## Debt Management Report

2010-2011
©Her Majesty the Queen in Right of Canada (2011) All rights reserved

All requests for permission to reproduce this document or any part thereof shall be addressed to Public Works and Government Services Canada.

Cette publication est également disponible en français.
Cat. No.: F1-33/2011E-PDF

## Table of Contents

Foreword by the Minister of Finance ..... 4
Purpose of This Publication ..... 5
Introduction ..... 6
Federal Debt Management. ..... 6
Highlights of 2010-11 ..... 7
Government of Canada Credit Rating Profile ..... 8
Part I: 2010-11 Debt Management Context ..... 9
Financial Market Developments ..... 9
Budgetary Outcomes ..... 10
Sources and Uses of Borrowing ..... 11
Part II: Report on Objectives and Principles ..... 13
Objectives and Principles ..... 13
Raising Stable, Low-Cost Funding ..... 13
Maintaining a Well-Functioning Government Securities Market ..... 17
Part III: Report on the 2010-11 Debt Program ..... 26
Domestic Marketable Bonds ..... 26
Treasury Bills and Cash Management Bills ..... 29
Foreign Currency Debt ..... 30
Retail Debt ..... 31
Cash Management ..... 32
Annex 1: Completed Treasury Evaluation Reports ..... 36
Annex 2: Debt Management Policy Measures Taken Since 1997 ..... 37
Annex 3: Glossary ..... 38
Annex 4: Contact Information ..... 41
Reference Tables ..... 42

## Foreword by the Minister of Finance

At a time when the global recovery is fragile and growth is modest, Canada's strong economic and fiscal fundamentals helped ensure a ready market for Government of Canada debt securities in 2010-11.

This vote of market confidence echoes the views of ratings agencies and the International Monetary Fund (IMF), which continue to give Canada high ratings, owing to our resilient and diversified economy, sound financial sector and the credible, prudent fiscal plan set out in The Next Phase of Canada's Economic Action Plan.

Canadians gave our Government a strong mandate to stay focused on what matters-creating jobs and economic growth. Our plan is working. The IMF recently predicted Canada, along with Germany, will have the fastest growing Group of Seven (G-7) economy over the next two years.

However, we are not immune to the volatile global economic environment, largely due to a problem of confidence in efforts of governments to reduce their deficits. Our Government has encouraged leaders from around the world to take necessary steps toward fiscal consolidation.

Thanks to our strong economy, sound financial sector and our commitment to return to balanced budgets, Canada has become a leader on the world stage. This leadership extends to the responsible long-term approach to the management of our debt obligations.

Maintaining a liquid, well-functioning government securities market will continue to be an important objective of the Government's debt management strategy. I invite you to explore the details of the Government's approach to debt management in this year's Debt Management Report.

The Honourable James M. Flaherty, P.C., M.P.
Minister of Finance
Ottawa, December 2011

## Purpose of This Publication

This edition of the Debt Management Report provides a detailed account of the Government of Canada's borrowing and debt management activities for fiscal year April 1, 2010 to March 31, 2011.

As required under Part IV (Public Debt) of the Financial Administration Act, this publication ensures transparency and accountability regarding these activities. It reports on actual borrowing and uses of funds compared to those forecast in the 2010-11 Debt Management Strategy, published in March 2010 as Annex 3 of Budget 2010 (available at www.fin.gc.ca/pub/dms-sgd/index-eng.asp). It also discusses the environment in which the debt was managed, the composition of the debt and changes in the debt during the year, strategic policy initiatives and performance outcomes.

Additional information about the federal debt can be found in the Public Accounts of Canada. Information on the management of Canada's foreign reserves is provided in the Report on the Management of Canada's Official International Reserves. The Debt Management Strategy, the Debt Management Report and the Report on the Management of Canada's Official International Reserves are tabled annually in Parliament and are available on the Department of Finance website.

## Introduction

## Federal Debt Management

This publication focuses on two major activities: (i) the management of federal market debt (the portion of the debt that is borrowed in financial markets); and (ii) the investment of cash balances in liquid assets until needed for operations.

At March 31, 2011, market debt totalled $\$ 596.8$ billion.

Chart 1
Composition of the Federal Debt, at March 31, 2011


Note: Numbers may not add due to rounding.

There are two types of market debt: domestic debt, which is denominated in Canadian dollars, and foreign currency debt. Funding in Canadian dollars is done through both wholesale and retail channels. Domestic wholesale funding is conducted through the issuance of marketable securities, which consist of nominal bonds, Real Return Bonds and treasury bills, including cash management bills. These securities are sold via auction. Retail funding is raised through sales of Canada Savings Bonds and Canada Premium Bonds to Canadian residents. Cross-currency swaps of domestic obligations and issuance of foreign currency debt are used to fund foreign reserve assets held in the Exchange Fund Account. A report on the management of Canada's official international reserves is available on the Department of Finance website (www.fin.gc.ca/purl/efa-eng.asp).

A detailed description of Government of Canada market debt instruments is available on the Department of Finance website (www.fin.gc.ca/invest/instru-eng.asp).

External assessments of the frameworks and processes used in the management of market debt, cash and reserves as well as the treasury activities of other entities under the authority of the Minister of Finance can be found on the Department of Finance website (www.fin.gc.ca/access/fininst-eng.asp). See Annex 1 for a list of treasury evaluations performed since 1992.

## Highlights of 2010-11

## Source and Uses of Borrowings

The total amount of cash raised through borrowing activities in 2010-11 was $\$ 269$ billion. Over the same period, refinancing needs totalled $\$ 237$ billion and the financial requirement was $\$ 46$ billion, leading to a net decrease in cash of $\$ 14$ billion.

## Strong Demand for Market Debt

Net issuance of Government of Canada market debt declined in 2010-11 from 2009-10 due to a lower financial requirement. The stock of market debt increased by $\$ 32.5$ billion in 2010-11, mainly comprised of a $\$ 48$-billion increase in the stock of domestic marketable bonds and a $\$ 13$-billion decrease in the stock of treasury bills.

The Government of Canada securities market easily accommodated the debt securities issued in 2010-11, with all treasury bill and bond auctions remaining well-covered and well-bid. Market participants reported that liquidity was excellent for government benchmarks and continued to improve for off-the-run bonds compared to recent years.

Debt charges increased slightly in 2010-11, reflecting a higher stock of interest-bearing debt, a shift towards a more balanced distribution of debt across all maturity sectors, and a slightly higher interest rate environment. However, despite a slight rise from 2009-10, the weighted average interest rate of the debt stock remains near historic lows.

## Adjustments to the Debt Program

Starting in August 2010, the frequency of cash management bond buyback operations was increased from bi-weekly to weekly. In addition, for regular bond buyback operations, the threshold of $\$ 3$ billion for large, off-the-run issues was removed. The $\$ 3$-billion threshold was maintained for cash management bond buybacks.

## Debt Auction Process Evaluation

In October 2010, the results of an external evaluation of the Government of Canada debt auction process for nominal bonds, Real Return Bonds and treasury bills were published. The evaluation found that the current structure works well and supports the transparency, effectiveness and efficiency of debt auctions. In addition, it found that the auction process has been successful in its immediate, intermediate and ultimate goals of raising necessary funding at a low cost, and that the auction process has helped sustain a liquid and efficient secondary market for Government of Canada debt.

## Maintaining a Liquid Government Securities Market

Maintaining a liquid, well-functioning government securities market is an important objective of the Government's debt management strategy. During 2010-11, the Government continued to provide regular and transparent bond issuance schedules and to communicate changes to the schedules through the Bank of Canada website in a timely fashion. Switch buybacks were used in 2010-11 to promote liquidity for off-the-run long-term bonds and smooth the maturity profile of the debt stock.

## Government of Canada Credit Rating Profile

The Government of Canada continued to receive the highest possible ratings, with a stable outlook, on both short- and long-term debt from the five rating agencies that evaluate Canada's debt (see Table 1).

Rating agencies indicated that Canada's resilient and diversified economy, sound financial sector, low federal debt burden, sound macroeconomic policies and business environment, and credible, prudent fiscal plan supported the country's ongoing triple-A credit rating.

Table 1
Government of Canada Credit Ratings

|  | Term | Domestic Currency | Foreign Currency Outlook | Latest Rating Action to Upgrade <br> Canada to AAA |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Rating Agency | Long-term | Aaa | Aaa | Stable | May 2002 |
| Moody's Investors Service | Short-term | P-1 | P-1 |  |  |
| Standard \& Poor's | Long-term | AAA | AAA | Stable | July 2002 |
|  | Short-term | A1+ | A1+ |  |  |
| Fitch Ratings | Long-term | AAA | AAA | Stable | August 2004 |
|  | Short-term | F1+ | F1+ |  |  |
| Dominion Bond Rating Service | Long-term | AAA | AAA | Stable | n/a |
|  | Short-term | R-1 (High | R-1 (High) |  | n/a |

## Part I: 2010-11 Debt Management Context

## Financial Market Developments

## Continuing Low Interest Rates

After keeping the target for the overnight interest rate at the effective lower bound of 0.25 per cent for more than a year, the Bank of Canada began to increase its key interest rate in mid-2010. By the end of 2010-11, the rate had been increased to 1.00 per cent, still low by historical standards.

Yields on Government of Canada securities also remained near historically low levels throughout 2010-11. Treasury bill yields increased in early 2010-11 from very low yields in 2009-10 but remained well below historical levels. Likewise, Government of Canada bonds continued to be issued at historically low yields across the curve.

In the US, the Federal Reserve target funds rate for interbank lending ranged between 0 per cent and 0.25 per cent, offering little room for additional easing. In November 2010, disappointed by the slow pace of growth and high unemployment, the Federal Reserve conducted a second round of quantitative easing, announcing that US $\$ 600$ billion of Treasuries would be purchased in an effort to bring down yields on government bonds and stimulate the US economy.

## Global Recovery

In 2010-11, global financial market conditions generally improved from the previous year. Strains in wholesale banking markets largely dissipated and corporate borrowing costs declined significantly. Following stronger-than-expected growth in late 2009 and early 2010, the pace of the global recovery slowed in the latter part of 2010-11, reflecting the waning effects of extraordinary fiscal stimulus measures, the end of the inventory rebuilding cycle, and a lack of confidence in the efforts of certain European governments to put their public finances on a sustainable path.

Most advanced economies posted moderate economic growth in 2010-11, while many emerging and developing countries experienced strong growth. Economic growth was modest in Canada and the United States, while the Euro area, Japan and the United Kingdom struggled to gain economic momentum.

## European Sovereign Debt Crisis

In early 2010-11, financial markets became increasingly concerned about the sustainability of public finances in a number of Euro area countries, with credit spreads widening substantially against benchmark German government securities.

Major credit rating agencies lowered the credit ratings of Portugal, Ireland, Greece and Spain. European financial institutions also came under pressure, reflecting investor concerns about their exposures to the sovereign debt of the most affected Euro area countries. Greece agreed to the terms of a financial support package from the European Union and the IMF in May 2010, followed by Ireland in November 2010 and Portugal in May 2011.

While important steps have been taken by sovereigns around the world to maintain or restore their fiscal health over the medium term, considerable challenges and uncertainties remain.

## Budgetary Outcomes

The key reference point for debt management is the financial source/requirement, which represents net cash needs for the year. This measure differs from the budgetary balance (i.e., the surplus or deficit) by the amount of non-budgetary transactions, which can be significant.

The budgetary balance is presented on a full accrual basis of accounting, recording government revenues and expenses when they are receivable or incurred, regardless of when the cash is received or paid. In contrast, the financial source/requirement measures the difference between cash coming into the Government and cash going out. This measure includes the cash source/requirement resulting from the Government's investing activities through its acquisition of capital assets and its loans, financial investments and advances, as well as from other activities, including payment of accounts payable and collection of accounts receivable, and foreign exchange activities.

With a budgetary deficit of $\$ 33.4$ billion and a cash requirement of $\$ 12.8$ billion from non-budgetary transactions, there was a financial requirement of $\$ 46.2$ billion in 2010-11. The financial requirement was approximately $\$ 1$ billion higher than projected in the 2010-11 Debt Management Strategy, as the roughly $\$ 16$ billion lower-than-projected budgetary deficit was offset by non-budgetary transactions that were almost $\$ 18$ billion higher than forecast. The difference between the actual financial source/requirement for non-budgetary transactions and the amount forecast was attributable to several factors, including the implementation of the harmonized sales tax in Ontario and British Columbia and higher-than-forecast income tax refunds.

Market debt increased by $\$ 32.5$ billion to $\$ 596.8$ billion. Table 2 presents the change in the composition of federal debt in 2010-11. For additional information on the financial position of the Government, see the 2010-11 Annual Financial Report of the Government of Canada (available at www.fin.gc.ca/purl/afr-eng.asp).

To view Budget 2010, including the 2010-11 Debt Management Strategy, which was published as Annex 3 of Budget 2010, visit the Department of Finance website (www.budget.gc.ca/2010/). Budget 2011, which includes an update on Canada's Economic Action Plan and the 2011-12 Debt Management Strategy (Annex 2), can also be viewed on the Department of Finance website (www.budget.gc.ca/2011/home-accueil-eng.html).

Table 2
Change in the Composition of Federal Debt, 2010-11 (\$ billions)

|  | March 31, 2011 | March 31, 2010 | Change |
| :---: | :---: | :---: | :---: |
| Payable in Canadian currency |  |  |  |
| Marketable bonds | 416.1 | 367.9 | 48.2 |
| Treasury and cash management bills | 163.0 | 175.9 | -12.9 |
| Retail debt | 10.1 | 11.8 | -1.7 |
| Canada Pension Plan bonds | 0 | 0.5 | -0.5 |
| Total payable in Canadian currency | 589.2 | 556.1 | 33.1 |
| Payable in foreign currencies | 7.6 | 8.2 | -0.6 |
| Total market debt | 596.8 | 564.4 | 32.5 |
| Market debt value adjustment and capital lease obligations | -5.7 | -5.2 | -0.5 |
| Total unmatured debt | 591.1 | 559.1 | 32.0 |
| Pension and other accounts | 210.7 | 203.7 | 7.0 |
| Total interest-bearing debt | 801.8 | 762.8 | 39.0 |
| Accounts payable, accruals and allowances | 119.1 | 120.5 | -1.4 |
| Gross debt | 920.9 | 883.3 | 37.6 |
| Total financial assets | -304.0 | -300.8 | -3.2 |
| Total non-financial assets | -66.6 | -63.4 | -3.2 |
| Federal debt (accumulated deficit) | 550.3 | 519.1 | 31.2 |

Note: Numbers may not add due to rounding.

## Sources and Uses of Borrowing

Authority to borrow in financial markets is provided by Part IV of the Financial Administration Act, which authorizes the Minister of Finance to issue securities and undertake related activities, including entering into financial contracts and derivatives transactions.

Anticipated borrowing and planned uses of funds are set out in the Debt Management Strategy, while actual borrowing and uses of funds compared to those forecast are reported in Table 3 of this publication.

On March 25, 2010, the Governor in Council approved an aggregate borrowing limit of $\$ 300$ billion for 2010-11. ${ }^{1}$ Total actual borrowings in 2010-11 were $\$ 269$ billion, $\$ 18$ billion higher than the plan set out in the 2010-11 Debt Management Strategy, but $\$ 31$ billion below the authorized borrowing authority limit.

[^0]In 2010-11, loans under the Crown borrowing program to the Business Development Bank of Canada, Canada Mortgage and Housing Corporation and Farm Credit Canada were $\$ 5$ billion, slightly lower than planned. Since the inception of the program in 2007-08, the consolidated borrowings of these Crown corporations have grown to account for $\$ 36$ billion of federal market debt. ${ }^{2}$

Table 3
Planned/Actual Sources and Uses of Borrowing, 2010-11 ${ }^{1}$ (\$ billions)

|  | Planned ${ }^{2}$ | Actual | Difference |
| :---: | :---: | :---: | :---: |
| Sources of borrowings |  |  |  |
| Payable in Canadian currency |  |  |  |
| Treasury bills | 150 | 163 | 13 |
| Bonds | 95 | 96 | 1 |
| Retail debt | 2 | 2 | 0 |
| Total payable in Canadian currency | 247 | 261 | 14 |
| Payable in foreign currencies | 4 | 8 | 4 |
| Total cash raised through borrowing activities | 251 | 269 | 18 |
| Uses of borrowings ${ }^{3}$ |  |  |  |
| Refinancing needs |  |  |  |
| Payable in Canadian currency |  |  |  |
| Treasury bills | 178 | 176 | -2 |
| Bonds | 35 | 48 | 13 |
| Of which: |  |  |  |
| Regular bond buybacks | 5 | 4 | -1 |
| Cash management bond buybacks | 10 | 22 | 12 |
| Retail debt | 3 | 4 | 0 |
| Canada Pension Plan bonds | 0 | 0 | 0 |
| Total payable in Canadian currency | 216 | 228 | 11 |
| Payable in foreign currencies | 4 | 9 | 5 |
| Total refinancing needs | 220 | 237 | 16 |
| Financial source/requirement |  |  |  |
| Budgetary balance | 49 | 33 | -16 |
| Non-budgetary transactions |  |  |  |
| Pension and other accounts | -6 | -7 | -1 |
| Non-financial assets | 4 | 3 | -1 |
| Loans, investments and advances Of which: | 3 | 4 | 1 |
| Loans to Crown corporations | 6 | 5 | -1 |
| Other transactions ${ }^{4}$ | -5 | 13 | 18 |
| Total non-budgetary transactions | -5 | 13 | 18 |
| Total financial source/requirement | 45 | 46 | 1 |

[^1]Table 3 (cont'd)
Planned/Actual Sources and Uses of Borrowing, 2010-11 ${ }^{1}$ (\$ billions)

|  | Planned $^{2}$ | Actual | Difference |
| :--- | :---: | :---: | :---: |
| Total uses of borrowings | 265 | 283 | 17 |
| Other unmatured debt transactions ${ }^{5}$ | 0 | 6 | 6 |
| Net increase or decrease $(-)$ in cash | -15 | -14 | 1 |

Note: Numbers may not add due to rounding.
1 Certain categories have been reclassified to conform to the current year's presentation.
2 Planned numbers are from Budget 2010 and the 2010-11 Debt Management Strategy.
3 A negative sign denotes a financial source.
4 Primarily includes the conversion of accrual adjustments into cash, such as tax and other account receivables; provincial and territorial tax collection agreements; and tax payables and other liabilities.
5 Includes cross-currency swap revaluation, unamortized discounts on debt issues and obligations related to capital leases.

