



Debt Management Report

2002-2003

Canada



Debt Management Report

2002-2003



Department of Finance
Canada

Ministère des Finances
Canada

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Foreword by the Minister of Finance

I am pleased to table before Parliament the Government of Canada's *Debt Management Report* for fiscal year 2002–03. It provides the accountability Canadians deserve, with comprehensive information about how Canada's debt is managed.

During the past fiscal year the Government of Canada recorded its sixth consecutive budget surplus, a feat not achieved in half a century. According to the Organisation for Economic Co-operation and Development (OECD), Canada will be the only G-7 nation in surplus this year. These ongoing surpluses have enabled us to reduce our federal debt by more than \$52 billion since we balanced the budget in 1997–98.

Today Canada's debt-to-GDP (gross domestic product) ratio stands at 44.2 per cent compared to its peak of 68.4 per cent in 1995–96. An additional benefit is a \$3-billion reduction, every year, in interest service charges. These savings are now being invested in the priorities of Canadians, while enabling us to better withstand the fiscal damage caused by unforeseen events both inside and outside our borders.

Canada has made remarkable fiscal progress. Yet, at 21 cents of every revenue dollar received by the Government, interest charges remain the largest single expense in our budget. Obviously, we must continue to reduce this debt obligation even further. This government will not waver from its commitment to manage the nation's finances prudently and in the long-term interest of its citizens.

Sound financial management is an integral part of our strategy to create the economic conditions of a better standard of living and a better quality of life, conditions that will allow Canadians to excel. It is an obligation that we will honour, to build the Canada we want.

The Honourable Ralph Goodale, P.C., M.P.
Minister of Finance
Ottawa, February 2004

Purpose of this Publication

The *Debt Management Report* provides a detailed account of the Government of Canada's borrowing and cash management operations over the fiscal year from April 1, 2002 to March 31, 2003.

It provides a comprehensive account of the context within which the debt is managed, its composition and changes during the year, and actions taken on strategic initiatives set out in the 2002-03 *Debt Management Strategy*, published in March 2002. A set of reference tables containing statistics on the operation of debt programs is also provided.

The information contained in this report is designed for market participants, to ensure transparency and public accountability in the Government's borrowing and cash management activities. The *Debt Management Strategy* and the *Debt Management Report* are tabled annually in Parliament and are available on the Department of Finance Web site at www.fin.gc.ca.

Additions to the Debt Management Report

Two sections have been added to this year's report.

- A summary of planned initiatives, their rationale, actions taken and underlying debt strategy themes for the year is found on page 12.
- A compilation of debt management indicators related to debt, cash and reserves management activities, which is intended to enhance public understanding and accountability, is found on page 41.

Highlights of the 2002–2003 Debt Strategy

Summary

In 2002–03 the Government of Canada continued to reduce its level of indebtedness. On a full accrual basis of accounting, the federal debt was reduced to \$510.6 billion, down \$52.3 billion from its peak in 1996–97. The 2002–03 budgetary surplus of \$7.0 billion was used to reduce interest-bearing debt by \$2.1 billion, lower other liabilities by \$2.1 billion, and increase financial and non-financial assets by \$2.8 billion. Debt-servicing charges were down \$2.4 billion from fiscal year 2001–02, as a result of the decline in interest-bearing debt and a 20-basis-point reduction in the average interest rate on that debt. The cumulative reduction in indebtedness since 1996–97 has reduced debt charges by \$3 billion, on average, each year. Lower debt-servicing charges benefit Canadian taxpayers.

The advent of a period of federal budgetary surpluses in the 1990s ushered in a new area in federal debt management—one focused on maintaining a well-functioning market for debt, or fixed-income securities, in an environment of declining borrowing needs. Over the past several years the majority of adjustments to government borrowing programs have been in this domain, and this focus continued in 2002–03.

A key objective of federal debt management is to raise stable, low-cost funding for the Government. To achieve this, the Government has established a framework for managing the debt, which includes principles that guide funding activities (see the box on the next page). In accordance with that framework, the Government lays out its annual plan for managing the outstanding stock of debt in the *Debt Management Strategy* publication prior to each fiscal year. Plans for the management of government cash balances and foreign exchange reserves are also included in the publication. The debt strategy for fiscal year 2002–03 was tabled in Parliament and published by the Department of Finance in March 2002 (www.fin.gc.ca/toce/2002/dms02_e.html).

This document, the *Debt Management Report*, reports on government debt, cash and reserves operations that occurred over the 2002–03 fiscal year and provides detailed information on the composition of the outstanding debt. Following the Government of Canada's shift to full accrual accounting, this report clarifies certain terms used to describe the debt, including "gross public debt," "market debt," "non-market debt," "net public debt," and "federal debt" or "accumulated deficit."

By highlighting the progress of plans and initiatives set out in the debt strategy, this report is of use to market participants and ensures public accountability. All of the 2002–03 objectives for the management of the Government of Canada's debt, cash and reserves were achieved over the course of the year. In addition, complementary initiatives were identified and acted upon based on consultations with market participants. The objectives and actions taken in 2002–03 are reviewed in more detail in the table on page 12.

New to the report this year is a section on the key themes underlying the debt strategy in 2002–03. The two key themes are supporting a well-functioning Government of Canada securities market and managing risk.

A **well-functioning wholesale market in Government of Canada securities** benefits the Government as well as a wide range of market participants. For the Government as a debt issuer, a well-functioning market attracts investors and ensures that funding costs are kept low. For market participants, a liquid and active secondary market in government debt provides credit-risk-free assets for investment portfolios, a pricing benchmark for other debt issues and swaps, and a primary tool for hedging risk.

Debt Strategy Framework

Fundamental Objective:

Raise stable, low-cost funding for the Government of Canada.

Strategic Objectives:

- Maintain a prudent debt structure.
- Maintain and enhance a well-functioning market for Government of Canada securities.
- Maintain a diversified investor base.

Operational Principles:

- **Prudence:** The structure of the federal debt is managed to protect the Government's fiscal position from unexpected increases in interest rates and to limit refinancing needs. All funding for domestic operational needs is raised in Canadian dollars, while risks arising in the management of the foreign reserves are immunized by matching as closely as possible the currency and duration of assets and liabilities.
- **Transparency, liquidity and regularity:** The design and implementation of funding and investment programs is based on these principles to attract broad investor interest and thereby lower costs.
- **Diversification:** A variety of sources of funds and borrowing maturities are used to take advantage of the range of investor types and demand.
- **Market integrity:** The Government works with market participants and regulators to maintain high standards of conduct to ensure the attractiveness to investors of the Government of Canada securities market.
- **Consultation:** Input from market participants is sought before major adjustments are made to federal debt and cash management programs to limit the risk of market disruption.
- **Best practices:** Operational frameworks and practices are based on the best practices of other comparable sovereign borrowers and relevant practices in the private sector.

The Government's efforts to maintain and enhance the market for its securities have targeted both the issuance of bonds and Treasury bills through auctions, and the liquidity and efficiency of the secondary market. Program initiatives of note in recent years include increasing the target sizes for benchmark 2-, 5-, 10- and 30-year bonds and the size of new bond issues, and implementing bond buybacks. The Department of Finance and the Bank of Canada have also worked with market participants and securities regulators to develop a framework to enhance the transparency and integrity of the fixed-income market. In 2002–03 these areas continued to be the primary focus of government initiatives.

The debt, cash and reserves management operations of the Government of Canada engender exposure to various forms of financial risk. The primary focus of **risk management** in the context of federal debt strategy has always been the management of the structure of the domestic debt, which, due to the impact of changing interest rates, is by far the most significant form of financial risk to which the Government is exposed.

In recent years, in addition to focusing on the maintenance of a prudent debt structure, the Government has introduced a comprehensive risk management framework for identifying and managing all forms of treasury risk, in particular the market, credit, operational and legal risks related to the financing and investment of its foreign exchange reserves and the investment of its Canadian-dollar cash balances.

The Government's risk management policies, supported by the creation of a special risk unit at the Bank of Canada, call for prudent management of treasury risks based on best practices. Risk tolerances are low, calling for market risk to be immunized to the greatest extent possible and the maintenance of high credit quality and portfolio diversification standards.

Also new to this year's report is a section describing commonly used indicators of a well-functioning securities market. These include the degree to which auctions in the primary market are well bid and the level of liquidity and trading in the secondary market. While there are a number of factors that affect these indicators, debt managers follow these measures when examining the Government's debt management activities.

Finally, an annex to the report describes the analytical tools and considerations that the Government uses to determine its target debt structure. One of the key indicators characterizing the composition of the debt is how much of the debt structure is exposed to interest rate variations. The annex describes the techniques the Government uses to analyze the exposure of the debt structure to fluctuations in interest rates, as well as its decision in the 2003 budget to lower the fixed-rate share target of the debt from two-thirds to 60 per cent over a five-year period.

Debt Strategy Plan and Actions Taken

	Plan (including initiatives identified through mid-year consultations)	Purpose	Actions Taken
Debt Structure	Maintain two-thirds of total interest-bearing debt in fixed-rate form.	Keep debt costs low and stable.	The fixed ratio was maintained within a band of 3 per cent around the 2/3 target.
Domestic Debt Programs	Maintain bond and Treasury bill program sizes in line with the prior year.	Provide liquidity to maintain a well-functioning market.	The gross bond program and stock of Treasury bills were roughly in line with the prior year.
	Maintain 2-, 5-, 10- and 30-year benchmark bond issue sizes.	Provide liquidity to maintain a well-functioning market.	Benchmark bond issue sizes were maintained, with the exception of a 2-year issue (see below).
	Limit the total amount of bonds maturing on any maturity date.	Maintain a balanced debt maturity structure.	The September 2002 2-year auction was reduced by \$500 million compared to prior 2-year bond issues, as it was fungible with an existing large outstanding bond.
	Expand the basket of bonds eligible for buyback operations.	Promote participation in buybacks and sustain the size of new bond issues in the context of declining borrowing needs.	The basket was expanded to include some old benchmark bonds and their fungibles.
	Continue and increase the size of the pilot program of buybacks on a switch basis.	Promote participation in buybacks and sustain the size of new bond issues.	Switch buybacks were expanded to all maturities (2-, 5-, 10- and 30-year sectors) and the program increased in size from \$400 million to \$5.9 billion.

Debt Strategy Plan and Actions Taken *(cont'd)*

	Plan (including initiatives identified through mid-year consultations)	Purpose	Actions Taken
Domestic Debt Programs <i>(cont'd)</i>	Reduce the targeted turnaround time for publication of the results of Government of Canada securities operations.	Reduce market risk for participants and encourage broader participation in auctions.	On November 25, 2002, turnaround times were reduced from 15 minutes to 10 minutes for auctions and from 30 minutes to 15 minutes for buyback operations.
	Adjust the timing of buyback operations.	Reduce market risk for participants, accommodate participants' preferences and encourage broader participation.	On November 25, 2002, the time of regular bond buyback operations was changed from 1:15 p.m. to 1:00 p.m. On September 25, 2002, the time of switch operations was changed from 12:30 p.m. to 10:30 a.m.
	Establish a lower limit on the buyback of older benchmarks.	Ensure liquidity is maintained in actively traded outstanding bonds.	Repurchases of older benchmarks are now stopped when the remaining outstanding amount for each maturity reaches \$6 billion.
Cash Management	Continue and expand the pilot Cash Management Bond Buyback program.	Reduce the peak levels of government cash balances and reduce variability in Treasury bill auctions.	Operations were held regularly throughout the year and offers to repurchase maturing bonds were extended to include those maturing in up to 18 months.
	Implement a new framework for the management of cash balances.	Reduce the risk of counterparty failure and broaden access.	In September 2002 the new collateral-based framework was successfully launched.

Debt Strategy Plan and Actions Taken (*cont'd*)

	Plan (including initiatives identified through mid-year consultations)	Purpose	Actions Taken
Reserves Management	Maintain a prudent level of international reserves, in line with comparable sovereigns.	Provide a source of foreign currency liquidity and promote orderly conditions in the foreign exchange market for the Canadian dollar.	International reserves increased by US\$1.9 billion to US\$35.9 billion as at March 31, 2003, largely due to changes in market values.
	Implement a collateral management framework for swap credit exposures.	Limit the risk of loss arising from the downgrade or failure of a swap counterparty.	The collateral management framework was implemented in April 2002.
	Develop and implement a US-dollar repo program.	Reduce the amount of uncollateralized commercial deposits.	The repo program was developed in 2002 and inaugurated in April 2003.
	Close the gap between foreign currency assets and liabilities.	Immunize against currency and interest risks.	In 2002 the Government continued its efforts to close the gap, which was closed in 2003.
	Review the investment guidelines governing the management of reserves.	Further diversify Exchange Fund Account investments and bring the guidelines in line with investment practices of a number of other OECD sovereigns.	In the fall of 2002 the Government amended its guidelines to allow a limited amount of securities of A-rated sovereigns to be held within prudent limits.
	Review the credit guidelines pertaining to financial institution counterparties for the management of reserves.	Further diversify credit risk across financial institution counterparties.	The credit risk guidelines were modified in 2002 to accept A-rated financial institutions as eligible counterparties for swaps, forwards and deposits.

Debt Strategy Plan and Actions Taken *(cont'd)*

	Plan (including initiatives identified through mid-year consultations)	Purpose	Actions Taken
Reserves Management <i>(cont'd)</i>	Publicly disclose the investment and credit guidelines.	Increase the transparency of the Government's investment and credit guidelines governing the management of reserves.	The guidelines were published in the <i>2002 Annual Report to Parliament on the Operations of the Exchange Fund Account</i> . ¹
	Renew the US\$6-billion standby line of credit with international banks.	Provide a potential source of supplementary liquidity for the Government. The existing standby credit agreement has been in place since June 23, 1978. The facility has not been used since 1986.	The standby credit facility with international banks was successfully renegotiated in 2002. The maturity date was extended from 2003 to 2007. No other changes were made to the terms of the facility.

¹ Available on the Department of Finance Web site at www.fin.gc.ca.

Part I: Debt Management Context

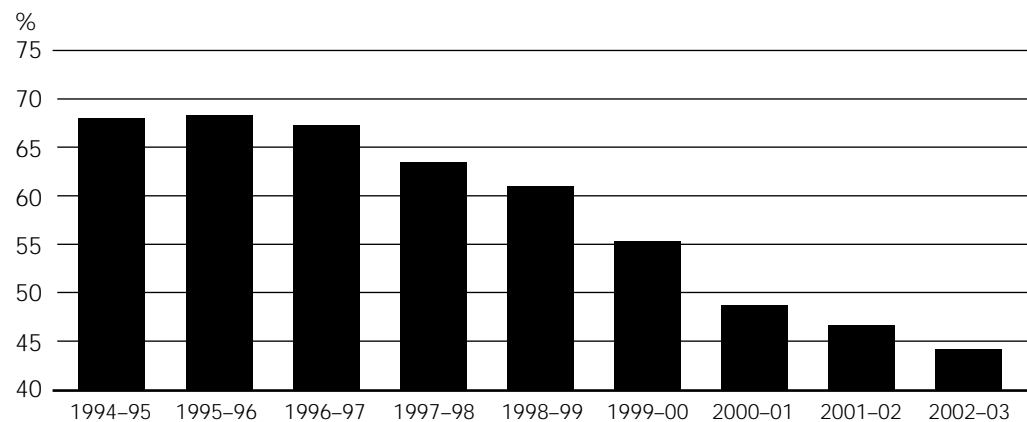
The Fiscal Environment

Budgetary Environment

Canada has experienced a remarkable turnaround in its fiscal position in recent years: the Government has recorded six consecutive budget surpluses; the federal debt has been reduced by \$52.3 billion since 1997–98; the federal debt-to-GDP ratio has fallen almost 25 percentage points from its peak of 68.4 per cent in 1995–96 to 44.2 per cent in 2002–03; and fiscal and monetary policy credibility has contributed to lower interest rates.

In 2002–03 the Government recorded a budgetary surplus of \$7.0 billion, and the federal debt-to-GDP ratio declined by 2.5 percentage points. This is the seventh consecutive year in which the debt-to-GDP ratio has declined, and it is at its lowest level since 1984–85 (see Chart 1). For detailed information, see the *Annual Financial Report of the Government of Canada* (fiscal year 2002–03) at www.fin.gc.ca/toce/2003/afr_e.html.

Chart 1
Federal Debt-to-GDP Ratio



Source: Department of Finance.

Financial Requirement/Source

The budgetary balance is the most comprehensive measure of the Government of Canada's fiscal results. It is presented on a full accrual basis of accounting, recording government assets and liabilities when they are receivable or incurred, regardless of when the cash is received or paid. In addition, the budgetary balance includes only those activities over which the Government has legislative control.

Note to Readers

The financial statements for 2002–03 are presented on the full accrual basis of accounting, which replaces the modified accrual standard that had been used since the mid-1980s. Prior to the shift to full accrual accounting, there was no distinction between net debt and the accumulated deficit, or federal debt, so these terms were used interchangeably.

