MANAGEMENT'S DISCUSSION AND ANALYSIS

Management's Discussion and Analysis (MD&A) is provided to enable a reader to assess our results of operations and financial condition for the fiscal year ended October 31, 2013, compared to the preceding two years. This MD&A should be read in conjunction with our 2013 Annual Consolidated Financial Statements and related notes and is dated December 4, 2013. All amounts are in Canadian dollars, unless otherwise specified, and are based on financial statements prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB), unless otherwise noted.

Additional information about us, including our 2013 Annual Information Form, is available free of charge on our website at rbc.com/investorrelations, on the Canadian Securities Administrators' website at sedar.com and on the EDGAR section of the United States (U.S.) Securities and Exchange Commission's (SEC) website at sec.gov.

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A-Z *See our Glossary for definitions of terms used throughout this document*

Caution regarding forward-looking statements

From time to time, we make written or oral forward-looking statements within the meaning of certain securities laws, including the "safe harbour" provisions of the *United States Private Securities Litigation Reform Act of 1995* and any applicable Canadian securities legislation. We may make forward-looking statements in this 2013 Annual Report, in other filings with Canadian regulators or the SEC, in other reports to shareholders and in other communications. Forward-looking statements in this document include, but are not limited to, statements relating to our financial performance objectives, vision and strategic goals, the economic and market review and outlook for Canadian, U.S., European and global economies, the regulatory environment in which we operate, the outlook and priorities for each of our business segments, and the risk environment including our liquidity and funding management. The forward-looking information contained in this document is presented for the purpose of assisting the holders of our securities and financial analysts in understanding our financial position and results of operations as at and for the periods ended on the dates presented and our financial performance objectives, vision and strategic goals, and may not be appropriate for other purposes. Forward-looking statements are typically identified by words such as "believe", "expect", "foresee", "forecast", "anticipate", "intend", "estimate", "goal", "plan" and "project" and similar expressions of future or conditional verbs such as "will", "may", "should", "could" or "would".

By their very nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties, which give rise to the possibility that our predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that our assumptions may not be correct and that our financial performance objectives, vision and strategic goals will not be achieved. We caution readers not to place undue reliance on these statements as a number of risk factors could cause our actual results to differ materially from the expectations expressed in such forward-looking statements. These factors – many of which are beyond our control and the effects of which can be difficult to predict – include: credit, market, liquidity and funding, insurance, regulatory compliance, operational, strategic, reputation and competitive risks and other risks discussed in the Risk management and Overview of other risks sections; the impact of regulatory reforms, including relating to the Basel Committee on Banking Supervision's (BCBS) global standards for capital and liquidity reform, the *Dodd-Frank Wall Street Reform and Consumer Protection Act* and the regulations issued and to be issued thereunder, over-the-counter derivatives reform, the payments system in Canada, the U.S. *Foreign Account Tax Compliance Act* (FATCA), and regulatory reforms in the United Kingdom (U.K.) and Europe; the high levels of Canadian household debt; cybersecurity; the business and economic conditions in Canada, the U.S. and certain other countries in which we operate; the effects of changes in government fiscal, monetary and other policies; our ability to attract and retain employees; the accuracy and completeness of information concerning our clients and counterparties; the development and integration of our distribution networks; model, information technology and social media risk; and the impact of environmental issues.

We caution that the foregoing list of risk factors is not exhaustive and other factors could also adversely affect our results. When relying on our forward-looking statements to make decisions with respect to us, investors and others should carefully consider the foregoing factors and other uncertainties and potential events. Material economic assumptions underlying the forward looking statements contained in this 2013 Annual Report are set out in the Overview and outlook section and for each business segment under the heading Outlook and priorities. Except as required by law, we do not undertake to update any forward-looking statement, whether written or oral, that may be made from time to time by us or on our behalf.

Additional information about these and other factors can be found in the Risk management and Overview of other risks sections.

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

Selected financial and other highlights — Table 1

(Millions of Canadian dollars, except per share, number of and percentage amounts)	2013	2012	2011	2013 vs. 2012 Increase (decrease)	
Continuing operations					
Total revenue	$ 30,867	$ 29,772	$ 27,638	$ 1,095	3.7%
Provision for credit losses (PCL)	1,239	1,301	1,133	(62)	(4.8)%
Insurance policyholder benefits, claims and acquisition expense (PBCAE)	2,784	3,621	3,358	(837)	(23.1)%
Non-interest expense	16,227	15,160	14,167	1,067	7.0%
Net income before income taxes	10,617	9,690	8,980	927	9.6%
Net income from continuing operations	8,429	7,590	6,970	839	11.1%
Net loss from discontinued operations	–	(51)	(526)	51	n.m.
Net income	$ 8,429	$ 7,539	$ 6,444	$ 890	11.8%
Segments – net income from continuing operations					
Personal & Commercial Banking	$ 4,438	$ 4,088	$ 3,740	$ 350	8.6%
Wealth Management	899	763	811	136	17.8%
Insurance	597	714	600	(117)	(16.4)%
Investor & Treasury Services	343	85	230	258	303.5%
Capital Markets	1,710	1,581	1,292	129	8.2%
Corporate Support	442	359	297	83	23.1%
Net income from continuing operations	$ 8,429	$ 7,590	$ 6,970	$ 839	11.1%
Selected information					
Earnings per share (EPS) – basic	$ 5.60	$ 4.98	$ 4.25	$ 0.62	12.4%
– diluted	5.54	4.93	4.19	0.61	12.4%
Return on common equity (ROE) (1), (2)	19.4%	19.3%	18.7%	n.m.	10 bps
Selected information from continuing operations					
EPS – basic	$ 5.60	$ 5.01	$ 4.62	$ 0.59	11.8%
– diluted	5.54	4.96	4.55	0.58	11.7%
ROE (1), (2)	19.4%	19.5%	20.3%	n.m.	(10) bps
PCL on impaired loans as a % of average net loans and acceptances	0.31%	0.35%	0.33%	n.m.	(4) bps
Gross impaired loans (GIL) as a % of loans and acceptances	0.52%	0.58%	0.65%	n.m.	(6) bps
Capital ratios and multiples (3)					
Common Equity Tier 1 (CET1) ratio (3)	9.6%	n.a. (3)	n.a. (3)	n.a.	n.a.
Tier 1 capital ratio (3)	11.7%	13.1%	13.3%	n.a.	n.a.
Total capital ratio (3)	14.0%	15.1%	15.3%	n.a.	n.a.
Assets-to-capital multiple (3), (4)	16.6X	16.7X	16.1X	n.a.	n.a.
Selected balance sheet and other information					
Total assets	$ 860,819	$ 825,100	$ 793,833	$ 35,719	4.3%
Securities	182,718	161,611	167,022	21,107	13.1%
Loans (net of allowance for loan losses)	408,666	378,244	347,530	30,422	8.0%
Derivative related assets	74,822	91,293	99,650	(16,471)	(18.0)%
Deposits	558,480	508,219	479,102	50,261	9.9%
Common equity	43,939	39,453	34,889	4,486	11.4%
Average common equity (1)	41,650	37,150	32,600	4,500	12.1%
Risk-weighted assets (RWA) (3)	318,981	280,609	267,780	n.a.	n.a.
Assets under management (AUM)	391,100	343,000	308,700	48,100	14.0%
Assets under administration (AUA) (5)	4,050,900	3,653,300	3,446,400	397,600	10.9%
Common share information					
Shares outstanding (000s) – average basic	1,443,735	1,442,167	1,430,722	1,568	0.1%
– average diluted	1,466,529	1,468,287	1,471,493	(1,758)	(0.1)%
– end of period	1,441,056	1,445,303	1,438,376	(4,247)	(0.3)%
Dividends declared per common share	$ 2.53	$ 2.28	$ 2.08	$ 0.25	11.0%
Dividend yield (6)	4.0%	4.5%	3.9%	n.m.	(50) bps
Common share price (RY on TSX)	$ 70.02	$ 56.94	$ 48.62	$ 13.08	23.0%
Market capitalization (TSX)	100,903	82,296	69,934	18,607	22.6%
Business information from continuing operations (number of)					
Employees (full-time equivalent) (FTE)	74,247	74,377	68,480	(130)	(0.2)%
Bank branches	1,372	1,361	1,338	11	0.8%
Automated teller machines (ATMs)	4,973	5,065	4,626	(92)	(1.8)%
Period average US$ equivalent of C$1.00 (7)	$ 0.977	$ 0.997	$ 1.015	$ (0.020)	(2.0)%
Period-end US$ equivalent of C$1.00	$ 0.959	$ 1.001	$ 1.003	$ (0.042)	(4.2)%

(1) Average amounts are calculated using methods intended to approximate the average of the daily balances for the period. This includes ROE and Average common equity. For further details, refer to the Key performance and non-GAAP measures section.
(2) These measures may not have a standardized meaning under generally accepted accounting principles (GAAP) and may not be comparable to similar measures disclosed by other financial institutions. For further details, refer to the Key performance and non-GAAP measures section.
(3) Effective the first quarter of 2013, we calculate capital ratios and Assets-to-capital multiple using the Basel III framework. The capital ratios are calculated on the "all-in" basis. The prior periods' capital ratios and Assets-to-capital multiple were calculated using the Basel II framework. Basel III and Basel II are not directly comparable. Capital ratios and multiples for 2011 comparative amounts in the MD&A were determined under Canadian GAAP. The CET1 ratio is a new regulatory measure under the Basel III framework. The CET1 ratio is not applicable (n.a.) for prior periods as Basel III was adopted prospectively, effective the first quarter of 2013. For further details, refer to the Capital management section.
(4) Effective the first quarter of 2013, Assets-to-capital multiple is calculated on a transitional basis as per the Office of the Superintendent of Financial Institutions (OSFI) Capital Adequacy Requirements (CAR) Guideline.
(5) Includes AUA from Investor Services and $32.6 billion (2012 – $38.4 billion, 2011 – $36.0 billion) of securitized mortgages and credit card loans.
(6) Defined as dividends per common share divided by the average of the high and low share price in the relevant period.
(7) Average amounts are calculated using month-end spot rates for the period.
n.m. not meaningful

About Royal Bank of Canada

Royal Bank of Canada (RY on TSX and NYSE) is Canada's largest bank as measured by assets and market capitalization, and is among the largest banks in the world, based on market capitalization. We are one of North America's leading diversified financial services companies, and provide personal and commercial banking, wealth management services, insurance, investor services and capital markets products and services on a global basis. We employ approximately 79,000 full- and part-time employees who serve more than 15 million personal, business, public sector and institutional clients through offices in Canada, the U.S. and 44 other countries. For more information, please visit rbc.com.

Our business segments are described below.

Personal & Commercial Banking comprises our personal and business banking operations, as well as certain investment businesses in Canada, the Caribbean and the U.S.

Wealth Management serves affluent, high net worth and ultra-high net worth clients from our offices in key financial centres mainly in Canada, the U.S., the U.K., continental Europe, and Asia with a comprehensive suite of investment, trust, banking, credit and other wealth management solutions. We also provide asset management products and services directly to institutional and individual clients as well as through RBC distribution channels and third-party distributors.

Insurance offers insurance products and services through our proprietary distribution channels, comprised of the field sales force which includes retail insurance branches, our field sales representatives, call centres and online, as well as through independent insurance advisors and affinity relationships in Canada. Outside North America, we operate in reinsurance markets globally.

Investor & Treasury Services serves the needs of institutional investing clients by providing custodial asset servicing, advisory, financing and other services to safeguard assets, maximize liquidity and manage risk in multiple jurisdictions around the world. We also provide funding and liquidity management for the enterprise.

Capital Markets provides public and private companies, institutional investors, governments and central banks with a wide range of products and services. In North America, we offer a full suite of products and services which include corporate and investment banking, equity and debt origination and distribution, and structuring and trading. Outside North America, we offer a diversified set of capabilities in our key sectors of expertise such as energy, mining and infrastructure.

Our business segments are supported by Corporate Support, which consists of Technology & Operations and Functions. Technology & Operations provides the technological and operational foundation required to effectively deliver products and services to our clients, while Functions includes our finance, human resources, risk management, internal audit and other functional groups.

The following chart presents our business segments and respective lines of business:

ROYAL BANK OF CANADA

Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets
○ Canadian Banking ○ Caribbean & U.S. Banking	○ Canadian Wealth Management ○ U.S. & International Wealth Management ○ Global Asset Management	○ Canadian Insurance ○ International Insurance		○ Corporate and Investment Banking ○ Global Markets ○ Other

Corporate Support

○ Technology & Operations ○ Functions

Vision and strategic goals

Our business strategies and actions are guided by our vision of **"Always earning the right to be our clients' first choice."** Our strategic goals are:

- In Canada, to be the undisputed leader in financial services;
- Globally, to be a leading provider of capital markets, investor, and wealth management solutions; and
- In targeted markets, to be a leading provider of select financial services complementary to our core strengths.

For our progress in 2013 against our business strategies and strategic goals, refer to the Business segment results section.

Overview and outlook

Economic and market review and outlook – data as at December 4, 2013

Canada

The Canadian economy is expected to grow at an estimated rate of 1.7% during calendar 2013, which is below our estimate of 2.4% as at November 28, 2012. Growth continues to be driven by consumer spending and business investment, moderated by weak net exports. The unemployment rate decreased to 6.9% in October 2013, supported by improvement during the year in labour markets. Housing market activity continues to benefit from these positive employment trends and the continuing low interest rate environment. Although the Canadian economy is growing at a moderate pace, concerns about the export outlook and continued low inflation led the Bank of Canada (BoC) to maintain its overnight rate at 1% in October 2013.

In calendar 2014, we expect the Canadian economy to grow at a rate of 2.6%, driven by solid consumer and investment spending and an improvement in global demand for exports. Given the ongoing low inflation environment and the factors restraining the growth of global demand for Canadian exports, we do not expect the BoC to change its overnight rate from the current 1% until at least the second quarter of 2015.

U.S.
We expect the U.S. economy to grow at an estimated rate of 1.7% during calendar 2013, below our estimate of 2.3% as at November 28, 2012. Moderate consumer spending and the improvement in the housing market more than offset a decline in government spending, and continue to drive moderate economic growth. The impact of the October 2013 federal government partial shutdown on the economy is not expected to be significant. Business investment continues to recover, and the unemployment rate improved to 7.3% in October 2013. In order to provide stimulus to the economy, the Federal Reserve (Fed) is maintaining interest rates at low levels, and maintained the size of its monthly asset purchases, despite market expectations of a reduction in the program in 2013.

In calendar 2014, we expect the U.S. economy to grow at a rate of 2.7%, driven by solid consumer spending and housing market activity as well as stronger business investment. The impact on consumer confidence of a failure by the government to complete debt negotiations could reduce spending activity in the near term. We expect the Fed to reduce its monthly asset purchases starting in March 2014 and cease making purchases by the end of 2014 as labour market conditions and the inflation rate approach the Fed's targeted levels.

Europe
The Eurozone economy is expected to contract at an estimated rate of (0.4%) during calendar 2013, below our estimate of growth of 0.1% as at November 28, 2012. The economy emerged from recession in the second quarter of 2013, but continues to show the effects of fiscal austerity measures and limited access to funding. The unemployment rate stabilized at 12.1% in October, reflecting limited improvement in labour markets. The European Central Bank (ECB) is continuing to provide stimulus to the Eurozone economy and decreased interest rates by 25 bps in May 2013 to 0.50% and by a further 25 bps in November 2013 to 0.25%.

We expect the Eurozone economy to grow at a rate of 1.0% in calendar 2014 as the ECB's policy actions continue to take effect. We expect the ECB to maintain its current low interest rates throughout 2014 in order to mitigate the impact of continuing fiscal austerity measures and encourage demand for credit.

Financial markets
Capital markets in Canada and the U.S. gradually improved during 2013, resulting from modest economic growth in both countries as well as the maintenance of stimulative monetary policy by the BoC and the Fed. Yields on long-term Canadian and U.S. government bonds rose from May to September 2013, following a period of historical lows as markets anticipated a reduction in the Fed's monthly asset purchase program. Credit spreads on corporate bonds started to widen in the U.S. in the latter half of 2013 after remaining low for most of the year. Equity markets improved throughout the year, despite some uncertainty regarding the outcome of the U.S. government's efforts to avoid hitting the debt ceiling. Despite continued uncertainty in global financial markets, there were slight signs of overall improvement in 2013.

The predictions and forecasts in this section are based on information and assumptions from sources we consider reliable. If this information or these assumptions are not accurate, actual economic outcomes may differ materially from the outlook presented in this section.

For details on risk factors from general business and economic conditions that may affect our business and financial results, refer to the Overview of other risks section.

Regulatory environment
We continue to monitor and prepare for regulatory developments by identifying and working to mitigate any potential negative business or economic impact resulting from the global proliferation of regulatory reform initiatives. These developments include prohibitions on proprietary trading and certain investment in hedge and other investment funds (the Volcker Rule) under the U.S. *Dodd-Frank Wall Street Reform and Consumer Protection Act* ("Dodd-Frank"), the Fed's proposal for Enhanced Supervision of Foreign Banking Organizations, and other Dodd-Frank initiatives; changes to capital and liquidity rules under the Basel Committee on Banking Supervision's global standards (Basel III); over-the-counter derivatives reform; the U.S. *Foreign Account Tax Compliance Act* (FATCA); enhanced risk disclosures recommended by the Enhanced Disclosure Task Force (EDTF) of the Financial Stability Board; and other reforms.

For a discussion on risk factors resulting from these and other regulatory developments which may affect our business and financial results, refer to the Risk management – Top and emerging risks section. For further details on our framework and activities to manage risks, refer to the Risk management and Capital management sections.

Defining and measuring success through Total Shareholder Returns (TSR)
Our focus is to maximize total shareholder returns through the achievement of top quartile performance over the medium term (3-5 years) which we believe reflects a longer term view of strong and consistent financial performance.

Maximizing TSR is aligned with our three strategic goals and we believe represents the most appropriate measure of shareholder value creation. TSR is a concept used to compare the performance of our common shares over a period of time, reflecting share price appreciation and dividends paid to common shareholders. The absolute size of the TSR will vary depending on market conditions, and the relative position reflects the market's perception of our overall performance relative to our peers over a period of time.

Financial performance objectives are used to measure progress against our medium-term TSR objectives. We review and revise these financial performance objectives as economic, market and regulatory environments change. By focusing on our medium-term objectives in our decision-making, we believe we will be well positioned to provide sustainable earnings growth and solid returns to our common shareholders.

We compared favourably to all our performance objectives in 2013. The following table provides a summary of our performance against our financial performance objectives in 2013:

Financial performance objectives — **Table 2**

	2013 results	Achieved
Diluted EPS growth of 7% +	12.4%	✓
ROE of 18% +	19.4%	✓
Strong capital ratios (CET1) (1)	9.6%	✓
Dividend payout ratio 40% – 50%	45%	✓

(1) For further details on the CET1 ratio, refer to the Capital management section.

For 2014, our financial performance objectives will remain unchanged.

Medium-term objectives – three and five year TSR vs. peer group average		Table 3
	three year TSR (1)	five year TSR (1)
Royal Bank of Canada	13% Second quartile	13% Second quartile
Peer group average (excluding RBC) (2)	11%	9%

(1) The three and the five year average annual TSR are calculated based on our common share price appreciation plus reinvested dividends for the period October 31, 2010 to October 31, 2013 and October 31, 2008 to October 31, 2013 respectively, based on information as disclosed by Bloomberg L.P.

(2) We compare our TSR to that of a global peer group approved by our Board of Directors and consisting of the following 20 financial institutions: seven large Canadian financial institutions in addition to us (Bank of Montreal, Canadian Imperial Bank of Commerce, Manulife Financial Corporation, National Bank of Canada, Power Financial Corporation, The Bank of Nova Scotia and The Toronto-Dominion Bank), five U.S. financial institutions (Bank of America Corporation, JPMorgan Chase & Co., The Bank of New York Mellon Corporation, U.S. Bancorp and Wells Fargo & Company), five European financial institutions (Banco Bilbao Vizcaya Argentaria Group (BBVA), Barclays PLC, BNP Paribas, Credit Suisse Group AG and Deutsche Bank Group) and two Australian financial institutions (National Australia Bank and Westpac Banking Corporation).

Our three and five year average annual TSR of 13% ranked us in the second quartile for both periods within our global peer group. The three year and five year average annual TSR for our global peer group was 11% and 9% respectively.

Common share and dividend information						Table 4
For the year ended October 31	**2013**	2012	2011	2010	2009
Common share price (RY on TSX) – close, end of period	**$ 70.02**	$ 56.94	$ 48.62	$ 54.39	$ 54.80
Dividends paid per share	**2.46**	2.22	2.04	2.00	2.00
Increase (decrease) in share price	**23.0%**	17.1%	(10.6)%	(0.7)%	17.0%
Total shareholder return	**28.0%**	22.0%	(6.7)%	2.9%	22.7%

Key corporate events of 2013

Canadian auto finance and deposit business of Ally Financial Inc. (Ally Canada)
On February 1, 2013, we completed the acquisition of Ally Canada for total cash consideration of $3.7 billion. Ally Canada's operations provide financial services, including floor plan financing, directly to auto dealers and also offer financing for consumers through dealerships. The acquisition adds scale to our existing consumer and commercial auto financing businesses. For further details, refer to Note 11 of our 2013 Annual Consolidated Financial Statements.

Financial performance

Overview

2013 vs. 2012
Net income of $8,429 million was up $890 million or 12% from a year ago. Diluted earnings per share (EPS) of $5.54 was up $0.61 and return on common equity (ROE) of 19.4% increased from 19.3% in 2012. At October 31, 2013, our Common Equity Tier 1 (CET1) ratio was 9.6%.

Our results reflected strong earnings growth across most of our business segments and were driven by solid volume growth across all our Canadian Banking businesses, partially offset by spread compression, strong growth in our corporate and investment banking businesses, and higher average fee-based client assets in Wealth Management. Favourable income tax adjustments in 2013 of $214 million related to prior years, lower provision for credit losses (PCL) reflecting improved credit quality, improved business performance in Investor Services, and continuing benefits from our ongoing focus on efficiency management activities also contributed to the increase. These factors were partially offset by lower trading revenue in Capital Markets and a charge of $160 million ($118 million after-tax) in Insurance as a result of proposed legislation in Canada, which would affect the policyholders' tax treatment of certain individual life insurance policies.

In addition, our prior year results were impacted by net favourable adjustments of $60 million after-tax including a release of $128 million of tax uncertainty provisions and interest income of $72 million ($53 million after-tax) related to a refund of taxes paid due to the settlement of several tax matters with the Canada Revenue Agency (CRA), an adjustment related to a change in estimate of mortgage prepayment interest of $125 million ($92 million after-tax), and a loss of $224 million ($213 million after-tax) related to the acquisition of the remaining 50% stake of RBC Dexia Investor Services Limited (RBC Dexia).

Our ROE was up 10 basis points (bps) despite holding higher common equity as a result of Basel lll capital requirements effective the first quarter of 2013, reflecting our solid earnings growth.

For further details on our results and CET1 ratio, refer to the Business segment results and Capital management sections, respectively.

Summary of 2012 vs. 2011
In 2012, net income of $7,539 million was up $1,095 million or 17% from 2011. Diluted EPS of $4.93 was up $0.74 and ROE of 19.3% was up 60 bps.

Effective the third quarter of 2012, we no longer have discontinued operations, as the sale of our U.S. regional retail banking operations closed in the second quarter of 2012. Net loss from discontinued operations in 2012 was $51 million due to operating losses related to our U.S. regional retail banking operations.

Continuing operations
In 2012, net income from continuing operations of $7,590 million was up $620 million or 9% from 2011. The increase in net income was driven by higher fixed income trading and corporate and investment banking results as well as strong volume growth across most of our domestic banking businesses. Lower claims costs in Insurance, higher funding and liquidity trading in Investor & Treasury Services, increased average fee-based client assets in Wealth Management, and continuing benefits from our ongoing focus on efficiency management activities also contributed to the increase. In addition, net income in 2012 was favourably impacted by the release of tax uncertainty provisions and interest income and the adjustment related to a change in estimate of mortgage prepayment interest, as described above. These factors were partially offset by higher costs in support of business growth, increased PCL in Capital Markets and our Caribbean portfolio, and lower transaction

volumes in Wealth Management. The loss related to the acquisition of the remaining 50% stake of RBC Dexia also negatively impacted net income in 2012.

Discontinued operations
In 2012, net loss from discontinued operations was $51 million as compared to a net loss of $526 million in 2011, primarily reflecting a loss on sale of our U.S. regional retail banking operations in 2011. Net loss from discontinued operations in 2012 included only four months of operating losses related to our U.S. regional retail banking operations compared to a full year of results in 2011.

Estimated impact of foreign currency translation on our consolidated financial results
Our foreign currency-denominated results are impacted by exchange rate fluctuations. Revenue, PCL, insurance policyholder benefits, claims and acquisition expense (PBCAE), non-interest expense and net income denominated in foreign currency are translated at the average rate of exchange for the year.

The estimated impact of foreign currency translation on our results was not significant in 2013 as compared to 2012.

Changes in the relevant average exchange rates that impact our business are shown in the following table:

Table 5

(Average foreign currency equivalent of C$1.00) (1)	2013	2012	2011
U.S. dollar	**0.977**	0.997	1.015
British pound	**0.626**	0.630	0.631
Euro	**0.740**	0.771	0.727

(1) Average amounts are calculated using month-end spot rates for the period.

Total revenue

Table 6

(Millions of Canadian dollars)	2013	2012	2011
Interest income	$ 21,150	$ 20,852	$ 20,813
Interest expense	7,899	8,354	9,456
Net interest income	**$ 13,251**	$ 12,498	$ 11,357
Investments (1)	$ 6,408	$ 5,375	$ 5,305
Insurance (2)	3,911	4,897	4,474
Trading	867	1,298	655
Banking (3)	4,244	3,799	3,596
Underwriting and other advisory	1,569	1,434	1,485
Other (4)	617	471	766
Non-interest income	**$ 17,616**	$ 17,274	$ 16,281
Total revenue	**$ 30,867**	$ 29,772	$ 27,638
Additional trading information			
Total trading revenue			
Net interest income	$ 1,661	$ 1,532	$ 1,377
Non-interest income	867	1,298	655
Total trading revenue	**$ 2,528**	$ 2,830	$ 2,032
Total trading revenue by product			
Interest rate and credit	$ 1,611	$ 1,923	$ 1,218
Equities	594	516	463
Foreign exchange and commodities	323	391	351
Total trading revenue	**$ 2,528**	$ 2,830	$ 2,032
Trading revenue (teb) by product			
Interest rate and credit	$ 1,611	$ 1,923	$ 1,218
Equities	972	945	920
Foreign exchange and commodities	323	391	351
Total trading revenue (teb)	**$ 2,906**	$ 3,259	$ 2,489
Trading revenue (teb) by product – Capital Markets			
Interest rate and credit	$ 1,350	$ 1,584	$ 968
Equities	942	925	906
Foreign exchange and commodities	286	323	289
Total Capital Markets trading revenue (teb)	**$ 2,578**	$ 2,832	$ 2,163

(1) Includes securities brokerage commissions, investment management and custodial fees, and mutual fund revenue.
(2) Includes premiums and investment and fee income. Investment income includes the change in fair value of investments backing policyholder liabilities and is largely offset in PBCAE.
(3) Includes service charges, foreign exchange revenue other than trading, card service revenue and credit fees.
(4) Includes other non-interest income, net gain (loss) on available-for-sale (AFS) securities and share of profit in associates.

2013 vs. 2012

Total revenue increased $1,095 million or 4% from last year.

Net interest income increased $753 million or 6%, mainly due to solid volume growth across all businesses in Canadian Banking. The inclusion of our acquisition of Ally Canada and strong growth in our lending portfolio in Capital Markets also contributed to the increase. These factors were partially offset by spread compression. In addition, the prior year was favourably impacted by a mortgage prepayment interest adjustment (prepayment adjustment) of $125 million resulting from a change in methodology with respect to the timing of recognition of mortgage prepayment interest, and interest income of $72 million related to a refund of taxes paid of $128 million due to the settlement of several tax matters with the CRA.

Investments revenue increased $1,033 million or 19%, mainly due to higher average fee-based client assets across all businesses in Wealth Management resulting from net sales and capital appreciation, and incremental revenue related to our additional 50% ownership of Investor Services.

Insurance revenue decreased $986 million or 20%, mainly due to a change in fair value of investments backing our policyholder liabilities resulting from an increase in long-term interest rates, largely offset in PBCAE.

Trading revenue in Non-interest income decreased $431 million or 33%. Total trading revenue of $2,528 million, which comprises trading-related revenue recorded in Net interest income and Non-interest income, decreased $302 million, or 11%, mainly due to lower fixed income trading revenue, largely in Europe, as a result of challenging market conditions.

Banking revenue increased $445 million or 12%, mainly due to strong growth in our loan syndication business primarily in the U.S. Higher service fee revenue and higher credit card transaction volumes in Personal & Commercial Banking, and increased foreign exchange revenue in Investor Services primarily driven by higher transaction volumes also contributed to the increase.

Underwriting and other advisory revenue increased $135 million or 9%, mainly due to higher debt origination reflecting solid issuance activity. Higher mergers and acquisitions (M&A) activity reflecting increased mandates mainly in Canada and the U.S. also contributed to the increase.

Other revenue increased $146 million or 31%, mainly due to gains on the disposition of our London Metal Exchange (LME) shares. In addition, the prior year was unfavourably impacted by our proportionate share of a securities exchange and trading loss of $36 million ($26 million after-tax) related to the acquisition of RBC Dexia.

2012 vs. 2011

Total revenue increased $2,134 million or 8% from 2011, mainly due to strong trading revenue reflecting improved market conditions compared to the unfavourable conditions in 2011 and strong growth in lending and increased loan syndication activity in our corporate and investment banking businesses. Strong volume growth across most of our Canadian banking businesses, higher average fee-based client assets in Wealth Management, and incremental revenue related to our additional 50% ownership of Investor Services also contributed to the increase. Volume growth across most insurance products, and the change in fair value of investments backing our policyholder liabilities, which was largely offset in PBCAE, also contributed to the increase. These factors were partially offset by losses compared to gains in 2011 in Other revenue and lower transaction volumes mainly in Wealth Management.

Provision for credit losses

2013 vs. 2012

Total PCL decreased $62 million or 5% from a year ago, mainly reflecting improved credit quality in our Canadian Banking and Caribbean portfolios, partially offset by higher provisions in Capital Markets and Wealth Management.

2012 vs. 2011

Total PCL increased $168 million or 15% as compared to 2011, mainly due to higher provisions related to Capital Markets and our Caribbean portfolios. Higher average loan balances reflecting volume growth in Canadian home equity products also contributed to the increase. These factors were partially offset by lower PCL in our Canadian credit card portfolio.

For further details on PCL, refer to the Credit quality performance section.

Insurance policyholder benefits, claims and acquisition expense

2013 vs. 2012

PBCAE decreased $837 million or 23% from a year ago, mainly due to the change in fair value of investments backing our policyholder liabilities, which was largely offset in insurance revenue. Favourable actuarial adjustments reflecting management actions and assumption changes also contributed to the decrease. These factors were partially offset by the charge of $160 million as a result of proposed legislation in Canada, which would affect the policyholders' tax treatment of certain individual life insurance policies.

2012 vs. 2011

PBCAE increased $263 million or 8% as compared to 2011, mainly due to the change in fair value of investments backing our policyholder liabilities, largely offset in insurance revenue, and volume growth across most products. These factors were partially offset by lower claims costs in Canadian insurance products and a reduction of policy acquisition cost-related liabilities reflecting changes to our proprietary distribution channel.

Non-interest expense

Table 7

(Millions of Canadian dollars)	2013	2012	2011
Salaries	$ 4,665	$ 4,313	$ 4,074
Variable compensation	3,924	3,650	3,300
Benefits and retention compensation	1,345	1,185	1,099
Share-based compensation	256	139	188
Human resources	$ 10,190	$ 9,287	$ 8,661
Impairment of goodwill and other intangibles	10	168	–
Equipment	1,135	1,020	960
Occupancy	1,246	1,170	1,076
Communications	742	764	746
Professional and other external services	1,003	949	958
Other expenses	1,901	1,802	1,766
Non-interest expense	$ 16,227	$ 15,160	$ 14,167

2013 vs. 2012

Non-interest expense increased $1,067 million or 7%, primarily reflecting incremental costs related to our additional 50% ownership of Investor Services and higher variable compensation mainly driven by higher revenue in Wealth Management. The inclusion of our acquisition of Ally Canada, higher costs in support of business growth, and higher litigation provisions and related legal costs in Capital Markets also contributed to the increase. These factors were partially offset by continued benefits from our ongoing focus on efficiency management activities, and lower variable compensation in Capital Markets reflecting a lower compensation to revenue ratio. In addition, the prior year was unfavourably impacted by an impairment loss and other costs of $188 million related to the acquisition of RBC Dexia.

2012 vs. 2011

Non-interest expense increased $993 million or 7% as compared to 2011, primarily due to higher variable compensation, largely driven by improved results in Capital Markets and higher revenue in Wealth Management. Higher costs in support of business and volume growth and the impact of a full quarter of non-interest expense related to our additional 50% ownership of Investor Services also contributed to the increase. In addition, our non-interest expense was negatively impacted by the loss relating to the acquisition of RBC Dexia noted above. The increase in non-interest expense was partially offset by continuing benefits from our efficiency management activities.

Income and other taxes

Table 8

(Millions of Canadian dollars, except percentage amounts)	2013	2012	2011
Income taxes	$ 2,188	$ 2,100	$ 2,010
Other taxes			
Goods and services sales taxes	$ 370	343	338
Payroll taxes	384	371	349
Capital taxes	85	80	75
Property taxes	119	124	107
Insurance premium taxes	50	50	49
Business taxes	25	21	18
	$ 1,033	$ 989	$ 936
Total income and other taxes	$ 3,221	$ 3,089	$ 2,946
Net income before income taxes	$ 10,617	$ 9,690	$ 8,980
Effective income tax rate	20.6%	21.7%	22.4%
Effective total tax rate (1)	27.6%	28.9%	29.7%

(1) Total income and other taxes as a percentage of net income before income taxes and other taxes.

2013 vs. 2012

Income tax expense increased $88 million or 4% from the prior year, mainly due to higher earnings before income tax. The effective income tax rate of 20.6% decreased 110 bps from 21.7% in the prior year, mainly due to favourable income tax adjustments in 2013 related to prior years. Our prior year results were favourably impacted by the release of $128 million of tax uncertainty provisions and interest income of $72 million ($53 million after-tax) related to a refund of taxes paid due to the settlement of several tax matters with the CRA in 2012.

Other taxes increased $44 million or 4%, mainly due to higher sales taxes and payroll taxes. In addition to the income and other taxes reported in our Consolidated Statements of Income, we recorded income tax recoveries of $352 million, as compared to income taxes of $72 million in 2012, in shareholders' equity, primarily reflecting foreign currency translation losses from hedging activities.

2012 vs. 2011

Income tax expense increased $90 million or 4% from 2011, mainly due to higher earnings before income taxes. The effective income tax rate of 21.7% decreased 70 bps from 22.4% in 2011, mainly due to a reduction in statutory Canadian corporate income tax rates and the release of the tax uncertainty provisions noted above. These factors were partially offset by a loss related to our acquisition of the remaining 50% stake of RBC Dexia, which was not deductible for tax purposes.

Other taxes increased $53 million or 6% from 2011, mainly due to higher payroll and property taxes.

Business segment results

Results by business segment — Table 9

(Millions of Canadian dollars, except percentage amounts)	2013 Personal & Commercial Banking	2013 Wealth Management	2013 Insurance	2013 Investor & Treasury Services	2013 Capital Markets (1)	2013 Corporate Support (1)	2013 Total	2012 Total	2011 Total
Net interest income	$ 9,435	$ 396	$ –	$ 671	$ 2,872	$ (123)	$ 13,251	$ 12,498	$ 11,357
Non-interest income	3,788	5,091	3,928	1,133	3,708	(32)	17,616	17,274	16,281
Total revenue	$ 13,223	$ 5,487	$ 3,928	$ 1,804	$ 6,580	$ (155)	$ 30,867	$ 29,772	$ 27,638
PCL	997	51	–	–	188	3	1,239	1,301	1,133
PBCAE	–	–	2,784	–	–	–	2,784	3,621	3,358
Non-interest expense	6,240	4,201	549	1,343	3,844	50	16,227	15,160	14,167
Net income before income taxes	$ 5,986	$ 1,235	$ 595	$ 461	$ 2,548	$ (208)	$ 10,617	$ 9,690	$ 8,980
Income tax	1,548	336	(2)	118	838	(650)	2,188	2,100	2,010
Net income from continuing operations	$ 4,438	$ 899	$ 597	$ 343	$ 1,710	$ 442	$ 8,429	$ 7,590	$ 6,970
Loss from discontinued operations	–	–	–	–	–	–	–	(51)	(526)
Net income	$ 4,438	$ 899	$ 597	$ 343	$ 1,710	$ 442	$ 8,429	$ 7,539	$ 6,444
ROE from continuing operations	31.0%	16.1%	41.6%	16.7%	14.2%	n.m.	19.4%	19.5%	20.3%
ROE							19.4%	19.3%	18.7%
Average assets	$ 356,000	$ 21,600	$ 11,900	$ 83,100	$ 368,300	$ 12,300	$ 853,200	$ 810,600	$ 778,900

(1) Net interest income, total revenue and net income before income taxes are presented in Capital Markets on a taxable equivalent basis (tab). The taxable equivalent basis adjustment is eliminated in the Corporate Support segment. For a further discussion, refer to the How we measure and report our business segments section.

How we measure and report our business segments

Our management reporting framework is intended to measure the performance of each business segment as if it were a stand-alone business and reflect the way that the business segment is managed. This approach is intended to ensure that our business segments' results include all applicable revenue and expenses associated with the conduct of their business and depicts how management views those results. The following highlights the key aspects of how our business segments are managed and reported:

- Personal & Commercial Banking reported results include securitized Canadian residential mortgage and credit card loans and related amounts for income and provisions for credit losses on impaired loans.
- Wealth Management reported results also include disclosure in U.S. dollars as we review and manage the results of certain businesses largely in this currency.
- Insurance reported results include the change in fair value of investments mainly backing our Canadian life policyholder liabilities recorded as revenue, which is largely offset in PBCAE.
- Capital Markets results are reported on a taxable equivalent basis (teb), which grosses up net interest income from certain tax-advantaged sources (Canadian taxable corporate dividends) to their effective taxable equivalent value with a corresponding offset recorded in the provision for income taxes. We record the elimination of the teb adjustments in Corporate Support. We believe these adjustments are useful and reflect how Capital Markets manages its business, since it enhances the comparability of revenue and related ratios across taxable revenue and our principal tax-advantaged source of revenue. The use of teb adjustments and measures may not be comparable to similar GAAP measures or similarly adjusted amounts disclosed by other financial institutions.
- Corporate Support results include all enterprise-level activities that are undertaken for the benefit of the organization that are not allocated to our five business segments, including residual asset/liability management results, impact from income tax adjustments, net charges associated with unattributed capital and PCL on loans not yet identified as impaired.

Key methodologies

The following outlines the key methodologies and assumptions used in our management reporting framework. These are periodically reviewed by management to ensure they remain valid.

Expense allocation

To ensure that our business segments' results include expenses associated with the conduct of their business, we allocate costs incurred or services provided by Technology & Operations and Functions, which were directly undertaken or provided on the business segments' behalf. For other costs not directly attributable to our business segments, including overhead costs and other indirect expenses, we use our management reporting framework for allocating these costs to each business segment in a manner that is intended to reflect the underlying benefits.

Capital attribution

Our framework also determines the attribution of capital to our business segments in a manner that is intended to consistently measure and align economic costs with the underlying benefits and risks associated with the activities of each business segment. The amount of capital assigned to each business segment is referred to as attributed capital. Unattributed capital and associated net charges are reported in Corporate Support. For further information, refer to the Capital management section.

Funds transfer pricing

A funds transfer pricing methodology is used to allocate interest income and expense by product to each business segment. This allocation considers the interest rate risk, liquidity and funding risk and regulatory requirements of each of our business segments. We base transfer pricing on external market costs and each business segment fully absorbs the costs of running its business. Our business segments may retain certain interest rate exposures subject to management approval that would be expected in the normal course of operations.

Net interest margin
We report net interest margin (NIM) for Personal & Commercial Banking and our Canadian banking businesses based on average earning assets which includes only those assets that give rise to net interest income including deposits with other banks, certain securities and loans.

PCL
PCL are recorded to recognize estimated losses on impaired loans, as well as losses that have been incurred but are not yet identified in our loans portfolio. This portfolio includes on-balance sheet exposures, such as loans and acceptances, and off-balance sheet items such as letters of credit, guarantees and unfunded commitments. PCL on impaired loans are included in the results of each business segment to fully reflect the appropriate expenses related to the conduct of each business segment. PCL on loans not yet identified as impaired are included in Corporate Support, as Group Risk Management effectively controls this through its monitoring and oversight of various lending portfolios throughout the enterprise. For details on our accounting policy on Allowance for credit losses, refer to Note 2 of our 2013 Annual Consolidated Financial Statements.

Key performance and non-GAAP measures

Performance measures

Return on common equity
We measure and evaluate the performance of our consolidated operations and each business segment using a number of financial metrics such as net income and ROE. We use ROE, at both the consolidated and business segment levels, as a measure of return on total capital invested in our business. Management views the business segment ROE measure as a useful measure for supporting investment and resource allocation decisions because it adjusts for certain items that may affect comparability between business segments and certain competitors.

Our consolidated ROE calculation is based on net income available to common shareholders divided by total average common equity for the period. Business segment ROE calculations are based on net income available to common shareholders divided by average attributed capital for the period. For each segment, average attributed capital includes the capital required to underpin various risks as described in the Capital Management section and amounts invested in goodwill and intangibles.

The attribution of capital and risk capital involves the use of assumptions, judgments and methodologies that are regularly reviewed and revised by management as necessary. Changes to such assumptions, judgments and methodologies can have a material effect on the segment ROE information that we report. Other companies that disclose information on similar attributions and related return measures may use different assumptions, judgments and methodologies.

The following table provides a summary of our ROE calculations:

Calculation of ROE — **Table 10**

	2013							2012	2011
(Millions of Canadian dollars, except percentage amounts)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total	Total
Net income available to common shareholders from continuing operations	$ 4,349	$ 866	$ 589	$ 330	$ 1,640	$ 304	$ 8,078	$ 7,235	$ 6,611
Loss to common shareholders from discontinued operations							–	(51)	(526)
Net income available to common shareholders	$ 4,349	$ 866	$ 589	$ 330	$ 1,640	$ 304	$ 8,078	$ 7,184	$ 6,085
Average common equity from continuing operations (1), (2)	$ 14,050	$ 5,400	$ 1,400	$ 2,000	$ 11,500	$ 7,300	$ 41,650	$ 36,750	$ 29,800
Average common equity from discontinued operations (1)							–	400	2,800
Total average common equity (1), (2)	$ 14,050	$ 5,400	$ 1,400	$ 2,000	$ 11,500	$ 7,300	$ 41,650	$ 37,150	$ 32,600
ROE (3)	31.0%	16.1%	41.6%	16.7%	14.2%	n.m.	19.4%	19.3%	18.7%

(1) Average common equity represent rounded figures.
(2) The amounts for the segments are referred to as attributed capital or economic capital.
(3) Calculated under Basel III, including comparative periods. ROE is based on actual balances of average common equity before rounding.
n.m. not meaningful

Embedded value for Insurance operations
Embedded value is a measure of shareholder value embedded in the balance sheet of our Insurance segment, excluding any value from future new sales. We use the change in embedded value between reporting periods as a measure of the value created by the insurance operations during the period.

We define embedded value as the value of equity held in our Insurance segment and the value of in-force business (existing policies). The value of in-force business is calculated as the present value of future expected earnings on in-force business less the present value of capital required to support in-force business. We use discount rates that are consistent with those used by other insurance companies. Required capital uses the capital frameworks in the jurisdictions in which we operate.

Key drivers affecting the change in embedded value from period to period are new sales, investment performance, claims and policyholder experience, change in actuarial assumptions, changes in foreign exchange rates and changes in shareholder equity arising from transfers in capital.

Embedded value does not have a standardized meaning under GAAP and may not be directly comparable to similar measures disclosed by other companies. Given that this measure is specifically used for our Insurance segment and involves the use of discount rates to present value the future expected earnings and capital required for the in-force business, reconciliation to financial statements information is not applicable.

Non-GAAP measures

Economic profit

Economic profit is net income excluding the after-tax effect of amortization of other intangibles less a capital charge for use of attributed capital. It measures the return generated by our businesses in excess of our cost of capital, thus enabling users to identify relative contributions to shareholder value. Economic profit is a non-GAAP measure, does not have a standardized meaning under GAAP and may not be comparable to similar measures disclosed by other financial institutions.

The capital charge includes a charge for common equity and preferred shares. We prospectively revised our cost of equity in the first quarter of 2013 to 8.5% from 9.5% in 2012, largely as a result of the continuing low interest rate environment. Effective Q1 2014, our cost of equity will increase to 9.0% due to higher long-term interest rates.

The following table provides a summary of our Economic profit on a continuing basis:

Economic profit from continuing operations — Table 11

	2013							2012	2011
(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total	Total
Net income from continuing operations	$ 4,438	$ 899	$ 597	$ 343	$ 1,710	$ 442	$ 8,429	$ 7,590	$ 6,970
add: Non-controlling interests	(4)	–	–	(1)	–	(93)	(98)	(97)	(101)
After-tax effect of amortization of other intangibles	26	67	–	21	1	2	117	112	123
Goodwill and intangibles writedown	–	–	–	–	–	–	–	168	–
Adjusted net income	$ 4,460	$ 966	$ 597	$ 363	$ 1,711	$ 351	$ 8,448	$ 7,773	$ 6,992
less: Capital charge	1,285	492	129	180	1,053	653	3,792	3,744	3,213
Economic profit from continuing operations	$ 3,175	$ 474	$ 468	$ 183	$ 658	$ (302)	$ 4,656	$ 4,029	$ 3,779

Results excluding specified items

Our results include specified items as described below. We believe excluding these specified items from our results is more indicative of our ongoing operating results, which will provide readers with a better understanding of management's perspective on our performance, and should enhance the comparability of our financial performance for the fiscal year ended October 31, 2013 with the fiscal year ended October 31, 2012. These measures are non-GAAP, do not have a standardized meaning under GAAP and may not be comparable to similar measures disclosed by other financial institutions.

A charge related to proposed legislation in Canada relating to certain individual life insurance policies in Insurance

Our Insurance results were impacted by a charge of $160 million ($118 million after-tax) recorded in the current year, as a result of proposed legislation in Canada, which would affect the policyholders' tax treatment of certain individual life insurance policies.

The following table provides calculations of our Insurance results excluding this charge:

Insurance — Table 12

	2013		
(Millions of Canadian dollars, except percentage amounts)	As reported	Charge related to certain individual life insurance policies	Adjusted
Revenue	$ 3,928	$ –	$ 3,928
PBCAE	2,784	(160)	2,624
Non-interest expense	549	–	549
Net income before income taxes	$ 595	$ 160	$ 755
Net income	$ 597	$ 118	$ 715
Selected balance and other information			
Net income available to common shareholders	$ 589	$ 118	$ 707
Average common equity	1,400	–	1,400
ROE	41.6%	–	49.9%

Acquisition of the remaining 50% stake of RBC Dexia included in Investor & Treasury Services

Our Investor & Treasury Services results were impacted in the prior year by a loss of $224 million ($213 million after-tax) related to our acquisition of the remaining 50% stake of RBC Dexia.

The following table provides calculations of our Investor & Treasury Services results and measures excluding this specified item:

Investor & Treasury Services — **Table 13**

(Millions of Canadian dollars, except percentage amounts)	2012 As reported	2012 Loss related to the acquisition of the remaining 50% stake of RBC Dexia (1)	2012 Adjusted
Net interest income	$ 668	$ –	$ 668
Non-interest income	657	36	693
Total Revenue	$ 1,325	36	$ 1,361
Non-interest expense	1,134	(188)	946
Net income before income taxes	$ 191	$ 224	$ 415
Net income	$ 85	$ 213	$ 298
Selected balances and other information			
Net income available to common shareholders	$ 85	$ 213	$ 298
Average common equity	1,700		1,700
ROE (2)	4.3%		16.9%

(1) Consisted of an impairment loss of $168 million (before- and after-tax), comprised of a writedown of goodwill and other intangibles, other costs relating to the acquisition of $20 million ($19 million after-tax), and a loss of $36 million ($26 million after-tax), which was our proportionate share of the loss recorded by RBC Dexia from the securities exchange with Dexia Group and trading losses on the sale of a majority of the securities received in the exchange.