## Part II: Report on Objectives and Principles Objectives and Principles

The fundamental objective of debt management is to raise stable and low-cost funding to meet the needs of the Government of Canada. An associated objective is to maintain a well-functioning market in Government of Canada securities, which helps to keep debt costs low and stable and is generally to the benefit of a wide array of domestic market participants.

In support of these objectives, the design and implementation of the domestic debt program is guided by the key principles of transparency, regularity and liquidity, which support a wellfunctioning government securities market. Towards this end, the Government publishes strategies and plans and consults regularly with market participants to ensure the integrity and attractiveness of the market for dealers and investors. The principle of prudence also guides all debt management activities. The structure of the debt is managed conservatively in a cost-risk framework, preserving access to diversified sources of funding and supporting a broad investor base.

## Raising Stable, Low-Cost Funding

In general, achieving stable, low-cost funding involves striking a balance between debt costs and various risks in the debt structure. This selected balance between cost and risk, or preferred debt structure, is achieved through the deliberate allocation of issuance among various debt instruments.

## Composition of Market Debt

The composition of market debt is a reflection of past and present debt issuance choices. The effects of changes in the issuance patterns of short-term instruments are visible relatively quickly, while the full effect of issuance changes in longer-term maturities can take decades to be fully appreciated. A well-distributed maturity profile ensures a controlled exposure to changes in interest rates over time and provides liquidity across different maturity sectors.

At March 31, 2008, almost a third of market debt was composed of treasury bills and approximately half had original terms at issuance of at least 10 years (see Chart 2).

The onset of the global financial crisis in late 2008 and the resulting need for the Government to rapidly fund liquidity and stimulus packages led to an increase in treasury bill issuance in 2008-09. In 2009-10 and 2010-11, however, there was a notable decrease in the share of treasury bills in favour of short- and medium-term bonds, including the newly reintroduced 3-year sector.

At March 31, 2011, the share of treasury bills had been brought down to below pre-crisis levels, and the increase in issuance of short- and medium-term bonds allowed the overall debt structure to become more evenly distributed.

## Chart 2 <br> Composition of Market Debt by Original Term at Issuance and Market Debt Outstanding



## Cost of Market Debt

Market debt costs are the largest component of public debt charges (public debt charges also include interest expenses on non-market liabilities). ${ }^{3}$ The cost of market debt increased from $\$ 15.3$ billion in 2009-10 to $\$ 16.9$ billion in 2010-11, reflecting a shift towards a more balanced distribution of debt across all maturity sectors, the increased stock of market debt, and a higher weighted average rate of interest on market debt (see Chart 3). In 2010-11, debt costs on unmatured debt represented about 58 per cent of total public debt charges, compared to 57 per cent the previous year. ${ }^{4}$

The average rate of interest on market debt was 2.8 per cent in 2010-11, up from 2.7 per cent in 2009-10, mainly due to the shift towards a more balanced distribution of debt across all maturity sectors and the associated reduction in the stock of treasury bills.


## Characteristics of Market Debt Structure

Market debt is composed of short-, medium- and long-term debt instruments. As the yield curve is normally upward sloping, there is generally a trade-off between cost and risk in the selection of a funding mix among shorter-, medium- and longer-term borrowings. While borrowing costs for longer-term instruments tend to be higher and remain fixed for a longer period, there is a reduced risk of having to refinance at higher interest rates. In contrast, borrowing costs tend to be lower on average for shorter-term instruments but are fixed for shorter periods, therefore increasing the risk of having to refinance the debt at higher interest rates.

[^2]In 2010-11, the average term to maturity (ATM) of market debt decreased slightly from 6.0 years to 5.9 years, while modified duration increased slightly from 4.8 years to 4.9 years (see Chart 4 ). ${ }^{5}$ The changes in ATM and duration from 2007-08 to 2010-11 are primarily due to large fluctuations in the stock of treasury bills relative to bonds in the context of evolving government financial requirements.


The refixing share of interest-bearing debt measures the proportion of all interest-bearing debt that matures or needs to be repriced within one year (see Chart 5). ${ }^{6}$ In 2010-11, the refixing share of interest-bearing debt increased slightly by half a percentage point to 36 per cent as increased issuance of short-term bonds in recent years more than offset a reduction in the stock of treasury bills.

[^3]The refixing share of gross domestic product (GDP) measures the amount of interest-bearing debt that matures or needs to be repriced within one year relative to nominal GDP for that year. The refixing share of GDP had been steadily declining for many years as a result of a lower debt-to-GDP ratio. However, the need for increased issuance during the financial crisis reversed this trend. In 2010-11, the refixing share of GDP was 13 per cent, up slightly from 2009-10.


## Maintaining a Well-Functioning Government Securities Market

A well-functioning wholesale market in Government of Canada securities is important as it benefits the Government as a borrower as well as a wide range of market participants. For the Government as a debt issuer, a well-functioning market attracts investors and contributes to keeping funding costs low and stable over time, and provides flexibility to meet changing financial requirements. For market participants, a liquid and transparent secondary market in government debt provides risk-free assets for investment portfolios, a pricing benchmark for other debt issues and derivatives, and a primary tool for hedging interest rate risk. In 2010-11, the following actions promoted a well-functioning Government of Canada securities market.

Providing regular and transparent issuance: For over a decade, the practice of pre-announcing quarterly bond auction schedules and the call for tenders has been in place. ${ }^{7}$ In 2010-11, there were regular auctions for 2-, 3-, 5-10- and 30-year nominal bonds, as well as for 30-year Real Return Bonds. Regular and pre-announced issuance provided certainty for dealers and investors, allowing them to plan their investment activities, and supported participation and competitive bidding at auctions. As in 2008-09 and 2009-10, the Government's heightened financial requirements in fiscal 2010-11 necessitated an elevated number of auctions relative to pre-crisis years. Bond issuance schedules were communicated through the Bank of Canada website on a timely basis.

Concentrating on key benchmarks: The 2-, 3-, 5-, 10- and 30-year new building benchmark target sizes were maintained (2- and 3-year bonds: $\$ 7$ billion to $\$ 10$ billion; 5 -year bonds: $\$ 9$ billion to $\$ 12$ billion; 10 -year bonds: $\$ 10$ billion to $\$ 14$ billion; and 30 -year nominal bonds: $\$ 12$ billion to $\$ 15$ billion). As in recent years, all benchmark bonds in 2010-11 continued to reach or exceed minimum benchmark size targets (Chart 6). ${ }^{8}$

## Chart 6 <br> Size of Gross Bond Benchmarks



[^4]Using the regular bond buyback program: Bond buyback operations on a cash basis and on a switch basis involve the purchase of bonds with a remaining term to maturity of 12 months to 25 years. Bond buyback operations on a cash basis involve the exchange of a bond for cash while bond buyback operations on a switch basis involve the exchange, on a duration-neutral basis, of an old bond for the new building benchmark bond. ${ }^{9}$ Buyback operations were conducted on a switch basis in order to promote liquidity in off-the-run bonds and to smooth the maturity profile of the debt stock. In total, regular bond buyback operations amounted to $\$ 4.4$ billion in 2010-11, higher than in 2009-10 but still low relative to levels over the last decade (see Chart 16 later in this document).

Consulting with market participants: Formal consultations with market participants are held at least once a year in order to obtain their views on the design of the bond program and on the liquidity and efficiency of the Government of Canada securities market. During consultations in the fall of 2010, the Government received feedback from market participants on changing maturity dates in certain sectors and on the number and size of benchmark bonds that would ensure sufficient depth and liquidity in each sector. Market participants' views were also sought on bond buyback operations on a switch basis and the increased frequency of cash management bond buyback operations. Market participants indicated that the Government of Canada securities market continued to be liquid and function well. They recognized the need to change certain bond maturity dates to smooth the debt maturity profile and reduce debt rollover risk. Furthermore, they were of the view that the move to weekly cash management bond buyback operations and the increased use of bond buybacks on a switch basis were beneficial for market liquidity. ${ }^{10}$

Supporting broad participation in Government of Canada operations: As the Government's fiscal agent, the Bank of Canada distributes Government of Canada marketable bills and bonds through auction to government securities distributors (GSDs) and customers. GSDs that maintain a certain threshold of activity in the primary and secondary market for Government of Canada securities may apply to become primary dealers, which form the core group of distributors for Government of Canada securities.

To maintain a well-functioning securities distribution system, government securities auctions are monitored to ensure that GSDs abide by the terms and conditions. ${ }^{11}$

Quick turnaround times enhance the efficiency of the auction and buyback process and encourage participation by reducing market risk for participants. Turnaround times averaged 1 minute 38 seconds for treasury bill and bond auctions and 2 minutes 22 seconds for buyback operations in 2010-11. ${ }^{12}$

[^5]Ensuring a broad investor base in Government of Canada securities: A diversified investor base supports an active secondary market for Government of Canada securities, thereby helping to keep funding costs low and stable. Diversification of the investor base is pursued by maintaining a domestic debt program that is attractive to a wide range of investors.

At March 31, 2011, insurance companies and pension funds accounted for the largest share of holdings of Government of Canada market debt securities, representing 24.8 per cent. The next largest share was held by non-residents ( 21.2 per cent), followed by other private financial institutions ( 14.5 per cent) and chartered banks and quasi-banks ( 14.1 per cent). Taken together, these four sectors held 75 per cent of outstanding Government of Canada securities (see Chart 7).

Chart 7
Distribution of Holdings of Government of Canada Market Debt
\%


Source: Statistics Canada.

Renewed foreign investor interest in Canada has resulted in an increase of non-resident holdings, though the level remains low compared to other sovereigns (see Chart 8).


Source: Organisation for Economic Co-operation and Development (OECD).

Maintaining debt rollover within acceptable parameters: Prudent management of debt refinancing needs promotes investor confidence and strives to minimize the impact of market volatility or disruptions on the funding program.

The amount of quarterly maturities of domestic market debt as a percentage of GDP is an indicator of the amount of refinancing a government faces relative to the size of the economy. Since 2000-01, quarterly maturities have averaged approximately 6 per cent of GDP (see Chart 9). While this ratio rose to just over 8.7 per cent during the financial crisis due to increased debt issuance, rollover levels have declined back to 7 per cent more recently. According to OECD statistics, the international sovereign mid-point is approximately 5 per cent of GDP.


The concentration of issuance mainly around June 1 maturity dates in recent years has been helpful in maintaining benchmark liquidity in an environment of declining debt issuance. This concentration plus increased issuance on the March 1 and September 1 maturity dates has led to four large single-day bond maturities and coupon payment dates: March 1, June 1, September 1 and December 1 (see Chart 10). In 2010-11, the largest single-day bond maturity plus coupon payment was $\$ 16.3$ billion on June 1, with the second largest being $\$ 13.2$ billion on December 1.

As announced in the 2011-12 Debt Management Strategy, four additional maturity dates have been introduced in order to reduce the size of single-day maturities going forward.

Chart 10
Single-Day Bond Maturities Plus Coupon Payments, Net of Buyback Operations


## Monitoring secondary market trading in Government of Canada securities: The

 two conventional measures of liquidity and efficiency in the secondary market for Government of Canada securities are trading volume and turnover ratio.Trading volume represents the amount of securities traded during a specific period (e.g., daily). Large trading volumes typically allow participants to buy or sell in the marketplace without a substantial impact on the price of the securities and generally imply lower bid-offer spreads.

The turnover ratio, which is the ratio of securities traded relative to the amount of securities outstanding, measures market depth and efficiency. High turnover implies that a large amount of securities changes hands over a given period of time, a hallmark of a liquid and efficient securities market.

The average daily trading volume during 2010-11 was $\$ 25.9$ billion, an increase of $\$ 6.2$ billion from 2009-10. Since 2008-09, average daily bond trading volumes have increased by approximately 52 per cent (see Chart 11).


With an annual debt stock turnover ratio of 17.3 in 2010-11, and the first year-over-year increase since 2005-06, the Government of Canada secondary bond market compares favourably with other major sovereign bond markets (see Chart 12).

Chart 12
Sovereign Bond Turnover Ratios


Note: Turnover ratio is total trading volume in each calendar year/average stock.
Sources: Bureau of the Public Debt of the US, Federal Reserve Bank of New York,
Bank of Canada, United Kingdom Debt Management Office, London Stock Exchange, Australian Financial Markets Report, Reserve Bank of New Zealand, Japan Ministry of Finance, Japan Securities Dealers Association.

## Debt Auction Process Evaluation

An external evaluation of the Government of Canada's debt auction process for nominal bonds, Real Return Bonds and treasury bills was performed from November 2008 through November 2009 as part of the ongoing Treasury Evaluation Program. The final summary report, released in October 2010, is listed in Annex 1 and is available on the Department of Finance website (www.fin.gc.ca/treas/evaluations/edap-epatd-eng.asp).

The evaluation included a review of comparable sovereigns, a literature review and analysis of market data. The two conclusions of the report are that the current structure works well and supports the transparency, effectiveness and efficiency of debt auctions, and that the auction process has been successful in its immediate, intermediate and ultimate goals of raising necessary funding at a low cost. In addition, the report indicates that the auction process has helped sustain a liquid and efficient secondary market for Government of Canada debt.

The report provides four recommendations to the Government. Two of the recommendations focus on improving internal and external communications. A third suggests that the Government encourage market participants to play a more active role in the design of the debt strategy and that it encourage greater customer participation in auctions. Lastly, the report recommends that additional support be provided for the transfer of corporate knowledge. Appendix F of the report provides the management response and an action plan.

## Part III: Report on the 2010-11 Debt Program

In 2010-11, despite issuance levels remaining near historic highs, both treasury bill and bond auctions continued to perform well. Demand for Government of Canada securities remained strong throughout the fiscal year as a result of persistent demand for fixed-income securities and Canada's strong fiscal and economic position.

## Domestic Marketable Bonds

## Bond Program

In 2010-11, gross bond issuance was $\$ 95.5$ billion (including issuance through switch buybacks), about $\$ 6.7$ billion lower than the $\$ 102.2$ billion in 2009-10 (see Reference Table VI for further details). This gross issuance consisted of $\$ 93.3$ billion in nominal bonds (including switch operations), and $\$ 2.2$ billion in Real Return Bonds (see Table 4). Taking into account gross issuance, buybacks and maturities, the stock of outstanding bonds increased by $\$ 48$ billion to $\$ 416$ billion over the course of the fiscal year (see Reference Table VI and X for further details).

Table 4
Annual Bond Program Operations (\$ billions)

|  | $\mathbf{2 0 0 6 - 0 7}$ | $\mathbf{2 0 0 7 - 0 8}$ | $\mathbf{2 0 0 8 - 0 9}$ | $\mathbf{2 0 0 9 - 1 0}$ | $\mathbf{2 0 1 0 - 1 1}$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Nominal | 27.3 | 29.5 | 69.9 | 97.7 | 88.4 |
| Nominal (switch) | 4.5 | 2.5 | 3.0 | 2.3 | 4.9 |
| Real Return Bonds | 1.6 | 2.3 | 2.1 | 2.2 | 2.2 |
| Total gross issuance | 33.4 | 34.3 | 75.0 | 102.2 | 95.5 |
| Cash buybacks | -5.1 | -4.3 | -3.2 | 0.0 | 0.0 |
| Switch buybacks | -4.7 | -2.4 | -2.7 | -2.1 | -4.4 |
| Total buybacks | -9.8 | -6.7 | -5.9 | -2.1 | -4.4 |
| Net Issuance | 23.6 | 27.6 | 69.0 | 100.1 | 91.2 |

Note: Numbers may not add due to rounding.

## Auction Result Indicators for Domestic Bonds

Auction coverage is defined as the total amount of bids received, including bids from the Bank of Canada, divided by the amount auctioned. A higher auction coverage level typically reflects strong demand and therefore should result in a lower average auction yield.

Assuming that all primary dealers bid at their maximum bidding limit, the coverage ratios for primary dealers would reach at least 2.71 for bond auctions. ${ }^{13}$ However, if all primary dealers only bid at their minimum bidding obligation, the coverage ratios would be 1.36 for bond auctions. ${ }^{14}$

The auction tail represents the number of basis points between the highest yield accepted and the average yield of an auction. A small auction tail is preferable as it is generally indicative of better transparency in the pricing of securities.