Under full accrual accounting, this is no longer the case. Net debt is the Government's net liabilities excluding the value of its non-financial assets. Non-financial assets include tangible capital assets, inventories and prepaid expenses. The accumulated deficit takes into account the value of non-financial assets. The two indicators now represent different measures of the Government's financial position. The federal debt will now represent the accumulation of surpluses and deficits in the past and is the key measure of debt.

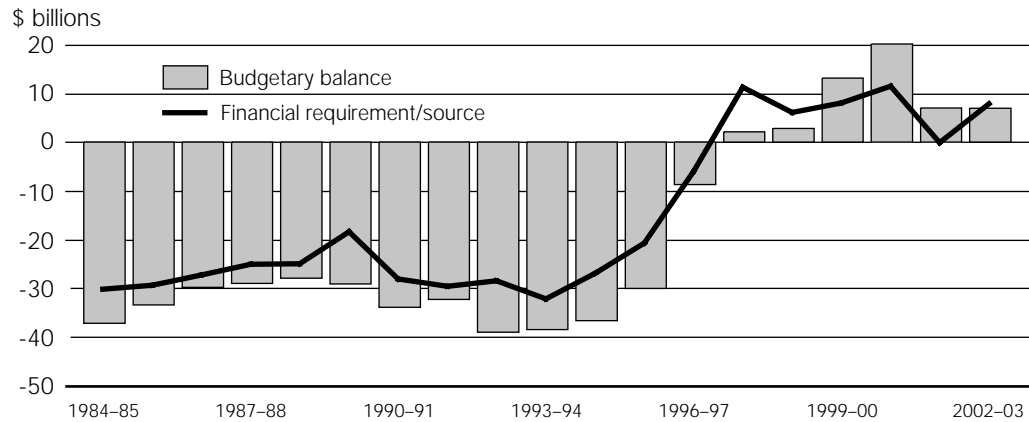
In contrast, the financial requirement/source measures the difference between cash coming in to the Government and cash going out. It differs from the budgetary balance in that it includes transactions in loans, investments and advances, federal employees' pension accounts, other employee and veteran future benefit plans, other specified purpose accounts, foreign exchange activities, changes in other financial assets, liabilities and non-financial assets. These activities are included as part of non-budgetary transactions. The conversion from full accrual to cash accounting is also reflected in non-budgetary transactions.

The budgetary surplus of \$7.0 billion and net source of funds from non-budgetary transactions of \$0.6 billion produced a financial source of \$7.6 billion. This compares to a financial requirement of \$0.3 billion in 2001–02 and sources of \$11.3 billion in 2000–01 and \$7.8 billion in 1999–2000.

In this environment of financial sources, one of the key goals of federal debt management in recent years has been to maintain a liquid and well-functioning market for Government of Canada securities, in particular the domestic Treasury bill and bond programs that form the benchmarks for the Canadian fixed-income market. In 2002–03 both the Treasury bill and bond programs were maintained at levels roughly in line with those of the previous year.

With the shift to full accrual accounting, a number of classification changes have been incorporated, with foreign exchange activities now part of non-budgetary transactions. Consequently, the Government has now recorded a financial source in five of the past six years (see Chart 2). The financial source in 2002–03 was used to increase cash balances by \$5.1 billion and to reduce market debt by \$2.5 billion.

Chart 2
Budgetary Balance and Financial Requirement/Source

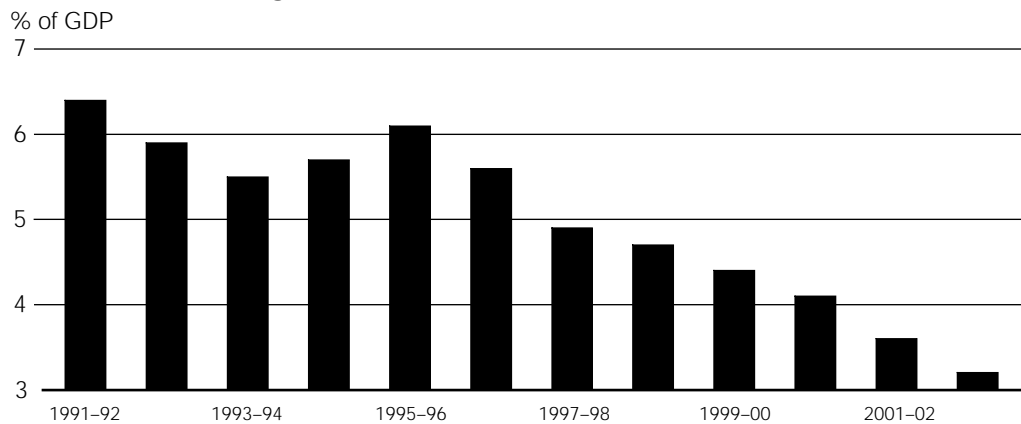


Sources: *Public Accounts of Canada* and Statistics Canada.

Public Debt Costs

In 2002–03 the Government spent 21 cents of every dollar of revenue to pay the interest on the public debt, down from a peak of almost 39 cents in 1990–91. Public debt charges as a percentage of GDP declined to 3.2 per cent in 2002–03 from 3.6 per cent in 2001–02 (see Chart 3).

Chart 3
Public Debt Charges



Source: *Public Accounts of Canada*.

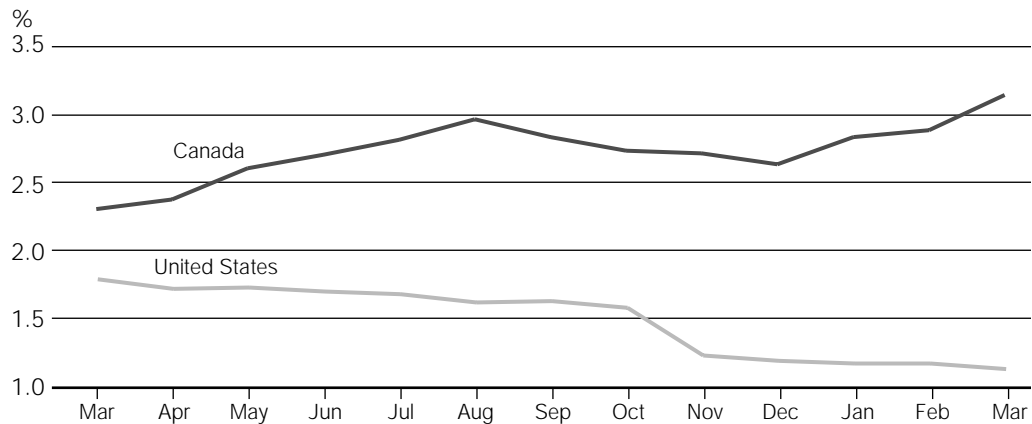
Debt-servicing costs arise from market and non-market debt. Interest rates on market debt are set at the time bonds and Treasury bills are issued and depend on the maturity of the borrowing. The interest rates on interest-bearing non-market debt are based on a 20-year rate imputed from market rates. In 2002–03 the cost of both types of long-term debt benefited from declining long-term interest rate movements over the year (described in the following section) and the decline in

the level of interest-bearing debt. The average interest rate paid on the public debt declined from 6.4 per cent in 2001–02 to 6.2 per cent in 2002–03, while the stock of debt declined by \$2.1 billion in 2002–03.

Interest Rate Developments in 2002–03

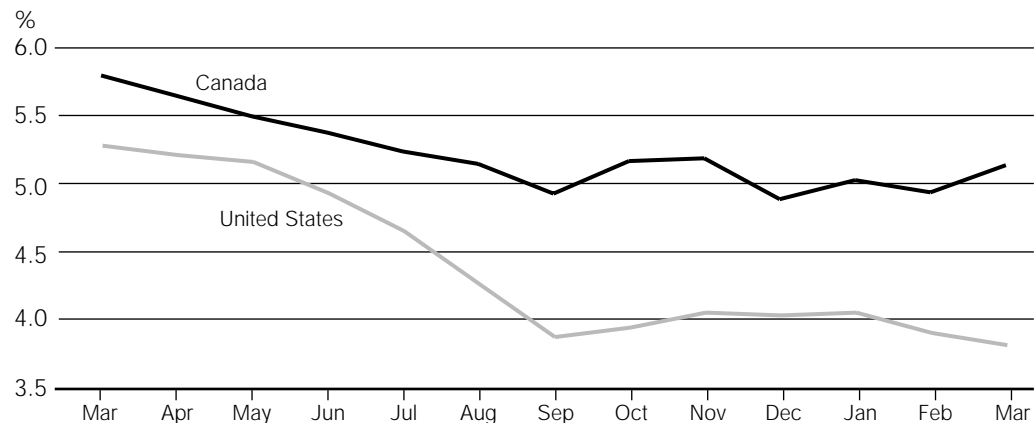
The Bank of Canada tightened monetary policy four times in 2002–03, increasing the overnight rate from 2 to 3 per cent. Three-month Treasury bill yields shifted upwards over the year, from 2.37 to 3.14 per cent (see Chart 4), while longer-term rates fell over the year, from 5.79 to 5.08 per cent (71 basis points) at the 10-year maturity and from 5.98 to 5.55 per cent (43 basis points) at the 30-year maturity (see Charts 5 and 6). Overall, the yield curve flattened at year-end compared to the previous year (see Chart 7).

Chart 4
3-Month Treasury Bill Rates, 2002–03



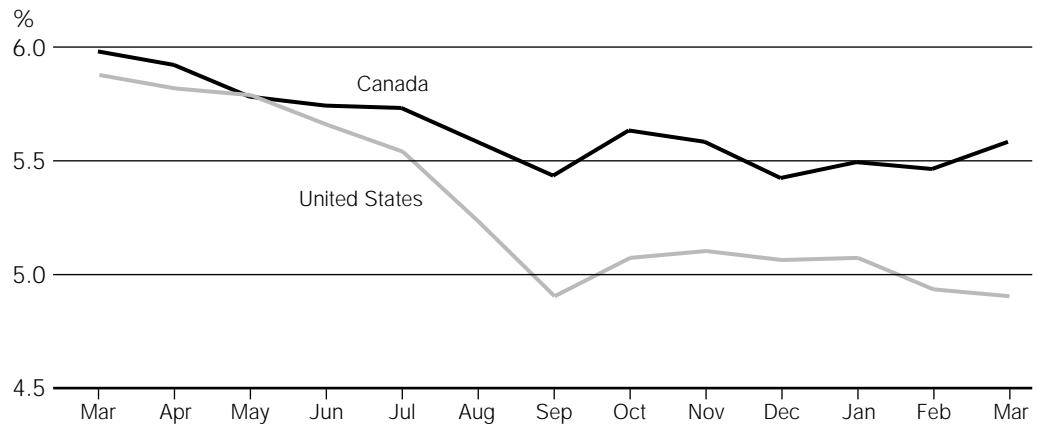
Sources: Bank of Canada and Federal Reserve Board.

Chart 5
10-Year Government Bond Rates, 2002–03



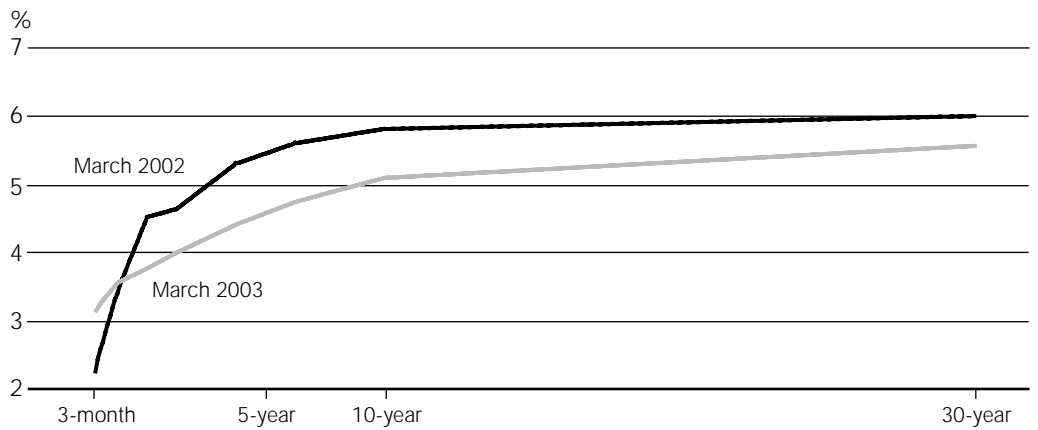
Sources: Bank of Canada and Federal Reserve Board.

Chart 6
Long-Term Government Bond Rates, 2002–03



Sources: Bank of Canada and Federal Reserve Board.

Chart 7
Canada Yield Curve, March 2002 and March 2003



Source: Bank of Canada.

Composition of the Federal Debt

Gross Public Debt

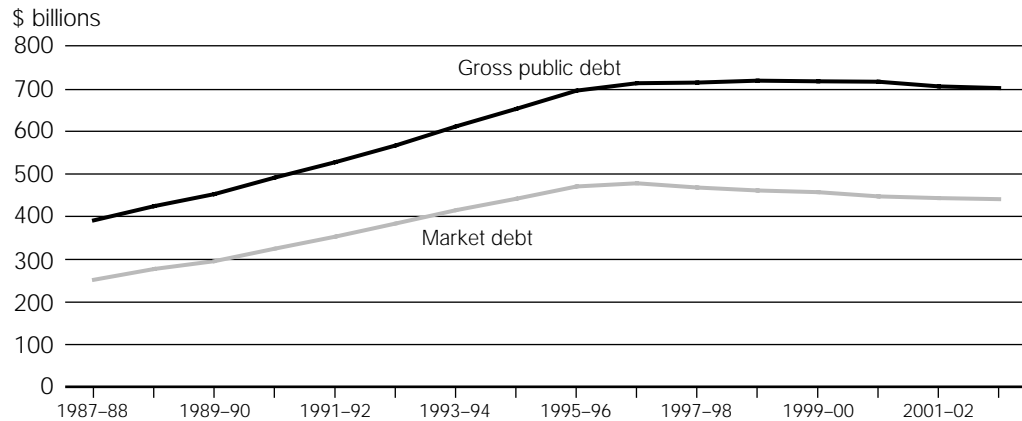
Gross public debt is made up of two major components: market debt and non-market debt. Gross public debt at the end of March 2003 totalled \$700.1 billion, down \$4.2 billion from the previous year and \$17.6 billion from its peak of \$717.7 billion on March 31, 1999 (see Chart 8).

Market Debt

Market debt is the portion of gross debt that is funded in the capital markets and strategically managed by the Government. (Foreign currency debt is issued on an opportunistic basis, while Canada Pension Plan [CPP] debt is not funded in markets but is based on market rates.) Market debt consists of marketable bonds, Treasury bills, foreign currency denominated bonds and bills, retail debt and bonds held by the CPP. At March 31, 2003, market debt outstanding was \$439.8 billion, down \$2.5 billion from the previous year (see Chart 8).

Chart 8

Evolution of Gross Public Debt and Market Debt



Source: *Public Accounts of Canada*.

Non-Market Debt

Non-market debt comprises liabilities held by the Government outside capital markets. This includes money owed to public sector pensions, the CPP and employees and veterans for future benefits, as well as other liabilities, accounts payable and accrued liabilities and allowances. In 2002-03 non-market debt amounted to \$260.4 billion, down \$1.7 billion from 2001-02.