(2) Based on actual balances before rounding.

Personal & Commercial Banking

Personal & Commercial Banking is comprised of our personal and business banking operations, as well as our expanded auto financing and certain retail investment businesses, including our online discount brokerage channel, and operates through two business lines: Canadian Banking, and Caribbean & U.S. Banking. We provide services to 13 million individual, business and institutional clients across Canada, the Caribbean and the U.S. In Canada, we provide a broad suite of financial products and services through our extensive branch, automated teller machine (ATM), online and telephone banking networks, as well as through a large number of proprietary sales professionals. In the Caribbean, we offer a broad range of financial products and services to individuals, business clients and public institutions in various markets. In the U.S., we serve the cross-border banking needs of Canadian clients within the U.S. through online channels, as well as the banking product needs of our U.S. wealth management clients.

Our banking-related operations compete in the Canadian financial services industry, which consists of other Schedule I banks, independent trust companies, foreign banks, credit unions, caisses populaires, and auto financing companies. We maintain top rankings in market share in this competitive environment for most retail and business financial product categories, and have the largest branch network, the most ATMs and the largest mobile sales network across Canada. In the Caribbean, our competition includes banks, trust companies and investment management companies serving retail and corporate customers and public institutions. We are the second largest bank as measured by assets in the English Caribbean, with 116 branches in 19 countries and territories. In the U.S., we compete primarily with other Canadian banking institutions with operations in the U.S.

Economic and market review

We continued to see solid volume growth across most of our Canadian banking businesses, reflecting gradual improvements in the Canadian economy and the continuing low interest rate environment. Improved credit loss rates across our portfolios reflected stable and improving labour markets. Our businesses continued to be impacted by spread compression and certain regulatory measures which scaled back the pace of borrowing. In the Caribbean, unfavourable economic conditions continued to negatively impact our results through spread compression and lower loan volumes.

Highlights

- We completed the acquisition of Ally Canada on February 1, 2013 and fully integrated it in 2013, adding scale to our existing consumer and commercial auto financing businesses and extending our leadership position in Canadian auto financing.
- We were named “Best Retail Bank in North America” by *Retail Banker International* for the second consecutive year and we took the top spot in the highly competitive “Innovation in Customer Service” category by *Retail Banker International*.
- We were named “Best Commercial Bank in Canada” in World Finance’s 2013 Banking Awards with strong leadership position and overall financial strength and stability in Canada.
- We launched a co-branded Target‡ RBC MasterCard‡ to provide clients instant savings at Target stores or earnings towards Target‡ GiftCard Rewards based on purchases made everywhere else.
- We continued to innovate by introducing RBC Secure Cloud, a mobile payments service that allows clients to more safely and securely pay for purchases using their mobile devices.
- In the Caribbean, we continued to focus on improving and sustaining performance through strategic growth, client care, market focus, and sound banking practices across the region in a difficult operating environment.

Outlook and priorities

Financial conditions in Canada are expected to remain favourable, supported by the continuing low rate environment. We expect continued volume growth across most of our products. However, due to moderating housing activity resulting from regulatory changes and elevated consumer debt levels, growth in our home equity products and personal loans is expected to slow. We anticipate our business lending will remain strong as business investment is expected to improve further, reflecting favourable credit conditions and the continuing low interest rate environment. Spread compression related to low interest rates and the highly competitive environment is expected to continue to put pressure on our net interest margins.

In the Caribbean, challenging market conditions and a slow economic recovery continue to constrain our outlook. Net interest margins will likely remain challenged by strong competition and spread compression. However, efficiency is expected to improve and result in volume growth as well as a reduction in expenses as we leverage our common operating model in our Caribbean platforms.

For further details on our general economic review and outlook, refer to the Economic and market review and outlook section.

Key strategic priorities for 2014

In Canada, our priorities are to continue to:

- Provide a superior client experience through relevant and tailored advice in order to achieve industry leading volume growth.
- Leverage our sales capabilities, strategic partnerships and innovative distribution channels to help broaden our client base and strengthen our distribution channels.
- Enhance our services and products in the emerging payments market.
- Streamline our business processes to improve the customer experience and maintain our industry-leading efficiency.

In the Caribbean and the U.S., we are focused on:

- Continuing to integrate our businesses in the Caribbean to reduce costs and enhancing the client experience by simplifying the way we do business, and improving productivity in our banking network.
- Strengthening the cross-border business in the U.S. and continuing to assess the market and our strategic business development options.

Personal & Commercial Banking — **Table 14**

(Millions of Canadian dollars, except number of and percentage amounts and as otherwise noted)	2013	2012	2011
Net interest income	$ 9,435	$ 9,061	$ 8,515
Non-interest income	3,788	3,582	3,510
Total revenue	13,223	12,643	12,025
PCL	997	1,167	1,142
Non-interest expense	6,240	5,932	5,682
Net income before income taxes	5,986	5,544	5,201
Net income	$ 4,438	$ 4,088	$ 3,740
Revenue by business			
Canadian Banking	$ 12,422	$ 11,815	$ 11,199
Caribbean & U.S. Banking	801	828	826
Key ratios			
ROE	31.0%	31.5%	30.9%
NIM (1)	2.78%	2.86%	2.86%
Efficiency ratio (2)	47.2%	46.9%	47.3%
Operating leverage	(0.6)%	0.7%	n.a.
Selected average balance sheet information			
Total assets	$ 356,000	$ 331,500	$ 310,700
Total earning assets (3)	338,900	316,400	297,200
Loans and acceptances (3)	337,700	315,400	294,800
Deposits	262,300	243,900	221,200
Attributed capital	14,050	12,700	11,800
Other information			
AUA (4)	$ 192,200	$ 179,200	$ 165,900
AUM	3,400	3,100	2,700
Number of employees (FTE)	37,997	38,231	38,216
Effective income tax rate	25.9%	26.3%	28.1%
Credit information			
Gross impaired loans as a % of average net loans and acceptances	0.55%	0.58%	0.70%
PCL on impaired loans as a % of average net loans and acceptances	0.30%	0.37%	0.39%

(1) NIM is calculated as Net interest income divided by Average total earning assets.
(2) Efficiency ratio is calculated as Non-interest expense divided by Total revenue.
(3) Average total earning assets and average loans and acceptances include average securitized residential mortgages and credit card loans for the year of $53.9 billion and $7.2 billion, respectively (2012 – $44.9 billion and $7.3 billion; 2011 – $42.0 billion and $4.0 billion).
(4) AUA includes securitized residential mortgages and credit card loans as at October 31, 2013 of $25.4 billion and $7.2 billion respectively (October 31, 2012 – $31.0 billion and $7.4 billion; October 31, 2011 – $32.1 billion and $3.9 billion).
n.a. not applicable

Financial performance

2013 vs. 2012

Net income increased $350 million or 9% compared to the prior year, reflecting solid volume growth across all our domestic businesses, improved credit quality in our Canadian and Caribbean portfolios, and the inclusion of our acquisition of Ally Canada. These factors were partially offset by spread compression, and a provision related to post-employment benefits and restructuring charges in the Caribbean of $40 million ($31 million after-tax). The prior year was favourably impacted by a mortgage prepayment interest adjustment (prepayment adjustment) of $125 million ($92 million after-tax) resulting from a change in methodology with respect to the timing of recognition of mortgage prepayment interest.

Total revenue increased $580 million or 5% from the previous year, mainly due to solid volume growth across all businesses in Canada, and the inclusion of our acquisition of Ally Canada, partially offset by spread compression. The prior year was favourably impacted by the prepayment adjustment as noted above.

Net interest margin decreased 8 bps as the prior year was favourably impacted by 4 bps due to the prepayment adjustment noted above. The continuing low interest rate environment and competitive pricing pressures also contributed to the decrease.

PCL decreased $170 million, and the PCL ratio decreased 7 bps, mainly due to lower PCL in both our Canadian and Caribbean portfolios, reflecting improved credit quality. For further details, refer to the Credit quality performance section.

Non-interest expense increased $308 million or 5%, mainly due to the inclusion of our acquisition of Ally Canada, higher costs in support of business growth, including higher staff costs, and higher pension expense. The provision related to post-employment benefits and restructuring charges in the Caribbean also contributed to the increase. These factors were partially offset by continuing benefits from our ongoing focus on efficiency management activities.

Average loans and acceptances increased $22 billion or 7%, mainly due to growth in Canadian home equity products, personal loans, and business loans. Average deposits increased $18 billion or 8%, reflecting solid growth in both business and personal deposits.

2012 vs. 2011

Net income was up $348 million or 9% from 2011, reflecting strong volume growth across most of our domestic businesses, a lower effective tax rate in Canada and the favourable prepayment adjustment as noted above. These factors were partially offset by continued spread compression in Canada as well as higher PCL in the Caribbean.

Total revenue was up $618 million or 5% from 2011, reflecting strong volume growth in Canada in personal deposits, residential mortgages, business deposits and loans and personal loans. The favourable impact of the prepayment adjustment as well as higher credit card transaction volumes also contributed to the increase.

Net interest margin remained flat as the favourable impact of the prepayment adjustment was largely offset by spread compression reflecting the continuing low interest rate environment.

PCL was up $25 million or 2% from 2011, mainly due to higher provisions in our Caribbean portfolio and higher PCL in our Canadian secured retail and business lending portfolios. These factors were partially offset by lower write-offs related to our Canadian credit card portfolio.

Non-interest expense was up $250 million or 4% from 2011, mainly due to higher costs in support of business growth in Canada. Higher staff costs in the Caribbean and set-up costs in our U.S. cross border banking business also contributed to the increase. These factors were partially offset by continuing benefits from our ongoing focus on efficiency management activities. In addition, our results in 2011 included net stamp tax and accounting adjustments in Caribbean banking, which favourably impacted our results in that year.

Average loans and acceptances increased $21 billion or 7% from 2011, mainly due to continued growth in Canadian home equity and business and personal lending products. Average deposits were up $23 billion or 10% from 2011, primarily in Canada, reflecting solid growth in personal and business deposits.

In Canada, we operate through three business lines: Personal Financial Services, Business Financial Services and Cards and Payments Solutions. The following provides a discussion of our consolidated Canadian Banking results.

Canadian Banking financial highlights — **Table 15**

(Millions of Canadian dollars, except number of and percentage amounts and as otherwise noted)	2013	2012	2011
Net interest income	$ 8,874	$ 8,483	$ 7,960
Non-interest income	3,548	3,332	3,239
Total revenue	12,422	11,815	11,199
PCL	910	1,017	1,033
Non-interest expense	5,530	5,258	5,082
Net income before income taxes	5,982	5,540	5,084
Net income	$ 4,414	$ 4,085	$ 3,664
Revenue by business			
Personal Financial Services	$ 6,948	$ 6,591	$ 6,192
Business Financial Services	2,990	2,894	2,750
Cards and Payment Solutions	2,484	2,330	2,257
Key ratios			
ROE	38.1%	39.3%	38.0%
NIM (1)	2.72%	2.78%	2.77%
Efficiency ratio (2)	44.5%	44.5%	45.4%
Operating leverage	0.0%	2.0%	n.a.
Selected average balance sheet information			
Total assets	$ 338,600	$ 315,400	$ 296,100
Total earning assets (3)	326,600	305,300	287,200
Loans and acceptances (3)	330,400	307,900	287,300
Deposits	248,100	230,300	208,600
Attributed capital	11,400	10,200	9,450
Other information			
AUA (4)	183,600	171,100	158,000
Number of employees (FTE)	31,956	31,787	31,607
Effective income tax rate	26.2%	26.3%	27.9%
Credit information			
Gross impaired loans as a % of average net loans and acceptances	0.36%	0.37%	0.44%
PCL on impaired loans as a % of average net loans and acceptances	0.28%	0.33%	0.36%

(1) NIM is calculated as Net interest income divided by Average total earning assets.
(2) Efficiency ratio is calculated as Non-interest expense divided by Total revenue.
(3) Average total earning assets and average loans and acceptances include average securitized residential mortgages and credit card loans for the year of $53.9 billion and $7.2 billion, respectively (2012 – $44.9 billion and $7.3 billion; 2011 – $42.0 billion and $4.0 billion).
(4) AUA includes securitized residential mortgages and credit card loans as at October 31, 2013 of $25.4 billion and $7.2 billion respectively (October 31, 2012 – $31.0 billion and $7.4 billion; October 31, 2011 – $32.1 billion and $3.9 billion).
n.a. not applicable

Financial performance

2013 vs. 2012

Net income increased $329 million or 8%, compared to the prior year, reflecting solid volume growth across all businesses, improved credit quality, and the contribution of our acquisition of Ally Canada of $65 million, net of integration and intangible amortization costs of $58 million ($43 million after-tax). These factors were partially offset by spread compression. The prior year was favourably impacted by a mortgage prepayment adjustment (prepayment adjustment) of $125 million ($92 million after-tax) resulting from a change in methodology with respect to the timing of recognition of mortgage prepayment interest.

Total revenue increased $607 million or 5%, from the previous year, primarily due to solid volume growth across all businesses, including higher credit card transaction volumes and higher mutual fund assets. The inclusion of our acquisition of Ally Canada contributed $222 million during the year. These factors were partially offset by spread compression. The prior year results were favourably impacted by the prepayment adjustment as noted above.

Net interest margin decreased 6 bps from the previous year as the prior year was favourably impacted by 4 bps due to the prepayment adjustment noted above. The continuing low interest rate environment and competitive pricing pressures also contributed to the decrease.

PCL decreased $107 million, and the PCL ratio decreased 5 bps, mainly due to improved credit quality in our business, credit card and personal loans portfolios.

Non-interest expense increased $272 million or 5%, largely reflecting the inclusion of our acquisition of Ally Canada which contributed $119 million, including integration and intangible amortization costs of $58 million. Higher costs in support of business growth, including higher staff costs, and higher pension expense also contributed to the increase. These factors were partially offset by continuing benefits from our ongoing focus on efficiency management activities.

Average loans and acceptances increased $23 billion or 7%, mainly due to growth in home equity products, personal loans, and business loans, as well as the inclusion of our acquisition of Ally Canada. Average deposits increased $18 billion or 8%, primarily reflecting growth in business and personal deposits.

2012 vs. 2011

Net income increased $421 million or 11% from 2011, reflecting strong volume growth across most of our businesses, a lower effective tax rate and the favourable prepayment adjustment noted above. These factors were partially offset by spread compression.

Total revenue increased $616 million or 6% from 2011, reflecting strong volume growth in personal deposits, residential mortgages, business deposits and loans and personal loans. The favourable prepayment adjustment and higher credit card transaction volumes also contributed to the increase. These factors were partially offset by spread compression.

Net interest margin increased 1 bp mainly due to the prepayment adjustment and a favourable change in product mix, largely offset by spread compression reflecting the low interest rate environment.

PCL decreased $16 million or 2% from 2011, mainly due to lower write-offs related to our credit card portfolio, partially offset by higher provisions in our secured retail and business lending portfolios.

Non-interest expense increased $176 million or 3% from 2011, mainly due to higher costs in support of business growth, partially offset by continuing benefits from our ongoing focus on efficiency management activities.

Business line review

Personal Financial Services

Personal Financial Services focuses on meeting the needs of our individual Canadian clients at every stage of their lives through a wide range of financing and investment products and services, including home equity financing, personal lending, deposit accounts, Canadian private banking, indirect lending (including auto financing), mutual funds and self-directed brokerage accounts, and Guaranteed Investment Certificates (GICs). We rank first or second in market share for most personal banking products in Canada and our retail banking network is the largest in Canada with 1,255 branches and 4,622 ATMs.

Financial performance

Total revenue increased $357 million or 5% compared to the prior year, reflecting solid volume growth across all businesses, and the inclusion of our acquisition of Ally Canada. These factors were partially offset by lower spreads. The prior year results were favourably impacted by the prepayment adjustment as noted above.

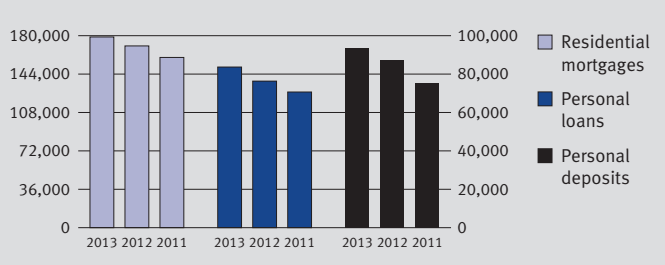
Average residential mortgages increased by 5% compared to 2012, resulting from the ongoing low interest rate environment and improving housing market activity. Average personal loans grew by 10% from last year largely due to the inclusion of our acquisition of Ally Canada, and solid growth in indirect lending and home equity products. Average personal deposits grew by 7% from last year, as new and existing clients continued to use savings and other deposit products.

Selected highlights — Table 16

(Millions of Canadian dollars, except number of)	2013	2012	2011
Total revenue	**$ 6,948**	$ 6,591	$ 6,192
Other information (average)			
Residential mortgages	**178,700**	170,400	159,700
Personal loans	**83,800**	76,300	70,500
Personal deposits	**93,700**	87,300	75,200
Personal GICs	**63,100**	59,100	56,900
Branch mutual fund balances (1)	**95,300**	82,300	74,500
AUA – Self-directed brokerage (1)	**53,300**	48,900	45,500
Number of:			
New deposit accounts opened (thousands)	**1,285**	1,204	1,158
Branches	**1,255**	1,239	1,214
ATM	**4,622**	4,724	4,293

(1) Represents year-end spot balances.

Average residential mortgages, personal loans and deposits
(Millions of Canadian dollars)



Business Financial Services

Business Financial Services offers a wide range of lending, leasing, deposit, investment, foreign exchange, cash management, auto dealer financing (floorplan), and trade products and services to small, medium-sized and commercial businesses and agriculture and agribusiness clients across Canada. Our business banking network has the largest team of relationship managers and specialists in the industry. Our strong commitment to our clients has resulted in our leading market share in business loans and deposits.

Financial performance

Total revenue increased $96 million or 3% compared to the prior year, primarily due to solid volume growth in business deposits and business loans, and the inclusion of our acquisition of Ally Canada, partially offset by lower spreads.

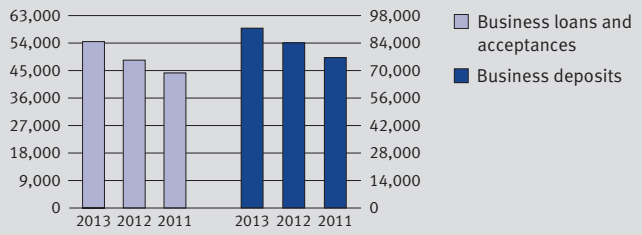
Average loans and acceptances were up 12% and average business deposits were up 9%, due to the acquisition of new clients, along with increased activity from existing clients.

Selected highlights — Table 17

(Millions of Canadian dollars)	2013	2012	2011
Total revenue	**$ 2,990**	$ 2,894	$ 2,750
Other information (average)			
Business loans and acceptances	**54,300**	48,300	44,200
Business deposits (1)	**91,300**	83,900	76,500

(1) Includes GIC balances.

Average business loans and acceptances and business deposits
(Millions of Canadian dollars)



Card and Payment Solutions

Cards and Payment Solutions provides a wide array of convenient credit cards with loyalty and reward benefits, and payment products and solutions within Canada. We have over 6.5 million credit card accounts and have approximately 22% market share of Canada's credit card purchase volume.

In addition, this business line includes our 50% interest in Moneris Solutions, Inc., our merchant card processing joint venture with the Bank of Montreal.

Financial performance

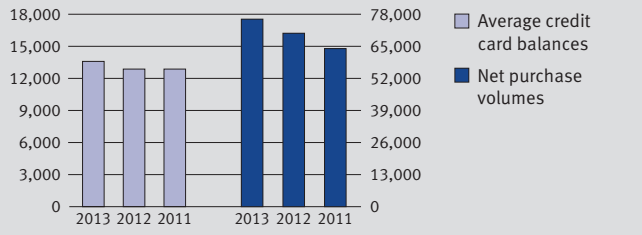
Total revenue increased $154 million or 7%, compared to the prior year, driven by higher credit card transaction volumes, higher balances, and higher spreads, partially offset by higher points costs.

Average credit card balances increased 5% and net purchase volumes increased 8% due to strength in new account acquisitions, driving higher active account growth.

Selected highlights — Table 18

(Millions of Canadian dollars)	2013	2012	2011
Total revenue	**$ 2,484**	$ 2,330	$ 2,257
Other information			
Average credit card balances	**13,600**	12,900	12,900
Net purchase volumes	**76,200**	70,500	64,300

Average credit card balances and net purchase volumes
(Millions of Canadian dollars)



Caribbean & U.S. Banking

Our Caribbean banking business offers a comprehensive suite of banking products and services, as well as international financing and trade promotion services through an extensive branch and ATM network, and online banking.

Our U.S. cross-border banking business serves the needs of our Canadian clients within the U.S. through online channels, and offers a broad range of financial products and services to individuals across all 50 states. As well, we serve the banking product needs of our U.S. wealth management clients.

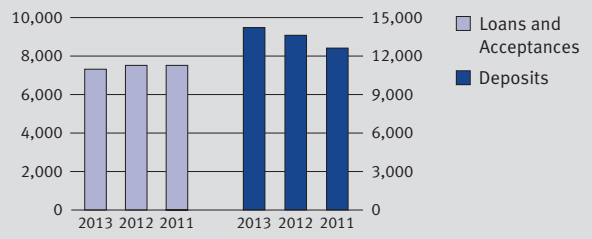
Financial performance
Total revenue decreased $27 million or 3% from the prior year, due to lower loan balances reflecting continuing unfavourable economic conditions, as well as spread compression in the Caribbean resulting from the low interest rate environment and a change in product mix, partially offset by the favourable impact of the weaker Canadian dollar.

Average loans and acceptances decreased by $200 million or 3%, primarily due to lower loan balances driven by weak economic conditions in the Caribbean. Average deposits increased by $600 million or 4%, mostly due to increased liquidity in the Caribbean leading to higher savings and current account balances.

Selected highlights — Table 19

(Millions of Canadian dollars, except number of and percentage amounts)	2013	2012	2011
Total revenue	**$ 801**	$ 828	$ 826
Other information			
Net interest margin	**4.57%**	5.21%	5.52%
Average loans and acceptances	**7,300**	7,500	7,500
Average deposits	**14,200**	13,600	12,600
AUA	**8,600**	8,100	7,900
AUM	**3,400**	3,100	2,700
Average AUA	**8,300**	8,000	7,500
Average AUM	**3,300**	2,800	2,600
Number of:			
Branches	**116**	121	123
ATM	**351**	341	333

Average loans and deposits (Millions of Canadian dollars)



Wealth Management

Wealth Management comprises Canadian Wealth Management, U.S. & International Wealth Management and Global Asset Management (GAM). We serve affluent, high net worth (HNW) and ultra-high net worth (UHNW) clients in over 180 countries from our offices in key financial centres mainly in Canada, the U.S., the U.K., continental Europe, and Asia with a comprehensive suite of investment, trust, banking, credit and other wealth management solutions. We also provide asset management products and services directly to institutional and individual clients as well as through RBC distribution channels and third-party distributors. Our competitive environment is discussed below in each business.

Economic and market review
Economic and financial market conditions in Canada and the U.S. gradually improved during the year, although market conditions remained uncertain in some European countries, driving higher average fee-based client assets reflecting net sales and capital appreciation and higher transactions volumes. The continuing low interest rate environment resulted in spread compression and money market fee waivers.

Highlights
- Client assets have surpassed $1 trillion, a 12% increase from last year largely reflecting capital appreciation and net sales. We realized strong growth in our credit and deposit-taking businesses, with loans up 22% and deposits up 9% compared to last year.
- In connection with growing our high-performing global asset management business, we maintained our leadership position in retail asset management with a 14.5% market share, continued to leverage BlueBay Asset Management's (BlueBay) leading fixed income and alternatives expertise to expand our product offering in Canada and the U.S. and deepened our relationships with HNW and UHNW clients globally.
- We continued to execute on our growth strategies to deliver integrated global wealth management advice, solutions and services to HNW and UHNW clients. In 2013 we were recognized as a top 10 global wealth manager, ranking sixth globally by client assets for the third consecutive year in Scorpio Partnership's 2013 Global Private Banking KPI Benchmark. We received numerous significant industry awards from around the world during the year, reflecting the strength of our global capabilities and commitment to client service.
- In Canada, our full service wealth management business continued to extend its industry lead in HNW share.
- Outside Canada, we have grown client assets by 14% through our continued focus on improving advisor productivity and efficiency in the U.S., and the execution of our long-term growth strategy outside North America.

Outlook and priorities
We expect that as global market conditions continue to improve, our revenues will grow driven by higher client assets and transaction volumes. The low interest rate environment is expected to continue, and we anticipate ongoing interest rate spread compression and continuing money market fund fee waivers in the U.S. We will continue to leverage our reputation, brand and financial strength to increase our market share of HNW and UHNW globally. For further details on our general economic review and outlook, refer to the Economic and market review and outlook section.

Key strategic priorities for 2014
- Leverage and grow our high-performing asset management business.
- Focus growth on the HNW and UHNW client segment in our geographic wealth businesses.
- Leverage the RBC brand and competitive strengths to seamlessly bring the full value of RBC to our clients around the world.

Wealth Management			Table 20
(Millions of Canadian dollars, except number of and percentage amounts and as otherwise noted)	2013	2012	2011
Net interest income	$ 396	$ 393	$ 365
Non-interest income			
Fee-based revenue	3,463	2,964	2,821
Transactional and other revenue	1,628	1,478	1,522
Total revenue	5,487	4,835	4,708
PCL	51	(1)	–
Non-interest expense	4,201	3,796	3,586
Net income before income taxes	1,235	1,040	1,122
Net income	$ 899	$ 763	$ 811
Revenue by business			
Canadian Wealth Management	$ 1,889	$ 1,741	$ 1,724
U.S. & International Wealth Management	2,225	1,977	1,948
U.S. & International Wealth Management (US$ millions)	2,174	1,973	1,980
Global Asset Management	1,373	1,117	1,036
Key ratios			
ROE	16.1%	14.1%	15.9%
Pre-tax margin (1)	22.5%	21.5%	23.8%
Selected average balance sheet information			
Total assets	$ 21,600	$ 20,900	$ 20,900
Loans and acceptances	12,100	9,900	8,200
Deposits	31,900	29,200	28,200
Attributed capital	5,400	5,150	4,850
Other information			
Revenue per advisor (000s) (2)	$ 862	$ 793	$ 784
AUA	639,200	577,800	527,200
AUM	387,200	339,600	305,700
Average AUA	609,500	554,800	532,300
Average AUM	367,600	322,500	302,800
Number of employees (FTE) (3)	12,462	12,139	12,063
Number of advisors (4)	4,366	4,388	4,281

(1) Pre-tax margin is defined as net income before income taxes divided by Total revenue.
(2) Represents investment advisors and financial consultants of our Canadian and U.S. full-service wealth businesses.
(3) FTE numbers have been restated to account for the transfer of Wealth Management Operations from Corporate Support into Wealth Management during 2013.
(4) Represents client-facing advisors across all our wealth management businesses.

2013 vs. 2012

Net income increased $136 million or 18% from a year ago, mainly due to higher average fee-based client assets and higher transaction volumes, partially offset by higher PCL.

Total revenue increased $652 million or 13%, mainly due to higher average fee-based client assets across all business lines resulting from net sales and capital appreciation and higher transaction volumes reflecting improved market conditions.

PCL increased $52 million mainly reflecting provisions on a few accounts. For further details, refer to the Credit quality performance section.

Non-interest expense increased $405 million or 11%, mainly due to higher variable compensation driven by higher revenue and increased staff levels and infrastructure investments in support of business growth.

2012 vs. 2011

Net income decreased $48 million or 6% from 2011, mainly due to lower transaction volumes partially offset by higher average fee-based client assets and a lower effective tax rate. In addition, our 2012 results included the unfavourable impact of certain regulatory and legal matters of $29 million ($21 million after-tax) and our 2011 results included favourable accounting and tax adjustments of $39 million after-tax.

Total revenue increased $127 million or 3%, mainly due to higher average fee-based client assets across all business lines resulting from capital appreciation and net sales, and volume growth in loans and deposits. The increase in fair value of our U.S. share-based compensation plan and the favourable impact of the weaker Canadian dollar also contributed to the increase. These factors were partially offset by lower transaction volumes.

Non-interest expense increased $210 million or 6% mainly due to higher staff levels and infrastructure investments in support of business growth. The unfavourable impact of certain regulatory and legal matters noted above and the unfavourable impact of the weaker Canadian dollar also contributed to the increase. In addition, our 2011 results included favourable accounting adjustments of $42 million related to our deferred compensation plan.

Business line review

Canadian Wealth Management

Canadian Wealth Management includes our full-service Canadian wealth advisory business, which is the largest as measured by AUA, with over 1,500 investment advisors providing comprehensive advice-based financial solutions to affluent, HNW and UHNW clients. Additionally, we provide discretionary investment management and estate and trust services to our clients through approximately 60 investment counsellors and 110 trust professionals in locations across Canada. We also serve international clients through a team of over 35 private bankers in key centres across Canada.

We compete with domestic banks and trust companies, investment counselling firms, bank-owned full service brokerages and boutique brokerages, mutual fund companies and global private banks. In Canada, bank-owned wealth managers continue to be the major players.

Financial performance

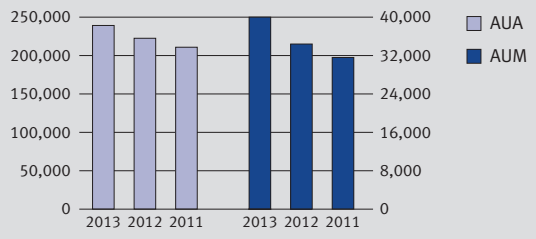
Revenue increased $148 million or 9%. The 9% increase in AUA from a year ago was mainly due to higher average fee-based client assets resulting from net sales and capital appreciation, and higher transaction volumes reflecting improved market conditions.

Selected highlights — **Table 21**

(Millions of Canadian dollars)	2013	2012	2011
Total revenue	**$ 1,889**	$ 1,741	$ 1,724
Other information			
Total loans and acceptances (1)	**2,500**	2,300	1,900
Total deposits (1)	**13,400**	11,900	11,000
AUA	**251,400**	230,400	209,700
AUM	**43,600**	36,100	31,700
Average AUA	**239,100**	222,100	210,900
Average AUM	**40,000**	34,400	31,500
Total assets under fee-based programs	**139,400**	120,700	109,000

(1) Represents an average amount, which is calculated using methods intended to approximate the average of the daily balances for the period.

Average AUA and AUM (1) (Millions of Canadian dollars)



(1) Represents average balances, which are more representative of the impact client balances have upon our revenue.

U.S. & International Wealth Management

U.S. Wealth Management includes our private client group, which is the seventh largest full-service wealth advisory firm in the U.S., as measured by number of advisors, with over 1,900 financial advisors. It also serves international clients through a team of more than 80 financial advisors and private bankers in key centres across the U.S. Additionally, our correspondent and advisor services businesses deliver clearing and execution services for small to mid-sized independent broker-dealers and registered investment advisor firms. In the U.S., we operate in a fragmented and extremely competitive industry. There are approximately 4,500 registered broker-dealers in the U.S., comprising independent, regional and global players.

International Wealth Management includes Wealth Management – British Isles & Caribbean, and Wealth Management – Emerging Markets. We provide customized and integrated trust, banking, credit, and investment solutions to HNW and UHNW clients and corporate clients with over 1,500 employees located in 18 countries around the world. Competitors in International Wealth Management comprise global wealth managers, traditional offshore private banks, domestic wealth managers and U.S. investment-led private client operations.

Financial performance

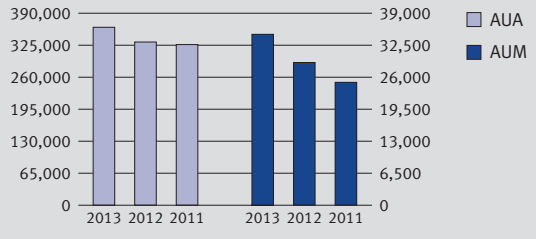
Revenue increased $248 million or 13% from a year ago. In U.S. dollars, revenue increased $201 million or 10%, mainly due to a 7% increase in AUA reflecting capital appreciation and net sales and higher transaction volumes reflecting improved market conditions.

Selected highlights — **Table 22**

(Millions of Canadian dollars)	2013	2012	2011
Total revenue	**$ 2,225**	$ 1,977	$ 1,948
Other information (US $ millions)			
Total revenue	**2,174**	1,973	1,980
Total loans, guarantees and letters of credit (1)	**12,100**	10,200	8,800
Total deposits (1)	**18,000**	17,200	17,400
AUA	**371,900**	347,800	318,600
AUM	**35,600**	31,300	26,900
Average AUA	**361,800**	331,700	326,500
Average AUM	**34,700**	29,000	24,900
Total assets under fee-based programs (2)	**83,200**	71,700	66,900

(1) Represents an average amount, which is calculated using methods intended to approximate the average of the daily balances for the period.
(2) Represents amounts related to our U.S. wealth management businesses.

Average AUA and AUM (1) (Millions of U.S. dollars)



(1) Represents average balances, which are more representative of the impact client balances have upon our revenue.

Global Asset Management

Global Asset Management provides global investment management services and solutions for individual and institutional investors in Canada, the U.S., the U.K., Europe and emerging markets. We provide a broad range of investment management services through mutual, pooled and hedge funds, fee-based accounts and separately managed portfolios. We distribute our investment solutions through a broad network of bank branches, our self-directed and full-service wealth advisory businesses, independent third party advisors and private bank, and directly to individual clients. We also provide investment solutions directly to institutional clients, including pension plans, endowments and foundations.

We are the largest retail fund company in Canada as well as a leading institutional asset manager. We face competition in Canada from major banks, insurance companies, asset management organizations and boutique firms. The Canadian fund management industry is large and mature, but still a relatively fragmented industry.

In the U.S., our asset management business offers investment management solutions and services primarily to institutional investors and competes with independent asset management firms, as well as those that are part of national and international banks, insurance companies and boutique asset managers.

Internationally, through our leading global capabilities of BlueBay and RBC Global Asset Management, we offer investment management solutions for institutions and, through private banks including RBC Wealth Management, to HNW and UHNW investors. We face competition from asset managers that are part of international banks as well as national, regional and boutique asset managers in the geographies where we serve clients.

Financial performance

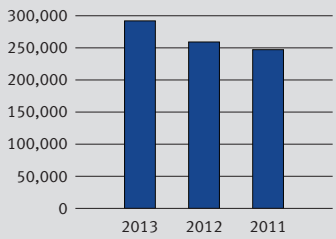
Revenue increased $256 million or 23% from a year ago, mainly due to a 13% increase in AUM reflecting net sales and capital appreciation and higher semi-annual performance fees.

Selected highlights — **Table 23**

(Millions of Canadian dollars)	2013	2012	2011
Total revenue (1)	**$ 1,373**	$ 1,117	$ 1,036
Other information			
Canadian net long-term mutual fund sales	**8,064**	7,906	7,300
Canadian net money market mutual fund (redemptions) sales	**(1,348)**	(1,981)	(3,400)
AUM	**306,500**	272,200	247,200
Average AUM	**292,100**	259,100	246,700

(1) Includes BlueBay results which are reported on a one-month lag.

Average AUM (1) (Millions of Canadian dollars)



(1) Represents average balances, which are more representative of the impact client balances have upon our revenue.

Insurance

Insurance comprises our insurance operations in Canada and globally and operates under two business lines: Canadian Insurance and International Insurance. In Canada, we offer our products and services through our proprietary distribution channels, comprised of the field sales force which includes retail insurance branches, our field sales representatives, call centres as well as online, through independent insurance advisors and affinity relationships. Outside North America, we operate in reinsurance markets globally. Our competitive environment is discussed below in each business.

Economic and market review

Continued low interest rates, uncertain global market conditions and changes in the regulatory environment continued to impact the insurance marketplace resulting in price increases, product refinements and competitors exiting certain lines of business. These factors have impacted our businesses; however, product and pricing actions taken in recent years, conservative investment practices and diversified product lines have mitigated this challenging environment.

Highlights

- In Canada, we continued to focus on our newly integrated field sales channel, providing tools, processes and products to further enable the delivery of advice-based solutions, enhance the overall client experience and increase cross-sell opportunities.
- We signed an agreement to transition the sales and distribution support of our travel agency insurance business to Manulife Financial. We remain committed to the direct travel insurance business and continue to look for ways to grow the business by offering our travel insurance solutions through proprietary channels.
- In the fourth quarter, we expanded our products and services based on the unique needs of our clients by launching our new Group Benefit solutions which include health and dental coverage for small and medium businesses.
- Internationally, we continued to work successfully with our existing partners and added new counterparties in order to grow our diversified business, reflecting our strong credit rating and our expertise.
- We were ranked highest overall in customer satisfaction for auto insurance claims experience among insurance companies in Canada, according to the inaugural J.D. Power 2013 Canadian Auto Claims Satisfaction Study.
- On October 22, 2013, the federal government's Bill C-4 received first reading in the House of Commons. The second reading for Bill C-4 was on October 29, 2013. Bill C-4 affects the policyholders' tax treatment of certain individual life insurance policies. As a result of this substantially enacted legislation, we recognized a charge in PBCAE of $160 million ($118 million after-tax). The charge is based on our current assumptions and will be updated, if necessary, to reflect any changes in policyholder experience or regulations.

Outlook and priorities

Financial conditions are expected to remain stable and we expect continued growth. We anticipate the product and pricing actions taken during the last few years, including increasing volumes through our growing proprietary channels and the execution of efficiency management initiatives will mitigate economic and regulatory challenges. For further details on our general economic review and outlook, refer to the Economic and market review and outlook section.

Key strategic priorities for 2014

- Leverage the field sales force through streamlined processes, tools and products, and continue to deliver a variety of insurance products and services to our clients through advice-based cross-sell strategies.
- Deepen client relationships by continuing to provide our customers with a comprehensive suite of insurance products and services based on their unique family needs.
- Grow our new Group Benefit solutions launched in the latter part of 2013 that include health and dental coverage.
- Continue to simplify the way we do business by streamlining all business processes to ensure that clients find it easy to do business with us, while diligently managing our expenses.
- Pursue select international niche opportunities, within our risk appetite, with the aim of continuing to grow our core reinsurance business.

Insurance			Table 24
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	**2013**	2012	2011
Non-interest income			
Net earned premiums	**$ 3,674**	$ 3,705	$ 3,533
Investment income (1)	**(17)**	929	703
Fee income	**271**	263	239
Total revenue	**3,928**	4,897	4,475
Insurance policyholder benefits and claims (1)	**2,326**	3,055	2,757
Insurance policyholder acquisition expense	**458**	566	601
Non-interest expense	**549**	515	498
Net income before income taxes	**595**	761	619
Net income	**$ 597**	$ 714	$ 600
Revenue by business			
Canadian Insurance	**$ 1,962**	$ 2,992	$ 2,676
International Insurance	**1,966**	1,905	1,799
Key ratios			
ROE	**41.6%**	46.8%	37.6%
Selected average balance sheet information			
Total assets	**$ 11,900**	$ 11,500	$ 10,500
Attributed capital	**1,400**	1,500	1,550
Other information			
Premiums and deposits (2)	**$ 4,924**	$ 4,849	$ 4,701
Canadian Insurance	**2,344**	2,362	2,355
International Insurance	**2,580**	2,487	2,346
Insurance claims and policy benefit liabilities	**8,034**	7,921	7,119
Fair value changes on investments backing policyholder liabilities (1)	**(491)**	410	214
Embedded value (3)	**6,302**	5,861	5,327
AUM	**500**	300	300
Number of employees (FTE)	**2,965**	2,744	2,859

(1) Investment income can experience volatility arising from fluctuation in the fair value of fair value through profit or loss (FVTPL) assets. The investments which support actuarial liabilities are predominantly fixed income assets designated as at FVTPL. Consequently changes in the fair values of these assets are recorded in investment income in the consolidated statement of income and are largely offset by changes in the fair value of the actuarial liabilities, the impact of which is reflected in insurance policyholder benefits and claims.
(2) Premiums and deposits include premiums on risk-based insurance and annuity products, and individual and group segregated fund deposits, consistent with insurance industry practices.
(3) Embedded value is defined as the sum of value of equity held in our Insurance segment and the value of in-force business (existing policies). For further details, refer to the Key performance and non-GAAP measures section.

Financial performance
2013 vs. 2012
Net income decreased $117 million or 16%, mainly due to a charge of $160 million ($118 million after-tax) as a result of proposed legislation in Canada, which would affect the policyholders' tax treatment of certain individual life insurance policies. Excluding this charge, net income of $715 million was relatively flat compared to the prior year as favourable actuarial adjustments and the continuing benefit from our ongoing focus on efficiency management activities were mostly offset by higher net claims costs.

Total revenue decreased $969 million or 20%, mainly due to the change in fair value of investments backing our policyholder liabilities resulting from an increase in long-term interest rates, largely offset in PBCAE.

PBCAE decreased $837 million or 23%, mainly due to the change in fair value of investments backing our policyholder liabilities, which was largely offset in revenue. Favourable actuarial adjustments reflecting management actions and assumption changes also contributed to the decrease. These factors were partially offset by the charge related to certain individual life insurance policies as noted above.

Non-interest expense increased $34 million or 7%, mainly due to the reclassification of certain acquisition expenses from PBCAE and higher costs in support of business growth, partially offset by continuing benefits from our ongoing focus on efficiency management activities.

Premiums and deposits were up $75 million or 2%, mainly reflecting volume growth in International Insurance.

Embedded value increased $441 million or 8%, mainly reflecting growth from operations partially offset by the impact of increased discount rates and the transfer of capital for our insurance businesses through dividend payments. For further details, refer to the Key performance and non-GAAP measures section.

Results excluding the charge related to certain individual life insurance policies are non-GAAP measures. For further details, including a reconciliation, refer to the Key performance and non-GAAP measures section.

2012 vs. 2011
Net income increased $114 million or 19% from 2011, mainly due to lower claims costs in disability, home and auto products and the favourable impact of a $33 million ($24 million after-tax) reduction of policy acquisition cost-related liabilities reflecting changes to our proprietary distribution channel. Higher net investment gains and volume growth in our reinsurance products also contributed to the increase. These factors were partially offset by higher claims costs in our reinsurance products.

Total revenue increased $422 million or 9%, mainly due to volume growth across reinsurance, life and home and auto products and the change in fair value of investments backing our policyholder liabilities, which was largely offset in PBCAE.

PBCAE increased $263 million or 8%, mainly due to the change in fair value of investments backing our policyholder liabilities, largely offset in revenue, and volume growth across reinsurance, life, home and auto products. These factors were partially offset by lower claims costs in disability, home and auto products and the reduction of policy acquisition cost-related liabilities as noted above.

Non-interest expense increased $17 million or 3%, mainly due to higher costs in support of business growth, partially offset by continuing benefits from our ongoing focus on efficiency management activities.

Business line review

Canadian Insurance

We offer life, health, property and casualty insurance products as well as wealth accumulation solutions, to individual and group clients across Canada. Our life and health portfolio includes universal life, term life, critical illness, disability, long-term care insurance and group benefits. We offer a wide range of property and casualty products including home, auto and travel insurance. Our travel products include out of province/country medical coverage, trip cancellation insurance and interruption insurance.

In Canada, we compete against over 200 insurance companies, with the majority of the organizations specializing in either life and health, or property and casualty products. We hold a leading market position in disability insurance products, have a significant presence in life and travel products, and have a growing presence in the home, auto and wealth markets.

Financial performance

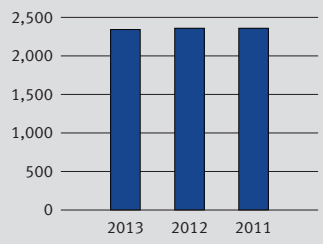
Total revenue decreased $1,030 million or 34% from last year, mainly due to the change in fair value of investments backing our policyholder liabilities resulting from the increase in long-term interest rates, which was largely offset in PBCAE.

Premiums and deposits decreased $18 million or 1% due to lower volumes in both life and health and travel product lines.

Selected highlights — Table 25

(Millions of Canadian dollars)	2013	2012	2011
Total revenue	**$ 1,962**	$ 2,992	$ 2,676
Other information			
Premiums and deposits			
Life and health	**1,245**	1,280	1,274
Property and casualty	**942**	965	962
Annuity and segregated fund deposits	**157**	117	119
Fair value changes on investments backing policyholder liabilities	**(510)**	408	209

Premiums and deposits (Millions of Canadian dollars)



International Insurance

International Insurance is primarily comprised of our reinsurance businesses which insure risks of other insurance and reinsurance companies. We offer life and health, accident and annuity reinsurance products.

The global reinsurance market is dominated by a few large players, with significant presence in the U.S., U.K. and Eurozone. The reinsurance industry is competitive but barriers to entry remain high.

Financial performance

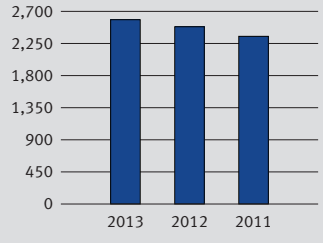
Total revenue increased $61 million or 3%, mainly due to volume growth in our U.K. annuity and European life products.

Premiums and deposits increased $93 million, or 4% driven by the growth mentioned above.

Selected highlights — Table 26

(Millions of Canadian dollars)	2013	2012	2011
Total revenue	**$ 1,966**	$ 1,905	$ 1,799
Other information			
Premiums and deposits			
Life and health	**2,069**	1,980	1,969
Property and casualty	**50**	56	38
Annuity	**461**	451	339

Premiums and deposits (Millions of Canadian dollars)



Investor & Treasury Services

Investor & Treasury Services is a specialist provider of asset servicing, custody, payments, and treasury services for financial institutions and other institutional investors worldwide. We deliver custodial, advisory, financing and other services to safeguard client assets, maximize liquidity, and manage risk across multiple jurisdictions. We also provide funding and liquidity management for RBC. We are a top 10 global custodian by assets under administration with a network of 18 offices across North America, Europe and Asia-Pacific. While we compete against the world's largest global custodians, we remain a specialist provider and our transaction banking business competes primarily with major Canadian banks.

Economic and market review

The highly competitive environment in the global custody industry continued to pressure our margins. Overall, investor confidence increased as market conditions in Canada and the U.S. gradually improved during 2013, driving higher transaction volumes. Nonetheless, European market conditions in select markets remained uncertain reflecting continued concerns about the European sovereign debt crisis.

Highlights

- Our earnings improved with the reorganization and integration efforts over the past year, driven by new client and business mandates and our ongoing focus on cost management activities.
- Following the RBC Dexia acquisition, we continued to integrate our investor services business and implemented key organizational changes that focused on deepening client relationships and cross-selling opportunities.
- In 2013, we were ranked best custodian overall (*Global Investor*), fund administrator of the year in Canada (Custody Risk Americas Awards) and top overall for customer service (R&M Fund Services.net).

Outlook and priorities

In 2014, as a result of the integration of our investor services business, we expect to further leverage our integrated capabilities to deliver a specialised service offering to our institutional clients while continuing to focus on their asset servicing needs. We expect that the global economy will improve gradually as ongoing concerns around the European sovereign debt crisis continue to subside. We believe there are strong long-term prospects for our business, largely underpinned by our operating model as a specialist provider, which will position us competitively in a rapidly-changing operating environment. For further details on our general economic review and outlook, refer to the Economic and market review and outlook section.

Key strategic priorities for 2014

- Focus on maintaining our superior customer service for custody and asset servicing amidst the competitive industry environment.
- Grow our Treasury & Market Services businesses as part of our full-service offering and to support our enterprise funding and liquidity management objectives.
- Maintain our highly disciplined approach to risk management in support of all client activities.
- Align our technological capabilities, to support our business activities and meet our clients' rapidly evolving needs.