As in 2009-10, 37 nominal bond auctions were conducted in 2010-11. Auction results are presented in Table $5 .{ }^{15}$ As in previous years, four Real Return Bond auctions were conducted (one per quarter). Bond auctions continued to be well covered across all sectors and were in line with five-year averages. Decreased volatility and less uncertainty regarding the economic and interest rate outlook resulted in smaller tails for most sectors in 2010-11. The size of the tail on the 3-year bond that was reinstated in 2009-10 continues to decrease but still remains large relative to 2 -year and 5 -year bonds, reflecting its status as a new benchmark bond. ${ }^{16}$

Table 5
Performance at Domestic Bond Auctions

|  |  | Nominal Bonds |  |  |  |  | Real Return Bonds |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2-Year | 3-Year | 5-Year | 10-Year | 30-Year | 30-Year |
| Tail | 2010-11 | 0.26 | 0.53 | 0.46 | 0.79 | 0.59 | n/a |
| Tail | 5-year average | 0.41 | $0.91{ }^{1}$ | 0.71 | 0.93 | 0.59 | n/a |
| Coverage | 2010-11 | 2.62 | 2.58 | 2.41 | 2.33 | 2.55 | 2.19 |
| Coverage | 5-year average | 2.50 | $2.44{ }^{1}$ | 2.35 | 2.34 | 2.55 | 2.58 |

${ }^{1}$ Reflects only two years of data since the 3-year bond was reintroduced in 2009-10.

[^6]
## Participation at Domestic Bond Auctions

In 2010-11, primary dealers (PDs) were allotted over 84 per cent of auctioned nominal debt securities, and customers were allotted over 15 per cent (see Table 6). ${ }^{17}$ The 10 most active participants were allotted almost 81 per cent of these securities. Primary dealers' share of the Real Return Bond allotments was about 52 per cent, with customers receiving close to the remaining 48 per cent of the allotments.

Table 6
Historical Share of Amount Allotted to Participants by Type of Auction

| Nominal Bonds |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Participant Type | 2006-07 |  | 2007-08 |  | 2008-09 |  | 2009-10 |  | 2010-11 |  |
|  | (\$ billions) | (\%) | (\$ billions) | (\%) | (\$ billions) | (\%) | (\$ billions) | (\%) | (\$ billions) | (\%) |
| PDs | 26 | 95 | 28 | 95 | 66 | 94 | 85 | 87 | 75 | 84 |
| Non-PD GSDs | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Customers | 1 | 4 | 1 | 4 | 4 | 6 | 13 | 13 | 14 | 15 |
| Top 5 participants | 18 | 65 | 20 | 67 | 46 | 66 | 55 | 56 | 46 | 52 |
| Top 10 participants | 25 | 91 | 26 | 89 | 63 | 91 | 81 | 83 | 72 | 81 |
| Total nominal bonds issued | 27 |  | 30 |  | 70 |  | 98 |  | 88 |  |

Real Return Bonds

| Participant Type | 2006-07 |  | 2007-08 |  | 2008-09 |  | 2009-10 |  | 2010-11 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (\$ billions) | (\%) | (\$ billions) | (\%) | (\$ billions) | (\%) | (\$ billions) | (\%) | (\$ billions) | (\%) |
| PDs | 1 | 75 | 1 | 54 | 1 | 37 | 1 | 56 | 1 | 52 |
| Non-PD GSDs | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| Customers | 0 | 24 | 1 | 46 | 1 | 62 | 1 | 43 | 1 | 48 |
| Top 5 participants | 1 | 55 | 1 | 59 | 1 | 52 | 1 | 57 | 1 | 56 |
| Top 10 participants | 1 | 78 | 2 | 76 | 2 | 73 | 2 | 75 | 2 | 75 |
| Total real return bonds issued | 2 |  | 2 |  | 2 |  | 2 |  | 2 |  |

[^7]
## Treasury Bills and Cash Management Bills

Over the fiscal year, $\$ 353$ billion in 3-month, 6-month and 1-year treasury bills were auctioned, a decrease of $\$ 24.5$ billion from the previous year. In addition, $\$ 79.6$ billion in cash management bills were issued compared to $\$ 63.5$ billion in 2009-10. The number of cash management bill operations also increased, rising from 24 in 2009-10 to 33 in 2010-11.

During 2010-11, the combined treasury and cash management bill stock decreased by $\$ 12.9$ billion to $\$ 163$ billion (see Chart 13). The slightly lower short-term issuance in 2010-11 had the effect of reducing the fluctuations in the average size of treasury bill operations. Net new issuance of treasury bills ranged from $-\$ 4.3$ billion to $+\$ 2.8$ billion per operation, with a standard deviation of $\$ 1.5$ billion, versus $-\$ 4.8$ billion to $+\$ 4.6$ billion per operation in 2009-10, with a standard deviation of $\$ 2.3$ billion.


If all primary dealers bid at their maximum bidding limit for treasury bill auctions, the coverage ratios for primary dealers would reach over 2.5 . However, if all primary dealers only bid at their minimum bidding obligation, the coverage ratios would be 1.04.

In 2010-11, all of the treasury bill and cash management bill auctions were fully covered. Coverage ratios for treasury bill auctions in 2010-11 were slightly higher than the five-year average and were consistent with the trend observed at bond auctions (see Table 7). Decreased volatility in short-term securities and low interest rates also resulted in much smaller tails for treasury bill and cash management bill auctions.

Table 7
Performance at Treasury Bill and Cash Management Bill Auctions

|  | Treasury Bills |  |  |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: |
|  |  | 3-Month | 6 -Month | 12-Month | Cash Management Bills |
| Tail | 2010-11 | 0.41 | 0.47 | 0.68 | 2.00 |
| Tail | 5-year average | 0.84 | 0.84 | 1.06 | 3.85 |
| Coverage | 2010-11 | 2.14 | 2.39 | 2.41 | 2.33 |
| Coverage | 5-year average | 2.10 | 2.28 | 2.22 | 2.32 |

## Participation at Treasury Bill Auctions

In 2010-11, primary dealers were allotted over 84 per cent of auctioned short-term debt securities, while other customers were allotted 15 per cent (see Table 8). The 10 most active participants were allotted 85 per cent of these securities.

Table 8
Historical Share of Amount Allotted to Participants by Type of Auction

| Treasury Bills |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Participant Type | 2006-07 |  | 2007-08 |  | 2008-09 |  | 2009-10 |  | 2010-11 |  |
|  | (\$ billions) | \% | (\$ billions) | \% | (\$ billions) | \% | (\$ billions) | \% | (\$ billions) | \% |
| PDs | 233 | 94 | 198 | 88 | 322 | 90 | 324 | 86 | 285 | 84 |
| Non-PD GSDs | 1 | 1 | 2 | 1 | 1 | 0 | 6 | 1 | 4 | 1 |
| Customers | 13 | 5 | 24 | 11 | 36 | 10 | 46 | 12 | 50 | 15 |
| Top 5 participants | 174 | 71 | 151 | 68 | 246 | 69 | 251 | 67 | 219 | 64 |
| Top 10 participants | 233 | 94 | 207 | 93 | 325 | 91 | 331 | 88 | 287 | 85 |
| Total treasury bills issued | 247 |  | 224 |  | 359 |  | 376 |  | 339 |  |

## Foreign Currency Debt

Foreign currency debt is used to fund the Exchange Fund Account (EFA), which represents the largest component of the official international reserves. The EFA is an actively managed portfolio of liquid foreign currency securities and deposits. The other component is the IMF reserve position, which represents Canada's investment in the activities of the IMF, and fluctuates according to drawdowns and repayments from the IMF. The Report on the Management of Canada's Official International Reserves (available at www.fin.gc.ca/purl/efa-eng.asp) provides information on the objectives, composition and performance of the reserves portfolio.

The market value of the official international reserves increased to US $\$ 60.6$ billion at March 31, 2011 from US $\$ 56.7$ billion at March 31, 2010. The change comprised a US\$2.6-billion increase in EFA assets and a US\$1.3-billion increase in the IMF reserve position.

The EFA is funded by liabilities of the Government of Canada denominated in, or converted to, foreign currencies. Funding requirements are primarily met through an ongoing program of cross-currency swaps of domestic obligations. Total cross-currency swap issuance and maturities during the reporting period were US $\$ 4.3$ billion and US $\$ 2.8$ billion, respectively.

In addition to cross-currency swaps of domestic obligations, the EFA can be funded through a short term US-dollar paper program (Canada bills) and medium-term note issuance in various markets (Canada notes, euro medium-term notes and international bond issues [global bonds]), the use of which depends on funding needs and market conditions (see Table 9). There was no new issuance of Canada notes, euro medium-term notes or global bonds during the period.

Table 9
Outstanding Foreign Currency Issues at March 31, 2011 (par value in millions of US dollars)

|  | March 31, 2011 | Change From <br> March 31, 2010 |
| :--- | :---: | :---: |
| Swapped domestic issues | 37,361 | 2,544 |
| Global bonds | 5,835 | 134 |
| Canada bills | 1,960 | -455 |
| Euro medium-term notes | 0 | 0 |
| Canada notes | 0 | 0 |
| Total | 45,156 | 2,223 |

Note: Liabilities are stated at the exchange rates prevailing on March 31, 2011.

## Retail Debt

The Government sold Canada Savings Bonds (CSBs) and Canada Premium Bonds (CPBs) from early October 2010 to the beginning of December 2010 via cash purchases directly and through financial institutions and investment dealers. The Government also sold CSBs through the Payroll Savings Program, with new subscriptions accepted during the month of October 2010.

The level of outstanding CSBs and CPBs held by retail investors decreased slightly from $\$ 11.9$ billion at the start of $2010-11$ to $\$ 10.4$ billion at the end of 2010-11, representing 1.7 per cent of total market debt at March 31, 2011 (see Chart 14).

## Chart 14

Evolution of the Retail Debt Stock


Gross sales and redemptions were $\$ 1.9$ billion and $\$ 3.5$ billion, respectively, for a net reduction of $\$ 1.6$ billion in the stock of retail debt (see Table 10).

Table 10
Retail Debt Gross Sales and Redemptions, 2010-11 (\$ billions)

|  | Gross Sales | Redemptions | Net Change |
| :--- | :---: | :---: | :---: |
| Payroll | 1.6 | 1.6 | 0.0 |
| Cash | 0.3 | 1.9 | -1.6 |
| Total | 1.9 | 3.5 | -1.6 |

## Cash Management

The Bank of Canada, as fiscal agent for the Government, manages the Receiver General (RG) Consolidated Revenue Fund, from which the balances required for the Government's day-to-day operations are drawn. The core objective of cash management is to ensure that the Government has sufficient cash available at all times to meet its operating requirements.

Twice daily auctions of RG cash balances, treasury bill auctions, cash management bill auctions and the cash management bond buyback program are used to manage RG cash balances.

## Twice-Daily Auctions of Receiver General Cash Balances

In 2010-11, RG cash balances fluctuated widely, reaching a peak of $\$ 25.7$ billion and a low of $\$ 2.8$ billion. Average daily RG cash balances were $\$ 9.6$ billion in $2010-11$ compared to $\$ 24.6$ billion in 2009-10, mainly due to the unwinding of the Government's support for Bank of Canada liquidity operations.

RG cash balances are invested in a prudent and cost-effective manner through auctions with private sector financial institutions. Since February 1999, when Canada's electronic funds transfer system-the Large Value Transfer System—was implemented, RG cash balances have been allocated to bidders twice daily through an auction process administered by the Bank of Canada. These auctions serve two main purposes: first, as a treasury management tool, they are the means by which the Government invests its short-term Canadian-dollar cash balances; second, the auctions are used by the Bank of Canada in its monetary policy implementation to neutralize the impact of public sector flows on the financial system.

The level of cash balances held by financial institutions tends to be at its highest during the months of March, April, May and November in anticipation of the large flows related to fiscal year-end and to cover large bond coupon and principal outflows on June 1 and December 1. Average daily RG cash balances held by financial institutions were $\$ 5.6$ billion in 2010-11, down from $\$ 7.2$ billion in 2009-10.

A portion of the morning auction has been offered on a collateralized basis since September 2002, permitting access to a broader group of potential participants, while ensuring that the Government's credit exposure is effectively mitigated. Participants with approval for uncollateralized bidding limits maximize their uncollateralized lines prior to using their collateralized lines. Generally, at least 20 per cent of the balances are collateralized; however, in months of high balances, the proportion of collateralized balances can exceed 80 per cent (see Chart 15).

Chart 15
Receiver General Auctions of Cash Balances
Allocation Between Collateralized and Uncollateralized Tranches
(Average of Daily Balances for Each Month)


A key measure of the cost to the Government of maintaining cash balances is the net return on these cash balances-the difference between the return on government balances auctioned to financial institutions (typically around the overnight rate) and the average yield paid on treasury bills. A normal upward sloping yield curve results in a negative cost of carry for the Government, as financial institutions pay rates of interest for government deposits based on an overnight rate that is lower than the rate paid by the Government to issue treasury bills. Conversely, under an inverted yield curve, short-term deposit rates are higher than the average of 3- to 12-month treasury bill rates, which can result in a net gain for the Government.

In 2010-11, treasury bill yields traded predominantly higher than the overnight rate, resulting in a loss of carrying cash of $\$ 7.2$ million for the fiscal year, compared to a gain of $\$ 5.7$ million in 2009-10 and $\$ 11.4$ million in 2008-09.

## Cash Management Bond Buyback Program

The cash management bond buyback (CMBB) program helps manage cash requirements by reducing the high levels of cash balances needed for key maturity payment dates. The program also helps smooth variations in treasury bill auction sizes over the year. In 2010-11, an adjustment was made to the bond buyback program (which includes the CMBB program) to increase its flexibility. ${ }^{18}$

In 2010-11, the total amount of bonds repurchased through the CMBB program was $\$ 21.9$ billion, compared to $\$ 10.3$ billion in 2009-10. In 2009-10 and 2010-11, the program reduced the size of the 2010 June 1, September 1 and December 1 bond maturities by about 29 per cent, from a total of $\$ 30.6$ billion outstanding to $\$ 21.7$ billion outstanding at the end of 2010-11.

The CMBB program has been the most consistently useful method for reducing maturity sizes (see Chart 16). However, switch and cash repurchase operations have also proven to be valuable tools in recent years. Overall, repurchase operations reduced the size of the 2010 June 1, September 1 and December 1 bond maturities by 44 per cent.

## Chart 16

Impact of Repurchase Operations on Bond Maturities


[^8]
## Annex 1: Completed Treasury Evaluation Reports

In order to inform future decision making and to support transparency and accountability, different aspects of the Government of Canada's treasury activities are reviewed periodically under the Treasury Evaluation Program. The program's purpose is to obtain periodic external assessments of the frameworks and processes used in the management of wholesale and retail market debt, cash and reserves as well as the treasury activities of other entities under the authority of the Minister of Finance.

Reports on the findings of these evaluations and the Government's response to each evaluation are tabled with the House of Commons Standing Committee on Public Accounts by the Minister of Finance. Copies are also sent to the Auditor General of Canada. The reports are posted on the Department of Finance website.

| Area | Year |
| :---: | :---: |
| Debt Management Objectives | 1992 |
| Debt Structure—Fixed/Floating Mix | 1992 |
| Internal Review Process | 1992 |
| External Review Process | 1992 |
| Benchmarks and Performance Measures | 1994 |
| Foreign Currency Borrowing-Canada Bills Program | 1994 |
| Developing Well-Functioning Bond and Bill Markets | 1994 |
| Liability Portfolio Performance Measurement | 1994 |
| Retail Debt Program | 1994 |
| Guidelines for Dealing With Auction Difficulties | 1995 |
| Foreign Currency Borrowing-Standby Line of Credit and FRN | 1995 |
| Treasury Bill Program Design | 1995 |
| Real Return Bond Program | 1998 |
| Foreign Currency Borrowing Programs | 1998 |
| Initiatives to Support a Well-Functioning Wholesale Market | 2001 |
| Debt Structure Target/Modelling | 2001 |
| Reserves Management Framework ${ }^{1}$ | 2002 |
| Bond Buybacks ${ }^{1}$ | 2003 |
| Funds Management Governance Framework ${ }^{1}$ | 2004 |
| Retail Debt Program ${ }^{1}$ | 2004 |
| Borrowing Framework of Major Federal Government-Backed Entities ${ }^{1}$ | 2005 |
| Receiver General Cash Management Program ${ }^{1}$ | 2006 |
| Exchange Fund Account Evaluation ${ }^{1}$ | 2006 |
| Risk Management Report ${ }^{1}$ | 2007 |
| Evaluation of the Debt Auction Process ${ }^{1}$ | 2010 |

## Annex 2: Debt Management Policy Measures Taken Since 1997

A well-functioning wholesale market in Government of Canada securities is important as it benefits the Government as a borrower as well as a wide range of market participants. For the Government as a debt issuer, a well-functioning market attracts investors and contributes to keeping funding costs low and stable over time. For market participants, a liquid and transparent secondary market in government debt provides risk-free assets for investment portfolios, a pricing benchmark for other debt issues and derivatives, and a primary tool for hedging interest rate risk. The following table lists policy measures that have been taken to ensure a well-functioning Government of Canada securities market.

| Measure | Year |
| :--- | :---: |
| Dropped the 3-year bond benchmark | 1997 |
| Moved from weekly to bi-weekly treasury bill auctions | 1998 |
| Introduced a cash-based bond buyback program | 1999 |
| Introduced standardized benchmarks (fixed maturities and increased size) | 1999 |
| Started regular cross-currency swap-based funding of foreign assets | 1999 |
| Introduced a switch-based bond buyback program | 2001 |
| Allowed the reconstitution of bonds beyond the size of the original amount issued | 2001 |
| Introduced the cash management bond buyback program | 2001 |
| Reduced targeted turnaround times for auctions and buyback operations | 2001 |
| Advanced the timing of treasury bill auctions from 12:30 p.m. to 10:30 a.m. | 2004 |
| Advanced the timing of bond auctions from 12:30 p.m. to 12:00 p.m. | 2005 |
| Reduced the timing between bond auctions and cash buybacks to 20 minutes | 2005 |
| Dropped one quarterly 2-year auction | 2006 |
| Announced the maintenance of benchmark targets through fungibility (common dates) | 2006 |
| Consolidated the borrowings of three Crown corporations | 2007 |
| Changed the maturity of the 5-year benchmark and dropped one quarterly 5-year auction | 2007 |
| Reintroduced the 3-year bond benchmark | 2009 |
| Increased the frequency of cash management bond buyback operations from bi-weekly to weekly | 2010 |

## Annex 3: Glossary

asset-liability management: An investment decision-making framework that is used to concurrently manage a portfolio of assets and liabilities.
average term to maturity: The weighted average amount of time until the securities in the debt portfolio mature.
benchmark bond: A bond that is considered by the market to be the standard against which all other bonds in that term area are evaluated against. It is typically a bond issued by a sovereign, since sovereign debt is usually the most creditworthy within a domestic market. Usually it is the most liquid bond within each range of maturities and is therefore priced accurately.
budgetary deficit: The shortfall between government annual revenues and annual budgetary expenses.
buyback on a cash basis: The repurchase of bonds for cash. Buybacks on a cash basis are used to maintain the size of bond auctions and new issuances.
buyback on a switch basis: The exchange of outstanding bonds for new bonds in the current building benchmark bond.

