodwill and intangible assets	Note 3 Note 17
Fair value of all identifiable assets and liabilities as a result of business combinations	Note 3 Note 36
Impairment of investment securities	Note 3 Note 11
Impairment of non-financial assets	Note 3 Note 15
Structured entities	Note 3 Note 14
De facto control of other entities	Note 3 Note 30
Derecognition of financial assets and liabilities	Note 3 Note 13
Provisions	Note 3 Note 22

3 Significant Accounting Policies

The significant accounting policies used in the preparation of these consolidated financial statements, including any additional accounting requirements of OSFI, as set out below, have been applied consistently to all periods presented in these consolidated financial statements.

Basis of consolidation

The consolidated financial statements include the assets, liabilities, financial performance and cash flows of the Bank and all of its subsidiaries, after elimination of intercompany transactions and balances. Subsidiaries are defined as entities controlled by the Bank and exclude associates and joint arrangements. The Bank's subsidiaries can be classified as entities controlled through voting interests or structured entities. The Bank consolidates a subsidiary from the date it obtains control. The Bank controls an investee when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. For the Bank to control an entity, all of the three elements of control should be in existence:

- power over the investee;
- exposure, or rights, to variable returns from involvement with the investee; and
- the ability to use power over the investee to affect the amount of the Bank's returns.

The Bank does not control an investee when it is acting as an agent. The Bank assesses whether it is an agent by determining whether it is primarily engaged to act on behalf of and for the benefit of another party or parties. The Bank reassesses whether it controls an investee if facts and circumstances indicate that one or more of the elements of control has changed. Non-controlling interests are presented within equity in the Consolidated Statement of Financial Position separate from equity attributable to common and preferred shareholders of the Bank. Partial sales and incremental purchases of interests in subsidiaries that do not result in a change of control are accounted for as equity transactions with non-controlling interest holders. Any difference between the carrying amount of the interest and the transaction amount is recorded as an adjustment to retained earnings.

Voting-interest subsidiaries

Control is presumed with an ownership interest of more than 50% of the voting rights in an entity unless there are other factors that indicate that the Bank does not control the entity despite having more than 50% of voting rights.

The Bank may consolidate an entity when it owns less than 50% of the voting rights when it has one or more other attributes of power:

- by virtue of an agreement, over more than half of the voting rights;
- to govern the financial and operating policies of the entity under a statute or an agreement;
- to appoint or remove the majority of the members of the board of directors or equivalent governing body and control of the entity is by that board or body; or
- to govern the financial and operating policies of the entity through the size of its holding of voting rights relative to the size and dispersion of holding of the other vote holders and voting patterns at shareholder meetings (i.e., *de facto* control).

Structured entities

Structured entities are designed to accomplish certain well-defined objectives and for which voting or similar rights are not the dominant factor in deciding who controls the entity. The Bank may become involved with structured entities either at the formation stage or at a later date. The Bank controls an investee when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.

The Bank consolidates all structured entities that it controls.

Investments in associates
An associate is an entity in which the Bank has significant influence, but not control, over the operating and financial policies of the entity. Significant influence is ordinarily presumed to exist when the Bank holds between 20% and 50% of the voting rights. The Bank may also be able to exercise significant influence through board representation. The effects of potential voting rights that are currently exercisable or convertible are considered in assessing whether the Bank has significant influence.

Investments in associates are recognized initially at cost, which includes the purchase price and other costs directly attributable to the purchase. Associates are accounted for using the equity method which reflects the Bank's share of the increase or decrease of the post-acquisition earnings and other movements in the associate's equity.

If there is a loss of significant influence and the investment ceases to be an associate, equity accounting is discontinued from the date of loss of significant influence. If the retained interest on the date of loss of significant influence is a financial asset, it is measured at fair value and the difference between the fair value and the carrying value is recorded as an unrealized gain or loss in the Consolidated Statement of Income.

Investments in associates are evaluated for impairment at the end of each financial reporting period, or more frequently if events or changes in circumstances indicate the existence of objective evidence of impairment.

For purposes of applying the equity method for an investment that has a different reporting period from the Bank, adjustments are made for the effects of any significant events or transactions that occur between the reporting date of the investment and the reporting date of the Bank.

Joint arrangements
A joint arrangement is an arrangement over which two or more parties have joint control. Joint control exists only when decisions about the relevant activities (i.e., those that significantly affect the returns of the arrangement) require the unanimous consent of the parties sharing the control of the arrangement. Investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations of each investor, rather than the legal structure of the joint arrangement.

Similar to accounting for investment in associates, for joint ventures, investments are recognized initially at cost and accounted for using the equity method which reflects the Bank's share of the increase or decrease of the post-acquisition earnings and other movements in the joint venture's equity. Investments in joint ventures are evaluated for impairment at the end of each financial reporting period, or more frequently if events or changes in circumstances indicate the existence of objective evidence of impairment.

If there is a loss of joint control and it does not result in the Bank having significant influence over the joint venture, equity accounting is discontinued from the date of loss of joint control. If the retained interest in the former joint venture on the date of loss of joint control is a financial asset, it is measured at fair value and the difference between the fair value and the carrying value is recorded as an unrealized gain or loss in the Consolidated Statement of Income.

Translation of foreign currencies

The financial statements of each of the Bank's foreign operations are measured using its functional currency, being the currency of the primary economic environment of the foreign operation.

Translation gains and losses related to the Bank's monetary items are recognized in non-interest income in the Consolidated Statement of Income. Revenues and expenses denominated in foreign currencies are translated using average exchange rates, except for depreciation and amortization of buildings, equipment and leasehold improvements of the Bank, purchased in foreign currency, which are translated using historical rates. Foreign currency non-monetary items that are measured at historical cost are translated into the functional currency at historical rates. Foreign currency non-monetary items measured at fair value are translated into functional currency using the rate of exchange at the date the fair value was determined. Foreign currency gains and losses on non-monetary items are recognized in the Consolidated Statement of Income or Consolidated Statement of Comprehensive Income consistent with the gain or loss on the non-monetary item.

Unrealized gains and losses arising upon translation of foreign operations, together with any gains or losses arising from hedges of those net investment positions to the extent effective, are credited or charged to net change in unrealized foreign currency translation gains/losses in the Consolidated Statement of Comprehensive Income. On disposal or partial disposal of a foreign operation, resulting in a loss of control, an appropriate portion of the translation differences previously recognized in other comprehensive income are recognized in the Consolidated Statement of Income.

Financial assets and liabilities

Date of recognition
The Bank initially recognizes loans, deposits, subordinated debentures and debt securities issued on the date at which they are originated or purchased. Regular-way purchases and sales of financial assets are recognized on the settlement date. All other financial assets and liabilities, including derivatives, are initially recognized on the trade date at which the Bank becomes a party to the contractual provisions of the instrument.

Initial classification and measurement
The classification of financial assets and liabilities at initial recognition depends on the purpose and intention for which the financial assets are acquired and liabilities issued and their characteristics. The initial measurement of a financial asset or liability is at fair value.

Determination of fair value
Fair value of a financial asset or liability is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants in the principal, or in its absence, the most advantageous market to which the Bank has access at the measurement date.

The Bank values instruments carried at fair value using quoted market prices, where available. Quoted market prices represent a Level 1 valuation. When quoted market prices are not available, the Bank maximizes the use of observable inputs within valuation models. When all significant inputs are observable, the valuation is classified as Level 2. Valuations that require the significant use of unobservable inputs are considered Level 3.

Inception gains and losses are only recognized where the valuation is dependent only on observable market data, otherwise, they are deferred and amortized over the life of the related contract or until the valuation inputs become observable.

IFRS 13 permits a measurement exception that allows an entity to determine the fair value of a group of financial assets and liabilities with offsetting risks based on the sale or transfer of its net exposure to a particular risk (or risks). The Bank has adopted this exception through an accounting policy choice. Consequently, the fair values of certain portfolios of financial instruments are determined based on the net exposure of those instruments to particular market, credit or funding risk.

In determining fair value for certain instruments or portfolios of instruments, valuation adjustments or reserves may be required to arrive at a more accurate representation of fair value. These adjustments include those made for credit risk, bid-offer spreads, unobservable parameters, constraints on prices in inactive or illiquid markets and when applicable funding costs.

Derecognition of financial assets and liabilities

Derecognition of financial assets

The derecognition criteria are applied to the transfer of part of an asset, rather than the asset as a whole, only if such part comprises specifically identified cash flows from the asset, a fully proportionate share of the cash flows from the asset, or a fully proportionate share of specifically identified cash flows from the asset.

A financial asset is derecognized when the contractual rights to the cash flows from the asset have expired; or the Bank transfers the contractual rights to receive the cash flows from the financial asset; or has assumed an obligation to pay those cash flows to an independent third-party; and the Bank has transferred substantially all the risks and rewards of ownership of that asset to an independent third-party. Management determines whether substantially all the risk and rewards of ownership have been transferred by quantitatively comparing the variability in cash flows before and after the transfer. If the variability in cash flows remains significantly similar subsequent to the transfer, the Bank has retained substantially all of the risks and rewards of ownership.

Where substantially all the risks and rewards of ownership of the financial asset are neither retained nor transferred, the Bank derecognizes the transferred asset only if it has lost control over that asset. Control over the asset is represented by the practical ability to sell the transferred asset. If the Bank retains control over the asset, it will continue to recognize the asset to the extent of its continuing involvement. At times such continuing involvement may be in the form of investment in senior or subordinated tranches of notes issued by non-consolidated structured entities.

On derecognition of a financial asset, the difference between the carrying amount and the sum of (i) the consideration received (including any new asset obtained less any new liability assumed) and (ii) any cumulative gain or loss that had been recognized in other comprehensive income is recognized in the Consolidated Statement of Income.

Transfers of financial assets that do not qualify for derecognition are reported as secured financings in the Consolidated Statement of Financial Position.

Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability is discharged, canceled or expires. If an existing financial liability is replaced by another from the same counterparty on substantially different terms, or the terms of the existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability at fair value. The difference in the respective carrying amount of the existing liability and the new liability is recognized as a gain/loss in the Consolidated Statement of Income.

Offsetting of financial instruments

Financial assets and financial liabilities with the same counterparty are offset, with the net amount reported in the Consolidated Statement of Financial Position, only if there is currently a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the assets and settle the liabilities simultaneously. When financial assets and financial liabilities are offset in the Consolidated Statement of Financial Position, the related income and expense items will also be offset in the Consolidated Statement of Income, unless specifically prohibited by an applicable accounting standard.

Cash and deposits with financial institutions

Cash and deposits with financial institutions comprises cash, cash equivalents, demand deposits with banks and other financial institutions, highly liquid investments that are readily convertible to cash, subject to insignificant risk of changes in value. These investments are those with less than three months' maturity from the date of acquisition.

Precious metals

Precious metals are carried at fair value less costs to sell, and any changes in fair value less costs to sell are credited or charged to non-interest income – trading revenues in the Consolidated Statement of Income.

Trading assets and liabilities

Trading assets and liabilities are measured at fair value in the Consolidated Statement of Financial Position, with transaction costs recognized immediately in the Consolidated Statement of Income as part of non-interest income – trading revenues. Gains and losses realized on disposal and unrealized gains and losses due to fair value changes on trading assets and liabilities, other than certain derivatives, are recognized as part of non-interest income – trading revenues in the Consolidated Statement of Income. Trading assets and liabilities are not reclassified subsequent to their initial recognition.

Financial assets and liabilities designated at fair value through profit or loss

Financial assets and financial liabilities classified in this category are those that have been designated by the Bank on initial recognition. The Bank may only designate an instrument at fair value through profit or loss when one of the following criteria is met, and designation is determined on an instrument by instrument basis:

- The designation eliminates or significantly reduces the inconsistent treatment that would otherwise arise from measuring the assets or liabilities on a different basis; or

- The assets and liabilities are part of a group of financial assets, financial liabilities or both which are managed together and their performance evaluated on a fair value basis, in accordance with a documented risk management or investment strategy and the information about the group is provided to key management personnel and it can be demonstrated that significant financial risks are eliminated or significantly reduced; or
- The financial instrument contains one or more embedded derivatives which significantly modify the cash flows otherwise required.

Financial assets and financial liabilities designated at fair value through profit or loss are recorded in the Consolidated Statement of Financial Position at fair value. For assets designated at fair value through profit or loss, changes in fair value are recognized in the Consolidated Statement of Income. For liabilities designated at fair value through profit or loss, changes in fair value arising from changes in the Bank's own credit risk are recognized in the Consolidated Statement of Comprehensive Income (OCI), without subsequent reclassification to the Consolidated Statement of Income, unless doing so would create or increase an accounting mismatch. All other changes in fair value are recognized in the Consolidated Statement of Income.

Securities purchased and sold under resale agreements
Securities purchased under resale agreements (reverse repurchase agreements) and securities sold under agreements to repurchase (repurchase agreements) are treated as collateralized financing arrangements and are recorded at amortized cost. The party disbursing the cash takes possession of the securities serving as collateral for the financing and having a market value equal to, or in excess of, the principal amount loaned. The securities received under reverse repurchase agreements and securities delivered under repurchase agreements are not recognized on, or derecognized from, the Consolidated Statement of Financial Position, unless the risks and rewards of ownership are obtained or relinquished. The related income and interest expense are recorded on an accrual basis in the Consolidated Statement of Income.

Obligations related to securities sold short
Obligations related to securities sold short arise in dealing and market-making activities where debt securities and equity shares are sold without possessing such securities.

Similarly, if securities purchased under an agreement to resell are subsequently sold to third parties, the obligation to return the securities is recorded as a short sale within obligations related to securities sold short in the Consolidated Statement of Financial Position. These trading liabilities are measured at fair value with any gains or losses included in non-interest income – trading revenues in the Consolidated Statement of Income. Interest expense accruing on debt securities sold short is recorded in interest expense – other, in the Consolidated Statement of Income.

Securities lending and borrowing
Securities lending and borrowing transactions are usually collateralized by securities or cash. The transfer of the securities to counterparties is only reflected on the Consolidated Statement of Financial Position if the risks and rewards of ownership are also transferred. Cash advanced or received as collateral is recorded as an asset or liability. Fees received and paid are reported as fee and commission revenues and expenses in the Consolidated Statement of Income, respectively.

Securities borrowed are not recognized on the Consolidated Statement of Financial Position, unless they are then sold to third parties, in which case the obligation to return the securities is recorded as a trading liability and measured at fair value with any gains or losses included in non-interest income – trading revenues, in the Consolidated Statement of Income.

Derivative instruments
Derivative instruments are contracts whose value is derived from interest rates, foreign exchange rates, commodities, equity prices or other financial variables. Most derivative instruments can be characterized as interest rate contracts, foreign exchange and gold contracts, commodity contracts, equity contracts or credit contracts. Derivative instruments are either exchange-traded contracts or negotiated over-the-counter contracts. Negotiated over-the-counter contracts include swaps, forwards and options.

The Bank enters into these derivative contracts for trading purposes, as well as to manage its risk exposures (i.e., to manage the Bank's non-trading interest rate, foreign currency and other exposures). Trading activities are undertaken to meet the needs of the Bank's customers, as well as for the Bank's own account to generate income from trading operations.

Derivatives embedded in other financial instruments or host contracts are treated as separate derivatives when the following conditions are met:
- their economic characteristics and risks are not closely related to those of the host contract;
- a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and
- the combined contract is not held for trading or designated at fair value through profit or loss.

Where an embedded derivative is separable from the host contract but the fair value, as at the acquisition or reporting date, cannot be reliably measured separately, the entire combined contract is measured at fair value. All embedded derivatives are presented on a combined basis with the host contracts although they are separated for measurement purposes when conditions requiring separation are met. Subsequent changes in fair value of embedded derivatives are recognized in non-interest income in the Consolidated Statement of Income.

All derivatives, including embedded derivatives that must be separately accounted for, are recorded at fair value in the Consolidated Statement of Financial Position. The determination of the fair value of derivatives includes consideration of credit risk, estimated funding costs and ongoing direct costs over the life of the instruments. Inception gains or losses on derivatives are only recognized where the valuation is dependent only on observable market data, otherwise, they are deferred and amortized over the life of the related contract, or until the valuation inputs become observable.

The gains and losses resulting from changes in fair values of trading derivatives are included in non-interest income – trading revenues in the Consolidated Statement of Income.

Changes in the fair value of non-trading derivatives that do not qualify for hedge accounting are recorded in the Consolidated Statement of Income in non-interest income – other. Where derivative instruments are used to manage the volatility of share-based payment expense, these derivatives are carried at fair value with changes in the fair value in relation to units hedged included in non-interest expenses – salaries and employee benefits in the Consolidated Statement of Income.

Changes in the fair value of derivatives that qualify for hedge accounting are recorded as non-interest income – other in the Consolidated Statement of Income for fair value hedges and other comprehensive income in the Consolidated Statement of Comprehensive Income for cash flow hedges and net investment hedges.

Investment securities
Investment securities are comprised of available-for-sale and held-to-maturity securities.

Available-for-sale investment securities
Available-for-sale investment securities include equity and debt securities. Equity investments classified as available-for-sale are those which are neither classified as held-for-trading nor designated at fair value through profit or loss. Debt securities in this category are those which are intended to be held for an indefinite period of time and which may be sold in response to needs for liquidity or in response to changes in the market conditions. Available-for-sale investment securities are recorded at fair value with unrealized gains and losses recorded in other comprehensive income. When realized, these gains and losses are reclassified from the Consolidated Statement of Comprehensive Income and recorded in the Consolidated Statement of Income on an average cost basis. For non-monetary investment securities designated as available-for-sale, the gain or loss recognized in other comprehensive income includes any related foreign exchange gains or losses. Foreign exchange gains and losses that relate to the amortized cost of an available-for-sale debt security are recognized in the Consolidated Statement of Income.

Premiums, discounts and related transaction costs on available-for-sale debt securities are amortized over the expected life of the instrument to interest income – securities in the Consolidated Statement of Income using the effective interest method.

Transaction costs on available-for-sale equity securities are initially capitalized and then recognized as part of the net realized gain/loss on subsequent sale of the instrument in the Consolidated Statement of Income.

Held-to-maturity investment securities
Held-to-maturity investment securities are non-derivative assets with fixed or determinable payments and fixed maturity that the Bank has the positive intent and ability to hold to maturity, and which do not meet the definition of a loan, are not held-for-trading, and are not designated at fair value through profit or loss or as available-for-sale. After initial measurement, held-to-maturity investment securities are carried at amortized cost using the effective interest method, less impairment. Amortized cost is calculated by taking into account any discount or premium on acquisition, transaction costs and fees that are an integral part of the effective interest rate. The amortization is included in interest income – securities in the Consolidated Statement of Income.

A sale or reclassification of a more than an insignificant amount of held-to-maturity investments would result in the reclassification of all held-to-maturity investments as available-for-sale, and would prevent the Bank from classifying investment securities as held-to-maturity for the current and the following two financial years. However, sales and reclassifications in any of the following circumstances would not trigger a reclassification:

- Sales or reclassifications that are so close to maturity that changes in the market rate of interest would not have a significant effect on the financial asset's fair value;
- Sales or reclassifications after the Bank has collected substantially all of the asset's original principal; or
- Sales or reclassifications attributable to non-recurring isolated events beyond the Bank's control that could not have been reasonably anticipated.

Impairment of investment securities
Investment securities are evaluated for impairment at the end of each reporting period, or more frequently if events or changes in circumstances indicate the existence of objective evidence of impairment.

In the case of equity instruments classified as available-for-sale, a significant or prolonged decline in the fair value of the security below its original cost is objective evidence of impairment. In the case of debt instruments classified as available-for-sale and held-to-maturity investment securities, impairment is assessed based on the same criteria as impairment of loans.

When a decline in value of available-for-sale debt or equity instrument is due to impairment, the carrying value of the security continues to reflect fair value. Losses arising from impairment are reclassified from accumulated other comprehensive income and included in net gain on investment securities within non-interest income in the Consolidated Statement of Income.

The losses arising from impairment of held-to-maturity investment securities are recognized in net gain on investment securities within non-interest income in the Consolidated Statement of Income.

Reversals of impairment losses on available-for-sale debt instruments resulting from increases in fair value related to events occurring after the date of impairment are included in net gain on investment securities within non-interest income in the Consolidated Statement of Income, to a maximum of the original impairment charge. Reversals of impairment on available-for-sale equity instruments are not recognized in the Consolidated Statement of Income; increases in fair value of such instruments after impairment are recognized in accumulated other comprehensive income.

Reversals of impairment losses on held-to-maturity investment securities are included in net gain on investment securities within non-interest income in the Consolidated Statement of Income, to a maximum of the amortized cost of the investment before the original impairment charge.

Loans
Loans include loans and advances originated or purchased by the Bank which are not classified as held-for-trading, held-to-maturity or designated at fair value. Debt securities, which are not trading securities or have not been designated as available-for-sale securities and that are not quoted in an active market, are also classified as loans.

Loans originated by the Bank are recognized when cash is advanced to a borrower. Loans purchased are recognized when cash consideration is paid by the Bank. Loans are measured at amortized cost using the effective interest method, less any impairment losses. Loans are stated net of allowance for credit losses.

Purchased loans

All purchased loans are initially measured at fair value on the date of acquisition. In arriving at the fair value, the Bank considers interest rate mark adjustments and credit mark adjustments. As a result of recording all purchased loans at fair value, no allowances for credit losses are recorded in the Consolidated Statement of Financial Position on the date of acquisition. Consequently none of the purchased loans are considered to be impaired on the date of acquisition.

The interest rate mark on the date of acquisition is principally set up for fixed interest rate loans and captures the impact of the interest rate differential between the contractual rate of interest on the loan and the prevailing interest rate on the loan on the date of acquisition for the remaining term. The interest rate mark is fully amortized into interest income in the Consolidated Statement of Income over the expected life of the loan using the effective interest method.

An aggregate credit mark adjustment is established to capture management's best estimate of cash flow shortfalls on the loans over their life time as determined at the date of acquisition. The credit mark adjustment comprises of both an incurred loss mark and a future expected loss mark.

For individually assessed loans, the credit mark established at the date of acquisition is tracked over the life of the loan. Changes to the expected cash flows of these loans from those expected at the date of acquisition are recorded as a charge/recovery in the provision for credit losses in the Consolidated Statement of Income.

Where loans are not individually assessed for determining losses, a portfolio approach is taken to determine expected losses at the date of acquisition. The portfolio approach will result in both an incurred loss mark and a future expected loss mark. The incurred loss mark is assessed at the end of each reporting period against the performance of the loan portfolio and an increase in expected cash flows will result in recovery in provision for credit losses in the Consolidated Statement of Income while any cash flows lower than expected will result in an additional provision for credit losses. The future expected loss mark is amortized into income as losses are recognized or as the portfolio of loans winds down over its expected life. An assessment is required at the end of each reporting period to determine the reasonableness of the unamortized balance in relation to the loan portfolio. An overall benefit is only recognized to the extent that the amortized amount is greater than the actual losses incurred. A net charge is recorded if the actual losses exceed the amortized amounts.

Loan impairment and allowance for credit losses

The Bank considers a loan to be impaired when there is objective evidence of impairment as a result of one or more loss events that occurred after the date of initial recognition of the loan and the loss event has an impact on the estimated future cash flows of the loan that can be reliably estimated. Objective evidence is represented by observable data that comes to the attention of the Bank and includes events that indicate:

- significant financial difficulty of the borrower;
- a default or delinquency in interest or principal payments;
- a high probability of the borrower entering a phase of bankruptcy or a financial reorganization;
- a measurable decrease in the estimated future cash flows from the loan or the underlying assets that back the loan.

If a payment on a loan is contractually 90 days in arrears, the loan will be classified as impaired, if not already classified as such, unless the loan is fully secured, the collection of the debt is in process, and the collection efforts are reasonably expected to result in repayment of the loan or in restoring it to a current status within 180 days from the date a payment has become contractually in arrears. Finally, a loan that is contractually 180 days in arrears is classified as impaired in all situations, except when it is guaranteed or insured by the Canadian government, the provinces or a Canadian government agency; such loans are classified as impaired if the loan is contractually in arrears for 365 days. Any credit card loan that has a payment that is contractually 180 days in arrears is written off.

Losses expected as a result of future events are not recognized.

The Bank considers evidence of impairment for loans and advances at both an individual and collective level.

Individual impairment allowance

For all loans that are considered individually significant, the Bank assesses on a case-by-case basis at each reporting period whether an individual allowance for loan losses is required.

For those loans where objective evidence of impairment exists and the Bank has determined the loan to be impaired, impairment losses are determined based on the Bank's aggregate exposure to the customer considering the following factors:

- the customer's ability to generate sufficient cash flow to service debt obligations;
- the extent of other creditors' commitments ranking ahead of, or pari passu with, the Bank and the likelihood of other creditors continuing to support the company;
- the complexity of determining the aggregate amount and ranking of all creditor claims and the extent to which legal and insurance uncertainties are evident; and
- the realizable value of security (or other credit mitigants) and likelihood of successful repossession.

Impairment losses are calculated by discounting the expected future cash flows of a loan at its original effective interest rate, and comparing the resultant present value with the loan's current carrying amount. This results in interest income being recognized using the original effective interest rate.

Collective impairment allowance

For loans that have not been individually assessed as being impaired, the Bank pools them into groups to assess them on a collective basis. Collective allowances are calculated for impaired loans and performing loans. Allowances related to performing loans estimate probable incurred losses that are inherent in the portfolio but have not yet been specifically identified as impaired.

Internal risk rating parameters are used in the calculation of the collective impairment allowance. For non-retail loan portfolios, internal risk rating parameters form the basis for calculating the quantitative portion of the collective allowance for performing loans:

- Probability of Default rates (PD) which are based upon the internal risk rating for each borrower;
- Loss Given Default rates (LGD); and
- Exposure at Default factors (EAD).

Funded exposures are multiplied by the borrower's PD and by the relevant LGD parameter.

Committed but undrawn exposures are multiplied by the borrower's PD, by the relevant LGD parameter, and by the relevant EAD parameter. A model stress component is also applied to recognize uncertainty in the credit risk parameters and the fact that current actual loss rates may differ from the long-term averages included in the model.

Retail loans

Retail loans represented by residential mortgages, credit cards and other personal loans are considered by the Bank to be homogeneous groups of loans that are not considered individually significant. All homogeneous groups of loans are assessed for impairment on a collective basis.

Mortgages are collectively assessed for impairment, taking into account number of days past due, historical loss experience and incorporating both quantitative and qualitative factors including the current business and economic environment and the realizable value of collateral to determine the appropriate level of the collective impairment allowance.

A roll rate methodology is used to determine impairment losses on a collective basis for credit cards and other personal loans because individual loan assessment is impracticable. Under this methodology, loans with similar credit characteristics are grouped into ranges according to the number of days past due and statistical analysis is used to estimate the likelihood that loans in each range will progress through the various stages of delinquency and ultimately prove irrecoverable. This methodology employs statistical analyses of historical data and experience of delinquency and default to estimate the amount of loans that will eventually be written off as a result of the events not identifiable on an individual loan basis. When the portfolio size is small or when information is insufficient or not reliable enough to adopt a roll rate methodology, the Bank adopts a basic formulaic approach based on historical loss rate experience.

Performing loans

Over and above the individually assessed and retail roll rate allowances, loans that were subject to individual assessment for which no evidence of impairment existed, are grouped together according to their credit risk characteristics for the purpose of reassessing them on a collective basis. This reflects impairment losses that the Bank has incurred as a result of events that have occurred but where the individual loss has not been identified.

The collective impairment allowance for such loans is determined after taking into account:

(a) historical loss experience in portfolios of similar credit risk characteristics (for example, by industry sector, loan grade or product);
(b) the estimated period between impairment occurring and the loss being identified and evidenced by the establishment of an appropriate allowance against the individual loan; and
(c) management's experienced judgment as to whether current economic and credit conditions are such that the actual level of inherent losses at the reporting date is likely to be greater or less than that suggested by historical experience. As soon as information becomes available which identifies losses on individual loans within the group, those loans are removed from the group and assessed on an individual basis for impairment.

Provision for credit losses on off-balance sheet positions

A provision is set up for the Bank's off-balance sheet positions and recorded in other liabilities on the Consolidated Statement of Financial Position. The process to determine the provision for off-balance sheet positions is similar to the methodology used for loans. Any change in the provision is recorded in the Consolidated Statement of Income as provision for credit losses.

Write-off of loans

Loans (and the related impairment allowance accounts) are normally written off, either partially or in full, when there is no realistic prospect of recovery. Where loans are secured, write-off is generally after receipt of any proceeds from the realization of security. In circumstances where the net realizable value of any collateral has been determined and there is no reasonable expectation of further recovery, write-off may be earlier.

Reversals of impairment

If the amount of an impairment loss related to loans decreases in a subsequent period, and the decrease can be related objectively to an event occurring after the impairment was recognized, the excess is written back by reducing the loan impairment allowance account accordingly. The write-back is recognized in the provision for credit losses in the Consolidated Statement of Income.

Restructured loans

Restructured loans include loans where the Bank has renegotiated the original terms of a loan by granting a concession to the borrower (concessions). These concessions include interest rate adjustments, deferral or extension of principal or interest payments and forgiveness of a portion of principal or interest. Once the terms of the loan have been renegotiated and agreed upon with the borrower the loan is considered a restructured loan. The investment in the loan is reduced as of the date of the restructuring to the amount of the net expected cash flows receivable under the modified terms, discounted at the original effective interest rate inherent in the loan. The loan is no longer considered past due and the reduction in the carrying value of the loan is recognized as a charge for loan impairment in the Consolidated Statement of Income in the period in which the loan is restructured. In other cases, restructuring may be considered substantial enough to result in recognition of a new loan.

Customer's liability under acceptances

The Bank's potential liability under acceptances is reported as a liability in the Consolidated Statement of Financial Position. The Bank has equivalent claims against its customers in the event of a call on these commitments, which are reported as an asset. Fees earned are reported in fee and commission revenues – banking fees in the Consolidated Statement of Income.

Hedge accounting

The Bank formally documents all hedging relationships and its risk management objective and strategy for undertaking these hedge transactions at inception. The hedge documentation includes identification of the asset, liability, firm commitment or highly probable forecasted transaction being hedged, the nature of the risk being hedged, the hedging instrument used and the method used to assess the effectiveness of the hedge. The Bank also formally assesses, both at each hedge's inception and on an ongoing basis, whether the hedging instruments are highly effective in offsetting changes in fair value or cash flows of hedged items. Hedge ineffectiveness is measured and recorded in non-interest income – other in the Consolidated Statement of Income.

There are three types of hedges: (i) fair value hedges, (ii) cash flow hedges and (iii) net investment hedges.

Fair value hedges

For fair value hedges, the change in fair value of the hedging instrument is offset in the Consolidated Statement of Income by the change in fair value of the hedged item attributable to the hedged risk. The Bank utilizes fair value hedges primarily to convert fixed rate financial instruments to floating rate financial instruments. Hedged items include available-for-sale debt and equity securities, loans, deposit liabilities and subordinated debentures. Hedging instruments include single-currency interest rate swaps, cross-currency interest rate swaps, foreign currency forwards and foreign currency liabilities.

Cash flow hedges

For cash flow hedges, the change in fair value of the hedging instrument, to the extent effective, is recorded in other comprehensive income until the corresponding gains and losses on the hedged item is recognized in income. The Bank utilizes cash flow hedges primarily to hedge the variability in cash flows relating to floating rate financial instruments and highly probable forecasted revenues. Hedged items include available-for-sale debt securities, loans, deposit liabilities and highly probable forecasted transactions. Hedging instruments include single-currency interest rate swaps, cross-currency interest rate swaps, total return swaps and foreign currency forwards.

Net investment hedges

For net investment hedges, the change in fair value of the hedging instrument, to the extent effective, is recorded in other comprehensive income until the corresponding cumulative translation adjustments on the hedged net investment are recognized in income. The Bank designates foreign currency liabilities and foreign currency forwards as hedging instruments to manage the foreign currency exposure and impact on capital ratios arising from foreign operations.

Property and equipment

Land, buildings and equipment

Land is carried at cost. Buildings (including building fittings), equipment, and leasehold improvements are carried at cost less accumulated depreciation and accumulated impairment losses, if any. Cost includes expenditures that are directly attributable to the acquisition of the asset. Depreciation is calculated using the straight-line method over the estimated useful life of the related asset less any residual value as follows: buildings – 40 years, building fittings – 15 years, equipment 3 to 10 years, and leasehold improvements – lease term determined by the Bank. Depreciation expense is included in the Consolidated Statement of Income under non-interest expenses – depreciation and amortization. Depreciation methods, useful lives and residual values are reassessed at each financial year-end and adjusted as appropriate.

When major components of building and equipment have different useful lives, they are accounted for separately and depreciated over each component's estimated useful life.

Net gains and losses on disposal are included in non-interest income – other in the Consolidated Statement of Income in the year of disposal.

Investment property

Investment property is property held either for rental income or for capital appreciation or for both. The Bank holds certain investment properties which are presented in property and equipment on the Consolidated Statement of Financial Position.

Investment property is carried at cost less accumulated depreciation and any accumulated impairment losses. Depreciation is calculated using the straight-line method over the estimated useful life of 40 years. Depreciation methods, useful lives and residual values are reassessed at each financial year-end and adjusted as appropriate.

Assets held-for-sale

Non-current non-financial assets (and disposal groups) are classified as held-for-sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. These assets meet the criteria for classification as held-for-sale if they are available for immediate sale in their present condition and their sale is considered highly probable to occur within one year.

Non-current non-financial assets classified as held-for-sale are measured at the lower of their carrying amount and fair value (less costs to sell) and are presented within other assets in the Consolidated Statement of Financial Position. Any subsequent write-down to fair value less costs to sell is recognized in the Consolidated Statement of Income, in non-interest income. Any subsequent increase in the fair value less costs to sell, to the extent this does not exceed the cumulative write-down, is also recognized in non-interest income, together with any realized gains or losses on disposal.

Non-financial assets acquired in exchange for loans as part of an orderly realization are recorded as assets held-for-sale or assets held-for-use. If the acquired asset does not meet the requirement to be considered held-for-sale, the asset is considered held-for-use, measured initially at cost which equals the carrying value of the loan and accounted for in the same manner as a similar asset acquired in the normal course of business.

Business combinations and goodwill

The Bank follows the acquisition method of accounting for the acquisition of subsidiaries. The Bank considers the date on which control is obtained and it legally transfers the consideration for the acquired assets and assumed liabilities of the subsidiary to be the date of acquisition. The cost of an acquisition is measured at the fair value of the consideration paid. The fair value of the consideration transferred by the Bank in a business

combination is calculated as the sum of the acquisition date fair value of the assets transferred by the Bank, the liabilities incurred by the Bank to former owners of the acquiree, and the equity interests, including any options, issued by the Bank. The Bank recognizes the acquisition date fair values of any previously held investment in the subsidiary and contingent consideration as part of the consideration transferred in exchange for the acquisition. A gain or loss on any previously held investments of an acquiree is recognized in non-interest income – other in the Consolidated Statement of Income.

In general, all identifiable assets acquired (including intangible assets) and liabilities assumed (including any contingent liabilities) are measured at the acquisition date fair value. The Bank records identifiable intangible assets irrespective of whether the assets have been recognized by the acquiree before the business combination. Non-controlling interests, if any, are recognized at their proportionate share of the fair value of identifiable assets and liabilities, unless otherwise indicated. Where the Bank has an obligation to purchase a non-controlling interest for cash or another financial asset, a portion of the non-controlling interest is recognized as a financial liability based on management's best estimate of the present value of the redemption amount. Where the Bank has a corresponding option to settle the purchase of a non-controlling interest by issuing its own common shares, no financial liability is recorded.

Any excess of the cost of acquisition over the Bank's share of the net fair value of the identifiable assets acquired and liabilities assumed is recorded as goodwill. If the cost of acquisition is less than the fair value of the Bank's share of the identifiable assets acquired and liabilities assumed, the resulting gain is recognized immediately in non-interest income – other in the Consolidated Statement of Income.

During the measurement period (which is within one year from the acquisition date), the Bank may, on a retrospective basis, adjust the amounts recognized at the acquisition date to reflect new information obtained about facts and circumstances that existed as of the acquisition date.

The Bank accounts for acquisition-related costs as expenses in the periods in which the costs are incurred and the services are received.

Subsequent to acquisition, the Bank accounts for the following assets and liabilities recognized in a business combination as described below:

- Contingent liabilities, until resolved, are measured at the higher of the amount that would be recognized as a provision or the amount initially recognized, with any change recognized in the Consolidated Statement of Income.
- Indemnification assets are measured on the same basis as the item to which the indemnification relates.
- Contingent consideration classified as a liability is measured at fair value, with any change recognized in the Consolidated Statement of Income.
- Liabilities to non-controlling interest holders when remeasured at the end of each reporting period, a corresponding change is recorded in equity.

After initial recognition of goodwill in a business combination, goodwill in aggregate is measured at cost less any accumulated impairment losses. Goodwill is not amortized but tested for impairment annually and when circumstances indicate that the carrying value may be impaired.

Goodwill is reviewed at each reporting date to determine whether there is any indication of impairment. For the purpose of impairment testing, goodwill acquired in a business combination is, on the acquisition date, allocated to each of the Bank's group of cash-generating units (CGUs) that is expected to benefit from the combination. CGUs to which goodwill has been allocated are aggregated so that the level at which impairment is tested reflects the lowest level at which goodwill is monitored for internal management purposes. Goodwill impairment, at a standalone subsidiary level, may not in itself result in an impairment at the consolidated Bank level.

The Bank determines the carrying value of the CGU using a regulatory capital approach based on credit, market, and operational risks, and leverage, consistent with the Bank's capital attribution for business line performance measurement. The recoverable amount is the greater of fair value less costs of disposal and value in use. If either fair value less costs of disposal or value in use exceeds the carrying amount, there is no need to determine the other. The recoverable amount of the CGU has been determined using the fair value less costs of disposal method. The estimation of fair value less costs of disposal involves significant judgment in the determination of inputs. In determining fair value less costs of disposal, an appropriate valuation model is used which considers various factors including normalized net income, control premiums and price earnings multiples. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded subsidiaries or other available fair value indicators. An impairment loss is recognized if the carrying amount of the CGU exceeds the recoverable amount. An impairment loss, in respect of goodwill, is not reversed.

Intangible assets

Intangible assets represent identifiable non-monetary assets and are acquired either separately or through a business combination or generated internally. The Bank's intangible assets are mainly comprised of computer software, customer relationships, contract intangibles, core deposit intangibles and fund management contracts.

The cost of a separately acquired intangible asset includes its purchase price and directly attributable costs of preparing the asset for its intended use. Intangibles acquired as part of a business combination are initially recognized at fair value.

In respect of internally generated intangible assets, cost includes all directly attributable costs necessary to create, produce, and prepare the asset to be capable of operating in the manner intended by management.

After initial recognition, an intangible asset is carried at its cost less any accumulated amortization and accumulated impairment losses.

Intangible assets that have finite useful lives are initially measured at cost and are amortized on a straight-line basis over their useful lives as follows: computer software – 5 to 10 years; and other intangible assets – 5 to 20 years. Amortization expense is included in the Consolidated Statement of Income under operating expenses – depreciation and amortization. As intangible assets are considered to be non-financial assets, the impairment model for non-financial assets is applied. Intangible assets with indefinite useful lives are not amortized but are tested for impairment annually and when circumstances indicate that the carrying value may be impaired.

Impairment of non-financial assets

The carrying amount of the Bank's non-financial assets, other than goodwill and indefinite life intangible assets and deferred tax assets which are separately addressed, is reviewed at each reporting date to determine whether there is any indication of impairment. For the purpose of impairment testing, non-financial assets that cannot be tested individually are grouped together into the smallest group of assets that generate cash inflows from continuing use that are largely independent from the cash inflows of other assets or groups of assets.

If any indication of impairment exists then the asset's recoverable amount is estimated. The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs of disposal. The Bank's corporate assets do not generate separate cash inflows. If there is an indication that a corporate asset may be impaired, then the recoverable amount is determined for the CGU to which the corporate asset belongs.