Investor & Treasury Services — **Table 27**

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	2013	2012	2011
Net interest income	$ 671	$ 668	$ 573
Non-interest income	1,133	657	569
Total revenue	1,804	1,325	1,142
Non-interest expense	1,343	1,134	821
Net income before income taxes	461	191	321
Net income	$ 343	$ 85	$ 230
Key Ratios			
ROE	16.7%	4.3%	18.4%
ROE adjusted (1)	n.a.	16.9%	n.a.
Selected average balance sheet information			
Total assets	$ 83,100	$ 73,600	$ 70,000
Deposits	104,300	102,200	103,200
Client deposits	36,100	23,400	19,300
Wholesale funding deposits	68,200	78,800	83,900
Attributed capital	2,000	1,700	1,200
Other Information			
Economic profit (2)	$ 183	$ 107	$ 133
AUA (3)	3,208,800	2,886,900	2,744,400
Average AUA (3)	3,052,600	2,781,800	2,825,100
Number of employees (FTE) (4)	5,208	6,084	112

(1) Measure has been adjusted for the acquisition of the remaining 50% stake of RBC Dexia. For further details, refer to the Key performance and non-GAAP measures section.
(2) Economic profit is a non-GAAP measure. For further details, refer to the Key performance and non-GAAP measures section.
(3) AUA and average AUA represented the total AUA of Investor Services, formerly RBC Dexia, of which we had a 50% ownership interest prior to July 27, 2012.
(4) On July 27, 2012, we completed our acquisition of the remaining 50% stake of RBC Dexia. Prior to this acquisition, FTE numbers do not include our RBC Dexia joint venture.
n.a. not applicable

Financial performance
2013 vs. 2012
Net income increased $258 million from the prior year. Excluding a prior year loss of $224 million ($213 million after-tax) related to the acquisition of the remaining 50% stake of RBC Dexia, net income increased $45 million or 15%, primarily reflecting improved business performance in Investor Services including higher revenue and continuing benefits from our ongoing focus on efficiency management activities. Incremental earnings related to our additional 50% ownership of Investor Services also contributed to the increase. These factors were partially offset by lower funding and liquidity revenue and a restructuring charge of $44 million ($31 million after-tax) in the current year related to the integration of Investor Services, primarily in Europe.

Total revenue increased $479 million or 36% from the prior year. Excluding our proportionate share of the securities exchange and trading loss in the prior year of $36 million ($26 million after-tax) related to the acquisition of RBC Dexia, total revenue increased $443 million or 33%, largely reflecting incremental revenue related to our additional 50% ownership of Investor Services. Higher custodial fees, mainly driven by growth in average fee-based client assets, and increased foreign exchange revenue in Investor Services, primarily driven by higher transaction volumes, also positively impacted our revenue. These factors were partially offset by lower funding and liquidity revenue across most geographies as the prior year benefited from tightening credit spreads.

Non-interest expense increased $209 million or 18% from the prior year. Excluding an impairment loss and other costs in the prior year of $188 million ($187 million after-tax) related to the acquisition of RBC Dexia, non-interest expense increased $397 million as continuing benefits from our ongoing focus on efficiency management activities was more than offset by incremental costs related to our additional 50% ownership of Investor Services, the restructuring charge related to the integration of Investor Services noted above and higher infrastructure costs.

2012 vs. 2011
Net income was down $145 million or 63% from 2011. Excluding the loss in 2012 related to the acquisition of the remaining 50% stake of RBC Dexia, net income increased $68 million or 30%. The increase was mainly due to higher funding and liquidity trading results, partially offset by lower foreign exchange revenue and decreased custodial fees.

Total revenue was up $183 million or 16% from 2011. Excluding our proportionate share of the securities exchange and trading loss in 2012 related to the acquisition of RBC Dexia, total revenue increased $219 million or 19%, largely related to higher funding and liquidity trading revenue across all geographies. Higher interest income on assets held for liquidity purposes and a full quarter of revenue related to our additional 50% ownership of Investor Services, partially offset by lower foreign exchange revenue and decreased custodial fees, also contributed to the increase. The increase in revenue was partially offset by the unfavourable impact of the depreciation of the Euro against the Canadian dollar.

Non-interest expense was up $313 million or 38% from 2011. Excluding the impairment loss and other costs in 2012 related to the acquisition of RBC Dexia, non-interest expense increased $125 million or 15%, mainly due to a full quarter of costs related to our additional 50% ownership of Investor Services. Higher staff costs, including increased variable compensation on improved results also contributed to the increase. These factors were partially offset by the depreciation of the Euro against the Canadian dollar.

Results excluding the loss related to the acquisition of the remaining 50% stake of RBC Dexia for the fiscal year ended October 31, 2012 are non-GAAP measures. For further details on this specified item impacting our results, including a reconciliation, refer to the Key performance and non-GAAP measures section.

Capital Markets

Capital Markets provides public and private companies, institutional investors, governments and central banks globally with a wide range of capital markets products and services across our two main business lines, Corporate and Investment Banking and Global Markets. Our legacy portfolio is grouped under Other.

In North America, we offer a full suite of products and services which include corporate and investment banking, equity and debt origination and distribution, and structuring and trading. Outside North America, we have a select presence in the U.K. and Europe, and Asia-Pacific, where we offer a diversified set of capabilities in our key sectors of expertise such as energy, mining and infrastructure.

In Canada, we compete mainly with Canadian banks where we are the premier global investment bank and market leader with a strategic presence in all lines of capital markets businesses. In the U.S., we have full industry sector coverage and investment banking product range and compete with large U.S. and global investment banks as well as smaller regional firms. In the U.K. and Europe, we compete in our key sectors of expertise with global and regional investment banks. In Asia-Pacific, we compete with global and regional investment banks in select products, consisting of our fixed income distribution and currencies trading in Asia and our corporate and investment banking in Australia.

Economic and market review
Capital markets in Canada and the U.S. gradually improved during 2013 resulting from modest economic growth in both countries and ongoing stimulative monetary policy. European market conditions in select markets, remained uncertain as sovereign debt issues continued.

Higher client activity driven by improvements in the global economy and the low interest rate environment led to strong issuance activity throughout most of the year, with our corporate and investment banking businesses performing well, driven by higher lending, loan syndication, debt origination, and M&A. This was despite a continued challenging trading environment with yields on long-term government and corporate bonds at historically low levels in the first half of the year and yields and volatility in credit spreads increasing in the latter half of 2013 as a result of market concerns related to uncertainty about the direction of U.S. fiscal and monetary policies. As a result of these market conditions, our fixed income trading businesses were unfavourably impacted.

Highlights
- We continued to focus on growing our corporate and investment banking businesses, particularly in the U.S. and Europe, while rebalancing our global markets businesses by leveraging our investments that were made in prior years, redeploying capital from trading to corporate and investment banking businesses and managing risks by narrowing our focus of trading products.
- In Canada, we maintained our market leadership by deepening our existing client relationships, gaining new clients, and offering a full suite of global capabilities. We were named Best Investment Bank in Canada by Euromoney Magazine for the sixth consecutive year and we continued to win significant mandates including acting as financial advisor to Nexen Inc. on its $15.1 billion acquisition by CNOOC Limited.
- In the U.S., we leveraged our key strategic investments made in recent years to expand our corporate and investment banking businesses, developed new lending relationships and increased focus on our origination and client flow businesses. We had a record year in U.S. corporate and investment banking and were ranked 10th largest investment bank in the Americas by fees for the first nine months of 2013 (Thomson Reuters). We attained this by gaining market share, growing our businesses and winning several significant mandates including acting as a joint bookrunner on the $49 billion of senior unsecured notes offerings by Verizon Communications Inc, joint lead arranger and joint bookrunner on the $24.9 billion leveraged buyout of Dell Inc., and joint lead arranger and joint bookrunner on the acquisition financing of the $6 billion acquisition of Neiman Marcus Group.

- In the U.K. and Europe, we continued to expand our corporate and investment banking businesses. We accomplished this by selectively growing in our key sectors of expertise, focused on gaining new clients through our continued focus on increasing lending activity and market positions. We won new mandates including leading an offer for the U.K.'s Debt Management Office for $2 billion. Due to the challenging trading environment, we refocused our efforts on improving returns in our core global markets businesses and exited non-performing businesses such as our European government bond business.
- In Asia, we continued to focus on our fixed income trading distribution and foreign exchange trading capabilities, while in Australia, we continued to selectively grow our corporate and investment banking business in mining, energy and infrastructure.

Outlook and priorities

In 2014, we anticipate continuing growth in our equity and debt origination, M&A advisory services, and lending businesses as a result of expected continuing improvement in economic and market environments, and strategic investments in our U.S. corporate and investment banking businesses in recent years.

Overall we anticipate net improvements in our global markets businesses driven by growth in our fixed income, currencies and commodities businesses reflecting stabilizing market conditions particularly in the U.S., as compared to the challenging market conditions in 2013. However improvements in the global economy and stabilizing market conditions will be dependent on market responses to resolutions surrounding uncertainty about the direction of U.S. fiscal and monetary policies particularly in the first half of 2014, and further resolutions of European sovereign debt concerns. We also anticipate that regulatory reforms, in particular related to over-the-counter (OTC) derivatives reform, the Volcker Rule and Basel III will unfavourably impact growth in our trading businesses.

For further details, refer to our Risk management – Top and emerging risks section. For further details on our general economic outlook, refer to the Economic and market review and outlook section.

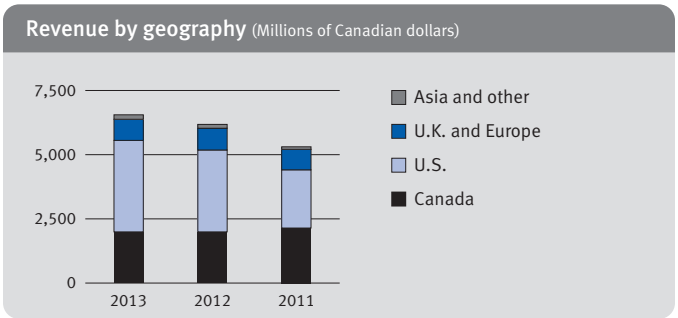
Key strategic priorities for 2014

- Maintain our clear leadership position in Canada by focusing on execution and long-term client relationships, increasing our market share with small- and medium-sized companies and leveraging our global capabilities.
- Expand and strengthen client relationships in the U.S. by leveraging industry sector coverage and our lending relationships to increase market share and drive fee-based revenues, while improving margins.
- Build on our core strengths in Europe and Asia in both Corporate and Investment Banking and Global Markets by improving profitability, selectively growing Corporate and Investment Banking in our sectors of expertise and focusing on the sustainability of trading through origination and sales.
- Deepen client relationships and optimize capital employed to earn high risk-adjusted returns on assets and equity, effectively manage risk by maintaining discipline within our risk tolerance framework and drive efficiency in our business model.
- Manage through the significant changes to the regulatory environment specifically related to OTC derivatives reform, the Volcker Rule, and Basel III changes related to credit valuation adjustments (CVA), Liquidity Coverage Ratio (LCR) and revised leverage framework.

Capital Markets financial highlights — **Table 28**

(Millions of Canadian dollars, except number of percentage amounts and as otherwise noted)	2013	2012	2011
Net interest income (1)	$ 2,872	$ 2,559	$ 2,197
Non-interest income	3,708	3,629	3,127
Total revenue (1)	6,580	6,188	5,324
PCL	188	135	(14)
Non-interest expense	3,844	3,746	3,487
Net income before income taxes	2,548	2,307	1,851
Net income	$ 1,710	$ 1,581	$ 1,292
Revenue by business			
Corporate and Investment Banking	$ 3,014	$ 2,533	$ 2,371
Global Markets	3,492	3,635	3,143
Other	74	20	(190)
Key ratios			
ROE	14.2%	13.5%	15.2%
Selected average balance sheet information			
Total assets	$ 368,300	$ 349,200	$ 322,000
Trading securities	100,800	90,400	112,300
Loans and acceptances	54,700	47,000	35,300
Deposits	35,300	30,900	26,500
Attributed capital	11,500	11,150	8,000
Other information			
Number of employees (FTE)	3,644	3,560	3,537
Credit information			
Gross impaired loans as a % of average net loans and acceptances	0.42%	0.83%	0.65%
PCL on impaired loans as a % of average net loans and acceptances	0.34%	0.29%	(0.04)%

(1) The teb adjustment for 2013 was $380 million (2012 – $431 million, 2011 – $459 million). For further discussion, refer to the How we measure and report our business segments section.



Financial performance
2013 vs. 2012
Net income increased $129 million or 8%, driven primarily by strong growth in Corporate and Investment Banking mainly in the U.S. and lower variable compensation. These factors were partially offset by lower trading revenue and higher PCL.

Total revenue increased $392 million or 6%, largely due to strong growth in our corporate and investment banking businesses driven by higher lending, loan syndication and debt origination mainly in the U.S. and increased volumes from our cash equities business across most geographies. These factors were partially offset by lower revenue in our fixed income trading businesses largely in Europe, as a result of challenging market conditions in the current year.

PCL increased $53 million or 39%, mainly reflecting provisions on a few accounts. For further details, refer to the Credit quality performance section.

Non-interest expense increased $98 million or 3%, mainly due to higher litigation provisions and related legal costs, and higher support costs related to infrastructure, control initiatives and increased regulation. These factors were partially offset by lower variable compensation reflecting a lower compensation to revenue ratio and continuing benefits from our ongoing focus on efficiency management activities.

2012 vs. 2011
Net income increased $289 million or 22% from 2011, driven primarily by our global markets businesses due to higher fixed income trading results reflecting improved market conditions as compared to the challenging market conditions in the latter half of 2011. Strong growth in our corporate and investment banking results driven by higher lending and increased loan syndication activity primarily in the U.S. also contributed to the increase. These factors were partially offset by higher PCL, as compared to recoveries in 2011 and a higher effective tax rate reflecting increased earnings in higher tax jurisdictions.

Total revenue increased $864 million or 16%, largely due to higher fixed income trading primarily driven by improved market conditions mainly in the U.S. as compared to the challenging market conditions in the latter half of 2011, resulting in increased client activity, greater market liquidity and tightening credit spreads. In our corporate and investment banking businesses, strong client growth in lending and increased loan syndication activity also contributed to the increase.

PCL of $135 million compared to a recovery of $14 million in 2011, largely reflecting provisions on a few accounts in 2012.

Non-interest expense increased $259 million or 7%, mainly due to higher variable compensation on improved results. Higher costs in support of business growth, primarily in our corporate and investment banking businesses in the U.S. and U.K., also contributed to the increase. This increase was partially offset by continuing benefits from our ongoing focus on efficiency management activities.

Business line review

Corporate and Investment Banking

Corporate and Investment Banking comprises our corporate lending, loan syndications, debt and equity origination, M&A advisory services, private equity, research, client securitization and the global credit businesses. For debt and equity origination, revenues are allocated between Corporate and Investment Banking and Global Markets based on the contribution of each group in accordance with an established agreement.

Financial performance
Corporate and Investment Banking revenue of $3,014 million increased $481 million or 19%, as compared to the prior year.

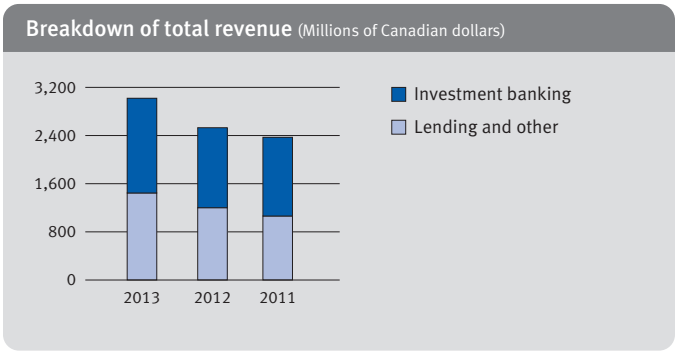
Investment banking revenue increased $236 million or 18%, mainly driven by strong growth in our loan syndication business primarily in the U.S. Higher debt origination reflecting solid issuance activity primarily in the U.S. and Europe and higher M&A activity reflecting increased mandates mainly in Canada and the U.S. also contributed to the increase.

Lending and other revenue increased $245 million or 21%, primarily due to strong growth in our lending portfolio largely in the U.S.

Selected highlights — Table 29

(Millions of Canadian dollars)	2013	2012	2011
Total revenue (1)	$ 3,014	$ 2,533	$ 2,371
Breakdown of revenue (1)			
Investment banking	1,574	1,338	1,306
Lending and other (2)	1,440	1,195	1,065
Other information			
Average assets	40,000	33,800	21,300

(1) The teb adjustment for 2013 was $2 million (2012 – $10 million, 2011 – $20 million). For further discussion, refer to the How we measure and report our business segments section.
(2) Comprises our corporate lending, client securitization, and global credit businesses.



Global Markets

Global Markets comprises our fixed income, foreign exchange, equity sales and trading, repos and secured financing and commodities businesses.

Financial performance

Total revenue of $3,492 million decreased $143 million or 4% as compared to the prior year.

Revenue in our Fixed income, currencies and commodities business decreased $218 million or 11%, largely due to significantly lower fixed income trading revenue driven by challenging market conditions reflecting uncertainty about the direction of U.S. fiscal and monetary policy, and lower client volumes and narrower bid/ask spreads in the first half of the year. These factors were partially offset by strong growth in debt origination primarily in the U.S. and Europe driven by increased client activity.

Revenue in our Equities business increased $62 million or 7%, largely reflecting improved trading results and volume growth in our cash equities business. Higher equity origination mainly in the U.S. reflecting stronger issuance activity also contributed to the increase.

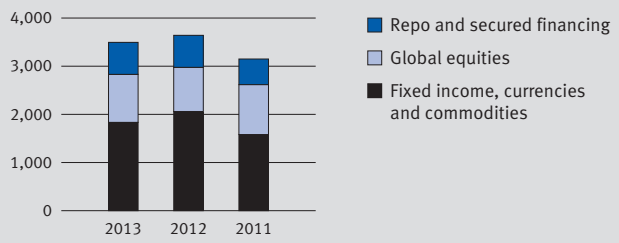
Selected highlights — Table 30

(Millions of Canadian dollars)	2013	2012	2011
Total revenue (1)	$ 3,492	$ 3,635	$ 3,143
Breakdown of revenue (1)			
Fixed income, currencies and commodities	1,834	2,052	1,584
Equities	989	927	1,033
Repo and secured financing (2)	669	656	526
Other information			
Average assets	351,100	311,700	278,500

(1) The teb adjustment for 2013 was $378 million (2012 – $421 million, 2011 – $439 million). For further discussion, refer to the How we measure and report our business segments section.

(2) Comprises our secured funding businesses for internal businesses and external clients.

Breakdown of total revenue (Millions of Canadian dollars)



Other

Other comprises our legacy portfolio which consists of our bank-owned life insurance (BOLI) stable value products, U.S. commercial mortgage-backed securities and U.S. auction rate securities (ARS). In recent years, in order to optimize our capital employed to improve our risk-adjusted returns and reduce our liquidity risk on various products, we have significantly reduced several of our legacy portfolios.

Financial performance

Revenue of $74 million increased $54 million as compared to the prior year, mainly due to higher gains on our U.S. student loan auction rate securities legacy portfolios.

Corporate Support

Corporate Support comprises Technology & Operations which provide the technological and operational foundation required to effectively deliver products and services to our clients, and Functions which includes our finance, human resources, risk management, internal audit and other functional groups. Reported results for Corporate Support mainly reflect certain activities related to monitoring and oversight of enterprise activities which are not allocated to business segments. Corporate Support also includes our Corporate Treasury function. For further details, refer to the How we measure and report our business segments section.

Corporate Support — Table 31

(Millions of Canadian dollars, except number of)	2013	2012	2011
Net interest income (loss) (1)	$ (123)	$ (183)	$ (293)
Non-interest income (loss)	(32)	67	257
Total revenue (1)	(155)	(116)	(36)
PCL	3	–	5
Non-interest expense	50	37	93
Net income (loss) before income taxes (1)	(208)	(153)	(134)
Income taxes (recoveries) (1)	(650)	(512)	(431)
Net income (2)	$ 442	$ 359	$ 297
Other information			
Number of employees (FTE)	11,971	11,618	11,694

(1) Teb adjusted.

(2) Net income reflects income attributable to both shareholders and Non-Controlling Interests (NCI). Net income attributable to NCI for the year ended October 31, 2013 was $93 million (October 31, 2012 – $92 million; October 31, 2011 – $92 million).

Due to the nature of activities and consolidated adjustments reported in this segment, we believe that a comparative period analysis is not relevant. The following identifies material items affecting the reported results in each period.

Net interest income (loss) and income taxes (recoveries) in each period in Corporate Support include the deduction of the teb adjustments related to the gross-up of income from Canadian taxable corporate dividends recorded in Capital Markets. The amount deducted from net interest income (loss) was offset by an equivalent increase in income taxes (recoveries). The teb amount for the year ended October 31, 2013 was $380 million as compared to $431 million in the prior year and $459 million for the year ended October 31, 2011. For further discussion, refer to the How we measure and report our business segments section.

In addition to the teb impacts noted above, the following identifies the other material items affecting the reported results in each period.

2013
Net income was $442 million largely reflecting net favourable tax adjustments, including $214 million of income tax adjustments related to prior years, and asset/liability management activities.

2012
Net income was $359 million largely reflecting the settlement of several tax matters with the CRA which resulted in the release of $128 million of tax uncertainty provisions and interest income of $72 million ($53 million after-tax) related to a refund of taxes paid and asset/liability management activities.

2011
Net income was $297 million largely due to asset/liability management activities and gains related to the change in fair value of certain derivatives used to economically hedge our funding activities.

Quarterly financial information

Fourth quarter 2013 performance

Q4 2013 vs. Q4 2012
Fourth quarter net income was $2,119 million, up $208 million or 11% from the prior year. Diluted EPS of $1.40 was up $0.15 and ROE of 18.6% was down 10 bps. Our fourth quarter earnings reflected strong growth in our corporate and investment banking businesses and solid volume growth across all our Canadian Banking businesses. Higher average fee-based client assets in Wealth Management and improved business performance in Investor Services also contributed to the increase. In addition, our results were positively impacted by a lower effective tax rate, largely reflecting favourable income tax adjustments of $124 million related to prior years and lower PCL. These factors were partially offset by a charge of $160 million ($118 million after-tax) as a result of proposed legislation in Canada, which would affect the policyholders' tax treatment of certain individual life insurance policies.

Total revenue increased $452 million or 6%, mainly due to higher average fee-based client assets in Wealth Management, higher loan syndication activity in Capital Markets, as well as the inclusion of our acquisition of Ally Canada, and solid volume growth across all our Canadian Banking businesses. Higher trading revenue and improved business performance in Investor Services also contributed to the increase. These factors were partially offset by spread compression due to the continuing low rate environment and competitive pricing pressures in Canadian Banking, and lower equity origination in Capital Markets.

Total PCL decreased $27 million or 7% from a year ago, mainly reflecting a provision taken in the prior year on a single account in Capital Markets and lower provisions in our Canadian Banking business lending portfolios. These factors were partially offset by higher PCL on a few accounts in Wealth Management.

PBCAE increased $108 million or 14%, mainly due to the charge related to certain individual life insurance policies as noted above and higher net claims costs. These factors were partially offset by favourable actuarial adjustments reflecting management actions and assumption changes.

Non-interest expense increased $291 million or 8%, primarily reflecting higher variable compensation driven by higher revenue in Wealth Management and a provision related to post-employment benefits and restructuring charges in the Caribbean of $40 million. Higher litigation provisions and related legal costs in Capital Markets, the inclusion of our acquisition of Ally Canada, and higher costs in support of business growth also contributed to the increase. These factors were partially offset by the continuing benefits from our ongoing focus on efficiency management activities.

Quarterly results and trend analysis

Our quarterly results are impacted by a number of trends and recurring factors, which include seasonality of certain businesses, general economic and market conditions, and fluctuations in the Canadian dollar relative to other foreign currencies. The following table summarizes our results for the last eight quarters (the period):

Quarterly results (1) — **Table 32**

	2013				2012			
(Millions of Canadian dollars, except per share and percentage amounts)	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Continuing operations								
Net interest income	$ 3,350	$ 3,393	$ 3,223	$ 3,285	$ 3,175	$ 3,289	$ 3,031	$ 3,003
Non-interest income	4,620	3,825	4,546	4,625	4,343	4,467	3,893	4,571
Total revenue	$ 7,970	$ 7,218	$ 7,769	$ 7,910	$ 7,518	$ 7,756	$ 6,924	$ 7,574
PCL	335	267	288	349	362	324	348	267
PBCAE	878	263	938	705	770	1,000	640	1,211
Non-interest expense	4,164	4,001	4,011	4,051	3,873	3,759	3,857	3,671
Net income before income taxes	$ 2,593	$ 2,687	$ 2,532	$ 2,805	$ 2,513	$ 2,673	$ 2,079	$ 2,425
Income taxes	474	383	596	735	602	433	516	549
Net income from continuing operations	$ 2,119	$ 2,304	$ 1,936	$ 2,070	$ 1,911	$ 2,240	$ 1,563	$ 1,876
Net loss from discontinued operations	–	–	–	–	–	–	(30)	(21)
Net income	$ 2,119	$ 2,304	$ 1,936	$ 2,070	$ 1,911	$ 2,240	$ 1,533	$ 1,855
EPS – basic	$ 1.41	$ 1.54	$ 1.28	$ 1.37	$ 1.26	$ 1.49	$ 1.00	$ 1.23
– diluted	1.40	1.52	1.27	1.36	1.25	1.47	0.99	1.22
EPS from continuing operations – basic	$ 1.41	$ 1.54	$ 1.28	$ 1.37	$ 1.26	$ 1.49	$ 1.02	$ 1.24
– diluted	1.40	1.52	1.27	1.36	1.25	1.47	1.01	1.23
Segments – net income (loss) from continuing operations								
Personal & Commercial Banking	$ 1,081	$ 1,180	$ 1,057	$ 1,120	$ 1,034	$ 1,102	$ 940	$ 1,012
Wealth Management	205	236	225	233	207	156	212	188
Insurance	107	160	166	164	194	179	151	190
Investor & Treasury Services	92	104	67	80	72	51	(121)	83
Capital Markets	472	388	386	464	410	429	371	371
Corporate Support	162	236	35	9	(6)	323	10	32
Net income from continuing operations	$ 2,119	$ 2,304	$ 1,936	$ 2,070	$ 1,911	$ 2,240	$ 1,563	$ 1,876
Net income – total	$ 2,119	$ 2,304	$ 1,936	$ 2,070	$ 1,911	$ 2,240	$ 1,533	$ 1,855
Effective income tax rate from continuing operations	18.3%	14.3%	23.5%	26.2%	24.0%	16.2%	24.8%	22.6%
Period average US$ equivalent of C$1.00	$ 0.960	$ 0.963	$ 0.982	$ 1.005	$ 1.011	$ 0.982	$ 1.008	$ 0.987

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

Seasonality

Seasonal factors impact our results in most quarters. The first quarter is seasonally stronger for our capital markets businesses. The second quarter has fewer days than the other quarters, generally resulting in a decrease in net interest income and certain expense items. The third quarter results for Investor Services are generally favourably impacted by higher securities lending as a result of the European dividend season. The third and fourth quarters include the summer months during which market activity generally tends to slow, negatively impacting the results of our capital markets, brokerage and investment management businesses.

Notable items affecting our consolidated results

- In the fourth quarter of 2013, our results included a charge of $160 million ($118 million after-tax) as a result of proposed legislation in Canada, which would affect the policyholders' tax treatment of certain individual life insurance policies, as well as net favourable income tax adjustments including a $124 million income tax adjustment related to prior years.
- In the third quarter of 2013, our results included net favourable income tax adjustments including a $90 million income tax adjustment related to the prior year.
- In the second quarter of 2013, our results included a restructuring charge of $44 million ($31 million after-tax) related to the integration of Investor Services, primarily in Europe.
- In the third quarter of 2012, our results included a release of $128 million of tax uncertainty provisions and interest income of $72 million ($53 million after-tax) related to a refund of taxes paid due to the settlement of several tax matters with the CRA, as well as a favourable adjustment of $125 million ($92 million after-tax) resulting from a change in methodology with respect to the timing of recognition of mortgage prepayment interest, and an additional loss of $12 million ($11 million after-tax) related to the acquisition of the remaining 50% stake of RBC Dexia.
- In the second quarter of 2012, our results included a loss of $212 million ($202 million after-tax) related to the acquisition of the remaining 50% stake of RBC Dexia.

Trend analysis

Economic conditions in Canada and the U.S. gradually improved over the period, with capital markets in Canada and the U.S. generally showing improvement in 2013. Conditions in global financial markets remained generally uncertain during the period due to ongoing European sovereign debt issues.

Earnings have been generally robust over the period, driven largely by solid volume growth in our Canadian Banking businesses and generally solid results in Capital Markets including a strong fourth quarter of 2013. Wealth Management results have generally trended upwards since the third quarter of 2012 due to higher average fee-based client assets and higher transaction volumes, with the current quarter decline

primarily due to higher PCL. Insurance results have continued to fluctuate over the period, due to the timing of new U.K. annuity contracts and actuarial adjustments, and have been unfavourably impacted in the current quarter by a charge as a result of proposed legislation in Canada relating to certain individual life insurance policies. Investor & Treasury Services' results in the five quarters since our acquisition of the remaining 50% stake of RBC Dexia have fluctuated, with solid results in the latter half of fiscal 2013.

Revenue continued to trend upwards with some fluctuations over the period. The general increase in revenue over the period continued to be driven by solid volume growth across most of our Canadian Banking businesses, growth in our corporate and investment banking business, and higher average fee-based client assets in Wealth Management. Our ownership of the additional 50% of Investor Services has contributed incremental revenue since the third quarter of 2012 and our acquisition of Ally Canada has contributed incremental revenue since the second quarter of 2013. Trading revenue fluctuated over the period due to challenging market conditions. Net interest income continued to trend up over the period, primarily due to solid volume growth across most of our Canadian Banking businesses, partially offset by spread compression caused by the continuing low interest rate environment and increased competitive pricing pressures.

PCL generally has been stable over the period, and has generally trended downwards since the fourth quarter of 2012 due to stabilizing asset quality in the Canadian retail portfolio and the improving credit quality of our Caribbean portfolio. The current quarter increase in PCL is largely due to provisions on a few accounts in Wealth Management. Provisions in Capital Markets have fluctuated, and have trended down over the past three quarters.

PBCAE has fluctuated quarterly as it reflects the changes to the fair value of investments backing our policyholder liabilities, largely offset in revenue. PBCAE has also been impacted by volume growth in our Insurance businesses as well as actuarial liability adjustments and generally lower claims costs. PBCAE in the current quarter included a charge as a result of proposed legislation in Canada relating to certain individual life insurance policies as noted above.

Non-interest expense has generally trended upwards over the period, mainly driven by higher variable compensation due to increased revenue in Wealth Management, and higher costs in support of business growth. Incremental costs related to our additional 50% ownership of Investor Services since the third quarter of 2012 and our acquisition of Ally Canada in the second quarter of 2013 have also contributed to the increase. These factors were partially offset by continuing benefits from our ongoing focus on efficiency management activities.

Our effective income tax rate fluctuated over the period, resulting from varying levels of income being reported in jurisdictions with different tax rates, as well as fluctuating levels of income from tax-advantaged sources (Canadian taxable corporate dividends), and various tax adjustments. The reduction in statutory Canadian corporate tax rates over the period generally lowered our effective tax rate. In the third and fourth quarters of 2013, the effective tax rate was impacted by net favourable income tax adjustments related to prior years as noted above.

Results by geographic segment (1)

For geographic reporting, our segments are grouped into Canada, U.S. and Other International. Transactions are primarily recorded in the location that best reflects the risk due to negative changes in economic conditions and prospects for growth due to positive economic changes. The following table summarizes our financial results by geographic region.

Table 33

	2013				2012				2011			
(Millions of Canadian dollars)	Canada	U.S.	Other International	Total	Canada	U.S.	Other International	Total	Canada	U.S.	Other International	Total
Continuing operations												
Net interest income	$ 10,960	$ 1,602	$ 689	$ 13,251	$ 10,413	$ 1,308	$ 777	$ 12,498	$ 9,641	$ 1,091	$ 625	$ 11,357
Non-interest income	8,855	3,834	4,927	17,616	9,378	3,564	4,332	17,274	9,270	2,815	4,196	16,281
Total revenue	$ 19,815	$ 5,436	$ 5,616	$ 30,867	$ 19,791	$ 4,872	$ 5,109	$ 29,772	$ 18,911	$ 3,906	$ 4,821	$ 27,638
PCL	898	77	264	1,239	1,021	90	190	1,301	1,016	(12)	129	1,133
PBCAE	1,425	10	1,349	2,784	2,320	16	1,285	3,621	2,124	21	1,213	3,358
Non-interest expense	9,345	3,677	3,205	16,227	8,809	3,404	2,947	15,160	8,376	3,159	2,632	14,167
Income taxes	1,754	402	32	2,188	1,600	519	(19)	2,100	1,728	259	23	2,010
Net income from continuing operations	$ 6,393	$ 1,270	$ 766	$ 8,429	$ 6,041	$ 843	$ 706	$ 7,590	$ 5,667	$ 479	$ 824	$ 6,970
Net loss from discontinued operations	–	–	–	–	–	(51)	–	(51)	–	(526)	–	(526)
Net income	$ 6,393	$ 1,270	$ 766	$ 8,429	$ 6,041	$ 792	$ 706	$ 7,539	$ 5,667	$ (47)	$ 824	$ 6,444

(1) For geographic reporting, our segments are grouped into Canada, U.S. and Other International. For further details, refer to Note 29 of our 2013 Annual Consolidated Financial Statements.

2013 vs. 2012

Net income in Canada was up $352 million or 6% from the prior year, mainly due to solid volume growth across all businesses in Canadian Banking. Higher average fee-based client assets in Wealth Management, strong growth in our corporate and investment banking businesses driven by higher lending, M&A and loan syndication, improved credit quality in our Canadian Banking portfolio, and the contribution of our acquisition of Ally Canada also contributed to the increase. These factors were partially offset by spread compression and a charge of $160 million ($118 million after-tax) in Insurance as a result of proposed legislation in Canada, which would affect the policyholders' tax treatment of certain individual life insurance policies. In addition, the prior year results were favourably impacted by a settlement of several tax matters with the CRA which resulted in the release of $128 million of tax uncertainty provisions and interest income of $72 million ($53 million after-tax) and a favourable adjustment related to a change in estimate of mortgage prepayment interest of $125 million ($92 million after-tax). Our results in the prior year were also unfavourably impacted by an impairment loss related to the acquisition of the remaining 50% stake of RBC Dexia of which $105 million (before- and after-tax) was recorded in our Canadian operations.

U.S. net income increased $478 million or 60% from the prior year, largely due to favourable income tax adjustments of $214 million related to prior years. Strong growth in our corporate and investment banking businesses mainly driven by higher loan syndication and higher lending, and higher average fee-based client assets and higher transaction volumes in Wealth Management also contributed to the increase. These factors were partially offset by higher variable compensation in Wealth Management and Capital Markets.

Other International net income was up $60 million or 8% from the previous year, largely due to strong growth in our corporate and investment banking businesses. Improved business performance in Investor Services including higher revenue and continuing benefits from our

ongoing focus on efficiency management activities, lower variable compensation in Capital Markets, and higher average fee-based client assets and higher transaction volumes in Wealth Management also contributed to the increase. In addition, the prior year results were unfavourably impacted by the impairment loss related to our acquisition of RBC Dexia as noted above of which $63 million (before- and after-tax) was recorded in our Other International operations, and our proportionate share of the loss on the securities exchange and trading losses recorded by RBC Dexia. These factors were partially offset by lower trading revenue largely in Europe, higher PCL in Wealth Management and Capital Markets, and a provision related to post-employment benefits and restructuring charges in the Caribbean of $40 million ($31 million after-tax).

2012 vs. 2011

Continuing operations

Net income in Canada was up $374 million or 7% compared to 2011, mainly due to strong volume growth across most of our Canadian banking businesses, the release of tax uncertainty provisions and interest income as noted above, a lower effective tax rate due to a reduction in statutory Canadian corporate income tax rates, and the mortgage prepayment interest adjustment as noted above. These factors were partially offset by increased costs in support of business growth partially offset by continuing benefits from our ongoing focus on efficiency management activities, and the impairment loss related to the acquisition of the remaining 50% stake of RBC Dexia as noted above.

U.S. net income increased $364 million or 76% compared to 2011, largely due to higher trading results, reflecting improved market conditions as compared to the challenging market conditions in the latter half of 2011. Strong growth in our corporate and investment banking results driven by client growth in our lending, loan syndication and origination businesses also contributed to the increase. These factors were partially offset by higher PCL in Capital Markets.

Other International net income was down $118 million or 14% compared to 2011, largely due to the impairment loss related to our acquisition of RBC Dexia as noted above, and higher PCL in Caribbean banking. These factors were partially offset by higher fixed income trading results in Capital Markets. In addition, 2011 included a gain related to MBIA which favourably impacted results in that year.

Discontinued operations

For details on results for our discontinued operations, refer to the Financial performance section.

Financial condition

Condensed balance sheets (1) — **Table 34**

As at October 31 (Millions of Canadian dollars)	2013	2012	2011
Assets			
Cash and due from banks	$ 15,870	$ 12,617	$ 12,428
Interest-bearing deposits with banks	9,061	10,255	6,460
Securities	182,718	161,611	167,022
Assets purchased under reverse repurchase agreements and securities borrowed	117,517	112,257	84,947
Loans			
Retail	321,678	301,185	284,745
Wholesale	88,947	79,056	64,752
Allowance for loan losses	(1,959)	(1,997)	(1,967)
Investments for account of segregated fund holders	513	383	320
Other – Derivatives	74,822	91,293	99,650
– Assets of discontinued operations	–	–	27,152
– Other	51,652	58,440	48,324
Total assets	$ 860,819	$ 825,100	$ 793,833
Liabilities			
Deposits	$ 558,480	$ 508,219	479,102
Insurance and investment contracts for account of segregated fund holders	513	383	320
Other – Derivatives	76,745	96,761	100,522
– Liabilities of discontinued operations	–	–	20,076
– Other	166,403	165,194	142,707
Subordinated debentures	7,443	7,615	8,749
Trust capital securities	900	900	894
Total liabilities	810,484	779,072	752,370
Equity attributable to shareholders	48,540	44,267	39,702
Non-controlling interests	1,795	1,761	1,761
Total equity	50,335	46,028	41,463
Total liabilities and equity	$ 860,819	$ 825,100	$ 793,833

(1) Foreign currency-denominated assets and liabilities are translated to Canadian dollars.

2013 vs. 2012

Total assets were up $36 billion or 4% from the previous year.

Interest-bearing deposits with banks decreased by $1 billion or 12% largely reflecting the increased placement of our deposits internally as a result of our acquisition of the remaining 50% stake of RBC Dexia, partially offset by higher overnight deposits.

Securities were up $21 billion or 13% compared to the prior year, primarily due to an increase in government and corporate debt securities as part of our management of liquidity and funding risk.

Assets purchased under reverse repurchase agreements (reverse repos) and securities borrowed increased by $5 billion or 5%, mainly attributable to the impact of the depreciation of the Canadian dollar against certain other currencies.

Loans were up $30 billion or 8%, predominantly due to solid volume growth in Canadian home equity products reflecting the ongoing low interest rate environment and our acquisition of Ally Canada. Higher corporate lending in Capital Markets also contributed to the increase.

Derivative assets were down $16 billion or 18%, mainly attributable to lower fair values of interest rate swaps due to an increase in interest rates.

Other assets were down $7 billion or 12%, primarily reflecting a decrease in cash collateral requirements.

Total liabilities were up $31 billion or 4% from the previous year.

Deposits increased $50 billion or 10%, mainly reflecting our issuances of covered bonds and other fixed term notes for funding requirements and growth in business deposits. Demand for our high-yield savings accounts and other product offerings in our retail business as well as the impact of the depreciation of the Canadian dollar against certain other currencies also contributed to the increase.

Derivative liabilities were down $20 billion or 21%, primarily attributable to lower fair values of interest rate swaps due to an increase in interest rates.

Other liabilities increased by $1 billion or 1%, mainly resulting from higher obligations related to securities sold short and the impact of the depreciation of the Canadian dollar against certain other currencies. These factors were partially offset by a decrease in repurchase agreements as a result of lower funding requirements and a decrease in cash collateral requirements.

Total equity increased by $4 billion or 9%, largely reflecting earnings, net of dividends.

Our consolidated balance sheet was impacted by foreign currency translation which increased our total assets and our total liabilities and equity by approximately $14 billion due to the depreciation of the Canadian dollar against certain other currencies as compared to last year.

Off-balance sheet arrangements

In the normal course of business, we engage in a variety of financial transactions that, for accounting purposes, are not recorded on our Consolidated Balance Sheets. Off-balance sheet transactions are generally undertaken for risk, capital and funding management purposes which benefit us and our clients. These include transactions with special purpose entities (SPEs) and may also include the issuance of guarantees. These transactions give rise to, among other risks, varying degrees of market, credit, liquidity and funding risk, which are discussed in the Risk management section.

We use SPEs to securitize our financial assets as well as assist our clients in securitizing their financial assets. These entities are not operating entities, typically have no employees, and may or may not be recorded on our Consolidated Balance Sheets.

Securitizations of our financial assets

We periodically securitize our credit card receivables, residential and commercial mortgage loans and bond participation certificates primarily to diversify our funding sources, enhance our liquidity position and for capital purposes. We also securitize residential and commercial mortgage loans for sales and trading activities. Securitization can be used as a cost-effective fund raising technique compared to the relative cost of issuing unsecured wholesale debt.

The majority of our securitization activities are recorded on our Consolidated Balance Sheets. We securitize our credit card receivables, on a revolving basis, through a consolidated SPE. We securitize single and multiple-family residential mortgages through the NHA MBS program, which are not derecognized from our Consolidated Balance Sheets. For details of these activities, refer to Note 6 and Note 7 of our 2013 Annual Consolidated Financial Statements.

We have also securitized residential mortgage loans through the Canadian social housing program which are derecognized from our Consolidated Balance Sheets when sold to third party investors. During 2013, we did not securitize mortgages through the Canadian social housing program (2012 – $21 million).

In prior years, we securitized commercial mortgages by selling them in collateral pools, which met certain diversification, leverage and debt coverage criteria, to SPEs, one of which is sponsored by us. We also participated in bond securitization activities where we purchased government, government related and corporate bonds and repackaged those bonds in participation certificates, which were sold to third party investors. Securitized commercial mortgage loans and bond participation certificates are derecognized from our Consolidated Balance Sheets as we have transferred substantially all of the risk and rewards of ownership of the securitized assets. Our continuing involvement with the transferred assets is limited to servicing the underlying bonds and the commercial mortgages sold to our sponsored SPE. As at October 31, 2013, there were $1.3 billion of commercial mortgages (October 31, 2012 – $1.4 billion) and $624 million of bond participation certificates (October 31, 2012 – $661 million) outstanding related to these prior period securitization activities. During 2013, we did not securitized bond participation certificates, or commercial mortgages.

Involvement with unconsolidated special purpose entities

In the normal course of business, we engage in a variety of financial transactions with SPEs to support our customers' financing and investing needs, including securitization of client financial assets, creation of investment products, and other types of structured financing. The following table summarizes SPEs in which we have significant financial interests, but have not consolidated.

Special Purpose Entities — **Table 35**

	2013												2012	
			Total assets by credit ratings			Total assets by average maturities				Total assets by geographic location of borrowers				
As at October 31 (Millions of Canadian dollars)	Total assets (1)	Maximum exposure (1)(2)	Investment grade (3)	Non-Investment grade (3)	Not Rated	Under year	1 to 5 years	Over 5 years	Not applicable	Canada	U.S.	Other International	Total assets (1)	Maximum exposure (1)
Unconsolidated SPEs														
Multi-seller conduits (4)	$ 31,075	$ 31,556	$ 30,919	$ 156	$ –	$6,000	$24,143	$ 932	$ –	$ 5,570	$22,549	$ 2,956	$ 29,582	$ 30,029
Structured finance	3,895	1,272	3,745	150	–	200	–	3,695	–	200	3,695	–	5,039	1,760
Investment funds	1,621	1,461	584	–	1,037	–	–	584	1,037	32	656	933	1,584	1,082
Credit investment product	74	15	–	74	–	–	–	74	–	–	–	74	852	169
Third-party securitization vehicles	8,098	992	1,688	33	6,377	–	105	3,601	4,392	–	3,706	4,392	6,811	1,266
Other	241	76	–	–	241	–	–	–	241	36	200	5	368	103
	$ 45,004	$ 35,372	$ 36,936	$ 413	$7,655	$6,200	$24,248	$8,886	$ 5,670	$ 5,838	$30,806	$ 8,360	$ 44,236	$ 34,409

(1) Total assets and maximum exposure to loss correspond to disclosures provided in Note 7 to our 2013 Annual Consolidated Financial Statements. Total asset amounts may differ from those presented in Note 7 due to certain entities, primarily mutual and pooled funds, which we sponsor but where we do not hold a significant financial interest.

(2) The maximum exposure to loss resulting from significant financial interests in these SPEs consists mostly of investments, loans, liquidity and credit enhancement facilities and fair value of derivatives. The maximum exposure to loss may exceed the total assets in the multi-seller conduits, as our liquidity facilities may sometimes be extended for up to 102% of the total value of the assets in the conduits.
(3) Our internal risk ratings for major counterparty types approximate those of public rating agencies. Ratings of AAA, AA, A, and BBB represent investment grade ratings and ratings of BB or lower represent non-investment grade ratings.
(4) Represents multi-seller conduits that we administer.

We have the ability to use credit mitigation tools such as third party guarantees, credit default swaps, and collateral to mitigate risks assumed through securitization and re-securitization exposures. The process in place to monitor the credit quality of our securitization and re-securitization exposures involves, among other things, reviewing the performance data of the underlying assets. We affirm our ratings each quarter and formally confirm or assign a new rating at least annually. For further details on our activities to manage risks, refer to the Risk management section.

Approximately 81% of assets in unconsolidated SPEs in which we have significant financial interests were internally rated A or above, compared to 79% in the prior year. For multi-seller conduits, 99% of assets were internally rated A or above, consistent with the prior year. All transactions funded by the unconsolidated multi-seller conduits are internally rated using a rating system which is largely consistent with that of the external rating agencies.

The assets in unconsolidated SPEs as at October 31, 2013 have varying maturities and a remaining expected weighted average life of approximately 3.5 years.

RBC-administered multi-seller conduits

We administer multi-seller conduits which are used primarily for the securitization of our clients' financial assets. We are involved in these conduit markets because our clients value these transactions. Our clients primarily use multi-seller conduits to diversify their financing sources and to reduce funding costs by leveraging the value of high-quality collateral. The conduits offer us a favourable revenue stream, risk-adjusted return and cross-selling opportunities.

We provide services such as transaction structuring, administration, backstop liquidity facilities and partial credit enhancements to the multi-seller conduits. Fee revenue for all such services amounted to $158 million during the year (2012 – $146 million). We do not maintain any ownership or retained interests in these multi-seller conduits and have no rights to, or control of, their assets.

Our total commitment to the conduits in the form of backstop liquidity and credit enhancement facilities is shown below. The total committed amount of these facilities exceeds the total amount of the maximum assets that may have to be purchased by the conduits under the purchase agreements. As a result, the maximum exposure to loss attributable to our backstop liquidity and credit enhancement facilities is less than the total committed amounts of these facilities.

Liquidity and credit enhancement facilities **Table 36**

	2013				2012			
As at October 31 (Millions of Canadian dollars)	Notional of committed amounts (1)	Allocable notional amounts	Outstanding loans (2)	Total maximum exposure to loss	Notional of committed amounts (1)	Allocable notional amounts	Outstanding loans (2)	Total maximum exposure to loss
Backstop liquidity facilities	$ 31,675	$27,875	$ 896	$ 28,771	$ 30,143	$25,935	$ 1,391	$ 27,326
Credit enhancement facilities	2,889	2,785	–	2,785	2,703	2,703	–	2,703
Total	$ 34,564	$30,660	$ 896	$ 31,556	$ 32,846	$28,638	$ 1,391	$ 30,029

(1) Based on total committed financing limit.
(2) Net of allowance for loan losses and write-offs.