Canada bill: A promissory note denominated in US dollars, issued for terms of up to 270 days. Canada bills are issued for foreign exchange reserves funding purposes only.

Canada Investment Bond: A non-marketable fixed-term security instrument issued by the Government of Canada.

Canada note: A promissory note usually denominated in US dollars and available in book-entry form. Canada notes can be issued for terms of nine months or longer, and can be issued at a fixed or a floating rate. Canada notes are issued for foreign exchange reserves funding purposes only.

Canada Premium Bond: A non-marketable security instrument issued by the Government of Canada, which is redeemable once a year on the anniversary date or during the 30 days thereafter without penalty.

Canada Savings Bond: A non-marketable security instrument issued by the Government of Canada, which is redeemable on demand by the registered owner(s), and which, after the first three months, pays interest up to the end of the month prior to cashing.
cross-currency swap: An agreement that exchanges one type of debt obligation for another involving different currencies and the exchange of the principal amounts and interest payments.
duration: Measures the sensitivity of the price of a bond or portfolio to fluctuations in interest rates. It is a measure of volatility and is expressed in years. The higher the duration number, the greater the interest rate risk for bond or portfolio prices.
electronic trading system: An electronic system that provides real-time information about securities and enables the user to execute financial trades.

Exchange Fund Account (EFA): An account that aids in the control and protection of the external value of the Canadian dollar. Assets held in the EFA are managed to provide foreign currency liquidity to the Government and to promote orderly conditions for the Canadian dollar in the foreign exchange markets, if required.
financial source/requirement: The difference between the cash inflows and outflows of the Government's Receiver General account. In the case of a financial requirement, it is the amount of new borrowing required from outside lenders to meet financing needs in any given year.
fixed-rate share of interest-bearing debt: The proportion of interest-bearing debt that does not mature or need to be repriced within one year (i.e. the inverse of the refixing share of interest-bearing debt).
foreign exchange reserves: The foreign currency assets (e.g. interest-earning bonds) held to support the value of the domestic currency. Canada's foreign exchange reserves are held in the Exchange Fund Account.

Government of Canada securities auction: A process used for selling Government of Canada debt securities (mostly marketable bonds and treasury bills) in which issues are sold by public tender to government securities distributors and approved clients.
government securities distributor (GSD): An investment dealer or bank that is authorized to bid at Government of Canada auctions and through which the Government distributes Government of Canada treasury bills and marketable bonds.
interest-bearing debt: Debt consisting of unmatured debt, or market debt, as well as liabilities to internally held accounts such as federal employees' pension plans.

Large Value Transfer System (LVTS): An electronic funds transfer system introduced in February 1999 and operated by the Canadian Payments Association. It facilitates the electronic transfer of Canadian-dollar payments across the country virtually instantaneously.
marketable bond: An interest-bearing certificate of indebtedness issued by the Government of Canada, having the following characteristics: bought and sold on the open market; payable in Canadian or foreign currency; having a fixed date of maturity; interest payable either in coupon or registered form; face value guaranteed at maturity.
marketable debt: Market debt that is issued by the Government of Canada and sold via public tender or syndication. These issues can be traded between investors while outstanding.
money market: The market in which short-term capital is raised, invested and traded using financial instruments such as treasury bills, bankers' acceptances, commercial paper, and bonds maturing in one year or less.
non-market debt: The Government's internal debt, which is, for the most part, federal public sector pension liabilities and the Government's current liabilities (such as accounts payable, accrued liabilities, interest payments and payments of matured debt).
overnight rate; overnight financing rate; overnight money market rate; overnight lending rate: An interest rate at which participants with a temporary surplus or shortage of funds are able to lend or borrow until the next business day. It is the shortest term to maturity in the money market.
primary dealer (PD): A member of the core group of government securities distributors that maintain a certain threshold of activity in the market for Government of Canada securities. The primary dealer classification can be attained in either treasury bills or marketable bonds, or both.
primary market: The market in which issues of securities are first offered to the public.
Real Return Bond (RRB): A bond whose interest payments are based on real interest rates. Unlike standard fixed-coupon marketable bonds, the semi-annual interest payments on Government of Canada RRBs are determined by adjusting the principal by the change in the Consumer Price Index.
refixing share of GDP: The amount of interest-bearing debt that matures or needs to be repriced within one year relative to nominal GDP for that year.
refixing share of interest-bearing debt: The proportion of interest-bearing debt that matures or needs to be repriced within one year (i.e. the inverse of the fixed-rate share of interest-bearing debt).
secondary market: The market where existing securities trade after they have been sold to the public in the primary market.
sovereign market: The market for debt issued by a government.
treasury bill: A short-term obligation sold by public tender. Treasury bills, with terms to maturity of 3,6 or 12 months, are currently auctioned on a bi-weekly basis.
yield curve: The conceptual or graphic representation of the term structure of interest rates. A "normal" yield curve is upward sloping, with short-term rates lower than long-term rates. An "inverted" yield curve is downward sloping, with short-term rates higher than long-term rates. A "flat" yield curve occurs when short-term rates are the same as long-term rates.

## Annex 4: Contact Information

Department of Finance Canada
Financial Sector Policy Branch
Financial Markets Division
140 O'Connor St., 20th Floor, East Tower
Ottawa, Canada K1A 0G5
Telephone: 613-992-9031
Fax: 613-943-2039

## Reference Tables

I Gross Public Debt, Outstanding Market Debt and Debt Charges
II Government of Canada Outstanding Market Debt
III Fiscal 2010-11 Treasury Bill Program
IV Fiscal 2010-11 Treasury Bill Auction Results
V Issuance of Government of Canada Domestic Bonds
VI Fiscal 2010-11 Domestic Bond Program
VII Fiscal 2010-11 Domestic Bond Auction Results
VIII Outstanding Government of Canada Domestic Bonds as at March 31, 2011
IX Government of Canada Cross-Currency Swaps Outstanding as at March 31, 2011
X Fiscal 2010-11 Bond Buyback Program Operations
XI Crown Corporation Borrowings as at March 31, 2011

Reference Table I
Gross Public Debt, Outstanding Market Debt and Debt Charges (\$ billions)

|  | Gross public debt |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Fiscal year | Market debt | Market debt value <br> adjustments | Accounts payable and <br> accrued liabilities | Pension and other <br> liabilities | Gross debt |
| $1985-86$ | 201.2 | -0.4 | 39.4 | 79.1 | 319.4 |
| $1986-87$ | 228.6 | -0.4 | 42.1 | 84.7 | 355.0 |
| $1987-88$ | 250.8 | -0.9 | 47.2 | 90.9 | 388.0 |
| $1988-89$ | 276.3 | -2.2 | 50.2 | 97.1 | 421.4 |
| $1989-90$ | 294.6 | -2.9 | 53.2 | 104.5 | 449.3 |
| $1990-91$ | 323.9 | -3.2 | 54.9 | 112.1 | 487.7 |
| $1991-92$ | 351.9 | -2.2 | 56.1 | 118.5 | 524.2 |
| $1992-93$ | 382.7 | -3.0 | 58.4 | 125.1 | 563.2 |
| $1993-94$ | 414.0 | -1.8 | 63.7 | 131.4 | 607.3 |
| $1994-95$ | 441.0 | -3.4 | 71.3 | 139.8 | 648.7 |
| $1995-96$ | 469.5 | -1.7 | 74.9 | 148.5 | 691.3 |
| $1996-97$ | 476.9 | 0.3 | 75.9 | 156.3 | 709.4 |
| $1997-98$ | 466.8 | 1.4 | 81.7 | 160.9 | 710.8 |
| $1998-99$ | 457.7 | 2.6 | 83.7 | 168.2 | 712.2 |
| $1999-00$ | 454.2 | -0.2 | 83.9 | 175.8 | 713.6 |
| $2000-01$ | 444.9 | 1.3 | 88.5 | 179.0 | 713.6 |
| $2001-02$ | 440.9 | 0.9 | 83.2 | 177.9 | 703.0 |
| $2002-03$ | 438.6 | -1.1 | 83.2 | 178.3 | 699.0 |
| $2003-04$ | 436.5 | -2.5 | 85.2 | 180.9 | 700.1 |
| $2004-05$ | 431.8 | -4.3 | 97.7 | 179.8 | 705.0 |
| $2005-06$ | 427.3 | -6.1 | 101.4 | 179.9 | 702.5 |
| $2006-07$ | 418.8 | -4.7 | 106.5 | 185.1 | 705.8 |
| $2007-08$ | 394.1 | -3.4 | 110.5 | 191.2 | 692.3 |
| $2008-09$ | 510.9 | 3.1 | 114.0 | 196.1 | 824.2 |
| $2009-10$ | 596.4 | -5.3 | 120.5 | 203.7 | 883.3 |
| $2010-11$ |  | -5.7 | 210.7 | 920.9 |  |

Reference Table I (cont'd)
Gross Public Debt, Outstanding Market Debt and Debt Charges

| Fiscal year | Accumulated deficit and debt charges |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Gross debt (\$ billions) | Financial assets (\$ billions) | Net debt (\$ billions) | Non-financial assets (\$ billions) | Accumulated deficit (\$ billions) | Gross public debt charges (\$ billions) | Fixed-rate portion of interest-bearing debt ${ }^{1-2}$ <br> (\%) |
| 1985-86 | 319.4 | 70.1 | 249.2 | 21.4 | 227.8 | 27.7 | 51.9 |
| 1986-87 | 355.0 | 73.2 | 281.8 | 24.2 | 257.7 | 28.7 | 50.9 |
| 1987-88 | 388.0 | 75.0 | 313.0 | 26.3 | 286.7 | 31.2 | 51.2 |
| 1988-89 | 421.4 | 77.9 | 343.6 | 29.0 | 314.6 | 35.5 | 49.6 |
| 1989-90 | 449.3 | 74.5 | 374.8 | 31.0 | 343.8 | 41.2 | 49.9 |
| 1990-91 | 487.7 | 76.6 | 411.1 | 33.4 | 377.7 | 45.0 | 50.4 |
| 1991-92 | 524.2 | 78.5 | 445.7 | 35.8 | 410.0 | 43.9 | 50.7 |
| 1992-93 | 563.2 | 76.0 | 487.2 | 38.2 | 449.0 | 41.3 | 50.4 |
| 1993-94 | 607.3 | 79.3 | 527.9 | 40.4 | 487.5 | 40.1 | 53.3 |
| 1994-95 | 648.7 | 81.2 | 567.5 | 43.3 | 524.2 | 44.2 | 55.1 |
| 1995-96 | 691.3 | 92.7 | 598.6 | 44.4 | 554.2 | 49.4 | 56.9 |
| 1996-97 | 709.4 | 100.4 | 609.0 | 46.1 | 562.9 | 47.3 | 61.7 |
| 1997-98 | 710.8 | 103.6 | 607.2 | 47.2 | 559.9 | 43.1 | 63.7 |
| 1998-99 | 712.2 | 109.3 | 602.9 | 48.7 | 554.1 | 43.3 | 64.5 |
| 1999-00 | 713.6 | 123.5 | 590.1 | 50.2 | 539.9 | 43.4 | 66.5 |
| 2000-01 | 713.6 | 141.9 | 571.7 | 51.7 | 520.0 | 43.9 | 67.8 |
| 2001-02 | 703.0 | 137.7 | 565.3 | 53.4 | 511.9 | 39.7 | 67.4 |
| 2002-03 | 699.0 | 139.5 | 559.6 | 54.2 | 505.3 | 37.3 | 65.8 |
| 2003-04 | 700.1 | 149.1 | 551.0 | 54.8 | 496.2 | 35.8 | 63.8 |
| 2004-05 | 705.0 | 155.4 | 549.6 | 54.9 | 494.7 | 34.1 | 63.1 |
| 2005-06 | 702.5 | 165.6 | 536.9 | 55.4 | 481.5 | 33.8 | 62.5 |
| 2006-07 | 705.8 | 181.9 | 523.9 | 56.6 | 467.3 | 33.9 | 60.8 |
| 2007-08 | 692.3 | 176.0 | 516.3 | 58.6 | 457.6 | 33.3 | 62.6 |
| 2008-09 | 824.2 | 298.9 | 525.2 | 61.5 | 463.7 | 31.0 | 61.0 |
| 2009-10 | 883.3 | 300.8 | 582.5 | 63.4 | 519.1 | 29.4 | 63.3 |
| 2010-11 | 920.9 | 304.0 | 616.9 | 66.6 | 550.3 | 30.9 | 63.1 |

Notes: Gross debt equals the sum of market debt, market debt value adjustments, accounts payable and accrued liabilities, and pension and other liabilities. Net debt equals gross debt less financial assets. Accumulated deficit equals net debt less non-financial assets.
1 Calculation methodology may vary slightly from year to year. The definition of interest-bearing debt changed slightly in 2002-03 to reflect the adoption of the full accrual basis of accounting.
2 During 2007-08, improvements were made to the calculation of the fixed-rate share of the debt to more appropriately reflect the Government's exposure to interest rate risk. The fixed-rate share of the debt is adjusted by excluding components of the debt that are matched with financial assets of the same term and therefore do not represent an exposure to interest rate risk. The federal liabilities netted out from the fixed-rate share calculation include liabilities funding the assets in the Exchange Fund Account; debt securities matched with corresponding loans to Crown corporations; Government of Canada debt held by the Bank of Canada; and the debt offset by Receiver General cash and deposit balances. The fixed-rate share from 2006-07 onwards has been adjusted to reflect this new methodology.

Reference Table II
Government of Canada Outstanding Market Debt (\$ billions)

| Fiscal year | Payable in Canadian dollars |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Treasury bills | Marketable bonds | Retail debt | Canada Pension Plan bonds | Total |
| 1985-86 | 62.0 | 81.1 | 44.2 | 0.4 | 187.7 |
| 1986-87 | 77.0 | 94.4 | 44.3 | 1.8 | 217.5 |
| 1987-88 | 81.1 | 103.9 | 53.3 | 2.5 | 240.8 |
| 1988-89 | 102.7 | 115.7 | 47.8 | 3.0 | 269.2 |
| 1989-90 | 118.6 | 127.7 | 40.9 | 3.1 | 290.2 |
| 1990-91 | 139.2 | 143.6 | 34.4 | 3.5 | 320.7 |
| 1991-92 | 152.3 | 158.1 | 35.6 | 3.5 | 349.5 |
| 1992-93 | 162.1 | 178.5 | 34.4 | 3.5 | 378.4 |
| 1993-94 | 166.0 | 203.4 | 31.3 | 3.5 | 404.3 |
| 1994-95 | 164.5 | 225.7 | 31.4 | 3.5 | 425.1 |
| 1995-96 | 166.1 | 252.8 | 31.4 | 3.5 | 453.8 |
| 1996-97 | 135.4 | 282.6 | 33.5 | 3.5 | 454.9 |
| 1997-98 | 112.3 | 294.6 | 30.5 | 3.5 | 440.8 |
| 1998-99 | 97.0 | 295.8 | 28.2 | 4.1 | 425.0 |
| 1999-00 | 99.9 | 294.4 | 26.9 | 3.6 | 424.7 |
| 2000-01 | 88.7 | 295.5 | 26.4 | 3.5 | 414.1 |
| 2001-02 | 94.2 | 294.9 | 24.0 | 3.4 | 416.5 |
| 2002-03 | 104.6 | 289.2 | 22.6 | 3.4 | 419.8 |
| 2003-04 | 113.4 | 279.0 | 21.3 | 3.4 | 417.1 |
| 2004-05 | 127.2 | 266.7 | 19.1 | 3.4 | 416.3 |
| 2005-06 | 131.6 | 261.9 | 17.3 | 3.1 | 413.9 |
| 2006-07 | 134.1 | 257.9 | 15.2 | 1.7 | 408.9 |
| 2007-08 | 117.0 | 253.8 | 13.1 | 1.0 | 384.9 |
| 2008-09 | 192.5 | 295.3 | 12.5 | 0.5 | 500.8 |
| 2009-10 | 175.9 | 367.9 | 11.8 | 0.5 | 556.1 |
| 2010-11 | 163.0 | 416.1 | 10.1 | 0.0 | 589.2 |