An impairment loss is recognized if the carrying amount of an asset or a CGU exceeds its recoverable amount. Impairment losses of continuing operations are recognized in the Consolidated Statement of Income in those expense categories consistent with the nature of the impaired asset. Impairment losses recognized in prior periods are reassessed at each reporting date for any indication that the loss had decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized. Such reversal is recognized in the Consolidated Statement of Income.

Significant judgment is applied in determining the non-financial asset's recoverable amount and assessing whether certain events or circumstances constitute objective evidence of impairment.

Corporate income taxes

The Bank follows the balance sheet liability method for corporate income taxes. Under this method, deferred tax assets and liabilities represent the cumulative amount of tax applicable to temporary differences which are the differences between the carrying amount of the assets and liabilities, and their values for tax purposes. Deferred tax assets are recognized only to the extent it is probable that sufficient taxable profits will be available against which the benefit of these deferred tax assets can be utilized.

Deferred tax assets and liabilities are measured using enacted or substantively enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

Deferred and current tax assets and liabilities are only offset when they arise in the same tax reporting group and where the Bank has both the legal right and the intention to settle on a net basis or to realize the asset and settle the liability simultaneously.

The Bank maintains provisions for uncertain tax positions that it believes appropriately reflect the risk of tax positions under discussion, audit, dispute, or appeal with tax authorities, or which are otherwise considered to involve uncertainty. These provisions are made using the Bank's best estimate of the amount expected to be paid based on an assessment of all relevant factors, which are reviewed at the end of each reporting period.

Income tax is recognized in the Consolidated Statement of Income except where it relates to items recognized in other comprehensive income or directly in equity, in which case income tax is recognized in the same line as the related item.

Leases

Bank as a lessor

Assets leased to customers under agreements which transfer substantially all the risks and rewards of ownership, with or without ultimate legal title, are classified as finance leases and presented within loans in the Consolidated Statement of Financial Position. When assets held are subject to a finance lease, the leased assets are derecognized and a receivable is recognized which is equal to the present value of the minimum lease payments, discounted at the interest rate implicit in the lease. Initial direct costs incurred in negotiating and arranging a finance lease are incorporated into the receivable through the discount rate applied to the lease. Finance lease income is recognized over the lease term based on a pattern reflecting a constant periodic rate of return on the net investment in the finance lease. Finance lease income is included in the Consolidated Statement of Income under interest income from loans.

Assets leased to customers under agreements which do not transfer substantially all the risks and rewards of ownership are classified as operating leases. The leased assets are included within property and equipment on the Bank's Consolidated Statement of Financial Position. Rental income is recognized on a straight-line basis over the period of the lease in non-interest income – other in the Consolidated Statement of Income. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized as an expense on a straight-line basis over the lease term.

Bank as a lessee

Assets held under finance leases are initially recognized as property and equipment in the Consolidated Statement of Financial Position at an amount equal to the fair value of the leased asset or, if lower, the present value of the minimum lease payments. The corresponding finance lease obligation is included in other liabilities in the Consolidated Statement of Financial Position. The discount rate used in calculating the present value of the minimum lease payments is the interest rate implicit in the lease. Contingent rentals are recognized as expense in the periods in which they are incurred.

Operating lease rentals payable are recognized as an expense on a straight-line basis over the lease term, which commences when the lessee controls the physical use of the asset. Lease incentives are treated as a reduction of rental expense and are also recognized over the lease term on a straight-line basis. Contingent rentals arising under operating leases are recognized as an expense in the period in which they are incurred.

Sale and lease-back

Where the Bank enters into a sale leaseback transaction for a non-financial asset at fair market value that results in the Bank retaining an operating lease (where the buyer/lessor retains substantially all risks and rewards of ownership), any gains and losses are recognized immediately in net income. Where the sale leaseback transaction results in a finance lease, any gain on sale is deferred and recognized in net income over the remaining term of the lease.

Leasehold improvements

Leasehold improvements are investments made to customize buildings and offices occupied under operating lease contracts to make them suitable for their intended purpose. The present value of estimated reinstatement costs to bring a leased property into its original condition at the end of the lease, if required, is capitalized as part of the total leasehold improvements costs. At the same time, a corresponding liability is recognized to reflect the obligation incurred. Reinstatement costs are recognized in net income through depreciation of the capitalized leasehold improvements over their estimated useful life.

Provisions

A provision, including for restructuring, is recognized if, as a result of a past event, the Bank has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation.

The amount recognized as a provision is the Bank's best estimate of the consideration required to settle the present obligation, taking into account the risks and uncertainties surrounding the obligation. If the effect of the time value of money is considered material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and, where appropriate, the risks specific to the liability. The increase in the provision due to the passage of time is recorded as interest expense – other in the Consolidated Statement of Income.

Insurance contracts

Gross premiums for life insurance contracts are recognized as income when due. Gross premiums for non-life insurance business primarily property and casualty are recognized as income over the term of the insurance contracts. Unearned premiums represent the portion of premiums written in the current year that relate to the period of risk after the reporting date. Insurance claims recoveries are accounted as income in the same period as the related claims.

Gross insurance claims for life insurance contracts reflect the cost of all claims arising during the year. Gross insurance claims for property and casualty insurance contracts include paid claims and movements in outstanding claim liabilities. Insurance premiums ceded to reinsurers are accounted as an expense in the same period as the premiums for the direct insurance contracts to which they relate.

Guarantees

A guarantee is a contract that contingently requires the Bank to make specified payments to reimburse the holder for a loss it incurs because a specified debtor failed to make payment when due in accordance with the original or modified terms of a debt instrument. Guarantees include standby letters of credit, letters of guarantee, indemnifications, credit enhancements and other similar contracts. Guarantees that qualify as a derivative are accounted for in accordance with the policy for derivative instruments. For guarantees that do not qualify as a derivative, a liability is recorded for the fair value of the obligation assumed at inception. The fair value of the obligation at inception is generally based on the discounted cash flow of the premium to be received for the guarantee, resulting in a corresponding asset. Subsequent to initial recognition, such guarantees are measured at the higher of the initial amount, less amortization to recognize any fee income earned over the period, and the best estimate of the amount required to settle any financial obligation arising as a result of the guarantee. Any increase in the liability is reported in the Consolidated Statement of Income.

Employee benefits

The Bank provides pension and other benefit plans for eligible employees in Canada, the United States and other international operations. Pension benefits are offered in the form of defined benefit pension plans (generally based on an employee's length of service and the final five years' average salary), and in the form of defined contribution pension plans (where the Bank's contribution is fixed and there is no legal or constructive obligation to pay further amounts). Other benefits provided include post-retirement health care, dental care and life insurance, along with other long-term employee benefits such as long-term disability benefits.

Defined benefit pension plans and other post-retirement benefit plans

The cost of these employee benefits is actuarially determined each year using the projected unit credit method. The calculation uses management's best estimate of a number of assumptions – including the discount rate, future compensation, health care costs, mortality, as well as the retirement age of employees. The discount rate used to determine the defined benefit obligation is based on the yield at the reporting date on high quality corporate bonds that have durations that match the terms of the Bank's obligations. Prior to 2016, the discount rate used to determine the annual benefit expense was the same as the rate used to determine the defined benefit obligation. Beginning in 2016, separate discount rates were used to determine the annual benefit expense in Canada and the U.S. These rates were determined with reference to the yields on high quality corporate bonds with durations that match the various components of the annual defined benefit expense. The discount rate used to determine the annual benefit expense for all other plans continues to be same as the rate used to determine the defined benefit obligation.

The Bank's net asset or liability in respect of employee benefit plans is calculated separately for each plan as the difference between the present value of future benefits earned in respect of service for prior periods and the fair value of plan assets. The net asset or liability is included in other assets and other liabilities, as appropriate, in the Consolidated Statement of Financial Position. When the net amount in the Consolidated Statement of Financial Position is an asset, the recognized asset is limited to the present value of any economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan.

The current service cost, net interest expense (income), past service cost, and administrative expense are recognized in net income. Net interest income or expense is calculated by applying the discount rate at the beginning of the annual period to the net defined benefit asset or liability. When the benefits of a plan are improved (reduced), a past service cost (credit) is recognized immediately in net income.

Remeasurements comprising of actuarial gains and losses, the effect of the asset ceiling and the change in the return on plan assets are recognized immediately in the Consolidated Statement of Financial Position with a charge or credit to the Statement of Comprehensive Income (OCI) in the period in which they occur. Amounts recorded in OCI are not recycled to the Consolidated Statement of Income.

Other long-term employee benefits

Other long-term employee benefits are accounted for similarly to defined benefit pension plans and other post-retirement benefit plans described above except that remeasurements are recognized in the Consolidated Statement of Income in the period in which they arise.

Defined contribution plans

The cost of such plans are equal to contributions payable by the Bank to employees' accounts for service rendered during the period and expensed.

Short-term employee benefits

Short-term employee benefits are expensed as the related service is provided and a liability is measured on an undiscounted basis net of payments made.

Recognition of income and expenses

Revenue is recognized to the extent that it is probable that the economic benefits will flow to the Bank and the revenue can be reliably measured. The following specific criteria must also be met before revenue is recognized:

Interest and similar income and expenses

For all non-trading interest-bearing financial instruments, interest income or expense is recorded in net interest income using the effective interest rate. This is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or a shorter period, where appropriate, to the net carrying amount of the financial asset or financial liability. The calculation takes into account all the contractual terms of the financial instrument (for example, prepayment options) and includes any fees or incremental costs that are directly attributable to the instrument and are an integral part of the effective interest rate, but not future credit losses.

For trading financial instruments, mark-to-market changes including related interest income or expense are recorded in trading revenues.

The carrying amount of interest-bearing financial instruments, measured at amortized cost or classified as available-for-sale, is adjusted if the Bank revises its estimates of payments or receipts. The adjusted carrying amount is calculated based on the original effective interest rate and the change in carrying amount is recorded as non-interest income in the Consolidated Statement of Income.

Once the carrying value of a financial asset or a group of similar financial assets has been reduced due to an impairment loss, interest income continues to be recognized based on net effective interest rate inherent in the investment.

Loan origination costs are deferred and amortized into interest income using the effective interest method over the expected term of the loan. Loan fees are recognized in interest income over the appropriate lending or commitment period. Mortgage prepayment fees are recognized in interest income when received, unless they relate to a minor modification to the terms of the mortgage, in which case the fees are deferred and amortized using the effective interest method over the remaining period of the original mortgage.

Loan syndication fees are recognized when no other services are required of the Bank and the fees are non-refundable unless the yield we retain is less than that of comparable lenders in the syndicate. In such cases, an appropriate portion will be deferred and amortized in interest income over the term of the loan.

Loan commitment fees for loans that are likely to be drawn down and other credit related fees are deferred (together with any incremental costs) and recognized as part of the effective interest on the loan. When it is unlikely that a loan will be drawn down, the loan commitment fees are recognized over the commitment period on a straight-line basis.

Fee and commission revenues

The Bank earns fee and commission revenues from a diverse range of services it provides to its customers. Fee income can be divided into the following two categories:

Fees earned for the provision of services over a period of time are accrued over that period the services are provided. These fees include commission income, investment management, custody and other management and advisory fees. Investment management fees and custodial fees are mainly calculated as a percentage of daily or period-end market value of the assets under management (AUM) or assets under administration (AUA) and are received monthly, quarterly, semi-annually, or annually based on the underlying investment management contracts. Performance-based fees related to AUM are earned based on exceeding certain benchmarks or other performance targets, are recognized at the end of the performance period in which the target is met.

Fees arising from negotiating or participating in the negotiation of a transaction for a third-party, such as the arrangement of the acquisition of shares or other securities or the purchase or sale of businesses, are recognized on completion of the underlying transaction. Fees or components of fees that are linked to a certain performance are recognized after fulfilling the corresponding criteria.

Fee and commission expenses

Fee and commission expenses relate to transaction and service fees which are expensed as the services are received.

Dividend income

Dividend income on equity securities is recognized in interest income when the Bank's right to receive payment is established.

Share-based payments

Share-based payments awarded to employees are recognized as compensation expense in the Consolidated Statement of Income over the vesting period based on the number of awards expected to vest including the impact of expected forfeitures. For awards that are delivered in tranches, each tranche is considered a separate award and accounted for separately.

Stock appreciation rights and other awards that must be settled for cash are classified as liabilities. Liability-classified awards are re-measured to fair value at each reporting date while they remain outstanding, with any changes in fair value recognized in compensation expense in the period. The liability is expensed over the vesting period which incorporates the re-measurement of the fair value and a revised forfeiture rate that anticipates units expected to vest.

Employee stock options with tandem stock appreciation rights give the employee the right to exercise for shares or settle in cash. These options are classified as liabilities and are re-measured to fair value at each reporting date while they remain outstanding. If an option is exercised, thereby cancelling the tandem stock appreciation right, both the exercise price proceeds together with the accrued liability and associated taxes are credited to equity – common shares in the Consolidated Statement of Financial Position.

Plain vanilla options and other awards that must be settled for shares are classified as equity awards. Equity-classified awards are expensed based on the grant date fair value with a corresponding increase to equity – other reserves in the Consolidated Statement of Financial Position. If an option is exercised, both the exercise price proceeds together with the amount recorded in other reserves is credited to equity – common shares in the Consolidated Statement of Financial Position.

For tandem stock appreciation rights, stock appreciation rights and plain vanilla options, the Bank estimates fair value using an option pricing model. The option pricing model requires inputs such as the exercise price of the option, the current share price, the risk free interest rate, expected dividends, expected volatility (calculated using an equal weighting of implied and historical volatility) and specific employee exercise behaviour patterns based on statistical data. For other awards, fair value is the quoted market price of the Bank's common shares at the reporting date.

Where derivatives are used to economically hedge share-based payment expense, related mark-to-market gains and losses are included in non-interest expenses – salaries and employee benefits in the Consolidated Statement of Income.

A voluntary renouncement of a tandem stock appreciation right where an employee retains the corresponding option for shares with no change in the overall fair value of the award, results in a reclassification of the accrued liability and associated tax to equity – other reserves in the Consolidated Statement of Financial Position. This reclassification is measured at the fair value of the renounced awards as of the renouncement date. Subsequent to the voluntary renouncement, these awards are accounted for as plain vanilla options, based on the fair value as of the renouncement date.

Customer loyalty programs

The Bank operates loyalty points programs, which allow customers to accumulate points when they use the Bank's products and services. The points can then be redeemed for free or discounted products or services, subject to certain conditions.

Consideration received is allocated between the products sold or services rendered and points issued, with the consideration allocated to points equal to their fair value. The fair value of points is generally based on equivalent retail prices for the mix of awards expected to be redeemed. The fair value of the points issued is deferred in other liabilities and recognized as banking revenues when the points are redeemed or lapsed. Management judgment is involved in determining the redemption rate to be used in the estimate of points to be redeemed.

Dividends on shares

Dividends on common and preferred shares are recognized as a liability and deducted from equity when they are approved by the Bank's Board. Dividends are deducted from equity when they are declared and no longer at the discretion of the Bank.

Segment reporting

Management's internal view is the basis for the determination of operating segments. The operating segments are those whose operating results are regularly reviewed by the Bank's chief operating decision-maker to make decisions about resources to be allocated to the segment and assess its performance. The Bank has three operating segments: Canadian Banking, International Banking, and Global Banking and Markets. The other category represents smaller operating segments, including Group Treasury and other corporate items, which are not allocated to an operating segment. These segments offer different products and services and are managed separately based on the Bank's management and internal reporting structure.

The results of these business segments are based upon the internal financial reporting systems of the Bank. The accounting policies used in these segments are generally consistent with those followed in the preparation of the consolidated financial statements by the Bank. The only notable accounting measurement difference is the grossing up of revenues which are tax-exempt and income from associate corporations to an equivalent before-tax basis for those affected segments. This change in measurement enables comparison of income arising from taxable and tax-exempt sources.

Because of the complexity of the Bank, various estimates and allocation methodologies are used in the preparation of the business segment financial information. The funding value of assets and liabilities is transfer-priced at wholesale market rates, and corporate expenses are allocated to each segment on an equitable basis using various parameters. As well, capital is apportioned to the business segments on a risk-based methodology. Transactions between segments are recorded within segment results as if conducted with a third-party and are eliminated on consolidation.

Earnings per share (EPS)

Basic EPS is computed by dividing net income for the period attributable to the Bank's common shareholders by the weighted-average number of common shares outstanding during the period.

Diluted EPS is calculated by dividing adjusted net income for the period attributable to common shareholders by the weighted-average number of diluted common shares outstanding for the period. In the calculation of diluted earnings per share, earnings are adjusted for changes in income or expenses that would result from the issuance of dilutive shares. The weighted-average number of diluted common shares outstanding for the period reflects the potential dilution that would occur if options, securities or other contracts that entitle their holders to obtain common shares had been outstanding from the beginning of the period (or a later date) to the end of the period (or an earlier date). Instruments determined to have an antidilutive impact for the period are excluded from the calculation of diluted EPS.

Earnings are adjusted by the after-tax amount of distributions related to dilutive capital instruments recognized in the period. For tandem stock appreciation rights that are carried as liabilities, the after-tax re-measurement included in salaries and employee benefits expense, net of related hedges, is adjusted to reflect the expense had these rights been equity-classified.

The number of additional shares for inclusion in diluted EPS for share-based payment options is determined using the treasury share method. Under this method, the net number of incremental common shares is determined by assuming that in-the-money stock options are exercised and the proceeds are used to purchase common shares at the average market price during the period.

The number of additional shares associated with capital instruments that potentially result in the issuance of common shares is based on the terms of the contract.

4 Future Accounting Developments

The Bank actively monitors developments and changes in accounting standards from the IASB, as well as requirements from the other regulatory bodies, including OSFI. The Bank is currently assessing the measurement impact the adoption of new standards issued by the IASB will have on its consolidated financial statements and also evaluating the alternative elections available on transition.

Effective November 1, 2017

Financial instruments

On July 24, 2014, the IASB issued IFRS 9 *Financial Instruments*, which will replace IAS 39. The standard covers three broad topics: Classification and Measurement, Impairment and Hedging. IFRS 9 must be adopted retrospectively. Restatement of comparatives is not required, though it is permitted.

On January 9, 2015, the Office of the Superintendent of Financial Institutions (OSFI) issued an advisory on the early adoption of IFRS 9 for Domestic Systematically Important Banks (D-SIBs) for annual reporting periods beginning on November 1, 2017.

On June 21, 2016, OSFI issued revised accounting and disclosure guidelines for IFRS 9 *Financial Instruments*, that provide application guidance for federally regulated entities. The guidelines are effective for the Bank with the adoption of IFRS 9 on November 1, 2017 and are consistent with Basel Committee on Banking Supervision (BCBS) Guidance on credit risk and accounting for expected credit losses issued in December 2015.

On October 11, 2016, BCBS published a consultative document: Regulatory treatment of accounting provisions – interim approach and transitional arrangements and a discussion document: Regulatory treatment of accounting provisions on the policy considerations related to the regulatory treatment of accounting provisions under the Basel III capital framework. BCBS is seeking comments on these documents by January 13, 2017.

Classification and measurement

The standard requires the Bank to consider two criteria when determining the measurement basis for debt instruments held as financial assets; i) its business model for managing those financial assets and ii) the cash flow characteristics of the assets. Based on these criteria, debt instruments are measured at amortized cost, fair value through OCI, or fair value through the Consolidated Statement of Income.

Equity investments are measured at fair value through the Consolidated Statement of Income. However, the Bank may, at initial recognition of a non-trading equity investment, irrevocably elect to designate the investment as fair value through OCI, with no subsequent recycling to the Consolidated Statement of Income and dividend income recognized in the Consolidated Statement of Income. This designation is also available to existing non-trading equity investments at the date of adoption of IFRS 9.

In addition, the Bank may, at initial recognition, irrevocably elect to designate a financial asset as fair value through the Consolidated Statement of Income, if doing so eliminates or significantly reduces an accounting mismatch which would otherwise arise. This designation is also available to existing financial assets at the date of adoption of IFRS 9.

IFRS 9 requirements related to financial liabilities have been carried forward substantially unchanged from IAS 39, apart from the requirements on own credit risk of liabilities designated at fair value through the Consolidated Statement of Income.

At the date of transition, the Bank is permitted to make a one-time irrevocable reassessment of its fair value through the Consolidated Statement of Income designations for its financial assets and liabilities. The Bank is currently evaluating the extent to which it will apply these designations to its financial instruments upon transition.

Impairment

The standard introduces a new single model for the measurement of impairment losses on all financial instruments including loans and debt securities measured at amortized cost or at fair value through OCI. The IFRS 9 expected credit loss (ECL) model replaces the current “incurred loss” model of IAS 39.

The ECL model contains a three stage approach which is based on the change in credit quality of loans since initial recognition. Under the first stage, where there has not been a significant increase in credit risk since initial recognition, an amount equal to 12 months ECL will be recorded. Under the second stage, where there has been a significant increase in credit risk since initial recognition and the financial instruments are not considered credit impaired, an amount equal to the lifetime ECL will be recorded.

Under the third stage, where there is an objective evidence of impairment at the reporting date these financial assets will be classified as credit impaired and an amount equal to the lifetime expected credit losses will be recorded for the financial assets.

The ECL model is forward looking and requires the use of reasonable and supportable forecasts of future economic conditions in the determination of significant increases in credit risk and measurement of expected credit losses.

Hedging

The standard expands the scope of hedged items and hedging items to which hedge accounting can be applied and aims to better align the accounting with risk management activities. The Bank is permitted to adopt the hedge accounting requirements of IFRS 9 concurrently or to defer the adoption to a future period and continue to apply the hedge accounting requirements of IAS 39. However, the hedging disclosure requirements of IFRS 9 will continue to apply to the Bank regardless of the choice made.

Financial instruments: disclosures (IFRS 7)

IFRS 7 *Financial Instruments: Disclosures*, has been amended to include more extensive qualitative and quantitative disclosure relating to IFRS 9 such as new classification categories, three stage impairment model, new hedge accounting requirements and transition provisions.

Effective November 1, 2018

Revenue from contracts with customers

On May 28, 2014, the IASB issued IFRS 15 *Revenue from Contracts with Customers*, which provides a single principle based framework to be applied to all contracts with customers. IFRS 15 replaces the previous revenue standard IAS 18 *Revenue,* and the related Interpretations on revenue recognition. The standard scopes out contracts that are considered to be lease contracts, insurance contracts and financial instruments, and as such will impact the businesses that earn fee and commission revenues. The new standard is a control-based model as compared to the existing revenue standard which is primarily focused on risks and rewards. Under the new standard revenue is recognized when a customer obtains control of a good or service. Transfer of control occurs when the customer has the ability to direct the use of and obtain the benefits of the good or service. The standard is effective for the Bank on November 1, 2018, with early adoption permitted, using either a full retrospective approach or a modified retrospective approach. A majority of the Bank's revenue generating instruments meet the definition of financial instruments and remain out of scope. The areas of focus for the Bank's assessment will be fees and commission revenues from wealth management and other banking services.

On April 12, 2016, the IASB issued amendments to the revenue standard, IFRS 15 *Revenue From Contracts with Customers*. The amendments provide additional clarification on the identification of a performance obligation in a contract, determining the principal and agent in an agreement, and determining whether the licensing revenues should be recognized at a point in time or over a specific period. The amendments also provide additional practical expedients upon transition to IFRS 15. The amendments are effective for the Bank on November 1, 2018, consistent with the effective date of the standard.

Effective November 1, 2019

Leases

On January 13, 2016, the IASB issued IFRS 16 *Leases*, which requires a lessee to recognize an asset for the right to use the leased item and a liability for the present value of its future lease payments. IFRS 16 will result in leases being recorded on the Bank's balance sheet, including those currently classified as operating leases except for short-term leases and leases with low value of the underlying asset. IFRS 16 substantially carries forward the lessor accounting requirements in IAS 17.

IFRS 16 is effective for the Bank on November 1, 2019, with early adoption permitted from the date the Bank applies IFRS 15 *Revenue from Contracts with Customers* on or before the date of initial application of IFRS 16. On transition there are practical expedients available whereby the Bank will not need to reassess whether a contract is, or contains a lease, or reassess the accounting of sale leaseback transactions recognized prior to the date of initial application.

A lessee will apply IFRS 16 to its leases either retrospectively to each prior reporting period presented; or retrospectively with the cumulative effect of initially applying IFRS 16 being recognized at the date of initial application.

5 Cash and Deposits with Financial Institutions

As at October 31 ($ millions)	2016	2015
Cash and non-interest-bearing deposits with financial institutions	**$ 6,855**	$ 6,724
Interest-bearing deposits with financial institutions	**39,489**	67,203
Total	**$ 46,344**	$ 73,927

The Bank is required to maintain balances with central banks, other regulatory authorities and certain counterparties and these amounted to $7,616 million (2015 – $6,219 million).

6 Fair Value of Financial Instruments

Determination of fair value

The calculation of fair value is based on market conditions at a specific point in time and therefore may not be reflective of future fair values. The Bank has controls and processes in place to ensure that the valuation of financial instruments is appropriately determined.

The best evidence of fair value for a financial instrument is the quoted price in an active market. Quoted market prices represent a Level 1 valuation. Where possible, valuations are based on quoted prices or observable inputs obtained from active markets. Independent Price Verification (IPV) is undertaken to assess the reliability and accuracy of prices and inputs used in the determination of fair value. The IPV process is performed by price verification groups that are independent from the business. The Bank maintains a list of pricing sources that are used in the IPV process. These sources include, but are not limited to, brokers, dealers and consensus pricing services. The valuation policies relating to the IPV process require that all pricing or rate sources used be external to the Bank. On a periodic basis, an independent assessment of pricing or rate sources is performed to determine market presence or market representative levels.

Quoted prices are not always available for over-the-counter transactions, as well as transactions in inactive or illiquid markets. In these instances, internal models that maximize the use of observable inputs are used to estimate fair value. The chosen valuation technique incorporates all the factors that market participants would take into account in pricing a transaction. When all significant inputs to models are observable, the valuation is classified as Level 2. Financial instruments traded in a less active market are valued using indicative market prices, present value of cash-flows or other valuation techniques. Fair value estimates normally do not consider forced or liquidation sales.

Where financial instruments trade in inactive markets or when using models where observable parameters do not exist, greater management judgment is required for valuation purposes. Valuations that require the significant use of unobservable inputs are considered Level 3.

The specific inputs and valuation techniques used in determining the fair value of financial instruments are noted below. For Level 3 instruments, additional information is disclosed in the Level 3 sensitivity analysis on page 158.

The fair values of cash and deposits with banks, securities purchased under resale agreements and securities borrowed, customers' liability under acceptances, obligations related to securities sold under repurchase agreements and securities lent, acceptances, and obligations related to securities sold short are assumed to approximate their carrying values, either due to their short-term nature or because they are frequently repriced to current market rates.

Trading loans

Trading loans as they relate to precious metals (primarily gold and silver) are valued using a discounted cash flow model incorporating market-observable inputs, including precious metals spot and forward prices and interest rate curves (Level 2). Other trading loans that serve as hedges to loan-based credit total return swaps are valued using consensus prices from Bank approved independent pricing services (Level 2).

Government issued or guaranteed securities

The fair values of government issued or guaranteed debt securities are primarily based on quoted prices in active markets, where available. Where quoted prices are not available, the fair value is determined by utilizing recent transaction prices, broker quotes, or pricing services (Level 2).

For securities that are not actively traded, the Bank uses a discounted cash flow method, using the effective yield of a similar instrument adjusted for instrument-specific risk factors such as credit spread and contracted features (Level 2).

Corporate and other debt

Corporate and other debt securities are valued using prices from independent market data providers or third-party broker quotes. Where prices are not available consistently, the last available data is used and verified with a yield-based valuation approach (Level 2). In some instances, interpolated yields of similar bonds are used to price securities (Level 2). The Bank uses pricing models with observable inputs from market sources such as credit spread, interest rate curves, and recovery rates (Level 2). These inputs are verified through an IPV process on a monthly basis.

For certain securities where there is no active market, no consensus market pricing and no indicative or executable independent third-party quotes, the Bank uses pricing by third-party providers or internal pricing models and cannot readily observe the market inputs used to price such instruments (Level 3).

Mortgage-backed securities

The fair value of residential mortgage-backed securities is primarily determined using third-party broker quotes and independent market data providers, where the market is more active (Level 2). Where the market is inactive, an internal price-based model is used (Level 3).

Equity securities

The fair value of equity securities is based on quoted prices in active markets, where available. Where equity securities are less frequently traded, the most recent exchange-quoted pricing is used to determine fair value. Where there is a wide bid-offer spread, fair value is determined based on quoted market prices for similar securities (Level 2).

Where quoted prices in active markets are not readily available, such as for private equity securities, the fair value is determined as a multiple of the underlying earnings or percentage of underlying assets obtained from third-party general partner statements (Level 3).

Income funds and hedge funds

The fair value of income funds and hedge funds is based on observable quoted prices where available. Where quoted or active market prices are unavailable, the last available Net Asset Value, fund statements and other financial information available from third-party fund managers at the fund level are used in arriving at the fair value. These inputs are not considered observable because the Bank cannot redeem these funds at Net Asset Value (Level 3).

Derivatives

Fair values of exchange-traded derivatives are based on quoted market prices. Fair values of over-the-counter (OTC) derivatives or inactive exchange-traded derivatives are determined using pricing models, which take into account input factors such as current market and contractual prices of the underlying instruments, as well as time value and yield curve or volatility factors underlying the positions (Level 2). The determination of the fair value of derivatives includes consideration of credit risk, estimated funding costs and ongoing direct costs over the life of the instruments.

Derivative products valued using a valuation technique with market-observable inputs mainly include interest rate swaps and options, currency swaps and forward foreign exchange contracts. The most frequently applied valuation techniques include forward pricing and swap models, using present value calculations. The models incorporate various inputs including foreign exchange spot and forward rates and interest rate curves (Level 2).

Derivative products valued using a valuation technique with significant unobservable inputs are long dated contracts (interest rate swaps, currency swaps, forward foreign exchange contracts, option contracts and certain credit default swaps) and other derivative products that reference a basket of assets, commodities or currencies. These models incorporate certain significant non-observable inputs such as volatility and correlation (Level 3).

Loans

The estimated fair value of loans carried at amortized cost reflects changes in the general level of interest rates and credit worthiness of borrowers that have occurred since the loans were originated or purchased. The particular valuation methods used are as follows:

(a) Canadian fixed rate residential mortgages are fair valued by discounting the expected future contractual cash flows, taking into account expected prepayments and using management's best estimate of average market interest rates currently offered for mortgages with similar remaining terms (Level 3).

(b) For fixed rate business and government loans, fair value is determined by discounting the expected future contractual cash flows of these loans at interest rates estimated by using the appropriate currency swap curves for the remaining term, adjusted for a credit mark of the expected losses in the portfolio (Level 3).

(c) For all other fixed rate loans, fair value is determined by discounting the expected future contractual cash flows of these loans at interest rates estimated by using the appropriate currency swap curves for the remaining term (Level 3).
(d) For all floating rate loans fair value is assumed to equal book value.

The fair value of loans is not adjusted for the value of any credit protection the Bank has purchased to mitigate credit risk.

Deposits

The fair values of deposits payable on demand or after notice or floating rate deposits payable on a fixed date is assumed to equal book value.

The estimated fair values of Canadian personal fixed rate deposits payable on a fixed date are fair valued by discounting the expected future contractual cash outflows, using management's best estimate of average market interest rates currently offered for deposits with similar remaining terms (Level 2).

Deposits under the Canada Mortgage Bond (CMB) program are fair valued by discounting expected future contractual cash flows using market observable inputs (Level 2).

For all other fixed rate deposits, fair value is determined by discounting the expected future contractual cash flows of these deposits at interest rates estimated by using the appropriate currency swap curves for the remaining term (Level 2).

For structured deposit notes containing embedded features that are bifurcated from the deposit notes, the fair value of the embedded derivatives is determined using option pricing models with inputs similar to other interest rate or equity derivative contracts (Level 2). The fair value of certain embedded derivatives is determined using net asset values (Level 3).

Subordinated debentures and other liabilities

The fair values of subordinated debentures, including debentures issued by subsidiaries which are included in other liabilities, are determined by reference to quoted market prices where available or market prices for debt with similar terms and risks (Level 2). The fair values of other liabilities is determined by the discounted contractual cash flow method with appropriate currency swap curves for the remaining term (Level 2).

Fair value of financial instruments

The following table sets out the fair values of financial instruments of the Bank using the valuation methods and assumptions described above. The fair values disclosed do not include non-financial assets, such as property and equipment, investments in associates, precious metals, goodwill and other intangible assets.

	2016			2015		
As at October 31 ($ millions)	Total fair value	Total carrying value	Favourable/ (Unfavourable)	Total fair value	Total carrying value	Favourable/ (Unfavourable)
Assets:						
Cash and deposits with financial institutions	**$ 46,344**	**$ 46,344**	**$ –**	$ 73,927	$ 73,927	$ –
Trading assets	**108,561**	**108,561**	**–**	99,140	99,140	–
Financial instruments designated at fair value through profit or loss	**221**	**221**	**–**	320	320	–
Securities purchased under resale agreements and securities borrowed	**92,129**	**92,129**	**–**	87,312	87,312	–
Derivative financial instruments	**41,657**	**41,657**	**–**	41,003	41,003	–
Investment securities – available-for-sale	**50,509**	**50,509**	**–**	42,565	42,565	–
Investment securities – held-to-maturity	**22,567**	**22,410**	**157**	716	651	65
Loans	**484,815**	**480,164**	**4,651**	463,047	458,628	4,419
Customers' liability under acceptances	**11,978**	**11,978**	**–**	10,296	10,296	–
Other financial assets	**9,973**	**9,973**	**–**	9,024	9,024	–
Liabilities:						
Deposits	**613,858**	**611,877**	**(1,981)**	602,606	600,919	(1,687)
Financial instruments designated at fair value through profit or loss	**1,459**	**1,459**	**–**	1,486	1,486	–
Acceptances	**11,978**	**11,978**	**–**	10,296	10,296	–
Obligations related to securities sold short	**23,312**	**23,312**	**–**	20,212	20,212	–
Derivative financial instruments	**42,387**	**42,387**	**–**	45,270	45,270	–
Obligations related to securities sold under repurchase agreements and securities lent	**97,083**	**97,083**	**–**	77,015	77,015	–
Subordinated debentures	**7,804**	**7,633**	**(171)**	6,234	6,182	(52)
Other financial liabilities	**24,304**	**23,796**	**(508)**	25,778	25,443	(335)

Changes in interest rates, credit spreads and liquidity costs are the main cause of changes in the fair value of the Bank's financial instruments resulting in a favourable or unfavourable variance compared to carrying value. For the Bank's financial instruments carried at cost or amortized cost, the carrying value is not adjusted to reflect increases or decreases in fair value due to market fluctuations, including those due to interest rate changes. For available-for-sale investment securities, derivatives and financial instruments held for trading purposes or designated as fair value through profit or loss, the carrying value is adjusted regularly to reflect the fair value.

Fair value hierarchy

The following table outlines the fair value hierarchy of instruments carried at fair value on a recurring basis and of instruments not carried at fair value.

	2016				2015			
As at October 31 ($ millions)	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Instruments carried at fair value on a recurring basis:								
Assets:								
Precious metals[1]	**$ –**	**$ 8,442**	**$ –**	**$ 8,442**	$ –	$ 10,550	$ –	$ 10,550
Trading assets								
Loans	**–**	**19,421**	**–**	**19,421**	–	18,341	–	18,341
Canadian federal government and government guaranteed debt	**10,830**	**–**	**–**	**10,830**	7,295	–	–	7,295
Canadian provincial and municipal debt	**–**	**9,608**	**–**	**9,608**	–	5,281	–	5,281
US treasury and other US agencies' debt	**10,182**	**–**	**–**	**10,182**	5,313	368	–	5,681
Other foreign governments' debt	**4,724**	**1,783**	**–**	**6,507**	9,512	1,515	–	11,027
Corporate and other debt	**75**	**9,844**	**31**	**9,950**	163	13,162	67	13,392
Income funds	**1,424**	**648**	**1,186**	**3,258**	93	1,728	1,218	3,039
Equity securities	**36,814**	**133**	**5**	**36,952**	32,553	107	5	32,665
Other[2]	**1,853**	**–**	**–**	**1,853**	2,419	–	–	2,419
	$ 65,902	**$ 49,879**	**$ 1,222**	**$ 117,003**	$ 57,348	$ 51,052	$ 1,290	$ 109,690
Financial assets designated at fair value through profit or loss	**$ 16**	**$ 205**	**$ –**	**$ 221**	$ 16	$ 279	$ 25	$ 320
Investment securities[3]								
Canadian federal government and government guaranteed debt	**$ 11,464**	**$ 2,157**	**$ –**	**$ 13,621**	$ 5,752	$ 1,997	$ –	$ 7,749
Canadian provincial and municipal debt	**934**	**2,558**	**–**	**3,492**	1,085	2,621	–	3,706
US treasury and other US agencies' debt	**9,901**	**176**	**–**	**10,077**	9,678	150	–	9,828
Other foreign governments' debt	**6,703**	**8,473**	**355**	**15,531**	6,003	6,233	447	12,683
Corporate and other debt	**745**	**3,852**	**81**	**4,678**	921	4,212	137	5,270
Mortgage-backed securities	**276**	**751**	**–**	**1,027**	97	187	23	307
Equity securities	**1,411**	**199**	**473**	**2,083**	1,665	224	1,133	3,022
	$ 31,434	**$ 18,166**	**$ 909**	**$ 50,509**	$ 25,201	$ 15,624	$ 1,740	$ 42,565
Derivative financial instruments								
Interest rate contracts	**$ –**	**$ 15,653**	**$ 54**	**$ 15,707**	$ –	$ 14,584	$ 36	$ 14,620
Foreign exchange and gold contracts	**17**	**21,642**	**–**	**21,659**	1	19,741	–	19,742
Equity contracts	**321**	**1,546**	**64**	**1,931**	173	2,032	102	2,307
Credit contracts	**–**	**148**	**–**	**148**	–	850	–	850
Commodity contracts	**321**	**1,891**	**–**	**2,212**	1,656	1,828	–	3,484
	$ 659	**$ 40,880**	**$ 118**	**$ 41,657**	$ 1,830	$ 39,035	$ 138	$ 41,003
Liabilities:								
Deposits[4]	**$ –**	**$ (36)**	**$ 1,163**	**$ 1,127**	$ –	$ 43	$ 1,192	$ 1,235
Financial liabilities designated at fair value through profit or loss	**$ –**	**$ 1,459**	**$ –**	**$ 1,459**	$ –	$ 1,486	$ –	$ 1,486
Obligations related to securities sold short	**$ 19,870**	**$ 3,442**	**$ –**	**$ 23,312**	$ 17,073	$ 3,139	$ –	$ 20,212
Derivative financial instruments								
Interest rate contracts	**$ –**	**$ 14,299**	**$ 187**	**$ 14,486**	$ –	$ 13,443	$ 81	$ 13,524
Foreign exchange and gold contracts	**3**	**21,640**	**–**	**21,643**	3	21,470	–	21,473
Equity contracts	**327**	**1,886**	**167**	**2,380**	233	2,172	170	2,575
Credit contracts	**–**	**1,475**	**–**	**1,475**	–	2,542	12	2,554
Commodity contracts	**312**	**2,091**	**–**	**2,403**	1,201	3,943	–	5,144
	$ 642	**$ 41,391**	**$ 354**	**$ 42,387**	$ 1,437	$ 43,570	$ 263	$ 45,270
Instruments not carried at fair value [5]:								
Assets:								
Investment securities – Held to maturity	**$ 4,972**	**$ 17,595**	**$ –**	**$ 22,567**	$ 131	$ 585	$ –	$ 716
Loans[6]	**–**	**–**	**276,462**	**276,462**	–	–	260,583	260,583
Liabilities:								
Deposits[6][7]	**–**	**271,170**	**–**	**271,170**	–	252,382	–	252,382
Subordinated debt	**–**	**7,804**	**–**	**7,804**	–	6,234	–	6,234
Other liabilities	**–**	**11,303**	**–**	**11,303**	–	11,041	–	11,041

(1) The fair value of precious metals is determined based on quoted market prices and forward spot prices.
(2) Consists primarily of base metal positions. The fair value of these positions is determined based on quoted prices in active markets.
(3) Excludes investments which are held-to-maturity of $22,410 (2015 – $651).
(4) These amounts represent embedded derivatives bifurcated from structured deposit notes.
(5) Represents the fair value of financial assets and liabilities where the carrying amount is not a reasonable approximation of fair value.
(6) Excludes floating rate instruments as carrying value approximates fair value.
(7) Excludes embedded derivatives bifurcated from structured deposit notes.