Net Public Debt

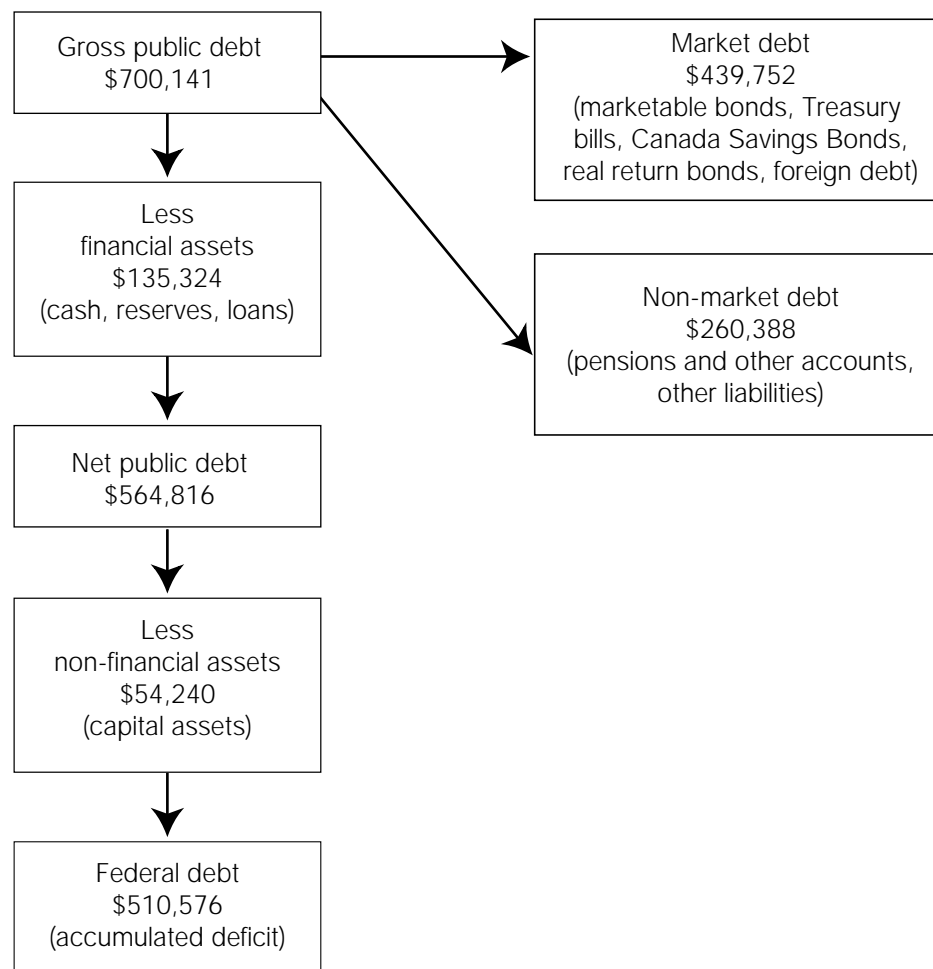
Net public debt is gross public debt minus financial assets. Financial assets include cash, foreign exchange accounts and loans. Net public debt declined by \$6.1 billion, from \$570.9 billion in 2001–02 to \$564.8 billion in 2002–03. The Government's financial assets increased by \$1.9 billion to \$135.3 billion, as the decrease in foreign exchange reserves was more than offset by increases in the Government's cash balances and accounts receivable and in its loans, investments and advances.

Federal Debt

Federal debt, or the accumulated deficit, is net public debt minus non-financial assets. Non-financial assets include tangible capital assets, inventories and prepaid expenses. Federal debt declined by \$7.0 billion, from \$517.5 billion in 2001–02 to \$510.6 billion in 2002–03. The Government's non-financial assets increased by \$0.9 billion to \$54.2 billion, as an increase in tangible capital assets was offset somewhat by decreases in inventories and prepaid expenses.

Total Public Debt as at March 31, 2003

(\$ millions)



Composition of the Market Debt

The Government of Canada has two types of market debt: domestic debt, which is denominated in Canadian dollars, and foreign currency debt. The Government borrows in Canadian dollars using two types of funding: wholesale and retail. Wholesale funding is conducted through issuance of marketable securities, which include nominal bonds, real return bonds and Treasury bills. These securities are sold via auctions to Government of Canada securities distributors² and end-investors. Retail funding is raised through sales of retail bonds to individuals who are Canadian residents.

Funds raised in Canadian dollars are used primarily to meet the Government's operational requirements. See www.fin.gc.ca/invest/debt-e.html for a detailed description of the Government of Canada's market debt instruments. A small proportion of Canadian-dollar wholesale debt is swapped to foreign currencies to fund the Government's foreign exchange reserves. The Government also borrows in foreign currencies for the reserves, which are held in the Exchange Fund Account. The Exchange Fund Account provides a source of foreign currency liquidity and is used to promote orderly conditions in the foreign exchange market for the Canadian dollar. Details on the operations of the Exchange Fund Account can be found in the *2002 Annual Report to Parliament on the Operations of the Exchange Fund Account* at www.fin.gc.ca/toce/2003/efa2002_e.html.

In 2002–03 debt issuance and stock levels (see Table 1) were in accordance with the plans set out in the *2002–03 Debt Management Strategy* at the beginning of the fiscal year.

Domestic Debt Programs

Fixed-Coupon Marketable Bonds

As planned, gross bond program issuance was maintained in line with 2001–02: gross issuance totalled \$42.3 billion in 2002–03 versus \$40 billion in 2001–02. Also as planned, bond buyback programs were conducted on a larger scale than in 2001–02.

The gross issuance of bonds of \$42.3 billion consisted of \$13.9 billion in 2-year bonds, \$11 billion in 5-year bonds, \$12.6 billion in 10-year bonds and \$4.8 billion in 30-year bonds (see Reference Table IX for more information on bond auctions). The majority of gross issuance, \$36.4 billion, was through new bond issuance while a smaller portion, \$5.9 billion, was issued through the pilot buyback program on a switch basis.

² The names of government securities distributors and primary dealers can be found at www.bankofcanada.ca/en/auct.htm. Details related to the responsibilities and performance requirements of government securities distributors are described in "Terms of Participation in Auctions for Government Securities Distributors."

Bond buyback operations totalled \$12.1 billion, consisting of \$3.2 billion in 2- and 5-year bonds, \$3.3 billion in 10-year bonds, and \$2.3 billion in 30-year bonds (see Reference Table XII for more information on buyback operations). The repurchase of old bonds on a cash basis accounted for \$7.1 billion of the buyback operations. Under the pilot program of buyback on a switch basis, the Government repurchased \$5 billion of old bonds and issued \$5.9 billion of new bonds.

During fiscal year 2002–03, \$30.3 billion of bonds matured. Net new issuance of fixed-coupon marketable bonds during the year, taking into account buybacks and maturities, declined by \$7.9 billion (gross issuance less repurchases and less maturing issues), bringing the stock of outstanding marketable bonds down to \$269.1 billion as at March 31, 2003.

Table 1
Change in Composition of Federal Market Debt, 2002–03

	April 1, 2002 Outstanding	New issues ^a	Maturing ^a	Repurchase	March 31, 2003 Outstanding ^a	Change
	(\$ billions)					
Domestic debt						
Fixed-coupon marketable bonds	277.0	42.3	30.3	19.9 ^d	269.1	-7.9
Real return bonds	16.8	2.3	–	–	19.1	2.3
Treasury bills ^b	94.0	236.8	226.4	–	104.4	10.4
Retail debt	24.0	2.7	4.1	–	22.6	-1.4
Total domestic debt	411.8				415.2	3.4
Foreign currency debt						
Canada bills	3.4	16.6	17.3	–	2.6	-0.8
Foreign bonds ^c	19.3	0.4	5.7	–	14.0	-5.3
Canada notes	1.2	–	0.0	–	1.2	0.0
Euro Medium-Term Notes	3.2	0.2	0.1	–	3.3	0.1
Total foreign debt	27.1				21.1	-6.0
CPP bonds and notes	3.4	–	0.0	–	3.4	0.0
Total market debt	442.3				439.8	-2.5

Note: As at March 31, 2003, the total amount of interest rate and cross-currency swaps outstanding stood at USD 20.2 billion (see Reference Table XI). Cross-currency swaps convert C\$ denominated government debt into foreign currency obligations for the purpose of funding the international reserves portfolio (see text below).

Numbers may not add due to rounding.

^a Includes other adjustments such as the Consumer Price Index adjustment and the translation of marketable bonds payable in foreign currencies to Canadian dollars using the closing rates of exchange at March 31, 2003.

^b These securities are issued at 3-, 6- and 12-month maturities and are therefore rolled over a number of times during the year for refinancing. This results in a larger number of new issues per year than stock outstanding at the end of the fiscal year. These amounts include cash management bills (CMBs); there were no CMBs outstanding at the beginning of fiscal 2002–03, while \$4 billion of CMBs were outstanding at the end of 2002–03.

^c Includes \$492.0 million in securities assumed by the Government of Canada on February 5, 2001, on the dissolution of Petro-Canada Limited.

^d Includes the bond buyback program on a cash and switch basis, and the pilot Cash Management Bond Buyback program.

Source: *Public Accounts of Canada*.

Impact of Marketable Bond Repurchases on the Debt Stock

Marketable bond buyback operations permit the maintenance of a liquid new bond issue program through the repurchase of older, less liquid bonds. These operations have a neutral impact on the market value of the debt, a temporary impact on the par value of the stock of government debt, and a very modest impact on debt-servicing costs.

When outstanding bonds are repurchased at premium, the par value of the debt (the basis for accounting) increases temporarily due to the need to issue more of the new bonds to pay for the premium on the old bonds. The opposite effect is observed when bonds are bought back at a discount. This effect on the par value of the debt is temporary, as buyback operations advance the time before outstanding bonds trading at a premium or discount would need to be refinanced with new bonds at par value.

Since the inception of the program, the Government has consistently paid premiums on bonds repurchased. This is due to: the basket of eligible bonds that was exclusively composed of illiquid, high-coupon bonds trading with large premiums before 2002–03; and interest rates that have fallen to record lows since early 2000, contributing to a further increase in the premiums at which bonds were repurchased. Despite the broadening of the basket, almost 70 per cent of the bonds repurchased in 2002–03 were illiquid, high-coupon bonds accounting for 90 per cent of premiums paid.

The continued popularity and expansion of the buyback program in 2002–03 significantly increased the amount of premiums paid, increasing the par value of the debt by about \$3.3 billion in 2002–03 from about \$1.5 billion in 2001–02. Most of this increase is due to the increase in buyback volume from \$5.6 billion in 2001–02 to \$12.1 billion in 2002–03. Since 1998 the cumulative impact on the par value of the Canadian debt has been about \$5.6 billion (see Table 2).

Table 2
Cumulative Impact of Buyback Operations
(on Par Value of the Debt)

Amount repurchased	1998–99	1999–00	2000–01	2001–02	2002–03
			(\$ millions)		
Buybacks on a cash basis	327	1,017	1,646	2,852	4,074
Buybacks on a switch basis	–	–	–	2	1,559
Total bond buyback program	327	1,017	1,646	2,854	5,633

Source: Department of Finance.

The cumulative impact of buybacks on the par value of the debt should reach its maximum within the next few years and diminish thereafter. The decline will occur as availability of illiquid high-coupon bonds falls. Eventually bonds may be repurchased at a discount, with the effect of reducing the par value of the debt.

Real Return Bonds

In 2002–03 issuance of real return bonds (RRBs) was in keeping with the announced target of \$1.4 billion, increasing the level of outstanding RRBs from \$14.8 billion to \$16.2 billion (from \$16.8 billion to \$19.1 billion including the Consumer Price Index adjustment) as at March 31, 2003 (see Table 1 on page 24). In 2002–03 the third RRB benchmark, with a December 1, 2031 maturity, was reopened four times to build a total outstanding of \$5.8 billion (see Reference Table X for more information on RRB auctions).

Treasury Bills and Cash Management Bills

The stock of outstanding Treasury bills and cash management bills (CMBs), which are a shorter-dated form of Treasury bills, at the end of the 2002–03 fiscal year was slightly larger than the \$90-billion to \$100-billion range announced in the 2002–03 *Debt Management Strategy*. The stock of outstanding Treasury bills and CMBs increased by \$10.4 billion during 2002–03, to \$104.4 billion at March 31, 2003 (see Table 1 on page 24). The increase was for the most part due to bonds repurchased under the cash management bond buyback program and an increase in cash balances over the year, which increased by \$5.1 billion, from \$11.4 billion on March 31, 2002, to \$16.5 billion on March 31, 2003. During the year \$12.9 billion of bonds were repurchased under the cash management bond buyback program.

There were no CMBs outstanding at the beginning of fiscal 2002–03, while \$4 billion of CMBs were outstanding at the end of 2002–03.

Retail Debt

In 2002–03 the level of outstanding debt held by domestic retail investors—Canada Savings Bonds and Canada Premium Bonds—decreased from \$24.0 billion to \$22.6 billion. Gross sales and redemptions were \$3.5 billion and \$4.9 billion, respectively, for a net change of -\$1.4 billion in the stock of retail debt.

Foreign Currency Debt Programs

Canada Bills

In 2002–03 the level of outstanding Canada bills decreased from \$3.4 billion (US\$2.1 billion) to \$2.6 billion (US\$1.8 billion). In 2002–03 Canada bills were issued, on average, at an all-in cost of US\$LIBOR less 15-20 basis points.

Foreign Currency Denominated Bonds

There was no new foreign bond issuance in 2002–03. A total of \$4.8 billion (US\$3.3 billion) of foreign currency bonds matured in 2002–03. The total outstanding was \$14.0 billion (US\$9.5 billion).

Canada Notes

The stock of outstanding Canada notes remained roughly unchanged at \$1.2 billion (US\$0.8 billion) during 2002–03. There was no new issuance.

Euro Medium-Term Notes

In 2002–03 there were no new Euro Medium-Term Note transactions, and the total outstanding increased from \$3.2 billion (US\$2.0 billion) to \$3.3 billion (US\$2.2 billion) due to the appreciation of the euro compared to the Canadian dollar.

Cross-Currency Swaps

In 2002–03 the Government of Canada raised \$2.2 billion (US\$1.5 billion) to fund the foreign exchange reserves by entering into 36 cross-currency swaps. A total of US\$2.4 billion of swaps matured in 2002–03. At the end of the 2002–03 fiscal year, the outstanding amount of cross-currency swaps totalled \$29.4 billion (US\$18.6 billion) (see Reference Table XI for transaction details). Taking into account the effect of cross-currency swaps, foreign currency obligations were 11.5 per cent of market debt.

Part II: Report on the 2002–2003 Debt Strategy

The federal debt strategy covers the management of the federal market debt and related operational activities, including the management of Canadian-dollar cash balances and the funding and investment of Canada's foreign exchange reserves. Annual debt strategy planning sets out the objectives for the year in each of these domains and provides for a series of initiatives. As required by legislation, the debt strategy is published and tabled in Parliament before the start of each fiscal year.

There are two main themes underlying the objectives of the 2002–03 federal debt strategy: supporting a well-functioning market in Government of Canada securities and managing risks. The Government has taken steps to support both a well-functioning primary and secondary market for Government of Canada securities. The Government supported a liquid primary market for government securities through a variety of measures to enhance programs and participation. Also, it continued to work with regulators to enhance secondary market liquidity, transparency and integrity.

In line with the increased attention paid to risk management by financial market participants in recent years, the Government has implemented a comprehensive risk management framework for treasury risks related to the debt program. The key treasury risks for the Government relate to changes in interest rates and their effect on domestic borrowing costs (interest rate risk), and the Government's credit exposure to financial institution counterparties with which it transacts in the management of the debt (credit risk). In 2002–03 significant work related to the Government's management of both interest rate and credit risk took place.

A Well-Functioning Government of Canada Securities Market

The advent of a period of federal budgetary surpluses in the 1990s ushered in a new era in federal debt management: one focused on maintaining a well-functioning market in an environment of declining borrowing needs. Over the past several years, the majority of federal debt strategy initiatives have been in this domain, and this focus continued in 2002–03.

A well-functioning wholesale market in Government of Canada securities benefits the Government as well as a wide range of market participants. For the Government as a debt issuer, a well-functioning market attracts investors and ensures that funding costs are kept low. For market participants, a liquid and active secondary market in government debt provides credit-risk-free assets for investment portfolios, a pricing benchmark for other debt issues and swaps, and a primary tool for hedging risk.

The Government's efforts to maintain and enhance the market for its securities have targeted both the issuance of bonds and Treasury bills through auctions, and the liquidity and efficiency of the secondary market. Program initiatives of note in recent years include increasing the target sizes for benchmark 2-, 5-, 10- and 30-year bonds and the size of new bond issues, and implementing bond buybacks. The Department of Finance and the Bank of Canada have also worked with market participants and securities regulators to develop a framework to enhance the transparency and integrity of the fixed-income market. In 2002–03 these areas continued to be the primary focus of government initiatives.

The section entitled “Debt, Cash and Reserve Management Indicators” describes commonly used indicators of a well-functioning securities market. These include the degree to which auctions in the primary market are well bid, the level of liquidity and trading in the secondary market, and cash and reserves management performance. While there are a number of factors that affect these indicators, debt managers follow these measures when examining government debt management initiatives. The measures, however, do not by themselves define the success of specific government debt management policies.

Marketable Bond Program

The use of liquid benchmark bond issues according to a regular, pre-announced quarterly calendar has been a key feature of the Government's approach to funding domestic operational requirements since the early 1990s. There are currently auctions of 2-, 5- and 10-year issues every quarter, and 30-year issues on a semi-annual basis. Each issue contributes to the creation of a large and liquid benchmark at the respective maturity.

The gross bond program increased by \$2.1 billion in 2002–03, while the net bond program decreased by \$4.3 billion (see Table 3).

Table 3
Bond Program

	1998–99	1999–00	2000–01	2001–02	2002–03
	(\$ millions)				
Bonds issued at auctions	36,300	44,750	38,500	39,800	36,400
Bonds issued at switches	–	–	–	400	5,900
Gross bond program	36,300	44,750	38,500	40,200	42,300
Buybacks on a cash basis	1,000	3,263	2,832	5,258	7,067
Buybacks on a switch basis	–	–	–	387	4,999
Total bond buyback program	1,000	3,263	2,832	5,645	12,066
Net bond program	35,300	41,487	35,668	34,556	30,234

Source: Department of Finance.