Reference Table II (cont'd)
Government of Canada Outstanding Market Debt (\$ billions)

| Fiscal year | Payable in foreign currencies |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Canada bills | Marketable bonds | Canada notes | Euro medium- term notes | Standby drawings | Term loans | Total |
| 1985-86 | 0.0 | 9.3 | 0.0 | 0.0 | 2.2 | 2.2 | 13.8 |
| 1986-87 | 1.0 | 8.9 | 0.0 | 0.0 | 0.0 | 2.0 | 12.0 |
| 1987-88 | 1.0 | 7.9 | 0.0 | 0.0 | 0.0 | 2.3 | 11.3 |
| 1988-89 | 1.1 | 6.3 | 0.0 | 0.0 | 0.0 | 0.9 | 8.3 |
| 1989-90 | 1.4 | 4.3 | 0.0 | 0.0 | 0.0 | 0.0 | 5.7 |
| 1990-91 | 1.0 | 3.6 | 0.0 | 0.0 | 0.0 | 0.0 | 4.5 |
| 1991-92 | 0.0 | 3.4 | 0.0 | 0.0 | 0.0 | 0.0 | 3.4 |
| 1992-93 | 2.6 | 2.8 | 0.0 | 0.0 | 0.0 | 0.0 | 5.4 |
| 1993-94 | 5.6 | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.7 |
| 1994-95 | 9.0 | 7.9 | 0.0 | 0.0 | 0.0 | 0.0 | 16.9 |
| 1995-96 | 7.0 | 9.5 | 0.3 | 0.0 | 0.0 | 0.0 | 16.8 |
| 1996-97 | 8.4 | 12.5 | 2.1 | 0.0 | 0.0 | 0.0 | 23.0 |
| 1997-98 | 9.4 | 14.6 | 1.7 | 1.5 | 0.0 | 0.0 | 27.2 |
| 1998-99 | 10.2 | 19.7 | 1.3 | 4.9 | 0.0 | 0.0 | 36.0 |
| 1999-00 | 6.0 | 21.4 | 1.1 | 4.1 | 0.0 | 0.0 | 32.6 |
| 2000-01 | 7.2 | 21.2 | 1.6 | 3.7 | 0.0 | 0.0 | 33.7 |
| 2001-02 | 3.4 | 19.8 | 1.2 | 3.2 | 0.0 | 0.0 | 27.5 |
| 2002-03 | 2.6 | 14.5 | 1.2 | 3.3 | 0.0 | 0.0 | 21.6 |
| 2003-04 | 3.4 | 13.2 | 1.3 | 3.0 | 0.0 | 0.0 | 20.8 |
| 2004-05 | 3.9 | 9.9 | 1.1 | 1.7 | 0.0 | 0.0 | 16.5 |
| 2005-06 | 4.7 | 7.6 | 0.5 | 1.5 | 0.0 | 0.0 | 14.3 |
| 2006-07 | 1.8 | 6.7 | 0.5 | 1.6 | 0.0 | 0.0 | 10.6 |
| 2007-08 | 1.5 | 6.1 | 0.5 | 1.6 | 0.0 | 0.0 | 9.7 |
| 2008-09 | 8.7 | 0.3 | 0.0 | 1.7 | 0.0 | 0.0 | 10.6 |
| 2009-10 | 2.5 | 5.8 | 0.0 | 0.0 | 0.0 | 0.0 | 8.2 |
| 2010-11 | 2.0 | 5.6 | 0.0 | 0.0 | 0.0 | 0.0 | 7.6 |

Reference Table II (cont'd)
Government of Canada Outstanding Market Debt

| Fiscal year | Total market debt |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total payable in Canadian dollars (\$ billions) | Total payable in foreign currencies (\$ billions) | Less: government's own holdings ${ }^{1}$ (\$ billions) | Total market debt (\$ billions) | Average interest rate <br> (\%) |
| 1985-86 | 187.7 | 13.8 | -0.3 | 201.2 | 10.7 |
| 1986-87 | 217.5 | 12.0 | -0.9 | 228.6 | 9.3 |
| 1987-88 | 240.8 | 11.3 | -1.2 | 250.8 | 9.6 |
| 1988-89 | 269.2 | 8.3 | -1.2 | 276.3 | 10.8 |
| 1989-90 | 290.2 | 5.7 | -1.3 | 294.6 | 11.2 |
| 1990-91 | 320.7 | 4.5 | -1.3 | 323.9 | 10.7 |
| 1991-92 | 349.5 | 3.4 | -1.0 | 351.9 | 8.9 |
| 1992-93 | 378.4 | 5.4 | -1.1 | 382.7 | 7.9 |
| 1993-94 | 404.3 | 10.7 | -1.0 | 414.0 | 6.8 |
| 1994-95 | 425.1 | 16.9 | -1.0 | 441.0 | 8.0 |
| 1995-96 | 453.8 | 16.8 | -1.0 | 469.5 | 7.3 |
| 1996-97 | 454.9 | 23.0 | -1.1 | 476.9 | 6.7 |
| 1997-98 | 440.8 | 27.2 | -1.2 | 466.8 | 6.6 |
| 1998-99 | 425.0 | 36.0 | -3.3 | 457.7 | 6.7 |
| 1999-00 | 424.7 | 32.6 | -3.1 | 454.2 | 6.2 |
| 2000-01 | 414.1 | 33.7 | -2.9 | 444.9 | 6.1 |
| 2001-02 | 416.5 | 27.5 | -3.1 | 440.9 | 5.6 |
| 2002-03 | 419.8 | 21.6 | -2.7 | 438.6 | 5.3 |
| 2003-04 | 417.1 | 20.8 | -1.5 | 436.5 | 4.9 |
| 2004-05 | 416.3 | 16.5 | -1.1 | 431.8 | 4.6 |
| 2005-06 | 413.9 | 14.3 | -1.0 | 427.3 | 4.7 |
| 2006-07 | 408.9 | 10.6 | -0.7 | 418.9 | 4.9 |
| 2007-08 | 384.9 | 9.7 | -0.5 | 394.1 | 4.6 |
| 2008-09 | 500.8 | 10.6 | -0.6 | 510.9 | 3.2 |
| 2009-10 | 556.1 | 8.2 | -0.1 | 564.4 | 2.7 |
| 2010-11 | 589.2 | 7.6 | -0.1 | 596.8 | 2.8 |

[^9]Reference Table III
Fiscal 2010-11 Treasury Bill Program (\$ millions)

| Settlement date | Maturing |  |  |  |  | New issues |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | CMB ${ }^{1}$ | 3 mo | 6 mo | 12 mo | Total | CMB ${ }^{1}$ | 3 mo | 6 mo | 12 mo | Total |
| April 1, 2010 | 2,000 | 8,000 | 6,600 |  | 16,600 |  | 8,000 | 3,000 | 3,000 | 14,000 |
| April 5, 2010 | 3,000 |  |  |  | 3,000 |  |  |  |  | 0 |
| April 7, 2010 | 1,900 |  |  |  | 1,900 |  |  |  |  | 0 |
| April 9, 2010 | 1,600 |  |  |  | 1,600 |  |  |  |  | 0 |
| April 14, 2010 |  |  |  |  | 0 | 2,000 |  |  |  | 2,000 |
| April 15, 2010 |  | 8,000 |  | 6,600 | 14,600 |  | 8,600 | 3,200 | 3,200 | 15,000 |
| April 21, 2010 |  |  |  |  | 0 | 2,500 |  |  |  | 2,500 |
| April 28, 2010 |  |  |  |  | 0 | 1,500 |  |  |  | 1,500 |
| April 29, 2010 |  | 6,800 | 6,800 |  | 13,600 |  | 7,400 | 2,800 | 2,800 | 13,000 |
| May 3, 2010 | 2,500 |  |  |  | 2,500 |  |  |  |  | 0 |
| May 5, 2010 | 1,500 |  |  |  | 1,500 |  |  |  |  | 0 |
| May 6, 2010 | 2,000 |  |  |  | 2,000 |  |  |  |  | 0 |
| May 13, 2010 |  | 7,400 |  | 5,400 | 12,800 |  | 6,800 | 2,600 | 2,600 | 12,000 |
| May 21, 2010 |  |  |  |  | 0 | 2,800 |  |  |  | 2,800 |
| May 26, 2010 |  |  |  |  | 0 | 2,600 |  |  |  | 2,600 |
| May 27, 2010 |  | 6,800 | 5,700 |  | 12,500 |  | 7,100 | 2,700 | 2,700 | 12,500 |
| May 28, 2010 |  |  |  |  | 0 | 1,300 |  |  |  | 1,300 |
| June 2, 2010 | 1,300 |  |  |  | 1,300 |  |  |  |  | 0 |
| June 3, 2010 | 2,800 |  |  |  | 2,800 |  |  |  |  | 0 |
| June 4, 2010 | 2,600 |  |  |  | 2,600 |  |  |  |  | 0 |
| June 10, 2010 |  | 7,100 |  | 7,100 | 14,200 | 1,500 | 6,800 | 2,600 | 2,600 | 13,500 |
| June 14, 2010 | 1,500 |  |  |  | 1,500 |  |  |  |  | 0 |
| June 23, 2010 |  | 7,400 | 6,000 |  | 13,400 |  | 7,100 | 2,700 | 2,700 | 12,500 |
| June 30, 2010 |  |  |  |  | 0 | 2,200 |  |  |  | 2,200 |
| July 8, 2010 |  | 8,000 |  | 7,600 | 15,600 |  | 8,000 | 3,000 | 3,000 | 14,000 |
| July 9, 2010 | 2,200 |  |  |  | 2,200 |  |  |  |  | 0 |
| July16, 2010 |  |  |  |  | 0 | 1,500 |  |  |  | 1,500 |
| July 22, 2010 |  | 8,600 | 5,400 |  | 14,000 | 2,500 | 7,400 | 2,800 | 2,800 | 15,500 |
| July 28, 2010 |  |  |  |  | 0 | 2,400 |  |  |  | 2,400 |
| August 5, 2010 | 1,500 | 7,400 |  | 6,200 | 15,100 |  | 7,400 | 2,800 | 2,800 | 13,000 |
| August 9, 2010 | 2,500 |  |  |  | 2,500 |  |  |  |  | 0 |
| August 19, 2010 | 2,400 | 6,800 | 5,300 |  | 14,500 |  | 7,400 | 2,800 | 2,800 | 13,000 |
| August 20, 2010 |  |  |  |  | 0 | 1,600 |  |  |  | 1,600 |
| August 27, 2010 |  |  |  |  | 0 | 2,400 |  |  |  | 2,400 |
| August 31, 2010 |  |  |  |  | 0 | 3,000 |  |  |  | 3,000 |
| September 2, 2010 |  | 7,100 |  | 5,800 | 12,900 |  | 7,400 | 2,800 | 2,800 | 13,000 |
| September 3, 2010 | 1,600 |  |  |  | 1,600 |  |  |  |  | 0 |
| September 7, 2010 | 2,400 |  |  |  | 2,400 |  |  |  |  | 0 |
| September 16, 2010 | 3,000 | 6,800 | 5,800 |  | 15,600 | 3,000 | 7,700 | 2,900 | 2,900 | 16,500 |
| September 23, 2010 |  |  |  |  | 0 | 3,500 |  |  |  | 3,500 |

Reference Table III (cont'd)
Fiscal 2010-11 Treasury Bill Program (\$ millions)

| Settlement date | Maturing |  |  |  |  | New Issues |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | CMB ${ }^{1}$ | 3 mo | 6 mo | 12 mo | Total | CMB ${ }^{1}$ | 3 mo | 6 mo | 12 mo | Total |
| September 28, 2010 |  |  |  |  | 0 | 3,000 |  |  |  | 3,000 |
| September 30, 2010 |  | 7,100 |  | 6,600 | 13,700 |  | 7,700 | 2,900 | 2,900 | 13,500 |
| October 1, 2010 | 3,000 |  |  |  | 3,000 |  |  |  |  | 0 |
| October 5, 2010 | 3,000 |  |  |  | 3,000 |  |  |  |  | 0 |
| October 14, 2010 | 3,500 | 8,000 | 6,000 |  | 17,500 |  | 8,600 | 3,200 | 3,200 | 15,000 |
| October 20, 2010 |  |  |  |  | 0 | 2,800 |  |  |  | 2,800 |
| October 25, 2010 |  |  |  |  | 0 | 3,000 |  |  |  | 3,000 |
| October 28, 2010 |  | 7,400 |  | 6,800 | 14,200 |  | 9,200 | 3,400 | 3,400 | 16,000 |
| November 2, 2010 | 2,800 |  |  |  | 2,800 |  |  |  |  | 0 |
| November 10, 2010 | 3,000 | 7,400 | 5,300 |  | 15,700 |  | 8,900 | 3,300 | 3,300 | 15,500 |
| November 18, 2010 |  |  |  |  | 0 | 2,500 |  |  |  | 2,500 |
| November 23, 2010 |  |  |  |  | 0 | 2,300 |  |  |  | 2,300 |
| November 25, 2010 |  | 7,400 |  | 5,700 | 13,100 |  | 7,700 | 2,900 | 2,900 | 13,500 |
| November 29, 2010 |  |  |  |  | 0 | 2,800 |  |  |  | 2,800 |
| December 3, 2010 | 2,500 |  |  |  | 2,500 |  |  |  |  | 0 |
| December 9, 2010 | 2,300 | 7,400 | 5,300 |  | 15,000 |  | 7,100 | 2,700 | 2,700 | 12,500 |
| December 13, 2010 | 2,800 |  |  |  | 2,800 |  |  |  |  | 0 |
| December 15, 2010 |  |  |  |  | 0 | 2,200 |  |  |  | 2,200 |
| December 22, 2010 |  |  |  |  | 0 | 3,000 |  |  |  | 3,000 |
| December 23, 2010 |  | 7,700 |  | 6,000 | 13,700 | 1,200 | 7,400 | 2,800 | 2,800 | 14,200 |
| January 6, 2011 | 5,200 | 7,700 | 5,800 |  | 18,700 |  | 7,100 | 2,700 | 2,700 | 12,500 |
| January 7, 2011 | 1,200 |  |  |  | 1,200 |  |  |  |  | 0 |
| January 20, 2011 |  | 8,600 |  | 5,400 | 14,000 | 1,500 | 6,200 | 2,400 | 2,400 | 12,500 |
| January 27, 2011 |  |  |  |  | 0 | 1,200 |  |  |  | 1,200 |
| February 3, 2011 |  | 9,200 | 5,600 |  | 14,800 |  | 5,900 | 2,300 | 2,300 | 10,500 |
| February 4, 2011 | 1,500 |  |  |  | 1,500 |  |  |  |  | 0 |
| February 17, 2011 | 1,200 | 8,900 |  | 5,300 | 15,400 | 2,800 | 6,500 | 2,500 | 2,500 | 14,300 |
| February 18, 2011 |  |  |  |  | 0 | 3,000 |  |  |  | 3,000 |
| February 24, 2011 |  |  |  |  | 0 | 2,500 |  |  |  | 2,500 |
| March 2, 2011 | 2,800 |  |  |  | 2,800 |  |  |  |  | 0 |
| March 3, 2011 | 3,000 | 7,700 | 5,700 |  | 16,400 |  | 7,100 | 2,700 | 2,700 | 12,500 |
| March 7, 2011 | 2,500 |  |  |  | 2,500 |  |  |  |  | 0 |
| March 17, 2011 |  | 7,100 |  | 5,800 | 12,900 |  | 6,800 | 2,600 | 2,600 | 12,000 |
| March 23, 2011 |  |  |  |  | 0 | 3,500 |  |  |  | 3,500 |
| March 28, 2011 |  |  |  |  | 0 | 3,000 |  |  |  | 3,000 |
| March 30, 2011 |  |  |  |  | 0 | 3,000 |  |  |  | 3,000 |
| March 31, 2011 |  | 7,400 | 6,100 |  | 13,500 |  | 7,700 | 2,900 | 2,900 | 13,500 |
| Total | 78,600 | 205,200 | 81,400 | 80,300 | 445,500 | 79,600 | 201,000 | 76,000 | 76,000 | 432,600 |