As at October 31, 2013, the notional amount of backstop liquidity facilities we provide increased by $1.5 billion or 5.1% from the prior year. Total loans extended to the multi-seller conduits under the backstop liquidity facilities decreased by $495 million from the prior year primarily due to principal repayments. The partial credit enhancement facilities we provide increased by $186 million from the prior year. The increase in the amount of backstop liquidity facilities and partial credit enhancement facilities provided to the multi-seller conduits compared to the prior year primarily reflects a fluctuation in exchange rates and an expansion of the outstanding securitized assets of the multi-seller conduits in support of our clients' securitization needs.

Maximum exposure to loss by client type **Table 37**

	2013			2012		
As at October 31 (Millions)	(US$)	(C$)	Total (C$)	(US$)	(C$)	Total (C$)
Outstanding securitized assets						
Credit cards	$ 6,096	$ 510	$ 6,866	$ 7,410	$ 510	$ 7,912
Auto loans and leases	8,643	2,252	11,264	7,903	2,193	10,087
Student loans	3,374	–	3,518	2,429	–	2,427
Trade receivables	2,688	56	2,859	2,290	112	2,400
Asset-backed securities	859	–	896	1,454	–	1,453
Equipment receivables	1,649	–	1,720	1,275	–	1,274
Consumer loans	–	–	–	1,020	–	1,019
Electricity market receivables	–	173	173	–	255	255
Dealer floor plan receivables	765	740	1,538	587	561	1,147
Fleet finance receivables	313	265	592	310	265	575
Insurance premiums	87	–	90	87	–	87
Corporate loan receivables	75	–	78	101	–	101
Residential mortgages	–	1,530	1,530	–	1,020	1,020
Transportation finance	415	–	432	272	–	272
Total	$ 24,964	$ 5,526	$ 31,556	$ 25,138	$ 4,916	$ 30,029
Canadian equivalent	$ 26,030	$ 5,526	$ 31,556	$ 25,113	$ 4,916	$ 30,029

Our overall exposure increased 5.1% compared to the prior year reflecting a fluctuation in exchange rates and improved business conditions which led to an expansion of the outstanding securitized assets of the multi-seller conduits. Correspondingly, total assets of the multi-seller conduits increased by $1.5 billion or 5.0% over the prior year, primarily due to increase in the Auto loans and leases, Student loans, Trade and Equipment receivables and Residential mortgages asset classes, which was offset partially by decreases in the Credit cards, Consumer loans and Asset-backed securities asset classes.

Multiple independent debt rating agencies review all of the transactions in the multi-seller conduits. Transactions financed in the U.S. multi-seller conduits are reviewed by Moody's Investors Service (Moody's), Standard & Poor's (S&P) and Fitch Ratings (Fitch). Transactions in the Canadian multi-seller conduits are also reviewed by Dominion Bond Rating Services (DBRS). Each applicable rating agency also reviews ongoing transaction performance on a monthly basis and may publish reports detailing portfolio and program information related to the conduits.

As at October 31, 2013, the total asset-backed commercial paper (ABCP) issued by the conduits amounted to $18.8 billion, an increase of $1.7 billion or 9.9% since the prior year. The increase in the amount of ABCP issued by the multi-seller conduits compared to the prior year is primarily due to increased client usage. The rating agencies that rate the ABCP rated 75% of the total amount issued within the top ratings category and the remaining amount in the second highest ratings category compared with 71% in the prior year.

We sometimes purchase ABCP issued by the multi-seller conduits in our capacity as a placement agent in order to facilitate overall program liquidity. As at October 31, 2013, the fair value of our inventory was $14 million, a decrease of $13 million from the prior year. The fluctuations in inventory held reflect normal trading activity. This inventory is classified as Securities – Trading on our Consolidated Balance Sheets.

Structured finance SPEs

We invest in ARS of entities which fund their long-term investments in student loans by issuing short-term senior and subordinated notes. As at October 31, 2013, the total assets of the unconsolidated ARS trusts in which we have significant investments were $2.8 billion (2012 – $3.9 billion). Our maximum exposure to loss in these ARS trusts as at October 31, 2013 was $680 million (2012 – $1.1 billion). The decrease in total assets and our maximum exposure to loss is primarily related to the sale, redemption or defeasement of the underlying ARS investment securities. As at October 31, 2013, approximately 89% of these investments were AAA rated. Interest income from the ARS investments, which is reported in Net-interest income was $6.5 million during the year (2012 – $19 million).

We also provide liquidity facilities to certain municipal bond Tender Option Bond (TOB) programs in which we have a significant interest but do not consolidate because the residual certificates are held by third parties. As at October 31, 2013, the total assets of these unconsolidated municipal bond TOB trusts were $941 million (2012 – $856 million) and our maximum exposure to loss was $572 million (2012 – $552 million). The increase in total assets of these TOB trusts and in our maximum exposure to loss relative to the prior year is primarily related to new TOB trusts and an increase in our TOB funding limits. Fee revenue from provision of liquidity facilities to these entities reported in Non-interest income was $3 million during the year (2012 – $2 million).

Investment funds

We enter into fee-based equity derivative transactions with third parties including mutual funds, unit investment trusts and other investment funds. These transactions provide their investors with the desired exposure to the referenced funds, and we economically hedge our exposure from these derivatives by investing in those third party managed referenced funds. Our maximum exposure as at October 31, 2013, which is primarily related to our investments in the reference funds, was $867 million (October 31, 2012 – $1.1 billion). The total assets held in the unconsolidated reference funds as at October 31, 2013 were $1.0 billion (October 31, 2012 – $1.6 billion). The decreases in total assets and our maximum exposure compared to the prior year are primarily due to negative performance of the reference funds and redemptions of capital by us and third-party investors in the funds.

Beginning in the first quarter of 2013, we also provide liquidity facilities to certain third party investment funds. The funds issue unsecured variable-rate preferred shares and invest in portfolios of tax exempt bonds. As at October 31, 2013, total assets in these funds were $584 million (October 31, 2012 – $nil).

Third-party securitization vehicles

We hold significant interests in certain unconsolidated third-party securitization vehicles, which are SPEs. We, as well as other financial institutions, are obligated to provide funding to these SPEs up to our maximum commitment level and are exposed to credit losses on the underlying assets after various credit enhancements. As at October 31, 2013, total assets of these funds were $4.4 billion (October 31, 2012 – $3.9 billion) and our maximum exposure to loss in these entities was $774 million (October 31, 2012 – $1.1 billion). The increase in total assets compared to the prior year reflects additional securitized assets funded by other investors in one of our SPEs. The decrease in our maximum exposure compared to prior periods reflects the amortizing nature of several of these transactions. Interest income earned in respect of these investments reported in Net-interest income was $10 million (2012 – $15 million).

We also invest in the securities issued by unconsolidated third-party SPEs, including government-sponsored SPEs, as part of our trading activities. These investments do not carry a funding commitment; therefore our maximum exposure to loss is limited to our investment. As at October 31, 2013, total assets of SPEs in which we have significant investments were $3.7 billion (October 31, 2012 – $2.9 billion). Our maximum exposure to loss in these entities was $218 million (October 31, 2012 – $118 million). Fluctuations in the amounts presented for these SPEs reflect normal trading activity and the extent to which our investments in certain entities are significant as at the end of the reporting period.

Credit investment product SPEs and Others

We use SPEs to create customized credit products to meet investors' specific requirements and created tax credit funds. Refer to Note 7 to our 2013 Annual Consolidated Financial Statements for more detail on these SPEs.

Guarantees, retail and commercial commitments

We provide guarantees and commitments to our clients that expose us to liquidity and funding risks. Our maximum potential amount of future payments in relation to our commitments and guarantee products as at October 31, 2013 amounted to $232 billion compared to $204 billion in the prior year. The increase compared to the prior year relates primarily to business growth in wholesale commitments. Refer to Liquidity and Funding Management and Note 26 to our 2013 Annual Consolidated Financial Statements for details regarding our guarantees and commitments.

Risk management

Overview

Our diversified business activities expose us to a wide variety of risks in virtually all aspects of our operations. Our ability to manage these risks is a key competency within RBC, and is supported by a strong risk culture and an effective risk management approach. We define risk as the potential for loss or an undesirable outcome with respect to volatility of actual earnings in relation to expected earnings, capital adequacy or liquidity.

We manage our risks by seeking to ensure that business activities and transactions provide an appropriate balance of return for the risks assumed and remain within our Risk Appetite, which is collectively managed throughout RBC, through adherence to our Enterprise Risk Appetite Framework. These risks include credit, market, liquidity and funding, insurance, regulatory compliance, operational, strategic, reputation and competitive risk. For further details, refer to the respective risk sections.

Enhanced Disclosure Task Force

On October 29, 2012, the Enhanced Disclosure Task Force (EDTF), established by the Financial Stability Board, issued its report "Enhancing the Risk Disclosures of Banks", which included 32 recommendations aimed at improving clarity, comparability and transparency of risk disclosures. For a listing of the location of the related disclosures, refer to the Index for Enhanced Disclosure Task Force recommendations on page 98.

Top and emerging risks

Our view of risks is not static. An important component of our enterprise risk management approach is to ensure that top risks which are evolving or emerging risks are appropriately identified, managed, and incorporated into existing enterprise risk management assessment, measurement, monitoring and escalation processes.

These practices ensure management is forward-looking in its assessment of risks to the organization. Identification of top and emerging risks occurs in the course of businesses developing and pursuing approved strategies and as part of the execution of risk oversight responsibilities by Group Risk Management (GRM), Finance, Corporate Treasury, Global Compliance and other control functions.

Risk oversight activities which can lead to identification of new, evolving or emerging risks include control mechanisms (e.g. approval of new products, transactions, projects or initiatives), business strategy development, stress testing, portfolio level measurement, monitoring and reporting activities, and the ongoing assessment of industry and regulatory developments.

Details of the top and emerging risks we are facing are discussed below.

Regulatory environment

Certain regulatory reforms will impact the way in which we operate, both in Canada and abroad. We continue to respond to these and other developments and are working to minimize any potential business or economic impact. The following regulatory reforms have potential to increase our operational, compliance, and technology costs.

Basel Committee on Banking Supervision global standards for capital and liquidity reform (Basel III)

The Basel Committee's new standards for capital and liquidity establish minimum requirements for common equity, increased capital requirements for counterparty credit exposures, a new global leverage ratio and measures to promote the build up of capital that can be drawn down in periods of stress. Banks around the world have begun to implement these new standards (commonly referred to as Basel III).

On January 7, 2013, the Basel Committee released final rules for the short-term Basel III Liquidity Coverage Ratio (LCR), including phased timelines for compliance. The Basel global timeline sets the minimum required coverage at 60% for 2015 (increasing 10% per annum until full compliance is achieved by January 2019). While the Basel III long-term liquidity standard (the Net Stable Funding Ratio, or NSFR) has not been finalized, we continue to measure our liquidity position and make adjustments that we believe are appropriate in anticipation of the Basel Committee's final NSFR implementation schedule.

In June 2013, the Basel Committee issued a revised leverage framework for industry consultation. Various jurisdictions including the U.S. have proposed or are in the process of developing national requirements for leverage. The Office of the Superintendent of Financial Institutions (OSFI) has not yet published a Canadian Basel III leverage requirement. Depending on the final leverage rules, the leverage ratio may require us to hold more capital than otherwise required under our risk-based measures.

In June 2013, the European Commission published the final Capital Requirements Directive (CRD 4) and the accompanying Capital Requirements Regulation (CRR) which implement the Basel III requirements in the European Union (EU), effective January 1, 2014. In addition to the Basel III requirements, CRD 4 / CRR introduces improvements to the transparency of activities of banks and investment funds in different countries, adds a host of governance standards (including standards for executive compensation and bonuses, board oversight of risk and board diversity), and implements a common reporting framework for regulatory reporting. This change may also result in higher capital requirements for our European subsidiaries.

Dodd-Frank – Enhanced Supervision of Foreign Banking Organizations

On December 14, 2012, the U.S. Federal Reserve proposed a new oversight regime for foreign banks operating in the United States, pursuant to sections 165 and 166 of the *Dodd-Frank Act*. The rule is proposed to take effect in July 2015 and is intended to address the perceived systemic risk that large foreign banks could pose to the U.S. financial markets. Under the rule as proposed, we would be required to re-organize all of our U.S. bank and non-bank subsidiaries into a separately capitalized U.S. holding company, against which U.S. prudential regulations for capital, liquidity and enhanced supervision would apply. These include U.S. focused requirements for capital, liquidity, leverage, risk management, stress testing and early remediation, as well as limits on exposures to single counterparties. The majority of the proposed requirements would apply at the U.S. holding company level, while notably, the liquidity rules would extend to business activities conducted within our U.S. banking operations. We continue to assess the full implications of the proposal, and if adopted, there may be a need to develop a separate, U.S.-based infrastructure to meet these U.S.-specific requirements.

Dodd-Frank – Volcker Rule

The industry continues to await final implementation rules from U.S. federal financial regulators relating to the Volcker Rule. As currently drafted, the proposed rule would impact our global capital markets activities and funding activities as its extraterritorial reach extends to the bank and each of its subsidiaries and affiliates. Under the proposal, certain activities may be permitted to continue (e.g. exemptions available for

underwriting, market making, and risk mitigating/hedging activities), although under new, restrictive definitions. Trading and investment activities outside of the U.S. may be permitted if conducted in accordance with certain exemptions from the regulation (e.g. activities found to be conducted solely outside of the U.S.), that may limit wholesale activities conducted in Canada or elsewhere. In anticipation of final rule issuance, we are continuing to analyze our investment, trading and funding activities across all of our businesses as part of our good faith compliance efforts to conform. This includes assessing our compliance and risk management programs as they relate to the proposed rule. Depending on the manner in which the rule is ultimately implemented, the proposed restrictions on proprietary trading and certain fund activities may have an adverse impact on our results of operations. U.S. regulators estimate final rules will be published by the end of 2013.

Over-the-counter (OTC) derivatives reform
Reforms in the OTC derivatives markets continue on a global basis, with the governments of the G20 nations proceeding with plans to transform the capital regimes, national regulatory frameworks and infrastructures in which we and other market participants operate. We, along with other Canadian banks, will experience changes in our wholesale banking business, some of which will impact our client- and trading-related derivatives revenues in Capital Markets. As part of this, we are implementing a compliance framework to adhere to the new mandatory clearing and reporting requirements of the U.S. *Dodd-Frank* and European Market Infrastructure Rules (EMIR) as they come into effect.

On December 31, 2012, we registered as a swaps dealer in the U.S. pursuant to the U.S. Commodity Futures Trading Commission (CFTC) requirements. To avoid the imposition of duplicative prudential requirements (and mitigate some of the expected compliance and operating costs), we are working with similarly-affected Canadian banks and Canadian and U.S. authorities to encourage reliance on the Canadian framework. The deadline for concluding discussions on a substitute compliance framework is December 21, 2013.

The payments system in Canada
The Federal government is currently reviewing a number of aspects of the Canadian payments system, including governance, mobile payments, debit and credit cards, and the state of the regulatory framework. Potential changes arising from the review could have implications for the bank from technological, systems, operational and regulatory perspectives. While the review is still at an early stage, risks associated with the implementation of these reforms could include implications for revenues and business strategies.

Foreign Account Tax Compliance Act (FATCA)
In 2010, the U.S. government passed legislation requiring non-U.S. financial institutions operating in the U.S. to provide information to U.S. tax authorities on non-U.S. persons' financial accounts in order to identify persons evading U.S. taxes through the use of foreign (non-U.S.) accounts. Final regulations implementing FATCA were published on January 17, 2013. The rules are scheduled to take effect starting July 1, 2014. The U.S. is working to facilitate implementation with certain jurisdictions through the negotiation of Inter-Governmental Agreements (IGAs) and it is expected that Canada will ultimately sign such an agreement.

Regulatory reform in the U.K. and Europe
The regulatory framework in the U.K. and Europe continues to undergo significant reform and reorganization. In the U.K. we continue to monitor developments arising from recommendations made by the Independent Commission on Banking and endorsed by the U.K. government, in particular the requirement that banks ring-fence their retail banking activities from their investment banking operations. As currently proposed, our U.K. entities would be exempt from the requirement to separate our retail banking and investment banking activities, by virtue of meeting prescribed *de minimis* thresholds. The EMIR require firms to clear certain OTC standardized derivative contracts through central counterparties, establish risk mitigation controls for OTC derivatives transactions that cannot be cleared, and report both cleared and non-cleared contracts to trade repositories. The majority of the requirements came into force on March 15, 2013, while certain others are expected to come into force in 2014. The review of Markets in Financial Instruments Directive (MiFID II) is another key initiative seeking to achieve greater trade transparency, enhanced investor protection and more oversight of OTC derivatives and fixed income products, primarily through the introduction of new types of regulated trading platforms and increased governance over certain trading activities. Negotiations on the final shape of MiFID II are ongoing and are not expected to come into force before 2015.

High levels of Canadian household debt
Growing Canadian household debt levels and elevated housing prices are resulting in increasing vulnerability to external risk factors. Growth in consumer debt has been driven by rising housing prices and high debt levels could amplify the effect of an external shock to the Canadian economy. In an increasing interest rate environment the debt service capacity of Canadian consumers will be negatively impacted. This will be more challenging for consumers with floating rate debt or impending mortgage renewals. The combination of increasing unemployment, rising interest rates, and a downturn in real estate markets would pose a risk to the credit quality of our retail lending portfolio. We actively manage our lending portfolios and stress test them against various scenarios. Our stress testing shows that the vast majority of our mortgage clients have sufficient capacity to absorb interest rate increases in the ranges currently forecast. For further discussion relating to our retail portfolio, refer to the Credit risk section.

Cybersecurity
Given our reliance on digital and internet technologies to conduct and expand our global operations, we are increasingly exposed to risks related to cybersecurity. Such incidents may include unauthorized access to our systems for purposes of misappropriating assets, gaining access to sensitive information, corrupting data, or causing operational disruption. Although our computer systems continue to be subject to cyber attacks, to date we have not experienced a material breach of cybersecurity. Such an event could compromise our confidential information as well as that of our clients and third parties with whom we interact and may result in negative consequences, including remediation costs, loss of revenue, additional regulatory scrutiny, litigation and reputational damage. We continue to place a significant focus on enhancing our cybersecurity technologies, processes and practices to protect our networks, systems, computers and data from attack, damage or unauthorized access. We will continue to actively monitor the cybersecurity threat landscape to review best practices and to implement additional controls to mitigate this risk.

Our Enterprise Risk Management Framework provides an overview of our enterprise-wide programs for identifying, measuring, controlling and reporting on the significant risks that face the organization.

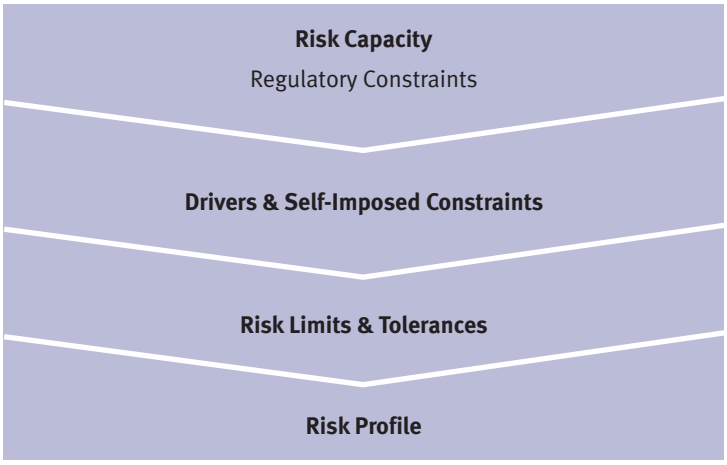
Risk culture

Our strong risk culture begins with setting the right tone at the top, from the Board of Directors to senior management, and across all businesses and employees. In order to reinforce our strong risk culture, risk accountabilities play an important part in performance evaluations. We are committed to maintaining our strong risk culture which is built on fostering risk awareness, a clear understanding of the risks that one can take and in developing a strong sense of responsibility for risk.

We have a strong ethical culture of integrity and compliance grounded in our Code of Conduct. The Code of Conduct broadly addresses a variety of ethical and legal concerns that our employees face on a daily basis. Our Code of Conduct is supported by a number of global and regional compliance frameworks, policies, training programs, online tools, job aids, new employee orientation materials, and the direction of senior management.

Risk Appetite

Our Risk Appetite is the amount and type of risk we are able and willing to accept in the pursuit of our business objectives. Our Risk Appetite Framework has four major components as illustrated below:



The framework provides a structured approach to:

1. Define our **Risk Capacity** by identifying regulatory constraints that restrict our ability to accept risk.
2. Establish and regularly confirm our Risk Appetite, comprised of **Drivers** that are the business objectives which include risks we must accept to generate desired financial returns, and **Self-Imposed Constraints** that limit or otherwise influence the amount of risk undertaken. Our Self-Imposed Constraints include:
   - maintaining stability of earnings;
   - avoiding excessive concentrations of risk;
   - maintaining low exposure to stress events;
   - ensuring sound management of regulatory compliance risk and operational risk;
   - ensuring sound management of liquidity and funding risk;
   - ensuring capital adequacy by maintaining capital ratios in excess of rating agency and regulatory expectations;
   - maintaining a AA rating; and
   - maintaining a Risk Profile that is consistent with our international peer group.
3. Set **Risk Limits and Tolerances** to ensure that risk-taking activities are within Risk Appetite.
4. Regularly measure and evaluate our **Risk Profile**, representing the risks we are exposed to, relative to our Risk Appetite, and ensure appropriate action is taken prior to Risk Profile surpassing Risk Appetite.

The Enterprise Risk Appetite Framework is structured in such a way that it can be applied at the enterprise, business segment, business unit, and legal entity levels. Risk Appetite is integrated into our business strategies and capital plan. As part of strategic planning, each business segment's risk posture is assessed to anticipate the impact of strategic priorities and growth objectives on Risk Profile. We also ensure that the business strategy aligns with the enterprise and business segment level Risk Appetite.

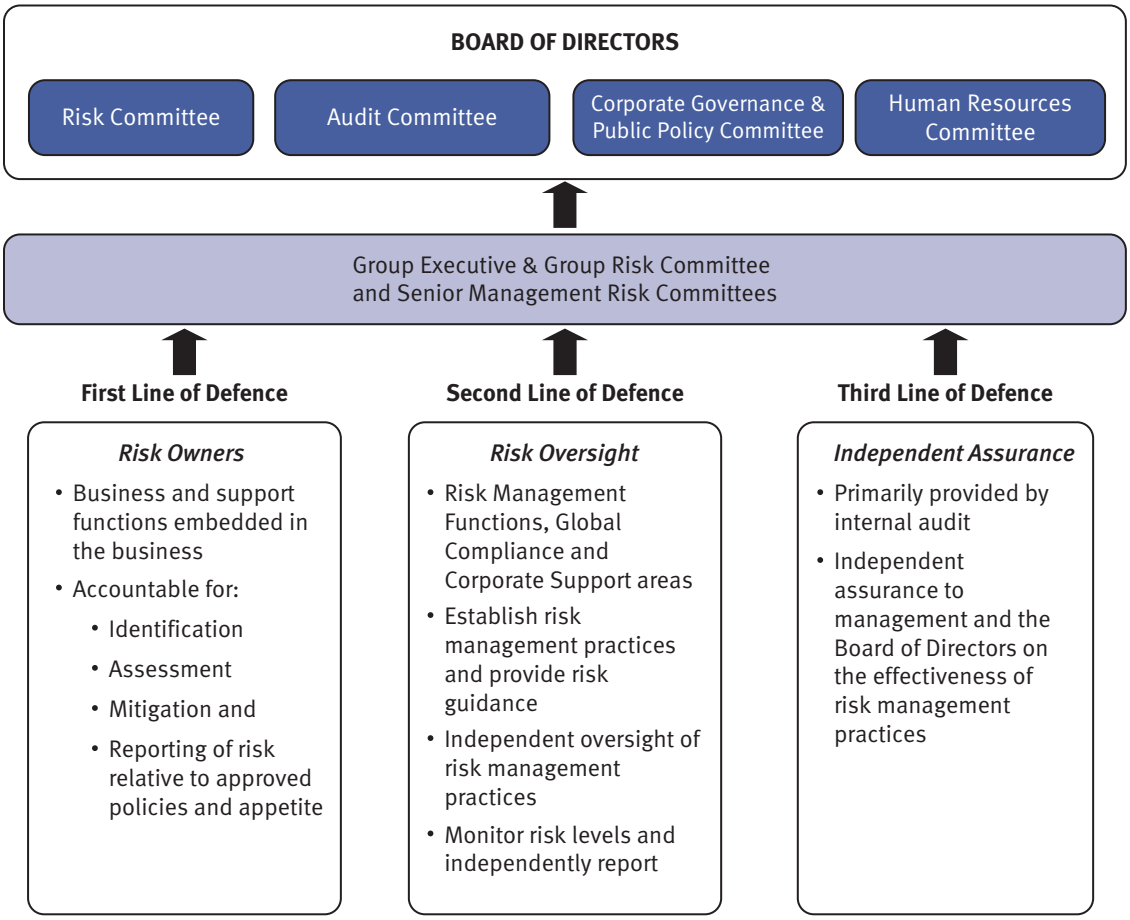
Risk management principles

The following principles guide our enterprise-wide management of risk:

1. **Effective balancing of risk and reward** by aligning Risk Appetite with business strategy, diversifying risk, pricing appropriately for risk, mitigating risk through preventive and detective controls and transferring risk to third parties.
2. **Shared responsibility for risk management** as business segments are responsible for active management of their risks, with direction and oversight provided by GRM and other corporate functions groups.
3. **Business decisions are based on an understanding of risk** as we perform rigorous assessment of risks in relationships, products, transactions and other business activities.
4. **Avoid activities that are not consistent with our values, Code of Conduct or policies,** which contributes to the protection of our reputation.
5. **Proper focus on clients reduces our risks** by knowing our clients and ensuring that all products and transactions are suitable for, and understood by our clients.
6. **Use of judgment and common sense** in order to manage risk throughout the organization.

Risk governance

Our overall risk governance structure shown below illustrates our Three Lines of Defence governance model.



The Board of Directors provides oversight and carries out its risk management mandate primarily through its committees which include the Risk Committee, the Audit Committee, the Corporate Governance & Public Policy Committee and the Human Resources Committee. The Board of Directors has responsibility for approving our Risk Appetite.

The purpose of the Risk Committee is to oversee our risk management program. The Risk Committee's oversight role is designed to ensure that the risk management function is adequately independent from the businesses whose activities it reviews, and that the policies, procedures and controls used by management are sufficient to keep risks within our risk appetite.

The Audit Committee also has a risk oversight role through its responsibilities to review our internal controls and the control environment, and to ensure that policies related to capital management and adequacy are in place and effective. The Audit Committee regularly reviews reporting on legal and regulatory compliance risks including significant litigation issues and regulatory compliance matters.

In addition, the following board committees have specific reputation risk oversight responsibilities:

- Corporate Governance & Public Policy Committee monitors the effectiveness of our corporate governance, reviews policies and programs, reviews our efforts to understand and meet changing public values and expectations, and identifies, assesses and advises management on public affairs issues related to our image and reputation.
- Human Resources Committee, along with the Risk Committee, is jointly responsible for our Code of Conduct, and actively oversees the design and operation of our compensation system.

The Group Executive (GE) is comprised of our senior management team and is led by the President & Chief Executive Officer (CEO). The GE is responsible for our strategy and its execution and establishing the "tone at the top". The GE actively shapes and recommends our Risk Appetite for approval by the Board of Directors. The GE's risk oversight role is executed primarily through the mandate of the Group Risk Committee (GRC). The GRC with the assistance of its supporting senior management risk committees is responsible for ensuring that our overall Risk Profile is consistent with our strategic objectives and remains within Risk Appetite and there are ongoing, appropriate and effective risk management processes.

The **First Line of Defence** is provided by the business as well as support functions embedded in the business. The First Line of Defence has ownership and accountability for:

- Risk identification, assessment, mitigation, control and reporting in accordance with established enterprise risk policies; and
- Alignment of business and operational strategies with corporate risk culture and Risk Appetite.

The **Second Line of Defence** is provided by functions with independent oversight accountabilities such as GRM, Global Compliance, and other corporate support areas. The Second Line of Defence:

- Establishes the enterprise level risk management frameworks and policies, and provides risk guidance,
- Provides oversight of the effectiveness of First Line risk management practices, and
- Monitors and independently reports on the level of risk relative to established appetite.

The Chief Risk Officer (CRO) and GRM have overall responsibility for promoting our risk culture; monitoring our Risk Profile relative to our Risk Appetite; and maintaining our enterprise-wide program for identifying, measuring, controlling and reporting the significant risks that we face. The Chief Compliance Officer and Global Compliance are responsible for our policies and processes designed to mitigate and manage regulatory compliance risk. Corporate Treasury manages and oversees our capital position, structural interest rate risk and liquidity and funding risks.

The **Third Line of Defence** is primarily provided by internal audit. The Third Line of Defence provides independent assurance to senior management and the Board of Directors on the effectiveness of risk management policies, processes and practices in all areas of our organization.

The roles of the various stakeholders in our enterprise risk management program are described further in the discussion of specific risks in the following pages.

Risk measurement

Our ability to measure risks is a key component of our enterprise-wide risk and capital management processes. Certain measurement methodologies are common to a number of risk types, while others only apply to a single risk type. While quantitative risk measurement is important, we also place reliance on qualitative factors. Our measurement models and techniques are continually subject to independent assessment for appropriateness and reliability. For those risk types that are difficult to quantify, we place greater emphasis on qualitative risk factors and assessment of activities to gauge the overall level of risk to ensure that they are within our Risk Appetite.

Quantifying expected loss

Expected loss represents losses that are statistically expected to occur in the normal course of business in a given period of time. For credit risk, the key parameters used to measure our exposure to expected loss are probability of default, loss given default, and exposure at default. For market risk, a statistical technique known as Value-at-Risk (VaR) is used to measure losses under normal market conditions.

Quantifying unexpected loss

Unexpected loss is a statistical estimate of the amount by which actual losses can exceed expected loss over a specified time horizon, measured at a specified level of confidence. We hold capital to withstand these unexpected losses, should they occur. For further information, refer to the Capital management section.

Stress testing

Stress testing examines potential effects resulting from changes in risk drivers corresponding to exceptional but plausible adverse events, and is an important component of our risk management framework. Stress testing results are used in:

- monitoring our risk profile relative to risk appetite;
- setting limits;
- identifying key risks to and potential shifts in our capital levels and financial position;
- enhancing our understanding of available mitigating actions in response to adverse events; and
- assessing the adequacy of our target capital levels.

Our enterprise-wide stress tests evaluate key balance sheet, income statement, and capital impacts arising from risk exposures and changes in earnings. The results are used by our senior management risk committees, the GRC, and the Board of Directors to understand our performance drivers under stress, and review stressed capital ratios against regulatory constraints and internal targets. The results are also explicitly incorporated into our Internal Capital Adequacy Assessment Process (ICAAP) and Capital Plan analyses.

We annually evaluate a number of enterprise-wide stress test scenarios over a multi-year horizon, featuring a range of severities. Our Board of Directors approves the recommended scenarios, and GRM leads the scenario assessment process. Results from across the organization are integrated to develop an enterprise-wide view of the impacts, with input from subject matter experts in GRM, Corporate Treasury, Finance, and Economics. Recent scenarios evaluated include severe recessions, energy price shocks, and natural catastrophe events.

Stress testing of specific risk types such as market risk, liquidity risk, structural interest rate risk, retail and wholesale credit risk, operational risk, and insurance risk supplement our enterprise-wide stress tests. Results may be used in a variety of decision-making processes including risk limit setting, portfolio composition, or business implementation strategies. For further details of some of these programs, refer to the Market risk and Liquidity and funding management sections.

Ad-hoc stress tests are used periodically to inform business planning and risk management decisions related to a particular line of business or portfolio. Along with our internal stress testing program, we also participate in a number of regulator-required stress test exercises at both the consolidated and subsidiary levels.

Validation of measurement models

We widely use models for many purposes, including validation of financial products and the measurement and management of different types of risk. Models are subject to validation by qualified employees that are sufficiently independent of the model design and development, or by approved external parties. Model validation is a comprehensive independent review of a model that checks the applicability of the model's logic, its assumptions and theoretical underpinnings, the appropriateness of input data sources, and provides an interpretation of the model results and the strategic use of the model outputs. By reviewing and evaluating a model's assumptions as well as its limitations, initial and ongoing model validation helps ensure the model incorporates current market developments and industry trends. Our model validation process is designed to ensure that all underlying model risk factors are identified and successfully mitigated.

Risk control

Our enterprise-wide risk management approach is supported by a comprehensive set of risk controls. The controls are anchored by our Enterprise Risk Management and Risk-Specific Frameworks. These frameworks lay the foundation for the development and communication of policies, establishment of formal risk review and approval processes, and the establishment of delegated authorities and limits. The implementation of robust risk controls enables the optimization of risk and return on both a portfolio and a transactional basis.

Our risk management frameworks and policies are organized into the following five levels:

Level 1: Enterprise Risk Management Framework provides an overview of our enterprise-wide program for identifying, measuring, controlling and reporting on the significant risks we face. The Risk Appetite Framework underpins this framework.

Level 2: Risk-Specific Frameworks elaborate on each specific risk type and the mechanisms for identifying, measuring, monitoring and reporting of risks; key policies; and roles and responsibilities.

Level 3: Enterprise Risk Policies articulate minimum requirements, within which businesses and employees must operate.

Level 4: "Multi-risk" Enterprise Risk Policies govern activities such as product risk review and approval, stress testing, risk limits, risk approval authorities and model risk management.

Level 5: Business Segments and Corporate Support; Specific Policies and Procedures are established to manage the risks that are unique to their operations.

Risk review and approval processes
Risk review and approval processes are established by GRM based on the nature, size, and complexity of the risk involved. In general, the risk review and approval process involves a formal review and approval by an individual, group or committee that is independent from the originator. The approval responsibilities are governed by delegated authorities based on the following categories: transactions, structured credit, projects and initiatives, and new products and services.

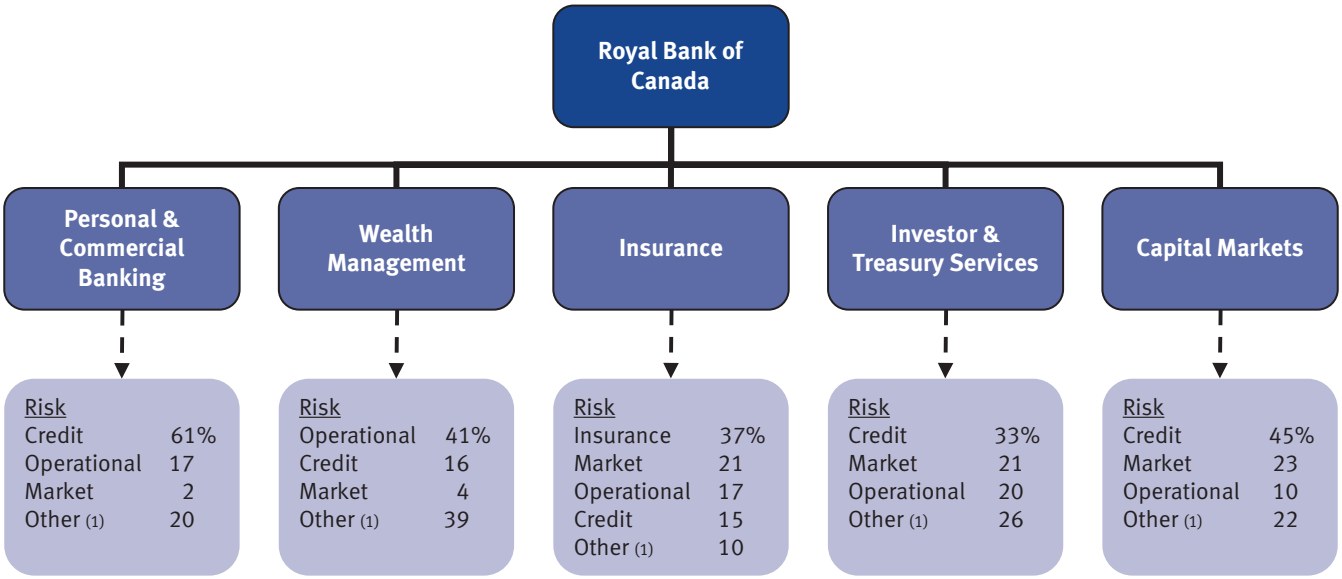
Authorities and limits
The Risk Committee of the Board of Directors delegates credit, market, and insurance risk authorities to the President & CEO and the CRO. These delegated authorities allow these officers to approve single name, geographic (country and region) and industry sector exposures within defined parameters to manage concentration risk, establish underwriting and inventory limits for trading and investment banking activities and set market risk tolerances.

The Board of Directors also delegates liquidity risk authorities to the President & CEO, Chief Administrative Officer and Chief Financial Officer, and the CRO. These limits act as a key risk control designed to ensure that reliable and cost-effective sources of cash or its equivalent are available to satisfy our current and prospective commitments.

Reporting
Enterprise level risk monitoring and reporting are critical components of our enterprise risk management program and support the ability of senior management and the Board of Directors to effectively perform their risk management and oversight responsibilities. On a quarterly basis, we provide to senior management and the Board of Directors the Enterprise Risk Report which includes a comprehensive review of our Risk Profile relative to our Risk Appetite and focuses on the range of risks we face along with analysis of the related issues and trends. In addition to our regular risk monitoring, other risk specific presentations are provided to and discussed with senior management and the Board of Directors on top and emerging risk issues or significant changes in our level of risk.

Risk in the context of our business activities
In carrying out our business activities, we are exposed to a range of risks. The following chart provides a high level view of risks within our business segments. We have used risk capital (i.e. economic capital less capital attribution for goodwill and intangibles) to illustrate the relative size of the risks in each of our businesses. The risk capital distribution reflects the diversified nature of our business activities.

Within Personal & Commercial Banking credit risk is the most significant risk, largely related to our personal financial services, business financial services and cards businesses. The primary risks within Wealth Management, which provides services to institutional and individual clients, are operational risk and credit risk. Risks within our Insurance operations primarily relate to insurance risk in our life, health, home and auto businesses followed by market risk and operational risk. The largest risk within Investor & Treasury Services is credit risk, followed by market risk and operational risk. The most significant risk within Capital Markets is credit risk followed by market risk.



(1) Other risks include regulatory capital allocation, business risk, and fixed assets risk.

The shaded texts along with the tables specifically marked with an asterisk(*) in the following sections of the MD&A represent our disclosures on credit, market and liquidity and funding risks in accordance with IFRS 7, *Financial Instruments: Disclosures*, and include discussion on how we measure our risks and the objectives, policies and methodologies for managing these risks. Therefore, these shaded texts and tables represent an integral part of our 2013 Annual Consolidated Financial Statements.

Credit risk

Credit risk is the risk of loss associated with an obligor's potential inability or unwillingness to fulfill their contractual obligations. Credit risk may arise directly from the risk of default of a primary obligor (e.g. issuer, debtor, counterparty, borrower or policyholder), or indirectly from a secondary obligor (e.g. guarantor or reinsurer).

The failure to effectively manage credit risk across all our products, services and activities can have a direct, immediate and material impact on our earnings and reputation.

We balance our risk and return by:

- Ensuring credit quality is not compromised for growth;
- Diversifying credit risks in transactions, relationships and portfolios;
- Using our credit risk rating and scoring systems or other approved credit risk assessment or rating methodologies, policies and tools;
- Pricing appropriately for the credit risk taken;
- Applying consistent credit risk exposure measurements;
- Mitigating credit risk through preventive and detective controls;
- Transferring credit risk to third parties, where appropriate, through approved credit risk mitigation techniques, including hedging activities and insurance coverage; and
- Ongoing credit risk monitoring and administration.

Risk measurement

We quantify credit risk, at both the individual obligor and portfolio levels, to manage expected credit losses and minimize unexpected losses in order to limit earnings volatility.

We employ different risk measurement processes for our wholesale and retail credit portfolios. The wholesale portfolio comprises businesses, sovereigns, public sector entities, banks and other financial institutions, and certain individuals and small businesses that are managed on an individual client basis. The retail portfolio is comprised of residential mortgages and personal, credit card and small business loans, which are managed on a pooled basis. Credit risk rating systems are designed to assess and quantify the risk inherent in credit activities in an accurate and consistent manner.

In measuring credit risk and setting regulatory capital, two principal approaches are available: Internal Ratings Based (IRB) Approach and Standardized Approach. Most of our credit risk exposure is measured under the IRB Approach.

Economic capital, which is our internal quantification of risks, is used extensively for performance measurement, limit setting and internal capital adequacy.

The key parameters that form the basis of our credit risk measures for both regulatory and economic capital are:

- Probability of default (PD): An estimated percentage that represents the likelihood of default within a one-year period of an obligor for a specific rating grade or for a particular pool of exposure.
- Exposure at default (EAD): An amount expected to be owed by an obligor at the time of default.
- Loss given default (LGD): An estimated percentage of EAD that is not expected to be recovered during the collections and recovery process.

These parameters are determined based on historical experience from internal credit risk rating systems in accordance with supervisory standards, and are independently validated and updated on a regular basis.

Under the Standardized Approach, used primarily for Investor Services and our Caribbean and U.S. banking operations, risk weights prescribed by OSFI are used to calculate risk-weighted assets (RWA) for credit risk exposure.

Wholesale credit portfolio

The wholesale credit risk rating system is designed to measure the credit risk inherent in our wholesale lending activities.

Each obligor is assigned a borrower risk rating (BRR), reflecting an assessment of the credit quality of the obligor. Each BRR has a PD assigned to it. The BRR differentiates the riskiness of obligors and represents our evaluation of the obligor's ability and willingness to meet its contractual obligations on time over a three year time horizon. The assignment of BRRs is based on the evaluation of the obligor's business risk and financial risk and is based on a fundamental credit analysis. The determination of the PD associated with each BRR relies primarily on internal default history since the late 1990s augmented where necessary with reference to external data. PD estimates are designed to be a conservative reflection of our experience across the economic cycle including periods of stress or economic downturn.

Our rating system is largely consistent with that of external rating agencies. The following table maps our 22-grade internal risk ratings compared to ratings by external rating agencies.

Internal ratings map* **Table 38**

Ratings	Standard & Poor's (S&P)	Moody's Investors Service (Moody's)	Description
1	AAA	Aaa	Investment Grade
2	AA+	Aa1	
3	AA	Aa2	
4	AA-	Aa3	
5	A+	A1	
6	A	A2	
7	A-	A3	
8	BBB+	Baa1	
9	BBB	Baa2	
10	BBB-	Baa3	
11	BB+	Ba1	Non-investment Grade
12	BB	Ba2	
13	BB-	Ba3	
14	B+	B1	
15	B	B2	
16	B-	B3	
17	CCC+	Caa1	
18	CCC	Caa2	
19	CCC-	Caa3	
20	CC	Ca	
21	D	C	Impaired
22	Bankruptcy	Bankruptcy	

* This table represents an integral part of our 2013 Annual Consolidated Financial Statements.

Each credit facility is assigned an LGD rate. LGD rates are largely driven by factors that will impact the extent of any losses in the event the obligor defaults and include seniority of debt, collateral security, and the industry sector in which the obligor operates. Estimated LGD rates draw primarily on internal loss experience since the late 1990s. Where we have limited internal loss data we also look to external data to inform the estimation. LGD rates are estimated to reflect conditions that might be expected to prevail in a period of an economic downturn, with additional conservatism added to reflect data limitations and judgments made in the estimation process.

EAD is estimated based on the current exposure to the obligor and the possible future changes in that exposure driven by factors such as the nature of the credit commitment and the type of obligor. As with LGD, rates are estimated to reflect downturn conditions, with added conservatism to reflect data and modeling uncertainty. Estimates are based on internal data dating back to the late 1990s.

Estimates of PD, LGD, and EAD are updated, and then validated and back-tested by an independent team within the Bank, on an annual basis. In addition, quarterly monitoring and back-testing is performed by the estimation team. These ratings and risk measurements are used in the determination of our expected losses and unexpected losses as well as economic and regulatory capital, setting of risk limits, portfolio management and product pricing.

Retail credit portfolio

Credit scoring is the primary risk rating system for assessing obligor and transaction risk for retail exposures. Credit scores along with decision strategies are employed in the acquisition of new clients (acquisition) and management of existing clients (behavioural).

Criteria used to pool exposures for risk quantification include behavioural score, product type (mortgages, credit cards, lines of credit and instalment loans), collateral type (chattel, liquid assets and real estate), loan to value, and the delinquency status (performing, delinquent and default) of the exposure. Regular monitoring and periodic adjustments and alignments are conducted to ensure that this process provides for a meaningful differentiation of risk. Migration between the pools is considered when assessing credit quality.

The pools are also assessed based on credit risk parameters (PD and EAD) which consider borrower and transaction characteristics, including behavioural credit score, product type and delinquency status. LGD is reviewed and re-estimated on an annual basis under the Basel III IRB Approach. The estimation is based on transaction specific factors, including product, loan to value and collateral types. LGD is determined based on over 10 years of historical economic losses with the highest degree of granularity and sufficient margin of conservatism. Parameters are validated and back-tested by an independent team within the bank.

The following table maps PD bands to various risk levels:

Internal ratings map* **Table 39**

PD bands	Description
0% – 1.0%	Low risk
1.1% – 6.4%	Medium risk
6.5% – 99.99%	High risk
100.00%	Impaired/Default

* This table represents an integral part of our 2013 Annual Consolidated Financial Statements.

Risk control

The Board of Directors and its committees, the GE, the GRC and other senior management risk committees work together to ensure a Credit Risk Framework and supporting policies, processes and procedures exist to manage credit risk and approve related credit risk limits. Reports are distributed to the Board of Directors, the GRC, and senior executives to keep them informed of our Risk Profile, including trending information and significant credit risk issues and shifts in exposures to ensure appropriate actions can be taken where necessary. Our enterprise-wide credit risk policies set out the minimum requirements for the management of credit risk in a variety of borrower, transactional and portfolio management contexts.

Credit policies are an integral component of our Credit Risk Management Framework and set out the minimum requirements for the management of credit risk as follows:

Credit risk assessment

- Mandatory use of credit risk rating and scoring systems.
- Consistent credit risk assessment criteria.
- Standard content requirements in credit application documents.

Credit risk mitigation

Structuring of transactions

- Specific credit policies and procedures set out the requirements for structuring transactions. Risk mitigants include the use of guarantees, seniority, loan-to-value requirements and covenants. Product-specific guidelines set out appropriate product structuring as well as client and guarantor criteria. The third-party guarantors that we deal with are primarily sovereign-sponsored agencies.

Collateral

- We often require obligors to pledge collateral as security when we advance credit. The extent of risk mitigation provided by collateral depends on the amount, type and quality of the collateral taken. Specific requirements relating to collateral valuation and management are documented in our credit risk management policies.

Credit derivatives

- Used as a tool to mitigate industry sector concentration and single-name exposure. For a more detailed description of the types of credit derivatives we enter into and how we manage related credit risk, refer to Note 8 of our 2013 Annual Consolidated Financial Statements.

Product approval

- Proposals for credit products and services are comprehensively reviewed and approved under a risk assessment framework.

Credit portfolio management

- Limits are used to ensure our portfolio is well-diversified, manage concentration risk and remain within our Risk Appetite. Limits are reviewed on a regular basis taking into account the business, economic, financial and regulatory environments.
- Our credit limits are established at the following levels: single name limits (notional and economic capital), underwriting risk limits, geographic (country and region) limits, industry sector limits (notional and economic capital), and product and portfolio limits, where deemed necessary.

Gross credit risk exposure

Gross credit risk exposure is calculated based on the definitions provided under the Basel II and Basel III frameworks. Under this method, risk exposure is calculated before taking into account any collateral and inclusive of an estimate of potential future changes to that credit exposure. Gross credit risk is categorized into lending-related and other, and trading-related.

Lending-related and other includes:

- Loans and acceptances outstanding, undrawn commitments, and other exposures including contingent liabilities such as letters of credit and guarantees, Available-for-sale (AFS) debt securities and deposits with financial institutions. Undrawn commitments represent an estimate of the contractual amount that may be drawn upon at the time of default of an obligor.