In 2002–03 the initiatives undertaken in the bond program to maintain and develop a well-functioning market in Government of Canada securities were:

- **30-Year Issuance:** The Government reaffirmed its commitment to continued issuance of 30-year bonds. There was a strong consensus among market participants that issuance of 30-year Government of Canada bonds is needed to provide a long-dated asset (given the limited supply of alternative long-term fixed-income instruments in Canada, particularly for pension fund and insurance company portfolios), as well as a pricing benchmark for other instruments.
- **10-Year Issuance:** Following consultations in the summer of 2002, the Government committed to maintain an annual 10-year benchmark cycle to ensure regularity and transparency, and support liquidity in the market for Government of Canada securities. This initiative also supports a liquid futures market by maintaining a viable basket of eligible government securities. However, at that time, the annual cycle constrained the building of a large benchmark. On September 25, 2002, the Government of Canada closed the June 2012 10-year benchmark at \$11.6 billion outstanding, resulting in a slight undershoot of the benchmark target of \$12 billion–\$15 billion. (The benchmark target range for 10-year bonds was subsequently changed from \$12 billion–\$15 billion to \$10 billion–\$14 billion starting in fiscal year 2003–04).
- **2-Year Issue Size:** In the consultations in the summer of 2002, most market participants agreed that the issuance of 2-year bonds could be modestly reduced at times when the 2-year benchmark being built is fungible with an existing large, liquid issue. Therefore, in order to limit the total amount of bonds maturing in December 2004, the August 28, 2002 2-year auction size was held to \$3 billion, a reduction of \$500 million from prior 2-year issues.
- **Turnaround Time for Auctions:** In November 2002 the turnaround time for auctions was reduced from 15 minutes to 10 minutes. The move to shorter processing times, in keeping with technological advancements and sovereign best practices, reduces participants' market risk and supports broad participation in government auctions.

Bond Buyback Programs

Buyback programs have become sizeable and play a strategic role in maintaining an active new issue bond program. There are two types of bond buyback programs currently in place: regular bond buybacks and cash management bond buybacks. Regular bond buybacks, which take place on a cash or switch basis, permit the maintenance of a liquid new bond issue program by buying back older, less liquid bonds with a remaining term to maturity from 18 months to 25 years. The second kind of buyback, the cash management bond buyback, aids in the management of the Government's cash balances by buying back bonds maturing in up to 18 months.

Regular bond buyback operations

Regular bond buyback operations are conducted on a cash and switch basis.

Bond buyback operations on a cash basis: These operations involve the exchange of less liquid bonds for cash and are conducted shortly after auctions of similar maturity bonds. They were introduced on a trial basis in 1998–99 to enhance liquidity in the primary market for Government of Canada securities. Based on favourable performance and market reaction, the program was implemented on an ongoing basis in 2000–01 and now plays an important role in maintaining the auction size of the new issue bond program. Since 2001–02 buyback operations on a cash basis have been conducted after every nominal bond auction.

Bond buyback operations on a switch basis: These operations involve the exchange of less liquid bonds for new issue (replacement) bonds on a duration-neutral basis. Buybacks on a switch basis assure minimal impact on bondholders' market risk and thus broaden participation in buyback operations. The first pilot switch operation was successfully conducted in the fourth quarter of 2001–02 in the 30-year sector for an amount of \$400 million.

Given strong support by market participants during 2002–03, the pilot program was continued and gradually expanded to all maturities. This provided market participants with more frequent access to benchmark bond issues and helped reduce market participants' risk. Switch buybacks are now held periodically and are announced in the quarterly bond auction schedule.

Regular bond buyback operations were conducted on a larger scale than in 2001–02 mainly due to a broader utilization of buyback operations on a switch basis. The regular bond buyback operations permitted the issuance of a larger amount (+\$12 billion) of new benchmark bonds than in the absence of a buyback program.

In 2002–03 the initiatives undertaken to enhance the functioning of regular bond buybacks were:

- ***Broadening the buyback basket:*** At the inception of the regular bond buyback program, the basket of eligible bonds was exclusively composed of illiquid, high-coupon bonds. As dealers and customers cleared out their inventories, it became necessary to broaden the buyback basket in order to maintain current bond issuance and auction sizes.

In 2002–03 the buyback basket was expanded to include some older benchmark bonds and their fungibles. Bonds that continue to be excluded from buybacks include issues in the 2-, 5- and 10-year sectors that are currently being built up as a benchmark, the current and preceding benchmark, and those having maturities equal to or greater than 25 years. The decision on specific bond issues to be included in buyback operations takes into account the views of market participants and is announced with the Call for Tenders.

- ***Introducing a \$6-billion floor for old benchmark bonds:*** In response to comments received during the summer 2002 consultations, the Government announced that outstanding amounts of older benchmarks would not be reduced below \$6 billion. This operational enhancement was introduced to help maintain liquidity in older, large off-the-run benchmarks targeted by the buyback program. When two or more issues are fungible, the total amount of

Government of Canada bonds maturing on that date will be considered in the calculation of the \$6-billion minimum threshold. However, the conditions governing the pilot cash management bond buyback program will apply when bonds become eligible for this repurchase program.

- ***Increasing the announced buyback ceiling:*** In order to allow the Government to take advantage of favourable buyback opportunities when they exist, the announced ceiling for individual buyback operations was raised from 2001–02 levels for regular buybacks (both on a cash and switch basis) and cash management bond buyback operations. Therefore, on many occasions, when conditions did not warrant buying back up to the announced ceiling, the amount purchased by the Government was lower than the announced ceiling.
- ***Moving up the submission deadline for buyback operations on a cash basis:*** During the summer 2002 consultations, market participants indicated that reducing the time period between the publication of auction and buyback results would reduce risk and provide an incentive for increased participation. In response to these comments, the submission deadline for buyback operations on a cash basis was advanced from 1:15 p.m. to 1:00 p.m. starting November 25, 2002. In tandem with the reduced turnaround time for bond auctions announced the same day, this reduces the time period between the publication of auction and buyback results from 1 hour to 35 minutes.
- ***Timing of switch operations:*** Buyback operations on a switch basis were moved from 12:30 p.m. to 10:30 a.m. to reflect market participants' preferences and to increase the participation of institutional investors. Typically held at 10:30 a.m. on Wednesdays, these operations were also held on some Thursdays when Wednesdays were not available due to holidays or other special events. This initiative became effective in September 2002.
- ***Turnaround time for regular buyback operations:*** In November 2002 the turnaround time for regular buyback operations was reduced from 30 minutes to 15 minutes. The move to shorter processing times, which is in keeping with technological advancements and sovereign best practices, reduces participants' market risk and supports broad participation in government operations.

The Cash Management Bond Buyback Program

The cash management bond buyback (CMBB) program, introduced on a pilot basis in early 2001, was implemented primarily to help manage the Government's cash requirements by reducing the high levels of government cash balances needed to redeem large bond maturities.

In contrast to the regular bond buyback program aimed at supporting a full new issue bond program, the CMBB program involves buying back bonds coming to maturity in the near future. By reducing the need to accumulate large cash balances leading up to large bond maturities, the CMBB program also smoothes out seasonal fluctuations in Treasury bill issuance.

The first CMBB of \$500 million was held in January 2001 and a total of \$2.5 billion was repurchased during the 2000–01 fiscal year. In 2002–03 the CMBB program increased from \$11.5 billion in 2001–02 to almost \$12.9 billion due to the increase in operational frequency.

In 2002–03 the initiatives undertaken to enhance the functioning of the CMBB program were:

- ***Increasing the announced buyback ceiling:*** In order to allow the Government to take advantage of favourable buyback opportunities when they exist, the announced ceiling for individual buyback operations was raised from 2001–02 levels for CMBB operations. Therefore, on occasions when conditions did not warrant buying back up to the announced maximum, the amount purchased by the Government was lower than the announced ceiling.
- ***Turnaround time for CMBB operations:*** On November 25, 2002, the turnaround time for CMBB operations was shortened from 30 minutes to 15 minutes to reduce participants' market risk and support participation.

Treasury Bill Program and Cash Management Bill Programs

Since the spring of 1999, the Government has regularly sought the views of market participants on the structure and operation of the Treasury bill and cash management bill (CMB) programs. In 2002–03 the majority of market participants continued to indicate that they were generally satisfied with the functioning of the two programs and that no major adjustment was required.

In 2002–03 Treasury bill issuance increased by \$23.5 billion, from \$189.5 in 2001–02 to \$213.0 billion. Issuance increased by \$14.1 billion in the 3-month tranche and \$4.7 billion in both the 6- and 12-month tranches. During the year \$23.8 billion of CMBs were issued through 13 auctions with maturities ranging between several days to six weeks (see Table 4).

- ***Turnaround time for Treasury bill and CMB auctions:*** On November 25, 2002, the operational turnaround time was reduced from 15 minutes to 10 minutes.

Table 4
Treasury Bill and CMB Program

	1998–99	1999–00	2000–01	2001–02	2002–03
	(\$ millions)				
CMB	25,750	19,700	9,000	7,500	23,750
3-month Treasury bills	90,800	100,700	88,100	103,300	117,400
6-month Treasury bills	42,600	46,600	38,600	43,100	47,800
12-month Treasury bills	39,500	46,600	38,600	43,100	47,800
Treasury bills	172,900	193,900	165,300	189,500	213,000
Total	198,650	213,600	174,300	197,000	236,750

Source: Department of Finance.

Receiver General AM and PM Auctions

The Bank of Canada conducts two auctions per day for the Government's domestic cash balances. The morning or "AM" auction is held at 9:15 a.m. while the afternoon or "PM" auction is held at 4:15 p.m. The AM auction is primarily for the purpose of investing surplus cash balances for periods that range from one day to several weeks. The purpose of PM auctions is to invest residual government cash balances resulting from cash flows taking place during the day (following the AM auction) and to facilitate the Bank of Canada's management of daily settlement balances in the country's Large Value Transfer System (LVTS). The PM deposits typically mature the following business day.

Prior to September 10, 2002, the AM and PM deposit auctions were conducted on an uncollateralized basis, and Canadian financial institutions that were direct clearers in the LVTS were the only eligible participants. Starting on September 10, 2002, a new collateralized framework was implemented for the AM auctions in order to strengthen the management of credit risk and increase competition by opening the auctions to a wider range of participants. No changes were made to the PM auction framework.

The average daily level of Receiver General cash balances at the financial institutions increased from \$7.1 billion in 1998–99 to \$10.2 billion in 2000–01, then decreased to \$6.1 billion in 2002–03.

Increasingly large bond maturities (concentrated on March 1, June 1, September 1 and December 1), the introduction in 1999 of the LVTS, and unexpectedly strong financial outcomes all contributed to the growing levels of average cash balances in 1999–00 and 2000–01.

Average daily cash balances declined in 2001–02 and 2002–03 as a result of smaller government surpluses, the impact of the cash management bond buyback program introduced in January 2001, a more mature LVTS and fewer large bond maturities (there were no large maturities in March 2002 or 2003—see Table 5).

Table 5
Average Daily Receiver General Cash Balances Held at Financial Institutions

	1998–99	1999–00	2000–01	2001–02	2002–03
	(\$ millions)				
Average daily cash balances	7,113	9,021	10,188	7,921	6,139

Source: Department of Finance.

Market Transparency and Integrity

The Government and the Bank of Canada have a strong interest in improving the transparency of the Government of Canada securities market because transparent markets can enhance the integrity and attractiveness of the Government of Canada securities market for a wide array of investors. This in turn supports the Government's debt strategy objective of achieving stable, low-cost funding, and the Bank's interest in an efficient mechanism for the transmission of monetary policy.

The Department of Finance and Bank of Canada have been actively involved in supporting the development of more transparent markets for many years. In particular, there have been ongoing discussions with Canadian securities regulators and market participants on the development of a regulatory framework for electronic or alternative trading systems since rules were first proposed in 1999. A key concern has been to facilitate enhanced market transparency without adversely affecting the liquidity of the Government of Canada securities market. For more information on this issue, please see the Web sites of the Bank of Canada (www.bankofcanada.ca) and the Ontario Securities Commission (www.osc.gov.on.ca).

Managing Treasury Risk

The debt, cash and reserves management operations of the Government of Canada engender exposure to various forms of financial risk, as detailed in the box on page 36. The primary focus of risk management in the context of federal debt strategy has always been the management of the structure of the domestic debt, which, due to the impact of changing interest rates, is by far the most significant form of financial risk to which the Government is exposed.

In recent years, in addition to focusing on the maintenance of a prudent debt structure, the Government has introduced a comprehensive risk management framework for identifying and managing all forms of treasury risk, in particular the market, credit, operational and legal risks related to the financing and investment of its foreign exchange reserves and the investment of its Canadian-dollar cash balances.

The Government's risk management policies, supported by the creation of a special risk unit at the Bank of Canada, call for prudent management of treasury risks based on best practices. Risk tolerances are low, calling for market risk to be immunized to the greatest extent possible and the maintenance of high credit quality and portfolio diversification standards.

The major considerations and recent initiatives in these domains are addressed in this section, while a detailed description of the analytical tools used to assess the debt structure can be found in Annex 1.

<i>Forms of Treasury Risk</i>		
<i>Risk Type</i>	<i>Definition</i>	<i>Government Exposure</i>
Interest rate risk	Risk of loss arising from unexpected changes in interest rates.	Primarily in the structure of the debt stock through the amount of floating-rate debt.
Foreign exchange risk	Risk of loss arising from changes in values of currencies.	In the value of reserve assets.
Credit risk	Risk of loss arising from default or downgrade of a counterparty.	In swap contracts, during the settlement period of transactions and in foreign currency investments (i.e., bonds, deposits).
Operational risk	Risk of loss arising from deficiencies in information systems and internal controls or from human error.	In all transactions related to debt, cash management and reserves management.
Market risk	Risk of loss arising from movements in foreign interest rates.	In the value of foreign currency debt and assets.
Legal risk	Risk of loss arising from contracts that are not legally enforceable or appropriately documented or executed.	In government contracts related to debt and reserves management (e.g., swap and repo contracts).
Liquidity risk	Risk of loss arising when a security asset cannot be sold at or near the previous market price because of inadequate market depth or market disruption.	In the value of reserve assets.
Refinancing risk	Risk of loss arising when a security (liability) cannot be fully sold because of market disruption or lack of demand.	At domestic auctions and for foreign currency debt.

Balancing Prudence and Cost: Debt Structure

As noted above, the federal debt structure has significant exposure to interest rate risk. In simple terms, every year a sizable portion of the debt matures and must be refinanced. As a result, the Government is exposed to the risk of an increase in interest rates that could potentially disrupt the fiscal plan.

This situation makes choosing an appropriate debt structure—one that balances prudence and cost savings—an important decision. In determining the appropriate debt structure, the Government generally faces a trade-off between keeping borrowing costs low and ensuring that the cost impact of unexpected increases in interest rates does not exceed its tolerance for risk. Specifically, long-term instruments such as Government of Canada bonds typically have higher debt-servicing costs than short-term instruments such as Treasury bills. On the other hand, interest costs for outstanding bonds are known with certainty over their entire life, while Treasury bills need to be refinanced several times throughout the year at new prevailing market interest rates.

The main operational measure used to manage the debt structure is the mix of fixed-rate and floating-rate debt instruments that make up the debt stock. The fixed-rate share of the debt is the proportion of interest-bearing debt having fixed rates—debt that does not mature or need to be re-priced within a year—relative to the total interest-bearing debt stock. Therefore, debt-servicing costs increase (decrease) and interest rate risk decreases (increases) with a higher (lower) fixed-rate share.

During the 1990s the Government raised the fixed-rate share of the federal debt from one-half to two-thirds to provide more cost stability in an environment of fiscal and current account deficits, volatile interest rates and high debt levels. As noted in the 2003 budget, by establishing a more prudent fixed-rate debt structure and reducing the debt, the Government reduced the sensitivity of its annual debt-service charges to changes in interest rates. For example, a 100-basis-point shock in interest rates in 2002–03 would have increased annual interest costs by \$0.8 billion under the current structure, compared to \$1.8 billion at the time of the 1995 budget.