Reference Table III (cont'd)
Fiscal 2010-11 Treasury Bill Program

| Settlement date | Net increment |  |  |  |  | Average tender yields |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total maturing (\$ Millions) | Total new issues (\$ Millions) | Total (\$ Millions) | Cumulative (\$ Millions) | $\begin{gathered} \text { O/S² }^{2} \\ \text { (\$ Millions) } \end{gathered}$ | CMB ${ }^{1}$ <br> (\%) | 3 mo <br> (\%) | 6 mo (\%) | 12 mo <br> (\%) |
| April 1, 2010 | 16,600 | 14,000 | -2,600 | -2,600 | 173,300 |  | 0.29 | 0.47 | 0.95 |
| April 5, 2010 | 3,000 | 0 | -3,000 | -5,600 | 170,300 |  |  |  |  |
| April 7, 2010 | 1,900 | 0 | -1,900 | -7,500 | 168,400 |  |  |  |  |
| April 9, 2010 | 1,600 | 0 | -1,600 | -9,100 | 166,800 |  |  |  |  |
| April 14, 2010 | 0 | 2,000 | 2,000 | -7,100 | 168,800 | 0.19 |  |  |  |
| April 15, 2010 | 14,600 | 15,000 | 400 | -6,700 | 169,200 |  | 0.30 | 0.60 | 1.11 |
| April 21, 2010 | 0 | 2,500 | 2,500 | -4,200 | 171,700 | 0.20 |  |  |  |
| PApril 28, 2010 | 0 | 1,500 | 1,500 | -2,700 | 173,200 | 0.23 |  |  |  |
| April 29, 2010 | 13,600 | 13,000 | -600 | -3,300 | 172,600 |  | 0.40 | 0.72 | 1.29 |
| May 3, 2010 | 2,500 | 0 | -2,500 | -5,800 | 170,100 |  |  |  |  |
| May 5, 2010 | 1,500 | 0 | -1,500 | -7,300 | 168,600 |  |  |  |  |
| May 6, 2010 | 2,000 | 0 | -2,000 | -9,300 | 166,600 |  |  |  |  |
| May 13, 2010 | 12,800 | 12,000 | -800 | -10,100 | 165,800 |  | 0.41 | 0.76 | 1.25 |
| May 21, 2010 | 0 | 2,800 | 2,800 | -7,300 | 168,600 | 0.18 |  |  |  |
| May 26, 2010 | 0 | 2,600 | 2,600 | -4,700 | 171,200 | 0.21 |  |  |  |
| May 27, 2010 | 12,500 | 12,500 | 0 | -4,700 | 171,200 |  | 0.43 | 0.64 | 1.02 |
| May 28, 2010 | 0 | 1,300 | 1,300 | -3,400 | 172,500 | 0.17 |  |  |  |
| June 2, 2010 | 1,300 | 0 | -1,300 | -4,700 | 171,200 |  |  |  |  |
| June 3, 2010 | 2,800 | 0 | -2,800 | -7,500 | 168,400 |  |  |  |  |
| June 4, 2010 | 2,600 | 0 | -2,600 | -10,100 | 165,800 |  |  |  |  |
| June 10, 2010 | 14,200 | 13,500 | -700 | -10,800 | 165,100 | 0.31 | 0.54 | 0.78 | 1.15 |
| June 14, 2010 | 1,500 | 0 | -1,500 | -12,300 | 163,600 |  |  |  |  |
| June 23, 2010 | 13,400 | 12,500 | -900 | -13,200 | 162,700 |  | 0.58 | 0.84 | 1.25 |
| June 30, 2010 | 0 | 2,200 | 2,200 | -11,000 | 164,900 | 0.29 |  |  |  |
| July 8, 2010 | 15,600 | 14,000 | -1,600 | -12,600 | 163,300 |  | 0.55 | 0.81 | 1.08 |
| July 9, 2010 | 2,200 | 0 | -2,200 | -14,800 | 161,100 |  |  |  |  |
| July 16, 2010 | 0 | 1,500 | 1,500 | -13,300 | 162,600 | 0.40 |  |  |  |
| July 22, 2010 | 14,000 | 15,500 | 1,500 | -11,800 | 164,100 | 0.59 | 0.64 | 0.85 | 1.08 |
| July 28, 2010 | 0 | 2,400 | 2,400 | -9,400 | 166,500 | 0.60 |  |  |  |
| August 5, 2010 | 15,100 | 13,000 | -2,100 | -11,500 | 164,400 |  | 0.70 | 0.93 | 1.15 |
| August 9, 2010 | 2,500 | 0 | -2,500 | -14,000 | 161,900 |  |  |  |  |
| August 19, 2010 | 14,500 | 13,000 | -1,500 | -15,500 | 160,400 |  | 0.69 | 0.94 | 1.10 |
| August 20, 2010 | 0 | 1,600 | 1,600 | -13,900 | 162,000 | 0.45 |  |  |  |
| August 27, 2010 | 0 | 2,400 | 2,400 | -11,500 | 164,400 | 0.61 |  |  |  |
| August 31, 2010 | 0 | 3,000 | 3,000 | -8,500 | 167,400 | 0.61 |  |  |  |
| September 2, 2010 | 12,900 | 13,000 | 100 | -8,400 | 167,500 |  | 0.69 | 0.90 | 1.03 |
| September 3, 2010 | 1,600 | 0 | -1,600 | -10,000 | 165,900 |  |  |  |  |
| September 7, 2010 | 2,400 | 0 | -2,400 | -12,400 | 163,500 |  |  |  |  |
| September 16, 2010 | 15,600 | 16,500 | 900 | -11,500 | 164,400 | 0.85 | 0.92 | 1.08 | 1.29 |
| September 23, 2010 | 0 | 3,500 | 3,500 | -8,000 | 167,900 | 0.89 |  |  |  |
| September 28, 2010 | 0 | 3,000 | 3,000 | -5,000 | 170,900 | 0.98 |  |  |  |

Reference Table III (cont'd)
Fiscal 2010-11 Treasury Bill Program

| Settlement date | Net increment |  |  |  |  | Average tender yields |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total maturing (\$ Millions) | Total new issues (\$ Millions) | Total (\$ Millions) | Cumulative (\$ Millions) | $\begin{gathered} \text { O/S² }^{2} \\ (\$ \text { Millions) } \end{gathered}$ | CMB ${ }^{1}$ <br> (\%) | 3 mo <br> (\%) | $\begin{aligned} & 6 \mathrm{mo} \\ & (\%) \end{aligned}$ | $\begin{gathered} 12 \mathrm{mo} \\ (\%) \\ \hline \end{gathered}$ |
| September 30, 2010 | 13,700 | 13,500 | -200 | -5,200 | 170,700 |  | 0.89 | 1.09 | 1.31 |
| October 1, 2010 | 3,000 | 0 | -3,000 | -8,200 | 167,700 |  |  |  |  |
| October 5, 2010 | 3,000 | 0 | -3,000 | -11,200 | 164,700 |  |  |  |  |
| October 14, 2010 | 17,500 | 15,000 | -2,500 | -13,700 | 162,200 |  | 0.89 | 1.01 | 1.20 |
| October 20, 2010 | 0 | 2,800 | 2,800 | -10,900 | 165,000 | 0.95 |  |  |  |
| October 25, 2010 | 0 | 3,000 | 3,000 | -7,900 | 168,000 | 0.94 |  |  |  |
| October 28, 2010 | 14,200 | 16,000 | 1,800 | -6,100 | 169,800 |  | 0.92 | 1.02 | 1.20 |
| November 2, 2010 | 2,800 | 0 | -2,800 | -8,900 | 167,000 |  |  |  |  |
| November 10, 2010 | 15,700 | 15,500 | -200 | -9,100 | 166,800 |  | 0.94 | 1.06 | 1.27 |
| November 18, 2010 | 0 | 2,500 | 2,500 | -6,600 | 169,300 | 0.96 |  |  |  |
| November 23, 2010 | 0 | 2,300 | 2,300 | -4,300 | 171,600 | 0.96 |  |  |  |
| November 25, 2010 | 13,100 | 13,500 | 400 | -3,900 | 172,000 |  | 0.98 | 1.10 | 1.32 |
| November 29, 2010 | 0 | 2,800 | 2,800 | -1,100 | 174,800 | 0.99 |  |  |  |
| December 3, 2010 | 2,500 | 0 | -2,500 | -3,600 | 172,300 |  |  |  |  |
| December 9, 2010 | 15,000 | 12,500 | -2,500 | -6,100 | 169,800 |  | 1.01 | 1.12 | 1.32 |
| December 13, 2010 | 2,800 | 0 | -2,800 | -8,900 | 167,000 |  |  |  |  |
| December 15, 2010 | 0 | 2,200 | 2,200 | -6,700 | 169,200 | 0.93 |  |  |  |
| December 22, 2010 | 0 | 3,000 | 3,000 | -3,700 | 172,200 | 0.95 |  |  |  |
| December 23, 2010 | 13,700 | 14,200 | 500 | -3,200 | 172,700 | 0.99 | 1.00 | 1.14 | 1.37 |
| January 6, 2011 | 18,700 | 12,500 | -6,200 | -9,400 | 166,500 |  | 1.00 | 1.17 | 1.44 |
| January 7, 2011 | 1,200 | 0 | -1,200 | -10,600 | 165,300 |  |  |  |  |
| January 20, 2011 | 14,000 | 12,500 | -1,500 | -12,100 | 163,800 | 0.93 | 0.99 | 1.16 | 1.46 |
| January 21, 2011 | 0 | 1,200 | 1,200 | -10,900 | 165,000 | 0.91 |  |  |  |
| February 3, 2011 | 14,800 | 10,500 | -4,300 | -15,200 | 160,700 |  | 0.97 | 1.07 | 1.32 |
| February 4, 2011 | 1,500 | 0 | -1,500 | -16,700 | 159,200 |  |  |  |  |
| February 17, 2011 | 15,400 | 14,300 | -1,100 | -17,800 | 158,100 | 0.95 | 0.97 | 1.13 | 1.44 |
| February 18, 2011 | 0 | 3,000 | 3,000 | -14,800 | 161,100 | 0.94 |  |  |  |
| February 24, 2011 | 0 | 2,500 | 2,500 | -12,300 | 163,600 | 0.99 |  |  |  |
| March 2, 2011 | 2,800 | 0 | -2,800 | -15,100 | 160,800 |  |  |  |  |
| March 3, 2011 | 16,400 | 12,500 | -3,900 | -19,000 | 156,900 |  | 0.97 | 1.10 | 1.39 |
| March 7, 2011 | 2,500 | 0 | -2,500 | -21,500 | 154,400 |  |  |  |  |
| March 17, 2011 | 12,900 | 12,000 | -900 | -22,400 | 153,500 |  | 0.94 | 1.07 | 1.27 |
| March 23, 2011 | 0 | 3,500 | 3,500 | -18,900 | 157,000 | 0.97 |  |  |  |
| March 28, 2011 | 0 | 3,000 | 3,000 | -15,900 | 160,000 | 0.98 |  |  |  |
| March 30, 2011 | 0 | 3,000 | 3,000 | -12,900 | 163,000 | 0.97 |  |  |  |
| March 31, 2011 | 13,500 | 13,500 | 0 | -12,900 | 163,000 |  | 0.92 | 1.08 | 1.34 |
| Total | 445,500 | 432,600 | -12,900 |  |  |  |  |  |  |
| 1 Cash management bill. <br> 2 Oustanding. <br> Source: Bank of Canada. |  |  |  |  |  |  |  |  |  |

Reference Table IV
Fiscal 2010-11 Treasury Bill Auction Results
$\left.\begin{array}{lrccccc}\hline \text { Auction date } & \begin{array}{c}\text { Term } \\ \text { (months) }\end{array} & \begin{array}{c}\text { Issue amount } \\ (\$ \text { millions) }\end{array} & \begin{array}{c}\text { Average price } \\ (\$)\end{array} & \begin{array}{c}\text { Average yield } \\ (\%)\end{array} & \text { Bid coverage }\end{array} \begin{array}{c}\text { Tail } \\ \text { (basis points) }\end{array}\right]$

Reference Table IV (cont'd)
Fiscal 2010-11 Treasury Bill Auction Results
$\left.\begin{array}{lrccccc}\hline \text { Auction date } & \begin{array}{c}\text { Term } \\ \text { (months) }\end{array} & \begin{array}{c}\text { Issue amount } \\ (\$ \text { millions) }\end{array} & \begin{array}{c}\text { Average price } \\ (\$)\end{array} & \begin{array}{c}\text { Average yield } \\ (\%)\end{array} & \text { Bid coverage }\end{array} \begin{array}{c}\text { Tail } \\ \text { (basis points) }\end{array}\right)$

Reference Table IV (cont'd)
Fiscal 2010-11 Treasury Bill Auction Results

| Auction date | $\begin{aligned} & \text { Term } \\ & \text { (months) } \end{aligned}$ | Issue amount (\$ millions) | Average price <br> (\$) | Average yield <br> (\%) | Bid coverage | Tail (basis points) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| December 22, 2010 | CM | 3,000 | 99.961 | 0.951 | 1.912 | 1.3 |
| December 23, 2010 | NF | 1,200 | 99.959 | 0.993 | 3.395 | 0.5 |
| January 5, 2011 | 12 | 2,700 | 98.642 | 1.436 | 2.308 | 0.4 |
| January 5, 2011 | 3 | 7,100 | 99.733 | 0.997 | 2.206 | 0.2 |
| January 5, 2011 | 6 | 2,700 | 99.466 | 1.167 | 2.356 | 0.3 |
| January 18, 2011 | 12 | 2,400 | 98.570 | 1.455 | 2.619 | 0.5 |
| January 18, 2011 | 3 | 6,200 | 99.736 | 0.986 | 2.096 | 0.2 |
| January 18, 2011 | 6 | 2,400 | 99.425 | 1.160 | 2.533 | 0.3 |
| January 20, 2011 | NF | 1,500 | 99.962 | 0.930 | 3.960 | 0.0 |
| January 27, 2011 | CM | 1,200 | 99.948 | 0.912 | 2.155 | 0.7 |
| February 1, 2011 | 12 | 2,300 | 98.746 | 1.324 | 2.966 | 0.4 |
| February 1, 2011 | 3 | 5,900 | 99.741 | 0.966 | 2.385 | 0.1 |
| February 1, 2011 | 6 | 2,300 | 99.508 | 1.074 | 2.495 | 0.4 |
| February 15, 2011 | 12 | 2,500 | 98.585 | 1.439 | 2.478 | 0.6 |
| February 15, 2011 | 3 | 6,500 | 99.741 | 0.967 | 2.269 | 0.3 |
| February 15, 2011 | 6 | 2,500 | 99.441 | 1.128 | 2.137 | 0.7 |
| February 17, 2011 | NF | 2,800 | 99.966 | 0.953 | 2.140 | 1.7 |
| February 18, 2011 | CM | 3,000 | 99.967 | 0.936 | 1.980 | 2.4 |
| February 24, 2011 | NF | 2,500 | 99.970 | 0.989 | 2.888 | 0.8 |
| March 1, 2011 | 12 | 2,700 | 98.681 | 1.394 | 2.665 | 0.4 |
| March 1, 2011 | 3 | 7,100 | 99.741 | 0.969 | 2.405 | 0.3 |
| March 1, 2011 | 6 | 2,700 | 99.495 | 1.102 | 2.289 | 0.8 |
| March 15, 2011 | 12 | 2,600 | 98.751 | 1.268 | 2.504 | 0.7 |
| March 15, 2011 | 3 | 6,800 | 99.749 | 0.938 | 2.199 | 0.3 |
| March 15, 2011 | 6 | 2,600 | 99.468 | 1.073 | 2.361 | 0.6 |
| March 23, 2011 | NF | 3,500 | 99.976 | 0.967 | 2.429 | 1.0 |
| March 28, 2011 | NF | 3,000 | 99.978 | 0.982 | 2.498 | 1.5 |
| March 29, 2011 | 12 | 2,900 | 98.728 | 1.344 | 2.436 | 0.5 |
| March 29, 2011 | 3 | 7,700 | 99.754 | 0.918 | 2.139 | 0.4 |
| March 29, 2011 | 6 | 2,900 | 99.507 | 1.076 | 2.223 | 0.4 |
| March 30, 2011 | CM | 3,000 | 99.960 | 0.965 | 2.099 | 1.7 |
| Total |  | 418,600 |  |  |  |  |

Notes : Coverage is defined as the ratio of total bids at auction to the amount auctioned. Tail is defined as the hight accepted yield minus the average yield.
1 Non-fungible cash management bill.
2 Cash management bill.
Source: Bank of Canada.