Trading-related credit includes:

- Repo-style transactions which include repurchase and reverse repurchase agreements and securities lending and borrowing transactions. For repo-style transactions, gross exposure represents the amount at which securities were initially financed, before taking into account collateral.
- Derivatives gross exposure amount which represents the credit equivalent amount, which is defined by OSFI as the replacement cost plus an amount for potential future credit exposure.

Gross (excluding allowance for loan losses) credit risk exposure by portfolio and sector* — Table 40

(Millions of Canadian dollars)	As at October 31 2013						As at October 31 2012					
	Lending-related and other			Trading-related			Lending-related and other			Trading-related		
	Loans and acceptances						Loans and acceptances					
	Outstanding	Undrawn commitments	Other (1)	Repo-style transactions	Derivatives (2)	Total exposure (3)	Outstanding	Undrawn commitments	Other (1)	Repo-style transactions	Derivatives (2)	Total exposure (3)
Residential mortgages	$ 209,238	$ –	$ –	$ –	$ –	$ 209,238	$ 198,324	$ –	$ –	$ –	$ –	$ 198,324
Personal	94,311	77,463	32	–	–	171,806	86,697	70,274	39	–	–	157,010
Credit cards	14,142	20,347	–	–	–	34,489	13,661	18,036	–	–	–	31,697
Small business (4)	3,987	4,043	41	–	–	8,071	2,503	3,933	40	–	–	6,476
Retail	$ 321,678	$ 101,853	$ 73	$ –	$ –	$ 423,604	$ 301,185	$ 92,243	$ 79	$ –	$ –	$ 393,507
Business (4)												
Agriculture	$ 5,441	$ 630	$ 51	$ –	$ 30	$ 6,152	$ 5,202	$ 659	$ 29	$ –	$ 29	$ 5,919
Automotive	6,167	3,602	255	–	451	10,475	3,585	3,219	240	–	546	7,590
Consumer goods	6,230	5,786	509	–	142	12,667	5,432	3,510	467	–	224	9,633
Energy	8,906	19,843	3,140	–	2,047	33,936	8,802	17,229	2,762	29	1,598	30,420
Non-bank financial services	4,903	8,529	13,374	134,290	18,368	179,464	3,895	6,954	11,149	124,925	6,051	152,974
Forest products	893	434	104	–	15	1,446	811	398	97	–	11	1,317
Industrial products	4,038	3,656	384	–	266	8,344	3,938	2,727	292	–	197	7,154
Mining & metals	1,074	2,648	807	–	158	4,687	965	2,630	681	91	113	4,480
Real estate & related	24,413	5,461	1,487	7	295	31,663	20,650	4,531	1,366	–	337	26,884
Technology & media	4,006	6,883	500	3	620	12,012	4,203	4,922	242	2	359	9,728
Transportation & environment	5,593	3,032	1,574	–	564	10,763	5,221	2,515	1,069	–	976	9,781
Other	21,520	9,989	9,060	2,202	14,537	57,308	20,554	8,575	7,783	25,807	3,964	66,683
Sovereign (4), (5)	4,396	5,527	34,789	27,193	8,319	80,224	4,193	5,026	36,239	20,130	7,868	73,456
Bank (4)	1,320	270	67,007	87,953	21,243	177,793	990	406	66,878	85,164	21,868	175,306
Wholesale	$ 98,900	$ 76,290	$ 133,041	$ 251,648	$ 67,055	$ 626,934	$ 88,441	$ 63,301	$ 129,294	$ 256,148	$ 44,141	$ 581,325
Total exposure	$ 420,578	$ 178,143	$ 133,114	$ 251,648	$ 67,055	$ 1,050,538	$ 389,626	$ 155,544	$ 129,373	$ 256,148	$ 44,141	$ 974,832

* This table represents an integral part of our 2013 Annual Consolidated Financial Statements.
(1) Includes contingent liabilities such as letters of credit and guarantees, AFS debt securities and deposits with financial institutions.
(2) Credit equivalent amount after factoring in master netting agreements.
(3) Gross credit risk exposure is before allowance for loan losses. Exposure under Basel III (2013) and Basel II (2012) asset classes of qualifying revolving retail and other retail are largely included within Personal and Credit cards, while home equity lines of credit are included in Personal.
(4) Refer to Note 5 of our 2013 Annual Consolidated Financial Statements for the definition of these terms.
(5) Sovereign as at October 31, 2012 was previously restated to include deposits with a central bank, which were previously not included in our exposure.

2013 vs. 2012

Total gross credit risk exposure increased $76 billion or 8% from the prior year, largely reflecting increases in outstanding loans, undrawn lending commitments and derivatives.

Retail exposure increased $30 billion or 8%, primarily due to solid volume growth in Canadian home equity products reflecting the ongoing low interest rate environment and our acquisition of Ally Canada.

Wholesale exposure increased $46 billion or 8%, largely due to an increase in outstanding loans and undrawn commitments driven by higher corporate lending along with an increase in derivatives. Derivatives increased as a result of the implementation of Basel III and now includes exposures related to exchange traded derivatives and derivatives with central clearing counterparties in the calculation of Total exposure. Wholesale loan utilization was 37%, unchanged from the prior year.

Gross (excluding allowance for loan losses) credit risk exposure by geography* — Table 41

(Millions of Canadian dollars)	As at October 31 2013						As at October 31 2012					
	Lending-related and other			Trading-related			Lending-related and other			Trading-related		
	Loans and acceptances						Loans and acceptances					
	Outstanding	Undrawn commitments	Other	Repo-style transactions	Derivatives (1)	Total exposure (2)	Outstanding	Undrawn commitments	Other	Repo-style transactions	Derivatives (1)	Total exposure (2)
Canada	$ 373,530	$ 129,632	$ 58,048	$ 55,394	$ 23,619	$ 640,223	$ 346,834	$ 117,797	$ 55,548	$ 81,691	$ 9,820	$ 611,690
U.S.	23,177	35,633	20,811	120,482	11,829	211,932	20,219	28,172	19,088	92,056	10,157	169,692
Europe (3)	11,471	10,200	39,111	55,928	27,215	143,925	10,679	7,705	39,357	65,329	19,941	143,011
Other International	12,400	2,678	15,144	19,844	4,392	54,458	11,894	1,870	15,380	17,072	4,223	50,439
Total exposure (4)	$ 420,578	$ 178,143	$133,114	$ 251,648	$ 67,055	$ 1,050,538	$ 389,626	$ 155,544	$129,373	$ 256,148	$ 44,141	$ 974,832

* This table represents an integral part of our 2013 Annual Consolidated Financial Statements.
(1) Credit equivalent amount after factoring in master netting agreements.
(2) Gross credit risk exposure is before allowance for loan losses.
(3) Europe as at October 31, 2012 was previously restated to include deposits with a central bank, which were previously not included in our exposure.
(4) Geographic profile is based on country of residence of the borrower.

2013 vs. 2012

The geographic mix of our gross credit risk exposure did not change significantly from the prior year as Canada, U.S., Europe and Other International ended the year at 61%, 20%, 14% and 5% respectively. Growth in U.S. lending is driven by continuing efforts to strengthen our wholesale business in that market.

Loans and acceptance outstanding and undrawn commitments*(1), (2) — **Table 42**

	As at									
	October 31 2013					October 31 2012				
(Millions of Canadian dollars)	Low risk	Medium risk	High risk	Impaired	Total	Low risk	Medium risk	High risk	Impaired	Total
Retail (3)										
Residential mortgages	$ 178,353	$ 24,011	$ 6,183	$ 691	$ 209,238	$ 166,217	$ 24,772	$ 6,661	$ 674	$ 198,324
Personal	143,747	23,890	3,774	363	171,774	133,711	19,418	3,569	273	156,971
Credit cards	25,429	7,907	1,153	–	34,489	24,022	6,592	1,083	–	31,697
Small business	4,567	2,214	1,212	37	8,030	3,201	2,201	1,001	33	6,436
	$ 352,096	$ 58,022	$ 12,322	$ 1,091	$ 423,531	$ 327,151	$ 52,983	$ 12,314	$ 980	$ 393,428

	As at							
	October 31 2013				October 31 2012			
(Millions of Canadian dollars)	Investment grade	Non-investment grade	Impaired	Total	Investment grade	Non-investment grade	Impaired	Total
Wholesale (4)								
Business	$ 73,865	$ 88,705	$ 1,107	$ 163,677	$ 65,781	$ 74,078	$1,268	$ 141,127
Sovereign	9,582	341	–	9,923	9,021	198	–	9,219
Bank	1,387	200	3	1,590	1,255	139	2	1,396
	$ 84,834	$ 89,246	$ 1,110	$ 175,190	$ 76,057	$ 74,415	$1,270	$ 151,742

* This table represents an integral part of our 2013 Annual Consolidated Financial Statements.

(1) This table represents our retail and wholesale loans and acceptances outstanding and undrawn commitments by portfolio and risk category. For a qualitative description of the credit risk assessment process, refer to the Risk measurement section.

(2) Based on exposure at default, which is the expected gross exposure upon the default of an obligor. This amount is before allowance for impaired loans and does not reflect the impact of credit risk mitigation such as guarantees.

(3) Includes undrawn commitments of $nil, $77.5 billion, $20.3 billion, and $4 billion for residential mortgages, personal, credit cards and small business, respectively.

(4) Includes undrawn commitments of $70.5 billion, $5.5 billion, and $0.3 billion for business, sovereign and bank, respectively.

2013 vs. 2012

For our retail portfolio, there was no significant shift in the overall distribution of exposures across the various credit quality categories as 83% of our portfolio is low risk, 14% is medium risk and 3% is high risk. Within our wholesale portfolio the increase in Business exposure is due to portfolio growth and our acquisition of Ally Canada.

European exposure — **Table 43**

	As at							
	October 31 2013							October 31 2012
	Loans and acceptances		Other					
(Millions of Canadian dollars)	Outstanding	Undrawn commitments (1)	Securities (2)	Letters of credit and guarantees	Repo-style transactions	Derivatives	Total European exposure	Total European exposure
Gross exposure to Europe (3)	$ 11,471	$ 10,200	$ 21,592	$ 17,519	$ 55,928	$ 27,215	$143,925	$ 143,011
Less: Collateral held against repo-style transactions	–	–	–	–	54,416	–	54,416	63,887
Potential future credit exposure add-on amount	–	–	–	–	–	18,827	18,827	10,536
Undrawn commitments	–	10,200	–	17,519	–	–	27,719	27,781
Gross drawn exposure to Europe	$ 11,471	$ –	$ 21,592	$ –	$ 1,512	$ 8,388	$ 42,963	$ 40,807
Less: Collateral applied against derivatives	–	–	–	–	–	6,306	6,306	6,495
Add: Trading securities	–	–	13,816	–	–	–	13,816	11,742
Net exposure to Europe (4)	$ 11,471	$ –	$ 35,408	$ –	$ 1,512	$ 2,082	$ 50,473	$ 46,054

(1) Comprised of undrawn commitments of $7.4 billion to corporate entities, $2 billion to financial entities and $0.8 billion to sovereign entities. On a country basis, exposure is comprised of $3.8 billion to U.K., $2.3 billion to France, $1.9 billion to Germany, $232 million to Ireland, $134 million to Spain, with the remaining $1.8 billion related to Other Europe. Of the undrawn commitments, over 86% are to investment grade entities.

(2) Securities include $13.8 billion of trading securities (2012 – $11.7 billion), $13.8 billion of deposits (2012 – $12.5 billion) and $7.8 billion of AFS securities (2012 – $6.8 billion).

(3) Gross exposure to Europe as at October 31, 2012 was previously restated to include deposits with a central bank, which were previously not included in our exposure.

(4) Excludes $1 billion (2012 – $0.6 billion) of exposures to supranational agencies and $2.4 billion (2012 – $1.9 billion) of exposures to trade credit reinsurance.

Our gross credit risk exposure is calculated based on the definitions provided under the Basel III (2013) and Basel II (2012) frameworks whereby risk exposure is calculated before taking into account any collateral and inclusive of an estimate of potential future changes to that credit exposure. On that basis, our total European exposure as at October 31, 2013 was $144 billion. Our gross drawn exposure to Europe was $43 billion, after taking into account collateral held against repo-style transactions of $54 billion, letters of credit and guarantees, and undrawn commitments for loans of $28 billion and potential future credit exposure to derivatives of $19 billion. Our net exposure to Europe was $51 billion, after taking into account $6 billion of collateral, primarily in cash, we hold against derivatives and the addition of trading securities of $14 billion held in our trading book. Our net exposure to Europe also reflected $0.7 billion of mitigation through credit default swaps, which are largely used to hedge single name exposures and market risk.

Net European exposure — **Table 44**

	As at					
	October 31 2013					October 31 2012
(Millions of Canadian dollars)	Loans outstanding	Securities (1)	Repo-style transactions	Derivatives	Total	Total
U.K. (2)	$ 7,288	$ 8,387	$ 1,241	$ 599	$ 17,515	$ 14,887
Germany	272	7,350	34	614	8,270	6,815
France	634	2,901	36	285	3,856	3,786
Total U.K., Germany, France	$ 8,194	$ 18,638	$ 1,311	$ 1,498	$ 29,641	$ 25,488
Greece	$ –	$ –	$ –	$ –	$ –	$ 14
Ireland	59	39	11	65	174	498
Italy	208	104	–	13	325	157
Portugal	5	–	–	1	6	1
Spain	363	127	–	1	491	803
Total Peripheral (3)	$ 635	$ 270	$ 11	$ 80	$ 996	$ 1,473
Luxembourg	$ 494	$ 5,103	$ 13	$ 56	$ 5,666	$ 6,900
Netherlands	559	2,062	–	240	2,861	3,283
Norway	339	2,558	–	28	2,925	1,632
Sweden	1	2,781	49	–	2,831	1,371
Switzerland	349	2,602	102	41	3,094	3,233
Other	900	1,394	26	139	2,459	2,674
Total Other Europe	$ 2,642	$ 16,500	$ 190	$ 504	$ 19,836	$ 19,093
Total exposure to Europe (4), (5)	$ 11,471	$ 35,408	$ 1,512	$ 2,082	$ 50,473	$ 46,054

(1) Securities include $13.8 billion of trading securities (2012 – $11.7 billion), $13.8 billion of deposits (2012 – $12.5 billion) and $7.8 billion of AFS securities (2012 – $6.8 billion).
(2) U.K. as at October 31, 2012 was previously restated to include deposits with a central bank, which were previously not included in our exposure.
(3) Gross credit risk exposure to peripheral Europe is comprised of $nil to Greece (2012 – $nil), Ireland $1.5 billion (2012 – $3.8 billion), Italy $0.3 billion (2012 – $0.2 billion), Portugal $0.1 billion (2012 – $0.1 billion), and Spain $0.9 billion (2012 – $1.1 billion).
(4) Excludes $1 billion (2012 – $0.6 billion) of exposures to supranational agencies.
(5) Geographic profile is based on country of risk, which reflects our assessment of the geographic risk associated with a given exposure. Typically, this is the residence of the borrower.

2013 vs. 2012

Net credit risk exposure to Europe increased $4 billion from the prior year, primarily in the U.K., Sweden and Germany, largely due to an increase in deposits, trading securities and AFS securities.

Our net exposure to peripheral Europe, which includes Greece, Ireland, Italy, Portugal and Spain, remained minimal, slightly down from the prior year. This exposure was predominantly investment grade. Our net exposure to larger European countries, including the U.K., Germany and France, was primarily related to our capital markets, wealth management and investor services businesses, particularly in fixed income, treasury services, derivatives, and corporate and individual lending. These are predominantly client-driven businesses where we transact with a range of European financial institutions, corporations and individuals. In addition, we engage in primary dealer activities in the U.K., where we participate in auctions of government debt and act as a market maker and provide liquidity to clients. Exposures to other European countries are largely related to securities which include trading securities, deposits, and AFS securities.

Our trading securities are related to both client market making activities and our funding and liquidity management needs. All of our trading securities are marked-to-market on a daily basis. Deposits primarily included deposits with central banks or financial institutions and also included deposits related to our wealth management business in the Channel Islands. AFS securities largely comprised of Organization of Economic Co-operation and Development government and corporate debt. Our European corporate loan book is run on a global basis and the underwriting standards for this loan book reflect the same approach to the use of our balance sheet as we have applied in both Canada and the U.S. We had credit losses of $127 million on this portfolio for this year, primarily related to a couple of accounts. The gross impaired loans ratio of this loan book was 0.69%.

Net European exposure by client type — Table 45

(Millions of Canadian dollars)	As at October 31 2013 U.K.	Germany	France	Total U.K., Germany, France	Greece	Ireland	Italy	Portugal	Spain	Total Peripheral	Other Europe	Total Europe	October 31 2012 Total Europe
Financials	$ 4,265	$ 5,999	$ 1,296	$ 11,560	$ –	$ 85	$ 40	$ 1	$ 32	$ 158	$ 9,875	$ 21,593	$ 21,944
Sovereign (1)	5,834	1,534	1,692	9,060	–	21	5	–	23	49	7,096	16,205	12,661
Corporate	7,416	737	868	9,021	–	68	280	5	436	789	2,865	12,675	11,449
Total (2)	$ 17,515	$ 8,270	$ 3,856	$ 29,641	$ –	$ 174	$ 325	$ 6	$ 491	$ 996	$ 19,836	$ 50,473	$ 46,054

(1) Sovereign as at October 31, 2012 was previously restated to include deposits with a central bank, which were previously not included in our exposure.
(2) Geographic profile is based on country of risk, which reflects our assessment of the geographic risk associated with a given exposure. Typically, this is the residence of the borrower.

2013 vs. 2012
Our net exposure to Sovereign increased $4 billion, largely due to higher deposits with the Bank of England. The increase in Corporate net exposure of $1 billion was largely in the U.K. Our net exposure to Financials decreased by $0.4 billion as reductions in France and the U.K. were partially offset by an increase in Germany.

Residential mortgages and home equity lines of credit

Residential mortgages and home equity lines of credit (insured vs. uninsured)
Residential mortgages and home equity lines of credit are secured by residential properties. The following table presents a breakdown by geographic region:

Residential mortgages and home equity lines of credit — Table 46

(Millions of Canadian dollars, except percentage amounts)	As at October 31, 2013 Residential mortgages (1) Insured (2)		Uninsured		Total	Home equity lines of credit Total
Region (3)						
Canada						
Atlantic provinces	$ 6,388	57%	$ 4,729	43%	$ 11,117	$ 1,986
Quebec	12,552	52	11,652	48	24,204	4,045
Ontario	36,491	44	46,582	56	83,073	16,609
Prairie provinces	25,099	54	21,063	46	46,162	10,422
B.C. and territories	16,078	39	24,708	61	40,786	10,018
Total Canada (4)	$ 96,608	47%	$ 108,734	53%	$ 205,342	$ 43,080
U.S.	5	1	373	99	378	270
Other International	11	–	2,715	100	2,726	2,144
Total International	$ 16	1%	$ 3,088	99%	$ 3,104	$ 2,414
Total	$ 96,624	46%	$ 111,822	54%	$ 208,446	$ 45,494
Total – 2012	$ 82,104	42%	$ 114,393	58%	$ 196,497	$ 45,073

(1) The residential mortgages amounts exclude our third party mortgage-backed securities (MBS) of $792 million (2012 – $1,827 million).
(2) Insured residential mortgages are mortgages whereby our exposure to default is mitigated by insurance through the Canadian Mortgage and Housing Corporation (CMHC) or other private mortgage default insurers.
(3) Region is based upon address of the property mortgaged. The Atlantic provinces are comprised of Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick, the Prairie provinces are comprised of Manitoba, Saskatchewan and Alberta, and B.C. and territories are comprised of British Columbia, Nunavut, Northwest Territories and Yukon.
(4) Total Canada residential mortgages balance of $205 billion consolidated is comprised of $183 billion of residential mortgages and $5 billion of mortgages with commercial clients of which $3.8 billion are insured mortgages, both in Canadian Banking, and $17 billion of securitized residential mortgages in Capital Markets.

Home equity lines of credit are uninsured and reported within the personal loan category. As at October 31, 2013, home equity lines of credit in Canadian Banking were $43 billion (2012 – $44 billion). Approximately 97% of these home equity lines of credit (2012 – 97%) are secured by a first lien on real estate, and less than 8% (2012 – 7%) of these clients pay the scheduled interest payment only.

Residential mortgages portfolio by amortization period
The following table provides a summary of the percentage of residential mortgages that fall within the remaining amortization periods based upon current customer payment amounts, which incorporate payments larger than the minimum contractual amount and/or higher frequency of payments:

Residential mortgages portfolio by amortization period — **Table 47**

	As at			
	October 31 2013			October 31 2012
	Canada	U.S. and Other International	Total	Total
Amortization period				
≤ 25 years	68%	86%	68%	63%
>25 years ≤ 30 years	22	14	22	23
> 30 years ≤ 35 years	8	–	8	10
> 35 years	2	–	2	4
Total	100%	100%	100%	100%

Average loan-to-value (LTV) ratio for newly originated and acquired uninsured residential mortgages and homeline products
The following table provides a summary of our average LTV ratio for newly originated and acquired uninsured residential mortgages and homeline products by geographic region:

Average LTV ratio — **Table 48**

	2013	
	Uninsured	
	Residential mortgages (1)	Homeline products (2)
Region (3)		
Atlantic provinces	73%	74%
Quebec	71	73
Ontario	71	71
Prairie provinces	73	73
B.C. and territories	69	67
U.S.	69	n.m.
Other International	83	n.m.
Average (4), (5), (6)	71%	71%

(1) Residential mortgages excludes residential mortgages within the homeline products.
(2) Homeline products are comprised of both residential mortgages and home equity lines of credit.
(3) Region is based upon address of the property mortgaged. The Atlantic provinces are comprised of Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick, the Prairie provinces are comprised of Manitoba, Saskatchewan and Alberta, and B.C. and territories are comprised of British Columbia, Nunavut, Northwest Territories and Yukon.
(4) Effective the fourth quarter of 2013, we calculate the average LTV ratio for newly originated and acquired uninsured residential mortgages and homeline products on a weighted basis by mortgage amounts at origination.
(5) The average LTV ratio for our uninsured residential mortgages and homeline products was 72% and 73%, respectively, for the fiscal year ended October 31, 2012.
(6) For newly originated mortgages and homeline products, LTV is calculated based on the total facility amount for the residential mortgage and homeline product divided by the value of the related residential property.
n.m. not meaningful

While the above table provides the LTV ratios for the current year originations, the LTV ratio on our outstanding balances of the entire Canadian Banking uninsured residential mortgages including homeline products is 56% as at October 31, 2013 (2012 – 56%). Effective the fourth quarter of 2013 we revised our calculation methodology. The new calculation is both weighted by mortgage balances and adjusted for property values based on the Teranet – National Bank National Composite House Price Index. Previously this calculation was both adjusted for property values based on a Statistics Canada provincial housing price index and weighted by property values.

We employ a risk-based approach to property valuation. Property valuation methods include automated valuation models (AVM) and appraisals. An AVM is a tool that estimates the value of a property by reference to market data including sales of comparable properties and price trends specific to the Metropolitan Statistical Area in which the property being valued is located. Using a risk-based approach, we also employ appraisals which can include drive-by or full on-site appraisals.

We continue to actively manage our entire mortgage portfolio and perform stress testing, based on a combination of increasing unemployment, rising interest rates, and a downturn in real estate markets. Our stress test results indicate the vast majority of our residential mortgage and homeline clients have sufficient capacity to continue making payments in the event of a shock to one of the above noted parameters.

Provision for (recovery of) credit losses — **Table 49**

(Millions of Canadian dollars)	2013	2012
Personal & Commercial Banking	$ 997	$ 1,167
Wealth Management	51	(1)
Capital Markets	188	135
Corporate Support and Other (1)	3	–
Total PCL	$ 1,239	$ 1,301
Canada (2)		
Residential mortgages	$ 27	$ 34
Personal	391	413
Credit cards	346	391
Small business	32	43
Retail	796	881
Wholesale	151	209
PCL on impaired loans	947	1,090
U.S. (2)		
Retail	$ 3	$ 4
Wholesale	32	29
PCL on impaired loans	35	33
Other International (2)		
Retail	$ 86	$ 64
Wholesale	171	116
PCL on impaired loans	257	180
Total PCL on impaired loans	1,239	1,303
PCL on loans not yet identified as impaired	–	(2)
Total PCL	$ 1,239	$ 1,301
PCL ratio (3)		
Total PCL ratio	0.31%	0.35%
Personal & Commercial Banking	0.30%	0.37%
Canadian Banking	0.28%	0.33%
Caribbean Banking	1.24%	2.08%
Capital Markets	0.34%	0.29%

(1) PCL in Corporate Support and Other primarily comprised of PCL for loans not yet identified as impaired. For further information, refer to the How we measure and report our business segments section.
(2) Geographic information is based on residence of borrower.
(3) PCL on impaired loans as a % of average net loans and acceptances.

2013 vs. 2012

Total PCL decreased $62 million, or 5%, from a year ago. The PCL ratio decreased 4 bps.

PCL in Personal & Commercial Banking decreased $170 million or 15%, and the PCL ratio decreased 7 bps, mainly reflecting improved credit quality in our Canadian business lending, credit card and personal loans portfolios as well as our Caribbean portfolio.

PCL in Wealth Management increased $52 million, mainly reflecting provisions on a few accounts.

PCL in Capital Markets increased $53 million or 39%, mainly reflecting provisions on a few accounts largely in the technology & media sector.

Gross impaired loans (GIL)		Table 50
(Millions of Canadian dollars)	2013	2012
Personal & Commercial Banking	$ 1,872	$ 1,820
Wealth Management	96	6
Capital Markets	229	389
Investor & Treasury Services	3	2
Corporate Support and Other	1	33
Total GIL	$ 2,201	$ 2,250
Canada (1)		
Retail	$ 729	$ 715
Wholesale	526	641
GIL	1,255	1,356
U.S. (1)		
Retail	$ 14	$ 7
Wholesale	98	162
GIL	112	169
Other International (1)		
Retail	$ 348	$ 258
Wholesale	486	467
GIL	834	725
Total GIL	$ 2,201	$ 2,250

(1) Geographic information is based on residence of borrower.

2013 vs. 2012

Total GIL decreased $49 million or 2% from a year ago.

GIL in Personal & Commercial Banking increased $52 million or 3%, mainly due to higher impaired loans in our Canadian business lending portfolios.

GIL in Wealth Management increased $90 million, mainly due to a few accounts.

GIL in Capital Markets decreased $160 million or 41%, primarily due to write-offs in our technology & media sector.

Allowance for credit losses (ACL)		Table 51
(Millions of Canadian dollars)	2013	2012
Allowance for impaired loans		
Personal & Commercial Banking	$ 486	$ 507
Wealth Management	53	–
Capital Markets	58	126
Investor & Treasury Services	2	2
Corporate Support and Other	–	2
Total allowance for impaired loans	599	637
Canada (1)		
Retail	$ 149	$ 142
Wholesale	170	239
Allowance for impaired loans	319	381
U.S. (1)		
Retail	$ 2	$ 1
Wholesale	19	38
Allowance for impaired loans	21	39
Other International (1)		
Retail	$ 146	$ 96
Wholesale	113	121
Allowance for impaired loans	259	217
Total allowance for impaired loans	599	637
Allowance for loans not yet identified as impaired	1,451	1,451
Total ACL	$ 2,050	$ 2,088

(1) Geographic information is based on residence of borrower.

2013 vs. 2012

Total ACL decreased $38 million or 2% from a year ago, mainly related to lower ACL in our Capital Markets and Caribbean portfolios, partially offset by higher ACL in Wealth Management.

Market risk

Market risk is defined to be the potential loss due to changes in market determined variables such as interest rates, credit spreads, equity prices, commodity prices, foreign exchange rates and implied volatilities.

Market risk manifests itself in the following ways:

- Fair Value Through Profit or Loss (FVTPL) positions whose revaluation gains and losses are reported in Revenue;
- AFS securities where revaluation gains and losses are reported as Other comprehensive income;
- The structural interest rate mismatch between assets and liabilities that are not marked-to-market which affects Net Interest Income; and
- Other positions whose financial performance is a function of market determined pricing variables.

Market risk controls – FVTPL positions

As an element of the Enterprise Risk Appetite Framework, the Board of Directors approves the overall market risk constraints for RBC. GRM creates and manages the control structure for FVTPL positions that ensures that business is conducted consistent with Board requirements. The Market and Trading Credit Risk function within GRM is responsible for creating and managing the controls and governance procedures that ensure that risk taken is consistent with risk appetite constraints set by the Board. These controls include limits on:

- Market risk positions;
- Probabilistic measures of potential loss such as Value-at-Risk (VaR) and Stressed Value-at-Risk defined below, and;
- Scenario based stress tests which utilize both actual historical market scenarios such as the global financial crisis of 2008 and hypothetical scenarios designed to be more forward looking. These stress tests apply severe and long duration stresses to market variables.

Market Risk Positions – are measures of potential loss due to changes in market variables.

Value-at-Risk (VaR) – is a statistical measure of potential loss for a financial portfolio computed at a given level of confidence and over a defined holding period. We measure VaR at the 99th percentile confidence level for price movements over a 1 day holding period using historic simulation of the last two years of equally weighted historic market data. These calculations are updated daily with current risk positions with the exception of CVA and certain other positions which are updated weekly.

Stressed Value-at-Risk (SVaR) – is calculated in an identical manner as VaR with the exception that it is computed using a fixed historical one year period of extreme volatility and its inverse rather than the most recent two year history. The stress period used is the interval from September 2008 through August 2009. Stressed VaR is calculated weekly for all portfolios.

VaR and SVaR are statistical estimates based on historical market data and should be interpreted with knowledge of their limitations – which include the following:

- VaR and SVaR will not be predictive of future losses if the realized market movements differ significantly from the periods used to compute them.
- VaR and SVaR project potential losses over a one day holding period and do not project potential losses for risk positions held over longer time periods.
- VaR and SVaR are measured using positions at close of business and do not include the impact of trading activity over the course of a day.

We validate our VaR and SVaR measures through a variety of means – including subjecting the models to vetting and validation by a group independent of the model developers and by back-testing the VaR against daily marked-to-market revenue to identify and examine events in which actual outcomes in trading revenue exceed the VaR projections.

Stress Tests – Our market risk stress testing program is used to identify and control risk due to large changes in market prices and rates. We conduct stress testing daily on positions that are marked-to-market. The stress tests simulate both historical and hypothetical events which are severe and long term in duration. Historical scenarios are taken from actual market events over the last 30 years and range in duration up to 90 days. Examples include the equity market crash of 1987 and the global financial crisis of 2008. Hypothetical scenarios are designed to be forward looking at potential future market stresses, and are designed to be severe but plausible. We are constantly evaluating and refining these scenarios as market conditions change. Stress results are calculated assuming an instantaneous revaluation of our positions with no management action.

These measures are computed on all positions that are FVTPL for financial reporting purposes, with the exception of those in a designated hedging relationship and those in our insurance businesses.

Market risk measures – FVTPL positions
VaR and Stress VaR
The following table presents our Market risk VaR and Market risk Stressed VaR figures for 2013 and 2012:

Market Risk VaR* **Table 52**

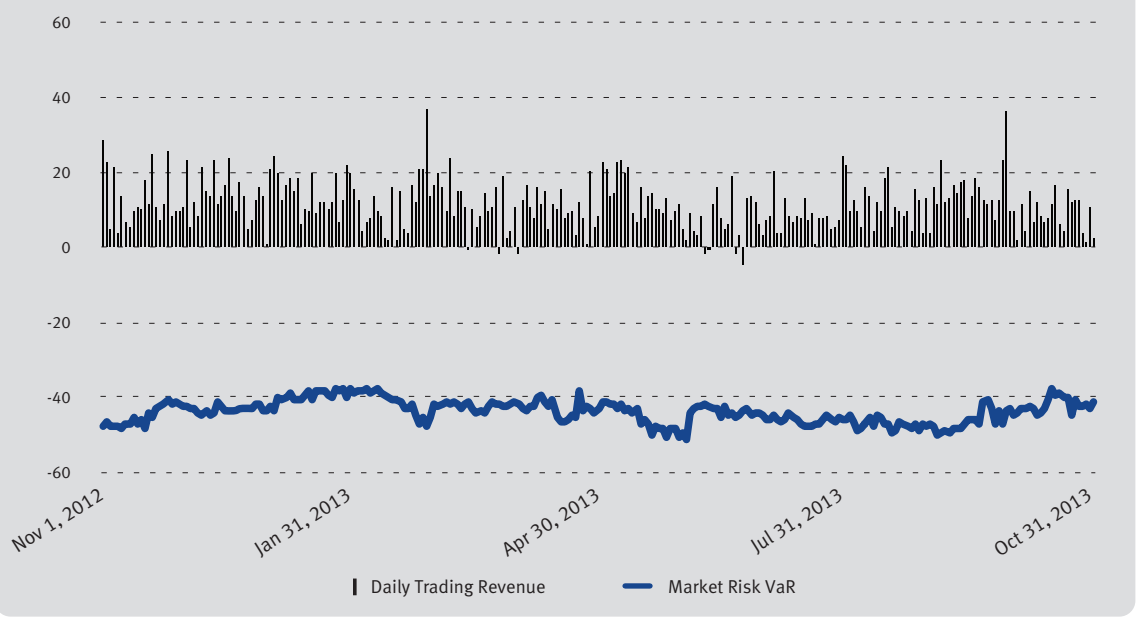
(Millions of Canadian dollars)	2013 As at Oct. 31	2013 For the year ended October 31 Average	2013 High	2013 Low	2012 As at Oct. 31	2012 For the year ended October 31 Average	2012 High	2012 Low
Equity	$ 8	$ 9	$ 19	$ 5	$ 10	$ 11	$ 21	$ 5
Foreign exchange	5	4	7	1	2	4	7	1
Commodities	3	3	5	2	3	2	4	1
Interest rate	38	41	51	36	50	50	65	34
Credit specific (1)	10	10	12	7	10	9	12	7
Diversification (2)	(23)	(23)	(31)	(16)	(28)	(24)	(41)	(13)
Market risk VaR	$ 41	$ 44	$ 51	$ 38	$ 47	$ 52	$ 66	$ 43
Market risk Stressed VaR	$ 117	$ 95	$ 123	$ 73	$ 79	$ 78	$ 107	$ 62

* This table represents an integral part of our 2013 Annual Consolidated Financial Statements.
(1) General credit spread risk is measured under interest rate VaR while credit specific risk captures issuer-specific credit spread volatility.
(2) Market risk VaR is less than the sum of the individual risk factor VaR results due to portfolio diversification.

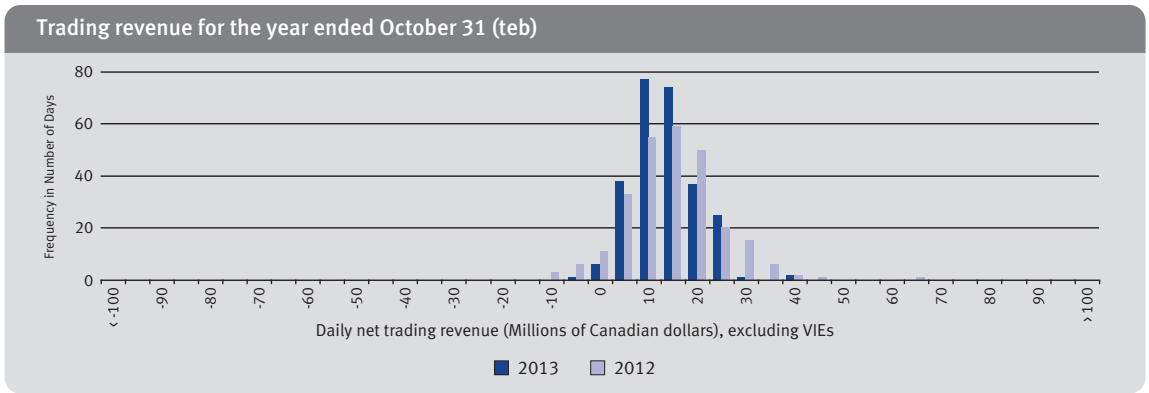
Average Market risk VaR of $44 million was down $8 million compared to the prior year, mainly driven by lower risk in fixed income portfolios in the current year and the roll forward of the historical VaR window. Average Stressed VaR of $95 million increased $17 million from $78 million in the prior year, largely due to increased positions and higher measured risk in certain mortgage-backed securities (MBS) and high grade credit-sensitive fixed income debt whose price behavior was particularly volatile in the historical period used for Stressed VaR when compared to more recent history. The higher risk attributed to MBS was in part due to changes in methodology which more accurately reflected the price behaviour of MBS during the global financial crisis of 2008 and 2009, which is the historical period used for SVaR.

The following chart graphically displays a bar chart of our daily trading profit and loss and a line chart of our daily Market risk VaR for the current year. We incurred net trading losses on seven days in the year, as compared to 20 days last year, totaling $14 million, with none of the losses exceeding VaR.

Trading Revenue and VaR (Millions of Canadian dollars)



The following chart displays the distribution of daily trading profit and loss. The largest reported profit in the current year was $36 million with an average daily profit of $11 million. The largest daily reported loss of $5 million, which occurred on June 25, 2013, was largely driven by RBC credit spread tightening.



Market risk measures for other FVTPL positions
Assets and liabilities of RBC Insurance
We offer a range of insurance products to clients and hold investments to meet the future obligations to policyholders. The investments which support actuarial liabilities are predominantly fixed income assets designated as at FVTPL. Consequently changes in the fair values of these assets are recorded in investment income in the consolidated statements of income and are largely offset by changes in the fair value of the actuarial liabilities, the impact of which is reflected in insurance policyholder benefits and claims. Liabilities with respect to insurance obligations are reported at $8.0 billion as of October 2013. We held $5.9 billion of trading securities in support of the liabilities. We also held $2.2 billion of securities classified as AFS as investments.

Market Risk – AFS
Securities classified as AFS of $38 billion as at October 31, 2013, compared to $40 billion as at October 31, 2012. We hold debt securities designated as AFS primarily as investments and to manage interest rate risk in our non-trading banking activity (as described above). Certain legacy debt portfolios are also classified as AFS. Our portfolio of AFS securities expose us to interest rate risk, measured as the change in the value of the securities for a one basis point parallel increase in yields, and credit spread risk, measured as a change in the value for a one basis point widening of credit spreads. Changes in the value of these securities are reported in other comprehensive income. As at October 31, 2013, the interest rate risk for the portfolio was $3.8 million and the credit spread risk was $6.1 million (1). Our AFS securities also include equity investments of $1.7 billion as at October 31, 2013, down from $1.8 billion last year.

(1) Interest rate and credit spread risks are represented on a pre-tax basis and exclude the securities held in our insurance businesses.

Market risk controls – Structural Interest Rate Risk (SIRR) Positions (2)

The asset/liability mismatch of positions not marked-to-market is referred to as SIRR and is subject to a separate set of limits and controls. The Board of Directors approves the overall risk appetite for SIRR, and ALCO along with GRM provide oversight for this risk with risk policies, limits, and operating standards. Interest rate risk reports are reviewed regularly by ALCO, the Group Risk Committee, the Risk Committee of the Board and the Board of Directors.

(2) SIRR positions include impact of derivatives in hedge accounting relationships and AFS securities used for interest rate risk management.

Risk measurement
SIRR measures the potential loss of both one year net interest income and instantaneous economic value of equity due to interest rate changes. These measures are reported on a weekly basis and are subject to limits and controls set by ALCO and GRM.

We further supplement our assessment by measuring interest rate risk for a range of dynamic and static market scenarios. Dynamic scenarios simulate our interest income in response to various combinations of business and market factors. Business factors include assumptions about future pricing strategies and volume and mix of new business, whereas market factors include assumed changes in interest rate levels and changes in the shape of the yield curve. Static scenarios supplement dynamic scenarios and are employed for assessing the risks to the value of equity and net interest income.

As part of our monitoring process, the effectiveness of our interest rate risk mitigation activity is assessed on value and earnings bases, and model assumptions are validated against actual client behavior.

Market risk measures – Structural Interest Rate Positions
The following table provides the potential before-tax impact of an immediate and sustained 100 bps and 200 bps increase or decrease in interest rates on net interest income and economic value of equity of our non-trading portfolio, assuming that no further hedging is undertaken. These measures are based upon assumptions made by senior management and validated by empirical research. All interest rate risk measures are based upon interest rate exposures at a specific time and continuously change as a result of business activities and our risk management actions. Over the course of 2013, our interest rate risk exposure was well within our target level.

Market risk measures – Non-trading banking activities* **Table 53**

(Millions of Canadian dollars)	2013 Economic value of equity risk: Canadian dollar impact	2013 Economic value of equity risk: U.S. dollar impact (1)	2013 Economic value of equity risk: Total	2013 Net interest income risk (2): Canadian dollar impact	2013 Net interest income risk (2): U.S. dollar impact (1)	2013 Net interest income risk (2): Total	2012 Economic value of equity risk	2012 Net interest income risk (2)	2011 Economic value of equity risk	2011 Net interest income risk (2)
Before-tax impact of:										
100bps increase in rates	$ (537)	$ (3)	$ (540)	$ 381	$ 10	$ 391	$ (497)	$ 397	$ (454)	$ 307
100bps decrease in rates	444	2	446	(302)	(1)	(303)	405	(322)	412	(161)
Before-tax impact of:										
200bps increase in rates	(1,152)	(8)	(1,160)	733	25	758	(1,005)	842	(925)	708
200bps decrease in rates	793	6	799	(397)	(1)	(398)	651	(370)	615	(189)

* This table represents an integral part of our 2013 Annual Consolidated Financial Statements.
(1) Represents the impact on the non-trading portfolios held in our U.S. banking operations.
(2) Represents the 12-month Net interest income exposure to an instantaneous and sustained shift in interest rates.

Non-trading foreign exchange rate risk

Foreign exchange rate risk is the potential adverse impact on earnings and economic value due to changes in foreign currency rates. Our revenue, expenses and income denominated in currencies other than the Canadian dollar are subject to fluctuations as a result of changes in the value of the average Canadian dollar relative to the average value of those currencies. Our most significant exposure is to the U.S. dollar due to our level of operations in the U.S., and other activities conducted in U.S. dollars. Other significant exposures are to the British pound and the Euro due to our activities conducted internationally in these currencies. A strengthening or weakening of the Canadian dollar compared to the U.S. dollar, British pound and the Euro could reduce or increase, as applicable, the translated value of our foreign currency denominated revenue, expenses and earnings and could have a significant effect on the results of our operations. We are also exposed to foreign exchange rate risk arising from our investments in foreign operations. For un-hedged equity investments, when the Canadian dollar appreciates against other currencies, the unrealized translation losses on net foreign investments decreases our shareholders' equity through the other components of equity and decreases the translated value of the RWA of the foreign currency-denominated operations. The reverse is true when the Canadian dollar depreciates against other currencies. Consequently, we consider these impacts in selecting an appropriate level of our investments in foreign operations to be hedged.

Our overall trading and non-trading market risk objectives, policies and methodologies have not changed significantly from 2012.

Market risk measures for other material non-trading portfolios

Derivatives in hedge accounting relationships

Derivative assets in a designated hedge accounting relationship of $2.0 billion as at October 31, 2013 were down from $2.7 billion in the prior year, and derivative liabilities of $931 million as at October 31, 2013 were down from $1.1 billion in the prior year. We use interest rate swaps to manage our structural interest rate risk as described above. To the extent these swaps are considered effective hedges, changes in their fair value are recognized in other comprehensive income. The interest rate risk for the designated cash flow hedges, measured as the change in the value of the derivatives for a one basis point parallel increase in yields, was $6.9 million as of October 31, 2013.

We also use interest rate swaps to hedge changes in the fair value of certain fixed-rate instruments. Changes in fair value of the interest rate swaps and the hedged instruments that are related to interest rate movements are reflected in income.

We also use foreign exchange derivatives to manage our exposure to equity investments in subsidiaries that are denominated in foreign currencies, particularly the U.S. dollar and British pound. Changes in the fair value of these hedges and the cumulative translation adjustment related to our structural foreign exchange risk are reported in other comprehensive income.

Linkage of market risk to selected balance sheet items

The following table provides the linkages between selected balance sheet items with positions included in our trading market risk and non-trading market risk disclosures, which illustrates how we manage market risk for our assets and liabilities through different risk measures.

Linkage of market risk to selected balance sheet items — **Table 54**

	As at October 31, 2013				
(Millions of Canadian dollars)	Balance Sheet amount	Included in VaR, SVaR and Stress testing	Included in Structural Interest Rate Risk	Included in other risk controls (1)	Not subject to market risk (1),(2)
Assets					
Cash and due from banks	$ 15,870	$ 8,202	$ 6,716	$ 952	$ –
Interest-bearing deposits with banks	9,061	2,833	6,228	–	–
Securities					
Trading	144,023	137,718	–	6,305	–
Available-for-sale	38,695	–	34,315	4,380	–
Assets purchased under reverse repurchase agreements and securities borrowed	117,517	116,703	814	–	–
Loans	408,666	16,555	391,085	1,026	–
Investments for account of segregated fund holders	513	–	–	513	–
Derivatives	74,822	71,678	3,144	–	–
Other assets	51,652	12,631	29,620	2,616	6,785
Total assets	$ 860,819	$ 366,320	$ 471,922	$ 15,792	$ 6,785
Liabilities					
Deposits	$ 558,480	$ 101,584	$ 456,896	$ –	$ –
Insurance and Investment contracts for account of segregated fund holders	513	–	–	513	–
Obligations related to securities sold short	47,128	47,128	–	–	–
Obligations related to assets sold under repurchase	60,416	60,147	269	–	–
Derivatives	76,745	75,368	1,377	–	–
Other liabilities	58,859	12,962	24,682	8,724	12,491
Subordinated debentures	7,443	–	7,443	–	–
Trust capital securities	900	–	900	–	–
Total liabilities	810,484	297,189	491,567	9,237	12,491
Total equity	50,335				
Total liabilities and equity	$ 860,819				

(1) "Included in other risk controls" includes $12.3 billion of assets and $8.7 billion of liabilities (net of intra-group liabilities) in RBC Insurance which are subject to a separate risk control framework. These amounts include trading securities of $5.9 billion, AFS securities of $2.2 billion and fair valued liabilities of $8.0 billion. In addition to the RBC Insurance positions, $442 million of trading securities and $2.2 billion in AFS and held-to-maturity (HTM) securities are included in other risk controls.

(2) Other assets under "Not subject to market risk" include certain receivable amounts and physical and intangible assets. Other liabilities include certain payable amounts. For further details, refer to Note 18 of our 2013 Annual Consolidated Financial Statements.

Liquidity and funding management

Liquidity and funding risk (liquidity risk) is the risk that we may be unable to generate or obtain sufficient cash or its equivalent in a timely and cost-effective manner to meet our commitments as they come due. The nature of banking services inherently exposes us to various types of liquidity risk. The most common sources of liquidity risk arise from mismatches in the timing and value of cash inflows and outflows, both from on- and off-balance sheet exposures.

Our liquidity position is established to satisfy our current and prospective commitments in normal business conditions, and in conjunction with our capital position, to maintain safety and soundness in times of stress. To achieve these goals, we operate under a comprehensive Liquidity Management Framework and employ key liquidity risk mitigation strategies that include the maintenance of:

- An appropriate balance between the level of exposure allowed under our risk appetite given the potential impact of extreme but plausible events and the cost of its mitigation;
- Broad funding access, including preserving and promoting a reliable base of core client deposits, ongoing access to diversified sources of wholesale funding and demonstrated capacities to monetize specific asset classes;
- A comprehensive enterprise-wide liquidity contingency plan that is supported by unencumbered marketable securities, a portion of which consists of an earmarked contingency pool that provides assured access to cash and is available to supplement other sources of cash in a crisis; and
- Appropriate and transparent liquidity transfer pricing and cost allocation.

Our liquidity management policies, practices and processes reinforce these risk mitigation strategies. In managing liquidity risk, we favour a centralized management approach to the extent possible given the various considerations outlined in this section.