Finding a New Balance

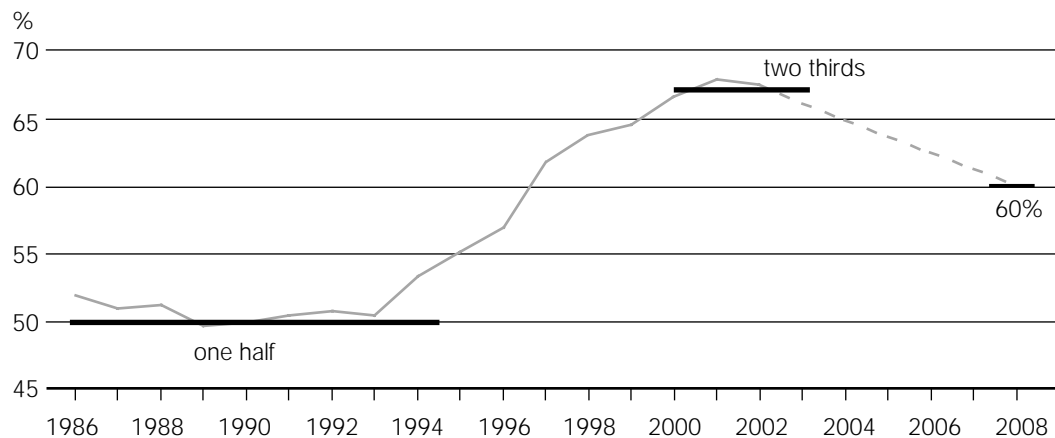
The target debt structure announced in the 2002–03 *Debt Management Strategy* was two-thirds fixed-rate debt. However, during the year, analysis was undertaken which resulted in a change in the target.

For the past five fiscal years, including 2002–03, the fixed-rate portion of the debt has been managed around a two-thirds target. Over the same period Canada's economic and fiscal position has strengthened substantially. Canada now has low and stable inflation and interest rates, lower foreign indebtedness and a current account surplus. In addition, the reduction in the debt level has provided Canada with greater financial stability, reduced vulnerability to events happening beyond our borders, and contributed to the restoration of Canada's triple-A credit rating.

As a result of these positive economic and fiscal developments, analysis conducted in 2002 indicated that the Government was in a position to adjust its debt structure to lower future financing costs without exposing itself to significantly higher levels of risk. Consequently, the Government announced a change in the debt structure target in the 2003 budget. The fixed-rate portion of the debt will be lowered from the previous target of two-thirds to 60 per cent over a five-year period (see Figure 1).

The decision to alter the target debt structure is aimed at reducing borrowing costs for the Government without compromising debt cost stability. Based on the 2003 budget outlook, the planned change to the debt structure is expected to reduce the Government's net debt-servicing costs by up to \$750 million during the five-year transition period and by up to \$500 million, on average, each year thereafter. Annex 1 describes in more detail the analytical tools and results supporting the decision.

Figure 1
Target Fixed-Rate Share of the Debt



Source: Department of Finance.

Managing the Risks of Holding Cash and Reserves

In recent years the Government has put in place frameworks to manage financial risk and instituted practices to limit risk exposure, notably its exposure to the financial institution counterparties holding cash and foreign exchange reserves.

In the late 1990s the Government moved to put in place a governance framework that separates risk management from treasury operations. A Risk Management Unit was established in 1997 to monitor, report and advise on the risk position of the Government. A Risk Management Committee of senior officials of the Department of Finance and the Bank of Canada meets regularly to review risk reports and to provide guidance and accountability on the Government's treasury risk policies.

Foreign currency reserve assets and the liabilities financing those assets have been managed together on a portfolio basis since 1998, based on the same principles used by private sector financial institutions. The Government uses an asset-liability matching framework, whereby assets and liabilities financing these assets are matched (as closely as possible) in currency and duration, so that the Government is not exposed to currency and interest rate risks. The risk of material loss arising from interest and/or currency risk is very low.

In the late 1990s the Government also developed a rigorous, comprehensive credit risk system that is consistent with best practices in credit risk management and includes credit exposure limits pertaining to issuers and counterparties across all lines of business. Specifically, the management of Canadian-dollar cash balances and the investment of reserve assets are governed by detailed investment and credit guidelines approved by the Minister of Finance. The guidelines limit the Government's credit exposure to commercial financial institution counterparties and to the issuer of securities held by the Government in the foreign currency reserve portfolio.

In 2002–03 the Government continued to further strengthen its risk management framework by implementing collateral management frameworks and amending its investment guidelines. Collateral management systems are increasingly the norm in capital markets as a way of managing credit risk. Under these frameworks, high-quality collateral (e.g., cash, securities) is posted to the Government when its credit exposure to financial institution counterparties exceeds specified limits.

Collateral Framework for Investment of Canadian-Dollar Cash Balances

As indicated earlier, a new collateralized framework for AM auctions was implemented in September 2002. The new framework strengthens the management of the credit risks involved in the investment of cash balances through the use of credit ratings, credit lines and collateral agreements, and increases competition in the auction of cash balances by opening the AM auctions to a wider range of participants. The number of eligible participants has increased from 13 to 20 institutions. The PM auction remains unchanged (see the Bank of Canada Web page www.bankofcanada.ca/en/auction/rec_general.pdf for further information on terms and conditions).

Collateral Framework for Swaps and Foreign Currency Cash Balances

Cross-currency swaps of domestic obligations have been used since March 1995 to fund the foreign exchange reserves, as they are highly cost-effective compared to other sources of foreign currency funds. As a result, the Government's swap portfolio has increased significantly—as of March 31, 2003, it stood at \$29.4 billion.

To mitigate the credit risk associated with swaps, the Government implemented a collateral management framework for swaps in April 2002. High-quality collateral is posted to the Government if individual credit exposures arising from changes in the marked-to-market values of swap contracts exceed pre-set limits. As of March 31, 2003, the swap collateral framework included 10 financial institution counterparties.

In addition to the swap collateral framework, in the latter part of 2002–03 the Government developed a US-dollar repo program to reduce the use of uncollateralized short-term US-dollar deposits with commercial banks. Under the repo framework, collateral is posted to the Government to protect US-dollar cash invested with the financial institution counterparties. As of March 31, 2003, the Government had signed three counterparties to its US-dollar repo framework.

Amendment of Investment and Risk Guidelines

With the implementation of a collateral management framework for the Government's cross-currency swap program, the Government modified its credit guidelines in 2002 to accept A-rated financial institutions as eligible counterparties for deposits and swaps. This change will help the Government further diversify its investments across financial institution counterparties without increasing risk significantly. Credit exposure to A-rated financial institutions will be maintained within prudent standards, consistent with best practices of comparable sovereigns and major market participants.

The investment guidelines governing the management of the reserve asset portfolio were also modified in 2002 to allow a limited amount of securities of A-rated sovereigns to be held within prudent limits (previously the Government could only invest in AA- and AAA-rated sovereigns), mirroring the change to allow limited exposure to A-rated financial counterparties involved in reserves management. This change is in line with investment practices of a number of OECD sovereigns and will allow the Government to further diversify its reserves investment portfolio.

Maintenance of Supplementary Liquidity

In August 2002 the Government successfully renegotiated its existing US\$6-billion standby credit facility with international banks. The standby facility provides supplementary liquidity to meet the Government's needs in the event that market disruption makes borrowing through securities markets impossible. Under the renewal of the facility, the composition of the banks in the facility was changed, and the maturity date was extended from 2003 to 2007. No other changes were made to the terms of the facility.

Part III: Debt, Cash and Reserves Management Indicators

This section is divided into three types of measures: the outcome of operations and activity with respect to domestic debt; indicators of cash management performance; and measures of reserves funding and investment. It also summarizes recent external evaluations of government programs. A detailed discussion of the measures used to manage and evaluate the risk structure of the debt stock is covered in Annex 1.

The indicators are intended to provide interested parties with an understanding of some of the key measures that debt managers follow. The measures do not, by themselves, define the success of specific government debt management policies. However, they serve as useful guideposts in helping to assess the outcomes of the Government's debt management initiatives.

Measures of a well-functioning securities market include the degree to which auctions in the primary market are well bid and the level of liquidity and trading in the secondary market. In 2002–03 the Government's Treasury bill and bond auctions continued to be well bid. Primary dealers play the major role at auctions except in the case of real return bond auctions, where customers' winnings exceed that of primary dealers. The secondary market for Government of Canada securities continues to experience healthy trading volumes and turnover ratios that compare favourably to those of other countries. Primary dealers also play a major role in secondary markets, with the top 10 participants accounting for about 90 per cent of turnover of Treasury bills and bonds.

Domestic Debt and Government of Canada Securities Market

There are a number of measures of outcomes in the area of domestic debt management. They can be divided into two groups: those associated with the debt issuance process (the primary market) and those dealing with post-issuance trades (the secondary market).

Primary Market Measures

Marketable Bond, Treasury Bill and Cash Management Bill Auctions

The two most conventional measures of auction performance are the auction coverage and tail.

The *auction coverage* is defined as the total size of bids received divided by the auction size. In this regard, a cover statistic of one is essential and a higher statistic is generally better, as it indicates active bidding and therefore lower costs for the Government.

The Terms of Participation in government auctions require larger dealers (primary dealers) to bid 50 per cent of their bidding limit at a reasonable rate. Maximum coverage ratios from primary dealers (which represents about 85 per cent of winning bids) could reach a maximum of about 2.6 for bond auctions and 2.4 for Treasury bill and CMB auctions, while minimum coverage, assuming that all primary dealers bid at their minimum bidding limit, would total about 1.3 for bond auctions and 1.1 for Treasury bill and CMB auctions.

In 2002–03 coverage remained generally stable for Treasury bill and bond auctions and increased for real return bond auctions. Overall, coverage has remained stable over the last four years (see Table 6).

The *auction tail* is the number of basis points between the highest yield accepted and the average yield. In this case, smaller is better as it indicates strong bidding and therefore lower costs.

These two measures, combined with the yield of the securities issued, describe the quality of an auction in terms of its competitiveness and its impact on the cost of borrowing.

In 2002–03 tails improved in 3-month Treasury bill and medium- to long-term bond auctions, especially for the 30-year bond auctions. Tails widened for 6- and 12-month Treasury bills and for 2-year auctions. Overall, tails have increased slightly from 2001–02 but still remain lower than four years ago (see Table 6).

Table 6
Performance at Auctions

	Coverage					Tail				
	1999–00	2000–01	2001–02	2002–03	4-yr avg.	1999–00	2000–01	2001–02	2002–03	4-yr avg.
CMB	2.12	1.98	1.94	1.98	2.01	2.48	2.31	1.43	1.38	1.90
3-month	1.86	1.96	1.84	1.93	1.90	1.21	1.08	1.28	1.16	1.18
6-month	1.97	2.17	2.03	1.99	2.04	1.18	0.92	0.83	0.85	0.95
12-month	1.86	2.06	1.88	1.86	1.91	1.10	0.96	0.93	1.00	1.00
2-year	2.38	2.42	2.24	2.23	2.32	0.65	0.58	0.66	0.71	0.65
5-year	2.43	2.46	2.23	2.29	2.35	0.66	0.50	0.74	0.65	0.64
10-year	2.25	2.54	2.30	2.33	2.35	1.06	1.08	0.89	0.80	0.96
30-year	2.29	2.29	2.36	2.39	2.33	1.58	2.75	1.07	0.76	1.54
RRB*	3.18	3.06	2.75	3.16	3.03	n.a.	n.a.	n.a.	n.a.	n.a.
Weighted Avg.**	1.98	2.12	1.96	1.99	2.01	1.11	0.99	0.91	1.01	1.01

* Auction tails for RRBs are not relevant since RRBs are distributed through single-price auctions.

** Weighted average excludes CMBs.

Note: The peak in the average tail for 30-year auctions in 2000–01 is due to one of the two 30-year auctions (April 19, 2000 auction), which had an unusually large tail of 4.4 basis points, increasing the annual average to 2.75 basis points.

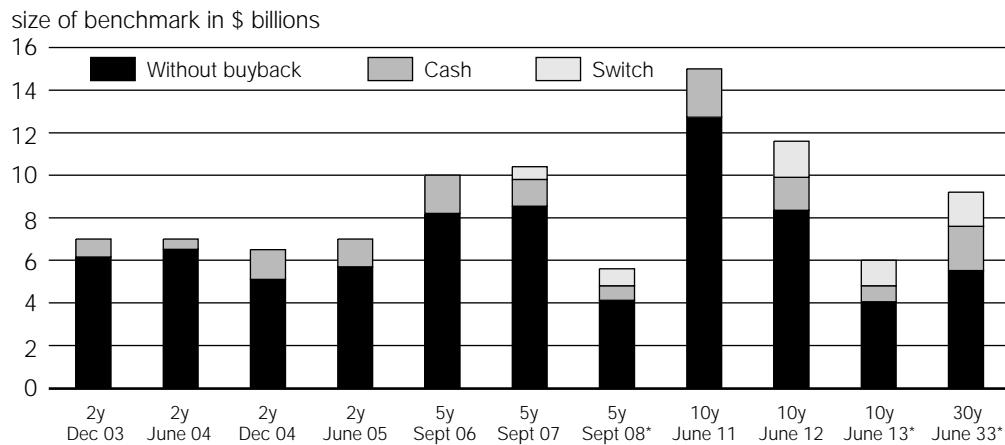
Source: Bank of Canada.

Effectiveness of the Regular Bond Buyback Program

The bond buyback program was introduced to enhance liquidity and maintain an active new issuance in the primary market for Government of Canada securities. Specifically, cash and switch buybacks were introduced to help maintain large benchmark issues.

On average, buybacks have helped to maintain auction sizes that are \$500 million larger than they would have been without the buyback program. Meanwhile, buybacks on a switch basis have provided an alternative to issuance at auctions and have contributed to the development of more liquid benchmarks, as shown by Chart 9.

Chart 9
**Impact of Regular Buyback Program
 on Benchmark Sizes**
 As of March 31, 2003



* Building benchmark.

Source: Department of Finance.

Cash Management Bond Buyback Program

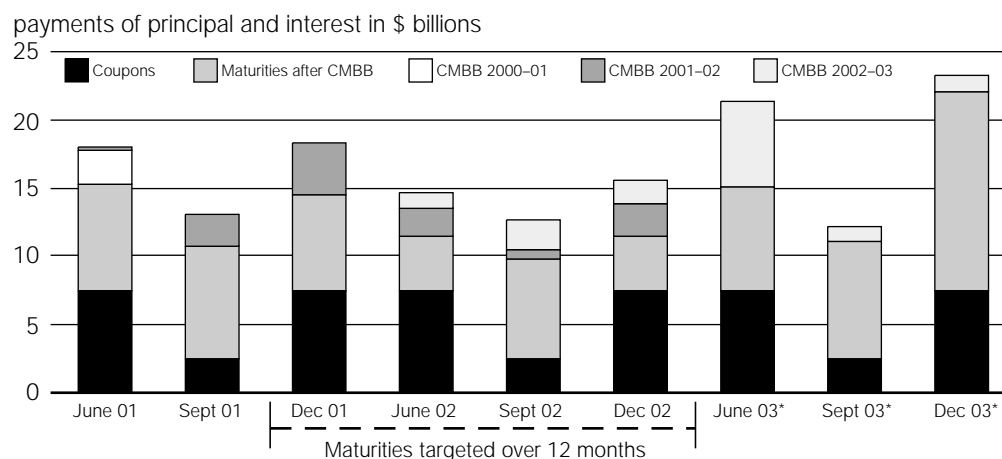
The cash management bond buyback (CMBB) program was implemented to help manage the Government's cash requirements by reducing the high levels of government cash balances needed to redeem large bond maturities. The program also helped to smooth variations in Treasury bill auction sizes over the year.

The CMBB program has lowered the Government's cash requirements at most large-maturity dates. In particular, as of March 31, 2003, the CMBB program had already reduced the June 1, 2003 cash requirement from about \$21 billion to about \$15 billion by reducing June 2003 bond maturities by \$6.2 billion. Since the inception of the program, the CMBB program has reduced sizes of bonds that were targeted for buyback over a full year by an average of 38 per cent (see Chart 10).

Chart 10

Impact of CMBB Operations on the Government's Large Payments

As of March 31, 2003



* These bonds continued to be targeted by operations conducted after March 31, 2003.

Source: Department of Finance.

Receiver General (RG) Auctions

As for bond and Treasury bill auctions, coverage and tail provide useful indicators of RG auction performance. For information on auction yield and the cost of carrying Receiver General cash balances, please see the later section on Canadian-dollar cash balances.

In 2002–03 RG coverage was better than the average of the past three years, especially for AM auctions. This result was to be expected, as the new RG collateralization framework encourages more participation in AM auctions.

AM auction tails improved in 2002–03 by 30 per cent over the four-year average and were quite stable over the year. AM auction tails for the first five months of the fiscal year (before collateralization) were not significantly different from tails for the last seven months of the fiscal year (after collateralization—see Table 7). PM auction tails improved compared to the last four years from 3.64 in 1999–2000 to 2.42 in 2002–03 (average for the fiscal year).