Reference Table V
Issuance of Government of Canada Domestic Bonds (\$ billions)

| Fiscal year | Gross issuance |  |  |  |  |  |  |  | Buybacks |  |  | Net issuance |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Nominal ${ }^{1}$ |  |  |  |  |  | RRB | Total |  |  |  |  |
|  | 2-year | 3-year | 5-year | 10-year | 30-year | Total | 30-year |  | Cash | Switch | Total |  |
| 1995-96 | 11.1 | 5.1 | 17.0 | 10.5 | 5.0 | 48.7 | 1.0 | 49.7 |  |  |  | 49.7 |
| 1996-97 | 12.0 | 11.1 | 13.3 | 11.8 | 5.8 | 54.0 | 1.7 | 55.7 |  |  |  | 55.7 |
| 1997-98 | 14.0 |  | 9.9 | 9.3 | 5.0 | 38.2 | 1.7 | 39.9 |  |  |  | 39.9 |
| 1998-99 | 14.0 |  | 9.8 | 9.2 | 3.3 | 36.3 | 1.6 | 37.9 |  |  |  | 37.9 |
| 1999-00 | 14.2 |  | 14.0 | 12.9 | 3.7 | 44.8 | 1.3 | 46.0 | -2.7 | 0.0 | -2.7 | 43.3 |
| 2000-01 | 14.1 |  | 10.5 | 10.1 | 3.8 | 38.5 | 1.4 | 39.9 | -2.8 | 0.0 | -2.8 | 37.1 |
| 2001-02 | 14.0 |  | 10.0 | 9.9 | 6.3 | 40.2 | 1.4 | 41.6 | -5.3 | -0.4 | -5.6 | 35.9 |
| 2002-03 | 13.9 |  | 11.0 | 12.6 | 4.8 | 42.3 | 1.4 | 43.7 | -7.1 | -5.0 | -12.1 | 31.6 |
| 2003-04 | 13.0 |  | 10.7 | 11.5 | 4.2 | 39.4 | 1.4 | 40.8 | -5.2 | -5.0 | -10.2 | 30.7 |
| 2004-05 | 12.0 |  | 9.6 | 10.6 | 3.3 | 35.5 | 1.4 | 36.9 | -6.8 | -4.7 | -11.4 | 25.5 |
| 2005-06 | 10.0 |  | 9.2 | 10.0 | 3.2 | 32.4 | 1.5 | 33.9 | -5.3 | -3.3 | -8.6 | 25.3 |
| 2006-07 | 10.3 |  | 7.8 | 10.4 | 3.3 | 31.8 | 1.6 | 33.4 | -5.1 | -4.7 | -9.8 | 23.6 |
| 2007-08 | 11.7 |  | 6.3 | 10.7 | 3.4 | 32.0 | 2.3 | 34.3 | -4.3 | -2.4 | -6.7 | 27.6 |
| 2008-09 | 23.2 |  | 29.0 | 15.7 | 5.1 | 72.9 | 2.1 | 75.0 | -3.2 | -2.7 | -6.0 | 69.0 |
| 2009-10 | 31.5 | 20.1 | 24.0 | 17.4 | 7.0 | 100.0 | 2.2 | 102.2 | 0.0 | -2.1 | -2.1 | 100.1 |
| 2010-11 | 36.8 | 18.8 | 21.2 | 12.0 | 4.5 | 93.3 | 2.2 | 95.5 | 0.0 | -4.4 | -4.4 | 91.2 |

[^10]Reference Table VI
Fiscal 2010-11 Domestic Bond Program
$\begin{array}{llllll}\hline & & & & \begin{array}{c}\text { Bond } \\ \text { Offering date }\end{array} & \text { Delivery date }\end{array} \quad$ Maturity date $\left.\quad \begin{array}{c}\text { Maturing } \\ \text { (\$ millions) }\end{array}\right)$

Reference Table VI (cont'd)
Fiscal 2010-11 Domestic Bond Program

| Offering date | Delivery date | Maturity date | Maturing <br> (\$ millions) | Gross <br> (\$ millions) | Bond repurchase (\$ millions) | $\begin{gathered} \text { Net } \\ \text { (\$ millions) } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fixed-coupon bonds |  |  |  |  |  |  |
| March 2, 2011 | March 7, 2011 | June 1, 2016 |  | 3,200 |  | 3,200 |
| March 9, 2011 | March 11, 2011 | March 1, 2013 |  | 3,000 |  | 3,000 |
| March 16, 2011 | March 21, 2011 | June 1, 2041 |  | 300 | 354 | -54 |
| March 23, 2011 | March 25, 2011 | March 1, 2014 |  | 3,200 |  | 3,200 |
| Real Return Bonds |  |  |  |  |  |  |
| May 26, 2010 | May 31, 2010 | December 1, 2044 |  | 700 |  | 700 |
| August 25, 2010 | August 30, 2010 | December 1, 2044 |  | 400 |  | 400 |
| December 1, 2010 | December 6, 2010 | December 1, 2044 |  | 700 |  | 700 |
| February 23, 2011 | February 28, 2011 | December 1, 2044 |  | 400 |  | 400 |
| Totals for fiscal year |  |  | 22,246 | 95,543 | 4,388 | 68,909 |

* Maturing date.

Reference Table VII
Fiscal 2010-11 Domestic Bond Auction Results

| Auction date | Term (years) | Maturity date | Coupon rate <br> (\%) | Issue amount (\$ millions) | Average price (\$) | Average yield <br> (\%) | Auction coverage | Tail (basis points) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April 7, 2010 | 2 | June 1, 2012 | 1.50 | 3,000 | 99.026 | 1.966 | 2.61 | 0.3 |
| April 14, 2010 | 5 | December 1, 2015 | 3.00 | 3,500 | 98.799 | 3.236 | 2.46 | 0.4 |
| April 28, 2010 | 10 | June 1, 2020 | 3.50 | 3,000 | 98.097 | 3.728 | 2.13 | 1.0 |
| May 5, 2010 | 2 | June 1, 2012 | 1.50 | 3,000 | 99.277 | 1.858 | 2.59 | 0.5 |
| May 12, 2010 | 3 | September 1, 2013 | 2.50 | 3,000 | 99.676 | 2.604 | 2.27 | 1.0 |
| May 19, 2010 | 30 | June 1, 2041 | 4.00 | 1,400 | 103.998 | 3.780 | 2.33 | 0.8 |
| May 26, 2010 | 30 | December 1, 2044 | 1.50* | 700 | 99.732 | 1.510 | 2.06 |  |
| June 2, 2010 | 2 | September 1, 2012 | 2.00 | 3,000 | 100.156 | 1.928 | 2.45 | 0.1 |
| June 9, 2010 | 5 | December 1, 2015 | 3.00 | 3,500 | 100.951 | 2.811 | 2.24 | 0.7 |
| June 16, 2010 | 3 | September 1, 2013 | 2.50 | 3,000 | 100.328 | 2.393 | 2.48 | 0.4 |
| July 7, 2010 | 2 | September 1, 2012 | 2.00 | 3,000 | 100.914 | 1.565 | 2.64 | 0.3 |
| July 14, 2010 | 10 | June 1, 2021 | 3.25 | 3,000 | 98.488 | 3.418 | 2.32 | 0.9 |
| August 4, 2010 | 3 | September 1, 2013 | 2.50 | 3,200 | 101.804 | 1.891 | 2.83 | 0.5 |
| August 11, 2010 | 2 | December 1, 2012 | 1.50 | 3,000 | 99.947 | 1.524 | 2.57 | 0.2 |
| August 18, 2010 | 5 | December 1, 2015 | 3.00 | 3,500 | 103.672 | 2.257 | 2.297 | 0.2 |
| August 25, 2010 | 30 | December 1, 2044 | 1.50* | 400 | 104.523 | 1.335 | 2.25 |  |
| September 1, 2010 | 30 | June 1, 2041 | 4.00 | 1,400 | 109.583 | 3.489 | 2.32 | 0.7 |
| September 15, 2010 | 2 | December 1, 2012 | 1.50 | 3,000 | 99.879 | 1.556 | 2.67 | 0.3 |
| October 6, 2010 | 10 | June 1, 2021 | 3.25 | 3,000 | 103.778 | 2.836 | 2.43 | 0.5 |
| October 13, 2010 | 2 | December 1, 2012 | 1.50 | 3,000 | 100.169 | 1.419 | 2.47 | 0.3 |
| November 3, 2010 | 5 | June 1, 2016 | 2.00 | 3,500 | 99.052 | 2.182 | 2.58 | 0.6 |
| November 10, 2010 | 2 | December 1, 2012 | 1.50 | 3,000 | 99.888 | 1.556 | 2.60 | 0.1 |
| November 17, 2010 | 30 | June 1, 2041 | 4.00 | 1,400 | 106.639 | 3.638 | 3.01 | 0.2 |
| December 1, 2010 | 30 | December 1, 2044 | 1.50* | 700 | 109.675 | 1.155 | 2.05 |  |
| December 8, 2010 | 3 | March 1, 2014 | 2.00 | 3,200 | 99.720 | 2.091 | 2.58 | 0.7 |
| December 15, 2010 | 2 | March 1, 2013 | 1.75 | 3,000 | 99.919 | 1.787 | 2.46 | 0.4 |
| January 12, 2011 | 5 | June 1, 2016 | 2.00 | 3,200 | 96.647 | 2.674 | 2.45 | 0.5 |
| January 26, 2011 | 2 | March 1, 2013 | 1.75 | 3,000 | 99.981 | 1.759 | 2.93 | 0.2 |
| February 2, 2011 | 10 | June 1, 2021 | 3.25 | 3,000 | 98.001 | 3.482 | 2.43 | 0.7 |
| February 9, 2011 | 3 | March 1, 2014 | 2.00 | 3,200 | 99.234 | 2.262 | 2.59 | 0.3 |
| February 23, 2011 | 30 | December 1, 2044 | 1.50* | 400 | 104.332 | 1.340 | 2.58 |  |
| March 2, 2011 | 5 | June 1, 2016 | 2.00 | 3,200 | 96.602 | 2.700 | 2.46 | 0.4 |
| March 9, 2011 | 2 | March 1, 2013 | 1.75 | 3,000 | 99.774 | 1.867 | 2.84 | 0.1 |
| March 23, 2011 | 3 | March 1, 2014 | 2.00 | 3,200 | 99.937 | 2.022 | 2.70 | 0.3 |
| Total |  |  |  | 90,600 |  |  |  |  |

[^11]Reference Table VIII
Outstanding Government of Canada Domestic Bonds as at March 31, 2011

| Maturity date | Amount (\$ millions) | Coupon rate (\%) | Inflation adjustment (\$ millions) | Outstanding amount (\$ millions) |
| :---: | :---: | :---: | :---: | :---: |
| Fixed-coupon bonds |  |  |  |  |
| June 1, 2011 | 3,636 | 1.25 |  |  |
| June 1, 2011 | 8,500 | 6.00 |  |  |
| June 1, 2011 | 606 | 8.50 |  |  |
| September 1, 2011 | 6,274 | 1.00 |  |  |
| September 1, 2011 | 6,129 | 3.75 |  |  |
| December 1, 2011 | 8,210 | 1.25 |  |  |
| March 1, 2012 | 8,112 | 1.50 |  |  |
| June 1, 2012 | 6,926 | 1.50 |  |  |
| June 1, 2012 | 6,523 | 3.75 |  |  |
| June 1, 2012 | 9,850 | 5.25 |  |  |
| September 1, 2012 | 17,500 | 2.00 |  |  |
| December 1, 2012 | 14,411 | 1.50 |  |  |
| March 1, 2013 | 18,990 | 1.75 |  |  |
| June 1, 2013 | 14,502 | 3.50 |  |  |
| June 1, 2013 | 8,997 | 5.25 |  |  |
| September 1, 2013 | 9,200 | 2.50 |  |  |
| March 1, 2014 | 9,600 | 2.00 |  |  |
| March 15, 2014 | 710 | 10.25 |  |  |
| June 1, 2014 | 13,635 | 3.00 |  |  |
| June 1, 2014 | 9,670 | 5.00 |  |  |
| December 1, 2014 | 15,000 | 2.00 |  |  |
| June 1, 2015 | 9,000 | 2.50 |  |  |
| June 1, 2015 | 10,143 | 4.50 |  |  |
| June 1, 2015 | 457 | 11.25 |  |  |
| December 1, 2015 | 11,342 | 3.00 |  |  |
| June 1, 2016 | 9,900 | 2.00 |  |  |
| June 1, 2016 | 10,157 | 4.00 |  |  |
| June 1, 2017 | 10,343 | 4.00 |  |  |
| June 1, 2018 | 10,623 | 4.25 |  |  |
| June 1, 2019 | 17,650 | 3.75 |  |  |
| June 1, 2020 | 13,100 | 3.50 |  |  |
| March 15, 2021 | 567 | 10.50 |  |  |
| June 1, 2021 | 9,000 | 3.25 |  |  |
| June 1, 2021 | 286 | 9.75 |  |  |
| June 1, 2022 | 206 | 9.25 |  |  |
| June 1, 2023 | 3,757 | 8.00 |  |  |
| June 1, 2025 | 3,075 | 9.00 |  |  |
| June 1, 2027 | 6,226 | 8.00 |  |  |
| June 1, 2029 | 12,665 | 5.75 |  |  |

Reference Table VIII (cont'd)
Outstanding Government of Canada Domestic Bonds as at March 31, 2011

| Maturity date | Amount <br> $(\$$ millions $)$ | Coupon rate <br> $(\%)$ | Inflation adjustment <br> $(\$$ millions) | Outstanding amount <br> $(\$$ millions $)$ |
| :--- | :---: | :---: | :---: | :---: |
| Fixed-coupon bonds |  |  |  |  |
| June 1, 2033 | 13,410 | 5.75 |  |  |
| June 1, 2037 | 13,999 | 5.00 |  |  |
| June 1, 2041 | 15,800 | 4.00 |  |  |
| Total | $\mathbf{3 7 8 , 6 8 7}$ |  |  |  |
| Real Return Bonds |  |  |  |  |
| December 1, 2021 | 5,175 | 4.25 | 2,162 | 7,041 |
| December 1, 2026 | 5,250 | 4.25 | 1,791 | 7,476 |
| December 1, 2031 | 5,800 | 4.00 | 1,676 | 6,691 |
| December 1, 2036 | 5,850 | 3.00 | 841 | 6,937 |
| December 1, 2041 | 6,550 | 2.00 | 387 | 2,242 |
| December 1, 2044 | 2,200 | 1.50 | 42 | $\mathbf{3 7 , 7 2 4}$ |
| Total | $\mathbf{3 0 , 8 2 5}$ |  | $\mathbf{6 , 8 9 9}$ |  |

Note: Outstanding bond amounts reported in this table are in accordance with Bank of Canada reports, which may vary slightly with Government of Canada amounts due to differences in classification methods.
Source: Bank of Canada.

## Reference Table IX

Government of Canada Cross-Currency Swaps Outstanding as at March 31, 2011 (CAD\$ millions)

|  | Swaps of domestic obligations |  |  | Swaps of foreign obligations |  |  |
| :--- | ---: | ---: | ---: | :--- | :--- | :---: |
| Maturity date | USD | EUR | JPY |  | USD | Total |
| 2010 | 727 | 1,381 | 0 |  | 2,108 |  |
| 2011 | 2,646 | 1,319 | 58 |  | 4,024 |  |
| 2012 | 1,091 | 1,601 | 117 |  | 2,808 |  |
| 2013 | 2,327 | 1,670 | 58 |  | 4,055 |  |
| 2014 | 2,279 | 1,333 | 0 |  | 3,612 |  |
| 2015 | 1,357 | 2,584 | 0 |  | 3,941 |  |
| 2016 | 2,643 | 1,381 | 0 |  | 4,025 |  |
| 2017 | 3,200 | 1,512 | 0 |  | 4,711 |  |
| 2018 | 1,711 | 1,374 | 0 |  | 3,085 |  |
| 2019 | 3,818 | 69 | 0 |  | 3,886 |  |
| 2020 | 2,816 | 0 | 0 |  | 2,816 |  |
| Total | $\mathbf{2 4 , 6 1 5}$ | $\mathbf{1 4 , 2 2 4}$ | $\mathbf{2 3 3}$ |  | $\mathbf{3 9 , 0 7 2}$ |  |

Notes: Foreign currency swaps converted to Canadian dollars as of March 31, 2011. Numbers may not add due to rounding. In addition, a USD 491 million foreign exchange swap was outstanding as of March 31, 2011.

Reference Table X
Fiscal 2010-11 Bond Buyback Program Operations

| Buyback date | Maturity date | Coupon rate <br> (\%) | Amount (\$ millions) |
| :---: | :---: | :---: | :---: |
| Buyback on a switch basis |  |  |  |
| July 28, 2010 | June 1, 2012 | 1.50 | 939 |
|  | June 1, 2014 | 3.00 | 97 |
| Total |  |  | 1,036 |
| September 2, 2010 | June 1, 2014 | 3.00 | 300 |
| Total |  |  | 300 |
| September 22, 2010 | June 1, 2014 | 3.00 | 635 |
|  | June 1, 2014 | 5.00 | 10 |
| Total |  |  | 645 |
| October 21, 2010 | June 1, 2014 | 3.00 | 519 |
| Total |  |  | 519 |
| October 27, 2010 | June 1, 2012 | 1.50 | 80 |
|  | June 1, 2012 | 3.75 | 2 |
|  | June 1, 2013 | 3.50 | 245 |
|  | June 1, 2014 | 3.00 | 305 |
|  | June 1, 2014 | 5.00 | 3 |
| Total |  |  | 635 |
| November 24, 2010 | June 1, 2013 | 3.50 | 317 |
|  | June 1, 2014 | 3.00 | 300 |
|  | June 1, 2014 | 5.00 | 40 |
| Total |  |  | 657 |
| February 16, 2011 | June 1, 2014 | 3.00 | 210 |
|  | June 1, 2014 | 5.00 | 32 |
| Total |  |  | 242 |
| March 16, 2011 | June 1, 2027 | 8.00 | 215 |
|  | June 1, 2029 | 5.75 | 139 |
| Total |  |  | 354 |
| Grand total |  |  | 4,388 |
| Cash management bond buyback |  |  |  |
| March 30, 2010 | June 1, 2011 | 1.25 | 705 |
| Total |  |  | 705 |
| April 13, 2010 | June 1, 2010 | 3.75 | 25 |
|  | September 1, 2010 | 4.00 | 450 |
|  | June 1, 2011 | 1.25 | 205 |
| Total |  |  | 680 |
| April 27, 2010 | June 1, 2011 | 1.25 | 500 |
| Total |  |  | 500 |
| May 11, 2010 | September 1, 2010 | 4.00 | 25 |
|  | December 1, 2010 | 2.75 | 570 |
|  | June 1, 2011 | 1.25 | 210 |
| Total |  |  | 805 |