Level 3 instrument fair value changes

Financial instruments categorized as Level 3 in the fair value hierarchy comprise certain illiquid government bonds, highly-structured corporate bonds, mortgage-backed securities, illiquid investments in private equity securities, income funds, complex derivatives, and embedded derivatives in structured deposit notes.

The following table summarizes the changes in Level 3 instruments carried at fair value for the year ended October 31, 2016.

All positive balances represent assets and negative balances represent liabilities. Consequently, positive amounts indicate purchases of assets or settlements of liabilities and negative amounts indicate sales of assets or issuances of liabilities.

	As at October 31, 2016							
($ millions)	Fair value November 1 2015	Gains/(losses) recorded in income[1]	Gains/(losses) recorded in OCI[2]	Purchases/ Issuances	Sales/ Settlements	Transfers into/out of Level 3	Fair value October 31 2016	Change in unrealized gains/(losses) recorded in income for instruments still held[3]
Trading assets[4]								
Corporate and other debt	$ 67	**$ 1**	**$ –**	**$ –**	**$ (37)**	**$ –**	**$ 31**	**$ (1)**
Income funds	1,243	**(23)**	**–**	**–**	**(34)**	**–**	**1,186**	**(23)[5]**
Equity securities	5	**–**	**–**	**–**	**–**	**–**	**5**	**–**
	1,315	**(22)**	**–**	**–**	**(71)**	**–**	**1,222**	**(24)**
Investment securities								
Other foreign governments' debt	447	**5**	**(17)**	**579**	**(659)**	**–**	**355**	**n/a**
Corporate and other debt	137	**5**	**14**	**49**	**(124)**	**–**	**81**	**n/a**
Mortgage-backed securities	23	**–**	**(1)**	**–**	**(22)**	**–**	**–**	**n/a**
Equity securities	1,133	**185**	**(213)**	**78**	**(710)**	**–**	**473**	**n/a**
	1,740	**195**	**(217)**	**706**	**(1,515)**	**–**	**909**	**n/a**
Derivative financial instruments – assets								
Interest rate contracts	36	**4**	**–**	**23**	**(9)**	**–**	**54**	**6**
Equity contracts	102	**(20)**	**–**	**22**	**(202)**	**162**	**64**	**(14)[6]**
Derivative financial instruments – liabilities								
Interest rate contracts	(81)	**54**	**–**	**(170)**	**10**	**–**	**(187)**	**52**
Equity contracts	(170)	**(127)**	**–**	**(14)**	**348**	**(204)**	**(167)**	**(71)[6]**
Credit contracts	(12)	**4**	**–**	**–**	**–**	**8**	**–**	**4**
	(125)	**(85)**	**–**	**(139)**	**147**	**(34)**	**(236)**	**(23)**
Deposits[7]	(1,192)	**29**	**–**	**–**	**–**	**–**	**(1,163)**	**29[5]**
Total	1,738	**117**	**(217)**	**567**	**(1,439)**	**(34)**	**732**	**(18)**

(1) Gains and losses on trading assets and all derivative financial instruments are included in trading revenues in the Consolidated Statement of Income. Gains and losses on disposal of investment securities are included in net gain on sale of investment securities in the Consolidated Statement of Income.
(2) Gains and losses from fair value changes of investment securities are presented in the net change in unrealized gains (losses) on available-for-sale securities in the Consolidated Statement of Comprehensive Income.
(3) These amounts represent the gains and losses from fair value changes of Level 3 instruments still held at the end of the period that are recorded in the Consolidated Statement of Income.
(4) Trading assets include an insignificant amount of financial assets designated at fair value through profit or loss.
(5) The unrealized gains on income fund units are mostly offset by the mark-to-market changes in an equity-linked deposit note and certain other derivative instruments in structured transactions. Both gains and offsetting losses are included in trading revenues in the Consolidated Statement of Income.
(6) Certain unrealized gains and losses on derivative assets and liabilities are largely offset by mark-to-market changes on other instruments included in trading revenues in the Consolidated Statement of Income, since these instruments act as an economic hedge to certain derivative assets and liabilities.
(7) These amounts represent embedded derivatives bifurcated from structured deposit notes.

The following table summarizes the changes in Level 3 instruments carried at fair value for the year ended October 31, 2015.

	As at October 31, 2015						
($ millions)	Fair value November 1 2014	Gains/(losses) recorded in income[1]	Gains/(losses) recorded in OCI	Purchases/ Issuances	Sales/ Settlements	Transfers into/out of Level 3	Fair value October 31 2015
Trading assets[2]	$ 1,386	$ 196	$ –	$ 54	$ (321)	$ –	$ 1,315
Investment securities	1,956	145	90	838	(1,289)	–	1,740
Derivative financial instruments	254	12	–	(26)	298	(663)	(125)
Deposits[3]	(1,011)	(181)	–	–	–	–	(1,192)

(1) Gains or losses for items in Level 3 may be offset with losses or gains on related hedges in Level 1 or Level 2.
(2) Trading assets include an insignificant amount of financial assets designated at fair value through profit or loss.
(3) These amounts represent embedded derivatives bifurcated from structured deposit notes.

Significant transfers

Significant transfers can occur between the fair value hierarchy levels when additional or new information regarding valuation inputs and their refinement and observability become available. The Bank recognizes transfers between levels of the fair value hierarchy as of the end of the reporting period during which the change has occurred.

The following significant transfers were made among Levels 1, 2 and 3 for the year ended October 31, 2016:
A net amount of derivative assets of $162 million was transferred into Level 3 from Level 2 for equity derivatives. A net amount of derivative liabilities of $196 million was transferred into Level 3 from Level 2 primarily for equity derivatives.

The following significant transfers were made among Levels 1, 2 and 3 for the year ended October 31, 2015:
A net amount of derivative assets of $595 million was transferred out of Level 3 into Level 2 primarily for equity derivatives. A net amount of derivative liabilities of $68 million was transferred into Level 3. $67 million was transferred out of Level 2 and $1 million was transferred out of Level 1.

All transfers were as a result of new information being obtained regarding the observability of inputs used in the valuation.

Level 3 sensitivity analysis

The table below sets out information about significant unobservable inputs used in measuring financial instruments categorized as Level 3 in the fair value hierarchy.

	Valuation technique	Significant unobservable inputs	Range of estimates for unobservable inputs[1]	Changes in fair value from reasonably possible alternatives ($ millions)
Investment securities[2]				
Other foreign governments' debt	Price based	Price	100%	(1)/–
Derivative financial instruments				
Interest rate contracts	Option pricing model	Interest rate volatility	13% - 98%	(53)/53
Equity contracts	Option pricing model	Equity volatility Single stock correlation	5% - 124% (77)% - 98%	(6)/6

(1) The range of estimates represents the actual lowest and highest level inputs used to fair value financial instruments within each financial statement category.
(2) The valuation of private equity and income fund investments utilize net asset values as reported by fund managers. Net asset values are not considered observable as the Bank cannot redeem these instruments at such values. The range for net asset values per unit or price per share has not been disclosed for these instruments since the valuations are not model based.

The Bank applies judgment in determining unobservable inputs used to calculate the fair value of Level 3 instruments.

The following section discusses the significant unobservable inputs for Level 3 instruments.

Correlation

Correlation in a credit derivative or debt instrument refers to the likelihood of a single default causing a succession of defaults. It affects the distribution of the defaults throughout the portfolio and therefore affects the valuation of instruments such as collateralized debt obligation tranches. A higher correlation may increase or decrease fair value depending on the seniority of the instrument.

Correlation becomes an input into equity derivative pricing when the relationship between price movements of two or more of the underlying assets is relevant.

Volatility

Volatility is a measure of security price fluctuation. Historic volatility is often calculated as the annualized standard deviation of daily price variation for a given time period. Implied volatility is volatility, when input into an option pricing model, that returns a value equal to the current market value of the option.

7 Trading Assets

(a) Trading securities

An analysis of the carrying value of trading securities is as follows:

As at October 31, 2016 ($ millions)	Remaining term to maturity						
	Within three months	Three to twelve months	One to five years	Five to ten years	Over ten years	No specific maturity	**Carrying value**
Trading securities:							
Canadian federal government issued or guaranteed debt	**$ 235**	**$ 2,620**	**$ 4,651**	**$ 1,079**	**$ 2,245**	**$ –**	**$ 10,830**
Canadian provincial and municipal debt	**1,713**	**950**	**1,483**	**2,907**	**2,555**	**–**	**9,608**
U.S. treasury and other U.S. agency debt	**2,688**	**400**	**4,304**	**957**	**1,833**	**–**	**10,182**
Other foreign government debt	**1,346**	**760**	**1,924**	**1,369**	**1,108**	**–**	**6,507**
Common shares	**–**	**–**	**–**	**–**	**–**	**40,210**	**40,210**
Other	**913**	**1,504**	**4,853**	**1,693**	**987**	**–**	**9,950**
Total	**$ 6,895**	**$ 6,234**	**$ 17,215**	**$ 8,005**	**$ 8,728**	**$ 40,210**	**$ 87,287**
Total by currency (in Canadian equivalent):							
Canadian dollar	**$ 2,161**	**$ 3,714**	**$ 6,832**	**$ 4,442**	**$ 5,185**	**$ 15,033**	**$ 37,367**
U.S. dollar	**3,199**	**1,502**	**7,792**	**2,156**	**2,448**	**8,178**	**25,275**
Mexican peso	**176**	**82**	**160**	**6**	**8**	**1,536**	**1,968**
Other currencies	**1,359**	**936**	**2,431**	**1,401**	**1,087**	**15,463**	**22,677**
Total trading securities	**$ 6,895**	**$ 6,234**	**$ 17,215**	**$ 8,005**	**$ 8,728**	**$ 40,210**	**$ 87,287**

As at October 31, 2015 ($ millions)	Remaining term to maturity						
	Within three months	Three to twelve months	One to five years	Five to ten years	Over ten years	No specific maturity	**Carrying value**
Trading securities:							
Canadian federal government issued or guaranteed debt	$ 338	$ 1,054	$ 3,154	$ 991	$ 1,758	$ –	$ 7,295
Canadian provincial and municipal debt	420	594	1,422	1,169	1,676	–	5,281
U.S. treasury and other U.S. agency debt	728	455	1,314	1,555	1,629	–	5,681
Other foreign government debt	1,902	2,501	3,142	1,631	1,851	–	11,027
Common shares	–	–	–	–	–	35,704	35,704
Other	1,294	2,212	6,137	1,963	1,751	35	13,392
Total	$ 4,682	$ 6,816	$ 15,169	$ 7,309	$ 8,665	$ 35,739	$ 78,380
Total by currency (in Canadian equivalent):							
Canadian dollar	$ 1,429	$ 1,971	$ 5,457	$ 2,633	$ 3,937	$ 18,992	$ 34,419
U.S. dollar	1,289	2,348	6,312	2,995	2,906	5,918	21,768
Mexican peso	389	689	959	28	84	680	2,829
Other currencies	1,575	1,808	2,441	1,653	1,738	10,149	19,364
Total trading securities	$ 4,682	$ 6,816	$ 15,169	$ 7,309	$ 8,665	$ 35,739	$ 78,380

(b) Trading loans

The following table provides the geographic breakdown of trading loans:

As at October 31 ($ millions)	2016	2015
Trading loans[1][2]		
U.S.[3]	**$ 11,235**	$ 9,990
Europe[4]	**4,163**	3,525
Asia Pacific[4]	**2,555**	3,657
Canada[4]	**340**	394
Other[4]	**1,128**	775
Total	**$ 19,421**	$ 18,341

(1) Geographic segmentation of trading loans is based upon the location of the ultimate risk of the underlying asset.
(2) Loans are denominated in U.S. dollars.
(3) Includes trading loans that serve as a hedge to loan-based credit total return swaps of $7,098 (2015 – $7,094), while the remaining relates to short-term precious metals trading and lending activities.
(4) These loans are primarily related to short-term precious metals trading and lending activities.

8 Financial Instruments Designated at Fair Value Through Profit or Loss

In accordance with its risk management strategy, the Bank has elected to designate certain investments, loans and deposit note liabilities at fair value through profit or loss to reduce an accounting mismatch between fair value changes in these instruments and fair value changes in related derivatives, and where a hybrid instrument contains one or more embedded derivatives that are not closely related to the host contract. Changes in fair value arising from changes in the Bank's own credit risk are recognized in other comprehensive income, without subsequent reclassification to net income.

The cumulative fair value adjustment due to own credit risk is determined at a point in time by comparing the present value of expected future cash flows over the term of these liabilities discounted at the Bank's effective funding rate, and the present value of expected future cash flows discounted under a benchmark rate. The change in fair value attributable to change in credit risk is determined by the change in the cumulative fair value adjustment due to own credit risk.

The following table presents the fair value of financial assets and liabilities designated at fair value through profit or loss and their changes in fair value.

	Fair value		Change in fair value		Cumulative change in FV[1]	
	As at		For the year ended			
October 31 ($ millions)	2016	2015	2016	2015	2016	2015
Investment securities[2]	**$ 16**	$ 107	**$ (1)**	$ (1)	**$ 11**	$ 12
Loans[3]	**205**	213	**(9)**	18	**8**	18
Deposit note liabilities[4]	**1,459**	1,486	**245**	106	**15**	124

(1) The cumulative change in fair value is measured from the instruments' date of initial recognition.
(2) Changes in fair value are recorded in non-interest income – other.
(3) Changes in fair value are recorded in non-interest income – trading revenues.
(4) Changes in fair value attributable to changes in the Bank's own credit risk are recorded in other comprehensive income. Other changes in fair value are recorded in non-interest income – trading revenues.

The following tables present the changes in fair value attributable to changes in the Bank's own credit risk for financial liabilities designated at fair value through profit or loss as well as their contractual maturity and carrying amounts.

	Deposit Note Liabilities				
	Contractual maturity amount[1]	Carrying Value	Difference between carrying value and contractual maturity amount	Changes in fair value for the period attributable to changes in own credit risk recorded in other comprehensive income	Cumulative changes in fair value attributable to changes in own credit risk[1]
As at October 31, 2016	**$ 1,474**	**$ 1,459**	**$ 15**	**$ (23)**	**$ (8)**
As at October 31, 2015	$ 1,610	$ 1,486	$ 124	$ 20	$ 15

(1) The cumulative change in fair value is measured from the instruments' date of initial recognition.

9 Derivative Financial Instruments

(a) Notional amounts[1]

The following table provides the aggregate notional amounts of derivative financial instruments outstanding by type and segregated between those used by the Bank in its dealer capacity (Trading) and those derivatives designated in hedging relationships. The notional amounts of these contracts represent the derivatives volume outstanding and do not represent the potential gain or loss associated with the market risk or credit risk of such instruments. Credit derivatives within other derivative contracts are comprised primarily of purchased and sold credit default swap transactions. To a lesser extent, this category also includes total return swaps referenced to loans and debt securities. Other derivative contracts – other includes precious metals other than gold, and other commodities including energy and base metal derivatives.

	2016			2015		
As at October 31 ($ millions)	Trading	Hedging	Total	Trading	Hedging	Total
Interest rate contracts						
Exchange-traded:						
Futures	**$ 112,196**	**$ –**	**$ 112,196**	$ 140,240	$ –	$ 140,240
Options purchased	**15,427**	**–**	**15,427**	29,670	–	29,670
Options written	**3,283**	**–**	**3,283**	28,755	–	28,755
	130,906	**–**	**130,906**	198,665	–	198,665
Over-the-counter:						
Forward rate agreements	**1,721**	**–**	**1,721**	4,613	–	4,613
Swaps	**479,029**	**25,537**	**504,566**	582,414	31,280	613,694
Options purchased	**35,404**	**–**	**35,404**	31,734	–	31,734
Options written	**36,864**	**–**	**36,864**	32,900	–	32,900
	553,018	**25,537**	**578,555**	651,661	31,280	682,941
Over-the-counter (settled through central counterparties):						
Forward rate agreements	**308,186**	**–**	**308,186**	852,416	–	852,416
Swaps	**1,702,488**	**87,480**	**1,789,968**	2,136,724	64,994	2,201,718
Options purchased	**–**	**–**	**–**	–	–	–
Options written	**–**	**–**	**–**	–	–	–
	2,010,674	**87,480**	**2,098,154**	2,989,140	64,994	3,054,134
Total	**$ 2,694,598**	**$ 113,017**	**$ 2,807,615**	$ 3,839,466	$ 96,274	$ 3,935,740
Foreign exchange and gold contracts						
Exchange-traded:						
Futures	**$ 35,862**	**$ –**	**$ 35,862**	$ 6,626	$ –	$ 6,626
Options purchased	**257**	**–**	**257**	251	–	251
Options written	**–**	**–**	**–**	–	–	–
	36,119	**–**	**36,119**	6,877	–	6,877
Over-the-counter:						
Spot and forwards	**425,033**	**24,244**	**449,277**	431,211	20,419	451,630
Swaps	**302,107**	**51,355**	**353,462**	296,670	41,658	338,328
Options purchased	**16,359**	**–**	**16,359**	5,382	–	5,382
Options written	**16,245**	**–**	**16,245**	4,884	–	4,884
	759,744	**75,599**	**835,343**	738,147	62,077	800,224
Over-the-counter (settled through central counterparties):						
Spot and forwards	**13**	**–**	**13**	–	–	–
Swaps	**–**	**–**	**–**	–	–	–
Options purchased	**–**	**–**	**–**	–	–	–
Options written	**–**	**–**	**–**	–	–	–
	13	**–**	**13**	–	–	–
Total	**$ 795,876**	**$ 75,599**	**$ 871,475**	$ 745,024	$ 62,077	$ 807,101
Other derivative contracts						
Exchange-traded:						
Equity	**$ 19,625**	**$ –**	**$ 19,625**	$ 13,594	$ –	$ 13,594
Credit	**–**	**–**	**–**	–	–	–
Commodity and other contracts	**41,888**	**–**	**41,888**	106,181	–	106,181
	61,513	**–**	**61,513**	119,775	–	119,775
Over-the-counter:						
Equity	**67,604**	**679**	**68,283**	47,152	605	47,757
Credit	**37,910**	**–**	**37,910**	54,020	–	54,020
Commodity and other contracts	**36,508**	**–**	**36,508**	43,524	–	43,524
	142,022	**679**	**142,701**	144,696	605	145,301
Over-the-counter (settled through central counterparties):						
Equity	**–**	**–**	**–**	1,198	–	1,198
Credit	**11,148**	**–**	**11,148**	9,913	–	9,913
Commodity and other contracts	**357**	**–**	**357**	101	–	101
	11,505	**–**	**11,505**	11,212	–	11,212
Total	**$ 215,040**	**$ 679**	**$ 215,719**	$ 275,683	$ 605	$ 276,288
Total notional amounts outstanding	**$ 3,705,514**	**$ 189,295**	**$ 3,894,809**	$ 4,860,173	$ 158,956	$ 5,019,129

(1) The notional amounts represent the amount to which a rate or price is applied to determine the amount of cash flows to be exchanged.

(b) Remaining term to maturity

The following table summarizes the remaining term to maturity of the notional amounts of the Bank's derivative financial instruments by type:

As at October 31, 2016 ($ millions)	Within one year	One to five years	Over five years	Total
Interest rate contracts				
Futures	**$ 112,183**	**$ –**	**$ 13**	**$ 112,196**
Forward rate agreements	**279,035**	**30,872**	**–**	**309,907**
Swaps	**663,184**	**1,114,988**	**516,362**	**2,294,534**
Options purchased	**13,169**	**29,392**	**8,270**	**50,831**
Options written	**6,956**	**24,700**	**8,491**	**40,147**
	1,074,527	**1,199,952**	**533,136**	**2,807,615**
Foreign exchange and gold contracts				
Futures	**858**	**35,004**	**–**	**35,862**
Spot and forwards	**400,914**	**47,590**	**786**	**449,290**
Swaps	**61,029**	**203,554**	**88,879**	**353,462**
Options purchased	**8,375**	**8,241**	**–**	**16,616**
Options written	**9,690**	**6,555**	**–**	**16,245**
	480,866	**300,944**	**89,665**	**871,475**
Other derivative contracts				
Equity	**63,485**	**24,265**	**158**	**87,908**
Credit	**22,911**	**22,852**	**3,295**	**49,058**
Commodity and other contracts	**37,001**	**41,612**	**140**	**78,753**
	123,397	**88,729**	**3,593**	**215,719**
Total	**$ 1,678,790**	**$ 1,589,625**	**$ 626,394**	**$ 3,894,809**

As at October 31, 2015 ($ millions)	Within one year	One to five years	Over five years	Total
Interest rate contracts				
Futures	$ 140,106	$ 133	$ 1	$ 140,240
Forward rate agreements	735,756	121,273	–	857,029
Swaps	945,149	1,264,240	606,023	2,815,412
Options purchased	32,246	22,636	6,522	61,404
Options written	31,630	23,269	6,756	61,655
	1,884,887	1,431,551	619,302	3,935,740
Foreign exchange and gold contracts				
Futures	1,535	5,091	–	6,626
Spot and forwards	420,551	30,622	457	451,630
Swaps	69,370	187,566	81,392	338,328
Options purchased	3,657	1,926	50	5,633
Options written	3,638	1,198	48	4,884
	498,751	226,403	81,947	807,101
Other derivative contracts				
Equity	34,689	26,792	1,068	62,549
Credit	22,747	37,526	3,660	63,933
Commodity and other contracts	89,482	60,324	–	149,806
	146,918	124,642	4,728	276,288
Total	$ 2,530,556	$ 1,782,596	$ 705,977	$ 5,019,129

(c) Credit risk

As with other financial assets, derivative instruments are subject to credit risk. Credit risk arises from the possibility that counterparties may default on their obligations to the Bank. However, whereas the credit risk of other financial assets is represented by the principal amount net of any applicable allowance for credit losses, the credit risk associated with derivatives is normally a small fraction of the notional amount of the derivative instrument.

Derivative contracts generally expose the Bank to credit loss if changes in market rates affect a counterparty's position unfavourably and the counterparty defaults on payment. Accordingly, exposure to credit risk of derivatives is represented by the positive fair value of the instrument.

Negotiated over-the-counter derivatives generally present greater credit exposure than exchange-traded contracts. The net change in the exchange-traded contracts is normally settled daily in cash with the exchange. Holders of these contracts look to the exchange for performance under the contract.

The Bank strives to limit credit risk by dealing with counterparties that it believes are creditworthy, and investment grade counterparties account for a significant portion of the credit risk exposure arising from the Bank's derivative transactions as at October 31, 2016. To control credit risk associated with derivatives, the Bank uses the same credit risk management activities and procedures that are used in the lending business in assessing and adjudicating potential credit exposure. The Bank applies limits to each counterparty, measures exposure as the current positive fair value plus potential future exposure, and uses credit mitigation techniques, such as netting and collateralization.

The Bank obtains the benefit of netting by entering into master netting arrangements with counterparties (typically industry standard International Swaps and Derivatives Association (ISDA) agreements), which allow for a single net settlement of all transactions covered by that agreement in the event of a default or early termination of the transactions. In this manner, the credit risk associated with favourable contracts is eliminated by the master netting arrangement to the extent that unfavourable contracts with the same counterparty are not settled before favourable contracts.

Collateralization is typically documented by way of an ISDA Credit Support Annex (CSA), the terms of which may vary according to each party's view of the other party's creditworthiness. CSAs can require one party to post initial margin at the onset of each transaction. CSAs also allow for variation margin to be called if total uncollateralized mark-to-market exposure exceeds an agreed upon threshold. Such variation margin provisions can be one way (only one party will ever post collateral) or bi-lateral (either party may post collateral depending upon which party is in-the-money). The CSA will also detail the types of collateral that are acceptable to each party, and the adjustments that will be applied against each collateral type. The terms of the ISDA master netting agreements and CSAs are taken into consideration in the calculation of counterparty credit risk exposure (see also page 73 of the 2016 Annual Report).

Derivatives instruments used by the Bank include credit derivatives in its investment and loan portfolios: credit protection is sold as an alternative to acquiring exposure to bond or loan assets, while credit protection is bought to manage or mitigate credit exposures.

The following table summarizes the credit exposure of the Bank's derivative financial instruments. The credit risk amount (CRA) represents the estimated replacement cost, or positive fair value, for all contracts taking into account master netting or collateral arrangements that have been made. The CRA does not reflect actual or expected losses.

The credit equivalent amount (CEA) is the CRA plus an add-on for potential future exposure. The add-on amount is based on a formula prescribed in the Capital Adequacy Requirements (CAR) Guideline of the Superintendent. The risk-weighted balance is calculated by multiplying the CEA by the capital requirement (K) times 12.5, where K is a function of the probability of default (PD), loss given default (LGD), maturity and prescribed correlation factors. Other derivative contracts – other includes precious metals other than gold, and other commodities, including energy and base metal derivatives.

	2016				2015			
As at October 31 ($ millions)	Notional amount	Credit risk amount (CRA)[1]	Credit equivalent amount (CEA)[1]	CET1 Risk Weighted Assets[2]	Notional amount	Credit risk amount (CRA)[1]	Credit equivalent amount (CEA)[1]	Risk Weighted Assets[1]
Interest rate contracts								
Futures	**$ 112,196**	**$ –**	**$ –**	**$ –**	$ 140,240	$ –	$ 3	$ –
Forward rate agreements	**309,907**	**9**	**100**	**17**	857,029	250	525	45
Swaps	**2,294,534**	**2,703**	**7,331**	**2,125**	2,815,412	2,222	10,416	1,871
Options purchased	**50,831**	**6**	**107**	**52**	61,404	–	149	138
Options written	**40,147**	**–**	**1**	**–**	61,655	–	–	–
	2,807,615	**2,718**	**7,539**	**2,194**	3,935,740	2,472	11,093	2,054
Foreign exchange and gold contracts								
Futures	**35,862**	**–**	**38**	**16**	6,626	–	249	5
Spot and forwards	**449,290**	**2,057**	**5,420**	**1,326**	451,630	2,328	6,742	1,860
Swaps	**353,462**	**2,596**	**5,919**	**1,585**	338,328	1,759	8,592	2,214
Options purchased	**16,616**	**322**	**532**	**129**	5,633	199	328	98
Options written	**16,245**	**–**	**127**	**19**	4,884	–	–	–
	871,475	**4,975**	**12,036**	**3,075**	807,101	4,286	15,911	4,177
Other derivative contracts								
Equity	**87,908**	**871**	**5,308**	**1,677**	62,549	1,228	6,534	2,049
Credit	**49,058**	**32**	**2,032**	**340**	63,933	261	2,643	608
Commodity and other contracts	**78,753**	**1,109**	**6,493**	**645**	149,806	2,288	11,347	1,945
	215,719	**2,012**	**13,833**	**2,662**	276,288	3,777	20,524	4,602
Credit Valuation Adjustment[2]	**–**	**–**	**–**	**4,165**	–	–	–	7,183
Total derivatives	**$ 3,894,809**	**$ 9,705**	**$ 33,408**	**$ 12,096**	$ 5,019,129	$ 10,535	$ 47,528	$ 18,016
Amount settled through central counterparties[3]								
Exchange-traded	**228,538**	**–**	**5,521**	**110**	325,317	–	8,172	163
Over-the-counter	**2,109,672**	**–**	**2,174**	**43**	3,065,346	–	6,331	127
	$ 2,338,210	**$ –**	**$ 7,695**	**$ 153**	$ 3,390,663	$ –	$ 14,503	$ 290

(1) The amounts presented are net of collateral and master netting agreements at the product level. The total amounts relating to netting and collateral were $31,952 (2015 – $30,467) for CRA, and $51,072 (2015 – $50,078) for CEA.

(2) As per OSFI guideline, effective 2014, Credit Valuation Adjustment (CVA) to CET1 RWA for derivatives was phased-in at 0.57. In 2016, the CVA was 0.64 (2015 – 0.64).

(3) Amounts are included under total derivatives above. Amounts include exposures settled directly through central counterparties and exposures settled through clearing members of central counterparties.

(d) Fair value

The following table summarizes the fair value of derivatives segregated by type and segregated between trading and those derivatives designated in hedging relationships.

As at October 31 ($ millions)	2016 Average fair value		2016 Year-end fair value		2015 Year-end fair value[1]	
	Favourable	Unfavourable	Favourable	Unfavourable	Favourable	Unfavourable
Trading						
Interest rate contracts						
Forward rate agreements	**$ 155**	**$ 3**	**$ 63**	**$ 3**	$ 250	$ 3
Swaps	**15,198**	**14,566**	**14,153**	**13,814**	12,871	12,770
Options	**91**	**92**	**65**	**82**	107	104
	15,444	**14,661**	**14,281**	**13,899**	13,228	12,877
Foreign exchange and gold contracts						
Forwards	**6,163**	**6,294**	**5,939**	**5,362**	5,358	5,192
Swaps	**10,985**	**13,141**	**11,506**	**12,369**	10,694	13,517
Options	**248**	**232**	**410**	**325**	227	131
	17,396	**19,667**	**17,855**	**18,056**	16,279	18,840
Other derivative contracts						
Equity	**2,248**	**2,490**	**1,905**	**2,380**	2,276	2,574
Credit	**674**	**1,840**	**148**	**1,475**	841	2,554
Commodity and other contracts	**2,861**	**3,993**	**2,212**	**2,403**	3,507	5,143
	5,783	**8,323**	**4,265**	**6,258**	6,624	10,271
Trading derivatives' market valuation	**$ 38,623**	**$ 42,651**	**$ 36,401**	**$ 38,213**	$ 36,131	$ 41,988
Hedging						
Interest rate contracts						
Swaps			**$ 1,426**	**$ 587**	$ 1,316	$ 679
Foreign exchange and gold contracts						
Forwards			**333**	**241**	301	578
Swaps			**3,471**	**3,346**	3,223	2,025
			$ 3,804	**$ 3,587**	$ 3,524	$ 2,603
Other derivative contracts						
Equity			**$ 26**	**$ –**	$ 32	$ –
Hedging derivatives' market valuation			**$ 5,256**	**$ 4,174**	$ 4,872	$ 3,282
Total derivative financial instruments as per Statement of Financial Position			**$ 41,657**	**$ 42,387**	$ 41,003	$ 45,270
Less: impact of master netting and collateral[2]			**31,952**	**31,952**	30,468	30,468
Net derivative financial instruments[2]			**$ 9,705**	**$ 10,435**	$ 10,535	$ 14,802

(1) The average fair value of trading derivatives' market valuation for the year ended October 31, 2015 was: favourable $38,950 and unfavourable $43,019. Average fair value amounts are based on the latest 13 month-end balances.

(2) Master netting agreement amounts are based on the capital adequacy criteria of the Basel Committee on Banking Supervision (BCBS) and OSFI. These criteria allow netting where there are legally enforceable contracts which enable net settlement in the event of a default, bankruptcy, liquidation or similar circumstances.

(e) Hedging activities

The Bank's hedging activities that qualify for hedge accounting consist of fair value hedges, cash flow hedges, and net investment hedges.

Ineffectiveness of hedge relationships

Due to the ineffective portion of designated hedges, the Bank recorded the following amounts in non-interest income – other:

For the year ended October 31 ($ millions)	2016	2015
Fair value hedges		
Gain (loss) recorded on hedged items	**$ 11**	$ (220)
Gain (loss) recorded on hedging instruments	**(51)**	198
Ineffectiveness	**$ (40)**	$ (22)
Cash flow hedges		
Ineffectiveness	**$ 11**	$ (27)

Hedging instruments

Market valuation is disclosed by the type of relationship:

As at October 31 ($ millions)	2016 Favourable	2016 Unfavourable	2015 Favourable	2015 Unfavourable
Derivatives designated in fair value hedging relationships[1]	**$ 1,622**	**$ 643**	$ 1,557	$ 715
Derivatives designated in cash flow hedging relationships	**3,568**	**3,291**	3,205	2,055
Derivatives designated in net investment hedging relationships[1]	**66**	**240**	110	512
Total derivatives designated in hedging relationships	**$ 5,256**	**$ 4,174**	$ 4,872	$ 3,282

(1) As at October 31, 2016, the fair value of non-derivative instruments designated as net investment hedges and fair value hedges was $6,905 (2015 – $7,428). These non-derivative hedging instruments are presented as deposits – financial institutions on the Consolidated Statement of Financial Position.

Cash flow hedges
The period when cash flows of designated hedged items are expected to occur and impact the Consolidated Statement of Income are as follows:

As at October 31, 2016 ($ millions)	Within one year	Within one to five years	More than five years
Cash inflows from assets	**$ 12,672**	**$ 26,838**	**$ 8,998**
Cash outflows from liabilities	**(22,187)**	**(30,870)**	**(7,666)**
Net cash flows	**$ (9,515)**	**$ (4,032)**	**$ 1,332**

As at October 31, 2015 ($ millions)	Within one year	Within one to five years	More than five years
Cash inflows from assets	$ 1,431	$ 9,543	$ 3,801
Cash outflows from liabilities	(14,803)	(18,172)	(3,296)
Net cash flows	$ (13,372)	$ (8,629)	$ 505

Income related to interest cash flows is recognized using the effective interest method over the life of the underlying instrument. Foreign currency gains and losses related to future cash flows of on-balance sheet monetary items are recognized as incurred. Forecasted revenue is recognized over the period to which it relates.

10 Offsetting Financial Assets and Financial Liabilities

The Bank is eligible to present certain financial assets and financial liabilities as listed in the table below on a net basis on the Consolidated Statement of Financial Position pursuant to criteria described in Note 3 – Significant accounting policies.

The following tables provide information on the impact of offsetting on the Bank's Consolidated Statement of Financial Position, as well as the financial impact of netting for instruments that are subject to enforceable master netting arrangements or similar agreements, but do not qualify for offsetting in the Consolidated Statement of Financial Position, as well as available cash and financial instrument collateral.

As at October 31, 2016 ($ millions)

Types of financial assets	Gross amounts of recognized financial assets	Gross amounts of recognized financial liabilities offset in the consolidated statement of financial position	Net amounts of financial assets presented in the consolidated statement of financial position	Related amounts not offset in the consolidated statement of financial position: Impact of master netting arrangements or similar agreements[1]	Related amounts not offset in the consolidated statement of financial position: Collateral[2]	Net amount[3]
Derivative financial instruments[4]	**$ 63,329**	**$ (21,672)**	**$ 41,657**	**$ (25,115)**	**$ (7,184)**	**$ 9,358**
Securities purchased under resale agreements and securities borrowed	**98,909**	**(6,780)**	**92,129**	**(9,447)**	**(75,365)**	**7,317**
Total	**$ 162,238**	**$ (28,452)**	**$ 133,786**	**$ (34,562)**	**$ (82,549)**	**$ 16,675**

As at October 31, 2016 ($ millions)

Types of financial liabilities	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets offset in the consolidated statement of financial position	Net amounts of financial liabilities presented in the consolidated statement of financial position	Related amounts not offset in the consolidated statement of financial position: Impact of master netting arrangements or similar agreements[1]	Related amounts not offset in the consolidated statement of financial position: Collateral[2]	Net amount
Derivative financial instruments[4]	**$ 64,059**	**$ (21,672)**	**$ 42,387**	**$ (25,115)**	**$ (7,318)**	**$ 9,954**
Obligations related to securities sold under repurchase agreements and securities lent	**103,863**	**(6,780)**	**97,083**	**(9,447)**	**(73,929)**	**13,707**
Total	**$ 167,922**	**$ (28,452)**	**$ 139,470**	**$ (34,562)**	**$ (81,247)**	**$ 23,661**

(1) Amounts that are subject to master netting arrangements or similar agreements but were not offset in the Consolidated Statement of Financial Position because they did not meet the net settlement/simultaneous settlement criteria; or because the rights of set off are conditional upon the default of the counterparty only.
(2) Cash and financial instrument collateral amounts received or pledged in relation to the total amounts of financial assets and financial liabilities, including those that were not offset in the Consolidated Statement of Financial Position. These amounts are disclosed at fair value and the rights of set off are conditional upon the default of the counterparty.
(3) Not intended to represent the Bank's actual exposure to credit risk, as a variety of credit mitigation strategies are employed in addition to offsetting and collateral arrangements.
(4) For fiscal 2016, the cash collateral received against the positive market values of derivative financial instruments of $1,398 and the cash collateral pledged towards the negative mark to market of derivative financial instruments of $875 are recorded within other liabilities and other assets, respectively.

As at October 31, 2015 ($ millions)

Types of financial assets	Gross amounts of recognized financial assets	Gross amounts of recognized financial liabilities offset in the consolidated statement of financial position	Net amounts of financial assets presented in the consolidated statement of financial position	Related amounts not offset in the consolidated statement of financial position		Net amount[3]
				Impact of master netting arrangements or similar agreements[1]	Collateral[2]	
Derivative financial instruments[4]	$ 65,026	$ (24,023)	$ 41,003	$ (22,357)	$ (8,451)	$ 10,195
Securities purchased under resale agreements and securities borrowed	95,757	(8,445)	87,312	(8,107)	(74,308)	4,897
Total	$ 160,783	$ (32,468)	$ 128,315	$ (30,464)	$ (82,759)	$ 15,092

As at October 31, 2015 ($ millions)

Types of financial liabilities	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets offset in the consolidated statement of financial position	Net amounts of financial liabilities presented in the consolidated statement of financial position	Related amounts not offset in the consolidated statement of financial position		Net amount
				Impact of master netting arrangements or similar agreements[1]	Collateral[2]	
Derivative financial instruments[4]	$ 69,293	$ (24,023)	$ 45,270	$ (22,357)	$ (8,560)	$ 14,353
Obligations related to securities sold under repurchase agreements and securities lent	85,460	(8,445)	77,015	(8,107)	(58,090)	10,818
Total	$ 154,753	$ (32,468)	$ 122,285	$ (30,464)	$ (66,650)	$ 25,171

(1) Amounts that are subject to master netting arrangements or similar agreements but were not offset in the Consolidated Statement of Financial Position because they did not meet the net settlement/simultaneous settlement criteria; or because the rights of set off are conditional upon the default of the counterparty only.
(2) Cash and financial instrument collateral amounts received or pledged in relation to the total amounts of financial assets and financial liabilities, including those that were not offset in the Consolidated Statement of Financial Position. These amounts are disclosed at fair value and the rights of set off are conditional upon the default of the counterparty.
(3) Not intended to represent the Bank's actual exposure to credit risk, as a variety of credit mitigation strategies are employed in addition to offsetting and collateral arrangements.
(4) For fiscal 2015, the cash collateral received against the positive market values of derivative financial instruments of $1,173 and the cash collateral pledged towards the negative mark to market of derivative financial instruments of $675 are recorded within other liabilities and other assets, respectively.

11 Investment Securities

Investment securities includes held-to-maturity securities and available-for-sale securities.