In 2010, OSFI introduced a regulatory enterprise liquidity metric, Net Cumulative Cash Flow. Limits are applicable for both Canadian dollars and foreign currencies and on an all currency basis and we submit a formal compliance report to OSFI on a monthly basis. We also continue to prepare for Basel III regulatory reforms led by the BCBS and supported by OSFI and other jurisdictions. The BCBS liquidity standards include minimum requirements for two regulatory measures, the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR). In January 2013, the BCBS released its final rules for LCR, with phased timelines for compliance, starting with a minimum of 60% coverage in 2015 and increasing by 10% annually to 100% in 2019. The BCBS continues to review the NSFR guidelines, with planned implementation effective 2018. We submit LCR and NSFR reports to OSFI regularly. In July 2013, the BCBS published a consultative paper on "Liquidity coverage ratio disclosure standards". Comments on this consultative document were submitted in October 2013 to the BCBS. Banks are expected to comply with the BCBS disclosure standards beginning in 2015.

Our liquidity risk objectives, policies and methodologies have not changed materially from 2012. However, certain limits and risk practices have been modified as a result of market conditions and to align with local regulatory developments and to position ourselves for the prospective Basel III regulatory liquidity standards. We continue to maintain liquidity and funding that is appropriate for the execution of our strategy. Liquidity risk remains well within our risk appetite. However, our liquidity management policies, practices and processes will be modified to take into account evolving regulatory requirements, as appropriate.

Risk measurement

To monitor and control risk within appropriate tolerances, limits are set on various metrics reflecting a range of time horizons and severity of stress conditions. Risk methodologies and underlying assumptions are periodically reviewed and validated to ensure alignment with our operating environment, expected economic and market conditions, rating agency preferences, regulatory requirements and accepted practices. Liquidity risk is measured using contractual maturity dates for some assets and liabilities (e.g., wholesale lending and funding) and effective maturity for others. In the effective maturity approach, the liquidity value of assets and liabilities is determined based on observed behavioural or market-based patterns unrelated to contractual maturity. For example, effective maturity may be shorter than contractual maturity if the demonstrated behaviour of the asset suggests that it can be monetized before maturity. Effective maturity for a liability may be longer than contractual maturity if the demonstrated behaviour of the liability suggests that it will be extended or rolled over at maturity. Specific examples include government bonds for assets as they can be quickly and reliably monetized and relationship-based deposits for liabilities where a significant portion is typically assigned core value although contractual maturity dates may be quite short or even legally characterized as available on demand (conversely, demand loans display attributes of longer term assets and are treated accordingly from an effective maturity perspective). Internally derived assumptions consider all relevant material and available data, information and methods of quantifying liquidity risk. We measure and manage our liquidity position from three risk perspectives as follows:

Structural (longer-term) liquidity risk
We use cash capital and other structural metrics, which focus on mismatches in effective maturity between all assets and liabilities, to measure and control balance sheet risk and to assist in the determination of our term funding strategy. Stressed conditions are considered, including a protracted loss of unsecured wholesale deposits that fund illiquid assets.

Tactical (shorter-term) liquidity risk
We apply net cash flow limits in Canadian dollar and foreign currencies for key short-term time horizons (overnight to nine weeks) under various stages of stress and assign a risk-adjusted limit to our aggregate pledging exposure and individual limits by types of pledging activities to measure our shorter-term liquidity exposures. Net cash flow positions reflect known and anticipated cash flows for all material unencumbered assets, liabilities and off-balance sheet activities. Pledged assets are not considered a source of available liquidity. We also control this risk by adhering to group-wide and unit-specific prescribed regulatory standards.

Contingency liquidity risk
Contingency liquidity risk management assesses the impact of and our intended responses to sudden stressful events. Our liquidity contingency plan, maintained and administered by Corporate Treasury, guides our actions and responses to liquidity crises. The Liquidity Crisis Team, consisting of senior representatives with relevant subject matter expertise from key business segments and Corporate Support, contributes to the development of stress tests and funding plans and meets regularly to assess our liquidity status, conduct stress tests and review liquidity contingency preparedness.

Our stress tests, which include elements of scenario and sensitivity analyses, are based on models that measure our potential exposure to global, country-specific and RBC-specific events (or combinations thereof) and consider both historical and hypothetical events over a nine week period consistent with our internal tactical liquidity risk measure and our view of the most critical time span for such events. Different levels of severity are considered for each type of crisis with some scenarios reflecting multiple notch downgrades to our credit ratings. Key tests are run monthly, while others are run quarterly. The frequency of review is determined by considering a combination of likelihood and impact.

In a particularly acute short-term crisis or if a crisis was to extend over a number of months, actions would be taken to supplement liquidity available from our earmarked contingency asset pool by limiting cash and collateral outflows and by accessing new sources of liquidity and funding; for example, through sales of liquid assets and securitization and, in extraordinary circumstances, sales of core assets. As well, in light of our current credit ratings and well-developed market relationships and access, it is expected that even under extreme but plausible scenarios, we would continue to be able to access wholesale funding markets, albeit possibly at reduced overall capacity, higher costs and for shorter average maturities.

While we also have potential access to various normal course and emergency central bank lending facilities in Canada, the U.S. and Europe, such facilities are not considered a source of funding in our contingency planning for scenarios identified as extreme but plausible.

After reviewing test results, the liquidity contingency plan and other liquidity risk management practices and limits may be modified accordingly. The risk of more prolonged crises is addressed through measures of structural liquidity risk that assume stress conditions.

Our liquid assets consist primarily of a diversified pool of highly rated and liquid marketable securities and include segregated portfolios (in both Canadian and U.S. dollars) of contingency liquidity assets to address potential on- and off-balance sheet liquidity exposures (such as deposit erosion, loan drawdowns and higher collateral demands), that have been sized through models we have developed or by the scenario analyses and stress tests we conduct periodically. These portfolios are subject to minimum asset quality levels and, as appropriate, other strict eligibility guidelines (e.g., maturity, diversification and eligibility for central bank advances) to maximize ready access to cash in emergencies. Examples of assets held in these portfolios include U.S. and Canadian federal government treasury bills and bonds, U.S. Agency bonds, U.S. and Canadian government guaranteed and sponsored entity bonds, other highly rated foreign sovereign bonds and their guaranteed debt, supranational bonds and Canadian provincial bonds. Our total pool of unencumbered liquid assets, whether held specifically for contingency liquidity purposes or for investment or trading activities, would be available during times of crisis as sources of liquidity, either via outright sale or to obtain secured funding.

Risk profile

As at October 31, 2013, relationship-based deposits which are the primary source of funding for retail loans and mortgages, were $359 billion or 54% of our total funding (October 31, 2012 – $329 billion or 54%). Funding for highly liquid assets consisted primarily of short-term wholesale funding that reflects the expected monetization period of these assets. This wholesale funding comprised unsecured short-term liabilities of $67 billion and secured (repos and short sales) liabilities of $111 billion, and represented 10% and 17% of total funding as at October 31, 2013, respectively (October 31, 2012 – $84 billion and $105 billion or 14% and 17% of total funding, respectively). Long-term wholesale funding is mostly used to fund less liquid wholesale assets. Additional quantitative information is provided in the following Funding section.

As at October 31, 2013, we held earmarked contingency liquidity assets of $11.5 billion, of which $6.5 billion was in U.S. currency and $5 billion was in Canadian currency (October 31, 2012 – $9.7 billion of which $5.2 billion was in U.S. currency and $4.5 billion was in Canadian currency). During the year ended October 31, 2013, we increased our earmarked contingency liquidity assets and, as a result, held on average $10 billion, of which $5.5 billion was in U.S. currency and $4.5 billion was in Canadian currency (October 31, 2012 – $8.3 billion of which $4.9 billion was in U.S. currency and $3.4 billion was in Canadian currency). We also held a derivatives pledging liquid asset buffer of US$3.7 billion as at October 31, 2013 to mitigate the volatility of our net pledging requirements for derivatives trading (October 31, 2012 – US$1.3 billion). This buffer averaged US$2.3 billion during the year ended October 31, 2013 (October 31, 2012 – US$1.3 billion). Our buffers were resized during the year to reflect changes in our liquidity policies and balance sheet composition.

As recommended by the EDTF, the following table provides a summary of our liquidity reserve and encumbered assets, according to level of liquidity. Unencumbered assets available as collateral represent, for the most part, a ready source of funding that can be accessed quickly, when required. Liquid assets available as collateral consist of on-balance sheet cash and securities holdings as well as securities received as collateral from securities financing (reverse repos and off-balance sheet collateral swaps) and derivative transactions and constitute the preferred source for quickly accessing liquidity. Illiquid assets for which there are established funding markets, such as mortgages and credit card receivables, can be monetized although requiring more lead times relative to liquid assets. We do not include encumbered assets as a source of available liquidity in measuring liquidity risk. As at October 31, 2013, our unencumbered highly marketable liquid assets comprised 54% of our total liquid assets. For the purpose of constructing the following table, encumbered assets include: (i) Bank-owned liquid assets that are either pledged as collateral (e.g., repo financing and derivative pledging) or not freely available due to regulatory or internal policy requirements (e.g., earmarked to satisfy mandatory reserve or local capital adequacy requirements and to maintain continuous access to payment and settlement systems); (ii) securities received as collateral from securities financing and derivative transactions which have either been re-hypothecated where permissible (e.g., to obtain financing through repos or to cover securities sold short) or have no liquidity value since re-hypothecation is prohibited; and iii) illiquid assets that have been securitized and sold into the market or that have been pledged as collateral in support of structured term funding vehicles. Unencumbered assets are the difference between total and encumbered assets from both on- and off-balance sheet sources.

Liquidity reserve and asset encumbrance (1) — Table 55

(Millions of Canadian dollars)	As at October 31, 2013						
				Encumbered assets		Unencumbered assets	
	On-balance sheet assets	Off-balance sheet securities received as collateral from securities financing and derivative transactions	Total assets	Pledged as collateral	Other (2)	Available as collateral (3)	Other (4)
Liquid assets							
Cash and deposits with central banks	$ 12,711	$ –	$ 12,711	$ –	$ 980	$ 11,731	$ –
Deposits with financial institutions	12,220	–	12,220	287	–	11,933	–
Precious metals	173	–	173	–	–	173	–
Securities and reverse repos (5)							
Canadian government obligations	59,760	11,120	70,880	40,164	–	30,716	–
Foreign government obligations	113,464	4,350	117,814	54,053	–	63,761	–
Other securities	72,133	11,953	84,086	40,743	48	43,295	–
Loans							
NHA mortgage-backed securities	32,556	–	32,556	10,738	–	21,818	–
Other assets	11,678	–	11,678	11,678	–	–	–
Total liquid assets	$ 314,695	$ 27,423	$ 342,118	$ 157,663	$ 1,028	$ 183,427	$ –
Other illiquid assets							
Securities and reverse repos not included above	$ 54,878	$ 14,781	$ 69,659	$ 23,349	$ –	$ 37,114	$ 9,196
Loans	378,069	–	378,069	64,775	–	125,789	187,505
Other assets	113,177	–	113,177	–	–	–	113,177
Total other illiquid assets	$ 546,124	$ 14,781	$ 560,905	$ 88,124	$ –	$ 162,903	$ 309,878
	$ 860,819	$ 42,204	$ 903,023	$ 245,787	$ 1,028	$ 346,330	$ 309,878

(Millions of Canadian dollars)	As at October 31 2013 Unencumbered assets
Royal Bank of Canada	$ 351,398
Foreign branches	129,796
Subsidiaries	175,014
	$ 656,208

(1) Information is provided from an enterprise-wide perspective. In managing liquidity risk, we consider market, legal, regulatory, tax and other constraints that may impede transferability of liquidity among RBC units.
(2) Includes assets which are believed to be restricted from being used to secure funding for legal or other reasons.
(3) Includes assets that are readily available in the normal course of business to secure funding or meet collateral needs.
(4) Other unencumbered assets are not subject to any restrictions on their use to secure funding or as collateral, but would not be considered readily available because they may not be readily acceptable at central banks or other lending programs.
(5) Includes investment grade government, public sector entities and corporate bonds and money market securities, exchange-traded funds, and equities traded as part of a major stock index but excludes auction rate and non-agency asset-backed securities as well as non-index equities and mutual funds. All securities are recorded at market value.

Other sources of liquidity that could be available to mitigate stressed conditions include: (i) our unused wholesale funding capacity, which is regularly assessed using an established methodology that is periodically reviewed and, as necessary, revised, and (ii) central bank borrowing facilities if, in extraordinary circumstances, market sources were not sufficient to allow us to monetize our assets available as collateral to meet our requirements (e.g., Bank of Canada, Federal Reserve Bank, Bank of England, and Bank of France).

Risk control

The Board of Directors annually approves delegation of liquidity risk authorities to senior management. The Risk Committee of the Board annually approves the Liquidity Management Framework and is responsible for its oversight. The Board of Directors and the Risk Committee also review, on a regular basis, reporting on our enterprise-wide liquidity position and status. The GRC and ALCO share management oversight responsibility and review all liquidity documents prepared for the Board of Directors or its committees. ALCO annually approves the Liquidity Management Framework's key supporting documents and provides strategic direction and primary management oversight to Corporate Treasury, GRM, other functions and business platforms in the area of liquidity risk management. To maximize funding and operational efficiencies, we monitor and manage our liquidity position on a consolidated basis and for key units taking into account market, legal, regulatory, tax, operational and any other applicable restrictions that may impede transferability of liquidity between RBC units. This includes analyzing our ability to lend or borrow funds between branches and subsidiaries, and converting funds between currencies. The outcome of this analysis is considered in liquidity metrics and our Recovery Plan.

Policies

Our principal liquidity policies define risk tolerance parameters. They authorize senior management committees, Corporate Treasury or GRM to approve more detailed policies and limits that govern management, measurement and reporting requirements for specific businesses and products.

Authorities and limits

Limits for our structural liquidity risk positions are approved at least annually and monitored regularly. Net cash flow limits are approved at least annually. Depending on the significance of each reporting entity, net cash flow limits are monitored daily or weekly by major currency, branches, subsidiaries and geographic locations. Any potential exceptions to established limits are reported immediately to Corporate Treasury and GRM, who provide or arrange for approval where appropriate after reviewing remedial action plans.

The liquidity factors for cash flow assets and liabilities under varying conditions are reviewed periodically by Corporate Treasury, GRM and the business segments to determine if they remain valid or changes to assumptions and limits are required. Through this process, we ensure that a close link is maintained between the management of liquidity risk, market liquidity risk and credit risk, including GRM approval of credit lines between entities. In response to our experience during periods of market volatility over the past six years, we have modified the liquidity treatment of certain asset classes to reflect changes in market liquidity. Where required, limits are reduced in consideration of the results of stress tests.

Funding

Funding strategy

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

Deposit profile

We continued to focus on building our core deposit base in Canada. Our relationship-based deposits, including our personal deposit franchise and our commercial and institutional client groups, maintain balances with relatively low volatility profiles and constitute our principal source of reliable funding. Reflecting deposit insurance and at times, exclusive relationships with us, these balances represent a highly stable source of core deposits in most conceivable environments as they are typically less responsive to market developments than those from transactional lenders and investors. Core deposits, consisting of our own statistically derived liquidity adjusted estimates of the highly stable portions of our relationship-based balances (demand, notice and fixed-term) together with wholesale funds maturing beyond one year have increased approximately 2% during the year and represent 70% of our total deposits, up from 68% last year. During the year, core deposits grew by about 10% with the most material contribution coming from an extension of our wholesale funding maturity profile. For further details on the gross dollar amounts of our relationship-based deposits and our wholesale funds maturing beyond one year, refer to the Risk profile section and the following Remaining maturity of wholesale debt issued table, respectively.

Long-term debt issuance

During 2013, we continued to experience more favourable unsecured wholesale funding access and pricing compared to global peers. As demonstrated in the following table, we also continued to expand our unsecured long-term funding base by selectively issuing, either directly or through our subsidiaries, $31 billion of term funding in various currencies and markets. Total unsecured long-term funding outstanding increased by $10.2 billion.

We use residential mortgage and credit card and auto receivable-backed securitization programs as alternative sources of funding and for liquidity and asset/liability management purposes. Our total secured long-term funding includes outstanding MBS sold, covered bonds that are collateralized with residential mortgages, and credit card and auto receivables. Compared to 2012, our outstanding MBS sold decreased $1.4 billion while our covered bonds and credit card and auto receivables increased $9.4 billion and $1 billion, respectively.

For further details, refer to the Off-balance sheet arrangements section.

Long-term funding sources* — **Table 56**

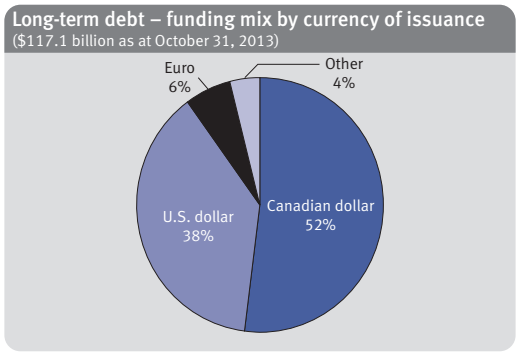
(Millions of Canadian dollars)	2013	2012
Unsecured long-term funding	$ 69,903	$ 59,661
Secured long-term funding	59,285	50,321
Commercial mortgage-backed securities sold	1,304	1,434
Subordinated debentures	7,408	7,416
	$ 137,900	$ 118,832

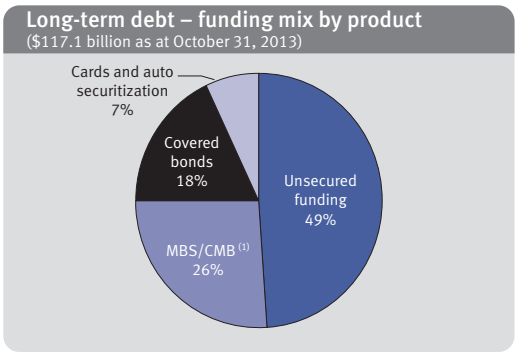
* This table represents an integral part of our 2013 Annual Consolidated Financial Statements.

Our wholesale funding activities are well-diversified by geography, investor segment, instrument, currency, structure and maturity. We maintain an ongoing presence in different funding markets, which allows us to continuously monitor market developments and trends, identify opportunities and risks, and take appropriate and timely actions. We operate longer-term debt issuance registered programs. The following table summarizes these programs with their authorized limits by geography.

Programs by geography		Table 57
Canada	**U.S.**	**Europe/Asia**
• Canadian Shelf – $15 billion	• SEC Registered – US$25 billion • SEC Registered Covered Bonds – US$12 billion	• European Debt Issuance Program – US$40 billion • Covered Bond Program – Euro 23 billion • Japanese Issuance Programs – JPY 1 trillion

We also raise long-term funding using Canadian Deposit Notes, Canadian NHA MBS, Canada Mortgage Bonds, credit card receivable-backed securities, Kangaroo Bonds (issued in the Australian domestic market by foreign firms) and Yankee Certificates of Deposit (issued in the U.S. domestic market by foreign firms), We continuously evaluate expansion into new markets and untapped investor segments against relative issuance costs since diversification expands our wholesale funding flexibility and minimizes funding concentration and dependency, and generally reduces financing costs. As presented in the following charts, our current long-term debt profile is well diversified by currency as well as by type of long-term funding products. Maintaining competitive credit ratings is also critical to cost-effective funding.





(1) Mortgage-backed securities and Canada Mortgage Bonds

The following table provides the remaining maturity of our wholesale debt issued and represents our enhanced disclosure in response to EDTF recommendations.

Remaining maturity of wholesale debt issued (1) — **Table 58**

	As at October 31, 2013							
(Millions of Canadian dollars)	Less than 1 month	1 to 3 months	3 to 6 months	6 to 12 months	Less than 1 year sub-total	1 to 2 years	2 years and greater	Total
Bearer deposit notes, certificates of deposit and commercial paper	$ 5,886	$ 5,564	$ 20,253	$ 14,370	$ 46,073	$ 261	$ 3,523	$ 49,857
Deposit and medium-term notes	1,154	3,984	3,652	5,467	14,257	12,327	41,216	67,800
Mortgage securitization	757	2,565	4,211	2,154	9,687	2,371	18,392	30,450
Covered bonds	–	–	–	–	–	3,164	17,713	20,877
Cards and auto securitization	54	94	132	213	493	2,965	4,501	7,959
Total	$ 7,851	$12,207	$ 28,248	$ 22,204	$ 70,510	$ 21,088	$ 85,345	$ 176,943
Comprises:								
- Unsecured	$ 7,040	$ 9,548	$ 23,905	$ 19,837	$ 60,330	$ 12,588	$ 44,739	$ 117,657
- Secured	811	2,659	4,343	2,367	10,180	8,500	40,606	59,286

(1) Excludes short-term wholesale deposits, bankers' acceptances and subordinated debt.

Contractual maturities of financial assets, financial liabilities and off-balance sheet items

The following tables provide remaining contractual maturity profiles of all our assets, liabilities, and off-balance sheet items at their carrying value (i.e. amortized cost or fair value) at the balance sheet date and have been enhanced in response to EDTF recommendations. Off-balance sheet items are allocated based on the expiry date of the contract.

Details of contractual maturities and commitments to extend funds are a source of information for the management of liquidity risk. Among other purposes, these details form a basis for modeling a behavioural balance sheet with effective maturities to calculate liquidity risk measures. For further details, refer to the Risk measurement section.

Contractual maturities of financial assets, financial liabilities and off-balance sheet items — Table 59

(Millions of Canadian dollars)	As at October 31, 2013									
	Less than 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 year to 3 years	3 years to 5 years	5 years and greater	With no specific maturity	Total
Assets										
Cash and deposits with banks	$ –	$ –	$ –	$ –	$ –	$ –	$ –	$ –	$ 24,931	$ 24,931
Securities										
Trading (1)	93,407	40	19	40	38	502	281	4,507	45,189	144,023
Available-for-sale	3,420	4,641	1,268	796	1,116	5,317	7,156	13,140	1,841	38,695
Assets purchased under reverse repurchase agreements and securities borrowed	61,871	18,388	17,985	6,268	6,980	1,151	–	–	4,874	117,517
Loans (net of allowance for loan losses)	15,698	11,662	5,568	10,208	18,855	128,918	97,938	29,761	90,058	408,666
Other										
Customers' liability under acceptances	1,240	501	563	705	2,617	2,393	1,671	263	–	9,953
Derivatives	2,349	5,028	2,338	2,353	1,627	14,939	12,401	33,786	1	74,822
Other financial assets	16,247	989	780	112	119	477	239	639	575	20,177
Total financial assets	$ 194,232	$41,249	$28,521	$20,482	$ 31,352	$153,697	$119,686	$ 82,096	$167,469	$ 838,784
Other non-financial assets	1,275	455	313	149	743	1,745	2	1,939	15,414	22,035
Total assets	$ 195,507	$41,704	$28,834	$20,631	$ 32,095	$155,442	$119,688	$ 84,035	$182,883	$ 860,819
Liabilities and equity										
Deposits (2)										
Unsecured borrowing	$ 22,589	$16,026	$31,266	$12,330	$ 16,785	$ 65,341	$ 25,978	$ 14,658	$281,237	$ 486,210
Secured borrowing	812	3,129	5,048	2,129	1,905	16,257	11,394	10,288	–	50,962
Covered bonds	–	–	–	–	–	7,851	9,987	3,470	–	21,308
Other										
Acceptances	1,240	501	563	705	2,617	2,393	1,671	263	–	9,953
Obligations related to securities sold short	47,128	–	–	–	–	–	–	–	–	47,128
Obligations related to assets sold under repurchase agreements and securities loaned	53,389	1,991	1,308	877	290	1,500	–	–	1,061	60,416
Derivatives	3,021	5,233	2,569	2,536	2,312	16,971	12,133	31,970	–	76,745
Other financial liabilities	20,995	1,090	720	261	336	667	391	3,969	60	28,489
Subordinated debentures	1,005	–	–	603	–	3,214	–	2,621	–	7,443
Trust capital securities	–	900	–	–	–	–	–	–	–	900
Total financial liabilities	$ 150,179	$28,870	$41,474	$19,441	$ 24,245	$114,194	$ 61,554	$ 67,239	$282,358	$ 789,554
Other non-financial liabilities	1,697	2,834	686	114	135	1,832	965	7,374	5,293	20,930
Equity	–	–	–	–	–	–	–	–	50,335	50,335
Total liabilities and equity	$ 151,876	$31,704	$42,160	$19,555	$ 24,380	$116,026	$ 62,519	$ 74,613	$337,986	$ 860,819
Off-balance sheet items										
Financial guarantees	$ 2,203	$ 854	$ 1,824	$ 1,714	$ 2,567	$ 3,166	$ 3,074	$ 139	$ 51	$ 15,592
Lease commitments	62	122	181	179	173	1,264	787	1,346	–	4,114
Commitments to extend credit	3,757	6,843	4,780	6,488	7,320	44,043	65,276	13,615	1,044	153,166
Other commitments	2,291	37	13	210	1,733	350	418	169	57,749	62,970
Total off-balance sheet items	$ 8,313	$ 7,856	$ 6,798	$ 8,591	$ 11,793	$ 48,823	$ 69,555	$ 15,269	$ 58,844	$ 235,842

(1) Trading debt securities classified as fair value through profit or loss have been included in the less than 1 month category as there is no expectation to hold these assets to their contractual maturity.

(2) A major portion of relationship-based deposits are repayable on demand or at short notice on a contractual basis while, in practice, these customer balances form a core base, as explained in the preceding Deposit profile section, for our operations and liquidity needs.

(Millions of Canadian dollars)	As at October 31, 2012									
	Less than 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 year to 3 years	3 years to 5 years	5 years and greater	With no specific maturity	Total
Assets										
Cash and deposits with banks	$ –	$ –	$ –	$ –	$ –	$ –	$ –	$ –	$ 22,872	$ 22,872
Securities										
Trading (1)	74,067	102	694	37	11	296	360	4,911	40,305	120,783
Available-for-sale	3,698	6,749	2,496	1,543	491	4,963	5,838	12,998	2,052	40,828
Assets purchased under reverse repurchase agreements and securities borrowed (2)	65,988	22,677	7,473	5,211	3,385	2,205	–	–	5,318	112,257
Loans (net of allowance for loan losses) (2)	12,444	9,546	8,487	11,989	20,918	83,635	124,218	22,060	84,947	378,244
Other										
Customers' liability under acceptances	1,329	435	404	624	2,406	1,907	2,167	113	–	9,385
Derivatives	2,517	3,799	2,891	2,379	1,372	15,735	14,222	48,374	4	91,293
Other financial assets	24,912	952	618	169	637	216	113	190	–	27,807
Total financial assets	$184,955	$44,260	$23,063	$21,952	$29,220	$108,957	$146,918	$ 88,646	$155,498	$803,469
Other non-financial assets (2)	2,646	594	298	277	193	1,427	–	1,859	14,337	21,631
Total assets	$187,601	$44,854	$23,361	$22,229	$29,413	$110,384	$146,918	$ 90,505	$169,835	$825,100
Liabilities and equity										
Deposits (3)										
Unsecured borrowing	$ 36,012	$14,247	$21,947	$14,865	$22,299	$ 49,577	$ 22,470	$ 8,525	$252,947	$442,889
Secured borrowing	–	2,423	546	2,613	3,509	21,150	14,733	8,384	–	53,358
Covered bonds	2,592	–	–	–	–	3,204	2,499	3,677	–	11,972
Other										
Acceptances	1,329	435	404	624	2,406	1,907	2,167	113	–	9,385
Obligations related to securities sold short	40,756	–	–	–	–	–	–	–	–	40,756
Obligations related to assets sold under repurchase agreements and securities loaned (2)	58,494	1,835	1,009	560	654	–	–	–	1,480	64,032
Derivatives	2,793	4,794	2,162	2,701	1,979	19,703	15,659	46,969	1	96,761
Other financial liabilities (2)	25,789	652	816	291	437	274	108	3,730	–	32,097
Subordinated debentures	–	–	–	–	–	233	–	7,382	–	7,615
Trust capital securities	–	–	–	–	–	900	–	–	–	900
Total financial liabilities	$167,765	$24,386	$26,884	$21,654	$31,284	$ 96,948	$ 57,636	$ 78,780	$254,428	$759,765
Other non-financial liabilities (2)	1,707	2,087	329	199	912	2,096	729	7,211	4,037	19,307
Equity	–	–	–	–	–	–	–	–	46,028	46,028
Total liabilities and equity	$169,472	$26,473	$27,213	$21,853	$32,196	$ 99,044	$ 58,365	$ 85,991	$304,493	$825,100
Off-balance sheet items										
Financial guarantees	$ 340	$ 2,061	$ 2,445	$ 2,234	$ 1,941	$ 2,791	$ 2,532	$ 317	$ 22	$ 14,683
Lease commitments	58	117	174	172	167	1,246	856	1,258	–	4,048
Commitments to extend credit	3,273	3,603	3,956	4,064	7,448	36,992	57,871	10,169	1,033	128,409
Other commitments	145	614	707	1,102	2,110	374	181	163	56,141	61,537
Total off-balance sheet items	$ 3,816	$ 6,395	$ 7,282	$ 7,572	$11,666	$ 41,403	$ 61,440	$ 11,907	$ 57,196	$208,677

(1) Trading debt securities classified as fair value through profit or loss have been included in the less than 1 month category as there is no expectation to hold these assets to their contractual maturity.
(2) Amounts have been revised from those previously presented.
(3) A major portion of relationship-based deposits are repayable on demand or at short notice on a contractual basis while, in practice, these customer balances form a core base, as explained in the preceding Deposit profile section, for our operations and liquidity needs.

Contractual maturities of financial liabilities and off-balance sheet items – undiscounted basis

The following tables provide remaining contractual maturity analysis of our financial liabilities and off-balance sheet items. The amounts disclosed in the following table are the contractual undiscounted cash flows of all financial liabilities (i.e. par value or amount payable upon maturity). The amounts do not reconcile directly with those in our consolidated balance sheets as the table only incorporates cash flows relating to payments on maturity of the instrument and do not recognize premiums, discounts or mark-to-market adjustments recognized in the instruments' carrying value as at the balance sheet date. Financial liabilities are based upon earliest period in which they are required to be paid. For off-balance sheet items, the undiscounted cash flows potentially payable under financial guarantees and commitments to extend credit are classified on the basis of the earliest date they can be called.

Contractual maturities of financial liabilities and off-balance sheet items – undiscounted basis* **Table 60**

(Millions of Canadian dollars)	As at October 31, 2013					
	On demand	Within 1 year	1 to 3 years	3 to 5 years	Over 5 years	Total
Financial liabilities						
Deposits (1)	$ 264,287	$ 128,884	$ 89,003	$ 46,895	$ 28,432	$ 557,501
Other						
Acceptances	–	5,626	2,393	1,671	263	9,953
Obligations related to securities sold short	–	47,128	–	–	–	47,128
Obligations related to assets sold under repurchase agreements and securities loaned	1,061	57,855	1,500	–	–	60,416
Other liabilities	60	23,378	635	406	4,095	28,574
Subordinated debentures	–	–	200	–	7,208	7,408
Trust capital securities	–	900	–	–	–	900
	265,408	263,771	93,731	48,972	39,998	711,880
Off-balance sheet items						
Financial guarantees (2)	5,850	9,550	181	11	–	15,592
Operating leases	–	717	1,264	787	1,346	4,114
Commitments to extend credit (2)	117,753	35,413	–	–	–	153,166
	123,603	45,680	1,445	798	1,346	172,872
Total financial liabilities and off balance-sheet items	$ 389,011	$ 309,451	$ 95,176	$ 49,770	$ 41,344	$ 884,752

(Millions of Canadian dollars)	As at October 31, 2012					
	On demand	Within 1 year	1 to 3 years	3 to 5 years	Over 5 years	Total
Financial liabilities						
Deposits (1), (3)	$ 237,643	$ 136,244	$ 73,722	$ 39,326	$ 19,902	$ 506,837
Other						
Acceptances	–	5,198	1,907	2,167	113	9,385
Obligations related to securities sold short	–	40,756	–	–	–	40,756
Obligations related to assets sold under repurchase agreements and securities loaned (3)	1,480	62,552	–	–	–	64,032
Other liabilities (3)	426	27,915	197	87	3,464	32,089
Subordinated debentures	–	–	199	–	7,217	7,416
Trust capital securities	–	–	900	–	–	900
	239,549	272,665	76,925	41,580	30,696	661,415
Off-balance sheet items						
Financial guarantees (2)	11,406	2,965	291	20	1	14,683
Operating leases	–	688	1,246	856	1,258	4,048
Commitments to extend credit (2)	128,239	170	–	–	–	128,409
	139,645	3,823	1,537	876	1,259	147,140
Total financial liabilities and off balance-sheet items	$ 379,194	$ 276,488	$ 78,462	$ 42,456	$ 31,955	$ 808,555

* This table represents an integral part of our 2013 Annual Consolidated Financial Statements.

(1) A major portion of relationship-based deposits are repayable on demand or at short notice on a contractual basis while, in practice, these customer balances form a core base, as explained in the preceding Deposit profile section, for our operations and liquidity needs.

(2) We believe that it is highly unlikely that all or substantially all of these guarantees and commitments will be drawn or settled within one year, and contracts may expire without being drawn or settled. The management of the liquidity risk associated with potential extensions of funds is outlined in the preceding Risk measurement section.

(3) Amounts have been revised from those previously presented.

Credit ratings

Our ability to access unsecured funding markets and to engage in certain collateralized business activities on a cost-effective basis are primarily dependent upon maintaining competitive credit ratings. Credit ratings and outlooks provided by rating agencies reflect their views and are based on their methodologies. Ratings are subject to change from time to time, based on a number of factors including, but not limited to, our financial strength, competitive position and liquidity and other factors not completely within our control.

On October 23, 2013, S&P again affirmed our ratings with a stable outlook reflecting S&P's expectations that we will continue to manage our balance sheet prudently, maintain favourable asset quality, and generate consistent though slower earnings growth through our premier Canadian businesses.

On July 22, 2013, Moody's affirmed our ratings with a stable outlook. On January 28, 2013, Moody's removed systematic support from the subordinated debt ratings of RBC and all other Canadian banks, consistent with their announcement in October 2012.

On July 9, 2013, DBRS affirmed our ratings with a stable outlook, which are underpinned by our highly diversified business model, strong Canadian retail franchise and well positioned capital markets business.

On December 13, 2012, S&P upgraded our outlook to stable from negative and affirmed our long- and short-term issuer credit ratings. The outlook revision followed a review by S&P of banking sector industry and economic risks in Canada, which resulted in a revision to their Banking Industry Country Risk Assessment for Canada to group 2 from 1.

The following table presents our major credit ratings and outlooks as at December 4, 2013:

Credit ratings — **Table 61**

	As at December 4, 2013 (1)		
	Short-term debt	Senior long-term debt	Outlook
Moody's	P-1	Aa3	stable
S&P	A-1+	AA-	stable (2)
Fitch Ratings	F1+	AA	stable
DBRS	R-1(high)	AA	stable

(1) Credit ratings are not recommendations to purchase, sell or hold a financial obligation inasmuch as they do not comment on market price or suitability for a particular investor. Ratings are determined by the rating agencies based on criteria established from time to time by them, and are subject to revision or withdrawal at any time by the rating organization.

(2) On December 13, 2012, S&P upgraded our outlook to stable from negative.

On October 23, 2013, Kroll Bond Rating Agency (KBRA), a registered National Recognized Statistical Rating Organization with the SEC, assigned us senior long-term and short-term debt and deposit ratings of AA and K1+, respectively, with a stable outlook. KBRA was requested to rate a commercial MBS multi-borrower transaction where RBC was one of four third party interest rate cap providers. Given KBRA's policy to rate all parties to a transaction, it was required to issue a rating on RBC. These ratings were unsolicited and we did not participate in the rating process.

Additional contractual obligations for rating downgrades

A lowering of our credit rating may have potentially adverse consequences for our funding capacity or access to the capital markets, may also affect our ability, and the cost, to enter into normal course derivative or hedging transactions and may require us to post additional collateral under certain contracts. However, we estimate, based on periodic reviews of ratings triggers embedded in our existing businesses and of our funding capacity sensitivity, that a minor downgrade would not significantly influence our liability composition, funding access, collateral usage and associated costs. The following table presents the additional collateral obligations required at the reporting date in the event of a one-, two- or three-notch downgrade to our credit ratings. These additional collateral obligations are incremental requirements for each successive downgrade and do not represent the cumulative impact. The amounts reported change periodically as a result of several factors including the transfer of trading activity to centrally cleared financial market infrastructures and exchanges, the expiration of transactions with downgrade triggers, the imposition of internal limitations on new agreements to exclude downgrade triggers, as well as normal course mark to market of positions with collateralized counterparties moving from a negative to a positive position. There is no outstanding senior debt issued in the market that contains rating triggers which would lead to early prepayment of principal.

Additional contractual obligations for rating downgrades — **Table 62**

	2013			2012		
(Millions of Canadian dollars)	One-notch downgrade	Two-notch downgrade	Three-notch downgrade	One-notch downgrade	Two-notch downgrade	Three-notch downgrade
Contractual derivatives funding or margin requirements	$ 616	$ 171	$ 762	$ 1,582	$ 256	$ 248
Other contractual funding or margin requirements (1)	490	187	95	678	170	–

(1) Includes GICs issued by our municipal markets business out of New York and London.

Insurance risk

Insurance risk refers to the potential financial loss that may arise where the amount, timing and/or frequency of benefit payments under insurance or reinsurance contracts are different than expected. Insurance risk does not include other risks covered by other parts of our risk management framework (e.g., credit, market and operational risk).

We have put in place an Insurance Risk Framework designed to identify, manage, and report on the insurance risks that face the organization. Insurance risk is managed through our infrastructure, systems, controls, and monitoring. Specific risk management policies, methodologies, and programs have been developed to support the management of risk including: delegated risk approval authorities, a product development and pricing process, and experience study analysis.

Regulatory compliance risk

Regulatory compliance risk is the risk of potential non-conformance with laws, rules, regulations, prescribed practices, or ethical standards in any jurisdiction in which we operate. Issues regarding compliance with laws and regulations can arise in a number of areas in a large complex financial institution such as RBC, and are often the result of inadequate or failed internal processes, people or systems.

Laws and regulations are in place to protect the financial and other interests of our clients, investors and the public. Changes to laws, including tax laws, regulations or regulatory policies, as well as the changes in how they are interpreted, implemented or enforced, could adversely affect us, for example by lowering barriers to entry in the businesses in which we operate or increasing our costs of compliance. Further, there is no assurance that we always will be or will be deemed to be in compliance with laws, regulations or regulatory policies. Accordingly, it is possible that we could receive a judicial or regulatory judgment or decision that results in fines, damages, and other costs or injunctions or loss of licenses or registrations that would damage our reputation and negatively impact our earnings. In addition, we are subject to litigation arising in the ordinary course of our business and the adverse resolution of any litigation could have a material adverse effect on our results or could give rise to significant reputational damage, which in turn could impact our future business prospects.

Global compliance has developed a Regulatory Compliance Management Framework consistent with regulatory expectations from OSFI and other regulators. The framework is designed to manage and mitigate the risks associated with failing to comply with, or adapt to, current and changing laws and regulations in the jurisdictions in which we operate. Within the framework there are five elements that form a cycle by which all regulatory compliance risk management programs are developed, implemented and maintained. The first element is intended to ensure our regulatory compliance programs evolve alongside our business activities and operations. The second element is intended to ensure regulatory compliance risks are identified and assessed appropriately so regulatory compliance programs are designed in a manner to most effectively

meet regulatory requirements. The third element relates to the design and implementation of specific controls. The fourth element is intended to ensure appropriate monitoring and oversight of the effectiveness of the controls. Lastly, the fifth element is intended to ensure the timely escalation and resolution of issues, and clear and transparent reporting. This is a critical step in enabling senior management and the Board of Directors to effectively perform their management and oversight responsibilities.

Operational risk

Operational risk is the risk of loss or harm resulting from inadequate or failed internal processes, people and systems or from external events.

Operational risk is embedded in all our activities, including the practices and controls used to manage other risks. Failure to manage operational risk can result in direct or indirect financial loss, reputational impact, regulatory censure, or failure in the management of other risks such as credit or market risk.

We have put in place an Operational Risk Framework which is founded on the principles of our Enterprise Risk Management Framework and sets out the elements that support these principles with respect to the management of operational risk. This framework is dynamic, articulating our strategy regarding management, measurement and reporting of operational risk. Its foundation is the Three Lines of Defence risk governance model as responsibility for risk management is shared across the organization. This model encompasses the practices, requirements, roles and responsibilities for a fully comprehensive, coordinated enterprise-wide approach for the management of operational risk.

Operational risk is difficult to measure in a complete and precise manner, given that exposure to operational risk is often implicit, bundled with other risks, or otherwise not taken on intentionally. In the financial services industry, measurement tools and methodologies continue to evolve. The two options available to us under Basel II are the Advanced Measurement Approach (AMA) and the Standardized Approach. Currently, we employ the Standardized Approach for measuring operational risk and we have made significant progress to meet requirements to achieve Advanced Measurement Approach status.

Operational risk is managed through our infrastructure, controls, systems and people, complemented by central groups focusing on enterprise-wide management and oversight of specific operational risks such as fraud, privacy, outsourcing, and business disruption, as well as people and systems risks.

Specific programs, policies, standards and methodologies have been developed to support the management of operational risk. These programs are (i) Risk and Control Assessment and monitoring of business environment and control factors with Key Risk indicators, (ii) Operational Risk Event data collection and analysis, (iii) External Event – Industry loss analysis, and (iv) Scenario Analysis.

Strategic risk

Strategic risk is the risk that the enterprise or particular business areas will make inappropriate strategic choices, or will be unable to successfully implement selected strategies or related plans and decisions.

Responsibility for selecting and successfully implementing business strategies is mandated to the individual heads of the businesses. Oversight of strategic risk is the responsibility of the heads of the business segments, the Enterprise Strategy Office, GE, and the Board of Directors. Management of strategic risk is supported by the Enterprise Strategy Group through the use of an Enterprise Strategy Framework.

Reputation risk

Reputation risk is the risk that an activity undertaken by an organization or its representatives will impair its image in the community or lower public confidence in it, resulting in the loss of business, legal action or increased regulatory oversight.

Reputation risk can arise from a number of events and primarily occurs in connection with credit risk, regulatory, legal and operational risks. Operational failures and non-compliance with laws and regulations can have a significant reputational impact on us.

We have put in place a Reputation Risk Framework which provides an overview of our approach to the management of this risk. It focuses on our organizational responsibilities, and controls in place to mitigate reputation risks.

The following principles guide our management of reputation risk:

- We must operate with integrity at all times in order to sustain a strong and positive reputation;
- Protecting our reputation is the responsibility of all our employees, including senior management and extends to all members of the Board of Directors.

Competitive risk

The competition for clients among financial services companies in the markets in which we operate is intense. Client loyalty and retention can be influenced by a number of factors, including new technology used or services offered by our competitors, relative service levels, relative prices, product and service attributes, our reputation and actions taken by our competitors. Other companies, such as insurance companies and non-financial companies, are increasingly offering services traditionally provided by banks. This competition could also reduce net interest income, fee revenue and adversely affect our results.

Overview of other risks

In addition to the risks described in the Risk management section, there are other risk factors, described below, which may adversely affect our businesses and financial results. The following discussion is not exhaustive as other factors could also adversely affect our results.

Business and economic conditions

Our earnings are significantly affected by the general business and economic conditions in the geographic regions in which we operate. These conditions include consumer saving and spending habits as well as consumer borrowing and repayment patterns, business investment, government spending, the level of activity and volatility of the capital markets and inflation. For example, an economic downturn may result in high unemployment and lower family income, corporate earnings, business investment and consumer spending, and could adversely affect the demand for our loan and other products and result in higher provisions for credit losses. Given the importance of our Canadian operations, an economic downturn in Canada or in the U.S. impacting Canada would largely affect our personal and business lending activities in our Canadian Banking businesses, including cards, and could significantly impact our results of operations.

Economic conditions in the Eurozone continue to show moderate signs of improvement as the risks of a sovereign default and exit from the currency union have lessened, although there continues to be risks to the growth outlook. We continue to follow market events very closely, and manage our exposure accordingly. Overall, we continue to transact business in a prudent manner and remain comfortable with our exposures in Europe, which are with well-rated counterparties mainly located in core European countries. For further details, refer to the Credit risk section.

In addition to our net exposure to Europe mentioned above, we are also subject to indirect exposure. We have implemented processes to monitor and mitigate indirect credit risk including specific controls related to the management of derivative and repo-style transaction exposures. Indirect market risk related to increased volatility resulting from European sovereign debt concerns are monitored through regular market risk stress testing and hypothetical scenario analysis. From an operational risk perspective, we have implemented contingency planning in the event of a crisis in the Eurozone economy.

Our analysis indicates that further deterioration in the Eurozone economies will result in adverse effects which are within our ability to manage as established through our stress testing, balance sheet analysis and operational assessments.

Our earnings are also sensitive to changes in interest rates. A continuing low interest rate environment in Canada, the U.S. and globally would result in net interest income being unfavourably impacted by spread compression largely in Personal & Commercial Banking and Wealth Management. While an increase in interest rates would benefit our businesses that are currently impacted by spread compression, a significant increase in interest rates could also adversely impact household balance sheets. This could result in credit deterioration which might negatively impact our financial results, particularly in some of our Personal & Commercial Banking and Wealth Management businesses.

Capital Markets and Investor & Treasury Services would be negatively impacted if global capital markets deteriorate resulting in lower average fee-based client assets and transaction volumes and trading volatility. In Wealth Management, weaker market conditions would lead to lower average fee-based client assets and transaction volumes. Worsening of financial and credit market conditions may adversely affect our ability to access capital markets on favourable terms and could negatively affect our liquidity, resulting in increased funding costs and lower transaction volumes in Capital Markets and Investor & Treasury Services. For further details on economic and market factors which may impact our financial performance, refer to the Wealth Management, Investor & Treasury Services and Capital Markets sections.

Government fiscal, monetary and other policies

Our businesses and earnings are affected by the fiscal, monetary or other policies that are adopted by the Bank of Canada and various other Canadian regulatory authorities, the Board of Governors of the Federal Reserve System in the U.S. and other U.S. government authorities, as well as those adopted by international regulatory authorities and agencies in jurisdictions in which we operate. Such policies can also adversely affect our clients and counterparties in Canada, the U.S. and internationally, which may increase the risk of default by such clients and counterparties.

Ability to attract and to retain employees

Competition for qualified employees is intense within the financial services industry and from non-financial industries looking to recruit. Although our goal is to retain and attract qualified employees, there is no assurance that we will be able to do so.

Accuracy and completeness of information on clients and counterparties

When deciding to extend credit or enter into other transactions with clients and counterparties, we may rely on information provided by or on behalf of clients and counterparties, including audited financial statements and other financial information. We may also rely on representations of clients and counterparties as to the completeness and accuracy of that information. Our financial results could be adversely impacted if the financial statements and other financial information relating to clients and counterparties on whom we rely do not comply with GAAP or are materially misleading.

Development and integration of our distribution networks

We regularly explore opportunities to expand our distribution networks, either through acquisitions or organically by adding, for example, new bank branches, insurance offices, online savings accounts and ATMs in high-growth, receptive markets. However, if we are not able to develop or integrate these distribution networks effectively, our results of operations and financial condition may be negatively affected.

Model risk

The use of models plays an important role in many of our business activities. We use a variety of models for many purposes, including the valuation of financial products, risk measurement and management of different types of risk. Model risk is the risk of error in the design, development, implementation or subsequent use of models. We have established an enterprise-wide Model Risk Management Framework, including principles, policies and procedures, roles and responsibilities to manage model risk. One of the key factors in the framework to mitigate model risk is independent validation.

Information technology risk

We use information technology for business operations and the enablement of strategic business goals and objectives. Information technology risk is the risk to our business associated with the use, ownership, operation, involvement, influence and adoption of information technology within the enterprise. It consists of information technology related events that could potentially have an adverse impact on our business. Such events could result in business interruption, service disruptions, theft of intellectual property and confidential information, additional regulatory scrutiny, litigation and reputational damage. To manage our information technology risk, we have established an enterprise-wide Information Technology Risk Management Framework.

Social media risk

The scale and profile of social media has grown to present a number of risks. These risks include brand and reputational damage, information leaks, non-compliance with regulatory requirements and governance risk. To manage the risks associated with social media, we have implemented an enterprise-wide policy as well as business unit policies on the usage of external social media, which sets out the requirements for the business and corporate use of social media and is part of our larger Social Media Governance Framework.