Reference Table X (cont'd)
Fiscal 2010-11 Bond Buyback Program Operations

| Buyback date | Maturity date | Coupon rate (\%) | Amount <br> (\$ millions) |
| :---: | :---: | :---: | :---: |
| Cash management bond buyback |  |  |  |
| June 8, 2010 | June 1, 2011 | 6.00 | 250 |
| Total |  |  | 250 |
| June 22, 2010 |  |  |  |
| Total |  |  | 0 |
| July 6, 2010 | December 1, 2010 | 2.75 | 800 |
|  | June 1, 2011 | 1.25 | 20 |
|  | June 1, 2011 | 6.00 | 75 |
|  | September 1, 2011 | 1.00 | 105 |
| Total |  |  | 1,000 |
| July 20, 2010 | September 1, 2011 | 1.00 | 400 |
| Total |  |  | 400 |
| August 3, 2010 | December 1, 2010 | 2.75 | 150 |
|  | September 1, 2011 | 1.00 | 300 |
|  | September 1, 2011 | 3.75 | 309 |
| Total |  |  | 759 |
| August 10, 2010 | December 1, 2010 | 2.75 | 150 |
|  | September 1, 2011 | 1.00 | 205 |
|  | September 1, 2011 | 3.75 | 145 |
| Total |  |  | 500 |
| August 17, 2010 | September 1, 2011 | 1.00 | 598 |
|  | September 1, 2011 | 3.75 | 402 |
| Total |  |  | 1,000 |
| August 31, 2010 | September 1, 2011 | 1.00 | 60 |
|  | September 1, 2011 | 3.75 | 100 |
| Total |  |  | 160 |
| September 7, 2010 | December 1, 2010 | 2.75 | 500 |
| Total |  |  | 500 |
| September 14, 2010 | December 1, 2010 | 2.75 | 4 |
|  | June 1, 2011 | 1.25 | 339 |
|  | September 1, 2011 | 1.00 | 200 |
|  | September 1, 2011 | 3.75 | 457 |
| Total |  |  | 1,000 |
| September 21, 2010 | September 1, 2011 | 1.00 | 210 |
|  | September 1, 2011 | 3.75 | 172 |
|  | December 1, 2011 | 1.25 | 118 |
| Total |  |  | 500 |

Reference Table X (cont'd)
Fiscal 2010-11 Bond Buyback Program Operations

| Buyback date | Maturity date | Coupon rate <br> (\%) | Amount (\$ millions) |
| :---: | :---: | :---: | :---: |
| Cash management bond buyback |  |  |  |
| September 28, 2010 | December 1, 2010 | 2.75 | 65 |
|  | June 1, 2011 | 1.25 | 543 |
|  | June 1, 2011 | 6.00 | 16 |
| Total |  |  | 624 |
| October 5, 2010 | December 1, 2010 | 2.75 | 13 |
|  | June 1, 2011 | 1.25 | 275 |
|  | September 1, 2011 | 1.00 | 31 |
|  | September 1, 2011 | 3.75 | 181 |
| Total |  |  | 500 |
| October 12, 2010 | June 1, 2011 | 1.25 | 931 |
|  | June 1, 2011 | 6.00 | 14 |
|  | September 1, 2011 | 1.00 | 10 |
|  | September 1, 2011 | 3.75 | 45 |
| Total |  |  | 1,000 |
| October 19, 2010 | December 1, 2010 | 2.75 | 13 |
|  | September 1, 2011 | 1.00 | 40 |
|  | December 1, 2011 | 1.25 | 447 |
| Total |  |  | 500 |
| October 26, 2010 | December 1, 2010 | 2.75 | 292 |
|  | June 1, 2011 | 1.25 | 29 |
|  | June 1, 2011 | 6.00 | 28 |
|  | September 1, 2011 | 1.00 | 275 |
|  | September 1, 2011 | 3.75 | 351 |
|  | December 1, 2011 | 1.25 | 25 |
| Total |  |  | 1,000 |
| November 2, 2010 | December 1, 2010 | 2.75 | 500 |
| Total |  |  | 500 |
| November 9, 2010 | December 1, 2010 | 2.75 | 210 |
|  | September 1, 2011 | 1.00 | 25 |
| Total |  |  | 235 |
| November 16, 2010 | December 1, 2010 | 2.75 | 20 |
|  | June 1, 2011 | 1.25 | 265 |
|  | September 1, 2011 | 1.00 | 25 |
|  | September 1, 2011 | 3.75 | 10 |
|  | December 1, 2011 | 1.25 | 25 |
| Total |  |  | 345 |
| November 30, 2010 | September 1, 2011 | 3.75 | 8 |
| Total |  |  | 8 |

Reference Table X (cont'd)
Fiscal 2010-11 Bond Buyback Program Operations

| Buyback date | Maturity date | Coupon rate (\%) | Amount <br> (\$ millions) |
| :---: | :---: | :---: | :---: |
| Cash management bond buyback |  |  |  |
| December 7, 2010 | September 1, 2011 | 1.00 | 27 |
|  | December 1, 2011 | 1.25 | 75 |
|  | March 1, 2012 | 1.50 | 164 |
|  | June 1, 2012 | 1.50 | 200 |
|  | June 1, 2012 | 3.75 | 50 |
|  | June 1, 2012 | 5.25 | 75 |
| Total |  |  | 591 |
| December 14, 2010 | June 1, 2011 | 1.25 | 300 |
|  | June 1, 2011 | 6.00 | 18 |
|  | September 1, 2011 | 3.75 | 67 |
|  | June 1, 2012 | 1.50 | 65 |
|  | June 1, 2012 | 3.75 | 50 |
| Total |  |  | 500 |
| December 21, 2010 | June 1, 2011 | 1.25 | 89 |
|  | June 1, 2011 | 6.00 | 100 |
|  | September 1, 2011 | 1.00 | 429 |
|  | September 1, 2011 | 3.75 | 243 |
|  | March 1, 2012 | 1.50 | 58 |
|  | June 1, 2012 | 1.50 | 75 |
|  | June 1, 2012 | 3.75 | 3 |
|  | June 1, 2012 | 5.25 | 3 |
| Total |  |  | 1,000 |
| January 5, 2011 | June 1, 2011 | 6.00 | 62 |
|  | December 1, 2011 | 1.25 | 24 |
|  | June 1, 2012 | 1.50 | 195 |
| Total |  |  | 282 |
| January 11, 2011 | June 1, 2011 | 1.25 | 100 |
|  | June 1, 2011 | 6.00 | 3 |
|  | September 1, 2011 | 1.00 | 140 |
|  | September 1, 2011 | 3.75 | 58 |
|  | December 1, 2011 | 1.25 | 72 |
|  | March 1, 2012 | 1.50 | 2 |
|  | June 1, 2012 | 1.50 | 100 |
|  | June 1, 2012 | 5.25 | 25 |
| Total |  |  | 500 |

Reference Table X (cont'd)
Fiscal 2010-11 Bond Buyback Program Operations

| Buyback date | Maturity date | Coupon rate (\%) | Amount (\$ millions) |
| :---: | :---: | :---: | :---: |
| Cash management bond buyback |  |  |  |
| January 18, 2011 | June 1, 2011 | 1.25 | 61 |
|  | December 1, 2011 | 1.25 | 110 |
|  | March 1, 2012 | 1.50 | 20 |
|  | June 1, 2012 | 1.50 | 210 |
| Total |  |  | 401 |
| January 25, 2011 | December 1, 2011 | 1.25 | 198 |
|  | March 1, 2012 | 1.50 | 50 |
| Total |  |  | 248 |
| February 1, 2011 | June 1, 2011 | 1.25 | 352 |
|  | June 1, 2011 | 6.00 | 1 |
|  | September 1, 2011 | 3.75 | 45 |
| Total |  |  | 399 |
| February 8, 2011 | December 1, 2011 | 1.25 | 50 |
|  | June 1, 2012 | 1.50 | 50 |
|  | June 1, 2012 | 3.75 | 21 |
|  | June 1, 2012 | 5.25 | 379 |
| Total |  |  | 500 |
| February 15, 2011 | June 1, 2011 | 1.25 | 386 |
|  | June 1, 2011 | 6.00 | 48 |
|  | September 1, 2011 | 3.75 | 45 |
|  | December 1, 2011 | 1.25 | 146 |
|  | March 1, 2012 | 1.50 | 225 |
|  | June 1, 2012 | 3.75 | 150 |
| Total |  |  | 1,000 |
| February 22, 2011 | June 1, 2011 | 1.25 | 93 |
|  | September 1, 2011 | 1.00 | 100 |
| Total |  |  | 193 |
| March 1, 2011 | June 1, 2011 | 1.25 | 219 |
|  | June 1, 2011 | 6.00 | 159 |
|  | September 1, 2011 | 1.00 | 91 |
|  | March 1, 2012 | 1.50 | 115 |
| Total |  |  | 584 |
| March 8, 2011 | June 1, 2011 | 1.25 | 6 |
|  | June 1, 2011 | 6.00 | 110 |
|  | March 1, 2012 | 1.50 | 85 |
|  | June 1, 2012 | 1.50 | 100 |
| Total |  |  | 301 |

Reference Table X (cont'd)
Fiscal 2010-11 Bond Buyback Program Operations

| Buyback date | Maturity date | Coupon rate <br> $(\%)$ | Amount <br> $(\$$ millions $)$ |
| :--- | :--- | :---: | ---: |
| Cash management <br> bond buyback |  |  |  |
| March 15, 2011 | June 1, 2011 | 1.25 | 210 |
|  | June 1, 2011 | 6.00 | 290 |
|  | September 1, 2011 | 1.00 | 455 |
|  | March 1, 2012 | 1.50 | 45 |
| Total |  |  | $\mathbf{1 , 0 0 0}$ |
| March 22, 2011 | June 1, 2011 | 1.25 | 170 |
|  | June 1, 2011 | 6.00 | 17 |
|  | March 1, 2012 | 1.50 | 125 |
|  | June 1, 2012 | 1.50 | 60 |
| Total | June 1, 2012 | 5.25 | 25 |
| March 29, 2011 |  |  | $\mathbf{3 9 7}$ |
|  | June 1, 2011 | 1.25 | 306 |
|  | March 1, 2012 | 1.50 | 230 |
| Total | June 1, 2012 | 1.50 | 25 |
| Grand total | June 1, 2012 | 5.25 | 13 |

Reference Table XI
Crown Corporation Borrowings as at March 31, 2011

|  |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Borrowings from the market | $\mathbf{2 0 0 2}$ | $\mathbf{2 0 0 3}$ | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ | $\mathbf{2 0 0 9}$ | $\mathbf{2 0 1 0}$ | $\mathbf{2 0 1 1}$ |
| Export Development Canada | 20,481 | 20,375 | 17,178 | 16,191 | 13,730 | 15,533 | 16,743 | 26,925 | 23,001 | 22,033 |
| Canadian Wheat Board ${ }^{1}$ | 397 | 378 | 12 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| Business Development Bank <br> of Canada | 5,726 | 6,263 | 7,302 | 7,432 | 7,898 | 8,256 | 8,025 | 2,354 | 1,488 | 897 |
| Farm Credit Canada | 7,096 | 8,082 | 9,209 | 10,181 | 11,133 | 12,182 | 9,624 | 3,949 | 1,765 | 1,293 |
| Canada Mortgage and Housing |  |  |  |  |  |  |  |  |  |  |
| Corporation | 11,372 | 11,091 | 10,441 | 9,573 | 8,953 | 9,071 | 8,907 | 6,153 | 4,421 | 3,039 |
| Canada Housing Trust ${ }^{2}$ |  |  |  | 57,518 | 77,840 | 96,547 | 127,566 | 160,664 | 180,440 | 199,238 |
| Petro-Canada Ltd. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Canada Ports Corporation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Canada Post Corporation | 63 | 114 | 108 | 71 | 64 | 61 | 58 | 93 | 90 | 1,051 |
| Other | 40 | 39 | 45 | 36 | 79 | 132 | 119 | 279 | 248 | 91 |
| Total | $\mathbf{4 5 , 1 7 5}$ | $\mathbf{4 6 , 3 4 2}$ | $\mathbf{4 4 , 2 9 5}$ | $\mathbf{1 0 1 , 0 0 8}$ | $\mathbf{1 1 9 , 6 9 7}$ | $\mathbf{1 4 1 , 7 8 2}$ | $\mathbf{1 7 1 , 0 4 2}$ | $\mathbf{2 0 0 , 4 1 7}$ | $\mathbf{2 1 1 , 4 5 3}$ | $\mathbf{2 2 7 , 6 4 2}$ |

1 Effective December 31, 1998, the Canadian Wheat Board ceased to be an agent of Her Majesty and a Crown corporation under the Financial Administration Act.
2 Canada Housing Trust has been included in the government reporting entity effective April 1, 2005 as a result of the application of a new accounting standard.

| Government's loans and advances in enterprise Crown corporations | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Business Development Bank of Canada | 0 | 0 |  | 0 | 0 | 0 | 1,000 | 7,284 | 12,245 | $13,223^{1}$ |
| Canada Mortgage and Housing Corporation | 5,696 | 5,408 | 5,189 | 4,999 | 4,799 | 4,651 | 4,393 | 61,863 | 72,262 | 69,569 ${ }^{2}$ |
| Canada Deposit Insurance Corporation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Farm Credit Canada | 0 | 0 | 0 | 0 | 0 | 0 | 3,840 | 11,450 | 15,931 | 17,558 |
| Other | 104 | 38 | 66 | 64 | 131 | 98 | 134 | 139 | 132 | 122 |
| Total | 5,800 | 5,446 | 5,255 | 5,063 | 4,930 | 4,749 | 9,367 | 80,736 | 100,570 | 100,472 |

Note: Certain comparative figures have been reclassified to conform to the current year's presentation.
1 Includes $\$ 2,127$ million in outstanding lending related to the Canadian Secured Credit Facility.
2 Includes $\$ 58,224$ million in outstanding lending related to the Insured Mortgage Purchase Program. Source: Public Accounts of Canada.


[^0]:    ${ }^{1}$ Approved Orders in Council (OIC) are available on the Privy Council Office website (www.pco-bcp.gc.ca/oic-ddc.asp?lang=eng\&page=secretariats). The reference number for the 2010-11 OIC is 2010-0415.

[^1]:    ${ }^{2}$ Activity under the Crown borrowing program does not affect the federal debt (accumulated deficit), since increased federal borrowing is matched by assets in the form of loans to the Crown corporations.

[^2]:    3 Non-market liabilities include pensions, other employee and veteran future benefits and other liabilities.
    4 Unmatured debt is almost entirely composed of market debt (it also includes amounts for capital leases).

[^3]:    5 Modified duration measures the price sensitivity of a security or portfolio of fixed-income securities to changes in yields. Multiplying the modified duration of a security by the change in its yield gives the estimated percentage change in price of the security. The average term to maturity is calculated by multiplying the remaining maturity on each instrument by its weight in the portfolio.
    6 The refixing share is simply a reformulation of the fixed-rate share reported in the past. The fixed-rate share has been replaced by the refixing share to facilitate comparison and be consistent with the metrics used by other sovereigns.

[^4]:    7 See the Bank of Canada website (www.bankofcanada.ca/stats/cars/f/bd_auction_schedule.html).
    8 Non-fungible securities do not share the same maturity dates with outstanding bond issues. The benchmark size for bonds that are fungible with existing bonds is deemed attained once the total amount of outstanding bonds for that maturity exceeds the minimum benchmark size.

[^5]:    ${ }^{9}$ The amount of new bonds issued through buybacks on a switch basis does not necessarily equal the amount of old bonds bought back through those operations because the exchange is not based on par value, but rather is on a duration-neutral equivalent basis.
    ${ }^{10}$ More details on the subjects of discussion and views expressed during the consultations can be found on the Bank of Canada website (mw .bankofcanada.ca/publications-research/market-notices/).
    ${ }^{11}$ See the Bank of Canada website (www.bankofcanada.ca/markets/government-securities-auctions/).
    ${ }^{12}$ The Bank of Canada targets an average turnaround time of less than 3 minutes for auctions and less than 5 minutes for buyback operations. Maximum turnaround times are 5 minutes for auctions and 10 minutes for buyback operations.

[^6]:    ${ }^{13}$ Note that on October 28, 2010, the Bank of Canada announced it would increase its minimum nominal bond purchase amount at auction from 5 per cent to 15 per cent.
    ${ }^{14}$ Under the Terms of Participation in Auctions for Government Securities Distributors (www.bankofcanada.ca/en/markets/markets_auct.html), a primary dealer's bids, and bids from its customers, must total a minimum of 50 per cent of its auction limit or 50 per cent of its formula calculation, rounded upward to the nearest percentage point, whichever is lower. In addition, the minimum level of bidding must be at a reasonable price.
    ${ }^{15}$ Tails are not calculated for Real Return Bond auctions since successful bidders are allotted bonds at the single-price equivalent of the highest real yield (single-price auction type) of accepted competitive bids. See Section 6 of the Standard Terms for Auctions of Government of Canada Real Return Bonds (www.bankofcanada.ca/wp-content/uploads/2010/07/termsrrb110110.pdf).
    ${ }^{16}$ The reintroduction of the 3-year nominal bond was announced in the 2009-10 Debt Management Strategy.

[^7]:    ${ }^{17}$ A customer is a bidder on whose behalf a GSD has been directed to submit a competitive or non-competitive bid for a specified amount of securities at a specific price.

[^8]:    ${ }^{18}$ The Details on Bond Buyback Operations were amended to allow for operations on a weekly basis, and the repurchase threshold of $\$ 3$ billion for large, off-the-run issues was removed except for cash management bond buybacks. For more information see the Bank of Canada website (www.bankofcanada.ca/wp-content/uploads/2010/07/not170610_bondback.pdf).

[^9]:    1 Because certain comparative figures have been restated to reflect the presentation method used in recent years, the numbers presented in this reference table can differ from numbers presented in other sections of the Debt Management Report. In the reference table, "Government's Holding - Consolidation Adjustment" is presented separately but in the rest of the report the amount is incorporated into the figures. For more information, please consult Table 6.1 and Table 6.14 of the Public Accounts of Canada 2011.

[^10]:    1 Including nominal issuance through switch buyback operations.

[^11]:    Notes: Coverage is defined as the ratio of total bids at auction to the amount auctioned. Tail is defined as the high accepted yield minus the average yield. Does not include nominal issuance resulting from switch buyback operations.

    * Real Return Bond.

    Source: Bank of Canada.