(a) An analysis of the carrying value of investment securities is as follows:

	Remaining term to maturity						
As at October 31, 2016 ($ millions)	Within three months	Three to twelve months	One to five years	Five to ten years	Over ten years	No specific maturity	Carrying value
Available-for-sale							
Canadian federal government issued or guaranteed debt	$ 51	$ 53	$ 11,507	$ 857	$ 1,153	$ –	$ 13,621
Yield[1] %	*0.8*	*1.0*	*1.0*	*2.5*	*3.0*	–	*1.3*
Canadian provincial and municipal debt	–	252	2,869	352	19	–	3,492
Yield[1] %	*0.0*	*1.0*	*1.4*	*2.1*	*2.9*	–	*1.5*
U.S. treasury and other U.S. agency debt	481	2,134	5,823	1,296	343	–	10,077
Yield[1] %	*0.3*	*0.6*	*1.0*	*0.9*	*1.2*	–	*0.9*
Other foreign government debt	4,645	3,620	5,602	1,424	240	–	15,531
Yield[1] %	*1.7*	*3.0*	*3.2*	*4.4*	*5.2*	–	*2.9*
Other debt	846	1,145	3,454	81	179	–	5,705
Yield[1] %	*1.7*	*0.1*	*1.4*	*3.0*	*2.5*	–	*1.2*
Preferred shares	–	–	–	–	–	264	264
Common shares	–	–	–	–	–	1,819	1,819
Total available-for-sale securities	6,023	7,204	29,255	4,010	1,934	2,083	50,509
Held-to-maturity							
Canadian federal and provincial government issued or guaranteed debt	123	432	5,335	281	–	–	6,171
U.S. treasury and other U.S. agency debt	–	335	4,281	–	–	–	4,616
Other foreign government debt	–	344	2,547	7	–	–	2,898
Corporate debt	523	1,578	6,617	7	–	–	8,725
Total held-to-maturity securities	646	2,689	18,780	295	–	–	22,410
Total investment securities	$ 6,669	$ 9,893	$ 48,035	$ 4,305	$ 1,934	$ 2,083	$ 72,919
Total by currency (in Canadian equivalent):							
Canadian dollar	$ 8	$ 430	$ 16,588	$ 1,239	$ 1,192	$ 721	$ 20,178
U.S. dollar	1,485	5,146	26,959	2,086	514	930	37,120
Mexican peso	878	264	1,496	247	77	12	2,974
Other currencies	4,298	4,053	2,992	733	151	420	12,647
Total investment securities	$ 6,669	$ 9,893	$ 48,035	$ 4,305	$ 1,934	$ 2,083	$ 72,919

(1) Represents the weighted-average yield of fixed income securities.

	Remaining term to maturity						
As at October 31, 2015 ($ millions)	Within three months	Three to twelve months	One to five years	Five to ten years	Over ten years	No specific maturity	Carrying value
Available-for-sale							
Canadian federal government issued or guaranteed debt	$ 2	$ 199	$ 5,105	$ 1,279	$ 1,164	$ –	$ 7,749
Yield[1] %	*0.6*	*1.0*	*1.3*	*2.2*	*3.1*	–	*1.7*
Canadian provincial and municipal debt	12	1,034	2,482	166	12	–	3,706
Yield[1] %	*0.1*	*1.3*	*1.3*	*2.3*	*2.9*	–	*1.3*
U.S. treasury and other U.S. agency debt	373	1,118	8,197	140	–	–	9,828
Yield[1] %	*0.2*	*0.3*	*1.1*	*1.6*	–	–	*1.0*
Other foreign government debt	2,274	4,838	4,323	1,053	195	–	12,683
Yield[1] %	*2.4*	*2.0*	*3.3*	*4.3*	*5.4*	–	*2.8*
Other debt	846	947	3,503	67	214	–	5,577
Yield[1] %	*1.2*	*0.7*	*1.5*	*1.7*	*2.3*	–	*1.4*
Preferred shares	–	–	–	–	–	255	255
Common shares	–	–	–	–	–	2,767	2,767
Total available-for-sale securities	3,507	8,136	23,610	2,705	1,585	3,022	42,565
Held-to-maturity							
Canadian federal and provincial government issued or guaranteed debt	–	–	74	–	–	–	74
U.S. treasury and other U.S. agency debt	–	–	131	–	–	–	131
Other foreign government debt	–	69	107	8	–	–	184
Corporate debt	–	–	262	–	–	–	262
Total held-to-maturity securities	–	69	574	8	–	–	651
Total investment securities	$ 3,507	$ 8,205	$ 24,184	$ 2,713	$ 1,585	$ 3,022	$ 43,216
Total by currency (in Canadian equivalent):							
Canadian dollar	$ 5	$ 761	$ 5,899	$ 1,359	$ 1,207	$ 956	$ 10,187
U.S. dollar	674	2,033	13,796	498	193	1,536	18,730
Mexican peso	161	997	1,259	120	83	40	2,660
Other currencies	2,667	4,414	3,230	736	102	490	11,639
Total investment securities	$ 3,507	$ 8,205	$ 24,184	$ 2,713	$ 1,585	$ 3,022	$ 43,216

(1) Represents the weighted-average yield of fixed income securities.

(b) An analysis of unrealized gains and losses on available-for-sale securities is as follows:

As at October 31, 2016 ($ millions)	Cost	Gross unrealized gains	Gross unrealized losses	Fair value
Canadian federal government issued or guaranteed debt	**$ 13,347**	**$ 280**	**$ 6**	**$ 13,621**
Canadian provincial and municipal debt	**3,469**	**33**	**10**	**3,492**
U.S. treasury and other U.S. agency debt	**10,050**	**53**	**26**	**10,077**
Other foreign government debt	**15,490**	**62**	**21**	**15,531**
Other debt	**5,650**	**59**	**4**	**5,705**
Preferred shares	**414**	**10**	**160**	**264**
Common shares	**1,634**	**243**	**58**	**1,819**
Total available-for-sale securities	**$ 50,054**	**$ 740**	**$ 285**	**$ 50,509**

As at October 31, 2015 ($ millions)	Cost	Gross unrealized gains	Gross unrealized losses	Fair value
Canadian federal government issued or guaranteed debt	$ 7,558	$ 202	$ 11	$ 7,749
Canadian provincial and municipal debt	3,685	25	4	3,706
U.S. treasury and other U.S. agency debt	9,806	29	7	9,828
Other foreign government debt	12,701	32	50	12,683
Other debt	5,531	58	12	5,577
Preferred shares	413	6	164	255
Common shares	2,104	706	43	2,767
Total available-for-sale securities	$ 41,798	$ 1,058	$ 291	$ 42,565

The net unrealized gain on available-for-sale securities of $455 million (2015 – gain of $767 million) decreases to a net unrealized gain of $26 million (2015 – gain of $267 million) after the impact of qualifying hedges is taken into account. The net unrealized gain on available-for-sale securities is recorded in Accumulated Other Comprehensive Income.

(c) An analysis of the fair value and carrying value of held-to-maturity securities is as follows:

	Fair value		Carrying value	
As at October 31 ($ millions)	**2016**	2015	**2016**	2015
Canadian federal and provincial government issued or guaranteed debt	**$ 6,207**	$ 74	**$ 6,171**	$ 74
U.S. treasury and other U.S. agency debt	**4,672**	131	**4,616**	131
Other foreign government debt	**2,901**	189	**2,898**	184
Corporate debt	**8,787**	322	**8,725**	262
Total held-to-maturity securities	**$ 22,567**	$ 716	**$ 22,410**	$ 651

(d) An analysis of available-for-sale securities with continuous unrealized losses:

	Less than twelve months			Twelve months or greater			Total		
As at October 31, 2016 ($ millions)	Cost	Fair value	Unrealized losses	Cost	Fair value	Unrealized losses	Cost	Fair value	Unrealized losses
Canadian federal government issued or guaranteed debt	**$ 1,867**	**$ 1,861**	**$ 6**	**$ 1,104**	**$ 1,104**	**$ –**	**$ 2,971**	**$ 2,965**	**$ 6**
Canadian provincial and municipal debt	**807**	**798**	**9**	**193**	**192**	**1**	**1,000**	**990**	**10**
U.S. treasury and other U.S. agency debt	**2,238**	**2,212**	**26**	**–**	**–**	**–**	**2,238**	**2,212**	**26**
Other foreign government debt	**2,812**	**2,799**	**13**	**575**	**567**	**8**	**3,387**	**3,366**	**21**
Other debt	**877**	**875**	**2**	**409**	**407**	**2**	**1,286**	**1,282**	**4**
Preferred shares	**6**	**6**	**–**	**382**	**222**	**160**	**388**	**228**	**160**
Common shares	**303**	**280**	**23**	**140**	**105**	**35**	**443**	**385**	**58**
Total available-for-sale securities	**$ 8,910**	**$ 8,831**	**$ 79**	**$ 2,803**	**$ 2,597**	**$ 206**	**$ 11,713**	**$ 11,428**	**$ 285**

	Less than twelve months			Twelve months or greater			Total		
As at October 31, 2015 ($ millions)	Cost	Fair value	Unrealized losses	Cost	Fair value	Unrealized losses	Cost	Fair value	Unrealized losses
Canadian federal government issued or guaranteed debt	$ 2,362	$ 2,351	$ 11	$ –	$ –	$ –	$ 2,362	$ 2,351	$ 11
Canadian provincial and municipal debt	1,302	1,298	4	–	–	–	1,302	1,298	4
U.S. treasury and other U.S. agency debt	977	973	4	10	7	3	987	980	7
Other foreign government debt	3,532	3,499	33	1,140	1,123	17	4,672	4,622	50
Other debt	1,625	1,617	8	132	128	4	1,757	1,745	12
Preferred shares	1	1	–	383	219	164	384	220	164
Common shares	419	379	40	39	36	3	458	415	43
Total available-for-sale securities	$ 10,218	$ 10,118	$ 100	$ 1,704	$ 1,513	$ 191	$ 11,922	$ 11,631	$ 291

As at October 31, 2016, the cost of 474 (2015 – 610) available-for-sale securities exceeded their fair value by $285 million (2015 – $291 million). This unrealized loss is recorded in accumulated other comprehensive income as part of unrealized gains (losses) on available-for-sale securities. Of the 474 (2015 – 610) available-for-sale securities, 140 (2015 – 110) have been in an unrealized loss position continuously for more than a year, amounting to an unrealized loss of $206 million (2014 – $191 million).

Investment securities are considered to be impaired only if objective evidence indicates one or more loss events have occurred and have affected the estimated future cash flows after considering available collateral.

Collateral is not generally obtained directly from the issuers of debt securities. However, certain debt securities may be collateralized by specifically identified assets that would be obtainable in the event of default.

Investment securities are evaluated for impairment at the end of each reporting date, or more frequently, if events or changes in circumstances indicate the existence of objective evidence of impairment.

(e) Net gain on sale of investment securities

An analysis of net gain on sale of investment securities is as follows:

For the year ended October 31 ($ millions)	2016	2015	2014
Net realized gains or losses	$ 570	$ 646	$ 755
Impairment losses[1]	36	7	14
Net gain on sale of investment securities	$ 534	$ 639	$ 741

(1) Impairment losses (gains) are comprised of $36 from equity securities (2015 – $8; 2014 – $14) and nil from other debt securities (2015 – $(1); 2014 – nil).

12 Loans, Impaired Loans and Allowance for Credit Losses

(a) Loans and acceptances outstanding by geography [1]

As at October 31 ($ millions)	2016	2015
Canada:		
Residential mortgages	$ 193,303	$ 190,123
Personal and credit cards	74,698	70,263
Business and government	48,653	44,808
	316,654	305,194
United States:		
Personal and credit cards	1,844	1,558
Business and government	36,613	28,593
	38,457	30,151
Mexico:		
Residential mortgages	6,346	6,043
Personal and credit cards	3,079	3,076
Business and government	11,384	9,473
	20,809	18,592
Chile:		
Residential mortgages	6,300	5,068
Personal and credit cards	4,632	3,681
Business and government	8,466	7,710
	19,398	16,459
Peru:		
Residential mortgages	2,586	2,367
Personal and credit cards	4,573	4,317
Business and government	10,661	10,287
	17,820	16,971
Colombia:		
Residential mortgages	1,497	1,286
Personal and credit cards	3,850	2,956
Business and government	3,948	4,441
	9,295	8,683
Other International:		
Residential mortgages	12,856	12,611
Personal and credit cards	6,826	5,626
Business and government	42,675	48,538
	62,357	66,775
Total loans	484,790	462,825
Acceptances[2]	11,978	10,296
Total loans and acceptances[3]	496,768	473,121
Allowance for credit losses	(4,626)	(4,197)
Total loans and acceptances net of allowances for loan losses	$ 492,142	$ 468,924

(1) Geographic segmentation is based on the location of the property for residential mortgages; otherwise, the residence of the borrower.
(2) 1% of borrowers reside outside Canada.
(3) Loans and acceptances denominated in U.S. dollars were $103,503 (2015 – $95,581), in Mexican pesos $15,954 (2015 – $14,054), Chilean pesos $15,214 (2015 – $12,566), and in other foreign currencies $44,870 (2015 – $42,570).

(b) Loan maturities

As at October 31, 2016	Remaining term to maturity						Rate sensitivity			
($ millions)	Within one year	One to five years	Five to ten years	Over ten years	No specific maturity	Total	Floating	Fixed rate	Non-rate sensitive	Total
Residential mortgages	**$ 41,127**	**$ 160,713**	**$ 9,745**	**$ 9,520**	**$ 1,783**	**$ 222,888**	**$ 55,543**	**$ 165,189**	**$ 2,156**	**$ 222,888**
Personal and credit cards	**14,107**	**31,191**	**4,820**	**993**	**48,391**	**99,502**	**40,163**	**58,439**	**900**	**99,502**
Business and government	**70,051**	**79,960**	**6,278**	**495**	**5,616**	**162,400**	**111,384**	**48,183**	**2,833**	**162,400**
Total	**$ 125,285**	**$ 271,864**	**$ 20,843**	**$ 11,008**	**$ 55,790**	**$ 484,790**	**$ 207,090**	**$ 271,811**	**$ 5,889**	**$ 484,790**
Allowance for credit losses	**–**	**–**	**–**	**–**	**(4,626)**	**(4,626)**	**–**	**–**	**(4,626)**	**(4,626)**
Total loans net of allowance for credit losses	**$ 125,285**	**$ 271,864**	**$ 20,843**	**$ 11,008**	**$ 51,164**	**$ 480,164**	**$ 207,090**	**$ 271,811**	**$ 1,263**	**$ 480,164**

As at October 31, 2015	Remaining term to maturity						Rate sensitivity			
($ millions)	Within one year	One to five years	Five to ten years	Over ten years	No specific maturity	Total	Floating	Fixed rate	Non-rate sensitive	Total
Residential mortgages	$ 43,659	$ 151,685	$ 9,438	$ 10,928	$ 1,788	$ 217,498	$ 61,553	$ 153,896	$ 2,049	$ 217,498
Personal and credit cards	11,872	29,709	4,595	1,124	44,177	91,477	39,137	51,465	875	91,477
Business and government	70,079	72,195	6,186	501	4,889	153,850	100,492	50,803	2,555	153,850
Total loans	$ 125,610	$ 253,589	$ 20,219	$ 12,553	$ 50,854	$ 462,825	$ 201,182	$ 256,164	$ 5,479	$ 462,825
Allowance for credit losses	–	–	–	–	(4,197)	(4,197)	–	–	(4,197)	(4,197)
Total loans net of allowance for credit losses	$ 125,610	$ 253,589	$ 20,219	$ 12,553	$ 46,657	$ 458,628	$ 201,182	$ 256,164	$ 1,282	$ 458,628

(c) Impaired loans[1][2]

	2016			2015		
As at October 31 ($ millions)	Gross impaired loans[1]	Allowance for credit losses	Net	Gross impaired loans[1]	Allowance for credit losses	Net
Residential mortgages	**$ 1,608**	**$ 458[3]**	**$ 1,150**	$ 1,668	$ 529[3]	$ 1,139
Personal and credit cards	**1,622**	**1,596[3]**	**26**	1,332	1,327[3]	5
Business and government	**2,164**	**894[4]**	**1,270**	1,658	717[4]	941
Total	**$ 5,394**	**$ 2,948**	**$ 2,446**	$ 4,658	$ 2,573	$ 2,085
By geography:						
Canada			**$ 435**			$ 450
United States			**163**			5
Mexico			**86**			85
Peru			**263**			181
Chile			**262**			230
Colombia			**142**			121
Other International			**1,095**			1,013
Total			**$ 2,446**			$ 2,085

(1) Interest income recognized on impaired loans during the year ended October 31, 2016 was $18 (2015 – $13).
(2) Excludes loans acquired under FDIC guarantee related to the acquisition of R-G Premier Bank of Puerto Rico. For loans where the guarantee has expired, the total amount of loans considered impaired is $94 (2015 – $150).
(3) Allowance for credit losses for residential mortgages and personal and credit card loans is assessed on a collective basis.
(4) Allowance for credit losses for business and government loans is individually assessed.

For the years ended October 31, 2016 and 2015, the Bank would have recorded additional interest income of $367 million and $337 million, respectively, on impaired loans, if these impaired loans were classified as performing loans.

(d) Allowance for credit losses

($ millions)	As at October 31, 2016 Balance at beginning of year	Write-offs[1]	Recoveries	Provision for credit losses	Other, including foreign currency adjustment	Balance at end of year
Individual	**$ 717**	**$ (428)**	**$ 40**	**$ 585**	**$ (20)**	**$ 894**
Collective	**3,260**	**(2,151)**	**542**	**1,827**	**20**	**3,498**
Total before loans acquired under FDIC guarantee	**3,977**	**(2,579)**	**582**	**2,412**	**–**	**4,392**
Loans acquired under FDIC guarantee[2]	**220**	**(9)**	**18**	**–**	**5**	**234**
	$ 4,197	**$ (2,588)**	**$ 600**	**$ 2,412**	**$ 5**	**$ 4,626**

($ millions)	As at October 31, 2015 Balance at beginning of year	Write-offs[1]	Recoveries	Provision for credit losses	Other, including foreign currency adjustment[3]	Balance at end of year
Individual	$ 614	$ (320)	$ 52	$ 255	$ 116	$ 717
Collective	2,856	(1,908)	377	1,721	214	3,260
Total before loans acquired under FDIC guarantee	3,470	(2,228)	429	1,976	330	3,977
Loans acquired under FDIC guarantee[2]	171	(2)	56	(34)	29	220
	$ 3,641	$ (2,230)	$ 485	$ 1,942	$ 359	$ 4,197

	2016	2015
Represented by:		
Allowance against impaired loans	**$ 2,948**	$ 2,573
Allowance against performing loans and loans past due but not impaired [4]	**1,444**	1,404
Total before loans acquired under FDIC guarantee	**4,392**	3,977
Loans acquired under FDIC guarantee[2]	**234**	220
	$ 4,626	$ 4,197

(1) For the wholesale portfolios, impaired loans restructured during the year amounted to $111 (2015 – $81). Write-offs of impaired loans restructured during the year were nil (2015 – nil). Non-impaired loans restructured during the year amounted to $55 (2015 – $93).
(2) This represents the gross amount of allowance for credit losses as the receivable from FDIC is separately recorded in other assets.
(3) Includes rebalancing of reserves between off-balance sheet and on-balance sheet credit exposures; and retrospective adjustments primarily relating to foreign currency translation of prior years.
(4) The allowance for performing loans is attributable to business and government loans $662 (2015 –$644) with the remainder allocated to personal and credit card loans $662 (2015 – $614) and residential mortgages $120 (2015 – $146).

(e) Loans acquired under FDIC guarantee

As at October 31, 2016 ($ millions)	Non-single family home loans	Single family home loans	Total
R-G Premier Bank			
Unpaid principal balance	**$ 353**	**$ 1,939**	**$ 2,292**
Fair value adjustments	**135**	**(211)**	**(76)**
Net carrying value	**488**	**1,728**	**2,216**
Allowance for credit losses	**(157)**	**(77)**	**(234)**
	$ 331	**$ 1,651**	**$ 1,982**

As at October 31, 2015 ($ millions)	Non-single family home loans	Single family home loans	Total
R-G Premier Bank			
Unpaid principal balance	$ 417	$ 2,136	$ 2,553
Fair value adjustments	136	(291)	(155)
Net carrying value	553	1,845	2,398
Allowance for credit losses	(160)	(60)	(220)
	$ 393	$ 1,785	$ 2,178

Loans purchased as part of the acquisition of R-G Premier Bank of Puerto Rico are subject to loss share agreements with the FDIC. Under this agreement, the FDIC guarantees 80% of loan losses. The provision for credit losses in the Consolidated Statement of Income related to these loans is reflected net of the amount expected to be reimbursed by the FDIC. Allowance for credit losses in the Consolidated Statement of Financial Position is reflected on a gross basis. The FDIC guarantee on non-single family loans expired in 2015. The guarantee for single family home loans will expire in April 2020.

As at October 31, 2016, the carrying value of loans acquired under the FDIC guarantee was $2.0 billion (2015 – $2.2 billion) and the carrying value of loans for which claims for losses under the guarantee expired during the year was $331 million. A net receivable of $116 million (2015 – $218 million) from the FDIC is included in Other assets in the Consolidated Statement of Financial Position.

(f) Loans past due but not impaired [1]

A loan is considered past due when a counterparty has not made a payment by the contractual due date. The following table presents the carrying value of loans that are contractually past due but not classified as impaired because they are either less than 90 days past due or fully secured and collection efforts are reasonably expected to result in repayment, or restoring it to a current status in accordance with the Bank's policy.

	2016[2][3]				2015[2][3]			
As at October 31 ($ millions)	31 – 60 days	61 – 90 days	91 days and greater	Total	31 – 60 days	61 – 90 days	91 days and greater	Total
Residential mortgages	**$ 1,194**	**$ 472**	**$ 123**	**$ 1,789**	$ 1,256	$ 453	$ 127	$ 1,836
Personal and credit cards	**784**	**447**	**94**	**1,325**	677	360	56	1,093
Business and government	**186**	**44**	**189**	**419**	172	73	338	583
Total	**$ 2,164**	**$ 963**	**$ 406**	**$ 3,533**	$ 2,105	$ 886	$ 521	$ 3,512

(1) Loans past due 30 days or less are not presented in this analysis as they are not administratively considered past due.
(2) Excludes loans acquired under the FDIC guarantee related to the acquisition of R-G Premier Bank of Puerto Rico.
(3) These loans would be considered in the determination of an appropriate level of collective allowances despite not being individually classified as impaired.

13 Derecognition of Financial Assets

Securitization of residential mortgage loans

The Bank securitizes fully insured residential mortgage loans, Bank originated and others, through the creation of mortgage backed securities (MBS) under the National Housing Act (NHA) MBS program, sponsored by Canada Mortgage Housing Corporation (CMHC). MBS created under the program are sold to Canada Housing Trust (the Trust), a government sponsored entity, under the Canada Mortgage Bond (CMB) program and/or third-party investors. The Trust issues securities to third-party investors.

The sale of mortgages under the above programs does not meet the derecognition requirements, as the Bank retains the pre-payment and interest rate risk associated with the mortgages, which represents substantially all the risk and rewards associated with the transferred assets.

The transferred mortgages continue to be recognized on the Consolidated Statement of Financial Position as residential mortgage loans. Cash proceeds from the transfer are treated as secured borrowings and included in Deposits – Business and government on the Consolidated Statement of Financial Position.

The following table provides the carrying amount of transferred assets that do not qualify for derecognition and the associated liabilities:

As at October 31 ($ millions)	2016[1]	2015[1]
Assets		
Carrying value of residential mortgage loans	**$ 17,570**	$ 18,313
Other related assets [2]	**3,102**	3,296
Liabilities		
Carrying value of associated liabilities	**19,836**	20,816

(1) The fair value of the transferred assets is $20,776 (2015 – $21,728) and the fair value of the associated liabilities is $20,493 (2015 – $21,416), for a net position of $283 (2015 – $312).
(2) These include cash held in trust and trust permitted investment assets acquired as part of principal reinvestment account that the Bank is required to maintain in order to participate in the programs.

Securitization of personal lines of credit, credit cards and auto loans

The Bank securitizes a portion of its unsecured personal lines of credit, credit card and auto loan receivables through consolidated structured entities. These receivables continue to be recognized on the Consolidated Statement of Financial Position as personal and credit cards loans. For further details, refer to Note 14.

Securities sold under repurchase agreements and securities lent

The Bank enters into transactions, such as repurchase agreements and securities lending agreements, where the Bank transfers assets under agreements to repurchase them on a future date and retains all the substantial risks and rewards associated with the assets. The transferred assets remain on the Consolidated Statement of Financial Position.

The following table provides the carrying amount of the transferred assets and the associated liabilities:

As at October 31 ($ millions)	2016[1]	2015[1]
Carrying value of assets associated with:		
Repurchase agreements [2]	**$ 87,402**	$ 67,052
Securities lending agreements	**38,668**	41,190
Total	**126,070**	108,242
Carrying value of associated liabilities [3]	**$ 97,033**	$ 77,015

(1) The fair value of transferred assets is $126,070 (2015 – $108,242) and the fair value of the associated liabilities is $97,033 (2015 – $77,015), for a net position of $29,037 (2015 – $31,227).
(2) Does not include over-collateralization of assets pledged.
(3) Liabilities for securities lending arrangements only include amounts related to cash collateral received. In most cases, securities are received as collateral.

14 Structured Entities

(a) Consolidated structured entities

U.S. multi-seller conduit

The Bank-sponsored U.S. multi-seller conduit purchases high-quality financial assets from independent third parties (the sellers) funded by the issuance of highly rated asset-backed commercial paper. The sellers continue to service the financial assets and provide credit enhancements through overcollateralization protection and cash reserves.

Each asset purchased by the conduit has a deal-specific liquidity facility provided by the Bank in the form of a liquidity asset purchase agreement (LAPA). The primary purpose of the backstop liquidity facility is to provide an alternative source of financing in the event the conduit is unable to access the asset-backed commercial paper market. The administration agent can require the Bank in its capacity as liquidity provider to perform under its asset-specific LAPA agreements, in which case the Bank is obliged to purchase an interest in the related assets owned by the conduit. The Bank is not obligated to perform under the LAPA agreements in the event the conduit itself is insolvent.

The Bank's liquidity agreements with the conduit call for the Bank to fund full par value of the assets, including defaulted assets, if any, of the conduit. This facility is available to absorb the losses on defaulted assets, if any, in excess of losses absorbed by deal-specific seller credit enhancements. Further, the Bank holds the subordinated note issued by the conduit.

The Bank's exposure from the U.S. conduit through the LAPA, including the obligation to purchase defaulted assets and investment in the conduit's subordinated note, gives the Bank the obligation to absorb losses that could potentially be significant to the conduit, which in conjunction with power to direct the conduit's activities, result in the Bank consolidating the U.S. multi-seller conduit.

The conduit's assets are primarily included in business and government loans on the Bank's Consolidated Statement of Financial Position.

There are contractual restrictions on the ability of the Bank's consolidated U.S. multi-seller conduit to transfer funds to the Bank. The Bank is restricted from accessing the conduit's assets under the relevant arrangements. The Bank has no rights to the assets owned by the conduit. In the normal course of business, the assets of the conduit can only be used to settle the obligations of the conduit.

Bank funding vehicles

The Bank uses funding vehicles to facilitate cost-efficient financing of its own operations, including the issuance of covered bonds and notes. These vehicles include Scotia Covered Bond Trust, Scotiabank Covered Bond Guarantor Limited Partnership, Hollis Receivables Term Trust II, Trillium Credit Card Trust II and Securitized Term Auto Receivables Trust 2016-1.

Activities of these structured entities are generally limited to holding an interest in a pool of assets or receivables generated by the Bank.

These structured entities are consolidated due to the Bank's decision-making power and ability to use the power to affect the Bank's returns.

Covered bond programs

Scotia Covered Bond Trust

Under the Bank's global covered bond program, the Bank issues debt to investors that is guaranteed by Scotia Covered Bond Trust (the "Trust"). Under the program, the Trust purchases CMHC insured residential mortgages from the Bank, which it acquires with funding provided by the Bank.

As at October 31, 2016, $6.0 billion (2015 – $8.5 billion) covered bonds were outstanding and included in Deposits – Business and government on the Consolidated Statement of Financial Position. The Bank's outstanding covered bonds issued under this program are denominated in U.S. dollars. As at October 31, 2016, assets pledged in relation to these covered bonds were insured residential mortgages denominated in Canadian dollars of $4.8 billion (2015 – $6.8 billion).

Scotiabank Covered Bond Guarantor Limited Partnership

The Bank has a registered covered bond program through which it issues debt that is guaranteed by Scotiabank Covered Bond Guarantor Limited Partnership (the "LP"). Under this program, the LP purchases uninsured residential mortgages from the Bank, which it acquires with funding provided by the Bank.

As at October 31, 2016, $23.9 billion (2015 – $13.7 billion) covered bonds were outstanding and included in Deposits – Business and government on the Consolidated Statement of Financial Position. The Bank's outstanding covered bonds are denominated in U.S. dollars, Australian dollars, British pounds and Euros. As at October 31, 2016, assets pledged in relation to these covered bonds were uninsured residential mortgages denominated in Canadian dollars of $25.7 billion (2015 – $14.5 billion).

Personal line of credit securitization trust

The Bank securitizes a portion of its unsecured personal line of credit receivables (receivables) through Hollis Receivables Term Trust II (Hollis), a Bank-sponsored structured entity. Hollis issues notes to third-party investors and the Bank, proceeds of which are used to purchase co-ownership interests in receivables originated by the Bank. Recourse of the note holders is limited to the purchased interests.

The Bank is responsible for servicing the transferred receivables as well as performing administrative functions for Hollis. The subordinated notes issued by Hollis are held by the Bank. As at October 31, 2016, $1.5 billion notes (2015 – $2.0 billion) were outstanding and included in Deposits – Business and government on the Consolidated Statement of Financial Position. As at October 31, 2016, assets pledged in relation to these notes were $1.8 billion (2015 – $2.5 billion).

Credit card receivables securitization trust

The Bank securitizes a portion of its credit card receivables (receivables) through Trillium Credit Card Trust II (Trillium), a Bank-sponsored structured entity. Trillium issues notes to third-party investors and the Bank, and the proceeds of such issuance are used to purchase co-ownership interests in receivables originated by the Bank. Recourse of the note holders is limited to the purchased interest.

The Bank is responsible for servicing the transferred receivables as well as performing administrative functions for Trillium. The subordinated notes issued by Trillium are held by the Bank. As at October 31, 2016, $1.2 billion Class A notes, denominated in U.S. dollars, were outstanding and included in Deposits – Business and government on the Consolidated Statement of Financial Position. As at October 31, 2016 assets pledged in relation to these notes were credit card receivables, denominated in Canadian dollars, of $1.3 billion.

Auto loan receivables securitization trust

The Bank securitizes a portion of its Canadian auto loan receivables (receivables) through Securitized Term Auto Receivables Trust 2016-1 (START), a Bank-sponsored structured entity. START issues multiple series of Class A notes to third-party investors and subordinated notes to the Bank, and the proceeds of such issuances are used to purchase a discrete pool of retail indirect auto loan receivables from the Bank on a fully serviced basis. Recourse of the note holders is limited to the receivables.

The Bank is responsible for servicing the transferred receivables as well as performing administrative functions for START. The subordinated notes issued by START are held by the Bank. As at October 31, 2016, $0.7 billion Class A notes were outstanding and included in Deposits – Business and government on the Consolidated Statement of Financial Position. START's outstanding Class A notes are denominated in U.S. dollars. As at October 31, 2016, assets pledged in relation to these notes were auto loan receivables denominated in Canadian dollars of $0.7 billion.

Other

Assets of other consolidated structured entities are comprised of securities, deposits with banks and other assets to meet the Bank's and customer needs.

(b) Unconsolidated structured entities

The following table provides information about other structured entities in which the Bank has a significant interest but does not control and therefore does not consolidate. A significant interest is generally considered to exist where the Bank is exposed to 10% or more of the unconsolidated structured entities maximum exposure to loss.

	As at October 31, 2016				
($ millions)	Canadian multi-seller conduits that the Bank administers	Structured finance entities	Capital funding vehicles	Other	Total
Total assets (on structured entity's financial statements)	**$ 4,401**	**$ 7,653**	**$ 1,520**	**$ 68**	**$ 13,642**
Assets recognized on the Bank's financial statements					
Trading assets	**2**	**467**	**–**	**–**	**469**
Investment securities	**–**	**1,147**	**15**	**20**	**1,182**
Loans[1]	**–**	**712**	**47**	**–**	**759**
	2	**2,326**	**62**	**20**	**2,410**
Liabilities recognized on the Bank's financial statements					
Deposits – Business and government	**–**	**–**	**1,400**	**–**	**1,400**
Derivative financial instruments	**2**	**–**	**–**	**–**	**2**
	2	**–**	**1,400**	**–**	**1,402**
Bank's maximum exposure to loss	**$ 4,401**	**$ 2,326**	**$ 62**	**$ 20**	**$ 6,809**

	As at October 31, 2015				
($ millions)	Canadian multi-seller conduits that the Bank administers	Structured finance entities	Capital funding vehicles	Other	Total
Total assets (on structured entity's financial statements)	$ 2,491	$ 7,813	$ 1,520	$ 950	$ 12,774
Assets recognized on the Bank's financial statements					
Trading assets	3	470	–	57	530
Investment securities	–	1,144	15	86	1,245
Loans[1]	–	716	47	35	798
	3	2,330	62	178	2,573
Liabilities recognized on the Bank's financial statements					
Deposits – Business and government	–	–	1,488	–	1,488
	–	–	1,488	–	1,488
Bank's maximum exposure to loss	$ 2,491	$ 2,330	$ 62	$ 178	$ 5,061

(1) Loan balances are presented net of allowance for credit losses.

The Bank's maximum exposure to loss represents the notional amounts of guarantees, liquidity facilities, and other credit support relationships with the structured entities, the credit risk amount for certain derivative contracts with the entities and the amount invested where the Bank holds an ownership interest in the structured entities. Of the aggregate amount of maximum exposure to loss as at October 31, 2016, the Bank has recorded $2.4 billion (2015 – $2.6 billion), primarily its interest in the structured entities, on its Consolidated Statement of Financial Position.

Canadian multi-seller conduits that the Bank administers
The Bank sponsors two Canadian multi-seller conduits. The conduits purchase assets from independent third parties (the sellers) funded by the issuance of asset-backed commercial paper. The sellers continue to service the assets and provide credit enhancements through overcollateralization protection and cash reserves. The Bank has no rights to these assets as they are available to support the obligations of the respective programs, but manages for a fee the commercial paper selling programs. To ensure timely repayment of the commercial paper, each asset pool financed by the multi-seller conduits has a deal-specific liquidity asset purchase agreement (LAPA) with the Bank. Pursuant to the terms of the LAPA, the Bank as the liquidity provider is obligated to purchase non-defaulted assets, transferred by the conduit at the conduit's original cost as reflected in the table above. In most cases, the liquidity agreements do not require the Bank to purchase defaulted assets. Additionally, the Bank has not provided any program-wide credit enhancement to these conduits. The Bank provides additional liquidity facilities to these multi-seller conduits to a maximum amount of $1.4 billion (2015 – $1.4 billion) based on future asset purchases by these conduits.

Although the Bank has power over the relevant activities of the conduits, it has limited exposure to variability in returns, which results in the Bank not consolidating the two Canadian conduits.

Structured finance entities
The Bank has interests in structured entities used to assist corporate clients in accessing cost-efficient financing through their securitization structures. The Bank may act as an administrator, an investor or a combination of both in these types of structures.

Capital funding vehicles
These entities are designed to pass the Bank's credit risk to the holders of the securities. Therefore the Bank does not have exposure or rights to variable returns from these entities.

Other
Other includes investments in managed funds, collateralized debt obligation entities, and other structured entities. The Bank's maximum exposure to loss is limited to its net investment in these funds.

(c) Other unconsolidated Bank-sponsored entities

The Bank sponsors unconsolidated structured entities in which it has insignificant or no interest at the reporting date. The Bank is a sponsor when it is significantly involved in the design and formation at inception of the structured entities, and the Bank's name is used by the structured entities to create an awareness of the instruments being backed by the Bank's reputation and obligation. The Bank also considers other factors, such as its continuing involvement and obligations to determine if, in substance, the Bank is a sponsor. The Bank considers mutual funds and managed companies as sponsored entities.

The following table provides information on revenue from unconsolidated Bank-sponsored entities.

	2016			2015		
As at October 31 ($ millions)	Funds[1]	Scotia Managed Companies	Total	Funds[1]	Scotia Managed Companies	Total
Revenue	**$ 1,960**	**$ 8**	**$ 1,968**	$ 1,964	$ 13	$ 1,977

(1) Includes mutual funds, other funds and trusts.

The Bank earned revenue of $1,968 million (2015 – $1,977 million) from its involvement with the unconsolidated Bank-sponsored structured entities for the year ended October 31, 2016, which was comprised of interest income of $2 million (2015 – $3 million), non-interest income – banking of $134 million (2015 – $133 million) and non-interest income – wealth management of $1,832 million (2015 – $1,841 million), including mutual fund, brokerage and investment management and trust fees.

15 Property and Equipment

($ millions)	Land	Buildings	Equipment	Leasehold improvements	Total
Cost					
Balance as at October 31, 2014	$ 266	$ 1,687	$ 3,378	$ 1,224	$ 6,555
Additions	19	135	262	100	516
Disposals	(11)	(243)	(118)	(57)	(429)
Foreign currency adjustments and other	60	70	17	38	185
Balance as at October 31, 2015	**$ 334**	**$ 1,649**	**$ 3,539**	**$ 1,305**	**$ 6,827**
Acquisitions	**39**	**117**	**60**	**26**	**242**
Additions	**17**	**239**	**223**	**98**	**577**
Disposals	**(42)**	**(244)**	**(102)**	**(61)**	**(449)**
Foreign currency adjustments and other	**(19)**	**(19)**	**(9)**	**(11)**	**(58)**
Balance as at October 31, 2016	**$ 329**	**$ 1,742**	**$ 3,711**	**$ 1,357**	**$ 7,139**
Accumulated depreciation					
Balance as at October 31, 2014	$ –	$ 715	$ 2,815	$ 753	$ 4,283
Depreciation	–	47	178	78	303
Disposals	–	(17)	(46)	(27)	(90)
Foreign currency adjustments and other	–	9	31	5	45
Balance as at October 31, 2015	**$ –**	**$ 754**	**$ 2,978**	**$ 809**	**$ 4,541**
Depreciation	**–**	**99**	**170**	**56**	**325**
Disposals	**–**	**(69)**	**(121)**	**(18)**	**(208)**
Foreign currency adjustments and other	**–**	**(18)**	**(12)**	**(9)**	**(39)**
Balance as at October 31, 2016	**$ –**	**$ 766**	**$ 3,015**	**$ 838**	**$ 4,619**
Net book value					
Balance as at October 31, 2015	$ 334	$ 895	$ 561	$ 496	$ 2,286[1]
Balance as at October 31, 2016	**$ 329**	**$ 976**	**$ 696**	**$ 519**	**$ 2,520[1]**

(1) Includes $20 (2015 – $27) of investment property.

16 Investments in Associates

The Bank had significant investments in the following associates:

			2016			2015
As at October 31 ($ millions)	Country of incorporation	Nature of business	Ownership percentage	Date of financial statements[1]	Carrying value	Carrying value
Thanachart Bank Public Company Limited	**Thailand**	**Banking**	**49.0%**	**September 30, 2016**	**$ 2,612**	$ 2,415
Canadian Tire's Financial Services business (CTFS)[2]	**Canada**	**Financial Services**	**20.0%**	**September 30, 2016**	**532**	538
Bank of Xi'an Co. Ltd.	**China**	**Banking**	**19.9%**	**September 30, 2016**	**654**	610
Maduro & Curiel's Bank N.V.[3]	**Curacao**	**Banking**	**48.1%**	**September 30, 2016**	**280**	264
Banco del Caribe[4]	**Venezuela**	**Banking**	**26.6%**	**September 30, 2016**	**26**	30

(1) Represents the date of the most recent published financial statements. Where available, financial statements prepared by the associates' management or other published information is used to estimate the change in the Bank's interest since the most recent published financial statements.

(2) On October 1, 2014, the Bank acquired a 20% equity interest in Canadian Tire's Financial Services business (CTFS). Under the agreement Canadian Tire has an option to sell to the Bank up to an additional 29% equity interest within the next 10 years at the then fair value, that can be settled, at the Bank's discretion, by issuance of common shares or cash. After 10 years, for a period of six months, the Bank has the option to sell its equity interest back to Canadian Tire at the then fair value. As at October 1, 2014 CTFS had total assets of $5,351 and total liabilities of $4,387.

(3) The local regulator requires financial institutions to set aside reserves for general banking risks. These reserves are not required under IFRS, and represent undistributed retained earnings related to a foreign associated corporation, which are subject to local regulatory restrictions. As of October 31, 2016 these reserves amounted to $63 (2015 – $61).

(4) As at October 31, 2016, the Bank's total net investment in Banco del Caribe, along with monetary assets, comprising of cash and dividend receivable was translated at the DICOM exchange rate of 1 USD to 660 VEF replacing the SIMADI exchange rate (2015 – 1 USD to 198 VEF).