Environmental risk

Environmental risk is the risk of loss to financial, operational or reputational value resulting from the impact of environmental issues. It arises from our business activities and our operations. For example, the environmental issues associated with our clients' purchase and sale of contaminated property or development of large-scale projects may give rise to credit and reputation risk. Operational and legal risks may arise from environmental issues at our branches, offices or data processing centres.

Corporate Environmental Affairs (CEA) sets enterprise-wide policy requirements for the identification, assessment, control, monitoring and reporting of environmental risk. Oversight is provided by GE and the Corporate Governance and Public Policy Committee (CG&PPC) of the Board of Directors. Business segments and corporate functions are responsible for incorporating environmental risk management requirements and controls within their operations. The CEA Group also provides advisory services and support to business segments on the management of specific environmental risks in business transactions.

Periodically, we verify that our environmental risk management policies and processes are operating as intended. On an annual basis, and more frequently as required, environmental risk management activities, issues, and trends are reported to GE and to the CG&PPC of the Board of Directors. Failure to adequately manage environmental risk could adversely impact our results and/or significantly impact our reputation.

For more information on RBC and environmental risk management, visit our website at rbc.com/community-sustainability/environment/responsible-financing.html.

Other factors

Other factors that may affect actual results include changes in government trade policy, changes in accounting standards, including their effect on our accounting policies, estimates and judgements, the timely and successful development of new products and services, our ability to cross-sell more products to customers, technological changes and our reliance on third parties to provide components of our business infrastructure, the failure of third parties to comply with their obligations to us and our affiliates as such obligations relate to the handling of personal information, fraud by internal or external parties, the possible impact on our business from disease or illness that affects local, national or global economies, disruptions to public infrastructure, including transportation, communication, power and water, international conflicts and other political developments including those relating to the war on terrorism, and our success in anticipating and managing the associated risks.

We caution that the foregoing discussion of risk factors, many of which are beyond our control, is not exhaustive and other factors could also affect our results.

For further details on our contingencies, including litigation, refer to Note 26 of our 2013 Annual Consolidated Financial Statements.

Capital management

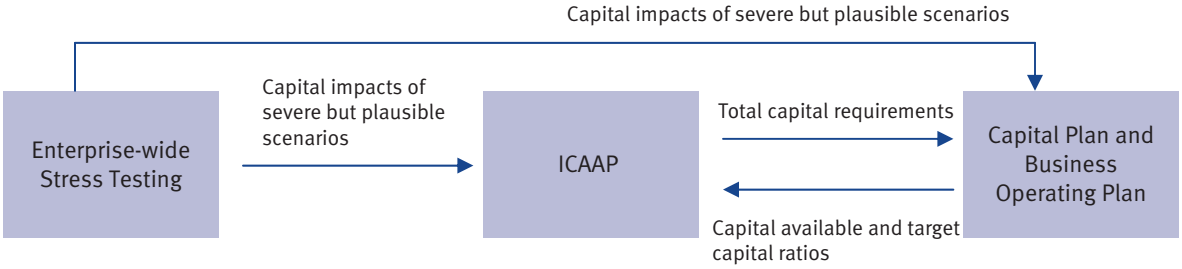
We actively manage our capital to maintain strong capital ratios and high ratings while providing strong returns to our shareholders. In addition to the regulatory requirements, we consider the expectations of rating agencies, depositors and shareholders, as well as our business plans, stress tests, peer comparisons and our internal capital ratio targets. Our goal is to optimize our capital usage and structure, and provide support for our business segments and clients and better returns for our shareholders, while protecting depositors and senior creditors.

Capital management framework

Our capital management framework provides the policies and processes for defining, measuring, raising and investing all types of capital in a coordinated and consistent manner. It includes the overall approach of capital management, including guiding principles as well as roles and responsibilities relating to capital adequacy and transactions, dividends, solo capital and management of risk-weighted assets and gross-adjusted assets or total exposures. We manage and monitor capital from several perspectives, including regulatory capital, economic capital and subsidiary capital.

Our capital planning is a dynamic process which involves various teams including Finance, Corporate Treasury, GRM and Economics, and covers internal capital ratio targets, potential capital transactions as well as projected dividend payouts and share repurchases. The integral parts of our capital planning comprise business operating plan, Enterprise-wide stress testing, Internal Capital Adequacy Assessment Process (ICAAP), along with the considerations of regulatory capital requirements and accounting changes, internal capital requirements, rating agency metrics and solo capital.

Our capital plan is established on an annual basis and is aligned with the management actions included in the annual business operating plan, which includes forecast growth in assets and earnings taking into account our business strategies, projected market and economic environment and peer positioning. This includes incorporating potential capital transactions based on our projected internal capital generation, business forecasts, market conditions and other developments, such as accounting and regulatory changes that may impact capital requirements. All of the components in the capital plan are monitored throughout the year and are revised as appropriate.



Our Enterprise-wide stress testing and ICAAP provide key inputs for capital planning including setting the appropriate internal capital ratio targets. The stress scenarios are evaluated across the organization, and results are integrated to develop an enterprise-wide view of financial impacts and capital requirements, which in turn facilitate the planning of mitigating actions to absorb exceptional adverse events. ICAAP is an OSFI mandated annual process to assess capital adequacy and requirements to cover all material risks, with a cushion to cover severe but plausible contingencies. In accordance with the OSFI guideline, the major components of our ICAAP process include comprehensive risk assessment, stress testing, capital assessment and planning (both economic and regulatory capital), board and senior management oversight, monitoring and reporting and internal control review.

Our internal capital targets are established to maintain robust capital positions in excess of OSFI's Basel III "all-in" regulatory targets, which include minimum capital requirements plus a capital conservation buffer that can absorb losses during periods of stress. The "all-in" methodology includes all regulatory adjustments that will be required by 2019, while retaining the phase-out rules for non-qualifying capital instruments, as per OSFI's Basel III Capital Adequacy Requirements (CAR) guideline published in December 2012. The stress test results of our Enterprise-wide stress testing and ICAAP are incorporated into the OSFI capital conservation buffer, with a view to ensuring the bank has adequate capital to underpin risks and absorb losses under all plausible stress scenarios given our risk profile and appetite. In addition, we include a discretionary cushion on top of the OSFI regulatory targets to maintain capital strength for forthcoming regulatory and accounting changes, peer comparatives, rating agencies sensitivities and solo capital level.

The Board of Directors is responsible for the ultimate oversight of capital management, including the annual review and approval of capital plan. ALCO and GE share management oversight responsibility for capital management and receive regular reports detailing our compliance with established limits and guidelines. The Risk Committee is responsible for the governance of our capital management framework. The Audit and Risk Committees approve the capital plan which includes the approval of the ICAAP process. The Audit Committee is also responsible for the ongoing review of internal controls over capital management.

Basel III

Effective the first quarter of 2013, our regulatory capital requirements are determined on a Basel III "all-in" basis as per OSFI guidelines. Prior to the first quarter of 2013, our regulatory capital requirements were under the Basel II framework.

The top corporate entity to which Basel III applies at the consolidated level is Royal Bank of Canada.

Under Basel III, banks select from among alternative approaches to calculate their minimum regulatory capital required to underpin credit, market and operational risks.

We adopted the Basel III IRB approach to calculate credit risk capital for consolidated regulatory reporting purposes. While the majority of our credit risk exposures are reported under the Basel III IRB approach for regulatory capital purposes, certain portfolios considered non-material from a consolidated perspective continue to use the Basel III Standardized approach for credit risk (for example, our Caribbean banking operations). For consolidated regulatory reporting of operational risk capital, we continue to use the Standardized approach. For consolidated regulatory reporting of market risk capital, we use both Internal Models-based and Standardized approaches.

In December 2010, the BCBS issued "Basel III: A global regulatory framework for more resilient banks and banking systems", which outlines the capital and liquidity requirements for global banks, with the objective of promoting financial stability and is intended to ensure sustainable economic growth. The BCBS sets out the Basel III transitional requirements for Common Equity Tier 1 (CET1), Tier 1 and Total capital ratios at 3.5%, 4.5% and 8%, respectively for 2013, which will be fully phased-in to 7%, 8.5% and 10.5%, respectively (including minimums plus capital conservation buffer of 2.5%) by January 1, 2019. The BCBS also released the Non-Viability Contingent Capital (NVCC) requirements in January 2011 with an effort to ensure the loss absorbency of regulatory capital instruments at the point of non-viability. In August 2011, OSFI issued an advisory outlining the NVCC principles and requirements, including a full and permanent conversion of non-common capital instruments into common shares upon a trigger event, effective the first quarter of 2013.

Effective the first quarter of 2013, OSFI expected Canadian banks to meet the "all-in" targets (minimum ratios plus the capital conservation buffer – January 1, 2019 BCBS requirements) for CET1 ratio, and Tier 1 and Total capital ratios by the first quarter of 2014. The final OSFI Basel III CAR guideline issued in 2013 also delayed the implementation of the CVA capital charge rules until January 1, 2014. In August 2013, OSFI published the advisory related to the phase-in options for the CVA capital charge over a period of five years, beginning in 2014.

In June 2013, BCBS published a consultative paper on "Revised Basel III leverage ratio framework and disclosure requirements" requiring public disclosure starting January 1, 2015. BCBS will continue to test the minimum requirement of 3% for the leverage ratio, and make any adjustments to the definition and calibration of the leverage ratio by 2017, with a view to migrating to Pillar 1 treatment on January 1, 2018 based on appropriate review and calibration. Starting January 1, 2013, Canadian banks are required to report the Basel III leverage ratio and its components to OSFI. The proposed leverage ratio is intended to act as a supplementary measure to risk-based capital requirements, and is currently defined as Basel III Tier 1 capital divided by Total exposures which include both on- and off-balance sheet exposures.

OSFI released the list of six Canadian banks, including RBC, which are designated as domestic systemically important banks (D-SIBs) in March 2013, for which an additional 1% risk weighted capital surcharge will be required commencing January 1, 2016. In July 2013, BCBS published a revised document on "Global systemically important banks (G-SIB): updated assessment methodology and the higher loss absorbency requirement". BCBS requires all banks with a Basel III leverage ratio total exposure exceeding EUR 200 billion as well as those designated as G-SIBs in the prior year to make publicly available the 12 indicators used in the assessment methodology by 2014, with the goal of enhancing the transparency of the relative scale of banks' potential global systemic importance and data quality. As indicated by OSFI in October 2013, Canadian banks, including RBC, that meet the BCBS size threshold and are not designated as G-SIBs in the previous year will be required to disclose in the report to shareholders the 12 indicators only (not the full template) for financial year ends 2013 and 2014 no later than the first quarter of 2015. For subsequent year ends, disclosure should be made as part of a bank's annual report to shareholders.

The following table provides a summary of OSFI regulatory target ratios under Basel III:

Basel III – OSFI regulatory target **Table 63**

Basel III Capital Ratios	OSFI regulatory target requirements for large banks under Basel III					RBC pro forma capital ratios as at October 31, 2012 (2)	RBC capital ratios as at October 31, 2013	Meet or exceed OSFI target ratios	OSFI target requirements as of (1)
	Minimum	Capital Conservation Buffer	Minimum including Capital Conservation Buffer	D-SIBs Surcharge (1)	Minimum including Capital Conservation Buffer and D-SIBs surcharge (1)				
Common Equity Tier 1 (%)	› 4.5%	2.5%	› 7.0%	1.0%	› 8.0%	8.9%	9.6%	✓	2013/2016
Tier 1 capital (%)	› 6.0%	2.5%	› 8.5%	1.0%	› 9.5%	11.3%	11.7%	✓	2014/2016
Total capital (%)	› 8.0%	2.5%	› 10.5%	1.0%	› 11.5%	13.9%	14.0%	✓	2014/2016

(1) The D-SIBs surcharge will be applicable to risk weighted capital commencing January 1, 2016.

(2) The 2012 Basel III pro forma capital ratios have been restated to reflect the delayed regulatory implementation of a CVA capital charge requirement.

The following table provides details on our regulatory capital, RWA and capital ratios. Our capital position remained strong during the year and our capital ratios remain well above OSFI regulatory targets:

Regulatory capital, RWA and capital ratios

Regulatory capital, risk-weighted assets (RWA) and capital ratios **Table 64**

As at October 31 (Millions of Canadian dollars, except percentage and multiple amounts)	Basel III (1) 2013	Basel III Pro forma (2) 2012	Basel II 2012
Capital			
CET1	**$ 30,541**	$ 27,447	n.a. (1)
Tier 1 capital	**37,196**	34,843	36,807
Total capital	**44,716**	42,575	42,347
RWA			
Credit risk	**$ 232,641**	$ 231,197	$ 209,559
Market risk	**42,184**	35,049	30,109
Operational risk	**44,156**	40,941	40,941
RWA	**$ 318,981**	$ 307,187	$ 280,609
Capital ratios and multiples (3)			
CET1 ratio (1)	**9.6 %**	8.9 %	n.a. (1)
Tier 1 capital ratio	**11.7 %**	11.3 %	13.1 %
Total capital ratio	**14.0 %**	13.9 %	15.1 %
Assets-to-capital multiple (4)	**16.6 X**	16.0 X	16.7 X
GAA (billions) (4)	**$ 807.0**	$ 742.7	$ 740.8

(1) Effective the first quarter of 2013, we calculate capital ratios and Assets-to-capital multiple using the Basel III framework. The capital ratios are calculated on the "all-in" basis. The prior periods' capital ratios and Assets-to-capital multiple were calculated using the Basel II framework. Basel III and Basel II are not directly comparable. The CET1 ratio is a new regulatory measure under the Basel III framework. The CET1 capital and ratio are not applicable (n.a.) for prior periods as Basel III was adopted prospectively, effective the first quarter of 2013.

(2) The 2012 Basel III pro forma capital, RWA, capital ratios and multiples have been restated to reflect the delayed regulatory implementation of the CVA capital charge requirement.

(3) To enhance comparability among other global financial institutions, the following are our transitional capital ratios. The transitional CET1, Tier 1 and Total capital ratios as at October 31, 2013 were 11.9%, 11.9% and 13.9% respectively. Transitional is defined as capital calculated according to the current year's phase-in of regulatory adjustments and phase-out of non-qualifying capital instruments.

(4) Effective the first quarter of 2013, Assets-to-capital multiple and GAA are calculated on a transitional basis as per OSFI CAR Guideline.

Basel III regulatory capital and capital ratios

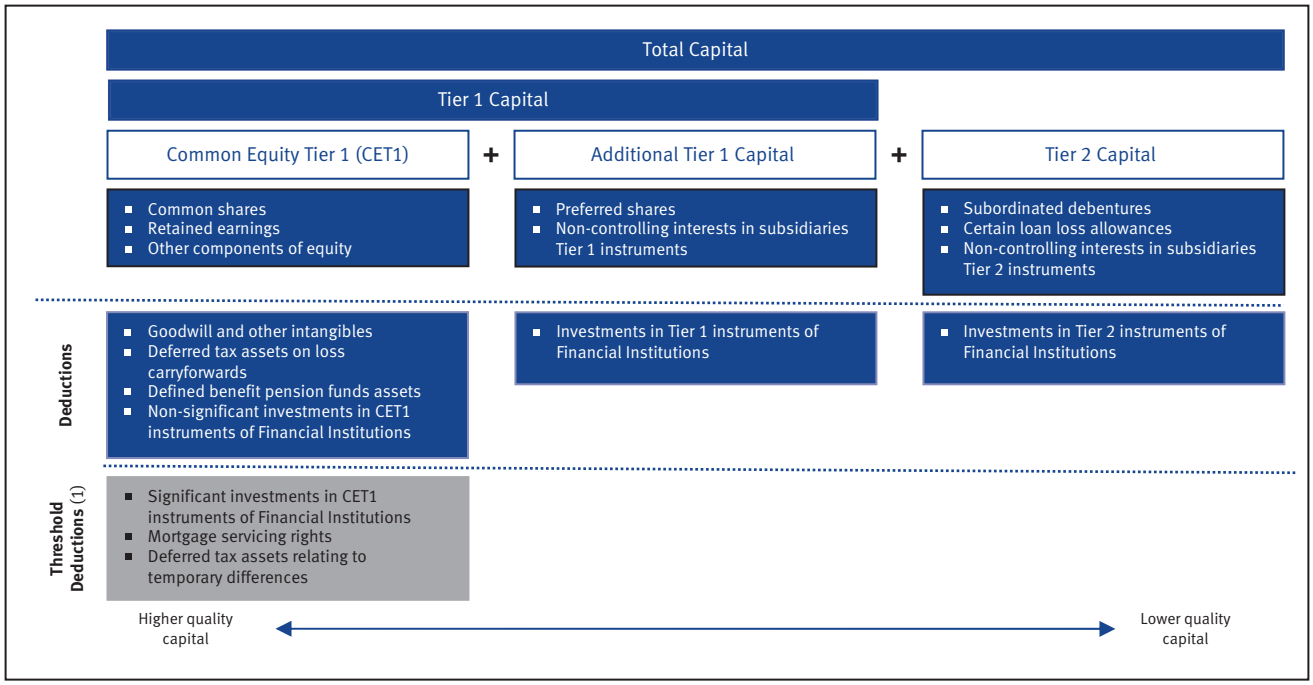
Under Basel III, regulatory capital includes CET1, Tier 1 and Tier 2 capital.

CET1 capital comprises the highest quality of capital. Regulatory adjustments under Basel III are expanded to include full deductions of certain items and additional capital components that are subject to threshold deductions.

Tier 1 capital comprises predominantly CET1 and additional Tier 1 items. Tier 2 capital includes subordinated debentures that meet certain criteria, certain loan loss allowances and non-controlling interests in subsidiaries' Tier 2 instruments. Total capital is defined as the sum of Tier 1 and Tier 2 capital.

Regulatory capital ratios are calculated by dividing CET1, Tier 1 and Total capital by RWA. Pending the BCBS's review of the final Basel III leverage ratio framework, OSFI requires Canadian banks to maintain an Assets-to-capital multiple (which is calculated by dividing Gross-Adjusted Assets (GAA) by Total capital calculated on a Basel III transitional basis) at or below a maximum level prescribed by OSFI on a continuous basis. All items that are deducted from capital are excluded from total assets.

The following chart provides a summary of the major components of CET1, Tier 1, Tier 2 and Total capital:



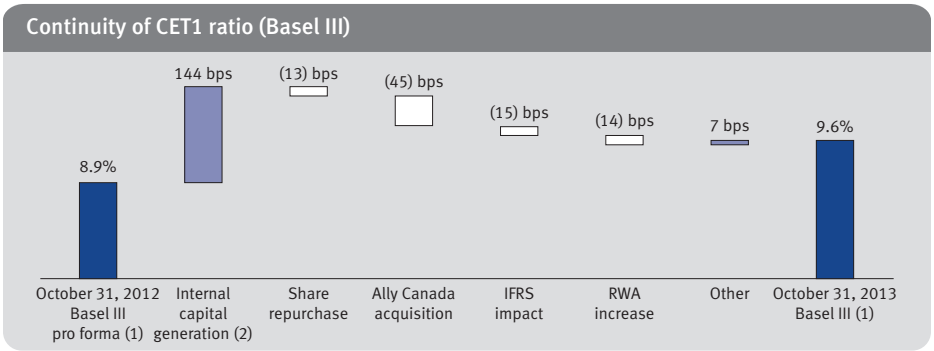
(1) First level: The amount by which each of the items exceeds a 10% threshold of CET1 capital (after all deductions but before threshold deductions) will be deducted from CET1 capital. Second level: The aggregate amount of the three items not deducted from the first level above and in excess of 15% of CET1 capital after regulatory adjustments will be deducted from capital, and the remaining balance not deducted will be risk-weighted at 250%.

Regulatory capital — **Table 65**

(Millions of Canadian dollars, except percentage and otherwise noted)	Basel III All-in basis 2013	Basel II 2012
Common Equity Tier 1 capital: instruments and reserves and regulatory adjustments		
Directly issued qualifying common share capital (and equivalent for non-joint stock companies)	$ 14,607	$ 14,354
Retained earnings	28,124	24,714
Other components of equity (and other reserves)	1,207	195
Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	11	–
Regulatory adjustments applied to Common Equity Tier 1 under Basel 3	(13,408)	–
Common Equity Tier 1 capital (CET1) (1)	30,541	
Additional Tier 1 capital: instruments and regulatory adjustments		
Directly issued qualifying Additional Tier 1 instruments plus related stock surplus	–	7,394
Directly issued capital instruments to phase out from Additional Tier 1	6,652	–
Additional Tier 1 instruments issued by subsidiaries and held by third parties (amount allowed in group AT1)	3	34
Regulatory adjustments applied to Additional Tier 1 under Basel 3	–	(9,884)
Additional Tier 1 capital (AT1)	6,655	
Tier 1 capital (T1 = CET1 + AT1)	$ 37,196	$ 36,807
Tier 2 capital: instruments and provisions and regulatory adjustments		
Directly issued qualifying Tier 2 instruments plus related stock surplus	–	7,495
Directly issued capital instruments subject to phase out from Tier 2	7,234	–
Tier 2 instruments issued by subsidiaries and held by third parties (amount allowed in group Tier 2)	24	–
Collective allowance	262	191
Other	–	221
Regulatory adjustments applied to Tier 2 under Basel 3	–	(2,367)
Tier 2 capital (T2)	$ 7,520	$ 5,540
Total capital (TC = T1 + T2)	$ 44,716	$ 42,347

(1) CET1 capital is a new regulatory measure under the Basel III framework. CET1 capital is not applicable for the prior period as Basel III was adopted prospectively, effective the first quarter of 2013.

2013 (Basel III) vs. 2012 (Pro forma Basel III)



(1) Represents rounded figures.
(2) Internal capital generation of $4.4 billion represents Net income available to shareholders less common and preferred shares dividends.

Our Basel III CET 1 ratio was 9.6% as at October 31, 2013 as compared to our pro forma CET1 ratio of 8.9% as at October 31, 2012, up 70 bps mainly reflecting internal capital generation, partially offset by the acquisition of Ally Canada, the phase-in impact of IFRS and an increase in RWA. Common share repurchases reduced the CET1 ratio by approximately 13 bps.

We estimated that our Basel III CET 1 ratio as at October 31, 2013 would be reduced by the following two adjustments: (i) approximately 30 bps based on a 57% CET1 phase-in as per OSFI advisory, if the 2014 CVA capital charge was currently in effect; and (ii) approximately 10 bps, if the future accounting changes related to IAS 19 amendments were currently in effect. For further details, refer to Accounting and control matters section and Note 2 of our 2013 Annual Consolidated Financial Statements.

Our Basel III Tier 1 capital ratio of 11.7%, increased 40 bps from our pro forma Basel III Tier 1 capital ratio of 11.3% as at October 31, 2012 largely due to the factors noted in relation to the CET1 capital ratio above. The phase-out of non-qualifying Additional Tier 1 capital as well as the redemption of preferred shares series AH reduced Tier 1 capital ratio by approximately 19 bps and 7 bps respectively.

Our Total capital ratio of 14.0%, increased 10 bps from our pro forma Basel III Total capital ratio of 13.9% as at October 31, 2012, largely due to the factors noted in relation to the Tier 1 capital ratio above.

As at October 31, 2013, our Assets-to-capital multiple was 16.6 times compared to our pro forma Assets-to-capital multiple as at October 31, 2012 of 16.0 times a year ago largely due to higher GAA including the acquisition of Ally Canada, share repurchases and the IFRS transition impact, partially offset by internal capital generation.

Basel III RWA

Under Basel III, the RWA requirement is more stringent than Basel II, largely reflecting the 250% risk-weighted threshold items not deducted from CET1 capital, increased and new capital charges for credit risk related to asset value correlation for financial institutions and exposures cleared through central counterparties, as well as the conversion of certain Basel II capital deductions to RWA.

OSFI requires banks to meet minimum risk-based capital requirements for exposures to credit risk, operational risk, and, where they have significant trading activity, market risk. RWA is calculated for each of these risk types and added together to determine total RWA. In addition, OSFI requires the minimum risk-based capital to be no less than 90% of the capital requirements as calculated under the Basel I standards. If the capital requirement is less than 90%, a transitional adjustment to RWA must be applied as prescribed by OSFI CAR guidelines.

RWA — **Table 66**

	Basel III						Basel II
	2013						2012
			Risk-weighted assets				
As at October 31 (Millions of Canadian dollars, except percentage amount)	Exposure (1)	Average of risk weights (2)	Standardized approach	Advanced approach	Other	Total	Total
Credit risk							
Lending-related and other							
Residential mortgages	$ 183,461	5%	$ 908	$ 7,582	$ –	$ 8,490	$ 8,713
Other retail	219,150	22%	6,198	42,220	–	48,418	38,633
Business	199,344	51%	15,331	86,449	–	101,780	100,357
Sovereign	46,302	8%	1,687	2,223	–	3,910	3,266
Bank	73,492	7%	2,168	3,241	–	5,409	4,801
Total lending-related and other	$ 721,749	23%	$ 26,292	$ 141,715	$ –	$ 168,007	$ 155,770
Trading-related							
Repo-style transactions	$ 251,648	1%	$ 57	$ 2,578	$ 27	$ 2,662	$ 2,235
Derivatives	67,055	25%	3,005	13,095	389	16,489	11,908
Total trading-related	$ 318,703	6%	$ 3,062	$ 15,673	$ 416	$ 19,151	$ 14,143
Total lending-related and other and trading-related	$ 1,040,452	18%	$ 29,354	$ 157,388	$ 416	$ 187,158	$ 169,913
Bank book equities	1,723	99%	–	1,712	–	1,712	1,206
Securitization exposures	40,460	17%	280	6,509	–	6,789	6,584
Regulatory scaling factor	n.a.	n.a.	n.a.	9,813	–	9,813	9,187
Other assets	35,234	77%	n.a.	n.a.	27,169	27,169	22,669
Total credit risk	$ 1,117,869	21%	$ 29,634	$ 175,422	$ 27,585	$ 232,641	$ 209,559
Market risk							
Interest rate			$ 2,509	$ 852	$ –	$ 3,361	$ 6,547
Equity			322	3,008	–	3,330	1,916
Foreign exchange			1,551	110	–	1,661	1,704
Commodities			971	19	–	990	844
Specific risk			16,169	5,779	–	21,948	9,695
Incremental risk charge			–	10,894	–	10,894	9,403
Total market risk			$ 21,522	$ 20,662	$ –	$ 42,184	$ 30,109
Operational risk			$ 44,156	n.a.	n.a.	$ 44,156	$ 40,941
Total risk-weighted assets	$ 1,117,869		$ 95,312	$ 196,084	$ 27,585	$ 318,981	$ 280,609

(1) Total exposure represents exposure at default which is the expected gross exposure upon the default of an obligor. This amount is before any allowance against impaired loans or partial write-offs and does not reflect the impact of credit risk mitigation and collateral held.

(2) Represents the average of counterparty risk weights within a particular category.

2013 (Basel III) vs. 2012 (Pro forma Basel III)

During the year, RWA was $319 billion, up $12 billion, as compared to our pro forma Basel III RWA of $307 billion for 2012, mainly due to higher market risk RWA due to an increase in trading exposures, the impact of foreign exchange in credit risk and the acquisition of Ally Canada. These factors were partially offset by the impact of an update of our risk parameters and our ongoing risk management and balance sheet optimization activities.

Selected capital management activity
The following table provides our selected capital management activity for the year ended October 31, 2013:

Selected capital management activity — **Table 67**

As at October 31 (Millions of Canadian dollars, except number of shares)	2013 Issuance or redemption date	2013 Number of shares (000s)	2013 Amount
Tier 1			
Common shares issued			
Stock options exercised (1)		2,528	$ 121
Purchased for cancellation		(6,775)	(67)
Preferred shares			
Redemption of preferred shares AH series	July 2, 2013	(8,500)	(213)
Tier 2			
Issuance of December 6, 2024 subordinated debentures (2)	December 6, 2012		2,000
Redemption of March 11, 2018 subordinated debentures (2)	March 13, 2013		(1,000)
Redemption of June 6, 2018 subordinated debentures (2)	June 6, 2013		(1,000)

(1) Amounts include cash received for stock options exercised during the period and the fair value adjustments to stock options.
(2) For further details, refer to Note 19 of our 2013 Annual Consolidated Financial Statements.

Dividends
Our common share dividend policy reflects our earnings outlook, payout ratio objective and the need to maintain adequate levels of capital to fund business opportunities. In 2013, our dividend payout ratio was 45%, which met our dividend payout ratio target of 40% to 50%. Common share dividends paid during the year were $3.7 billion.

Selected share data (1) — **Table 68**

(Millions of Canadian dollars, except number of shares)	2013 Number of shares (000s)	2013 Amount	2013 Dividends declared per share	2012 Number of shares (000s)	2012 Amount	2012 Dividends declared per share	2011 Number of shares (000s)	2011 Amount	2011 Dividends declared per share
Common shares outstanding	1,441,056	$ 14,377	$ 2.53	1,445,303	$ 14,323	$ 2.28	1,438,376	$ 14,010	$ 2.08
First preferred shares outstanding									
Non-cumulative Series W (2)	12,000	300	1.23	12,000	300	1.23	12,000	300	1.23
Non-cumulative Series AA	12,000	300	1.11	12,000	300	1.11	12,000	300	1.11
Non-cumulative Series AB	12,000	300	1.18	12,000	300	1.18	12,000	300	1.18
Non-cumulative Series AC	8,000	200	1.15	8,000	200	1.15	8,000	200	1.15
Non-cumulative Series AD	10,000	250	1.13	10,000	250	1.13	10,000	250	1.13
Non-cumulative Series AE	10,000	250	1.13	10,000	250	1.13	10,000	250	1.13
Non-cumulative Series AF	8,000	200	1.11	8,000	200	1.11	8,000	200	1.11
Non-cumulative Series AG	10,000	250	1.13	10,000	250	1.13	10,000	250	1.13
Non-cumulative Series AH	–	–	0.86	8,500	213	1.41	8,500	213	1.41
Non-cumulative Series AJ (3)	16,000	400	1.25	16,000	400	1.25	16,000	400	1.25
Non-cumulative Series AL (3)	12,000	300	1.40	12,000	300	1.40	12,000	300	1.40
Non-cumulative Series AN (3)	9,000	225	1.56	9,000	225	1.56	9,000	225	1.56
Non-cumulative Series AP (3)	11,000	275	1.56	11,000	275	1.56	11,000	275	1.56
Non-cumulative Series AR (3)	14,000	350	1.56	14,000	350	1.56	14,000	350	1.56
Non-cumulative Series AT (3)	11,000	275	1.56	11,000	275	1.56	11,000	275	1.56
Non-cumulative Series AV (3)	16,000	400	1.56	16,000	400	1.56	16,000	400	1.56
Non-cumulative Series AX (3)	13,000	325	1.53	13,000	325	1.53	13,000	325	1.53
Treasury shares – preferred	47	1		42	1		(6)	–	
Treasury shares – common	666	41		543	30		146	8	
Stock options									
Outstanding	10,604			12,304			14,413		
Exercisable	5,711			6,544			8,688		
Dividends									
Common		3,651			3,291			2,979	
Preferred		253			258			258	

(1) For further details about our capital management activity, refer to Note 21 of our Annual Consolidated Financial Statements.
(2) Effective February 24, 2010, we have the right to convert into common shares at our option, subject to certain restrictions.
(3) Dividend rate will reset every five years.

On October 25, 2013, we announced our intention to redeem all outstanding $900 million Trust Capital Securities Series 2013 at par. The redemption is expected to be completed on December 31, 2013 and will be financed out of general corporate funds.

On October 28 2013, we announced that the Toronto Stock Exchange (TSE) approved our normal course issuer bid (NCIB) to purchase up to 30 million of our common shares, commencing on November 1, 2013 and which may continue until October 31, 2014. Purchases may be made through the TSE, the New York Stock Exchange and other designated exchanges and published markets in both Canada and the U.S. The price paid for any repurchased shares will be the prevailing market price at the time of acquisition. We determine the amount and timing of the purchases under the NCIB, subject to prior consultation with OSFI. As at December 4, 2013, we have not purchased any shares under the 2014 NCIB.

Our previous NCIB commenced on November 1, 2012 and expired on October 31, 2013. Over the term of the previous bid, we purchased 6.8 million of our common shares. The total cost of the share repurchase was $408 million, comprised of a book value of $67 million, with an additional $341 million premium paid on repurchase.

On November 4, 2013, we redeemed all outstanding $1 billion subordinated debentures due November 4, 2018 at par plus accrued interest. The redemption was financed out of general corporate funds.

As at November 29, 2013, the number of outstanding common shares and stock options was 1,441,058,114 and 10,601,928, respectively. As at November 29, 2013, the number of Treasury shares – preferred and Treasury shares – common was (48,463) and (950,654), respectively.

Attributed capital

Our methodology for allocating capital to our business segments is based on the higher of fully diversified economic capital and the Basel III regulatory capital requirements. The capital conversion rate is aligned with our target CET1 ratio set in our Capital Plan. Risk-based capital attribution provides a uniform base for performance measurement among business segments, which compares to our overall corporate return objective and facilitates management decisions in resource allocation in conjunction with other factors. Capital attribution to each business segment might vary due to the evolving changes in regulatory requirements such as the delay of the implementation of the CVA capital charge until January 1, 2014, and the D-SIBs surcharge implementation commencing January 1, 2016.

Attributed capital is calculated and attributed on a wider array of risks compared to Basel III regulatory capital requirements, which are calibrated predominantly to target credit, market (trading) and operational risk measures. Economic capital is our internal quantification of risks associated with business activities which is the capital required to remain solvent under extreme market conditions, reflecting our objective to maintain a debt rating of at least AA. Economic capital is calculated based on credit, market (trading and non-trading), operational, business and fixed asset, and insurance risks, along with capital attribution for goodwill and other intangibles. The common risks between the two frameworks are aligned to reflect increased regulatory requirements.

- Business risk is the risk of loss or harm due to variances in volumes, prices and costs caused by competitive forces, regulatory changes, reputation and strategic risks.
- Fixed asset risk is defined as the risk that the value of fixed assets will be less than their book value at a future date.

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

Attributed capital is also used to assess the adequacy of our capital base. Our policy is to maintain a level of available capital, defined as common equity and other capital instruments with equity-like loss absorption features such as preferred shares that exceed Economic capital with a comfortable cushion.

The calculation and attribution of capital involves a number of assumptions and judgments by management which are monitored to ensure that the economic capital framework remains comprehensive and consistent. The models are benchmarked to leading industry practices via participation in surveys, reviews of methodologies and ongoing interaction with external risk management industry professionals.

The following provides a discussion of our attributed capital:

Attributed capital — **Table 69**

(Millions of Canadian dollars)	2013	2012
Credit risk	$ 11,800	$ 9,550
Market risk (trading and non-trading)	3,300	3,800
Operational risk	4,050	3,750
Business and fixed asset risk	2,650	2,750
Insurance risk	500	450
Goodwill and intangibles	10,750	9,800
Regulatory capital allocation	3,400	4,100
Attributed capital	$ 36,450	$ 34,200
Under attribution of capital	5,200	2,550
Average common equity from discontinued operations	–	400
Average common equity	$ 41,650	$ 37,150

2013 vs. 2012

Attributed capital increased by $2.3 billion largely due to an increase in Credit risk reflecting business growth and rate changes, higher Goodwill and intangible risk reflecting the acquisition of Ally Canada, the recognition of intangibles in certain businesses, and foreign exchange gains. Increased Operational risk due to revenue growth also contributed to the increase. These factors were partly offset by a decrease in Market risk primarily due to the annual revisions to our methodologies and lower regulatory capital adjustment of $0.7 billion resulting from the exclusion of CVA derived by OSFI's decision to delay implementation until 2014.

We remain well capitalized with current levels of available capital exceeding the attributed capital required to underpin all of our material risks. Unattributed capital increased from the prior year as we retained additional capital in anticipation of the additional capital requirements by OSFI for D-SIBs. For further details on the additional capital, refer to table 63 which provides a summary of OSFI regulatory target ratios.

Subsidiary capital

Our capital management framework includes the management of our subsidiary capital. We invest capital across the enterprise to meet local regulators' capital adequacy requirements and maximize returns to our shareholders. We invest in our subsidiaries as appropriate during the year. We set guidelines for defining capital investments in our subsidiaries and manage the relationship between capital invested in subsidiaries and our consolidated capital base to ensure that we can access capital recognized in our consolidated regulatory capital measurements.

Each of our subsidiaries has responsibility for maintaining its compliance with local regulatory capital adequacy requirements, which may include restrictions on the transfer of assets in the form of cash, dividends, loans or advances. Concurrently, Corporate Treasury provides centralized oversight and consolidated capital management across all subsidiary entities.

Other considerations affecting capital

Capital treatment for equity investments in other entities is determined by a combination of accounting and regulatory guidelines based on the size or nature of the investment. Three broad approaches apply as follows:

- Consolidation: entities in which we have a controlling interest are fully consolidated on our Consolidated Balance Sheets, and joint ventures are consolidated on a pro rata basis.

- Deduction: certain holdings are deducted in full from our regulatory capital. These include all unconsolidated "substantial investments," as defined by the *Bank Act* (Canada), as well as all investments in insurance subsidiaries.
- Risk weighting: unconsolidated equity investments that are not deducted from capital are risk weighted at a prescribed rate for determination of capital charges.

Regulatory capital approach for securitization exposures

For our securitization exposures, we use an internal assessment approach (IAA) for exposures related to our ABCP business, and for other securitization exposures we use a combination of approaches including a ratings-based approach and the standardized approach.

While our IAA rating methodologies are based in large part on criteria that are published by External Credit Assessment Institutions (ECAIs) such as S&P and therefore are similar to the methodologies used by these institutions, they are not identical. Our ratings process includes a comparison of the available credit enhancement in a securitization structure to a stressed level of projected losses. The stress level used is determined by the desired risk profile of the transaction. As a result, we stress the cash flows of a given transaction at a higher level in order to achieve a higher rating. Conversely, transactions that only pass lower stress levels achieve lower ratings.

Most of the other securitization exposures (non-ABCP) carry external ratings and we use the lower of our own rating or the lowest external rating for determining the proper capital allocation for these positions. We periodically compare our own ratings to ECAIs ratings to ensure that the ratings provided by ECAIs are reasonable.

GRM has responsibility for providing risk assessments for capital purposes in respect of all our banking book exposures. GRM is independent of the business originating the securitization exposures and performs its own analysis, sometimes in conjunction with but always independent of the applicable business. GRM has developed asset class specific criteria guidelines which provide the rating methodologies for each asset class. The guidelines are reviewed periodically and are subject to the ratings replication process mandated by Pillar I of the Basel rules.

Additional financial information

Exposures to selected financial instruments

Exposure to U.S. subprime and Alt-A through RMBS, CDOs and mortgages — Table 70

	2013				2012			
As at October 31 (Millions of Canadian dollars)	Subprime RMBS	Alt-A RMBS	CDOs that may contain subprime or Alt-A	Total	Subprime RMBS	Alt-A RMBS	CDOs that may contain subprime or Alt-A	Total
Fair value of securities	$ 205	$ 221	$ 15	$ 441	$ 256	$ 207	$ 17	$ 480
Fair value of securities by rating								
AAA	$ 8	$ 8	$ –		$ 48	$ –	$ –	
AA	36	19	–		52	26	–	
A	16	25	–		6	5	–	
BBB	51	11	–		15	1	–	
Below BBB-	94	158	15		135	175	17	
Total	$ 205	$ 221	$ 15	$ 441	$ 256	$ 207	$ 17	$ 480
Fair value of securities by vintage								
2003 (or before)	$ 1	$ 25	$ –		$ 8	$ 11	$ –	
2004	4	43	–		10	22	–	
2005	94	63	15		100	75	17	
2006	38	64	–		88	65	–	
2007 and greater	68	26	–		50	34	–	
Total	$ 205	$ 221	$ 15	$ 441	$ 256	$ 207	$ 17	$ 480
Amortized cost of subprime/Alt-A mortgages (whole loans)	$ 7	$ 26	$ –	$ 33	$ 7	$ 30	$ –	$ 37
Total subprime and Alt-A exposures	$ 212	$ 247	$ 15	$ 474	$ 263	$ 237	$ 17	$ 517

Sensitivities of fair value of securities to changes in assumptions

(Millions of Canadian dollars):		
100bps increase in credit spread	$ (4)	$ (10)
100bps increase in interest rates	(2)	(6)
20% increase in default rates	(5)	(4)
25% decrease in prepayment rates	(1)	–

Exposure to U.S. subprime and Alt-A residential Mortgage-backed securities (RMBS), and collateralized debt obligations (CDOs) and mortgages

Certain activities and transactions we enter into expose us to the risk of default of U.S. subprime and Alt-A residential mortgages. Our exposures to U.S. subprime and Alt-A residential mortgages of $474 million represented less than 0.1% of our total assets as at October 31, 2013, compared to $517 million or 0.1% in the prior year. The decrease of $43 million was primarily due to the sale of securities.

2013 vs. 2012

Our total holdings of RMBS noted in the table above may be exposed to U.S. subprime risk. As at October 31, 2013, our U.S. subprime RMBS exposure of $205 million decreased $51 million or 20% from the prior year, primarily due to the sale of certain securities. Of this exposure, $60 million or 29% of our related holdings were rated A and above, a decrease of $46 million from the prior year due to the sale of certain securities.

As at October 31, 2013, U.S. subprime RMBS holdings rated AAA comprised 4% of our total U.S. subprime RMBS holdings compared with 19% in the prior year due to the sale of securities. As at October 31, 2013, our exposure to U.S. subprime loans of $7 million was unchanged from the prior year.

Of our total portfolio of RMBS, holdings with a fair value of $221 million may be exposed to U.S. Alt-A risk. U.S. Alt-A exposures, increased $14 million from the prior year. Approximately 41% of these RMBS were issued during 2006 and onwards, compared to 48% in the prior year. As at October 31, 2013, our exposure to U.S. Alt-A loans of $26 million decreased $4 million from the prior year.

Of our total portfolio of CDOs, holdings of $15 million may be exposed to U.S. subprime or Alt-A risk, relatively unchanged from the prior year. As at October 31, 2013, the fair value of our corporate CDOs, which were predominately comprised of $1.4 billion of corporate collateralized loan obligations decreased $700 million from the prior year mainly due to the redemption of certain securities.

Off-balance sheet arrangements

For our off-balance sheet arrangements including multi-seller conduits, structured investment vehicles and other variable interest entities as at October 31, 2013, refer to the Off-balance sheet arrangements section.

Leveraged finance

Leveraged finance comprises infrastructure finance, essential services and other types of finance. It excludes investment grade financing and non-investment grade financing where there is no private equity sponsor involvement. This definition is subject to refinement moving forward. As at October 31, 2013, our total commitments, combined funded and unfunded of $13.6 billion, increased $1.5 billion from the prior year, reflecting an increase in client volumes. As at October 31, 2013, our total commitments, combined funded and unfunded represented 1.6% of our total assets similar to the prior year.

Commercial mortgage-backed securities

The fair value of our total direct holdings of commercial mortgage-backed securities was $128 million as at October 31, 2013.

Assets and liabilities measured at fair value

There were significant transfers in or out of levels 1, 2 or 3 in the current year, as classified by the fair value hierarchy set out in IFRS 7, *Financial Instruments – Disclosures*.

For further details, refer to Note 3 of our 2013 Annual Consolidated Financial Statements.

Assets and liabilities measured at fair value — **Table 71**

	As at October 31, 2013				
(Millions of Canadian dollars, except percentage amounts)	Fair value (1)	Level 1 (1)	Level 2 (1)	Level 3 (1)	Total
Financial assets					
Securities at FVTPL	$ 144,023	43%	56%	1%	100%
Available-for-sale	38,271	15%	72%	13%	100%
Loans – Wholesale	1,578	0%	74%	26%	100%
Derivatives	106,012	2%	97%	1%	100%
Other assets	983	53%	46%	1%	100%
Financial liabilities					
Deposits	$ 67,038	0%	93%	7%	100%
Derivatives	108,238	2%	95%	3%	100%

(1) Fair value of assets and liabilities as a percentage of total assets and liabilities measured at fair value on a recurring basis for categories presented in the table above and does not reflect the impact of netting.

Accounting and control matters

Critical accounting policies and estimates

Application of critical accounting policies and estimates

Our significant accounting policies are described in Note 2 to our 2013 Annual Consolidated Financial Statements. Certain of these policies, as well as estimates made by management in applying such policies, are recognized as critical because they require us to make particularly subjective or complex judgments about matters that are inherently uncertain and because of the likelihood that significantly different amounts could be reported under different conditions or using different assumptions. Our critical accounting policies and estimates relate to the fair value of financial instruments, allowance for credit losses, goodwill and other intangible assets, employee benefits, special purpose entities, derecognition of financial assets, and income taxes. Our critical accounting policies and estimates have been reviewed and approved by our Audit Committee, in consultation with management, as part of their review and approval of our significant accounting policies, estimates and judgments.

Fair value of financial instruments

The fair value of a financial instrument is the amount at which the financial instrument could be exchanged in an arm's-length transaction between knowledgeable and willing parties under no compulsion to act. We determine fair value by incorporating all factors that market participants would consider in setting a price and using accepted economic methodologies for pricing financial instruments. We have established policies on approved methodologies and procedures for determining fair value. Valuation techniques are approved for use within our model risk management framework. The framework addresses, among other things, model development standards, validation processes and procedures, and approval authorities. Valuation techniques also include using a documented third-party pricing source list. The third party pricing source list gives priority to those services and prices having the highest and most consistent accuracy. The level of accuracy is developed over time by comparing third-party price values to traders' or system values, to other pricing service values and, when available, to actual trade data.

In determining fair value, a hierarchy is used which prioritizes the inputs to valuation techniques. The fair value hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The availability of inputs relevant to the asset or liability and the relative reliability of the inputs might affect the selection of appropriate valuation techniques.

Level 1 inputs are unadjusted quoted prices in active markets for identical assets or liabilities that we have the ability to access at the measurement date. Level 2 inputs are inputs other than quoted prices in Level 1 that are observable for the asset or liability, either directly or indirectly. Level 2 inputs include quoted prices for similar assets or liabilities in active markets or quoted prices for identical or similar assets or liabilities in markets that are not active, and inputs that are derived principally from observable market data. Level 3 inputs are unobservable inputs for the asset or liability. Unobservable inputs are used to measure fair value to the extent that observable inputs are not available at the measurement date.

Where observable prices or inputs are not available, management judgment is required to determine fair values by assessing other relevant sources of information such as historical data, proxy information from similar transactions, and through extrapolation and interpolation techniques. For instruments not traded in an active market, fair value is determined using a valuation technique that maximizes the use of observable market inputs to the extent available. For more complex or illiquid instruments, significant judgment is required in the determination of the model used, the selection of model inputs, and in some cases the application of valuation adjustments to the model value or quoted price for inactively traded financial instruments, as the selection of model inputs may be subjective and the inputs may be unobservable. Unobservable inputs are inherently uncertain as there is little or no market data available from which to determine the level at which an arm's length transaction would occur under normal business circumstances. Appropriate parameter uncertainty and market risk valuation adjustments for such inputs and other model risk valuation adjustments are assessed in all such instances.

We record valuation adjustments to appropriately reflect counterparty credit quality and our own creditworthiness, differences between the overnight index swap (OIS) curve and London Interbank Offered Rates (LIBOR) for collateralized derivatives, unrealized gains or losses at inception of the transaction, bid-offer spreads and unobservable parameters. These adjustments may be subjective as they require significant judgment in the input selection, such as probability of default and recovery rate, and are intended to arrive at fair value that is determined based on assumptions that market participants would use in pricing the financial instrument. The realized price for a transaction may be different from its recorded value that is previously estimated using management judgment, and may therefore impact unrealized gains and losses recognized in Non-interest income – Trading revenue or Other.

Valuation adjustments are recorded for the credit risk of our derivative portfolios in order to arrive at their fair values. Credit Valuation Adjustments (CVA) take into account our creditworthiness and our counterparties' creditworthiness, the current and potential future mark-to-market of the transactions, and the effects of credit mitigants such as master netting and collateral agreements. CVA amounts are derived from estimates of exposure at default, probability of default, recovery rates on a counterparty basis, and market and credit factor correlations. Exposure at default is the amounts of expected derivative related assets and liabilities at the time of default, estimated through modeling using underlying risk factors. Probability of default and recovery rate is generally implied from the market prices for credit protection and credit ratings of the counterparty. Correlation is the statistical measure of how credit and market factors may move in relation to one another, if any. Correlation is estimated using historical data and market data where available. CVA is calculated daily and changes are recorded in Non-interest income – Trading revenue.