Table 7
Performance at Receiver General Auctions

	1999-00	2000-01	2001-02	2002-03		
				April to Sept 10 2002	Sept 11* 2002 to March 2003	4-yr avg.
AM Auctions						
Coverage	3.28	2.67	2.55	3.32	3.53	2.95
Tail	1.47	1.08	1.89	0.69	0.91	1.34
PM Auctions						
Coverage	1.89	1.97	2.33	2.44	2.45	2.12
Tail	3.64	4.14	2.40	2.81	2.08	3.28

* Sept. 10, 2002 marked the start of AM auction collateralization.

Source: Bank of Canada.

Activity of Dealers and Accounts

This section provides information on participation of government securities distributors (primary dealers and other government securities dealers) and customers (institutional investors) in the primary and secondary markets for Government of Canada securities. Primary market activity shares are calculated using participants' allotment amounts at auctions during the fiscal year, and secondary market activity shares are calculated using participants' trading volumes during the fiscal year.

Nominal Bonds

In 2002-03 primary dealers were allotted 91.8 per cent of nominal bond auctions while customers were allotted 5.6 per cent (see Table 8). The 10 most active participants bought 88.7 per cent of the bonds. These percentages are in line with those observed in previous years.

Table 8
Bond Auctions Share (Per Cent) of Amount Allotted to Participants
(Excluding Real Return Bonds)

Fiscal year	PDs	Non-PDs	Customers	Top 10 participants
1999-00	88.1	4.9	7.0	84.8
2000-01	91.5	2.7	5.8	86.1
2001-02	83.7	6.4	9.8	82.2
2002-03	91.8	2.5	5.6	88.7

Source: Bank of Canada.

Real Return Bonds

Unlike the situation in nominal bonds, the primary market in RRBs was split almost evenly between dealers and customers. The 10 most active participants in RRB auctions were allotted 63.9 per cent of the auction, which is in line with historical averages (see Table 9).

Table 9
RRB Auctions Share (Per Cent) of Amount Allotted to Participants

Fiscal year	PDs	Non-PDs	Customers	Top 10 participants
1999–00	45.9	3.4	50.7	65.9
2000–01	45.5	2.7	51.8	68.4
2001–02	39.0	3.9	57.2	59.7
2002–03	47.9	0.9	51.2	63.9

Source: Bank of Canada.

Bond Buybacks

Primary dealers are usually the dominant participants in bond buyback operations. Customers' participation reached a peak of 13.8 per cent in 2001–02, when a few customers were very active in buybacks on a cash basis. In 2002–03 customers' participation returned to a lower level and the primary dealers' share increased to previous years' levels, at 96.4 per cent of operations (see Table 10).

Table 10
Bond Buyback Operations Share (Per Cent) of Amount Allotted to Participants
(Excludes Cash Management Bond Buybacks)

Fiscal year	PDs	Non-PDs	Customers*	Top 10 participants
1999–00	97.6	2.4	0.0	97.2
2000–01	94.1	2.4	3.5	97.1
2001–02	86.2	0.0	13.8	98.4
2002–03	96.4	1.7	1.9	94.5

* Results may underestimate customer participation. Contrary to Treasury bill and bond auctions, customers do not have to inform the Bank of Canada about their participation at buyback operations.

Source: Bank of Canada.

Cash Management Bond Buyback Program

Primary dealers are usually the only participants in CMBB operations, with a share of 100 per cent in 2000–01 and 2002–03 (see Table 11).

Table 11
CMBB Operations Share (Per Cent) of Amount Allotted to Participants

Fiscal year	PDs	Non-PDs	Customers*	Top 10 participants
2000–01	100.0	0.0	0.0	100.0
2001–02	95.9	1.2	2.9	99.2
2002–03	100.0	0.0	0.0	100.0

* Results may underestimate customer participation. Contrary to Treasury bill and bond auctions, customers do not have to inform the Bank of Canada about their participation at buyback operations.

Source: Bank of Canada.

Treasury Bills

For 2002–03 primary dealers accounted for 84.1 per cent of amounts allotted during Treasury bill (T-bill) auctions while customers accounted for 13.6 per cent. Customers' participation in Treasury bill auctions has increased slightly in recent years. In 2002–03 the 10 most active participants accounted for 91.5 per cent of amounts allotted during Treasury bill auctions (see Table 12).

Table 12
T-Bill Auctions Share (Per Cent) of Amount Allotted to Participants

Fiscal year	PDs	Non-PDs	Customers	Top 10 participants
1999–00	85.2	2.9	11.9	88.0
2000–01	87.6	1.5	10.9	92.5
2001–02	86.0	1.6	12.4	93.0
2002–03	84.1	2.2	13.6	91.5

Source: Bank of Canada.

Cash Management Bills

In 2002–03 the 10 most active participants accounted for 95.5 per cent of amounts allotted during CMB auctions. For the same fiscal year, primary dealers accounted for 93 per cent of amounts allotted while customers accounted for 4.5 per cent (see Table 13).

Table 13
CMB Auctions Share (Per Cent) of Amount Allotted to Participants

Fiscal year	PDs	Non-PDs	Customers	Top 10 participants
1999–00	84.3	2.0	12.9	92.1
2000–01	92.9	4.5	2.6	95.6
2001–02	95.6	2.3	2.1	97.9
2002–03	93.0	2.5	4.5	95.5

Source: Bank of Canada.

Receiver General AM and PM Auctions

Prior to September 10, 2002, the AM and PM deposit auctions were conducted on an uncollateralized basis, and Canadian financial institutions that were direct clearers in the Large Value Transfer System (LVTS) were the only eligible participants. Starting on September 10, 2002, a new collateralized framework was implemented for the AM auctions in order to strengthen the management of credit risk and increase competition by opening the auctions to a wider range of participants. No changes were made to the PM auction framework.

Since the introduction of the new framework, to the end of the 2002–03 fiscal year, the top 10 LVTS participants represent 80.9 per cent compared to 99.8 per cent for the first five month of the fiscal year. Other participants of Receiver General auctions gained 18.7 per cent of the amount allotted since the new framework has been in place (see Table 14).

Table 14
Receiver General Auctions Share (Per Cent) of Amount Allotted Between LVTS and Other Participants

Fiscal year	Top 10 LVTS	Top 10 others
1999–00	99.2	–
2000–01	97.3	–
2001–02	98.5	–
2002–03		
– Before Sept 10, 2002	99.8	–
– After Sept 10, 2002	80.9	18.7
– Avg. for 2002–03	88.8	10.9

Source: Bank of Canada.

Secondary Market

The two conventional measures for liquidity and efficiency in the Government of Canada securities market are trading volume and turnover ratio. These two measures are presented for bonds (Chart 11 and, for international comparison, Chart 15), Treasury bills (Chart 12), bond repos (Chart 13) and Treasury bill repos (Chart 14).

Trading volume, which shows the amount of securities traded per period, is a conventional indicator of liquidity. Large trading volume shows that participants can buy or sell in the marketplace without a substantial change in the price of the securities.

Turnover ratio, which is the ratio of securities traded to the securities float, is a measure of market efficiency. High turnover implies that a large amount of securities changes hands easily over a given period of time, a hallmark of an efficient securities market.

Also, the presence of liquid repo markets and liquid futures contracts characterizes an efficient market. A liquid repo market exists in the Government of Canada securities market for Treasury bills and for nominal bonds. There is also an active futures contract based on the benchmark 10-year bond (Canadian Government Bond contracts).

Chart 11
Government of Canada Bonds
Trading Volume and Turnover Ratio

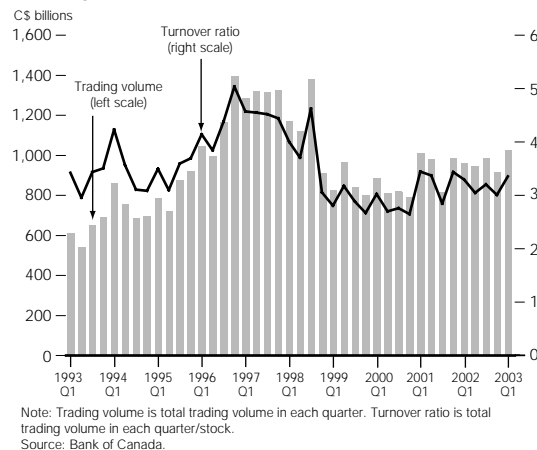


Chart 12
Government of Canada Treasury Bills
Trading Volume and Turnover Ratio

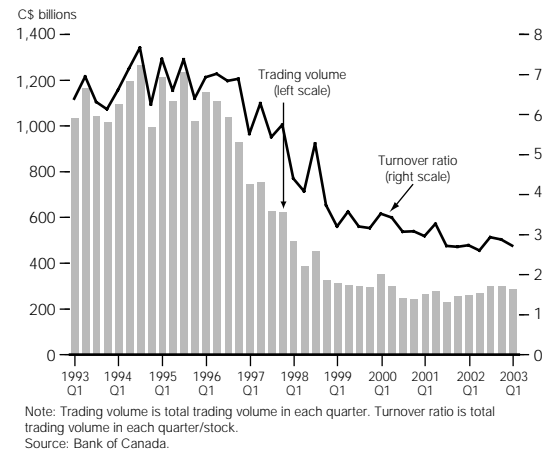


Chart 13
Government of Canada Bond Repos
Trading Volume and Turnover Ratio

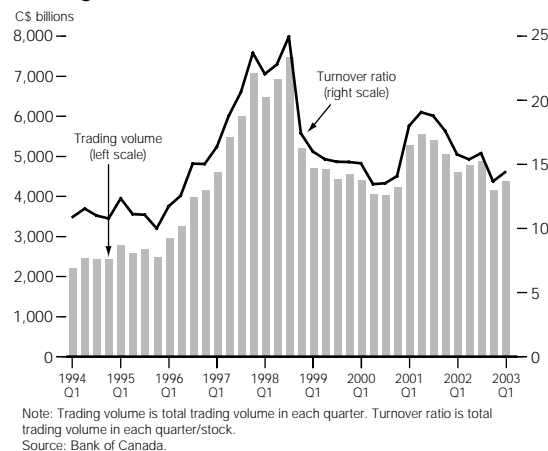
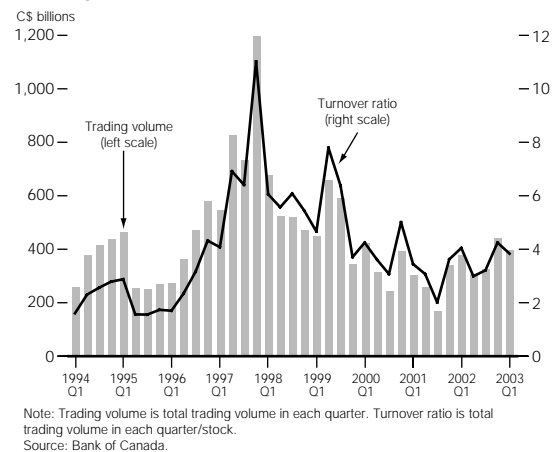


Chart 14
Government of Canada Treasury Bill Repos
Trading Volume and Turnover Ratio



Market Activity

The volume of transactions in the Government of Canada bond market has grown significantly since 1990. Total marketable bond trading volume was \$3,876.6 billion in 2002–03, a 3.7-per-cent increase from 2001–02. The average quarterly turnover ratio was 3.1 times the outstanding stock of bonds in 2002–03, compared to 3.2 in 2001–02 (see Chart 11). The volume of transactions in the Treasury bill market remained at the low levels seen in recent years, as the stock of Treasury bills outstanding has fallen. In 2002–03 total Treasury bill turnover was \$1,138 billion.

An active repo market is a hallmark of a well-functioning government securities market, and both Government of Canada bond repos and Treasury bill repos remained active in 2002–03. The total turnover for Government of Canada bond repos in 2002–03 was \$18,126 billion, down from \$20,536 billion in 2001–02. The average quarterly turnover ratio for bond repos in 2002–03 was 14.7 times compared to 17.7 times in 2001–02 (see Chart 13). The Treasury bill repo market volume in 2002–03 was \$1,449 billion and the average quarterly turnover ratio was 3.5 (see Chart 14).

Futures contracts are important complements to an efficient Government of Canada securities market. In Canada the trading volume of futures contracts maintained the levels of previous years. The futures contract based on 10-year Government of Canada bonds (the Canadian Government Bond contracts or CGB contracts) continues to be actively traded, as trading volume reached 1.8 million in 2002, a 1.7-per-cent decrease from 2001. Open interest on the CGB contract as of December 31, 2003, was 63,500, in line with the open interest at the end of 2001. There is also an active market for the 3-month Canadian Bankers' Acceptance Futures (BAX contracts).

Trading Volume by Market Participants

Treasury Bills

Over the last four fiscal years, primary dealers have become the main traders in the Treasury bill secondary market and now represent 98.4 per cent of total trading volume. The 10 most active participants in the Treasury bill secondary market represent 99.5 per cent of trading activities (see Table 15).

Table 15

Treasury Bill Trading Volume, Market Share (Per Cent) of Participants

Fiscal year	PDs	Non-PDs	Top 10 participants
1999–00	96.1	3.9	96.0
2000–01	98.3	1.7	98.3
2001–02	98.3	1.7	99.4
2002–03	98.4	1.6	99.5

Source: Bank of Canada.

Bonds

Primary dealers' and non-primary dealers' shares have remained fairly stable over the last four years at about 94 and 6 per cent, respectively. The 10 most active participants in the bond secondary market represent 95.9 per cent of trading activities (see Table 16).

Table 16
Bonds Trading Volume, Market Share (Per Cent) of Participants

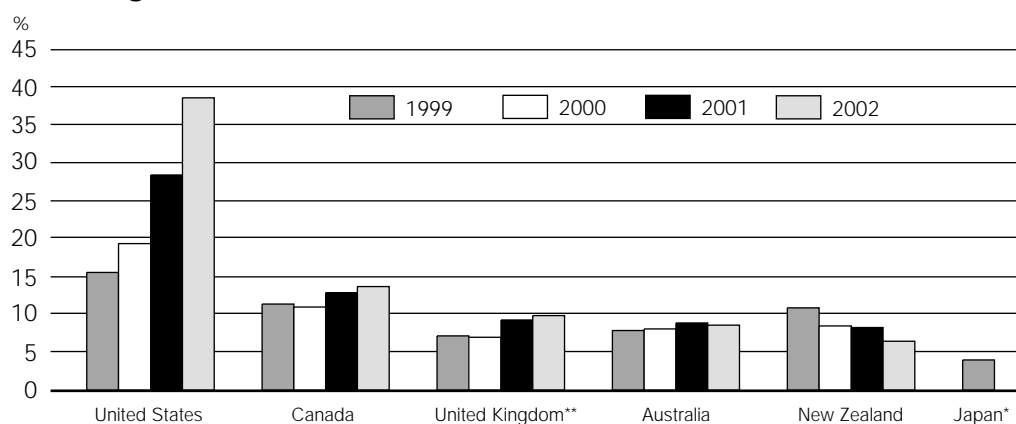
Fiscal year	PDs	Non-PDs	Top 10 participants
1999-00	92.8	7.2	91.1
2000-01	93.5	6.5	91.6
2001-02	94.0	6.0	96.0
2002-03	93.3	6.7	95.9

Source: Bank of Canada.

Comparison With Other Countries

The Government of Canada bond market compares favourably with other major sovereign bond markets. The market had an annual stock turnover level in 2002 of 13.7, behind only the United States, which had a stock turnover level of 38.7 (see Chart 15).

Chart 15
Sovereign Bond Turnover Ratios



* Turnover data are unavailable for Japan for 2000, 2001 and 2002.

** Data for the United Kingdom do not take into account higher issuance levels of inflation-linked bonds compared to other sovereigns.

Note: Turnover ratio is total trading volume in each quarter/stock.

Sources: *Australian Financial Markets Report*, Bank of Canada, Federal Reserve Bank of New York, Japan Ministry of Finance, The Bureau of the Public Debt of the U.S., London Stock Exchange, United Kingdom Debt Management Office, Reserve Bank of New Zealand.