Summarized financial information of the Bank's significant associates are as follows.

	For the twelve months ended and as at September 30, 2016 [1]			
($ millions)	Revenue	Net income	Total assets	Total liabilities
Thanachart Bank Public Company Limited	**$ 1,622**	**$ 449**	**$ 37,372**	**$ 32,637**
Canadian Tire's Financial Services business (CTFS)	**999**	**305**	**5,490**	**4,469**
Bank of Xi'an Co. Ltd.	**915**	**427**	**38,083**	**35,022**
Maduro & Curiel's Bank N.V.	**347**	**101**	**5,456**	**4,855**
Banco del Caribe	**90**	**(46)**	**703**	**601**

	For the twelve months ended and as at September 30, 2015 [1]			
($ millions)	Revenue	Net income	Total assets	Total liabilities
Thanachart Bank Public Company Limited	$ 1,601	389	35,483	31,399
Canadian Tire's Financial Services business (CTFS)	1,003	310	5,829	4,782
Bank of Xi'an Co. Ltd.	942	378	29,525	26,688
Maduro & Curiel's Bank N.V.	327	92	4,954	4,391
Banco del Caribe	111	(9)	1,131	1,016

(1) Based on the most recent available financial statements.

17 Goodwill and Other Intangible Assets

Goodwill

The changes in the carrying amounts of goodwill by cash-generating unit (CGU) are as follows:

($ millions)	Canadian Banking	Global Wealth & Insurance	Global Capital Markets	Global Corporate & Investment Banking	Global Banking and Markets	Latin America	Caribbean and Central America	Asia Pacific	Total
Balance as at October 31, 2014	$ 1,633	2,292	100	123	–	2,041	720	–	6,909
Transfers November 1, 2014	1,728	(2,292)	(100)	(123)	223	413	151	–	–
Acquisitions	–	–	–	–	–	116	–	–	116
Foreign currency adjustments and other	–	–	–	–	35	(179)	134	–	(10)
Balance as at October 31, 2015	3,361	–	–	–	258	2,391	1,005	–	7,015
Acquisitions	**49**	**–**	**–**	**–**	**–**	**–**	**241**	**–**	**290**
Foreign currency adjustments and other	**(7)**	**–**	**–**	**–**	**7**	**70**	**9**	**–**	**79**
Balance as at October 31, 2016	**$ 3,403**	**$ –**	**$ –**	**$ –**	**$ 265**	**$ 2,461**	**$ 1,255**	**$ –**	**$ 7,384**

Effective November 1, 2014, the Canadian and International businesses previously reported in Global Wealth & Insurance are included in Canadian Banking and International Banking's results, respectively. In addition, there was a reallocation of the results of the Global Capital Markets CGU and Global Corporate & Investment Banking CGU into Global Banking and Markets CGU. As well, certain business activity previously reported in the Asia Pacific CGU is now included in Global Banking and Markets CGU. Consequently, the aggregate number of CGUs for the purposes of goodwill impairment assessment as of November 1, 2014 is reduced to 5 (October 31, 2014 – 7 CGUs). Goodwill was assessed for impairment following the reallocation and no impairment was determined to exist.

Impairment testing of goodwill

Goodwill acquired in business combinations is allocated to each of the Bank's group of CGUs that are expected to benefit from the synergies of the particular acquisition. Goodwill is assessed for impairment annually or more frequently if events or circumstances occur that may result in the recoverable amount of the CGU falling below its carrying value.

The bank determines the carrying value of the CGU using a regulatory capital approach based on credit, market, and operational risks, and leverage, consistent with the Bank's capital attribution for business line performance measurement. The recoverable amount is the higher of fair value less costs of disposal and value in use. The recoverable amount for the CGU has been determined using the fair value less costs of disposal method. In arriving at such value for the CGU, the Bank has used price earnings (P/E) multiples applied to normalized net income for the last four quarters as of the test date, a control premium is added based on a five year weighted average acquisition premium paid for comparable companies, and costs of disposal are deducted from the fair value of the CGU. The resulting recoverable amount determined is then compared to its respective carrying amount to identify any impairment. P/E multiples ranging from 10 to 13 times (2015 – 10 to 12.5 times) have been used.

The fair value less costs of disposal of the CGU is sensitive to changes in net income, P/E multiples and control premiums.

Management believes that reasonable negative changes in any one key assumption used to determine the recoverable amount of the CGU would not result in an impairment.

Goodwill was assessed for annual impairment as at July 31, 2016 and July 31, 2015 and no impairment was determined to exist.

Intangible assets

Intangible assets consist of assets with indefinite and finite useful lives. Indefinite life intangible assets consist substantially of fund management contracts. The fund management contracts are for the management of open-ended funds. Finite life intangible assets include assets such as computer software, customer relationships and core deposit intangibles.

	Finite life		Indefinite life		
($ millions)	Computer software	Other intangibles	Fund management contracts[1]	Other intangibles	Total
Cost					
Balance as at October 31, 2014	$ 1,771	$ 1,231	$ 2,325	$ 67	$ 5,394
Acquisitions	5	296	–	–	301
Additions	474	–	–	–	474
Foreign currency adjustments and other	(57)	(17)	–	1	(73)
Balance as at October 31, 2015	$ 2,193	$ 1,510	$ 2,325	$ 68	$ 6,096
Acquisitions	**–**	**61**	**–**	**–**	**61**
Additions	**584**	**31**	**–**	**–**	**615**
Foreign currency adjustments and other	**(40)**	**29**	**–**	**–**	**(11)**
Balance as at October 31, 2016	**$ 2,737**	**$ 1,631**	**$ 2,325**	**$ 68**	**$ 6,761**
Accumulated amortization					
Balance as at October 31, 2014	$ 629	$ 790	$ –	$ –	$ 1,419
Amortization Expense	191	90	–	–	281
Foreign currency adjustments and other	(42)	4	–	–	(38)
Balance as at October 31, 2015	$ 778	$ 884	$ –	$ –	$ 1,662
Amortization Expense	**255**	**104**	**–**	**–**	**359**
Foreign currency adjustments and other	**(24)**	**7**	**–**	**–**	**(17)**
Balance as at October 31, 2016	**$ 1,009**	**$ 995**	**$ –**	**$ –**	**$ 2,004**
Net book value					
As at October 31, 2015	$ 1,415[2]	$ 626	$ 2,325	$ 68	$ 4,434
As at October 31, 2016	**$ 1,728[2]**	**$ 636**	**$ 2,325**	**$ 68**	**$ 4,757**

(1) Fund management contracts are attributable to HollisWealth Inc. (formerly DundeeWealth Inc.).
(2) Computer software comprises of purchased software of $377 (2015 – $256), internally generated software of $948 (2015 – $619), and in process software not subject to amortization of $403 (2015 – $540).

Impairment testing of intangible assets

Indefinite life intangible assets are not amortized and are assessed for impairment annually or more frequently if events or changes in circumstances indicate that the asset may be impaired. Impairment is assessed by comparing the carrying value of the indefinite life intangible asset to its recoverable amount. The recoverable amount of the fund management contracts is based on a value in use approach using the multi-period excess earnings method. This approach uses cash flow projections from management-approved financial budgets which include key assumptions related to market appreciation, net sales of funds, and operating margins taking into consideration past experience and market expectations. The forecast cash flows cover a 5-year period, with a terminal growth rate of 4.5% (2015 – 4.5%) applied thereafter. These cash flows have been discounted at a rate of 10% (2015 – 10%). Management believes that reasonable negative changes in any one key assumption used to determine the recoverable amount would not result in an impairment.

Indefinite life intangible assets were assessed for annual impairment as at July 31, 2016 and July 31, 2015 and no impairment was determined to exist.

18 Other Assets

As at October 31 ($ millions)	2016	2015
Accrued interest	**$ 1,986**	$ 1,742
Accounts receivable and prepaids	**1,939**	1,983
Current tax assets	**422**	649
Margin deposit derivatives	**4,604**	4,085
Pension assets (Note 27)	**184**	183
Receivable from brokers, dealers and clients	**796**	504
Receivable from the Federal Deposit Insurance Corporation (Note 12)	**116**	218
Other	**2,823**	2,939
Total	**$ 12,870**	$ 12,303

19 Deposits

As at October 31 ($ millions)	2016 Payable on demand[1] Interest-bearing	2016 Payable on demand[1] Non-interest bearing	2016 Payable after notice[2]	2016 Payable on a fixed date[3]	2016 Total	2015
Personal	**$ 10,296**	**$ 6,118**	**$ 111,956**	**$ 70,932**	**$ 199,302**	$ 190,044
Business and government	**69,348**	**22,346**	**26,363**	**254,246**	**372,303**	375,144
Financial institutions	**3,583**	**2,464**	**2,958**	**31,267**	**40,272**	35,731
Total	**$ 83,227**	**$ 30,928**	**$ 141,277[4]**	**$ 356,445**	**$ 611,877**	$ 600,919
Recorded in:						
Canada	**$ 69,542**	**$ 16,938**	**$ 113,739**	**$ 234,665**	**$ 434,884**	$ 409,415
United States	**6,236**	**330**	**1,075**	**47,356**	**54,997**	79,015
United Kingdom	**–**	**–**	**307**	**14,949**	**15,256**	14,547
Mexico	**–**	**4,055**	**4,753**	**7,456**	**16,264**	15,794
Peru	**2,479**	**592**	**4,474**	**8,002**	**15,547**	14,727
Chile	**62**	**1,659**	**74**	**9,006**	**10,801**	7,940
Colombia	**106**	**557**	**2,833**	**3,776**	**7,272**	6,825
Other International	**4,802**	**6,797**	**14,022**	**31,235**	**56,856**	52,656
Total[5]	**$ 83,227**	**$ 30,928**	**$ 141,277**	**$ 356,445**	**$ 611,877**	$ 600,919

(1) Deposits payable on demand include all deposits for which we do not have the right to notice of withdrawal, generally chequing accounts.
(2) Deposits payable after notice include all deposits for which we require notice of withdrawal, generally savings accounts.
(3) All deposits that mature on a specified date, generally term deposits, guaranteed investments certificates and similar instruments.
(4) Includes $135 (2015 – $120) of non-interest bearing deposits.
(5) Deposits denominated in U.S. dollars amount to $217,850 (2015 – $227,320) deposits denominated in Mexican pesos amount to $14,464 (2015 – $14,034) and deposits denominated in other foreign currencies amount to $76,777 (2015 – $66,860).

The following table presents the maturity schedule for term deposits in Canada greater than $100,000 [1].

($ millions)	Within three months	Three to six months	Six to twelve months	One to five years	Over five years	
As at October 31, 2016	**$ 40,211**	**$ 24,077**	**$ 23,690**	**$ 99,905**	**$ 12,451**	**$ 200,334**
As at October 31, 2015	$ 24,170	$ 18,890	$ 27,219	$ 90,927	$ 17,231	$ 178,437

(1) The majority of foreign term deposits are in excess of $100,000.

20 Subordinated Debentures

These debentures are direct, unsecured obligations of the Bank and are subordinate to the claims of the Bank's depositors and other creditors. The Bank, where appropriate, enters into interest rate and cross-currency swaps to hedge the related risks.

As at October 31 ($ millions)			2016	2015
Maturity date	Interest rate (%)	Terms[1]	Carrying value[2]	Carrying value[2]
January 2021	6.65	Redeemed on January 22, 2016.	**$ –**	$ 1,000
August 2022	2.898	Redeemable on or after August 3, 2017. After August 3, 2017, interest will be payable at an annual rate equal to the 90-day bankers' acceptance rate plus 1.255%.	**1,500**	1,501
October 2024	3.036	Redeemable on or after October 18, 2017. After October 18, 2019, interest will be payable at an annual rate equal to the 90-day bankers' acceptance rate plus 1.14%.	**1,798**	1,806
June 2025	8.90	Redeemable at any time.	**262**	263
December 2025[3]	3.37	Redeemable on or after December 8, 2020. After December 8, 2020, interest will be payable at an annual rate equal to the 90 day bankers' acceptance rate plus 2.19%.	**759**	–
December 2025[3]	4.50	US$1,250 million. Interest will be payable semi-annually in arrears on June 16 and December 16 of each year.	**1,677**	–
March 2027[3]	2.58	Redeemable on or after March 30, 2022. After March 30, 2022, interest will be payable at an annual rate equal to the 90-day bankers' acceptance rate plus 1.19%.	**1,271**	1,247
November 2037	3.015	JPY ¥10 billion. Redeemable on November 20, 2017.	**118**	100
April 2038	3.37	JPY ¥10 billion. Redeemable on April 9, 2018.	**116**	100
August 2085	Floating	US$99 million bearing interest at a floating rate of the offered rate for six-month Eurodollar deposits plus 0.125%. Redeemable on any interest payment date.	**132**	165
			$ 7,633	$ 6,182

(1) In accordance with the provisions of the Capital Adequacy Guideline of the Superintendent, all redemptions are subject to regulatory approval and subject to the terms in the relevant prospectus.
(2) The carrying value of subordinated debentures may differ from par value due to adjustments related to hedge accounting.
(3) These debentures contain non-viability contingent capital (NVCC) provisions. Under such NVCC provisions, the debentures are convertible into a variable number of common shares if OSFI announces that the Bank has ceased, or is about to cease, to be viable, or if a federal or provincial government in Canada publicly announces that the Bank has accepted or agreed to accept a capital injection, or equivalent support, from the federal government or any provincial government or political subdivision or agent thereof without which the Bank would have been determined by OSFI to be non-viable. If such a conversion were to occur, the debentures would be converted into common shares pursuant to an automatic conversion formula defined as 150% of the par value plus accrued and unpaid interest divided by the conversion price. The conversion price is based on the greater of: (i) a floor price of $5.00 or, where applicable, the US dollar equivalent of $5.00 (subject to adjustments in certain events as set out in the respective prospectus supplements, and (ii) the current market price of the Bank's common shares at the time of the trigger event (10-day weighted average).

21 Other Liabilities

As at October 31 ($ millions)	2016	2015
Accrued interest	**$ 2,033**	$ 1,888
Accounts payable and accrued expenses	**5,427**	5,225
Current tax liabilities	**587**	584
Deferred tax liabilities (Note 26)	**611**	599
Gold and silver certificates and bullion	**8,430**	7,812
Margin and collateral accounts	**6,708**	8,848
Payables to brokers, dealers and clients	**528**	226
Provisions (Note 22)	**536**	315
Pension liabilities (Note 27)	**1,613**	722
Other liabilities of subsidiaries and structured entities	**10,950**	10,835
Other	**5,293**	4,584
Total	**$ 42,716**	$ 41,638

22 Provisions

($ millions)	Off-balance sheet credit risks	Restructuring	Other	Total
As at November 1, 2014	$ 184	$ 136	$ 198	$ 518
Provisions made during the year	–	–	66	66
Provisions utilized / released during the year	(72)	(87)	(110)	(269)
Balance as at October 31, 2015	$ 112	$ 49	$ 154	$ 315
Provisions made during the year	**26**	**378**	**85**	**489**
Provisions utilized / released during the year	–	**(150)**	**(118)**	**(268)**
Balance as at October 31, 2016	**$ 138**	**$ 277**	**$ 121**	**$ 536**

Off-balance sheet credit risks

The provision for off-balance sheet credit risks relates primarily to credit risks such as undrawn lending commitments, letters of credit and letters of guarantee. These are collectively assessed at each reporting period in a manner consistent with the collective allowance for performing on-balance sheet credit risks.

Restructuring charge

During fiscal 2016, the Bank recorded a restructuring provision of $378 million ($278 million after tax) as part of the Bank's efforts to enhance customer experience, reduce costs in a sustainable manner, to achieve greater operational efficiencies, and to simplify the organization. The restructuring charge primarily related to employee severance and was recorded within non-interest expenses. As at October 31, 2016, $265 million of the restructuring provision remains and is expected to be utilized in line with the approved plans, during fiscal 2017 and early part of fiscal 2018. This amount represents the Bank's best estimate of the amount required to settle the obligation. Uncertainty exists with respect to when the obligation will be settled and the amounts ultimately paid, as this will largely depend upon individual facts and circumstances.

In the fourth quarter of 2014, a restructuring charge of $148 million was recorded in non-interest expenses, primarily relating to employee severance costs. As at October 31, 2016, the restructuring provision has been substantially utilized.

Litigation and Other

Other primarily includes provisions related to litigation. In the ordinary course of business, the Bank and its subsidiaries are routinely defendants in, or parties to a number of pending and threatened legal actions and regulatory proceedings, including actions brought on behalf of various classes of claimants. In view of the inherent difficulty of predicting the outcome of such matters, the Bank cannot state what the eventual outcome of such matters will be. However, based on current knowledge, management does not believe that liabilities, if any, arising from pending litigation or regulatory proceedings will have a material adverse effect on the Consolidated Statement of Financial Position or results of operations of the Bank.

Legal provisions are established when it becomes probable that the Bank will incur an expense related to a legal action and the amount can be reliably estimated. Such provisions are recorded at the best estimate of the amount required to settle any obligation related to these legal actions as at the balance sheet date, taking into account the risks and uncertainties surrounding the obligation. Management and internal and external experts are involved in estimating any amounts that may be required. The actual costs of resolving these claims may vary significantly from the amount of the legal provisions. The Bank's estimate involves significant judgement, given the varying stages of the proceedings, the fact that the Bank's liability, if any, has yet to be determined and the fact that the underlying matters will change from time to time. As such, there is a possibility that the ultimate resolution of those legal actions may be material to the Bank's consolidated results of operations for any particular reporting period.

23 Common and Preferred Shares

(a) Common shares

Authorized:
An unlimited number of common shares without nominal or par value.
Issued and fully paid:

	2016		2015	
As at October 31 ($ millions)	Number of shares	Amount	Number of shares	Amount
Outstanding at beginning of year	**1,202,937,205**	**$ 15,141**	1,216,582,245	$ 15,231
Issued under Shareholder Dividend and Share Purchase Plan [1]	**2,234,037**	**153**	27,220	2
Issued in relation to share-based payments, net (Note 25)	**4,228,124**	**236**	1,827,730	102
Issued in relation to the acquisition of a subsidiary or associated corporation	**29,138**	**2**	–	–
Repurchased for cancellation under the Normal Course Issuer Bid	**(1,534,900)**	**(19)**	(15,499,990)	(194)
Outstanding at end of year	**1,207,893,604[2]**	**$ 15,513**	1,202,937,205[2]	$ 15,141

(1) Effective June 30, 2016, the Bank commenced issuing shares from Treasury for the Dividend and Share Purchase options of the Plan. As at October 31, 2016, there were 7,786,784 common shares held in reserve for issuance under the Plan.
(2) In the normal course of business, the Bank's regulated Dealer subsidiary purchases and sells the Bank's common shares to facilitate trading/institutional client activity. During fiscal 2016, the number of such shares bought and sold was 13,912,150 (2015 – 12,466,541).

Dividend

The dividends paid on common shares in fiscal 2016 and 2015 were $3,468 million ($2.88 per share) and $3,289 million ($2.72 per share), respectively. The Board of Directors approved a quarterly dividend of 74 cents per common share at its meeting on November 28, 2016. This quarterly dividend applies to shareholders of record as of January 3, 2017, and is payable January 27, 2017.

Normal Course Issuer Bid

During the year ended October 31, 2016, under normal course issuer bids, the Bank repurchased and cancelled approximately 1.5 million common shares (2015 –15.5 million) at an average price of $52.34 per share (2015 – $61.64) for a total amount of approximately $80 million (2015 – $955 million).

On May 31, 2016, the Bank announced that OSFI and the Toronto Stock Exchange (TSX) approved a normal course issuer bid pursuant to which it may repurchase for cancellation up to 12 million of the Bank's common shares, which represented approximately 1% of the Bank's common shares issued and outstanding as of May 26, 2016. Purchases under the new bid commenced on June 2, 2016, and will end on the earlier of June 1, 2017, or the date on which the Bank completes its purchases. On a quarterly basis, the Bank will consult with OSFI prior to making purchases. Under this bid, the Bank has not repurchased any common shares.

On May 29, 2015, the Bank announced that OSFI and the TSX approved its normal course issuer bid pursuant to which it may repurchase for cancellation up to 24 million of the Bank's common shares, which represented approximately 2% of the Bank's common shares issued and outstanding as of May 25, 2015. The bid ended on June 1, 2016. Under this bid, the Bank repurchased and cancelled approximately 9.5 million common shares at an average price of $58.94 per share.

(b) Preferred shares

Authorized:
An unlimited number of preferred shares without nominal or par value.
Issued and fully paid:

	2016			2015		
As at October 31 ($ millions)	Number of shares	Amount	Dividends declared per share	Number of shares	Amount	Dividends declared per share
Preferred shares:[a]						
Series 14[b]	**–**	**$ –**	**0.562500**	13,800,000	$ 345	1.125000
Series 15[c]	**–**	**–**	**0.843750**	13,800,000	345	1.125000
Series 16[d]	**13,800,000**	**345**	**1.312500**	13,800,000	345	1.312500
Series 17[e]	**9,200,000**	**230**	**1.400000**	9,200,000	230	1.400000
Series 18[f][g]	**7,497,663**	**187**	**0.837500**	7,497,663	187	0.837500
Series 19[f][g]	**6,302,337**	**158**	**0.628938**	6,302,337	158	0.697813
Series 20[f][h]	**8,039,268**	**201**	**0.902500**	8,039,268	201	0.902500
Series 21[f][h]	**5,960,732**	**149**	**0.541438**	5,960,732	149	0.610313
Series 22[f][i]	**9,376,944**	**234**	**0.957500**	9,376,944	234	0.957500
Series 23[f][i]	**2,623,056**	**66**	**0.586438**	2,623,056	66	0.655313
Series 30[f][j]	**6,142,738**	**154**	**0.455000**	6,142,738	154	0.708750
Series 31[f][j]	**4,457,262**	**111**	**0.366438**	4,457,262	111	0.197313
Series 32[f][k]	**11,161,422**	**279**	**0.638235**	16,345,767	409	0.925000
Series 33[f][k]	**5,184,345**	**130**	**0.334959**	–	–	–
Series 34[f][l][o]	**14,000,000**	**350**	**1.184800**	–	–	–
Series 36[f][m][o]	**20,000,000**	**500**	**0.852350**	–	–	–
Series 38[f][n][o]	**20,000,000**	**500**	**–**	–	–	–
Total preferred shares	**143,745,767**	**$ 3,594**		117,345,767	$ 2,934	

Terms of preferred shares

	Issue date	Issue price	Initial dividend	Initial dividend payment date	Rate reset spread	Redemption date	Redemption price
Preferred shares[a]:							
Series 14[b]	January 24, 2007	25.00	0.283560	April 26, 2007	–	April 27, 2016	25.00
Series 15[c]	April 5, 2007	25.00	0.348290	July 27, 2007	–	July 27, 2016	25.00
Series 16[d]	April 17, 2007 October 12, 2007	25.00	0.391950	January 29, 2008	–	January 27, 2016 to January 26, 2017	25.25
Series 17[e]	January 31, 2008	25.00	0.337530	April 28, 2008	–	April 27, 2016 to April 25, 2017	25.25
Series 18[f][g]	March 25, 2008	25.00	0.431500	July 29, 2008	2.05%	April 26, 2018	25.00
Series 19[f][g]	March 27, 2008 April 26, 2013	25.00	0.189250	July 29, 2013	2.05%	April 26, 2013 to April 26, 2018	25.50
Series 20[f][h]	June 10, 2008	25.00	0.167800	July 29, 2008	1.70%	October 26, 2018	25.00
Series 21[f][h]	October 26, 2013	25.00	0.167875	January 29, 2014	1.70%	October 26, 2013 to October 26, 2018	25.50
Series 22[f][i]	September 9, 2008	25.00	0.482900	January 28, 2009	1.88%	January 26, 2019	25.00
Series 23[f][i]	January 26, 2014	25.00	0.173875	April 28, 2014	1.88%	January 26, 2014 to January 26, 2019	25.50
Series 30[f][j]	April 12, 2010	25.00	0.282200	July 28, 2010	1.00%	April 26, 2020	25.00
Series 31[f][j]	April 26, 2015	25.00	0.095500	July 29, 2015	1.00%	April 26, 2015 to April 26, 2020	25.50
Series 32[f][k]	February 1, 2011	25.00	0.215410	April 27, 2011	1.34%	February 2, 2021	25.00
Series 33[f][k]	February 28, 2011 February 2, 2016	25.00	0.105690	April 27, 2016	1.34%	February 2, 2016 to February 2, 2021	25.50
Series 34[f][l][o]	December 17, 2015	25.00	0.497300	April 27, 2016	4.51%	April 26, 2021	25.00
Series 36[f][m][o]	March 14, 2016	25.00	0.508600	July 27, 2016	4.72%	July 26, 2021	25.00
Series 38[f][n][o]	September 16, 2016	25.00	0.441800	January 27, 2017	4.19%	January 27, 2022	25.00

(a) Non-cumulative preferential cash dividends on Series 16, 17, 18, 19, 20, 21, 22, 23, 30, 31, 32, 33, 34, 36 and 38 are payable quarterly, as and when declared by the Board. Dividends on the Non-cumulative 5-Year Rate Reset Preferred Shares (Series 18, 20, 22, 30 and 32) and the Non-cumulative 5-Year Rate Reset Preferred Shares Non Viability Contingent Capital (NVCC) (Series 34, 36, and 38) are payable at the applicable rate for the initial five-year fixed rate period ending one day prior to the redemption date. Subsequent to the initial five-year fixed rate period, and resetting every five years thereafter, the dividend on all Rate Reset Preferred Shares will be determined by the sum of the 5-year Government of Canada Yield plus the indicated rate reset spread, multiplied by $25.00. If outstanding, non-cumulative preferential cash dividends on the Series 19, 21, 23, 31, 33, 35, 37 and 39 are payable quarterly, as and when declared by the Board. Dividends on the Non-cumulative 5-Year Rate Reset Preferred Shares (Series 19, 21, 23, 31 and 33) and the Non-cumulative 5-Year Rate Reset Preferred Shares NVCC (Series 35, 37 and 39) are payable, in an amount per share equal to the sum of the T-Bill Rate plus the rate reset spread of the converted preferred shares, multiplied by $25.00. For each of the years presented, the Bank paid all of the non-cumulative preferred share dividends.

(b) On April 27, 2016, the Bank redeemed all outstanding Series 14 Non-cumulative Preferred Shares at $25.00 per share together with declared and unpaid dividends.

(c) On July 27, 2016, the Bank redeemed all outstanding Series 15 Non-cumulative Preferred shares at $25.00 per share together with declared and unpaid dividends.

(d) With regulatory approval, the Series 16 Non-cumulative Preferred Shares may be redeemed by the Bank during the period commencing January 27, 2016 and ending January 26, 2017 at $25.25 per share, together with declared and unpaid dividends to the date then fixed for redemption and at $25.00 per share commencing January 27, 2017.

(e) With regulatory approval, the Series 17 Non-cumulative Preferred Shares may be redeemed by the Bank during the period commencing April 27, 2016 and ending April 25, 2017 at $25.25 per share, together with declared and unpaid dividends to the date then fixed for redemption and at $25.00 per share commencing April 26, 2017.

(f) Holders of Fixed Rate Reset Preferred Shares will have the option to convert shares into an equal number of the relevant series of Floating Rate Preferred Shares on the applicable Rate Reset Series conversion date and every five years thereafter. Holders of Floating Rate Reset Preferred Shares have reciprocal conversion options into the relevant series of Fixed Rate Reset Preferred Shares. With respect to Series 18 and 19, 20 and 21, 22 and 23, 30 and 31, 32 and 33, 34 and 35, 36 and 37, and 38 and 39, if the Bank determines that, after giving effect to any Election Notices received, there would be less than 1,000,000 Fixed Rate or Floating Rate Preferred Shares of such Series issued and outstanding on an applicable conversion date, then all of the issued and outstanding preferred shares of such Series will automatically be converted into an equal number of the preferred shares of the other relevant Series.

(g) Holders of Series 18 Non-cumulative 5-Year Rate Reset Preferred Shares will have the option to convert shares into an equal number of Series 19 non-cumulative floating rate preferred shares on April 26, 2018 and on April 26 every five years thereafter. With regulatory approval, the Series 18 preferred shares may be redeemed by the Bank on April 26, 2018 and every five years thereafter, respectively, at $25.00 per share, together

with declared and unpaid dividends. With regulatory approval, the Series 19 Non-cumulative Preferred Shares may be redeemed by the Bank at (i) $25.00 together with all declared and unpaid dividends to the date fixed for redemption in the case of redemptions on April 26, 2018 and on April 26 every five years thereafter, or (ii) $25.50 together with all declared and unpaid dividends to the date fixed for redemption on any other date on or after April 26, 2013.

(h) Holders of Series 20 Non-cumulative 5-Year Rate Reset Preferred Shares will have the option to convert shares into an equal number of Series 21 non-cumulative floating rate preferred shares on October 26, 2018, and on October 26 every five years thereafter. With regulatory approval, the Series 20 preferred shares may be redeemed by the Bank on October 26, 2018, and every five years thereafter, respectively, at $25.00 per share, together with declared and unpaid dividends. With regulatory approval, the Series 21 Non-cumulative Preferred Shares may be redeemed by the Bank at (i) $25.00 together with all declared and unpaid dividends to the date fixed for redemption in the case of redemptions on October 26, 2018 and on October 26 every five years thereafter, or (ii) $25.50 together with all declared and unpaid dividends to the date fixed for redemption on any other date on or after October 26, 2013.

(i) Holders of Series 22 Non-cumulative 5-Year Rate Reset Preferred Shares will have the option to convert shares into an equal number of Series 23 non-cumulative floating rate preferred shares on January 26, 2019, and on January 26 every five years thereafter. With regulatory approval, the Series 22 preferred shares may be redeemed by the Bank on January 26, 2019, and every five years thereafter, respectively, at $25.00 per share, together with declared and unpaid dividends. With regulatory approval, the Series 23 Non-cumulative Preferred Shares may be redeemed by the Bank at (i) $25.00 together with all declared and unpaid dividends to the date fixed for redemption in the case of redemptions on January 26, 2019 and on January 26 every five years thereafter, or (ii) $25.50 together with all declared and unpaid dividends to the date fixed for redemption on any other date after January 26, 2014.

(j) Holders of Series 30 Non-cumulative 5-Year Rate Reset Preferred Shares will have the option to convert shares into an equal number of Series 31 non-cumulative floating rate preferred shares on April 26, 2020, and on April 26 every five years thereafter. With regulatory approval, the Series 30 preferred shares may be redeemed by the Bank on April 26, 2020, and every five years thereafter, respectively, at $25.00 per share, together with declared and unpaid dividends. With regulatory approval, the Series 31 Non-cumulative Preferred Shares may be redeemed by the Bank at (i) $25.00 together with all declared and unpaid dividends to the date fixed for redemption in the case of redemptions on April 26, 2020 and on April 26 every five years thereafter, or (ii) $25.50 together with all declared and unpaid dividends to the date fixed for redemption on any other date after April 26, 2015.

(k) Holders of Series 32 Non-cumulative 5-Year Rate Reset Preferred Shares will have the option to convert shares into an equal number of Series 33 non-cumulative floating rate preferred shares on February 2, 2021 and on February 2 every five years thereafter. With regulatory approval, the Series 32 preferred shares may be redeemed by the Bank on February 2, 2021, and every five years thereafter, respectively, at $25.00 per share, together with declared and unpaid dividends. With regulatory approval, the Series 33 Non-cumulative Preferred Shares may be redeemed by the Bank at (i) $25.00 together with all declared and unpaid dividends to the date fixed for redemption in the case of redemptions on February 2, 2021 and on February 2 every five years thereafter, or (ii) $25.50 together with all declared and unpaid dividends to the date fixed redemption on any other date after February 2, 2016.

(l) Holders of Series 34 Non-cumulative 5-Year Rate Reset Preferred Shares (NVCC) will have the option to convert shares into an equal number of Series 35 non-cumulative floating rate preferred shares on April 26, 2021, and on April 26 every five years thereafter. With regulatory approval, Series 34 preferred shares may be redeemed by the Bank on April 26, 2021, and for Series 35 preferred shares (NVCC), if applicable, on April 26, 2026 and every five years thereafter, respectively, at $25.00 per share, together with declared and unpaid dividends.

(m) Holders of Series 36 Non-cumulative 5-Year Rate Reset Preferred Shares (NVCC) will have the option to convert shares into an equal number of Series 37 non-cumulative floating rate preferred shares (NVCC) on July 26, 2021, and on July 26 every five years thereafter. With regulatory approval, Series 36 preferred shares may be redeemed by the Bank on July 26, 2021, and for Series 37 preferred shares, if applicable, on July 26, 2026 and every five years thereafter, respectively, at $25.00 per share, together with declared and unpaid dividends.

(n) Holders of Series 38 Non-cumulative 5-Year Rate Reset Preferred Shares (NVCC) will have the option to convert shares into an equal number of Series 39 non-cumulative floating rate preferred shares (NVCC) on January 27, 2022, and on January 27 every five years thereafter. With regulatory approval, Series 38 preferred shares may be redeemed by the Bank on January 27, 2022, and for Series 39 preferred shares, if applicable, on January 27, 2027 and every five years thereafter, respectively, at $25.00 per share, together with declared and unpaid dividends. The initial dividend, if declared will be payable on January 27, 2017 and will be $0.4418 per share of Preferred Shares Series 38.

(o) These preferred shares contain NVCC provisions necessary for the shares to qualify as Tier 1 regulatory capital under Basel III.

NVCC provisions require the conversion of capital instruments into a variable number of common shares if OSFI announces that the Bank has ceased, or is about to cease, to be viable, or if a federal or provincial government in Canada publicly announces that the Bank has accepted or agreed to accept a capital injection, or equivalent support, from the federal government or any provincial government or political subdivision or agent thereof without which the Bank would have been determined by OSFI to be non-viable. If such a conversion were to occur, NVCC preferred shares Series 34, Series 35, Series 36, Series 37, Series 38 and Series 39, if outstanding, would be converted into common shares pursuant to an automatic conversion formula defined as 100% times the share value of $25.00 plus declared and unpaid dividends divided by the conversion price. NVCC subordinated debentures due March 30, 2027, December 8, 2025, and December 16, 2025, would be converted into common shares pursuant to an automatic conversion formula defined as 150% of the par value plus accrued and unpaid interest divided by the conversion price. The conversion price is based on the greater of: (i) a floor price of $5.00 or, where applicable, the U.S. dollar equivalent of $5.00 (subject in each case to adjustments in certain events as set out in their respective prospectus supplements), and (ii) the current market price of the Bank's common shares at the time of the trigger event (10-day weighted average). Based on the floor price, excluding the impact of accrued and unpaid interest (if any) and declared but unpaid dividends (if any), the maximum number of common shares issuable on conversion of the subordinated debentures and preferred shares would be 1,373 million common shares.

(c) Restrictions on dividend payments

Under the Bank Act, the Bank is prohibited from declaring any dividends on its common or preferred shares when the Bank is, or would be placed by such a declaration, in contravention of the capital adequacy, liquidity or any other regulatory directives issued under the Bank Act. In addition, common share dividends cannot be paid unless all dividends to which preferred shareholders are then entitled have been paid or sufficient funds have been set aside to do so.

In the event that applicable cash distributions on any of the Scotiabank Trust Securities are not paid on a regular distribution date, the Bank has undertaken not to declare dividends of any kind on its preferred or common shares. Similarly, should the Bank fail to declare regular dividends on any of its directly issued and outstanding preferred or common shares, cash distributions will also not be made on any of the Scotiabank Trust Securities. Currently, these limitations do not restrict the payment of dividends on preferred or common shares.

24 Capital Management

The primary regulator over the Bank's consolidated capital adequacy is the Office of the Superintendent of Financial Institutions, Canada (OSFI). The capital adequacy regulations in Canada are largely consistent with international standards set by the Basel Committee on Banking Supervision (BCBS). OSFI requires Canadian deposit-taking institutions to fully implement the 2019 Basel III reforms, without the transitional phase-in provisions for capital deductions (referred to as 'all-in'), and achieve minimums of 7%, 8.5% and 10.5% for CET1, Tier 1 and Total Capital, respectively. OSFI has also designated the Bank as a domestic systemically important bank (D-SIB), increasing its minimum capital ratio requirements by 1% across all tiers of capital effective January 1, 2016, in line with the requirements for global systemically important banks.

In addition to risk-based capital requirements, the Basel III reforms introduced a simpler, non risk-based Leverage ratio requirement to act as a supplementary measure to its risk-based capital requirements. In October 2014, OSFI released its Leverage Requirements Guideline which outlines the application of the Basel III Leverage ratio in Canada and the replacement of the former Assets-to-Capital Multiple (ACM), effective the first quarter of 2015. Institutions are expected to maintain a material operating buffer above the 3% minimum.

The Bank's regulatory capital ratios were as follows:

	2016		2015	
As at October 31 ($ millions)	All-in	Transitional	All-in	Transitional
Capital				
Common Equity Tier 1 Capital	**$ 39,989**	**$ 45,816**	$ 36,965	$ 44,811
Net Tier 1 Capital	**$ 45,066**	**$ 47,668**	$ 41,366	$ 44,811
Total regulatory capital	**$ 53,330**	**$ 55,824**	$ 48,230	$ 51,501
Risk-weighted assets/exposures used in calculation of capital ratios				
CET1 risk-weighted assets[1]	**$ 364,048**	**$ 368,215**	$ 357,995	$ 364,824
Tier 1 risk-weighted assets[1]	**$ 364,504**	**$ 368,215**	$ 358,780	$ 364,824
Total risk-weighted assets[1]	**$ 364,894**	**$ 368,215**	$ 359,453	$ 364,824
Leverage exposures	**$ 1,010,987**	**$ 1,013,346**	$ 980,212	$ 983,318
Capital ratios				
Common Equity Tier 1 Capital ratio	**11.0%**	**12.4%**	10.3%	12.3%
Tier 1 capital ratio	**12.4%**	**12.9%**	11.5%	12.3%
Total capital ratio	**14.6%**	**15.2%**	13.4%	14.1%
Leverage ratio	**4.5%**	**4.7%**	4.2%	4.6%

(1) In accordance with OSFI's requirements, scalars for CVA risk-weighted assets of 0.64, 0.71 and 0.77 (0.64, 0.71 and 0.77 in 2015) were used to compute the CET1 capital ratio, Tier 1 capital ratio and Total capital ratio, respectively.

The Bank substantially exceeded the OSFI capital targets as at October 31, 2016. OSFI has also prescribed an authorized leverage ratio and the Bank was above the regulatory minimum as at October 31, 2016.

25 Share-Based Payments

(a) Stock option plans

The Bank grants stock options and stand-alone stock appreciation rights (SARs) as part of the Employee Stock Option Plan. Options to purchase common shares and/or to receive an equivalent cash payment, as applicable, may be granted to selected employees at an exercise price of the higher of the closing price of the Bank's common shares on the Toronto Stock Exchange (TSX) on the trading day prior to the grant date or the volume weighted average trading price for the five trading days immediately preceding the grant date.

Stock Options granted since December 2014 vest 50% at the end of the third year and 50% at the end of the fourth year. This change is prospective and does not impact prior period grants. Stock Options are exercisable no later than 10 years after the grant date. In the event that the expiry date falls within an insider trading blackout period, the expiry date will be extended for 10 business days after the end of the blackout period. As approved by the shareholders, a total of 129 million common shares have been reserved for issuance under the Bank's Employee Stock Option Plan of which 99.4 million common shares have been issued as a result of the exercise of options and 19.6 million common shares are committed under outstanding options, leaving 10.0 million common shares available for issuance as options. Outstanding options expire on dates ranging from December 13, 2016 to December 3, 2025.

The cost of these options is recognized on a graded vesting basis except where the employee is eligible to retire prior to a tranche's vesting date, in which case the cost is recognized between the grant date and the date the employee is eligible to retire.

The stock option plans include:

- Tandem stock appreciation rights

  Employee stock options granted between December 13, 2006 to November 1, 2009 have Tandem SARs, which provide the employee the choice to either exercise the stock option for shares, or to exercise the Tandem SARs and thereby receive the intrinsic value of the stock option in cash. As at October 31, 2016, 57,800 Tandem SARs were outstanding (2015 – 175,876).