In order to reflect recently observed market practice of pricing collateralized over-the-counter (OTC) derivatives using the OIS curve, our valuation approach accounts for the difference between certain OIS rates and LIBOR for derivatives valuation as valuation adjustments. Market practices continue to evolve concerning the use of and construction of OIS curves that best reflect the nature of the underlying collateral and as a result, additional valuation adjustments may be required in the future.

Where required, a valuation adjustment is made to reflect the unrealized gain or loss at inception of a financial instrument contract where the fair value of that financial instrument is not obtained from a quoted market price or cannot be evidenced by other observable market transactions based on a valuation technique incorporating observable market data.

A bid-offer valuation adjustment is required when a financial instrument is valued at the mid-market price, instead of the bid or offer price for asset or liability positions, respectively. The valuation adjustment takes into account the spread from the mid to either the bid or offer price.

Some valuation models require parameter calibration from such factors as market observed option prices. The calibration of parameters may be sensitive to factors such as the choice of instruments or optimization methodology. A valuation adjustment is also estimated to mitigate the uncertainties of parameter calibration.

IFRS requires us to classify our financial instruments measured at fair value into three levels based on the transparency of the inputs used to measure the fair values of the instruments. As at October 31, 2013, we have $296 billion of financial assets (79% of our total financial assets at fair value) (2012 – $302 billion and 80.9%) and $234 billion of financial liabilities (84.8% of our total financial liabilities at fair value) (2012 – $246 billion and 85.5%), which fair values are based on observable inputs (Level 2 instruments). We also have $8 billion of financial assets (2.1% of our total financial assets at fair value) (2012 – $10 billion and 2.7%) and $8 billion of financial liabilities (2.8% of our total financial liabilities at fair value) (2012 – $13 billion and 4.5%), which valuations include significant unobservable inputs (Level 3 instruments).

At each reporting date or more frequently when conditions warrant, we evaluate our AFS securities to determine whether there is any objective evidence of impairment, such as a significant or prolonged decline in the fair value of the security below its cost or when an adverse effect on future cash flows from the security can be reliably estimated. When assessing impairment for debt instruments we primarily considered counterparty ratings and security-specific factors, including collateral, external ratings, subordination and other market factors. For complex debt instruments including U.S. non-agency MBS, ABS and other structured products, we also use cash flow projection models which incorporate actual and projected cash flows for each security using a number of assumptions and inputs that are based on security specific factors. The inputs and assumptions used such as default, prepayment and recovery rates are based on updated market data. For U.S. non-agency MBS, recovery rates are largely dependent upon forecasted property prices which were assessed at the municipal level, provided by a third-party vendor. In addition, we also consider the transaction structure and credit enhancement for the structured securities. If the result indicates that we will not be able to recover the entire principal and interest amount, we do a further review of the security in order to assess whether a loss would ultimately be realized. As equity securities do not have contractual cash flows, they are assessed differently than debt securities. In assessing whether there is any objective evidence that suggests that the security is impaired we consider factors which include the length of time and extent the fair value has been below the cost and the financial condition and near term prospects of the issuer. We also consider the estimated recoverable value and the period of recovery. We conduct further analysis for securities where the fair value had been below cost for greater than twelve months. If an AFS security is impaired, the cumulative unrealized losses previously recognized in Other components of equity are recognized directly in income under Non-interest income. As at October 31, 2013, our gross unrealized losses on AFS securities were $293 million (2012 – $359 million). Refer to Note 4 to our 2013 Annual Consolidated Financial Statements for more information.

Allowance for credit losses

We maintain allowance for credit losses relating to on-balance sheet exposures, such as loans and acceptances, and off-balance sheet items such as letters of credit, guarantees and unfunded commitments, at levels that management considers appropriate to cover credit related losses incurred as at the balance sheet date.

Allowances are determined individually for loans that are individually significant, and collectively for loans that are not individually significant and loans which are significant but for which there is no objective evidence of impairment, using current and historical credit

information in both quantitative and qualitative assessments. For further information on allowance for credit losses, refer to Note 5 to our 2013 Annual Consolidated Financial Statements.

Individually assessed loans
Loans which are individually significant are assessed individually for objective indicators of impairment. A loan is considered impaired when management determines that it will not be able to collect all amounts due according to the original contractual terms or the equivalent value.

Credit exposures of individually significant loans are evaluated based on factors including the borrower's overall financial condition, resources and payment record, and where applicable, the realizable value of any collateral. If there is evidence of impairment leading to an impairment loss, then the amount of the loss is recognized in income and is determined as the difference between the carrying amount of the loan, including accrued interest, and the estimated recoverable amount. The estimated recoverable amount is measured as the present value of expected future cash flows discounted at the loan's original effective interest rate, including cash flows that may result from the realization of collateral less costs to sell.

Collectively assessed loans
Loans which are not individually significant, or which are individually assessed and not determined to be impaired, are collectively assessed for impairment. For the purposes of a collective evaluation of impairment, loans are grouped on the basis of similar risk characteristics, taking into account loan type, industry, geographic location, collateral type, past due status and other relevant factors.

The collective impairment allowance is determined by reviewing factors including: (i) historical loss experience, which takes into consideration historical probabilities of default, loss given default and exposure at default, in portfolios of similar credit risk characteristics, and (ii) management's judgment on the level of impairment losses based on historical experience relative to the actual level as reported at the balance sheet date, taking into consideration the current portfolio credit quality trends, business and economic and credit conditions, the impact of policy and process changes, and other supporting factors. Future cash flows for a group of loans are collectively evaluated for impairment on the basis of the contractual cash flows of the loans in the group and historical loss experience for loans with credit risk characteristics similar to those in the group. Historical loss experience is adjusted based on current observable data to reflect the effects of current conditions that did not affect the period on which the historical loss experience is based and to remove the effects of conditions in the historical period that do not currently exist. The methodology and assumptions used for estimating future cash flows are reviewed regularly to reduce any differences between loss estimates and actual loss experience.

Write-off of loans
Loans and the related impairment allowance for credit losses are written off, either partially or in full, when there is no realistic prospect of recovery. Where loans are secured, they are generally written off after receipt of any proceeds from the realization of the collateral. 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. For credit cards, the balances and related allowance for credit losses are written off when payment is 180 days in arrears. Personal loans are generally written off at 150 days past due.

Total allowance for credit losses
Based on the procedures discussed above, management believes that the total allowance for credit losses of $2,050 million is adequate to absorb estimated credit losses incurred in the lending portfolio as at October 31, 2013 (2012 – $2,088 million). This amount includes $91 million (2012 – $91 million) classified in Provisions under Other Liabilities on our Consolidated Balance Sheets, which relates to letters of credit and guarantees and unfunded commitments.

Goodwill and other intangible assets
We allocate goodwill to groups of cash-generating units (CGU). Goodwill is not amortized and is tested for impairment on an annual basis, or more frequently if there are objective indications of impairment. We test for impairment by comparing the recoverable amount of a CGU with its carrying amount. A CGU's recoverable amount is the higher of its fair value less cost to sell and its value in use. The carrying amount of a CGU comprises the carrying amount of assets, liabilities, and goodwill allocated to the CGU. When the carrying value of a CGU exceeds its recoverable amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the CGU and then to the other assets of the CGU proportionally based on the carrying amount of each asset. Any impairment charge is recognized in income in the period it is identified. Subsequent reversals of goodwill impairment are prohibited.

We estimate the value in use and fair value less costs to sell of our CGUs primarily using a discounted cash flow approach which incorporates each CGU's internal forecasts of revenues and expenses. Significant management judgment is applied in the determination of expected future cash flows (uncertainty in timing and amount), discount rates (based on CGU-specific risks) and terminal growth rates. CGU-specific risks include country risk, business/operational risk, geographic risk (including political risk, devaluation risk and government regulation), currency risk and price risk (including product pricing risk and inflation). If the forecast earnings and other assumptions in future periods deviate significantly from the current amounts used in our impairment testing, the value of our goodwill could become impaired.

Other intangible assets with a finite life are amortized on a straight-line basis over their estimated useful lives as follows: computer software – 3 to 10 years and customer relationships – 10 to 20 years. They are tested for impairment when there is an indication that an asset may be impaired. An impairment test is performed by comparing the carrying amount of the intangible asset to its recoverable amount. Where it is not possible to estimate the recoverable amount of an individual asset, we estimate the recoverable amount of the CGU to which the asset belongs. If the recoverable amount of the asset (or CGU) is less than its carrying amount, the carrying amount of the intangible asset is written down to its recoverable amount as an impairment loss. An impairment loss recognized previously is reversed if there is a change in the estimates used to determine the recoverable amount of the asset (or CGU) since the last impairment loss recognized. Significant judgment is applied in estimating the useful lives and recoverable amounts of our intangible assets and assessing whether certain events or circumstances constitute objective evidence of impairment. We do not have any intangible assets with indefinite lives.

As at October 31, 2013, we had $8.4 billion of goodwill (2012 – $7.5 billion) and $2.8 billion of other intangible assets (2012 – $2.7 billion). For further details, refer to Notes 2 and 10 to our 2013 Annual Consolidated Financial Statements.

Employee benefits
We sponsor a number of benefit programs to eligible employees, including registered pension plans, supplemental pension plans, health, dental, disability and life insurance plans.

The calculation of defined benefit expenses and obligations depends on various assumptions such as discount rates, expected rates of return on assets, healthcare cost trend rates, projected salary increases, retirement age, and mortality and termination rates. The discount rate

assumption is determined using spot rates from a derived Aa corporate bond yield curve for our Canadian pension and other post-employment plans, and spot rates from an Aa corporate bond yield curve for our U.S. pension and other post-employment plans. All other assumptions are determined by management, applying significant judgment, and are reviewed by the actuaries. Actual experience that differs from the actuarial assumptions will affect the amounts of benefit obligations and expenses that we recognize. As at October 31, 2013, the unrecognized net actuarial losses of our pension and other post-employment plans were $1,033 million and $127 million, respectively (2012 – $1,345 million and $134 million, respectively). The weighted average assumptions used and the sensitivity of key assumptions are presented in Note 17 to our 2013 Annual Consolidated Financial Statements.

Special Purpose Entities

A special purpose entity is an entity created to accomplish a narrow and well-defined objective with limited decision-making powers and pre-established or limited activities. We are required to consolidate an SPE if an assessment of the relevant factors indicates that we control the SPE. Relevant factors include: (i) whether the activities of the SPE are conducted on our behalf according to our specific business needs so that we obtain benefits from the SPE's operation; (ii) whether we have the decision-making powers to obtain a majority of the benefits; (iii) whether we will obtain the majority of the benefits of the activities of the SPE; and (iv) whether we retain the majority of the residual ownership risks related to the assets or SPE in order to obtain the benefits from its activities.

We consider a number of factors in determining whether an entity is an SPE and, if required, analyzing whether we control the SPE. Our approach is generally focused on identifying the significant activities that impact the financial results of the SPE, and determining which party has substantive rights to control the decision making over those activities, and is also exposed to a majority of the SPE's risks and rewards. In certain instances, conditions considered in isolation may indicate control or lack of control over an SPE, but when considered together require a significant degree of judgment to reach a conclusion. For further information on our involvement with SPEs, refer to the Off-balance sheet arrangements section and Note 7 to our 2013 Annual Consolidated Financial Statements.

Derecognition of financial assets

We periodically enter into transactions in which we transfer financial assets such as loans or packaged mortgage-backed securities (MBS) to special purpose entities (SPEs) or trusts that issue securities to investors. We derecognized the assets when our contractual rights to the cash flows from the assets have expired, when we retain the rights to receive the cash flows but assume an obligation to pay those cash flows to a third party subject to certain pass-through requirements, or when we transfer our contractual rights to receive the cash flows and substantially all of the risks and rewards of the assets have been transferred. When we retain substantially all of the risks and rewards of the transferred assets, the transferred assets are not derecognized from our Consolidated Balance Sheets and are accounted for as secured financing transactions. When we neither retain nor transfer substantially all risks and rewards of ownership of the assets, we derecognize the assets if control over the assets is relinquished. If we retain control over the transferred assets, we continue to recognize the transferred assets to the extent of our continuing involvement. Management's judgment is applied in determining whether we have transferred or retained substantially all risk and rewards of ownership of the transferred financial asset.

The majority of assets transferred under repurchase agreements, securities lending agreements, and in our Canadian residential mortgage securitization transactions do not qualify for derecognition; as a result, we continue to record the associated transferred assets on our Consolidated Balance Sheets and no gains or losses are recognized for these securitization activities. Otherwise, a gain or loss is recognized on securitization by comparing the carrying amount of the transferred asset with its fair value at the date of the transfer. As at October 31, 2013, the carrying and fair values of the transferred assets that fail derecognition were $104 billion and $103 billion, respectively (2012 – $110 billion and $110 billion), and the carrying and fair values of the associated liabilities totalled $103 billion and $104 billion, respectively (2012 – $110 billion and $111 billion). For further information on derecognition of financial assets, refer to Note 6 to our 2013 Annual Consolidated Financial Statements.

Income taxes

We are subject to income tax laws in various jurisdictions where we operate, and the complex tax laws are potentially subject to different interpretations by us and the relevant taxation authority. Management's judgment is applied in the interpretation of the relevant tax laws and in the estimation of the provision for current and deferred income taxes, including the expected timing and amount of the realization. A deferred tax asset or liability is determined for each temporary difference based on the tax rates that are expected to be in effect in the period that the asset is realized or the liability is settled. Where the temporary differences will not reverse in the foreseeable future, no deferred tax amount is recognized.

On a quarterly basis, we review whether it is probable that the benefits associated with our deferred tax assets will be realized, using both positive and negative evidence. Refer to Note 24 to our 2013 Annual Consolidated Financial Statements for further information.

Future changes in accounting policies and disclosure

IFRS 10 *Consolidated Financial Statements* (IFRS 10)

In May 2011, the IASB issued IFRS 10, which replaces the consolidation requirements in IAS 27 *Consolidated and Separate Financial Statements* (IAS 27) and SIC-12 *Consolidation – Special Purpose Entities* (SIC-12) and provides a single consolidation model applicable to all types of entities. Under IFRS 10, consolidation is based on control. Three conditions must be satisfied to have control over an investee: (i) decision making power over the relevant activities, (ii) exposure to variable returns, and (iii) a link between power and returns. The determination of control is based on the current facts and circumstances and is continuously assessed. IFRS 10 contains a substantial amount of application guidance that expands on new and existing principles related to the determination of control. IFRS 10 is effective for us on November 1, 2013 with modified retrospective application based on entities in place as at the effective date.

Currently, we consolidate SPEs that we control based on an overall assessment of the purpose and design of the entity, our decision making rights, and our exposure to the majority of the risks and rewards of ownership. IFRS 10 places a greater emphasis on decision making power, which is a required condition for control. It removes the bright lines for assessing exposure to risks and rewards, and introduces new considerations related to our role as a principal or an agent in entities over which we have decision making power.

On adoption of IFRS 10, we expect the consolidation status of certain entities to change. We will deconsolidate RBC Capital Trust II as our involvement does not expose us to variable returns. This will result in the reclassification of $900 million from Trust capital securities to Deposits. See Note 20 for further details on our innovative capital instruments. Additionally, certain mutual funds will be consolidated where our exposure to variability indicates that our power as fund manager is in a principal capacity. The effects of these changes are not expected to have a material impact on our consolidated financial statements.

IFRS 11 *Joint Arrangements* (IFRS 11)
In May 2011, the IASB issued IFRS 11 which requires a party to a joint arrangement to determine the type of joint arrangement in which it is involved by assessing its rights and obligations arising from the arrangement. IFRS 11 requires a joint operator to recognize and measure the assets and liabilities in relation to its interest in the arrangement, and a joint venturer to apply equity method of accounting. IFRS 11 is effective for us on November 1, 2013. The adoption of this standard is not expected to have a material impact on our consolidated financial statements.

IFRS 12 *Disclosure of Interest in Other Entities* (IFRS 12)
In May 2011, the IASB issued IFRS 12, *Disclosure of Interests in Other Entities* (IFRS 12), which provides enhanced guidance on the annual disclosure requirements of a reporting entity's interests in other entities. The standard requires an entity to disclose information that helps users to evaluate the nature of, and risks associated with a reporting entity's interests in subsidiaries, consolidated entities, associates, joint arrangements and, in particular, unconsolidated structured entities (off-balance sheet structures), and the effect of those interests on the entity's financial position, financial performance and cash flows.

IFRS 12 is effective for us on November 1, 2013 with disclosure, including comparative periods, to be presented in our 2014 consolidated financial statements.

IAS 27 *Separate Financial Statements* (IAS 27) and IAS 28 *Investments in Associates and Joint Ventures* (IAS 28)
As a consequence of the new IFRS standards IFRS 10, IFRS 11 and IFRS 12, in May 2012, the IASB issued amended and retitled IAS 27, *Separate Financial Statements and* IAS 28 *Investments in Associates and Joint Ventures*. These new requirements are effective for us on November 1, 2013. The adoption of these standards is not expected to have a material impact on our consolidated financial statements.

IFRS 13 *Fair Value Measurement* (IFRS 13)
In May 2011, the IASB issued IFRS 13 *Fair Value Measurement* which provides a revised definition of fair value and sets out a framework for measuring fair value in a single standard. IFRS 13 also requires more comprehensive disclosure requirements on fair value measurement. The measurement and disclosure requirements of IFRS 13 apply when another standard requires or permits the item to be measured at fair value with limited exceptions. IFRS 13 is effective for us on November 1, 2013 and is required to be applied prospectively from the adoption date. The adoption of this standard is not expected to have a material impact on our consolidated financial statements.

IAS 19 *Employee Benefits* (IAS 19)
In June 2011, the IASB issued amendments to IAS 19 regarding the accounting for pensions and other post-employment benefits. The new requirements are effective for us on November 1, 2013 and will require a restatement of comparative figures. The amendments will alter the accounting for actuarial gains and losses, past service costs, interest expense and return on plan assets. The amended standard eliminates the deferral and amortization of actuarial gains and losses in net income, instead requiring the immediate recognition of actuarial gains and losses in Other comprehensive income (OCI). Past service costs will also be immediately recognized in the period in which a plan amendment occurs. Net interest, calculated by applying the discount rate to the Net defined benefit liability or asset, will replace the Interest cost and Expected return on plan assets components of Defined benefit pension expense. The amendments also introduce a number of enhanced disclosure requirements for defined benefit plans.

The amended standard is expected to impact our Consolidated Balance Sheets, Consolidated Statements of Income and Consolidated Statements of Comprehensive Income for the years ended October 31, 2013 and 2012 by the following amounts:

Impact of IAS 19 amendments — **Table 72**

(Millions of Canadian dollars)	As at or for the year ended October 31 2013	As at or for the year ended October 31 2012
Consolidated Balance Sheets		
(Decrease) in Prepaid pension benefit cost	$ (923)	$ (920)
Increase in Accrued pension and other post-employment benefit expense	268	589
Increase in Other assets – Deferred income tax asset	316	400
(Decrease) in Retained earnings (opening)	(1,108)	(297)
(Decrease) in Retained earnings (closing)	(876)	(1,108)
Consolidated Statements of Income and Comprehensive Income		
(Decrease) in Net income	(87)	(32)
Increase (Decrease) in Total other comprehensive income, net of taxes	319	(779)

IFRS 7 *Disclosure – Offsetting Financial Assets and Financial Liabilities* (IFRS 7)
In December 2011, the IASB issued amendments to IFRS 7, requiring extended disclosures to enable users to assess the effect of offsetting arrangements on an entity's financial position. The amendments require entities to disclose both gross and net amounts associated with master netting agreements and similar arrangements, including the effects of financial collateral, whether or not they are presented net on the balance sheet. The amendments are effective for us on November 1, 2013 and we are required to adopt these disclosures in our 2014 consolidated financial statements.

Controls and procedures

Disclosure controls and procedures

Our disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed by us in reports filed or submitted under Canadian and U.S. securities laws is recorded, processed, summarized and reported within the time periods specified under those laws and include controls and procedures that are designed to ensure that information is accumulated and communicated to management, including the President and Chief Executive Officer, and the Chief Administrative Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure.

As of October 31, 2013, management evaluated, under the supervision of and with the participation of the President and Chief Executive Officer and the Chief Administrative Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures as defined under rules adopted by the United States Securities and Exchange Commission. Based on that evaluation, the President and Chief Executive Officer and the Chief Administrative Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of October 31, 2013.

Internal control over financial reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. However, because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements on a timely basis. See Management's Report on Internal Control over Financial Reporting and the Report of Independent Registered Chartered Accountants.

No changes were made in our internal control over financial reporting during the year ended October 31, 2013, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Related party transactions

In the ordinary course of business, we provide normal banking services, operational services, and enter into other transactions with associated and other related corporations, including our joint venture entities, on terms similar to those offered to non-related parties. We grant loans to directors, officers and other employees at rates normally accorded to preferred clients. In addition, we offer deferred share and other plans to non-employee directors, executives and certain other key employees. For further information, refer to Notes 12 and 28 of our 2013 Annual Consolidated Financial Statements.

Net interest income on average assets and liabilities — Table 73

(Millions of Canadian dollars, except for percentage amounts)	Average balances			Interest			Average rate		
	2013	2012 (1)	2011 (1)	**2013**	2012 (1)	2011 (1)	**2013**	2012 (1)	2011 (1)
Assets									
Deposits with other banks (2)									
Canada	**$ 1,355**	$ 193	$ 1,437	**$ 56**	$ 30	$ 21	**4.13%**	15.54%	1.46 %
U.S.	**426**	899	305	**4**	8	8	**0.94**	0.90	2.62
Other International	**7,386**	7,081	4,786	**13**	23	62	**0.18**	0.32	1.30
	9,167	8,173	6,528	**73**	61	91	**0.80%**	0.75%	1.39 %
Securities									
Trading	**137,053**	122,606	148,307	**3,113**	3,028	3,910	**2.27**	2.47	2.64
Available-for-sale	**37,818**	39,638	41,551	**666**	846	840	**1.76**	2.13	2.02
	174,871	162,244	189,858	**3,779**	3,874	4,750	**2.16**	2.39	2.50
Asset purchased under reverse repurchase agreements and securities borrowed									
Loans (2), (3)	**123,766**	104,465	82,353	**941**	945	736	**0.76**	0.90	0.89
Canada									
Retail	**302,849**	292,899	272,999	**12,077**	11,681	11,672	**3.99**	3.99	4.28
Wholesale	**49,228**	37,778	30,583	**2,486**	2,468	1,548	**5.05**	6.53	5.06
	352,077	330,677	303,582	**14,563**	14,149	13,220	**4.14**	4.28	4.35
U.S.	**22,691**	18,802	13,329	**776**	702	895	**3.42**	3.73	6.71
Other International	**21,135**	14,251	13,337	**1,018**	1,121	1,121	**4.82**	7.87	8.41
	395,903	363,730	330,248	**16,357**	15,972	15,236	**4.13**	4.39	4.61
Total interest-earning assets	**703,707**	638,612	608,987	**21,150**	20,852	20,813	**3.01**	3.27	3.42
Non-interest-bearing deposits with other banks	**11,716**	9,520	6,665	**–**	–	–	**–**	–	–
Customers' liability under acceptances	**9,663**	8,617	7,547	**–**	–	–	**–**	–	–
Other assets (2)	**128,114**	153,851	155,701	**–**	–	–	**–**	–	–
Total assets	**$ 853,200**	$ 810,600	$ 778,900	**$ 21,150**	$ 20,852	$ 20,813	**2.48%**	2.57%	2.67 %
Liabilities and shareholders' equity									
Deposits (2), (4)									
Canada	**374,962**	350,099	306,754	**5,190**	5,318	5,318	**1.38%**	1.52 %	1.73 %
U.S.	**40,006**	36,430	41,638	**169**	210	232	**0.42**	0.58	0.56
Other International	**48,937**	45,139	52,942	**283**	489	784	**0.58**	1.08	1.48
	463,905	431,668	401,334	**5,642**	6,017	6,334	**1.22**	1.39	1.58
Obligations related to securities sold short	**48,980**	43,080	56,603	**1,579**	1,584	2,168	**3.22**	3.68	3.83
Obligations related to assets sold under repurchase agreements and securities loaned	**70,881**	55,369	49,724	**279**	330	473	**0.39**	0.60	0.95
Subordinated debentures	**8,216**	8,156	8,821	**336**	360	399	**4.09**	4.41	4.52
Other interest-bearing liabilities	**1,372**	1,327	2,089	**63**	63	82	**4.59**	4.75	3.93
Total interest-bearing liabilities	**593,354**	539,600	518,571	**7,899**	8,354	9,456	**1.33**	1.55	1.82
Non-interest-bearing deposits	**69,819**	64,512	63,983	**–**	–	–	**–**	–	–
Acceptances	**9,663**	8,617	7,547	**–**	–	–	**–**	–	–
Other liabilities (2)	**132,362**	156,339	150,727	**–**	–	–	**–**	–	–
Total liabilities	**$ 805,198**	$ 769,068	$ 740,828	**$ 7,899**	$ 8,354	$ 9,456	**0.98%**	1.09%	1.28 %
Equity	**48,002**	41,532	38,072	**n.a.**	n.a.	n.a.	**n.a.**	n.a.	n.a.
Total liabilities and shareholders' equity	**$ 853,200**	$ 810,600	$ 778,900	**$ 7,899**	$ 8,354	$ 9,456	**0.93%**	1.03%	1.21 %
Net interest income and margin	**$ 853,200**	$ 810,600	$ 778,900	**$ 13,251**	$ 12,498	$ 11,357	**1.55%**	1.54%	1.46 %
Net interest income and margin (average earning assets)									
Canada	**$ 471,378**	$ 442,585	$ 416,817	**$ 10,960**	$ 10,952	$ 9,693	**2.33%**	2.47%	2.33 %
U.S.	**116,016**	87,845	73,404	**1,602**	957	1,093	**1.38**	1.09	1.49
Other International	**116,313**	108,182	118,766	**689**	589	571	**0.59**	0.54	0.48
Total	**$ 703,707**	$ 638,612	$ 608,987	**$ 13,251**	$ 12,498	$ 11,357	**1.88%**	1.96 %	1.86 %

(1) On a continuing operations basis.
(2) In 2012, we reclassified cash collateral for 2012 and 2011 paid from Interest bearing deposits with banks and Loans-wholesale to Other assets and cash collateral received from Deposits to Other liabilities.
(3) Interest income includes loan fees of $512 million (2012 – $467 million; 2011 – $434 million).
(4) Deposits include savings deposits with average balances of $123 billion (2012 – $109 billion; 2011 – $97 billion), interest expense of $.7 billion (2012 – $.6 billion; 2011 – $.6 billion) and average rates of .6% (2012 – .6%; 2011 – .6%). Deposits also include term deposits with average balances of $269 billion (2012 – $264 billion; 2011 – $245 billion), interest expense of $4.2 billion (2012 – $4.6 billion; 2011 – $3.4 billion) and average rates of 1.58% (2012 – 1.74%; 2011 – 1.40%).

Change in net interest income — Table 74

(Millions of Canadian dollars)	2013 vs. 2012 (1) Increase (decrease) due to changes in: Average volume (3)	Average rate (3)	Net change	2012 vs. 2011 (1) Increase (decrease) due to changes in: Average volume (3)	Average rate (3)	Net change
Assets						
Deposits with other banks (4)						
Canada (2)	$ 181	$ (155)	$ 26	$ (18)	$ 27	$ 9
U.S. (2)	(4)	–	(4)	16	(16)	–
Other international (2)	1	(11)	(10)	30	(69)	(39)
Securities						
Trading	357	(272)	85	(678)	(204)	(882)
Available-for-sale	(39)	(141)	(180)	(39)	45	6
Asset purchased under reverse repurchase agreements and securities borrowed	175	(179)	(4)	198	11	209
Loans (4)						
Canada						
Retail	397	(1)	396	851	(842)	9
Wholesale	748	(730)	18	364	556	920
U.S.	145	(71)	74	367	(560)	(193)
Other international	542	(645)	(103)	77	(77)	–
Total interest income	$ 2,503	$ (2,205)	$ 298	$ 1,168	$ (1,129)	$ 39
Liabilities						
Deposits (4)						
Canada	378	(506)	(128)	751	(751)	–
U.S.	21	(62)	(41)	(29)	7	(22)
Other international	41	(247)	(206)	(116)	(179)	(295)
Obligations related to securities sold short	217	(222)	(5)	(518)	(66)	(584)
Obligations related to assets sold under repurchase agreements and securities loaned	92	(143)	(51)	54	(197)	(143)
Subordinated debentures	3	(27)	(24)	(30)	(9)	(39)
Other interest-bearing liabilities	2	(2)	–	(30)	11	(19)
Total interest expense	$ 754	$ (1,209)	$ (455)	$ 82	$ (1,184)	$ (1,102)
Net interest income	$ 1,749	$ (996)	$ 753	$ 1,086	$ 55	$ 1,141

(1) On a continuing operations basis.
(2) Geographic classification for selected assets and liabilities is based on the domicile of the booking point of the subject assets and liabilities.
(3) Volume/rate variance is allocated on the percentage relationship of changes in balances and changes in rates to the total net change in net interest income.
(4) In 2012, we reclassified cash collateral for 2012 and 2011 paid from Interest bearing deposits with banks and Loans-wholesale to Other assets and cash collateral received from Deposits to Other liabilities.

Loans and acceptances by geography — Table 75

As at October 31 (Millions of Canadian dollars)	IFRS 2013	IFRS 2012 (1)	IFRS 2011 (1)	Canadian GAAP 2010 (1)	Canadian GAAP 2009 (1)
Canada					
Residential mortgages	$ 206,134	$ 195,552	$ 185,620	$ 124,064	$ 117,292
Personal	87,153	80,897	75,668	69,291	60,493
Credit cards	13,902	13,422	12,723	9,704	8,285
Small business	3,987	2,503	2,481	2,712	2,851
Retail	311,176	292,374	276,492	205,771	188,921
Business	57,724	50,319	45,186	45,217	47,110
Sovereign	3,807	3,751	3,304	2,785	1,394
Bank	823	390	747	808	1,096
Wholesale	$ 62,354	$ 54,460	$ 49,237	$ 48,810	$ 49,600
	$ 373,530	$ 346,834	$ 325,729	$ 254,581	$ 238,521
U.S.					
Retail	3,734	3,138	3,101	4,230	4,163
Wholesale	19,443	17,081	11,094	7,584	9,310
	23,177	20,219	14,195	11,814	13,473
Other International					
Retail	6,768	5,673	5,152	4,936	4,625
Wholesale	17,103	16,900	12,110	11,084	12,964
	23,871	22,573	17,262	16,020	17,589
Total loans and acceptances	$ 420,578	$ 389,626	$ 357,186	$ 282,415	$ 269,583
Total allowance for loan losses	(1,959)	(1,997)	(1,967)	(2,038)	(2,164)
Total loans and acceptances, net of allowance for loan losses	$ 418,619	$ 387,629	$ 355,219	$ 280,377	$ 267,419

Loans and acceptances by portfolio and sector — Table 76

As at October 31 (Millions of Canadian dollars)	IFRS 2013	IFRS 2012 (1)	IFRS 2011 (1)	Canadian GAAP 2010 (1)	Canadian GAAP 2009 (1)
Residential mortgages	$ 209,238	$ 198,324	$ 188,406	$ 126,790	$ 119,945
Personal	94,311	86,697	80,921	75,519	66,405
Credit cards	14,142	13,661	12,937	9,916	8,508
Small business	3,987	2,503	2,481	2,712	2,851
Retail	$ 321,678	$ 301,185	$ 284,745	$ 214,937	$ 197,709
Business					
Agriculture	5,441	5,202	4,880	4,705	4,967
Automotive	6,167	3,585	3,025	3,228	3,282
Consumer goods	6,230	5,432	5,341	5,202	5,323
Energy	8,906	8,802	6,394	5,869	6,984
Non-bank financial services	4,903	3,895	2,007	4,593	3,345
Forest products	893	811	698	726	761
Industrial products	4,038	3,938	3,381	3,143	3,331
Mining & metals	1,074	965	1,122	587	1,746
Real estate & related	24,413	20,650	15,569	12,651	13,308
Technology & media	4,006	4,203	2,712	2,257	2,307
Transportation & environment	5,593	5,221	4,927	3,546	4,184
Other (2)	21,520	20,554	17,011	15,290	17,041
Sovereign	4,396	4,193	4,050	3,765	2,779
Bank	1,320	990	1,324	1,916	2,516
Wholesale	$ 98,900	$ 88,441	$ 72,441	$ 67,478	$ 71,874
Total loans and acceptances	$ 420,578	$ 389,626	$ 357,186	$ 282,415	$ 269,583
Total allowance for loan losses	(1,959)	(1,997)	(1,967)	(2,038)	(2,164)
Total loans and acceptances, net of allowance for loan losses	$ 418,619	$ 387,629	$ 355,219	$ 280,377	$ 267,419

(1) On a continuing operations basis.
(2) Other in 2013 related to other services, $8.1 billion; financing products, $3.1 billion; holding and investments, $5.0 billion; health, $3.8 billion; and other, $1.5 billion.

Impaired loans by portfolio and geography — Table 77

As at October 31 (Millions of Canadian dollars, except for percentage amounts)	IFRS 2013	IFRS 2012 (1)	IFRS 2011 (1)	Canadian GAAP 2010 (1)	Canadian GAAP 2009 (1)
Residential mortgages	$ 691	$ 674	$ 719	$ 691	$ 533
Personal	363	273	289	278	290
Small business	37	33	40	49	59
Retail	1,091	980	1,048	1,018	882
Business					
Agriculture	$ 43	$ 52	$ 75	$ 74	$ 79
Automotive	12	17	38	97	36
Consumer goods	101	83	91	91	111
Energy	14	2	33	104	100
Non-bank financial services	1	5	13	28	197
Forest products	26	30	27	49	47
Industrial products	54	88	38	102	143
Mining & metals	2	2	4	8	18
Real estate & related	367	353	464	560	422
Technology & media	117	251	47	68	114
Transportation & environment	98	73	105	52	20
Other (2)	272	312	311	385	514
Sovereign	–	–	–	9	10
Bank	3	2	33	34	62
Wholesale	1,110	1,270	1,279	1,661	1,873
Total impaired loans (3)	$ 2,201	$ 2,250	$ 2,327	$ 2,679	$ 2,755
Canada					
Residential mortgages	$ 464	$ 475	$ 567	$ 544	$ 441
Personal	229	206	188	174	173
Small business	36	34	40	49	59
Retail	729	715	795	767	673
Business					
Agriculture	38	44	62	71	77
Automotive	9	11	30	87	27
Consumer goods	58	34	48	53	53
Energy	14	–	25	65	5
Non-bank financial services	1	3	1	1	1
Forest products	8	12	7	11	20
Industrial products	40	34	26	99	140
Mining & metals	2	2	2	4	6
Real estate & related	169	153	164	177	232
Technology & media	86	238	43	55	88
Transportation & environment	21	22	12	42	17
Other	80	88	93	106	173
Sovereign	–	–	–	–	–
Bank	–	–	–	–	–
Wholesale	526	641	513	771	839
Total	$ 1,255	$ 1,356	$ 1,308	$ 1,538	$ 1,512
U.S.					
Retail	$ 14	$ 7	$ 6	$ –	$ –
Wholesale	98	162	116	364	719
Total	$ 112	$ 169	$ 122	$ 364	$ 719
Other International					
Retail	$ 348	$ 258	$ 247	$ 251	$ 209
Wholesale	486	467	650	526	315
Total	$ 834	$ 725	$ 897	$ 777	$ 524
Total impaired loans	$ 2,201	$ 2,250	$ 2,327	$ 2,679	$ 2,755
Allowance against impaired loans	(599)	(637)	(605)	(721)	(863)
Net impaired loans	$ 1,602	$ 1,613	$ 1,722	$ 1,958	$ 1,892
Gross impaired loans as a % of loans and acceptances					
Residential mortgages	0.33%	0.34%	0.38%	0.54%	0.44%
Personal	0.39%	0.31%	0.36%	0.37%	0.44%
Small business	0.92%	1.32%	1.61%	1.81%	2.07%
Retail	0.34%	0.33%	0.37%	0.47%	0.45%
Wholesale	1.12%	1.44%	1.77%	2.46%	2.61%
Total	0.52%	0.58%	0.65%	0.95%	1.02%
Allowance against impaired loans as a % of gross impaired loans	27.22%	28.33%	26.00%	26.91%	31.32%

(1) On a continuing operations basis.
(2) Other in 2013 is related to other, $69 million; financing products, $38 million; other services, $101 million; holding and investments, $39 million; and health, $25 million.
(3) Past due loans greater than 90 days not included in impaired loans were $346 million in 2013 (2012 – $393 million; 2011 – $525 million; 2010 – $180 million; 2009 – $312 million).

Provision for credit losses by portfolio and geography — Table 78

(Millions of Canadian dollars, except for percentage amounts)	IFRS 2013	IFRS 2012 (1)	IFRS 2011 (1)	Canadian GAAP 2010 (1)	Canadian GAAP 2009 (1)
Residential mortgages	$ 41	$ 67	$ 42	$ 25	$ 22
Personal	458	445	438	457	494
Credit cards	354	394	448	399	393
Small business	32	43	35	45	55
Retail	$ 885	$ 949	$ 963	$ 926	$ 964
Business					
Agriculture	$ 4	$ 8	$ 7	$ 18	$ 18
Automotive	3	(2)	(4)	15	21
Consumer goods	17	27	14	29	38
Energy	(6)	(11)	(20)	(6)	13
Non-bank financial services	10	1	(11)	(34)	264
Forest products	4	5	5	3	11
Industrial products	21	32	3	(6)	38
Mining & metals	1	–	–	(1)	7
Real estate & related	62	82	66	184	124
Technology & media	157	102	(3)	5	94
Transportation & environment	35	47	29	10	8
Other (2)	46	63	82	76	296
Sovereign	–	–	–	–	–
Bank	–	–	–	15	20
Wholesale	$ 354	$ 354	$ 168	$ 308	$ 952
Total provision for credit losses on impaired loans	$ 1,239	$ 1,303	$ 1,131	$ 1,234	$ 1,916
Canada					
Residential mortgages	$ 27	$ 34	$ 25	$ 7	$ 18
Personal	391	413	408	444	467
Credit cards	346	391	448	399	393
Small business	32	43	35	45	55
Retail	$ 796	$ 881	$ 916	$ 895	$ 933
Business					
Agriculture	4	8	7	18	18
Automotive	3	(2)	(3)	15	17
Consumer goods	16	13	13	17	26
Energy	(6)	(11)	(9)	3	(4)
Non-bank financial services	–	1	–	(1)	36
Forest products	3	5	4	3	9
Industrial products	14	12	3	(4)	36
Mining & metals	1	–	1	2	2
Real estate & related	37	43	31	35	52
Technology & media	50	98	6	(6)	33
Transportation & environment	2	10	5	10	7
Other	27	32	44	30	204
Sovereign	–	–	–	–	–
Bank	–	–	–	–	–
Wholesale	$ 151	$ 209	$ 102	$ 122	$ 436
Total	$ 947	$ 1,090	$ 1,018	$ 1,017	$ 1,369
U.S.					
Retail	3	4	4	–	–
Wholesale	32	29	(19)	62	455
	$ 35	$ 33	$ (15)	$ 62	$ 455
Other International					
Retail	86	64	43	31	31
Wholesale	171	116	85	124	61
	$ 257	$ 180	$ 128	$ 155	$ 92
Total provision for credit losses on impaired loans	$ 1,239	$ 1,303	$ 1,131	$ 1,234	$ 1,916
Total provision for credit losses on non-impaired loans	–	(2)	2	6	251
Total provision for credit losses	1,239	1,301	1,133	1,240	2,167
Provision for credit losses as a % of average net loans and acceptances	0.31%	0.35%	0.33%	0.40%	0.72%

(1) On a continuing operations basis.
(2) Other in 2013 is related to financing products, $0.4 million; other services, $3.7 million; holdings and investments, $2.0 million; and other, $12.8 million.

Allowance for credit losses by portfolio and geography — Table 79

(Millions of Canadian dollars, except percentage amounts)	IFRS 2013	IFRS 2012 (1)	IFRS 2011 (1)	Canadian GAAP 2010 (1)	Canadian GAAP 2009 (2)
Allowance at beginning of year	$ 2,088	$ 2,058	$ 2,966	$ 2,264	$ 1,734
Allowance at beginning of year – discontinued operations	–	–	(854)	–	–
Provision for credit losses	1,239	1,301	1,133	1,240	2,167
Write-offs by portfolio					
Residential mortgages	(24)	(31)	(16)	(11)	(9)
Personal	(498)	(499)	(515)	(538)	(535)
Credit cards	(466)	(497)	(545)	(463)	(445)
Small business	(35)	(50)	(45)	(56)	(54)
Retail	$ (1,023)	$ (1,077)	$ (1,121)	$ (1,068)	$ (1,043)
Business	$ (450)	$ (291)	$ (226)	$ (478)	$ (805)
Sovereign	–	–	(9)	–	–
Bank	–	(32)	–	–	–
Wholesale	$ (450)	$ (323)	$ (235)	$ (478)	$ (805)
Total write-offs by portfolio	$ (1,473)	$ (1,400)	$ (1,356)	$ (1,546)	$ (1,848)
Recoveries by portfolio					
Residential mortgages	$ 2	$ 1	$ 1	$ 1	$ 1
Personal	96	83	79	79	65
Credit cards	112	102	97	63	52
Small business	9	8	7	7	5
Retail	$ 219	$ 194	$ 184	$ 150	$ 123
Business	$ 51	$ 39	$ 60	$ 51	$ 126
Sovereign	–	–	–	–	–
Bank	–	–	–	–	–
Wholesale	$ 51	$ 39	$ 60	$ 51	$ 126
Total recoveries by portfolio	$ 270	$ 233	$ 244	$ 201	$ 249
Net write-offs	$ (1,203)	$ (1,167)	$ (1,112)	$ (1,345)	$ (1,599)
Adjustments (3)	(74)	(104)	(75)	(33)	(38)
Total allowance for credit losses at end of year	$ 2,050	$ 2,088	$ 2,058	$ 2,126	$ 2,264
Allowance against impaired loans					
Canada					
Residential mortgages	$ 36	$ 41	$ 47	$ 47	$ 39
Personal	97	89	88	88	94
Small business	16	12	15	18	22
Retail	$ 149	$ 142	$ 150	$ 153	$ 155
Business					
Agriculture	$ 6	$ 9	$ 13	$ 14	$ 10
Automotive	4	7	15	27	6
Consumer goods	15	14	17	20	18
Energy	1	1	3	10	1
Non-bank financial services	–	–	–	1	–
Forest products	4	6	3	4	8
Industrial products	15	10	12	36	63
Mining & metals	1	1	1	1	1
Real estate & related	42	45	47	36	44
Technology & media	46	107	20	12	32
Transportation & environment	6	8	5	6	7
Other	30	31	43	40	72
Sovereign	–	–	–	–	–
Bank	–	–	–	–	–
Wholesale	$ 170	$ 239	$ 179	$ 207	$ 262
	$ 319	$ 381	$ 329	$ 360	$ 417
U.S.					
Retail	$ 2	$ 1	$ 1	$ –	$ –
Wholesale	19	38	25	85	251
	$ 21	$ 39	$ 26	$ 85	$ 251
Other International					
Retail	$ 146	$ 96	$ 80	$ 83	$ 74
Wholesale	113	121	170	193	121
	$ 259	$ 217	$ 250	$ 276	$ 195
Total allowance against impaired loans	$ 599	$ 637	$ 605	$ 721	$ 863
Allowance against non-impaired loans					
Residential mortgages	$ 48	$ 48	$ 41	$ 26	$ 24
Personal	405	392	412	480	449
Credit cards	385	403	415	365	313
Small business	45	60	60	60	47
Retail	$ 883	$ 903	$ 928	$ 931	$ 833
Wholesale	$ 477	$ 457	$ 434	$ 386	$ 468
Off-balance sheet and other items	$ 91	$ 91	$ 91	$ 88	$ 100
Total allowance against non-impaired loans	$ 1,451	$ 1,451	$ 1,453	$ 1,405	$ 1,401
Total allowance for credit losses	$ 2,050	$ 2,088	$ 2,058	$ 2,126	$ 2,264
Key ratios					
Allowance for credit losses as a % of loans and acceptances	0.49%	0.54%	0.57%	0.75%	0.84%
Net write-offs as a % of average net loans and acceptances	0.30%	0.28%	0.33%	0.49%	0.60%

(1) On a continuing operations basis.
(2) Opening allowance for credit losses as at November 1, 2008 has been restated due to the implementation of amendments to CICA section 3855.
(3) Under IFRS, other adjustments include $86 million of unwind of discount and $(12) million of changes in exchange rate (2012 – $110 million and $(6) million; 2011 – $78 million and $3 million). For further details, refer to Note 5 of our 2013 Annual Consolidated Financial Statements.

Credit quality information by Canadian province — Table 80

(Millions of Canadian dollars)	IFRS 2013	IFRS 2012 (1)	IFRS 2011 (1)	Canadian GAAP 2010 (1)	Canadian GAAP 2009 (1)
Loans and acceptances (2)					
Atlantic provinces (3)	$ 21,263	$ 19,953	$ 18,481	$ 14,558	$ 13,147
Quebec	48,060	42,920	38,776	33,093	29,994
Ontario	152,074	141,570	141,230	103,179	100,282
Prairie provinces (4)	84,015	77,187	68,468	54,843	49,964
B.C. and territories (5)	68,118	65,204	58,774	48,908	45,134
Total loans and acceptances in Canada	$ 373,530	$ 346,834	$ 325,729	$ 254,581	$ 238,521
Gross impaired loans					
Atlantic provinces (3)	$ 83	$ 67	$ 66	$ 72	$ 57
Quebec	177	180	135	162	190
Ontario	424	502	398	598	647
Prairie provinces (4)	330	338	404	429	300
B.C. and territories (5)	241	269	305	277	318
Total gross impaired loans in Canada	$ 1,255	$ 1,356	$ 1,308	$ 1,538	$ 1,512
Provision for credit losses on impaired loans					
Atlantic provinces (3)	$ 50	$ 62	$ 54	$ 50	$ 56
Quebec	78	96	63	85	90
Ontario	607	706	686	659	942
Prairie provinces (4)	113	120	107	146	138
B.C. and territories (5)	99	106	108	77	143
Total provision for credit losses on impaired loans in Canada	$ 947	$ 1,090	$ 1,018	$ 1,017	$ 1,369

(1) On a continuing operations basis.
(2) Comparative figures have been revised from those previously presented.
(3) Comprises Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick.
(4) Comprises Manitoba, Saskatchewan and Alberta.
(5) Comprises British Columbia, Nunavut, Northwest Territories and Yukon.

Small business loans and acceptances in Canada by sector — Table 81

As at October 31 (Millions of Canadian dollars)	IFRS 2013	IFRS 2012 (1)	IFRS 2011 (1)	Canadian GAAP 2010 (1)	Canadian GAAP 2009 (1)
Agriculture	$ 371	$ 334	$ 302	$ 332	$ 304
Automotive	676	662	684	643	666
Consumer goods	2,479	2,415	2,448	2,367	2,261
Energy	522	525	465	393	367
Non-bank financial services	87	77	71	73	66
Forest products	328	309	300	305	316
Industrial products	1,779	1,849	1,830	1,712	1,696
Mining & metals	127	125	140	113	102
Real estate & related	3,916	3,569	3,439	3,205	3,053
Technology & media	443	344	304	318	318
Transportation & environment	1,106	1,137	1,039	941	961
Other (2)	7,214	6,083	5,674	5,360	5,013
Total small business loans	$ 19,048	$ 17,429	$ 16,696	$ 15,762	$ 15,123

(1) On a continuing operations basis.
(2) Other sector in 2013 related primarily to other services, $3.6 billion; health, $2.2 billion; holding and investment, $282 million; financing products, $75 million; and not elsewhere classified, $1.1 billion.