Domestic Holdings of Government of Canada Debt

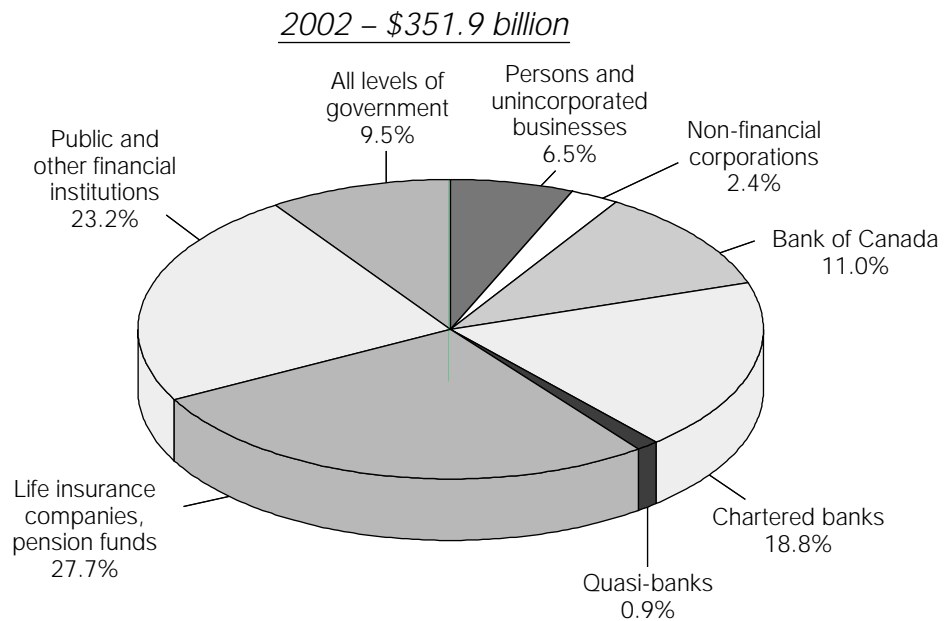
A diversified investor base helps to keep funding costs low by ensuring there is active demand for Government of Canada securities. The Government of Canada pursues diversification of its investor base by maintaining a domestic wholesale debt program that is attractive to a wide range of investors, offering a retail debt program that provides savings products to suit the needs of individual Canadians, and using a broad array of funding sources in its foreign borrowings.

In 2002 life insurance companies and pension funds accounted for the largest share of domestic holdings of Government of Canada market debt (27.7 per cent), followed by public and other financial institutions such as investment dealers and mutual funds, at 23.2 per cent (see Chart 16.) Taken together, they accounted for over 50 per cent of domestic holdings.

Reference Table IV shows the evolution of the distribution of domestic holdings of Government of Canada debt since 1976.

Chart 16

Distribution of Domestic Holdings of Government of Canada Market Debt



Source: Statistics Canada, *National Balance Sheet Accounts*.

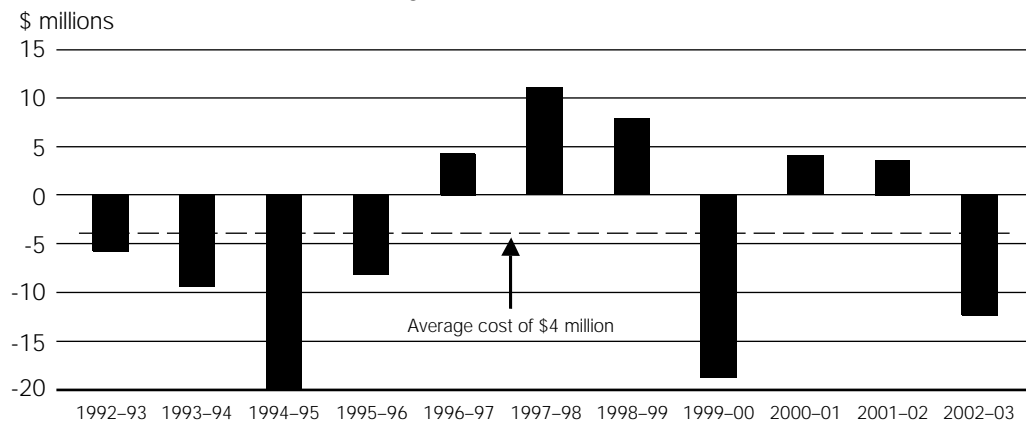
Canadian-Dollar Cash Balances

The key measure for the management of cash balances is the net return (cost paid or gain of “carry” earned) on cash balances, which fluctuate widely over the year owing to the scope of the Government’s financial operations, periodic large maturities of Government of Canada bonds, the operations of the Bank of Canada and changes in market conditions.

The yield spread earned or carry paid by the Government is 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. The cost of carry depends on the shape of the yield curve. A normal upward sloping yield curve, which has a positive interest rate spread between the rate at which the Government invests its cash and the rate at which it borrows, results in a cost of carry, 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 borrow funds. Conversely, under an inverted yield curve, short-term deposit rates are higher than 3- to 12-month Treasury bill rates, which can result in a net gain for the Government.

In 2002–03 the financial impact of holding Receiver General cash balances was a net cost of \$12.4 million, compared to a net gain of \$3.5 million for the prior fiscal year (see Chart 17). The change from gain to cost was due to shifts in the short-end of the yield curve from an inverted to a more normal upward sloping shape. This shift occurred in the last quarter of 2001–02 and persisted in 2002–03.

Chart 17
Cost (-) or Gain (+) of Carry for Cash Balances



Source: Bank of Canada.

Funding and Investment of Reserves

The main measures in the area of the funding and investment of reserves are the costs of the liabilities and the cost of carry on the asset/liability portfolio.

Liability Costs: In 2002–03 the sources of reserve funding were Canada bills and cross-currency swaps. Canada bills were issued, on average, at an all-in cost of US\$LIBOR less 15-20 basis points—generally in line with funding levels of recent years.

In the case of cross-currency swaps, costs are measured in floating-rate terms (LIBOR). On average, in 2002–03, the Government raised floating-rate “swap funds” at US\$LIBOR less 35 basis points, in line with recent years.

Carry

The carry on the foreign reserves is currently assessed by subtracting the interest paid on Canada’s foreign currency liabilities from interest earned on the reserve assets (i.e., the net interest earned or paid) and expressing this value as a percentage of total assets held (see the *2002 Annual Report to Parliament on the Operations of the Exchange Fund Account*, available at www.fin.gc.ca, for further information). The carry of the total Exchange Fund Account portfolio in 2002–03 is estimated at +1.5 basis points compared to zero basis points in 2001–02. In other words, the Government was able to hold reserves without incurring a cost to the taxpayer.

External Evaluations of Fund Management Policies and Activities

A means used by the Government to assess fund management effectiveness is program evaluation. The Department of Finance uses an external evaluation process to assess policies and operational decisions in the area of fund management in order to inform future decision making and contribute to public transparency and good governance. Independent evaluators are contracted to carry out the evaluations.

Two evaluations were undertaken in 2002–03, focusing on reserves management and the bond buyback program.

The evaluation of reserves management³ looked at the program’s objectives, roles and responsibilities and the costs and risks involved in the program. The evaluator noted the program compares well with that of other similar sovereigns. The main recommendation of the evaluation dealt with issues of risk management and performance measurement. The Department was largely in agreement with the recommendations, noting that work on improving performance measurement is underway.

³ “External Review of the Reserves Management Framework (2002),” available upon request from the Financial Markets Division, Department of Finance.

The evaluation of the bond buyback program⁴ looked at the value and effectiveness of the program and its impact on the debt program, secondary markets and market participants. The evaluator noted the program has been successful and enjoys the support of market participants. The main recommendations dealt with issues such as the need to keep apprised of developments in other sovereigns and the benefits of working with market participants, particularly with respect to the selection of bonds to be targeted for future buyback operations. The departmental response was again favourable, noting that it monitors developments in the borrowing programs of other sovereigns and maintains a dialogue with market participants.

⁴ "Evaluation of the Bond Buyback Program (2003)," available upon request from the Financial Markets Division, Department of Finance.

Annex 1—Managing the Debt Structure

This section describes the measures of the debt structure that the Government uses and presents the main analytical techniques and results supporting the decision to lower the fixed-rate share over five years, as announced in the February 2003 budget and subsequent 2003–04 *Debt Management Strategy*.

Measures of Debt Structure

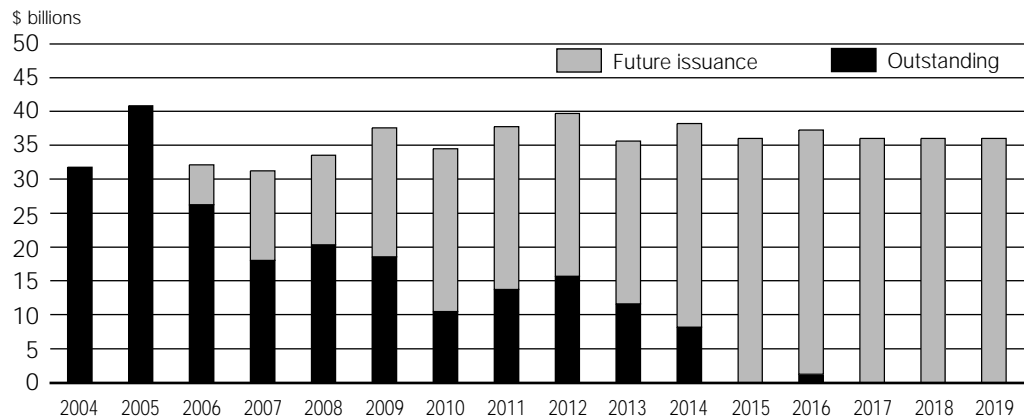
Debt managers commonly use a variety of indicators to characterize the composition of the debt and indicate how much of or how often the debt structure is exposed to interest rate variations.

Fixed-rate share: The fixed-rate share of the debt is computed as the proportion of interest-bearing debt having fixed rates—debt that does not mature or need to be re-priced within a year—relative to the total interest-bearing debt stock. The fixed-rate share has been used as the main operational target for a number of years, as it is intuitive and easy to compute.

Maturity profile: The Government monitors the maturity profile of the debt (i.e., the amount that matures, or comes due, in any given year) to limit its future refinancing risk. A well-distributed maturity profile reduces the risk that a relatively large proportion of the debt will mature and need to be refinanced in a period of higher interest rates.

The maturity profile of domestic government bonds is shown in Chart A1. Initiatives to regularize bond refinancing into predictable benchmark securities have led to a gradual smoothing out of the maturity profile of the bond stock. The recent adjustment of the size of the 10-year benchmark to maintain an annual benchmark cycle will contribute to maintaining a stable maturity profile in the future. The use of cash management buybacks also helps to reduce peaks in maturities within a year.

Chart A1
Maturity Profile of Domestic Bonds



Note: Outstanding bonds as of March 2003. Projections assume future issuance remains near 2002–03 levels and excludes buybacks.

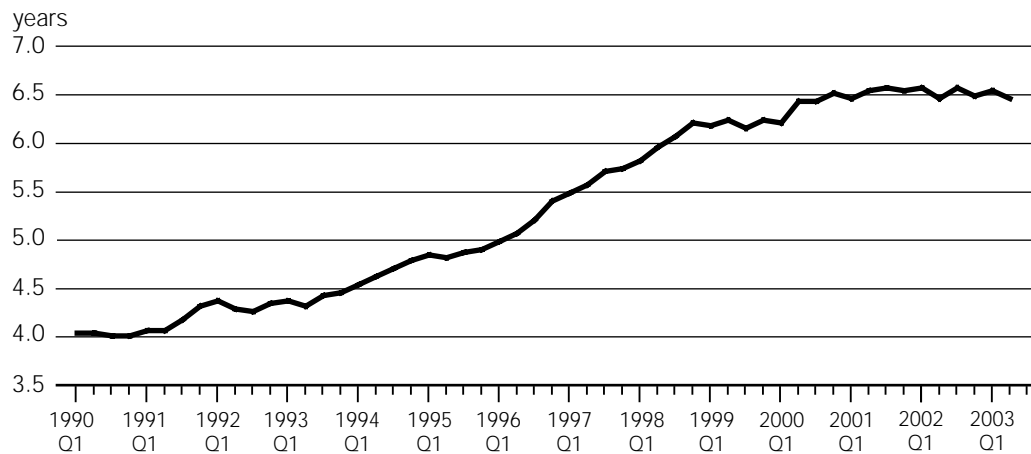
Source: Department of Finance.

Average term to maturity: The average term to maturity (ATM) is the average lifespan, measured in years, of the marketable instruments that make up the debt. ATM represents the average length of time before debt instruments mature and become subject to refinancing risk. A longer ATM means that debt instruments are rolled over less frequently, which implies less uncertainty regarding future debt costs.

The average term to maturity of marketable debt has stabilized at around 6½ years in recent years, having increased from roughly 4 years in 1990 (see Chart A2). With the announced change in debt structure, average term to maturity is expected to remain near current levels.

Chart A2

Average Term to Maturity of Marketable Debt



Source: Bank of Canada.

Duration: Duration is another measure of the average length of time before refinancing risk occurs and is widely used by other sovereign issuers. While ATM tracks only the time when the principal is repaid, duration considers the time value of all expected cash flows (coupon payments and principal repayments) through the life of debt instruments. From an issuer's perspective, a longer duration is associated with lower refinancing risk. At the end of March 2003, the Government's marketable debt had a duration of 4.5 years.⁵

⁵ Duration is calculated according to the modified duration formula, and includes the effect of cross-currency and interest-rate swaps.

Analytical Techniques and Results

The primary goal of the analysis in 2002 was to assess whether a change in debt structure is appropriate, in light of recent improvements in the fiscal and macroeconomic environment. The risk and cost profiles of the two-thirds fixed-rate debt structure were compared with structures having a fixed-rate share that is 5 and 10 per cent lower. Results indicate cost savings could be expected over time by lowering the fixed-rate share, and risk exposure would be kept within tolerable risk levels. In light of these findings, the Government decided to lower the fixed-rate share target from two-thirds to 60 per cent over five years.

Stochastic simulation, based on the simulation of debt costs for a large number of interest rate scenarios, was used to assess the balance between the costs and risks of alternative debt structures. The Government takes a long-term strategic view in choosing a target debt structure to have reasonable and lasting cost stability under a range of potential interest rate environments. The decision to change the fixed-rate share target is not based on a particular interest rate outlook.

The analysis showed that a lower fixed-rate share would provide cost savings over a medium-term horizon and would not increase risk beyond that tolerated in the budgetary framework. Under either debt structure, there was a high degree of certainty (95 per cent probability) that debt costs in the next year would be within the Government's risk tolerance.

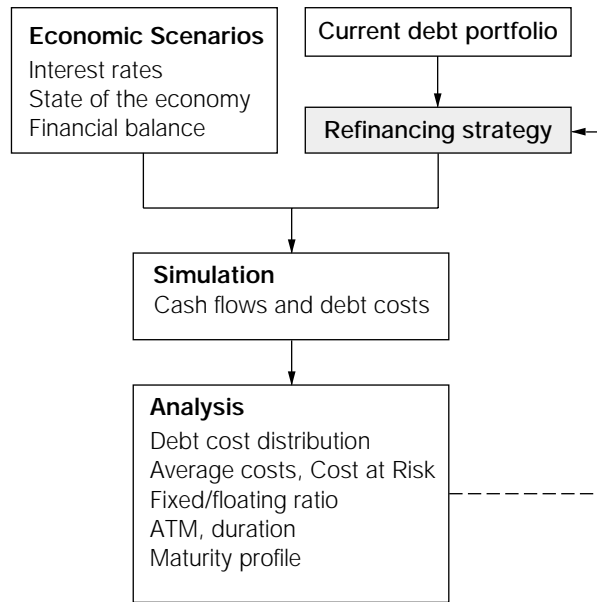
Compared to the current two-thirds debt structure, a lower fixed-rate structure is more exposed to adverse movements in interest rates. For example, a 100-basis-point increase in interest rates along the entire yield curve would raise net federal debt-servicing costs by \$1.1 billion in the first year with a 60-per-cent fixed-rate structure, compared to \$800 million for a two-thirds debt structure. By comparison, the impact of the same interest rate shock was estimated at \$1.8 billion in the mid-1990s owing to a high debt level and an even lower fixed-rate share.

However, the analysis indicates that it is unlikely that the additional debt costs stemming from a severe interest rate shock would be disruptive to the budgetary framework. Over time, the additional costs resulting from an interest rate shock would be more than offset by the savings associated with a lower fixed-rate structure.

Modelling Framework

The model used for the analysis is illustrated in Figure A1. In addition to data on the existing debt and assumptions on future debt evolution, a large number of economic scenarios are generated (see box below) and an issuance strategy is designed. Cash flows and debt costs are then simulated for each scenario and results are extracted. The process is finally repeated for alternative financing strategies.

Figure A1
Debt Strategy Framework



Interest Rate Scenarios

Uncertainty surrounding future interest rates is the main source of risk in managing the Government's debt portfolio. Any empirical modelling of future debt charges requires future interest rate scenarios. Moreover, the quality of the analysis depends on the plausibility of the scenarios.

The term structure model used to develop scenarios is the two-factor Cox-Ingersoll-Ross (CIR) model⁶. The generated term structures take the various shapes observed historically: upward sloping, inverted and humped. The model is able to reproduce the general shape of the empirical average yield curves.

For the analysis, the model parameters have been selected to reproduce characteristics of interest rates observed over the 1994–2002 period. It is therefore assumed that the interest rate environment that prevailed over that period will continue over the next 10 years. It should be noted that the choice of the historical period is critical and, inevitably, subjective.

The CIR model is used to produce 10,000 term structure paths for a 10-year horizon. To summarize the properties of the generated interest rate scenarios, the sample mean and volatility of the 3-month and 10-year rates are presented in Table A1. The spread between 3-month and 10-year rates for the generated scenarios remains generally between 0 and 4 per cent, with an average of about 1.8 per cent, matching what was observed over the 1994–2002 period.