  The share-based payment liability recognized for vested Tandem SARs as at October 31, 2016 was $2 million (2015 – $3 million). The corresponding intrinsic value of this liability as at October 31, 2016 was $2 million (2015 – $3 million).

  In 2016, an expense of $0.4 million (2015 – $0.3 million benefit) was recorded in salaries and employee benefits in the Consolidated Statement of Income. This expense is net of gains arising from derivatives used to manage the volatility of share-based payments of $0.6 million (2015 – $1.1 million losses).

- Stock options

  Employee stock options granted beginning December 2009, are equity-classified stock options which call for settlement in shares and do not have Tandem SARs features.

  The amount recorded in equity – other reserves for vested stock options as at October 31, 2016 was $161 million (2015 – $182 million).

  In 2016, an expense of $7 million (2015 – $13 million) was recorded in salaries and employee benefits in the Consolidated Statement of Income. As at October 31, 2016, future unrecognized compensation cost for non-vested stock options was $4 million (2015 – $5 million) which is to be recognized over a weighted-average period of 1.80 years (2015 – 1.90 years).

- Stock appreciation rights

  Stand-alone SARs are granted instead of stock options to selected employees in countries where local laws may restrict the Bank from issuing shares. When a SAR is exercised, the Bank pays the appreciation amount in cash equal to the rise in the market price of the Bank's common shares since the grant date.

  During fiscal 2016, 77,298 SARs were granted (2015 – 88,768) and as at October 31, 2016, 1,541,368 SARs were outstanding (2015 – 1,791,458), of which 1,478,854 SARs were vested (2015 – 1,726,644).

  The share-based payment liability recognized for vested SARs as at October 31, 2016 was $25 million (2015 – $17 million). The corresponding intrinsic value of this liability as at October 31, 2016 was $25 million (2015 – $17 million).

  In 2016, a benefit of $2 million (2015 – benefit of $3 million) was recorded in salaries and employee benefits in the Consolidated Statement of Income. This benefit is net of gains arising from derivatives used to manage the volatility of share-based payment of $18 million (2015 – $6 million losses).

Determination of fair values

The share-based payment liability and corresponding expense for SARs and options with Tandem SAR features were quantified using the Black-Scholes option pricing model with the following assumptions and resulting fair value per award:

As at October 31	**2016**	2015
Assumptions		
Risk-free interest rate %	**0.56% - 0.81%**	0.57% – 0.82%
Expected dividend yield	**3.92%**	4.33%
Expected price volatility	**16.28% - 30.40%**	16.34% – 28.12%
Expected life of option	**0.00 - 4.48 years**	0.05 – 4.43 years
Fair value		
Weighted-average fair value	**$ 17.69**	$ 10.23

The share-based payment expense for stock options, i.e., without Tandem SAR features, was quantified using the Black-Scholes option pricing model on the date of grant. The fiscal 2016 and 2015 stock option grants were fair valued using the following weighted-average assumptions and resulting fair value per award:

	2016 Grant	2015 Grant
Assumptions		
Risk-free interest rate %	**1.20%**	1.60%
Expected dividend yield	**4.49%**	3.86%
Expected price volatility	**20.10%**	21.90%
Expected life of option	**6.65 years**	6.69 years
Fair value		
Weighted-average fair value	**$ 5.27**	$ 7.63

The risk-free rate is based on Canadian treasury bond rates interpolated for the maturity equal to the expected life until exercise of the options. Expected dividend yield is based on historical dividend payout. Expected price volatility is determined based on the historical volatility for compensation. For accounting purposes, an average of the market consensus implied volatility for traded options on our common shares and the historical volatility is used.

Details of the Bank's Employee Stock Option Plan are as follows [1]:

As at October 31	2016 Number of stock options (000's)	2016 Weighted average exercise price	2015 Number of stock options (000's)	2015 Weighted average exercise price
Outstanding at beginning of year	**22,957**	**$ 53.19**	23,355	$ 51.68
Granted	**1,263**	**60.67**	1,514	68.32
Exercised as options	**(4,224)**	**48.81**	(1,811)	46.10
Exercised as Tandem SARs	**(28)**	**48.41**	(2)	47.92
Forfeited	**(92)**	**62.49**	(99)	58.06
Expired	**(24)**	**61.47**	–	–
Outstanding at end of year[2]	**19,852**	**$ 54.55**	22,957	$ 53.19
Exercisable at end of year[3]	**14,617**	**$ 51.57**	16,192	$ 50.09
Available for grant	**10,198**		11,317	

	Options Outstanding			Options Exercisable	
As at October 31, 2016	Number of stock options (000's)	Weighted average remaining contractual life (years)	Weighted average exercise price	Number of stock options (000's)	Weighted average exercise price
Range of exercise prices					
$33.89 to $47.75	**3,770**	**2.67**	**$ 41.70**	**3,770**	**$ 41.70**
$49.93 to $52.57	**3,897**	**3.88**	**$ 50.66**	**3,897**	**$ 50.66**
$55.21 to $60.67	**7,639**	**5.76**	**$ 56.44**	**5,435**	**$ 55.61**
$63.98 to $68.32	**4,546**	**7.24**	**$ 65.39**	**1,515**	**$ 63.98**
	19,852	**5.15**	**$ 54.55**	**14,617**	**$ 51.57**

(1) Excludes SARs.
(2) Includes outstanding options of 57,800 Tandem SARs (2015 – 175,876) and 257,170 options originally issued under HollisWealth plans (2015 – 301,950).
(3) Includes exercisable options of 57,800 Tandem SARs (2015 – 175,876) and 257,170 options originally issued under HollisWealth plans (2015 – 301,950).

(b) Employee share ownership plans

Eligible employees can contribute up to a specified percentage of salary towards the purchase of common shares of the Bank. In general, the Bank matches 50% of eligible contributions, up to a maximum dollar amount, which is expensed in salaries and employee benefits. In Canada, the maximum dollar amounts were increased effective January 1, 2016. During 2016, the Bank's contributions totalled $49 million (2015 – $31 million). Contributions, which are used to purchase common shares in the open market, do not result in a subsequent expense to the Bank from share price appreciation.

As at October 31, 2016, an aggregate of 19 million common shares were held under the employee share ownership plans (2015 – 19 million). The shares in the employee share ownership plans are considered outstanding for computing the Bank's basic and diluted earnings per share.

(c) Other share-based payment plans

Other share-based payment plans use notional units that are valued based on the Bank's common share price on the TSX. These units accumulate dividend equivalents in the form of additional units based on the dividends paid on the Bank's common shares. These plans are settled in cash and, as a result, are liability-classified. Fluctuations in the Bank's share price change the value of the units, which affects the Bank's share-based payment expense. As described below, the value of a portion of the Performance Share Unit notional units also varies based on Bank performance. Upon exercise or redemption, payments are made to the employees with a corresponding reduction in the accrued liability.

In 2016, an aggregate expense of $237 million (2015 – $209 million) was recorded in salaries and employee benefits in the Consolidated Statement of Income for these plans. This expense includes gains from derivatives used to manage the volatility of share-based payment of $121 million (2015 – $72 million losses).

As at October 31, 2016, the share-based payment liability recognized for vested awards under these plans was $849 million (2015 – $754 million).

Details of these other share-based payment plans are as follows:

Deferred Stock Unit Plan (DSU)

Under the DSU Plan, senior executives may elect to receive all or a portion of their cash bonus under the Annual Incentive Plan (which is expensed for the year awarded in salaries and employee benefits in the Consolidated Statement of Income) in the form of deferred stock units which vest immediately. In addition the DSU plan allows for eligible executives of the Bank to participate in grants that are not allocated from the Annual Incentive Plan election. These grants are subject to specific vesting schedules. Units are redeemable in cash only when an executive ceases to be a Bank employee, and must be redeemed by December 31 of the year following that event. As at October 31, 2016, there were 703,168 units (2015 – 1,325,679) awarded and outstanding of which 703,168 units were vested (2015 – 1,325,679).

Directors' Deferred Stock Unit Plan (DDSU)

Under the DDSU Plan, non-officer directors of the Bank may elect to receive all or a portion of their fee for that fiscal year (which is expensed by the Bank in other expenses in the Consolidated Statement of Income) in the form of deferred stock units which vest immediately. Units are redeemable in cash, only following resignation or retirement, and must be redeemed by December 31 of the year following that event. As at October 31, 2016, there were 348,197 units outstanding (2015 – 337,413).

Restricted Share Unit Plan (RSU)

Under the RSU Plan, selected employees receive an award of restricted share units which, for the majority of grants, vest at the end of three years. There are certain grants that provide for a graduated vesting schedule. Upon vesting all RSU units are paid in cash to the employee. The share-based

payment expense is recognized evenly over the vesting period except where the employee is eligible to retire prior to the vesting date in which case, the expense is recognized between the grant date and the date the employee is eligible to retire. As at October 31, 2016, there were 2,214,543 units (2015 – 2,147,971) awarded and outstanding of which 1,537,076 were vested (2015 – 1,566,333).

Performance Share Unit Plan (PSU)

Eligible executives receive an award of performance share units, for the majority of grants vest at the end of three years. One grant provides for a graduated vesting schedule which includes a specific performance factor calculation. A portion of the PSU awards are subject to performance criteria measured over a three-year period whereby a multiplier factor is applied which impacts the incremental number of outstanding shares due to employees. The three-year performance measures include return on equity compared to target and total shareholder return relative to a comparator group selected prior to the granting of the award. The Bank uses a probability-weighted-average of potential outcomes to estimate the multiplier impact. The share-based payment expense is recognized over the vesting period except where the employee is eligible to retire prior to the vesting date; in which case, the expense is recognized between the grant date and the date the employee is eligible to retire. This expense varies based on changes in the Bank's share price and the Bank's performance compared to the performance measures. Upon vesting, the units are paid in cash to the employee. As at October 31, 2016, there were 8,588,753 units (2015 – 9,025,306) outstanding subject to performance criteria, of which 7,035,242 units were vested (2015 – 7,686,580).

Deferred Performance Plan

Under the Deferred Performance Plan, a portion of the bonus received by Global Banking and Markets employees (which is accrued and expensed in the year to which it relates) is allocated to qualifying employees in the form of units. These units are subsequently paid in cash to the employees over each of the following three years. Changes in the value of the units, which arise from fluctuations in the market price of the Bank's common shares, are expensed in the same manner as the Bank's other liability-classified share-based payment plans in the salaries and employee benefits expense in the Consolidated Statement of Income. As at October 31, 2016, there were 1,802,540 units outstanding (2015 – 1,940,375).

26 Corporate Income Taxes

Corporate income taxes recorded in the Bank's consolidated financial statements for the years ended October 31 are as follows:

(a) Components of income tax provision

For the year ended October 31 ($ millions)	**2016**	2015	2014
Provision for income taxes in the Consolidated Statement of Income:			
Current income taxes:			
Domestic:			
Federal	**$ 467**	$ 528	$ 565
Provincial	**386**	459	423
Adjustments related to prior periods	**4**	23	(70)
Foreign	**935**	897	865
Adjustments related to prior periods	**(19)**	2	(3)
	1,773	1,909	1,780
Deferred income taxes:			
Domestic:			
Federal	**141**	(16)	141
Provincial	**70**	(20)	66
Foreign	**46**	(20)	15
	257	(56)	222
Total provision for income taxes in the Consolidated Statement of Income	**$ 2,030**	$ 1,853	$ 2,002
Provision for income taxes in the Consolidated Statement of Changes in Equity:			
Current income taxes	**$ (158)**	$ (496)	$ (248)
Deferred income taxes	**(168)**	(8)	(174)
	(326)	(504)	(422)
Reported in:			
Other Comprehensive Income	**(322)**	(464)	(432)
Retained earnings	**(10)**	(43)	4
Common shares	**1**	1	1
Other reserves	**5**	2	5
Total provision for income taxes in the Consolidated Statement of Changes in Equity	**(326)**	(504)	(422)
Total provision for income taxes	**$ 1,704**	$ 1,349	$ 1,580
Provision for income taxes in the Consolidated Statement of Income includes:			
Deferred tax expense (benefit) relating to origination/reversal of temporary differences	**$ 372**	$ 118	$ 163
Deferred tax expense (benefit) of tax rate changes	**(4)**	(2)	–
Deferred tax expense (benefit) of previously unrecognized tax losses, tax credits and temporary differences	**(111)**	(172)	59
	$ 257	$ (56)	$ 222

(b) Reconciliation to statutory rate

Income taxes in the Consolidated Statement of Income vary from the amounts that would be computed by applying the composite federal and provincial statutory income tax rate for the following reasons:

	2016		2015		2014	
For the year ended October 31 ($ millions)	Amount	Percent of pre-tax income	Amount	Percent of pre-tax income	Amount	Percent of pre-tax income
Income taxes at statutory rate	**$ 2,485**	**26.4%**	$ 2,386	26.3%	$ 2,439	26.2%
Increase (decrease) in income taxes resulting from:						
Lower average tax rate applicable to subsidiaries and foreign branches	**(234)**	**(2.5)**	(233)	(2.6)	(177)	(1.9)
Tax-exempt income from securities	**(220)**	**(2.3)**	(281)	(3.1)	(212)	(2.3)
Deferred income tax effect of substantively enacted tax rate changes	**(4)**	**–**	(2)	–	–	–
Other, net	**3**	**–**	(17)	(0.2)	(48)	(0.5)
Total income taxes and effective tax rate	**$ 2,030**	**21.6%**	$ 1,853	20.4%	$ 2,002	21.5%

The change in the statutory tax rate between 2016 and 2015 was primarily due to an increase in certain provincial tax rates.

(c) Deferred taxes

Significant components of the Bank's deferred tax assets and liabilities are as follows:

	Statement of Income		Statement of Financial Position	
	For the year ended		As at	
October 31 ($ millions)	2016	2015	2016	2015
Deferred tax assets:				
Loss carryforwards	**$ 57**	$ 80	**$ 484**	$ 539
Allowance for credit losses	**3**	(93)	**852**	812
Deferred compensation	**(14)**	50	**224**	215
Deferred income	**18**	46	**289**	301
Property and equipment	**99**	(72)	**101**	186
Pension and other post-retirement benefits	**18**	54	**937**	676
Securities	**139**	8	**162**	138
Other	**57**	(10)	**511**	408
Total deferred tax assets	**$ 377**	$ 63	**$ 3,560**	$ 3,275
Deferred tax liabilities:				
Deferred income	**$ 5**	$ 39	**$ 122**	$ 114
Property and equipment	**7**	1	**75**	65
Pension and other post-retirement benefits	**25**	22	**146**	153
Securities	**19**	(26)	**221**	68
Intangible assets	**(129)**	38	**1,043**	914
Other	**193**	45	**543**	526
Total deferred tax liabilities	**$ 120**	$ 119	**$ 2,150**	$ 1,840
Net deferred tax assets (liabilities)[1]	**$ 257**	$ (56)	**$ 1,410**	$ 1,435

(1) For Consolidated Statement of Financial Position presentation, deferred tax assets and liabilities are assessed by legal entity. As a result, the net deferred tax assets of $1,410 (2015 – $1,435) are represented by deferred tax assets of $2,021 (2015 – $2,034), and deferred tax liabilities of $611 (2015 – $599) on the Consolidated Statement of Financial Position.

The major changes to net deferred taxes were as follows:

For the year ended October 31 ($ millions)	2016	2015
Balance at beginning of year	**$ 1,435**	$ 1,309
Deferred tax benefit (expense) for the year recorded in income	**(257)**	56
Deferred tax benefit (expense) for the year recorded in equity	**168**	8
Acquired in business combinations	**71**	27
Other	**(7)**	35
Balance at end of year	**$ 1,410**	$ 1,435

The tax related to temporary differences, unused tax losses and unused tax credits for which no deferred tax asset is recognized in the Consolidated Statement of Financial Position amounts to $55 million (2015 – $166 million). The amount related to unrecognized tax losses is $14 million, which will expire as follows: $13 million in 2018 and beyond and $1 million have no fixed expiry date.

Included in the net deferred tax asset are tax benefits of $73 million (2015 – $41 million) that have been recognized in certain Canadian and foreign subsidiaries that have incurred losses in either the current or the preceding year. In determining if it is appropriate to recognize these tax benefits, the Bank relied on projections of future taxable profits.

Deferred tax liabilities are not required to be recognized for taxable temporary differences arising on investments in subsidiaries, associates and interests in joint ventures if the Bank controls the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. At the end of the year taxable temporary differences of $52.5 billion (2015 – $46.0 billion) related to the Bank's investment in subsidiaries were not recognized as deferred tax liabilities in line with these requirements.

Reassessment of dividend deductions

In November 2016 the Bank received a federal reassessment of $179 million for tax and interest as a result of the Canada Revenue Agency denying the tax deductibility of certain Canadian dividends received during the 2011 taxation year. The circumstances of the dividends subject to the reassessment are similar to those prospectively addressed by recently enacted rules which had been introduced in the 2015 Canadian federal budget. The Bank is confident that its tax filing position was appropriate and in accordance with the relevant provisions of the Income Tax Act (Canada), and intends to vigorously defend its position.

27 Employee Benefits

The Bank sponsors a number of employee benefit plans, including pensions (defined benefit and defined contribution) and other benefit plans (post-retirement benefits and other long-term employee benefits) for most of its employees globally. The information presented below relates to the Bank's principal plans; other plans operated by certain subsidiaries of the Bank are not considered material and are not included in these disclosures.

Global pension plans

The principal pension plans include plans in Canada, the US, Mexico, the UK, Ireland, Jamaica, Trinidad & Tobago and other countries in the Caribbean in which the Bank operates. The Bank has a strong and well defined governance structure to manage these global obligations. The investment policy for each principal plan is reviewed periodically and all plans are in good standing with respect to legislation and local regulations.

Actuarial valuations for funding purposes for the Bank's funded pension plans are conducted as required by applicable legislation. The purpose of the actuarial valuation is to determine the funded status of the plans on a going-concern and statutory basis and to determine the required contributions. The plans are funded in accordance with applicable pension legislation and the Bank's funding policies such that future benefit promises based on plan provisions are well secured. The assumptions used for the funding valuations are set by independent plan actuaries on the basis of the requirements of the local actuarial standards of practice and statute.

Scotiabank Pension Plan (Canada)

The most significant pension plan is the Scotiabank Pension Plan (SPP) in Canada, a defined benefit pension plan, which was recently amended to include an optional defined contribution (DC) component for employees in Canada hired on or after January 1, 2016. As the administrator of the SPP, the Bank has established a well-defined governance structure and policies to ensure compliance with legislative and regulatory requirements under OSFI and the Canada Revenue Agency. The Bank appoints a number of committees to oversee and make decisions related to the administration of the SPP. Certain committees are also responsible for the investment of the assets of the SPP Fund and for monitoring the investment managers and performance.

- The Human Resources Committee (HRC) of the Board approves the charter of the Pension Administration and Investment Committee (PAIC), reviews reports, and approves the investment policy. The HRC also reviews and recommends any amendments to the SPP to the Board of Directors.
- PAIC is responsible for recommending the investment policy to the HRC, for appointing and monitoring investment managers, and for reviewing auditor and actuary reports. PAIC also monitors the administration of member pension benefits.
- The Scotiabank Master Trust Committee (MTC) invests assets in accordance with the investment policy and all applicable legislation. The MTC assigns specific mandates to investment management firms. PAIC and the MTC both have independent member representation on the committees.
- The Capital Accumulation Plans (CAP) Committee is responsible for the administration and investment of the DC component of the SPP including the selection and monitoring of investment options available to DC participants.

Actuarial valuations for funding purposes for the SPP are conducted on an annual basis. The most recent funding valuation was conducted as of November 1, 2015. Contributions are being made to the SPP in accordance with this valuation and are shown in the table in b) below. The assumptions used for the funding valuation are set by independent plan actuaries on the basis of the requirements of the Canadian Institute of Actuaries and applicable regulation.

Other benefit plans

The principal other benefit plans include plans in Canada, the US, Mexico, Uruguay, the UK, Jamaica, Panama, Trinidad & Tobago and other countries in the Caribbean in which the Bank operates. The most significant other benefit plans provided by the Bank are in Canada.

Key assumptions

The financial information reported below in respect of pension and other benefit plans are based on a number of assumptions. The most significant assumption is the discount rate used to determine the defined benefit obligation, which is set by reference to the yields on high quality corporate bonds with matching durations. Prior to 2016, the discount rate used to determine the annual benefit expense was the same as the rate used to determine the defined benefit obligation. Beginning in 2016, separate discount rates were used to determine the annual benefit expense in Canada and the US. These rates were determined with reference to the yields on high quality corporate bonds with durations that match the various components of the annual defined benefit expense. The discount rate used to determine the annual benefit expense for all other plans continues to be same as the rate used to determine the defined benefit obligation. Other assumptions set by management are determined in reference to market conditions, plan-level experience, best practices and future expectations. The key weighted-average assumptions used by the Bank for the measurement of the benefit obligation and benefit expense for all of the Bank's principal plans are summarized in the table in f) below.

Risk management

The Bank's defined benefit pension plans and other benefit plans expose the Bank to a number of risks. Some of the more significant risks include interest rate risk, investment risk, longevity risk and health care cost increases, among others. These risks could result in higher defined benefit expense and a higher defined benefit obligation to the extent that:

- there is a decline in discount rates; and/or
- plan assets returns are less than expected; and/or
- plan members live longer than expected; and/or
- health care costs are higher than assumed.

In addition to the governance structure and policies in place, the Bank manages risks by regularly monitoring market developments and asset investment performance. The Bank also monitors regulatory and legislative changes along with demographic trends and revisits the investment strategy and/or plan design as warranted.

(a) Relative size of plan obligations and assets

	Pension plans			Other benefit plans	
	Canada				
For the year ended October 31, 2016	SPP	Other	International	Canada	International
Percentage of total benefit obligations	**73%**	**11%**	**16%**	**63%**	**37%**
Percentage of total plan assets	**76%**	**6%**	**18%**	**19%**	**81%**
Percentage of total benefit expense[1]	**76%**	**17%**	**7%**	**46%**	**54%**

	Pension plans			Other benefit plans	
	Canada				
For the year ended October 31, 2015	SPP	Other	International	Canada	International
Percentage of total benefit obligations	72%	11%	17%	62%	38%
Percentage of total plan assets	76%	6%	18%	20%	80%
Percentage of total benefit expense[1]	78%	16%	6%	63%	37%

(1) Excludes non-routine benefit expense items such as past service costs, curtailment charges and settlement charges.

(b) Cash contributions and payments

The table below shows the cash contributions and payments made by the Bank to its principal plans in 2016, and the two prior years.

Contributions to the principal plans for the year ended October 31 ($ millions)	**2016**	2015	2014
Defined benefit pension plans (cash contributions to fund the plans, including paying beneficiaries under the unfunded pension arrangements)			
SPP	**$ 187**	$ 236	$ 268
All other plans	**77**	60	75
Other benefit plans (cash contributions mainly in the form of benefit payments to beneficiaries)	**45**	42	46
Defined contribution pension plans (cash contributions)	**31**	29	21
Total contributions[1]	**$ 340**	$ 367	$ 410

(1) Based on preliminary estimates, the Bank expects to make contributions of $174 to the SPP, $216 to all other defined benefit pension plans, $54 to other benefit plans and $32 to all other defined contribution plans for the year ending October 31, 2017.

(c) Funded and unfunded plans

The excess (deficit) of the fair value of assets over the benefit obligation at the end of the year includes the following amounts for plans that are wholly unfunded and plans that are wholly or partly funded.

	Pension plans			Other benefit plans		
As at October 31 ($ millions)	**2016**	2015	2014	**2016**	2015	2014
Benefit obligation						
Benefit obligation of plans that are wholly unfunded	**$ 408**	$ 373	$ 376	**$ 1,310**	$ 1,231	$ 1,201
Benefit obligation of plans that are wholly or partly funded	**8,731**	7,740	7,571	**372**	408	418
Funded status						
Benefit obligation of plans that are wholly or partly funded	**$ 8,731**	$ 7,740	$ 7,571	**$ 372**	$ 408	$ 418
Fair value of assets	**7,770**	7,615	7,323	**284**	307	341
Excess (deficit) of fair value of assets over benefit obligation of wholly or partly funded plans	**$ (961)**	$ (125)	$ (248)	**$ (88)**	$ (101)	$ (77)
Benefit obligation of plans that are wholly unfunded	**$ 408**	$ 373	$ 376	**$ 1,310**	$ 1,231	$ 1,201
Excess (deficit) of fair value of assets over total benefit obligation	**$ (1,369)**	$ (498)	$ (624)	**$ (1,398)**	$ (1,332)	$ (1,278)
Effect of asset limitation and minimum funding requirement	**(60)**	(41)	(76)	**–**	–	–
Net asset (liability) at end of year	**$ (1,429)**	$ (539)	$ (700)	**$ (1,398)**	$ (1,332)	$ (1,278)

(d) Financial information

The following tables present financial information related to the Bank's principal plans.

	Pension plans			Other benefit plans		
For the year ended October 31 ($ millions)	**2016**	2015	2014	**2016**	2015	2014
Change in benefit obligation						
Benefit obligation at beginning of year	**$ 8,113**	$ 7,947	$ 6,940	**$ 1,639**	$ 1,619	$ 1,510
Current service cost	**284**	304	262	**39**	43	41
Interest cost on benefit obligation	**314**	350	342	**77**	84	84
Employee contributions	**24**	23	21	**–**	–	–
Benefits paid	**(593)**	(498)	(393)	**(71)**	(73)	(66)
Actuarial loss (gain)	**1,119**	152	731	**95**	(52)	35
Past service cost	**(16)**	(241)	(19)	**(77)**	3	7
Business combination	**–**	–	–	**9**	–	–
Settlements	**–**	(48)	–	**–**	(2)	(23)
Foreign exchange	**(106)**	124	63	**(29)**	17	31
Benefit obligation at end of year	**$ 9,139**	$ 8,113	$ 7,947	**$ 1,682**	$ 1,639	$ 1,619
Change in fair value of assets						
Fair value of assets at beginning of year	**$ 7,615**	$ 7,323	$ 6,647	**$ 307**	$ 341	$ 332
Interest income on fair value of assets	**310**	343	343	**22**	23	25
Return on plan assets in excess of interest income on fair value of assets	**275**	55	310	**5**	(12)	11
Employer contributions	**264**	296	343	**45**	42	46
Employee contributions	**24**	23	21	**–**	–	–
Benefits paid	**(593)**	(498)	(393)	**(71)**	(73)	(66)
Administrative expenses	**(12)**	(12)	(9)	**–**	–	–
Business combination	**–**	**–**	**–**	**2**	**–**	**–**
Settlements	**–**	(39)	–	**–**	–	(18)
Foreign exchange	**(113)**	124	61	**(26)**	(14)	11
Fair value of assets at end of year	**$ 7,770**	$ 7,615	$ 7,323	**$ 284**	$ 307	$ 341
Funded status						
Excess (deficit) of fair value of assets over benefit obligation at end of year	**$ (1,369)**	$ (498)	$ (624)	**$ (1,398)**	$ (1,332)	$ (1,278)
Effect of asset limitation and minimum funding requirement [1]	**(60)**	(41)	(76)	**–**	–	–
Net asset (liability) at end of year	**$ (1,429)**	$ (539)	$ (700)	**$ (1,398)**	$ (1,332)	$ (1,278)
Recorded in:						
Other assets in the Bank's Consolidated Statement of Financial Position	**$ 184**	$ 183	$ 117	**$ –**	$ –	$ –
Other liabilities in the Bank's Consolidated Statement of Financial Position	**(1,613)**	(722)	(817)	**(1,398)**	(1,332)	(1,278)
Net asset (liability) at end of year	**$ (1,429)**	$ (539)	$ (700)	**$ (1,398)**	$ (1,332)	$ (1,278)
Annual benefit expense						
Current service cost	**$ 284**	$ 304	$ 262	**$ 39**	$ 43	$ 41
Net interest expense (income)	**9**	15	6	**55**	60	59
Administrative expenses	**13**	10	9	**–**	–	–
Past service costs	**(16)**	(241)	(19)	**(77)**	4	7
Amount of settlement (gain) loss recognized	**–**	(9)	–	**–**	(2)	(5)
Remeasurement of other long-term benefits	**–**	–	–	**(20)**	4	5
Benefit expense (income) recorded in the Consolidated Statement of Income	**$ 290**	$ 79	$ 258	**$ (3)**	$ 109	$ 107
Defined contribution benefit expense	**$ 31**	$ 29	$ 21	**$ –**	$ –	$ –
Remeasurements						
(Return) on plan assets in excess of interest income on fair value of assets	**$ (275)**	$ (55)	$ (310)	**$ (3)**	$ 13	$ (8)
Actuarial loss (gain) on benefit obligation	**1,119**	152	731	**113**	(58)	27
Change in the asset limitation	**18**	(49)	(8)	**–**	–	–
Remeasurements recorded in OCI	**$ 862**	$ 48	$ 413	**$ 110**	$ (45)	$ 19
Total benefit cost	**$ 1,183**	$ 156	$ 692	**$ 107**	$ 64	$ 126
Additional details on actual return on assets and actuarial (gains) and losses						
Actual return on assets (net of administrative expenses)	**$ 573**	$ 386	$ 644	**$ 27**	$ 11	$ 36
Actuarial (gains) and losses from changes in demographic assumptions	**9**	91	54	**(5)**	(22)	(26)
Actuarial (gains) and losses from changes in financial assumptions	**1,116**	22	645	**133**	(28)	102
Actuarial (gains) and losses from changes in experience	**(6)**	39	32	**(33)**	(2)	(41)
Additional details on fair value of pension plan assets invested						
In Scotiabank securities (stock, bonds)	**$ 410**	$ 404	$ 556	**$ –**	$ –	$ –
In property occupied by Scotiabank	**5**	5	4	**–**	–	–
Change in asset ceiling/onerous liability						
Asset ceiling /onerous liability at end of prior year	**$ 41**	$ 77	$ 77	**$ –**	$ –	$ –
Interest expense	**5**	8	7	**–**	–	–
Remeasurements	**18**	(49)	(8)	**–**	–	–
Foreign exchange	**(4)**	5	–	**–**	–	–
Asset ceiling /onerous liability at end of year	**60**	41	76	**–**	–	–

(1) The recognized asset is limited by the present value of economic benefits available from a reduction in future contributions to a plan and from the ability to pay plan expenses from the fund.

(e) Maturity profile of the defined benefit obligation

The weighted average duration of the total benefit obligation at October 31, 2016 is 15.3 years (2015 – 15.3 years, 2014 – 14.7 years).

	Pension plans			Other benefit plans		
For the year ended October 31	**2016**	2015	2014	**2016**	2015	2014
Disaggregation of the benefit obligation (%)						
Canada						
Active members	**60%**	58%	58%	**33%**	35%	36%
Inactive and retired members	**40%**	42%	42%	**67%**	65%	64%
Total	**100%**	100%	100%	**100%**	100%	100%
Mexico						
Active members	**29%**	30%	35%	**57%**	58%	59%
Inactive and retired members	**71%**	70%	65%	**43%**	42%	41%
Total	**100%**	100%	100%	**100%**	100%	100%
United States						
Active members	**33%**	39%	40%	**38%**	37%	36%
Inactive and retired members	**67%**	61%	60%	**62%**	63%	64%
Total	**100%**	100%	100%	**100%**	100%	100%

(f) Key assumptions (%)

The key weighted-average assumptions used by the Bank for the measurement of the benefit obligation and benefit expense for all of the Bank's principal plans are summarized as follows:

	Pension plans			Other benefit plans		
For the year ended October 31	**2016**	2015	2014	**2016**	2015	2014
Benefit obligation at end of year						
Discount rate – all plans	**3.86%**	4.64%	4.46%	**4.74%**	5.33%	5.24%
Discount rate – Canadian plans only	**3.60%**	4.40%	4.20%	**3.42%**	4.27%	4.12%
Rate of increase in future compensation [1]	**2.72%**	2.75%	2.77%	**4.09%**	4.41%	4.51%
Benefit expense (income) for the year						
Discount rate – All plans						
Discount rate for defined benefit obligations	**4.64%**	4.46%	5.04%	**5.33%**	5.24%	5.56%
Discount rate for net interest cost	**4.03%**	4.46%	5.04%	**4.91%**	5.24%	5.56%
Discount rate for service cost	**4.83%**	4.46%	5.04%	**5.62%**	5.24%	5.56%
Discount rate for interest on service cost	**4.31%**	4.46%	5.04%	**5.56%**	5.24%	5.56%
Discount rate – Canadian plans only						
Discount rate for defined benefit obligations	**4.40%**	4.20%	4.80%	**4.27%**	4.12%	4.80%
Discount rate for net interest cost	**3.70%**	4.20%	4.80%	**3.67%**	4.12%	4.80%
Discount rate for service cost	**4.60%**	4.20%	4.80%	**4.54%**	4.12%	4.80%
Discount rate for interest on service cost	**4.00%**	4.20%	4.80%	**4.44%**	4.12%	4.80%
Rate of increase in future compensation [1]	**2.75%**	2.77%	2.84%	**4.41%**	4.51%	4.49%
Health care cost trend rates at end of year						
Initial rate	**n/a**	n/a	n/a	**6.12%**	6.29%	6.37%
Ultimate rate	**n/a**	n/a	n/a	**4.93%**	4.97%	5.02%
Year ultimate rate reached	**n/a**	n/a	n/a	**2030**	2030	2029
Assumed life expectancy in Canada (years)						
Life expectancy at 65 for current pensioners – male	**23.2**	23.1	23.0	**23.2**	23.1	23.0
Life expectancy at 65 for current pensioners – female	**24.3**	24.3	24.2	**24.3**	24.3	24.2
Life expectancy at 65, for future pensioners currently aged 45 – male	**24.2**	24.1	24.0	**24.2**	24.1	24.0
Life expectancy at 65, for future pensioners currently aged 45 – female	**25.3**	25.2	25.1	**25.3**	25.2	25.1
Assumed life expectancy in Mexico (years)						
Life expectancy at 65 for current pensioners – male	**21.3**	21.3	21.3	**21.3**	21.3	21.3
Life expectancy at 65 for current pensioners – female	**23.8**	23.8	23.8	**23.8**	23.8	23.8
Life expectancy at 65, for future pensioners currently aged 45 – male	**21.7**	21.7	21.7	**21.7**	21.7	21.7
Life expectancy at 65, for future pensioners currently aged 45 – female	**24.0**	24.0	24.0	**24.0**	24.0	24.0
Assumed life expectancy in United States (years)						
Life expectancy at 65 for current pensioners – male	**23.0**	22.3	20.5	**23.0**	22.3	20.5
Life expectancy at 65 for current pensioners – female	**24.7**	23.5	22.6	**24.7**	23.5	22.6
Life expectancy at 65, for future pensioners currently aged 45 – male	**23.7**	23.0	19.9	**23.7**	23.0	19.9
Life expectancy at 65, for future pensioners currently aged 45 – female	**25.6**	25.4	22.0	**25.6**	25.4	22.0

(1) The weighted-average rates of increase in future compensation shown for other benefit plans do not include Canadian flexible post-retirement benefits plans established in fiscal 2005, as they are not impacted by future compensation increases.

(g) Sensitivity analysis

The sensitivity analysis presented below represents the impact of a change in a single assumption with other assumptions left unchanged. For purposes of the sensitivity analysis, the present value of the defined benefit obligation has been calculated using the projected unit credit method at the end of the reporting period, which is the same as that applied in calculating the defined benefit obligation recognized in the statement of financial position.

	Pension plans		Other benefit plans	
For the year ended October 31, 2016 ($ millions)	Benefit obligation	Benefit expense	Benefit obligation	Benefit expense
Impact of the following changes:				
1% decrease in discount rate	**$ 1,697**	**$ 100**	**$ 284**	**$ 16**
0.25% increase in rate of increase in future compensation	**102**	**7**	**1**	**–**
1% increase in health care cost trend rate	**n/a**	**n/a**	**166**	**17**
1% decrease in health care cost trend rate	**n/a**	**n/a**	**(132)**	**(13)**
1 year increase in Canadian life expectancy	**170**	**7**	**27**	**1**
1 year increase in Mexican life expectancy	**3**	**–**	**4**	**–**
1 year increase in the United States life expectancy	**9**	**–**	**5**	**–**

(h) Assets

The Bank's principal pension plans' assets are generally invested with the long-term objective of maximizing overall expected returns, at an acceptable level of risk relative to the benefit obligation. A key factor in managing long-term investment risk is asset mix. Investing the pension assets in different asset classes and geographic regions helps to mitigate risk and to minimize the impact of declines in any single asset class, particular region or type of investment. Investment management firms – including related-party managers – are typically hired and assigned specific mandates within each asset class.

Pension plan asset mix guidelines are set for the long term, and are documented in each plan's investment policy. Asset mix policy typically also reflects the nature of the plan's benefit obligations. Legislation places certain restrictions on asset mix – for example, there are usually limits on concentration in any one investment. Other concentration and quality limits are also set forth in the investment policies. The use of derivatives is generally prohibited without specific authorization; currently, the main use of derivatives is for currency hedging. Asset mix guidelines are reviewed at least once each year, and adjusted, where appropriate, based on market conditions and opportunities. However, large asset class shifts are rare, and typically reflect a change in the pension plan's situation (e.g. a plan termination). Actual asset mix is reviewed regularly, and rebalancing back to target asset mix is considered – as needed – generally on a semi-annual basis. The Bank's other benefit plans are generally not funded; the assets reflected for these other benefit plans are related to programs in Canada and Mexico.

The tables below shows the weighted-average actual and target asset allocations for the Bank's principal plans at October 31, by asset category.

	Pension plans			Other benefit plans		
Asset category %	Actual **2016**	Actual 2015	Actual 2014	Actual **2016**	Actual 2015	Actual 2014
Cash and cash equivalents	**2%**	2%	4%	**2%**	2%	2%
Equity investments						
Quoted in an active market	**44%**	44%	42%	**45%**	45%	46%
Non quoted	**16%**	19%	22%	**–%**	–%	–%
	60%	63%	64%	**45%**	45%	46%
Fixed income investments						
Quoted in an active market	**4%**	5%	6%	**29%**	28%	28%
Non quoted	**27%**	25%	23%	**24%**	25%	24%
	31%	30%	29%	**53%**	53%	52%
Other						
Quoted in an active market	**1%**	–%	–%	**–%**	–%	–%
Non quoted	**6%**	5%	3%	**–%**	–%	–%
	7%	5%	3%	**–%**	–%	–%
Total	**100%**	100%	100%	**100%**	100%	100%

Target asset allocation at October 31, 2016

Asset category %	Pension plans	Other benefit plans
Cash and cash equivalents	**–%**	**2%**
Equity investments	**60%**	**45%**
Fixed income investments	**33%**	**53%**
Other	**7%**	**–%**
Total	**100%**	**100%**

28 Operating Segments

Scotiabank is a diversified financial services institution that provides a wide range of financial products and services to retail, commercial and corporate customers around the world. The Bank's businesses are grouped into three business lines: Canadian Banking, International Banking and Global Banking and Markets. Other smaller business segments are included in the Other segment. The results of these business segments are based upon the internal financial reporting systems of the Bank. The accounting policies used in these segments are generally consistent with those followed in the preparation of the consolidated financial statements as disclosed in Note 3 of the consolidated financial statements. Notable accounting measurement differences are:

- tax normalization adjustments related to the gross-up of income from associated corporations. This adjustment normalizes the effective tax rate in the divisions to better present the contribution of the associated companies to the divisional results.
- the grossing up of tax-exempt net interest income and non-interest income to an equivalent before-tax basis for those affected segments.

These differences in measurement enable comparison of net interest income and non-interest income arising from taxable and tax-exempt sources.

Scotiabank's results, and average assets and liabilities, allocated by these operating segments, are as follows:

For the year ended October 31, 2016

Taxable equivalent basis ($ millions)	Canadian Banking	International Banking	Global Banking and Markets	Other[1]	Total
Net interest income[2]	**$ 7,024**	**$ 6,359**	**$ 1,293**	**$ (384)**	**$14,292**
Non-interest income[3]	**5,164**	**3,482**	**3,139**	**273**	**12,058**
Total revenues	**12,188**	**9,841**	**4,432**	**(111)**	**26,350**
Provision for credit losses	**832**	**1,281**	**249**	**50**	**2,412**
Depreciation and amortization	**340**	**265**	**68**	**11**	**684**
Non-interest expenses	**5,984**	**5,258**	**1,972**	**642**	**13,856**
Income tax expense	**1,296**	**707**	**572**	**(545)**	**2,030**
Net income	**$ 3,736**	**$ 2,330**	**$ 1,571**	**$ (269)**	**$ 7,368**
Net income attributable to non-controlling interests in subsidiaries	**–**	**251**	**–**	**–**	**251**
Net income attributable to equity holders of the Bank	**3,736**	**2,079**	**1,571**	**(269)**	**7,117**
Average assets ($ billions)	**309**	**143**	**351**	**111**	**914**
Average liabilities ($ billions)	**232**	**109**	**270**	**247**	**858**

(1) Includes all other smaller operating segments and corporate adjustments, such as the elimination of the tax-exempt income gross-up reported in net interest income and non-interest income and provision for income taxes for the year ended October 31, 2016 amounting to $299 to arrive at the amounts reported in the Consolidated Statement of Income, differences in the actual amount of costs incurred and charged to the operating segments.
(2) Interest income is reported net of interest expense as management relies primarily on net interest income as a performance measure.
(3) Includes net income from investments in associated corporations for Canadian Banking – $78; International Banking – $473 and Other – $(137).

For the year ended October 31, 2015

Taxable equivalent basis ($ millions)	Canadian Banking	International Banking	Global Banking and Markets	Other[1]	Total
Net interest income[2]	$ 6,415	$ 5,706	$ 1,071	$ (100)	$ 13,092
Non-interest income[3]	4,832	3,137	2,953	35	10,957
Total revenues	11,247	8,843	4,024	(65)	24,049
Provision for credit losses	687	1,128	67	60	1,942
Depreciation and amortization	272	242	57	13	584
Non-interest expenses	5,742	4,853	1,789	73	12,457
Income tax expense	1,202	568	558	(475)	1,853
Net income	$ 3,344	$ 2,052	$ 1,553	$ 264	$ 7,213
Net income attributable to non-controlling interests in subsidiaries	–	199	–	–	199
Net income attributable to equity holders of the Bank	3,344	1,853	1,553	264	7,014
Average assets ($ billions)	300	128	342	91	861
Average liabilities ($ billions)	218	94	240	257	809

(1) Includes all other smaller operating segments and corporate adjustments, such as the elimination of the tax-exempt income gross-up reported in net interest income and non-interest income and provision for income taxes for the year ended October 31, 2015 amounting to $390, to arrive at the amounts reported in the Consolidated Statement of Income, differences in the actual amount of costs incurred and charged to the operating segments.
(2) Interest income is reported net of interest expense as management relies primarily on net interest income as a performance measure.
(3) Includes net income from investments in associated corporations for Canadian Banking – $66; International Banking – $476 and Other – $(137).

For the year ended October 31, 2014

Taxable equivalent basis ($ millions)	Canadian Banking	International Banking	Global Banking and Markets	Other[1]	Total
Net interest income[2]	$ 5,996	$ 5,155	$ 1,064	$ 90	$ 12,305
Non-interest income[3]	5,263	2,945	3,167	(76)	11,299
Total revenues	11,259	8,100	4,231	14	23,604
Provision for credit losses	663	1,024	16	–	1,703
Depreciation and amortization	235	224	56	11	526
Non-interest expenses	5,564	4,466	1,824	221	12,075
Income tax expense	1,113	544	665	(320)	2,002
Net income	$ 3,684	$ 1,842	$ 1,670	$ 102	$ 7,298
Net income attributable to non-controlling interests in subsidiaries	1	226	–	–	227
Net income attributable to equity holders of the Bank	3,683	1,616	1,670	102	7,071
Average assets ($ billions)	292	115	311	78	796
Average liabilities ($ billions)	208	85	217	238	748

(1) Includes all other smaller operating segments and corporate adjustments, such as the elimination of the tax-exempt income gross-up reported in net interest income and non-interest income and provision for income taxes for the year ended October 31, 2014 amounting to $354, to arrive at the amounts reported in the Consolidated Statement of Income, differences in the actual amount of costs incurred and charged to the operating segments.
(2) Interest income is reported net of interest expense as management relies primarily on net interest income as a performance measure.
(3) Includes net income from investments in associated corporations for Canadian Banking – $157; International Banking – $411 and Other – $(140).

Geographical segmentation[1]

The following table summarizes the Bank's financial results by geographic region. Revenues and expenses which have not been allocated back to specific operating business lines are reflected in corporate adjustments.

For the year ended October 31, 2016 ($ millions)	Canada	United States	Mexico	Peru	Chile	Colombia	Other International	Total
Net interest income	**$ 7,022**	**$ 479**	**$ 1,224**	**$ 1,231**	**$ 763**	**$ 674**	**$ 2,950**	**$ 14,343**
Non-interest income[1]	**6,893**	**871**	**554**	**600**	**325**	**419**	**2,409**	**12,071**
Total revenues[2]	**13,915**	**1,350**	**1,778**	**1,831**	**1,088**	**1,093**	**5,359**	**26,414**
Provision for credit losses	**876**	**112**	**225**	**315**	**113**	**320**	**401**	**2,362**
Non-interest expenses	**7,339**	**633**	**1,121**	**740**	**605**	**550**	**3,036**	**14,024**
Income tax expense	**1,235**	**155**	**69**	**201**	**45**	**89**	**497**	**2,291**
	$ 4,465	**$ 450**	**$ 363**	**$ 575**	**$ 325**	**$ 134**	**$ 1,425**	**$ 7,737**
Corporate adjustments								**(369)**
Net income								**$ 7,368**
Net income attributable to non-controlling interests in subsidiaries								**251**
Net income attributable to equity holders of the Bank								**$ 7,117**
Total average assets ($ billions)	**$ 529**	**$ 126**	**$ 27**	**$ 23**	**$ 20**	**$ 10**	**$ 165**	**$ 900**
Corporate adjustments								**14**
Total average assets, including corporate adjustments								**$ 914**

(1) Includes net income from investments in associated corporations for Canada – $78; Peru – $5 and Other International – $468.
(2) Revenues are attributed to countries based on where services are performed or assets are recorded.

For the year ended October 31, 2015 ($ millions)	Canada	United States	Mexico	Peru	Chile	Colombia	Other International	Total
Net interest income	$ 6,458	$ 472	$1,246	$1,077	$554	$ 677	$ 2,631	$13,115
Non-interest income[1]	6,272	882	561	601	231	372	2,163	11,082
Total revenues[2]	12,730	1,354	1,807	1,678	785	1,049	4,794	24,197
Provision for credit losses	728	6	260	266	108	246	268	1,882
Non-interest expenses	6,936	507	1,160	744	431	541	2,745	13,064
Income tax expense	1,038	267	27	195	24	84	401	2,036
	$ 4,028	$ 574	$ 360	$ 473	$222	$ 178	$ 1,380	$ 7,215
Corporate adjustments								(2)
Net income								$ 7,213
Net income attributable to non-controlling interests in subsidiaries								199
Net income attributable to equity holders of the Bank								$ 7,014
Total average assets ($ billions)	$ 502	$ 125	$ 26	$ 21	$ 17	$ 10	$ 148	$ 849
Corporate adjustments								12
Total average assets, including corporate adjustments								$ 861

(1) Includes net income from investments in associated corporations for Canada – $66; Peru – $4 and Other International – $472.
(2) Revenues are attributed to countries based on where services are performed or assets are recorded.

For the year ended October 31, 2014 ($ millions)	Canada	United States	Mexico	Peru	Chile	Colombia	Other International	Total
Net interest income	$ 6,219	$ 440	$1,180	$ 935	$407	$ 726	$ 2,443	$12,350
Non-interest income[1]	7,071	810	599	534	226	391	2,049	11,680
Total revenues[2]	13,290	1,250	1,779	1,469	633	1,117	4,492	24,030
Provision for credit losses	662	6	240	267	74	145	309	1,703
Non-interest expenses	6,986	513	1,154	645	348	556	2,495	12,697
Income tax expense	1,156	237	35	175	16	141	340	2,100
	$ 4,486	$ 494	$ 350	$ 382	$195	$ 275	$ 1,348	$ 7,530
Corporate adjustments								(232)
Net income								$ 7,298
Net income attributable to non-controlling interests in subsidiaries								227
Net income attributable to equity holders of the Bank								$ 7,071
Total average assets ($ billions)	$ 470	$ 117	$ 24	$ 17	$ 15	$ 10	$ 130	$ 783
Corporate adjustments								13
Total average assets, including corporate adjustments								$ 796

(1) Includes net income from investments in associated corporations for Canada – $156; Peru – $6 and Other International – $405.
(2) Revenues are attributed to countries based on where services are performed or assets are recorded.

29 Related Party Transactions

Compensation of key management personnel of the Bank

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the Bank, directly or indirectly, and comprise the directors of the Bank, the President and Chief Executive Officer, certain direct reports of the President and Chief Executive Officer and Group Heads.

For the year ended October 31 ($ millions)	2016	2015
Salaries and cash incentives[1]	**$ 20**	$ 13
Equity-based payment[2]	**24**	20
Pension and other benefits[1]	**3**	3
Total	**$ 47**	$ 36

(1) Expensed during the year.
(2) Awarded during the year.

Directors can use some or all of their director fees earned to buy common shares of the Bank at market rates through the Directors' Share Purchase Plan. Non-officer directors may elect to receive all or a portion of their fees in the form of deferred stock units which vest immediately. Refer to Note 25 for further details of these plans.

Loans and deposits of key management personnel

Loans are currently granted to key management personnel at market terms and conditions.

As at October 31 ($ millions)	2016	2015
Loans	**$ 6**	$ 5
Deposits	**$ 11**	$ 5

The Bank's committed credit exposure to companies controlled by directors totaled $99.5 million as at October 31, 2016 (2015 – $182.9 million), while actual utilized amounts were $3.9 million (2015 – $6.7 million).

Transactions with associates and joint ventures

In the ordinary course of business, the Bank provides normal banking services and enters into transactions with its associated and other related corporations on terms similar to those offered to non-related parties. If these transactions are eliminated on consolidation, they are not disclosed as related party transactions. Transactions between the Bank and its associated companies and joint ventures also qualify as related party transactions and were recorded as follows:

As at and for the year ended October 31 ($ millions)	2016	2015	2014
Net income / (loss)	**$ (45)**	$ (27)	$ 11
Loans	**788**	747	553
Deposits	**338**	187	223
Guarantees and commitments	**99**	84	75

Scotiabank principal pension plan

The Bank manages assets of $1.9 billion (2015 – $2.0 billion) which is a portion of the Scotiabank principal pension plan assets and earned $4 million (2015 – $4.0 million) in fees.

30 Principal Subsidiaries and Non-Controlling Interests in Subsidiaries

(a) Principal subsidiaries[1]

The following table presents the major operating subsidiaries the Bank owns, directly or indirectly. All of these subsidiaries are included in the Bank's consolidated financial statements.

As at October 31 ($ millions)	Principal office	Carrying value of shares 2016	2015
Canadian			
1832 Asset Management L.P.	Toronto, Ontario	**$ 1,762**	$ 1,241
BNS Investments Inc.	Toronto, Ontario	**13,733**	12,746
Montreal Trust Company of Canada	Montreal, Quebec		
Hollis Canadian Bank	Toronto, Ontario	**411**	392
HollisWealth Inc.	Toronto, Ontario	**3,499**	3,632
National Trustco Inc.	Toronto, Ontario	**650**	608
The Bank of Nova Scotia Trust Company	Toronto, Ontario		
National Trust Company	Stratford, Ontario		
RoyNat Inc.	Calgary, Alberta	**175**	58
Scotia Capital Inc.	Toronto, Ontario	**1,194**	1,598
Scotia Dealer Advantage Inc.	Burnaby, British Columbia	**509**	445
Scotia Life Insurance Company	Toronto, Ontario	**166**	206
Scotia Mortgage Corporation	Toronto, Ontario	**941**	797
Scotia Securities Inc.	Toronto, Ontario	**80**	53
Tangerine Bank	Toronto, Ontario	**3,489**	3,443
International			
Banco Colpatria Multibanca Colpatria S.A. (51%)	Bogota, Colombia	**1,302**	1,259
The Bank of Nova Scotia Berhad	Kuala Lumpur, Malaysia	**311**	288
The Bank of Nova Scotia International Limited	Nassau, Bahamas	**17,815**	16,310
BNS Asia Limited	Singapore		
The Bank of Nova Scotia Trust Company (Bahamas) Limited	Nassau, Bahamas		
Grupo BNS de Costa Rica, S.A.	San Jose, Costa Rica		
Scotiabank & Trust (Cayman) Ltd.	Grand Cayman, Cayman Islands		
Scotiabank (Bahamas) Limited	Nassau, Bahamas		
Scotiabank (British Virgin Islands) Limited	Road Town, Tortola, B.V.I.		
Scotiabank (Hong Kong) Limited	Hong Kong, China		
Scotiabank (Ireland) Designated Activity Company	Dublin, Ireland		
Scotiabank (Turks and Caicos) Ltd.	Providenciales, Turks and Caicos Islands		
Grupo Financiero Scotiabank Inverlat, S.A. de C.V. (97.4%)	Mexico, D.F., Mexico	**3,141**	2,986
Nova Scotia Inversiones Limitada	Santiago, Chile	**3,200**	2,585
Scotiabank Chile, S.A. (99.6%)	Santiago, Chile		
Scotia Holdings (US) Inc.[2]	Houston, Texas		
Scotiabanc Inc.	Houston, Texas		
Scotia Capital (USA) Inc.[2][3]	New York, New York		
Scotia International Limited	Nassau, Bahamas	**387**	899
Scotiabank Anguilla Limited	The Valley, Anguilla		
Scotiabank Brasil S.A. Banco Multiplo	Sao Paulo, Brazil	**225**	145
Scotiabank Caribbean Holdings Ltd.	Bridgetown, Barbados	**1,658**	1,311
Scotia Group Jamaica Limited (71.8%)	Kingston, Jamaica		
The Bank of Nova Scotia Jamaica Limited	Kingston, Jamaica		
Scotia Investments Jamaica Limited (77.0%)	Kingston, Jamaica		
Scotiabank (Belize) Ltd.	Belize City, Belize		
Scotiabank Trinidad and Tobago Limited (50.9%)	Port of Spain, Trinidad and Tobago		
Scotiabank de Puerto Rico	San Juan, Puerto Rico	**1,371**	1,316
Scotiabank El Salvador, S.A. (99.6%)	San Salvador, El Salvador	**646**	597
Scotiabank Europe plc	London, United Kingdom	**2,546**	2,472
Scotiabank Peru S.A.A. (98.05%)	Lima, Peru	**4,046**	3,418

(1) The Bank (or immediate parent of an entity) owns 100% of the outstanding voting shares of each subsidiary unless otherwise noted.
(2) The carrying value of this subsidiary is included with that of its parent, BNS Investments Inc.
(3) The carrying value of this subsidiary is included with that of its parent, Scotia Holdings (US) Inc.

Subsidiaries may have a different reporting date from that of the Bank of October 31. Dates may differ for a variety of reasons including local reporting requirements or tax laws. In accordance with our accounting policies, for the purpose of inclusion in the consolidated financial statements of the Bank, adjustments are made where significant for subsidiaries with different reporting dates.

(b) Non-controlling interests in subsidiaries

The Bank's significant non-controlling interests in subsidiaries are comprised of the following entities:

	As at			For the year ended			
	2016		2015	2016		2015	
October 31 ($ millions)	Non-controlling interest %	Non-controlling interests in subsidiaries	Non-controlling interests in subsidiaries	Net income attributable to non-controlling interests in subsidiaries	Dividends paid to non-controlling interest	Net income attributable to non-controlling interests in subsidiaries	Dividends paid to non-controlling interest
Banco Colpatria Multibanca Colpatria S.A.[1]	**49.0%**	**$ 471**	$ 417	**$ 85**	**$ 25**	$ 75	$ 27
Scotia Group Jamaica Limited	**28.2%**	**311**	307	**36**	**17**	37	17
Scotiabank Trinidad and Tobago Limited	**49.1%**	**359**	353	**62**	**54**	54	33
Cencosud Administradora de Tarjetas S.A.	**49.0%**	**139**	111	**38**	**10**	–	–
Other	**0.1% - 49.0%[2]**	**290**	272	**30**	**10**	33	9
Total		**$ 1,570**	$ 1,460	**$ 251**	**$ 116**	$ 199	$ 86

(1) Non-controlling interest holders for Banco Colpatria Multibanca Colpatria S.A. have a right to sell their holding to the Bank after the end of 7th anniversary (January 17, 2019) and at subsequent pre-agreed intervals, into the future, at fair market value that can be settled at the Bank's discretion, by issuance of common shares or cash.
(2) Range of non-controlling interest % for other subsidiaries.

Summarized financial information of the Bank's subsidiaries with significant non-controlling interests are as follows:

	As at and for the year ended October 31, 2016			
($ millions)	Revenue	Total comprehensive income	Total assets	Total liabilities
Banco Colpatria Multibanca Colpatria S.A.	**$ 973**	**$ 152**	**$ 11,081**	**$ 10,345**
Scotia Group Jamaica Limited	**407**	**71**	**5,001**	**3,860**
Scotiabank Trinidad and Tobago Limited	**318**	**118**	**4,780**	**3,889**
Cencosud Administradora de Tarjetas S.A.	**350**	**85**	**2,114**	**1,755**

	As at and for the year ended October 31, 2015			
($ millions)	Revenue	Total comprehensive income	Total assets	Total liabilities
Banco Colpatria Multibanca Colpatria S.A.	$ 942	$ (165)	$ 10,969	$ 10,207
Scotia Group Jamaica Limited	383	263	4,877	3,667
Scotiabank Trinidad and Tobago Limited	283	214	4,670	3,731
Cencosud Administradora de Tarjetas S.A.	125	(1)	1,772	1,265

31 Non-Interest Income

The following table presents details of banking revenues and wealth management revenues in non-interest income.

For the year ended October 31 ($ millions)	2016	2015	2014
Banking			
Card revenues	**$ 1,359**	$ 1,089	$ 933
Deposit and payment services	**1,279**	1,235	1,183
Credit fees	**1,154**	1,053	1,014
Other	**436**	406	379
	4,228	3,783	3,509
Banking fee related expenses	**559**	423	339
Total banking revenues	**$ 3,669**	$ 3,360	$ 3,170
Wealth management			
Mutual funds	**$ 1,624**	$ 1,619	$ 1,468
Brokerage fees	**1,010**	1,006	942
Investment management and trust	**648**	644	613
Total wealth management revenues	**$ 3,282**	$ 3,269	$ 3,023

32 Trading Revenues

The following table presents details of trading revenues.

For the year ended October 31 ($ millions)	2016	2015	2014
Interest rate and credit	**$ 613**	$ 400	$ 415
Equities	**101**	177	92
Commodities	**376**	345	359
Foreign exchange	**262**	201	208
Other	**51**	62	40
Total	**$ 1,403**	$ 1,185	$ 1,114

33 Earnings Per Share

For the year ended October 31 ($ millions)	2016	2015	2014
Basic earnings per common share			
Net income attributable to common shareholders	**$ 6,987**	$ 6,897	$ 6,916
Weighted average number of common shares outstanding (millions)	**1,204**	1,210	1,214
Basic earnings per common share[1] (in dollars)	**$ 5.80**	$ 5.70	$ 5.69
Diluted earnings per common share			
Net income attributable to common shareholders	**$ 6,987**	$ 6,897	$ 6,916
Adjustments to net income due to share-based payment options and others[2]	**83**	86	8
Net income attributable to common shareholders (diluted)	**$ 7,070**	$ 6,983	$ 6,924
Weighted average number of common shares outstanding (millions)	**1,204**	1,210	1,214
Adjustments to average shares due to share-based payment options and others[2] (millions)	**22**	22	8
Weighted average number of diluted common shares outstanding (millions)	**1,226**	1,232	1,222
Diluted earnings per common share[1] (in dollars)	**$ 5.77**	$ 5.67	$ 5.66

(1) Earnings per share calculations are based on full dollar and share amounts.
(2) Certain tandem stock appreciation rights or options that the Bank may settle at its own discretion by issuing common shares were not included in the calculation of diluted earnings per share as they were anti-dilutive.

34 Guarantees, Commitments and Pledged Assets

(a) Guarantees

The Bank enters into various types of guarantees and indemnifications in the normal course of business. Guarantees represent an undertaking to another party to make a payment to that party when certain specified events occur. The various guarantees and indemnifications that the Bank provides with respect to its customers and other third parties are presented below:

As at October 31 ($ millions)	2016 Maximum potential amount of future payments[1]	2015 Maximum potential amount of future payments[1]
Standby letters of credit and letters of guarantee	**$ 34,520**	$ 30,944
Liquidity facilities	**5,814**	3,874
Derivative instruments	**4,129**	5,206
Indemnifications	**597**	568

(1) The maximum potential amount of future payments represents those guarantees that can be quantified and excludes other guarantees that cannot be quantified. As many of these guarantees will not be drawn upon and the maximum potential amount of future payments listed above does not consider the possibility of recovery under recourse or collateral provisions, the above amounts are not indicative of future cash requirements, credit risk, or the Bank's expected losses from these arrangements.

(i) Standby letters of credit and letters of guarantee

Standby letters of credit and letters of guarantee are irrevocable undertakings by the Bank on behalf of a customer, to make payments to a third party in the event that the customer is unable to meet its obligations to the third party. Generally, the term of these guarantees does not exceed four years. The types and amounts of collateral security held by the Bank for these guarantees is generally the same as for loans. As at October 31, 2016, $19 million (2015 – $4 million) was included in other liabilities in the Consolidated Statement of Financial Position with respect to these guarantees.

(ii) Liquidity facilities

The Bank's backstop liquidity facilities are committed liquidity and provided to asset-backed commercial paper conduits, administered by the Bank. These facilities generally provide an alternative source of financing in the event market disruption prevents the conduit from issuing commercial paper or, in some cases, when certain specified conditions or performance measures are not met. These facilities generally have a term of up to three years.

(iii) Derivative instruments

The Bank enters into written credit derivative contracts under which a counterparty is compensated for losses on a specified referenced asset, typically a loan or bond, if certain events occur. The Bank also enters into written option contracts under which a counterparty is granted the right, but not the obligation, to sell a specified quantity of a financial instrument at a pre-determined price on or before a set date. These written option contracts are normally referenced to interest rates, foreign exchange rates, commodity prices or equity prices. Typically, a corporate or government entity is the counterparty to the written credit derivative and option contracts that meet the characteristics of guarantees described above. The maximum potential amount of future payments disclosed in the table above relates to written credit derivatives, puts and floors. However, these amounts exclude certain derivatives contracts, such as written caps, as the nature of these contracts prevents quantification of the maximum potential amount of future payments. As at October 31, 2016, $333 million (2015 – $891 million) was included in derivative instrument liabilities in the Consolidated Statement of Financial Position with respect to these derivative instruments.

(iv) Indemnifications

In the ordinary course of business, the Bank enters into many contracts which contain indemnification provisions, such as purchase contracts, service agreements, trademark licensing agreements, director / officer contracts, escrow arrangements, sales of assets or businesses, outsourcing agreements, leasing arrangements, clearing system arrangements, securities lending agency agreements and structured transactions. The Bank cannot estimate the maximum potential future amount that may be payable. The Bank has not made any significant payments under such indemnifications. Historically, the Bank has not made any significant payments under these indemnities. As at October 31, 2016, $3 million (2015 – $3 million) was included in other liabilities in the Consolidated Statement of Financial Position with respect to indemnifications.

(b) Other indirect commitments

In the normal course of business, various other indirect commitments are outstanding which are not reflected on the Consolidated Statement of Financial Position. These may include:

- Commercial letters of credit which require the Bank to honour drafts presented by a third-party when specific activities are completed;
- Commitments to extend credit which represent undertakings to make credit available in the form of loans or other financings for specific amounts and maturities, subject to specific conditions;
- Securities lending transactions under which the Bank, acting as principal or agent, agrees to lend securities to a borrower. The borrower must fully collateralize the security loan at all times. The market value of the collateral is monitored relative to the amounts due under the agreements, and where necessary, additional collateral is obtained; and
- Security purchase commitments which require the Bank to fund future investments.

These financial instruments are subject to normal credit standards, financial controls and monitoring procedures.

The table below provides a detailed breakdown of the Bank's other indirect commitments expressed in terms of the contractual amounts of the related commitment or contract which are not reflected on the Consolidated Statement of Financial Position.

As at October 31 ($ millions)	2016	2015
Commercial letters of credit	**$ 777**	$ 921
Commitments to extend credit[1]		
Original term to maturity of one year or less	**69,865**	64,522
Original term to maturity of more than one year	**104,380**	101,874
Securities lending	**38,668**	41,190
Securities purchase and other commitments	**538**	682
Total	**$ 214,228**	$ 209,189

(1) Includes liquidity facilities.

(c) Lease commitments

Operating lease commitments

The Bank leases various offices, branches and other premises under non-cancellable operating lease arrangements. The leases have various terms, escalation and renewal rights. There are no contingent rents payable. The Bank also leases equipment under non-cancellable lease arrangements. Where the Bank is the lessee, the future minimum lease payment under non-cancellable operating leases are as follows:

As at October 31 ($ millions)	2016	2015
Within one year	**$ 344**	$ 328
After one year but not more than five years	**922**	880
More than five years	**536**	546
Total	**$ 1,802**	$ 1,754

Building rent expense, included in premises and technology expense in the Consolidated Statement of Income, was $428 million (2015 – $433 million).

(d) Assets pledged and repurchase agreements

In the ordinary course of business, securities and other assets are pledged against liabilities. As well, securities are sold under repurchase agreements. The carrying value of pledged assets and details of related activities are shown below.

As at October 31 ($ millions)	2016	2015
Assets pledged to:		
Bank of Canada[1]	**$ 25**	$ 25
Foreign governments and central banks[1]	**3,080**	2,933
Clearing systems, payment systems and depositories[1]	**1,400**	1,557
Assets pledged in relation to exchange-traded derivative transactions	**2,128**	1,512
Assets pledged in relation to over-the-counter derivative transactions	**10,505**	12,447
Assets pledged as collateral related to securities borrowing and lending	**107,901**	88,839
Assets pledged in relation to covered bond program (Note 14)	**30,491**	21,293
Assets pledged in relation to other securitization programs (Note 14)	**3,919**	2,467
Assets pledged under CMHC programs (Note 13)	**20,672**	21,609
Other	**1,031**	569
Total assets pledged	**$ 181,152**	$ 153,251
Obligations related to securities sold under repurchase agreements	**87,402**	67,052
Total[2]	**$ 268,554**	$ 220,303

(1) Includes assets pledged in order to participate in clearing and payment systems and depositories, or pledged to have access to the facilities of central banks in foreign jurisdictions.
(2) Includes assets that have been received from counterparties through normal course of business in securities financing and derivative transactions.

(e) Other executory contracts

The Bank and its subsidiaries have entered into certain long-term executory contracts, relating to outsourced services. The significant outsourcing arrangements have variable pricing based on utilization and are cancellable with notice.

35 Financial Instruments – Risk Management

The Bank's principal business activities result in a balance sheet that consists primarily of financial instruments. In addition, the Bank uses derivative financial instruments for both trading and hedging purposes. The principal financial risks that arise from transacting financial instruments include credit risk, liquidity risk and market risk. The Bank's framework to monitor, evaluate and manage these risks is consistent with that in place as at October 31, 2015:

- extensive risk management policies define the Bank's risk appetite, set the limits and controls within which the Bank and its subsidiaries can operate, and reflect the requirements of regulatory authorities. These policies are approved by the Bank's Board of Directors, either directly or through the Risk Committee of the Board, (the Board);
- guidelines are developed to clarify risk limits and conditions under which the Bank's risk policies are implemented;
- processes are implemented to identify, evaluate, document, report and control risk. Standards define the breadth and quality of information required to make a decision; and
- compliance with risk policies, limits and guidelines is measured, monitored and reported to ensure consistency against defined goals.

Further details on the fair value of financial instruments and how these amounts were determined are provided in Note 6. Note 9 provides details on the terms and conditions of the Bank's derivative financial instruments including notional amounts, remaining term to maturity, credit risk, and fair values of derivatives used in trading and hedging activities.

(a) Credit risk

Credit risk is the risk of loss resulting from the failure of a borrower or counterparty to honour its financial or contractual obligations to the Bank. The Bank's credit risk appetite and credit risk policy are developed by its Global Risk Management (GRM) department and are reviewed and approved by the Board on an annual and biennial basis, respectively. The credit risk appetite defines target markets and risk tolerances that are developed at an all-Bank level, and then further refined at the business line level. The objectives of the credit risk appetite are to ensure that, for the Bank, including the individual business lines:

- target markets and product offerings are well defined;
- the risk parameters for new underwritings and for the portfolios as a whole are clearly specified; and
- transactions, including origination, syndication, loan sales and hedging, are managed in a manner to ensure the goals for the overall portfolio are met.

The credit risk policy sets out, among other things, the credit risk rating systems and associated parameter estimates, the delegation of authority for granting credit, the provisions for credit losses and the collective allowance on performing loans. It forms an integral part of enterprise-wide policies and procedures that encompass governance, risk management and control structure.

The Bank's credit risk rating systems are designed to support the determination of key credit risk parameter estimates which measure credit and transaction risk. For non-retail exposures, parameters are associated with each credit facility through the assignment of borrower and transaction ratings. Borrower risk is evaluated using methodologies that are specific to particular industry sectors and/or business lines. The risk associated with facilities of a given borrower is assessed by considering the facilities' structural and collateral-related elements. For retail portfolios, product specific models assign accounts into homogeneous segments using internal and external borrower/facility-level credit experience. This process provides for a meaningful differentiation of risk, and allows for appropriate and consistent estimation of loss characteristics at the model and segment level. Further details on credit risk relating to derivatives are provided in Note 9(c).

(i) Credit risk exposures

Credit risk exposures disclosed below are presented based on the Basel framework utilized by the Bank i.e. exposures subject to credit risk capital. The Bank uses the Advanced Internal Ratings Based approach (AIRB) for all material Canadian, U.S., European portfolios, and effective 2011 for a significant portion of all international corporate and commercial portfolios. The remaining portfolios, including other individual portfolios, are treated under the standardized approach. Under the AIRB approach, the Bank uses internal risk parameter estimates, based on historical experience, for probability of default (PD), loss given default (LGD) and exposure at default (EAD), as defined below:

- EAD: Generally represents the expected gross exposure – outstanding amount for on-balance sheet exposure and loan equivalent amount for off-balance sheet exposure.
- PD: Measures the likelihood that a borrower will default within a 1-year time horizon, expressed as a percentage.
- LGD: Measures the severity of loss on a facility in the event of a borrower's default, expressed as a percentage of exposure at default.

Under the standardized approach, credit risk is estimated using the risk weights as prescribed by the Basel framework either based on credit assessments by external rating agencies or based on the counterparty type for non-retail exposures and product type for retail exposures. Standardized risk weights also takes into account other factors such as specific provisions for defaulted exposures, eligible collateral, and loan-to-value for real estate secured retail exposures.

As at October 31 ($ millions)	2016				2015
	Exposure at default[1]				
Category	Drawn[2]	Undrawn commitments	Other exposures[3]	Total	Total
By counterparty type					
Non-retail					
AIRB portfolio					
Corporate	$ 130,387	$ 67,990	$ 69,777	$ 268,154	$ 232,963
Bank	23,978	1,944	23,740	49,662	54,922
Sovereign	181,227	1,042	5,429	187,698	194,445
	335,592	70,976	98,946	505,514	482,330
Standardized portfolio					
Corporate	47,042	5,721	2,919	55,682	54,870
Bank	2,044	38	196	2,278	3,081
Sovereign	8,402	10	–	8,412	5,508
	57,488	5,769	3,115	66,372	63,459
Total non-retail	$ 393,080	$ 76,745	$ 102,061	$ 571,886	$ 545,789
Retail[4]					
AIRB portfolio					
Real estate secured	$ 106,771	$ 14,587	$ –	$ 121,358	$ 132,259
Qualifying revolving	16,717	21,108	–	37,825	34,615
Other retail	28,246	799	–	29,045	27,559
	151,734	36,494	–	188,228	194,433
Standardized portfolio					
Real estate secured	30,865	–	–	30,865	27,934
Other retail	33,936	–	–	33,936	26,466
	64,801	–	–	64,801	54,400
Total retail	$ 216,535	$ 36,494	$ –	$ 253,029	$ 248,833
Total	$ 609,615	$ 113,239	$ 102,061	$ 824,915	$ 794,622
By geography[5]					
Canada	$ 357,268	$ 69,447	$ 42,208	$ 468,923	$ 435,953
United States	79,932	27,951	35,925	143,808	153,285
Mexico	23,965	1,183	1,725	26,873	23,808
Peru	23,931	1,413	2,984	28,328	27,007
Chile	21,354	782	1,374	23,510	19,777
Columbia	10,239	186	518	10,943	9,899
Other International					
Europe	23,164	5,936	12,425	41,525	40,048
Caribbean	37,900	1,704	1,564	41,168	39,831
Latin America (other)	7,891	522	495	8,908	8,962
All other	23,971	4,115	2,843	30,929	36,052
Total	$ 609,615	$ 113,239	$ 102,061	$ 824,915	$ 794,622

(1) Exposure at default is presented after credit risk mitigation. Exposures exclude available-for-sale equity securities and other assets.
(2) Non-retail drawn includes loans, acceptances, deposits with financial institutions and available-for-sale debt securities. Retail drawn includes residential mortgages, credit cards, lines of credit, and other personal loans.
(3) Non-retail other exposures include off-balance sheet lending instruments such as letters of credit, letters of guarantees, securitizations including first loss protection of $20 (2015 – $48), derivatives and repo-style transactions (reverse repurchase agreements, repurchase agreements, securities lending and securities borrowing), net of related collateral. Not applicable for retail exposures.
(4) During the year 2015, the Bank implemented new retail probability of default (PD), exposure at default (EAD) and loss given default (LGD) models for mortgages and term loans.
(5) Geographic segmentation is based upon the location of the ultimate risk of the credit exposure.

Consolidated Statement of Financial Position asset categories cross-referenced to credit risk exposures

The table below provides mapping of on-balance sheet asset categories that are included in the various Basel III exposure categories as presented in the credit risk exposure summary table of these consolidated financial statements. In addition, it also provides other exposures which are subject to market risk and/or other assets which are not subject to market and credit risk with a reconciliation to the balance sheet. The credit risk exposures on certain assets such as cash, precious metals, investment securities (equities) and other assets are not included on the credit risk exposure summary table. Also excluded from the credit risk exposures are certain trading assets and all assets of the Bank's insurance subsidiaries.

	Credit Risk Exposures						Other Exposures			
	Drawn[1]		Other Exposures				Market Risk Exposures			
As at October 31, 2016 ($ millions)	Non-retail	Retail	Securitization	Repo-style Transactions	OTC Derivatives	Equity	Also subject to Credit Risk		All Other[1]	Total
Cash and deposits with financial institutions	**$ 44,001**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ 2,343**	**$ 46,344**
Precious metals	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**8,442**	**–**	**8,442**
Trading assets										
Securities	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**87,287**	**–**	**87,287**
Loans	**11,485**	**–**	**–**	**–**	**–**	**–**	**11,485**	**7,936**	**–**	**19,421**
Other	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**1,853**	**–**	**1,853**
Financial assets designated at fair value through profit or loss	**16**	**–**	**–**	**–**	**–**	**–**	**–**	**205**	**–**	**221**
Securities purchased under resale agreements and securities borrowed	**–**	**–**	**–**	**92,129**	**–**	**–**	**–**	**–**	**–**	**92,129**
Derivative financial instruments	**–**	**–**	**–**	**–**	**41,657**	**–**	**36,401**	**–**	**–**	**41,657**
Investment securities	**68,134**	**–**	**832**	**–**	**–**	**2,042**	**–**	**–**	**1,911**	**72,919**
Loans:										
Residential mortgages[2]	**104,890**	**117,839**	**–**	**–**	**–**	**–**	**–**	**–**	**159**	**222,888**
Personal and credit cards	**–**	**95,825**	**2,418**	**–**	**–**	**–**	**–**	**–**	**1,259**	**99,502**
Business & government	**152,720**	**2,489**	**7,161**	**–**	**–**	**–**	**–**	**–**	**30**	**162,400**
Allowances for credit losses[3]	**(781)**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**(3,845)**	**(4,626)**
Customers' liability under acceptances	**11,978**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**11,978**
Property and equipment	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**2,520**	**2,520**
Investment in associates	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**4,299**	**4,299**
Goodwill and other intangibles assets	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**12,141**	**12,141**
Other (including Deferred tax assets)	**637**	**383**	**–**	**–**	**–**	**–**	**–**	**–**	**13,871**	**14,891**
Total	**$ 393,080**	**$ 216,536**	**$ 10,411**	**$ 92,129**	**$ 41,657**	**$ 2,042**	**$ 47,886**	**$ 105,723**	**$ 34,688**	**$ 896,266**

(1) Includes the Bank's insurance subsidiaries' assets and all other assets which are not subject to credit and market risks.
(2) Includes $100.9 billion in mortgages guaranteed by Canada Mortgage Housing Corporation including 90% of privately insured mortgages.
(3) Amounts for AIRB exposures are reported gross of allowances and amounts for standardized exposures are reported net of allowances.

	Credit Risk Exposures						Other Exposures			
	Drawn[1]		Other Exposures				Market Risk Exposures			
As at October 31, 2015 ($ millions)	Non-retail	Retail	Securitization	Repo-style Transactions	OTC Derivatives	Equity	Also subject to Credit Risk		All Other[1]	Total
Cash and deposits with financial institutions	$ 71,631	$ –	$ –	$ –	$ –	$ –	$ –	$ –	$ 2,296	$ 73,927
Precious metals	–	–	–	–	–	–	–	10,550	–	10,550
Trading assets										
Securities	–	–	–	–	–	–	–	78,380	–	78,380
Loans	11,213	–	–	–	–	–	11,213	7,128	–	18,341
Other	–	–	–	–	–	–	–	2,419	–	2,419
Financial assets designated at fair value through profit or loss	295	–	–	–	–	25	–	–	–	320
Securities purchased under resale agreements and securities borrowed	–	–	–	87,312	–	–	–	–	–	87,312
Derivative financial instruments	–	–	–	–	41,003	–	35,862	–	–	41,003
Investment securities	39,187	–	–	–	–	2,960	–	–	1,069	43,216
Loans:										
Residential mortgages[2]	88,945	128,398	–	–	–	–	–	–	155	217,498
Personal and credit cards	–	89,220	2,240	–	–	–	–	–	17	91,477
Business & government	147,210	–	6,599	–	–	–	–	–	41	153,850
Allowances for credit losses[3]	(1,045)	–	–	–	–	–	–	–	(3,152)	(4,197)
Customers' liability under acceptances	10,296	–	–	–	–	–	–	–	–	10,296
Property and equipment	–	–	–	–	–	–	–	–	2,286	2,286
Investment in associates	–	–	–	–	–	–	–	–	4,033	4,033
Goodwill and other intangibles assets	–	–	–	–	–	–	–	–	11,449	11,449
Other (including Deferred tax assets)	41	168	–	–	–	–	–	–	14,128	14,337
Total	$ 367,773	$ 217,786	$ 8,839	$ 87,312	$ 41,003	$ 2,985	$ 47,075	$ 98,477	$ 32,322	$ 856,497

(1) Includes the Bank's insurance subsidiaries' assets and all other assets which are not subject to credit and market risks.
(2) Includes $86.8 billion in mortgages guaranteed by Canada Mortgage Housing Corporation including 90% of privately insured mortgages.
(3) Amounts for AIRB exposures are reported gross of allowances and amounts for standardized exposures are reported net of allowances.

(ii) Credit quality of non-retail exposures

Credit decisions are made based upon an assessment of the credit risk of the individual borrower or counterparty. Key factors considered in the assessment include: the borrower's management; the borrower's current and projected financial results and credit statistics; the industry in which the borrower operates; economic trends; and geopolitical risk. Banking units and Global Risk Management also review the credit quality of the credit portfolio across the organization on a regular basis to assess whether economic trends or specific events may affect the performance of the portfolio.

The Bank's non-retail portfolio is well diversified by industry. As at October 31, 2016, and October 31, 2015, a significant portion of the authorized corporate and commercial lending portfolio was internally assessed at a grade that would generally equate to an investment grade rating by external rating agencies. There has not been a significant change in concentrations of credit risk since October 31, 2015.

Internal grades (IG) are used to differentiate the risk of default of a borrower. The following table cross references the Bank's internal borrower grades with equivalent ratings categories utilized by external rating agencies:

Cross referencing of internal ratings to external ratings [1]

Equivalent External Rating					
S&P	Moody's	DBRS	Internal Grade	Internal Grade Code	PD Range[2]
AAA to AA+	Aaa to Aa1	AAA to AA (high)		99 – 98	0.0000% – 0.0510%
AA to A+	Aa2 to A1	AA to A (high)		95	0.0510% – 0.1321%
A to A-	A2 to A3	A to A (low)	Investment grade	90	0.0618% – 0.1517%
BBB+	Baa1	BBB (high)		87	0.0969% – 0.2429%
BBB	Baa2	BBB		85	0.1381% – 0.3383%
BBB-	Baa3	BBB (low)		83	0.1969% – 0.4714%
BB+	Ba1	BB (high)		80	0.3059% – 0.5239%
BB	Ba2	BB		77	0.4751% – 0.5822%
BB-	Ba3	BB (low)	Non-Investment grade	75	0.5822% – 0.7380%
B+	B1	B (high)		73	0.7380% – 1.4180%
B to B-	B2 to B3	B to B (low)		70	1.4180% – 2.7248%
CCC+	Caa1	–		65	2.7248% – 9.9903%
CCC	Caa2	–	Watch list	60	9.9903% – 19.0626%
CCC- to CC	Caa3 to Ca	–		40	19.0626% – 35.9847%
–	–	–		30	35.9847% – 59.9872%
Default			Default	27 – 21	100%

(1) Applies to non-retail portfolio.
(2) PD ranges overlap across IG codes as the Bank utilizes two risk rating systems for its AIRB portfolios, and each risk rating system has its own separate IG to PD mapping.

Non-retail AIRB portfolio

The credit quality of the non-retail AIRB portfolio, expressed in terms of risk categories of borrower internal grades is shown in the table below:

		2016				2015
		Exposure at Default[1]				
As at October 31 ($ millions) Category of internal grades	IG Code	Drawn	Undrawn commitments	Other exposures[2]	Total	Total
Investment grade	**99 – 98**	**$ 59,802**	**$ 1,920**	**$ 15,719**	**$ 77,441**	$ 89,664
	95	**23,793**	**7,005**	**23,209**	**54,007**	47,214
	90	**21,121**	**14,127**	**21,597**	**56,845**	52,276
	87	**23,483**	**10,109**	**8,806**	**42,398**	43,056
	85	**19,118**	**10,446**	**10,707**	**40,271**	33,445
	83	**19,892**	**9,870**	**8,282**	**38,044**	38,646
Non-Investment grade	**80**	**24,132**	**8,314**	**3,689**	**36,135**	33,036
	77	**18,134**	**3,900**	**1,907**	**23,941**	20,340
	75	**11,032**	**2,355**	**2,554**	**15,941**	19,589
	73	**5,021**	**1,143**	**1,143**	**7,307**	8,737
	70	**4,031**	**422**	**239**	**4,692**	4,804
Watch list	**65**	**1,016**	**208**	**73**	**1,297**	991
	60	**625**	**285**	**311**	**1,221**	1,101
	40	**1,764**	**487**	**214**	**2,465**	1,454
	30	**98**	**1**	**1**	**100**	3
Default	**27 – 21**	**1,661**	**384**	**475**	**2,520**	1,093
Total, excluding residential mortgages		**$ 234,723**	**$ 70,976**	**$ 98,926**	**$ 404,625**	$ 395,449
Government guaranteed residential mortgages[3]		**100,869**	**–**	**–**	**100,869**	86,832
Total		**$ 335,592**	**$ 70,976**	**$ 98,926**	**$ 505,494**	$ 482,281

(1) After credit risk mitigation.
(2) Includes off-balance sheet lending instruments such as letters of credit, letters of guarantee, securitizations, excluding first loss protection of $20 (2015 – $48), derivatives and repo-style transactions (reverse repurchase agreements, repurchase agreements and securities lending and borrowing), net of related collateral.
(3) These exposures are classified as sovereign exposures and are included in the non-retail category.

Non-retail standardized portfolio

Non-retail standardized portfolio as at October 31, 2016 comprised of drawn, undrawn and other exposures to corporate, bank and sovereign counterparties amounted to $66 billion (October 31, 2015 – $63 billion). Exposures to most Corporate/Commercial counterparties mainly in the Caribbean and Latin American region are to non-investment grade counterparties based on the Bank's internal grading systems.

(iii) Credit quality of retail exposures

The Bank's retail portfolios consist of a number of relatively small loans to a large number of borrowers. The portfolios are distributed across Canada and a wide range of countries. As such, the portfolios inherently have a high degree of diversification. In addition, as of October 31, 2016, 57% of the Canadian banking residential mortgage portfolio is insured and the average loan-to-value ratio of the uninsured portion of the portfolio is 50%.

Retail AIRB portfolio

The data in the table below provides a distribution of the retail AIRB exposure within each PD range by asset class:

As at October 31 ($ millions)		2016					2015
		Exposure at default[1]					
		Real estate secured					
Category of (PD) grades	PD range	Mortgages	HELOC	Qualifying revolving	Other retail	Total	Total
Exceptionally Low	**0.0000% – 0.0499%**	**$ 35,903**	**$ –**	**$ 8,036**	**$ 417**	**$ 44,356**	$ 49,414
Very Low	**0.0500% – 0.1999%**	**29,193**	**15,846**	**7,854**	**6,616**	**59,509**	59,484
Low	**0.2000% – 0.9999%**	**16,371**	**11,532**	**10,130**	**14,228**	**52,261**	53,094
Medium Low	**1.0000% – 2.9999%**	**4,635**	**4,760**	**7,160**	**4,296**	**20,851**	21,545
Medium	**3.0000% – 9.9999%**	**638**	**1,035**	**2,281**	**2,311**	**6,265**	5,551
High	**10.0000% – 19.9999%**	**299**	**311**	**1,365**	**22**	**1,997**	2,213
Extremely High	**20.0000% – 99.9999%**	**284**	**279**	**803**	**946**	**2,312**	2,521
Default	**100%**	**215**	**57**	**196**	**209**	**677**	611
Total		**$ 87,538**	**$ 33,820**	**$ 37,825**	**$ 29,045**	**$ 188,228**	$ 194,433

(1) After credit risk mitigation.

Retail standardized portfolio

The retail standardized portfolio of $65 billion as at October 31, 2016 (2015 – $54 billion) was comprised of residential mortgages, personal loans, credit cards and lines of credit to individuals, mainly in the Caribbean and Latin American region. Of the total retail standardized exposures, $31 billion (2015 – $28 billion) was represented by mortgages and loans secured by residential real estate, mostly with a loan-to-value ratio of below 80%.

(iv) Collateral

Collateral held

In the normal course of business, to reduce its exposure to counterparty credit risk, the Bank receives collateral on derivative, securities lending, and other transactions related to the capital markets. The following are examples of the terms and conditions customary to collateral for these types of transactions:

- The risks and rewards of the pledged assets reside with the pledgor.
- Additional collateral is required when the market value of the transaction exceeds thresholds agreed upon with the pledgor.
- The Bank is normally permitted to sell or repledge the collateral it receives, although this right is specific to each agreement under which the collateral is pledged.
- Upon satisfaction of the obligation, the Bank must return the pledged assets, unless the Bank has the right to sell or repledge the collateral it receives, in which case the Bank must return comparable collateral to the pledgor.

As at October 31, 2016, the approximate market value of collateral accepted that may be sold or repledged by the Bank was $99 billion (2015 – $117 billion). This collateral is held primarily in connection with reverse repurchase agreements, securities lending and derivative transactions.

Collateral pledged

In the normal course of business, securities and other assets are pledged to secure an obligation, participate in clearing or settlement systems, or operate in a foreign jurisdiction. Note 34(d) details the nature and extent of the Bank's asset pledging activities. Asset pledging transactions are conducted under terms that are common and customary to standard derivative, securities financing, and other borrowing activities. Standard risk management controls are applied with respect to asset pledging.

Assets acquired in exchange for loans

The carrying value of non-financial assets acquired in exchange for loans as at October 31, 2016 was $404 million (2015 – $310 million) mainly comprised of real estate and was classified as either held-for-sale or held-for-use as appropriate.

(b) Liquidity risk

Liquidity risk is the risk that the Bank is unable to meet its financial obligations in a timely manner at reasonable prices. The Bank's liquidity risk is subject to extensive risk management controls and is managed within the framework of policies and limits approved by the Board. The Board receives reports on risk exposures and performance against approved limits. The Asset-Liability Committee (ALCO) provides senior management oversight of liquidity risk.

The key elements of the Bank's liquidity risk management framework include:

- liquidity risk measurement and management limits, including limits on maximum net cash outflow by currency over specified short-term horizons;
- prudent diversification of its wholesale funding activities by using a number of different funding programs to access the global financial markets and manage its maturity profile, as appropriate;
- large holdings of liquid assets to support its operations, which can generally be sold or pledged to meet the Bank's obligations;
- liquidity stress testing, including Bank-specific, global-systemic, and combination systemic/specific scenarios; and
- liquidity contingency planning.

The Bank's foreign operations have liquidity management frameworks that are similar to the Bank's framework. Local deposits are managed from a liquidity risk perspective based on the local management frameworks and regulatory requirements.

(i) Commitments to extend credit

In the normal course of business, the Bank enters into commitments to extend credit in the form of loans or other financings for specific amounts and maturities, subject to specific conditions. These commitments, which are not reflected on the Consolidated Statement of Financial Position, are subject to normal credit standards, financial controls and monitoring procedures.

(ii) Derivative instruments

The Bank is subject to liquidity risk relating to its use of derivatives to meet customer needs, generate revenues from trading activities, manage market and credit risks arising from its lending, funding and investment activities, and lower its cost of capital. The maturity profile of the notional amounts of the Bank's derivative instruments is summarized in Note 9(b).

(c) Market risk

Market risk arises from changes in market prices and rates (including interest rates, credit spreads, equity prices, foreign exchange rates and commodity prices), the correlations between them, and their levels of volatility. Market risk is subject to extensive risk management controls, and is managed within the framework of market risk policies and limits approved by the Board. The ALCO and Market Risk Management and Policy Committee oversee the application of the framework set by the Board, and monitor the Bank's market risk exposures and the activities that give rise to these exposures.

The Bank uses a variety of metrics and models to measure and control market risk exposures. The measurements used are selected based on an assessment of the nature of risks in a particular activity. The principal measurement techniques are Value at Risk (VaR), stress testing, sensitivity analysis and simulation modeling, and gap analysis. The Board reviews results from these metrics quarterly. Models are independently validated internally prior to implementation and are subject to formal periodic review.

VaR is a statistical measure that estimates the potential loss in value of the Bank's trading positions due to adverse market movements over a defined time horizon with a specified confidence level. The quality of the Bank's VaR is validated by regular back testing analysis, in which the VaR is compared to theoretical and actual profit or loss results. To complement VaR, the Bank also uses stress testing to examine the impact that abnormally large swings in market factors and periods of prolonged inactivity might have on trading portfolios. The stress testing program is designed to identify key risks and ensure that the Bank's capital can absorb potential losses from abnormal events. The Bank subjects its trading portfolios to a series of stress tests on a daily, weekly and monthly basis.

In trading portfolios, sensitivity analysis is used to measure the effect of changes in risk factors, including prices and volatility, on financial products and portfolios. In non-trading portfolios, sensitivity analysis assesses the effect of changes in interest rates on current earnings and on the economic value of shareholders' equity. Simulation modeling under various scenarios is particularly important for managing risk in the deposit, lending and investment products the Bank offers to its retail customers. Gap analysis is used to assess the interest rate sensitivity of the Bank's retail, wholesale banking and international operations. Under gap analysis, interest rate-sensitive assets, liabilities and derivative instruments are assigned to defined time periods, on the earlier of contractual repricing or maturity dates on the basis of expected repricing dates.

(i) Non-trading interest rate risk

Interest rate risk, inclusive of credit spread risk, is the risk of loss due to the following: changes in the level, slope and curvature of the yield curve; the volatility of interest rates; mortgage prepayment rates; changes in the market price of credit; and the creditworthiness of a particular issuer. The Bank actively manages its interest rate exposures with the objective of enhancing net interest income within established risk tolerances. Interest rate risk arising from the Bank's funding and investment activities is managed in accordance with Board-approved policies and global limits, which are designed to control the risk to net interest income and economic value of shareholders' equity. The income limit measures the effect of a specified shift in interest rates on the Bank's annual net income over the next twelve months, while the economic value limit measures the impact of a specified change in interest rates on the present value of the Bank's net assets. Interest rate exposures in individual currencies are also controlled by gap limits.

Interest rate sensitivity gap

The following table summarizes carrying amounts of assets, liabilities and equity, and derivative instrument notional amounts in order to arrive at the Bank's interest rate gap based on the earlier of contractual repricing or maturity dates. To arrive at the Bank's view of its effective interest rate gap, adjustments are made to factor in expected mortgage and loan repayments based on historical patterns and reclassify the Bank's trading instruments to the immediately rate sensitive and within 3 months categories. Consumer behaviour assumptions are used to reclassify certain non-maturity assets and liabilities.

As at October 31, 2016 ($ millions)	Immediately rate sensitive	Within 3 months	Three to 12 months	One to 5 years	Over 5 years	Non-rate sensitive	Total
Cash and deposits with financial institutions	**$ 21,400**	**$ 17,928**	**$ 183**	**$ 345**	**$ –**	**$ 6,488**	**$ 46,344**
Precious metals	**–**	**–**	**–**	**–**	**–**	**8,442**	**8,442**
Trading assets	**–**	**26,385**	**8,037**	**16,209**	**15,432**	**42,498**	**108,561**
Financial instruments designated at fair value through profit or loss	**–**	**–**	**205**	**16**	**–**	**–**	**221**
Securities purchased under resale agreements and securities borrowed	**13,593**	**41,300**	**8,287**	**–**	**–**	**28,949**	**92,129**
Investment securities	**–**	**15,667**	**9,275**	**41,482**	**4,908**	**1,587**(1)	**72,919**
Loans	**24,180**	**222,268**	**52,946**	**162,402**	**17,108**	**1,260**(2)	**480,164**
Other assets	**–**	**–**	**–**	**–**	**–**	**87,486**	**87,486**
Total assets	**$ 59,173**	**$ 323,548**	**$ 78,933**	**$ 220,454**	**$ 37,448**	**$ 176,710**	**$ 896,266**
Deposits	**$ 85,878**	**$ 310,666**	**$ 68,693**	**$ 106,025**	**$ 8,549**	**$ 32,066**	**$ 611,877**
Financial instruments designated at fair value through profit or loss	**–**	**35**	**4**	**1,147**	**273**	**–**	**1,459**
Obligations related to securities sold short	**42**	**280**	**1,309**	**7,256**	**9,038**	**5,387**	**23,312**
Obligations related to securities sold under repurchase agreements and securities lent	**67,895**	**25,334**	**2,901**	**1**	**–**	**952**	**97,083**
Subordinated debentures	**–**	**–**	**1,632**	**2,792**	**3,209**	**–**	**7,633**
Other liabilities	**849**	**2,471**	**1,108**	**2,692**	**3,686**	**86,275**	**97,081**
Equity	**–**	**958**	**230**	**1,905**	**500**	**54,228**	**57,821**
Total liabilities and equity	**$ 154,664**	**$ 339,744**	**$ 75,877**	**$ 121,818**	**$ 25,255**	**$ 178,908**	**$ 896,266**
On-balance sheet gap	**$ (95,491)**	**$ (16,196)**	**$ 3,056**	**$ 98,636**	**$ 12,193**	**$ (2,198)**	**$ –**
Off-balance sheet gap	**–**	**(29,682)**	**(1,748)**	**23,409**	**7,589**	**432**	**–**
Interest rate sensitivity gap based on contractual repricing	**$ (95,491)**	**$ (45,878)**	**$ 1,308**	**$ 122,045**	**$ 19,782**	**$ (1,766)**	**$ –**
Adjustment to expected repricing	**143,969**	**(10,504)**	**(14,262)**	**(54,507)**	**(29,223)**	**(35,473)**	**–**
Total interest rate sensitivity gap	**$ 48,478**	**$ (56,382)**	**$ (12,954)**	**$ 67,538**	**$ (9,441)**	**$ (37,239)**	**$ –**
As at October 31, 2015 ($ millions)							
Total interest rate sensitivity gap	$ 61,735	$ (37,345)	$ (29,091)	$ 30,707	$ 7,012	$ (33,018)	$ –

(1) Represents common shares, preferred shares, and equity accounted investments.
(2) Includes net impaired loans, less the collective allowance on performing loans.

Interest rate sensitivity

Based on the Bank's interest rate positions, the following table shows the pro-forma after-tax impact on the Bank's net income over the next twelve months and economic value of shareholders' equity of an immediate and sustained 100 and 200 basis point increase and decrease in interest rates across major currencies as defined by the Bank.

As at October 31 ($ millions)	2016						2015	
	Net income			Economic value of equity				
	Canadian dollar	Other currencies	Total	Canadian dollar	Other currencies	Total	Net income	Economic value of equity
100 bp increase	**$ (76)**	**$ 44**	**$ (32)**	**$ (255)**	**$ (530)**	**$ (785)**	$ 242	$ (488)
100 bp decrease(1)	**$ 76**	**$ (44)**	**$ 32**	**$ 52**	**$ 598**	**$ 650**	$ (240)	$ 418
200 bp increase	**$ (152)**	**$ 88**	**$ (64)**	**$ (624)**	**$ (1,006)**	**$ (1,630)**	$ 488	$ (1,035)
200 bp decrease(1)	**$ 152**	**$ (86)**	**$ 66**	**$ (428)**	**$ 1,122**	**$ 694**	$ (483)	$ 412

(1) The annual income sensitivities for CAD, USD, EUR, and GBP exposures are now measured using 100 and 200 basis point decline. Prior period items have been restated to reflect this change.

(ii) Non-trading foreign currency risk

Foreign currency risk is the risk of loss due to changes in spot and forward rates, and the volatility of currency exchange rates. Non-trading foreign currency risk, also referred to as structural foreign exchange risk, arises primarily from Bank's net investments in self-sustaining foreign operations and is controlled by a Board-approved limit. This limit considers potential volatility to shareholders' equity as well as the potential impact on capital ratios from foreign exchange fluctuations. On a quarterly basis, the Asset-Liability Committee (ALCO) reviews the Bank's exposures to these net investments. The Bank may fully or partially hedge this exposure by funding the investments in the same currency, or by using other financial instruments, including derivatives.

The Bank is subject to foreign currency risk on the earnings of its foreign operations. To manage this risk, foreign currency revenues and expenses, which are primarily denominated in U.S. dollars, are projected over a number of future fiscal quarters. The ALCO assesses economic data and forecasts to decide on the portion of the estimated future foreign currency revenues and expenses to hedge. Hedging instruments normally include foreign currency spot and forward contracts, as well as foreign currency options and swaps.

As at October 31, 2016, a one percent increase (decrease) in the Canadian dollar against all currencies in which the Bank operates decreases (increases) the Bank's before-tax annual earnings by approximately $60 million (2015 – $60 million) in the absence of hedging activity, primarily from exposure to U.S. dollars. A similar change in the Canadian dollar as at October 31, 2016 would increase (decrease) the unrealized foreign currency translation losses in the accumulated other comprehensive income of equity by approximately $366 million (2015 – $315 million), net of hedging.

(iii) Non-trading equity risk

Equity risk is the risk of loss due to adverse movements in equity prices. Equity price risk is often classified into two categories: general equity risk, which refers to the sensitivity of an instrument or portfolio's value to changes in the overall level of equity prices, and specific equity risk, which refers to that portion of an individual equity instrument's price volatility that is determined by entity-specific characteristics.

The Bank is exposed to equity risk through its equity investment portfolios, which are controlled by Board-approved portfolio, VaR, and stress-test limits. Equity investments include common and preferred shares, as well as a diversified portfolio of third-party managed funds.

The majority of the Bank's equity investment portfolios are managed by Group Treasury under the strategic direction of the ALCO. Group Treasury delegates the management of a portion of equity and equity-related portfolios to other external fund managers to take advantage of these fund managers' expertise in particular market niches and products.

The fair value of available-for-sale equity securities is shown in Note 11.

(iv) Trading portfolio risk management

The Bank's policies, processes and controls for trading activities are designed to achieve a balance between pursuing profitable trading opportunities and managing earnings volatility within a framework of sound and prudent practices. Trading activities are primarily customer focused.

Market risk arising from the Bank's trading activities is managed in accordance with Board-approved policies and limits, including aggregate VaR and stress testing limits.

Trading portfolios are marked-to-market in accordance with the Bank's valuation policies. Positions are marked-to-market daily and valuations are independently reviewed by back office, GRM or finance units on a regular basis. These units also provide profit or loss reporting, as well as VaR and limit compliance reporting to business unit management and executive management for evaluation and action as appropriate. VaR is calculated daily using a 99% confidence level, and a one-day holding period. This means that, once in every 100 days, the trading positions are expected to lose more than the VaR estimate. The Bank calculates general market risk VaR using historical simulation based on 300 days of market data. For debt specific risk VaR, the Bank uses historical resampling. The table below shows the Bank's VaR by risk factor:

		For the year ended October 31, 2016			
($ millions)	**As at October 31, 2016**	Average	High	Low	As at October 31, 2015
Credit spread plus interest rate	**$ 10.6**	**$ 10.6**	**$ 16.4**	**$ 7.5**	$ 10.6
Credit spread	**8.0**	**8.3**	**13.6**	**4.5**	8.1
Interest rate	**8.5**	**6.4**	**10.0**	**3.0**	4.3
Equities	**2.0**	**2.7**	**6.4**	**0.8**	4.1
Foreign exchange	**2.1**	**1.3**	**2.9**	**0.6**	0.8
Commodities	**2.0**	**2.4**	**3.9**	**1.3**	2.0
Debt specific	**4.2**	**6.3**	**12.6**	**3.7**	7.4
Diversification effect	**(7.6)**	**(10.7)**	**N/A**	**N/A**	(12.9)
All-Bank VaR	**$ 13.2**	**$ 12.6**	**$ 20.3**	**$ 8.7**	$ 11.9
All-Bank stressed VaR	**$ 21.2**	**$ 27.6**	**$ 37.4**	**$ 18.0**	$ 22.3

Below are the market risk capital requirements as at October 31, 2016.

($ millions)	
All-Bank VaR	$ 105
All-Bank stressed VaR	209
Incremental risk charge	407
Comprehensive risk measure	77
Standardized approach	48
Total market risk capital	$ 846[1]

(1) Equates to $10,571 of risk-weighted assets (2015 – $14,350).

(d) Operational risk

Operational risk is the risk of loss, whether direct or indirect, to which the Bank is exposed due to inadequate or failed internal processes or systems, human error, or external events. Operational risk includes legal and regulatory risk, business process and change risk, fiduciary or disclosure breaches, technology failure, financial crime and environmental risk. Operational risk, in some form, exists in each of the Bank's business and support activities, and can result in financial loss, regulatory sanctions and damage to the Bank's reputation. The Bank has developed policies, processes and assessment methodologies to ensure that operational risk is appropriately identified and managed with effective controls with a view to safeguarding client assets and preserving shareholder value.

36 Business Combinations and Divestitures

Current year:

Acquisitions

JPMorgan Canadian Credit Card Business

On November 16, 2015, the Bank acquired a MasterCard and private label credit card portfolio and the related Canadian credit card operations from JPMorgan Chase Bank, N.A. for cash consideration of $1.7 billion. The acquisition was accounted for as a business combination and resulted in the recognition of approximately $1.7 billion in assets, primarily credit card loans. The acquisition forms part of the Canadian Banking business operating segment. The Bank recorded fair value adjustments to the acquired loans, representing a credit mark of $121 million and an interest rate mark of $28 million, finite life intangible assets of $38 million relating to client relationships, and goodwill of $49 million.

Citibank Panama and Costa Rica Retail Banking Operations

On February 1, 2016, the Bank acquired 100% of the issued and outstanding common shares of Citigroup Panama and Citigroup Costa Rican entities (renamed Scotiabank Transformandose in both countries) for cash consideration of US$360 million. The acquisitions were accounted for as a business combination and resulted in the recognition of approximately $1.9 billion in assets (mainly consumer and credit card loans) and $1.6 billion in liabilities (mainly deposits). The acquisition forms part of the International Banking business operating segment. The Bank recorded preliminary fair value adjustments to the acquired loans, representing a credit mark of $190 million, finite life intangible assets of $23 million relating to client relationships, low cost deposits and insurance contracts, and goodwill of $241 million. The Bank continues to evaluate the fair values of all assets acquired and liabilities assumed.

Divestiture

Roynat Lease Finance

On April 29, 2016, the Bank, through its wholly owned subsidiary, Roynat Inc., completed the sale of the business operations and assets of Roynat Lease Finance. Assets sold comprised mainly commercial lease receivables previously classified with Business and government loans. As a result of the transaction, the Bank recorded a gain on disposal of $116 million pre-tax ($100 million after tax), including deal and transaction costs, in non-interest income.

Prior year:

Cencosud Administradora de Tarjetas S.A., Chile

On May 1, 2015, the Bank acquired a 51% controlling interest in Cencosud Administradora de Tarjetas S.A. and certain other smaller entities (collectively, CAT) from Cencosud S.A. (Cencosud), for a consideration of US $280 million. Simultaneously, the Bank entered into a 15 year exclusivity contract with Cencosud to manage the business. The acquisition was accounted for as a business combination resulting in consolidation of 100% of its assets and liabilities with the recording of non-controlling interest for the 49% held by another shareholder. Assets recognized mainly include credit card and consumer loans. The non-controlling interest was measured as the proportionate share of CAT's identifiable net assets. A finite life intangible of $296 million relating to the exclusivity contract was recorded.

Citibank Peru Operations

On May 1, 2015, the Bank's subsidiary in Peru acquired 100% of the retail and commercial banking operations of Citibank in Peru for cash consideration of $380 million. The acquisition was accounted for as a business combination and resulted in the recognition of mainly personal and credit card loans of $480 million and personal deposits of $210 million.

Management's Report on Internal Control Over Financial Reporting

The management of The Bank of Nova Scotia (the Bank) is responsible for establishing and maintaining adequate internal control over financial reporting, and have designed such internal control over financial reporting to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with International Financial Reporting Standards as issued by The International Accounting Standards Board.

Management has used the *Internal Control – Integrated Framework (2013)* to evaluate the effectiveness of internal control over financial reporting, which is a recognized and suitable framework developed by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has evaluated the design and operation of the Bank's internal control over financial reporting as of October 31, 2016, and has concluded that such internal control over financial reporting is effective. There are no material weaknesses that have been identified by management in this regard.

KPMG LLP, the independent auditors appointed by the shareholders of the Bank, who have audited the consolidated financial statements, have also audited internal control over financial reporting and have issued their report below.

Brian J. Porter
President and Chief Executive Officer

Sean McGuckin
Chief Financial Officer

Toronto, Canada
November 29, 2016

Report of Independent Registered Public Accounting Firm

To the Shareholders of The Bank of Nova Scotia

We have audited The Bank of Nova Scotia's internal control over financial reporting as of October 31, 2016, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Bank of Nova Scotia's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's Report on Internal Control over Financial Reporting". Our responsibility is to express an opinion on The Bank of Nova Scotia's internal control over financial reporting based on our audit.

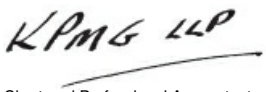
We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, The Bank of Nova Scotia maintained, in all material respects, effective internal control over financial reporting as of October 31, 2016, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We also have audited, in accordance with Canadian generally accepted auditing standards and the standards of the Public Company Accounting Oversight Board (United States), the consolidated statements of financial position of The Bank of Nova Scotia as at October 31, 2016 and October 31, 2015, the consolidated statements of income, comprehensive income, changes in equity and cash flows for each of the years in the three-year period ended October 31, 2016, and notes, comprising a summary of significant accounting policies and other explanatory information, and our report dated November 29, 2016 expressed an unmodified (unqualified) opinion on those consolidated financial statements.



Chartered Professional Accountants, Licensed Public Accountants
Toronto, Canada

November 29, 2016

CORPORATE GOVERNANCE

Corporate Governance Regulation

The Board of Directors and management believe that a strong, effective, independent Board plays a crucial role in building long-term sustainable growth in shareholder value, maximizing the value shareholders receive from their investment in the Bank and protecting the interests of stakeholders. The Board is committed to meeting high standards of corporate governance in all aspects of the Bank's affairs.

The Bank's corporate governance practices are regulated by many different parties, including the Bank's regulator, the Office of the Superintendent of Financial Institutions Canada, and the Board looks to evolving best practices domestically and internationally in reviewing its corporate governance practices. Our practices:

- Meet or exceed the standards set out in the guidelines and rules of the Bank Act (Canada) (the "Bank Act") and those of the Canadian Securities Administrators ("CSA") – which include National Instrument 52-110, National Instrument 52-109, National Policy 58-201 and National Instrument 58-101, and
- Comply with applicable requirements of the New York Stock Exchange ("NYSE") and the Sarbanes-Oxley Act of 2002, including applicable rules of the U.S. Securities and Exchange Commission.

The Bank is not required to comply with most of the NYSE corporate governance rules. However, except as summarized in the Corporate Governance section of the Bank's website (www.scotiabank.com), our practices do not differ significantly from those rules.

The Corporate Governance Policies and the committee charters are also available in the Corporate Governance section of the Bank's website and in print to any shareholder who requests a copy from the Bank's Secretary. Additional information on the Bank's Audit and Conduct Review Committee, including a copy of its charter and descriptions of its members and their applicable education and experience, can be found in Exhibit 99.1, the Bank's Annual Information Form under the heading "The Bank's Audit and Conduct Review Committee" and in Schedule "C" thereto.

Director Independence

The Bank is committed to complying with all applicable laws, rules and regulations related to the status of its Directors. The Bank defines a Director who does not have a direct or indirect material relationship with the Bank as independent. The Board has approved Director Independence Standards (the "Independence Standards"), which provide a framework for the Board to assess any material relationships of the Directors with the Bank. The Independence Standards are derived from the Bank Act Affiliated Persons Regulations, the CSA rules and the NYSE corporate governance rules. Each year:

- The Board reviews its Directors against these standards, considering all relevant facts and circumstances, including the relationship of the non-management Directors to the Bank — as well as any relationship to the Bank of their spouses, children, principal business affiliations and any other relevant individuals.

- All Directors complete a detailed questionnaire to inform this review.
- All Directors certify their compliance with the Bank's Guidelines for Business Conduct, including the requirement that they declare any material interest in matters coming before the Board.

On the recommendation of the Corporate Governance Committee, the Board determined that as of November 29, 2016, Brian J. Porter was determined to be non-independent, due to his position as President and CEO. Mr. Porter is also affiliated under the Bank Act due to his management position. As of November 29, 2016, Eduardo Pacheco was also determined to be non-independent, due to his business relationships with the Bank and its subsidiary, Banco Colpatria Multibanca Colpatria S.A.

That means, 15 of the current 17 (or 88.2%) Directors are independent, including Thomas C. O'Neill, the Chairman of the Board.

The Board also takes appropriate steps to ensure that the Board is able to function independent of management. The independent members of the Board held an "in camera" session at all but one Board meeting held in fiscal 2016. The non-executive members of the Board held an "in camera" session at every Board meeting held in fiscal 2016.

The following Directors are independent: Nora A. Aufreiter, Guillermo E. Babatz, Scott B. Bonham, Ronald A. Brenneman, Charles H. Dallara, William R. Fatt, Tiff Macklem, Thomas C. O'Neill, Una M. Power, Aaron W. Regent, Indira V. Samarasekera, Susan L. Segal, Paul D. Sobey, Barbara S. Thomas and L. Scott Thomson.

Director Independence Standards

A majority of the Bank's directors are independent, as required by CSA's' National Policy 58-201 — *Corporate Governance Guidelines* and the current NYSE listed company corporate governance rules. To be considered independent under these rules, the Board must determine that a director has no direct or indirect material relationship with the Bank. A material relationship is a relationship that could, in the view of the Board, be reasonably expected to interfere with the exercise of a director's judgment independent of management. The rules permit the Board to adopt categorical standards in making its independence determinations. The standards adopted by the Board are reproduced below. Definitions and interpretation of terms in the standards are in accordance with applicable source rules and regulations, as amended from time to time. In applying these standards, the Board broadly considers all relevant facts and circumstances.

1. A director will not be independent if:

   - the director is, or has been within the last three years, an employee or executive officer of the Bank or a subsidiary, or an immediate family member of the director is, or has been within the last three years, an executive officer of the Bank or a subsidiary;
   - the director has received, or an immediate family member of the director has received for service as an executive officer, during any twelve-month period within the last three years, more than the lesser of Cdn$75,000 and US$120,000 in direct compensation from the Bank or a subsidiary, other than director and committee fees and pension or other forms of deferred compensation for prior service (provided such compensation is not contingent in any way on continued service);
   - (a) the director or an immediate family member of the director is a current partner of a firm that is the Bank's or a subsidiary's internal or external auditor; (b) the director is a current employee of such firm; (c) an immediate family member of the director is a current employee of such a firm and personally works on the Bank's or a subsidiary's audit, or the director's spouse, or child or stepchild who shares a home with the director, is an employee of such firm and participates in the firm's audit, assurance or tax compliance (but not tax planning) practice; or (d) the director or an immediate family member was within the last three years a partner or employee of such a firm and personally worked on the Bank's or a subsidiary's audit within that time;
   - the director or an immediate family member of the director, is, or has been within the last three years, employed as an executive officer of another company where any of the Bank's or a subsidiary's present executive officers at the same time serves or served on that company's compensation committee;
   - the director is currently an employee, or an immediate family member of the director is currently an executive officer, of a company that has made payments to, or received payments from, the Bank or a subsidiary for property or services in an amount which, in any of the last three fiscal years, exceeds the greater of US$1 million or 2% of such other company's consolidated gross revenues (with the exception that contributions to tax exempt organizations shall not be considered payments for this purpose); or
   - the director is "affiliated" with the Bank as that term is used in the Affiliated Persons (Banks) Regulations made under the Bank Act.

An "immediate family member" includes a person's spouse, parents, children, stepchildren, siblings, mothers and fathers-in-law, sons and daughters-in-law, brothers and sisters-in-law, and anyone (other than domestic employees) who shares the person's home.

2. In addition to satisfying the independence standards set forth above, members of the audit committee must satisfy the following additional independence requirements:

   - An audit committee member may not accept, directly or indirectly, any consulting, advisory or other compensatory fee from the Bank or any subsidiary, other than

compensation in his or her capacity as a member of the Board or any committee or any fixed amount of compensation under a retirement plan (including deferred compensation) for prior service with the Bank (provided such compensation is not contingent in any way on continued service).

- An audit committee member may not be an “affiliated” person of the Bank or any subsidiary, as defined in applicable Canadian and U.S. securities laws.

The indirect acceptance by an audit committee member of any consulting, advisory or other compensatory fee includes acceptance of such fee by a spouse, minor child or stepchild or a child or stepchild who shares a home with the audit committee member or by an entity in which such audit committee member is a partner, member, an officer such as a managing director occupying a comparable position or executive officer, or occupies a similar position (except limited partners, non-managing members and those occupying similar positions who, in each case, have no active role in providing services to the entity) and which provides accounting, consulting, legal, investment banking or financial advisory services to the Bank or any subsidiary.

3. In addition to satisfying the independence standards set forth above in section 1, in affirmatively determining the independence of any director who will serve on the Bank’s compensation committee, the Board must consider all factors specifically relevant to determining whether a director has a relationship to the Bank which is material to that director’s ability to be independent from management in connection with the duties of a compensation committee member, including, but not limited to:

    - the source of compensation of such director, including any consulting, advisory or other compensatory fee paid by the Bank or a subsidiary to such director; and
    - whether such director is affiliated with the Bank, a subsidiary of the Bank or an affiliate of a subsidiary of the Bank.

Whether directors meet these categorical independence standards will be reviewed and will be made public annually prior to their standing for re-election to the Board. The Board will examine relationships such as the nature of the director’s banking, lending or other business dealings with the Bank or a director’s role in a charitable organization which has received a certain level of contributions from the Bank. For relationships not covered by the standards in section 1 above, the determination of whether the relationship is material, and therefore whether the director would be independent, will be made by the directors who satisfy those standards. The Bank will disclose the basis for any Board determination that a relationship is immaterial despite the fact that it does not meet the categorical standards set forth above.

Exhibit 99.6

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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors of The Bank of Nova Scotia

We consent to the incorporation by reference of our reports, each dated November 29, 2016, with respect to the consolidated financial statements and the effectiveness of internal control over financial reporting included in this annual report on Form 40-F.

We also consent to the incorporation by reference of such reports in the Registration Statements – Form F-3 – File No. 333-200089 and File No. 333-185049, and the Registration Statement – Form S-8 – File No. 333-199099 of the Bank.



Chartered Professional Accountants, Licensed Public Accountants

November 29, 2016
Toronto, Canada

KPMG LLP is a Canadian limited liability partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. KPMG Canada provides services to KPMG LLP.

Exhibit 99.7

CERTIFICATIONS

I, BRIAN J. PORTER, certify that:

1. I have reviewed this annual report on Form 40-F of The Bank of Nova Scotia;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the issuer as of, and for, the periods presented in this report;

4. The issuer's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the issuer and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c) Evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the issuer's internal control over financial reporting; and

5. The issuer's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Date: November 29, 2016

/s/ Brian J. Porter
Brian J. Porter
President and Chief Executive Officer

CERTIFICATIONS

I, SEAN D. MCGUCKIN, certify that:

1. I have reviewed this annual report on Form 40-F of The Bank of Nova Scotia;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the issuer as of, and for, the periods presented in this report;

4. The issuer's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the issuer and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c) Evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the issuer's internal control over financial reporting; and

5. The issuer's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Date: November 29, 2016

/s/ Sean D. McGuckin
Sean D. McGuckin
Group Head and
Chief Financial Officer

Exhibit 99.8

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ENACTED PURSUANT TO
SECTION 906 OF THE U.S. SARBANES-OXLEY ACT OF 2002

In connection with the annual report of The Bank of Nova Scotia (the "Bank") on Form 40-F for the year ended October 31, 2016 (the "Report") as filed with the U.S. Securities and Exchange Commission,

I, Brian J. Porter, President and Chief Executive Officer of the Bank, certify, pursuant to 18 U.S.C. section 1350, as enacted pursuant to section 906 of the U.S. Sarbanes-Oxley Act of 2002, that to my knowledge:

(i) the Report fully complies with the requirements of section 13(a) or 15(d) of the U.S. Securities Exchange Act of 1934; and

(ii) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Bank.

November 29, 2016

/s/ Brian J. Porter
Brian J. Porter
President and Chief Executive Officer

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ENACTED PURSUANT TO
SECTION 906 OF THE U.S. SARBANES-OXLEY ACT OF 2002

In connection with the annual report of The Bank of Nova Scotia (the "Bank") on Form 40-F for the year ended October 31, 2016 (the "Report") as filed with the U.S. Securities and Exchange Commission,

I, Sean D. McGuckin, Group Head and Chief Financial Officer of the Bank, certify, pursuant to 18 U.S.C. section 1350, as enacted pursuant to section 906 of the U.S. Sarbanes-Oxley Act of 2002, that to my knowledge:

(i) the Report fully complies with the requirements of section 13(a) or 15(d) of the U.S. Securities Exchange Act of 1934; and

(ii) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Bank.

November 29, 2016

/s/ Sean D. McGuckin
Sean D. McGuckin
Group Head and Chief Financial Officer