Table A1
Generated Interest Rate Scenarios Statistics

	Average	Volatility	95% range in year 5
3-month	4.8%	0.5%	2.5 to 8.0%
10-year	6.6%	0.3%	4.5 to 10.2%

Source: Department of Finance.

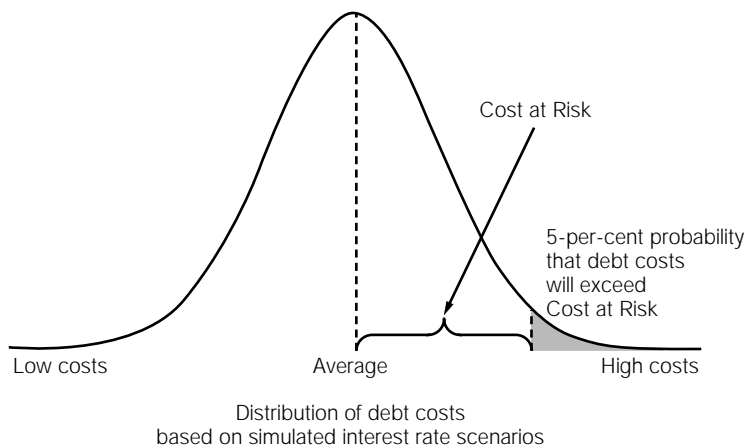
Experience has shown that results of the stochastic analysis are highly dependent on the interest rate model and the parameters used. While progress has been accomplished at improving the interest rate model, more work is required to ensure that the model captures adequately all dimensions of observed interest rate dynamics and that generated scenarios are realistic.

⁶ See end of Annex 1 for more information on the CIR model.

Stochastic Analysis

The first technique employed is based on the simulation of a large number of future interest rate scenarios and the examination of their implications for debt costs. The statistical distribution of debt costs (see Figure A2) is compared for the three different debt structures.

Figure A2
Debt Cost Distribution



Cost at Risk (CaR) is one of the main tools used to present and interpret results of stochastic simulations. This measure is similar to the well-known Value at Risk measure used extensively throughout the financial community, but is based on debt costs rather than marked-to-market values. CaR is a measure based on the statistical distribution of debt charges that enables risk to be quantified in terms of the maximum costs that could occur with a 95-per-cent probability in a particular year. A number of useful variants in the definition are presented in Table A2.

Table A2
Cost at Risk Concepts

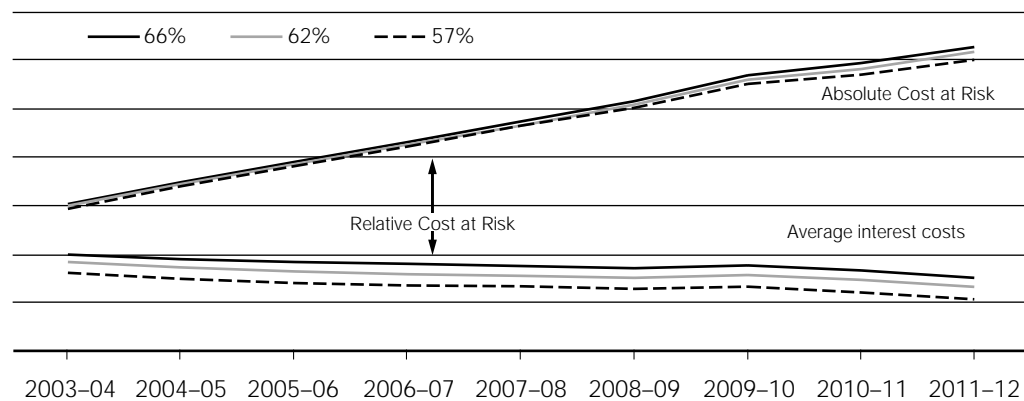
Measure	Interpretation
Absolute Cost at Risk	Maximum costs expected with a 95-per-cent probability.
Relative Cost at Risk	Maximum increase over average in-debt costs expected with a 95-per-cent probability.
Time-conditional Cost at Risk	Maximum unexpected increase in costs that is expected with a 95-per-cent probability, from one year to the next.

Results of the analysis are illustrated in Chart A3. As expected, average debt costs decline when the proportion of long-term bonds is decreased in the debt portfolio. Cost savings could be realized over the long term by reducing the fixed-rate share by 5 or 10 per cent.

The relative CaR measure is attractive to gauge risk because it can be directly compared to the level of prudence incorporated in the budget framework to analyze the risk that an unexpected increase in debt costs disrupts the budget plan. In other words, an appropriate debt structure could require that relative CaR remain inside the Government's risk tolerance limit.

Relative CaR rises when the fixed/floating ratio is decreased. A lower debt structure is slightly more sensitive to interest rate volatility. All three debt structures are highly likely to contain increases in debt costs without disrupting the budget plan over a one-year horizon.

Chart A3
Cost at Risk Results



From an economic perspective, absolute CaR may be more relevant, as it focuses on the potential level of costs instead of the risk of deviation from an average. Absolute CaR gives the maximum level of debt charges with a 95-per-cent probability; that is, there would be only a 5-per-cent chance that debt charges exceed the absolute CaR in a given year. When comparing two debt structures, absolute CaR considers the difference in expected debt costs in addition to risk as defined by relative CaR. This can be seen as a risk-adjusted measure of cost.

As shown in Chart A3, absolute CaR for the three debt structures is very similar. In other words, the risk that debt costs exceed the absolute CaR lines is virtually the same for each debt structure, while there is a potential for lower costs for the 62-per-cent and 57-per-cent debt structures. Lower running costs for these structures fully offset the increased relative CaR.

The farther out into the future they are forecast, the greater the uncertainty surrounding the level of debt charges. This results in an increasing relative CaR over years, as the proportion of debt refinanced at unknown interest rates rises.

While this is in the nature of long-term forecasts, it renders difficult the interpretation of results beyond a one- or two-year horizon. With time-conditional CaR, the horizon is fixed to one year by examining risk in a particular year using the year before as the basis, rather than the start of the simulation. This facilitates interpretation and improves the comparability of risk across years, particularly when the structure or the size of the portfolio changes. This is also consistent with the fiscal-planning process, where a new budget is prepared every year, based on updated forecasts in light of developing economic conditions. The time-conditional CaR is computed by obtaining the statistical distribution of changes in debt costs for each year. The difference between the 95th percentile and the mean for each individual year represents the maximum unexpected increase in costs that is expected with a 95-per-cent probability.

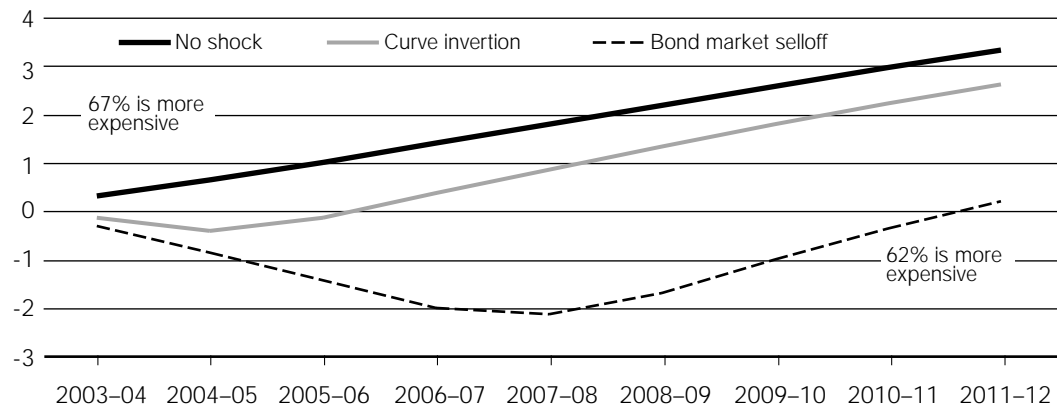
Stress Testing

Experience has shown that quantitative results of stochastic simulations are very sensitive to assumptions employed for the dynamics of interest rates. Quantitative results thus need to be interpreted with caution. In addition, the technique may not capture adequately more extreme events. Therefore, scenario analysis remains an important tool to evaluate the impact of specific shocks on debt costs. In particular, stress testing allows considering worst-case scenarios (events that are highly unlikely but still possible). While it is not possible to determine exactly what would be the characteristics of such shocks or their probability, results provide useful insight to complement the stochastic analysis. Stress testing allows, in particular, the consideration of severe shocks on interest rates that could occur in periods of instability in financial markets.

A shock similar to the 1994 bond market selloff (in which 3-month rates increase by 5 per cent and 10-year rates rise by 2 per cent over a 15-month period, before gradually settling back to their previous level) would have a significant impact on debt costs for all three structures considered. But severe shocks can more easily be managed within the fiscal framework in the short run with a higher fixed-rate structure. The 62-per-cent and 57-per-cent debt structures would become marginally more expensive than the current two-thirds structure for a three-year period, but the advantage disappears over a longer-term horizon as the shock dissipates.

Chart A4 presents cumulative cost differences between the two-thirds structure and the 62-per-cent structure. Savings would accumulate quickly in the absence of interest rate shocks. Savings would be slightly negative in the event of the bond market selloff scenario, but quickly turn back into positive territory after three years. It would take a severe inversion that persists for a long period (e.g., the 3-month rate jumps by 6 per cent and the 10-year rate increases by 2 per cent over a 6-month period, and both rates remain at those levels for three years before abating back to their historical average over the following 2½ years) to make the higher debt structure attractive over a longer-term horizon, as illustrated by the severe curve inversion.

Chart A4
Cumulative Cost Differences Between 66% and 62%



In summary, only if unfavourable shocks of the magnitude of the bond market selloff occur on a frequent basis or if more severe shocks occur would the benefits of a two-thirds debt structure outweigh the higher running costs over the long term.

For more information on evaluating the debt structure ...

A number of working papers have been released to illustrate some of the techniques being developed by debt managers to evaluate the debt structure. Interested readers are invited to consult the papers, noting that working papers present work-in-progress and do not reflect official positions of the Department of Finance or the Bank of Canada.

- The two-factor Cox-Ingersoll-Ross model used to develop interest rate scenarios is described in Bolder, D. J. (2001) "Affine Term-Structure Models: Theory and Implementation," Bank of Canada, Working Paper 2001-15, www.bankofcanada.ca/en/res/wp01-15.htm.
- A simulation framework to explore a large number of financing strategies, using an enhanced scenario model, has been developed. Illustrative results, along with further refinements in simulation techniques and a discussion on risk measures, are presented in Bolder, D. J. (2003) "A Stochastic Simulation Framework for the Government of Canada's Debt Strategy," Bank of Canada, Working Paper 2003-10, www.bankofcanada.ca/en/res/2003/wp03-10.htm.
- The role that debt management decisions might have in fiscal planning is discussed in Georges, P. (2003) "Borrowing Short- or Long-Term: Does the Government Really Face a Trade-off?," Department of Finance, Working Paper 2003-16, www.fin.gc.ca/wp/2003-16e.html.

Annex 2

Glossary

Bank Rate: The minimum rate at which the Bank of Canada extends short-term advances to members of the Canadian Payments Association.

basis point: One-hundredth of a percentage point (0.01 per cent).

benchmark bond: Specific issue outstanding within each class of maturities. It is considered by the market to be the standard against which all other bonds issued in that class are evaluated.

bid: Price a buyer is willing to pay.

bid-offer spread: The difference between bid and offer prices. It is typically measured in basis points (hundredths of a per cent).

budgetary surplus: Occurs when government annual revenues exceed annual budgetary expenditures. A deficit is the shortfall between government revenues and budgetary expenditures.

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 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.

Canadian Payments Association: A non-profit association created by an Act of Parliament in 1980 to establish and operate a national system for the clearing and settlement of cheques, electronic funds transfers and other payment items, and to plan the evolution of the national payments system.

cash management: Control by the Bank of Canada of settlement balances through increases or decreases in the amount supplied to Large Value Transfer System participants in relation to the amount demanded in order to reinforce the Target for the Overnight Rate.

compound interest bond; C-bond: A Canada Savings Bond or Canada Premium Bond on which interest accrues and is compounded annually to maturity or until redeemed.

Exchange Fund Account: A fund maintained by the Government of Canada for the purpose of promoting order and stability of the Canadian dollar in the foreign exchange market. This function is fulfilled by purchasing foreign exchange (selling Canadian dollars) when there is upward pressure on the value of the Canadian dollar and selling foreign exchange (buying Canadian dollars) when there is downward pressure on the currency.

financial requirement/source: Measures the difference between the cash coming in to the Government and the cash going out. In the case of a financial requirement, it is the amount of new borrowing required from outside lenders to meet the Government's financing needs in any given year.

foreign exchange reserves: Stocks of foreign exchange assets (e.g., interest-earning bonds) held by sovereign states to support the value of the domestic currency. Canada's foreign exchange reserves are held in a special account called 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.

government securities distributors: The Government distributes Government of Canada Treasury bills and marketable bonds through a group of investment dealers and banks. The members of this group are called government securities distributors.

gross public debt: Total amount the Government owes. It consists of both market debt in the form of outstanding securities such as Treasury bills and Canada Savings Bonds, internal debt owed mainly to the superannuation fund for government employees, and other current liabilities.

inflation: A persistent rise over time in the average price of goods and services.

interest-bearing debt: Unmatured debt, or market debt, and the Government's liabilities to internally held accounts such as federal employees' pension plans.

Large Value Transfer System; LVTS: A Canadian Payments Association electronic system for the transfer of large-value or time-critical payments.

market debt: For debt management purposes, market debt is defined as the portion of debt that is funded in the public markets, and consists of marketable bonds, Treasury bills, retail debt (primarily Canada Savings Bonds), foreign currency denominated bonds and bills, as well as bonds issued to the Canada Pension Plan.

marketable bond: A Canadian government debt security that is non-cashable prior to maturity, but whose ownership may be transferred from one holder to another on the open market.

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.

monetary policy: A policy that seeks to improve the performance of the economy by regulating money supply and credit.

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.

net public debt: Consists of gross public debt net of financial assets.

non-market debt: Consists of 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 and payment of matured debt).

non-marketable debt: Market debt that is not tradable and that is issued to retail investors (Canada Savings Bonds and Canada Premium Bonds).

offer: Price at which a seller is willing to sell.

overnight rate; overnight financing rate; overnight money market (financing) rate; overnight lending rate: The rate at which major participants in the money market borrow and lend one-day funds to each other.

primary dealers: 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 securities are initially sold or offered.

regular interest bond; R-bond: A Canada Savings Bond or Canada Premium Bond on which interest is paid annually by cheque or by direct deposit to maturity or until the bond is redeemed.

repo; repurchase agreement: A transaction in which a party sells a security and simultaneously agrees to repurchase it at a given price after a specified time.

sale and repurchase agreement; SRA: A transaction in which the Bank of Canada offers to sell Government of Canada securities to designated counterparties with an agreement to buy them back at a predetermined price the next business day; used to reinforce the Target for the Overnight Rate.

secondary market: The market in which previously issued securities are traded, as distinguished from the new issue or primary market.

special purchase and resale agreement; special PRA; SPRA: A transaction in which the Bank of Canada offers to purchase Government of Canada securities from designated counterparties with an agreement to sell them back at a predetermined price the next business day; used to reinforce the Target for the Overnight Rate.

Target for the Overnight Rate: The Bank of Canada's key policy interest rate. It serves as a signal to major participants in the money market as to what rate the Bank is aiming for in the market for overnight funds.

term structure of interest rates: The levels of interest rates from short- to long-term maturities.

turnover ratio: Volume of securities traded as a percentage of securities outstanding.

Annex 3

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Reference Table I
Gross Public Debt, Outstanding Market Debt and Debt Charges

Fiscal years ending March 31	Gross public debt			Outstanding market debt			Average interest rate (%)
	Outstanding (\$ billions)	Fixed-rate portion ¹ (%)	Average fixed-rate portion ² (%)	Outstanding (\$ billions)	Fixed-rate portion (%)	Total debt charges (\$ billions)	
1985-86	321.5	51.9	0	201.2	36.7	20.7	10.66
1986-87	357.2	50.9	0	228.6	36.9	21.5	9.34
1987-88	390.3	51.2	0	250.8	38.2	23.1	9.61
1988-89	423.8	49.6	0	276.3	37.2	26.5	10.82
1989-90	451.8	49.9	0	294.6	38.1	31.4	11.20
1990-91	490.3	50.4	0	323.9	38.5	34.3	10.72
1991-92	526.9	50.7	0	351.9	38.9	32.4	8.86
1992-93	566.0	50.4	0	382.7	39.0	29.4	7.88
1993-94	610.7	53.3	0	414.0	42.7	28.0	6.75
1994-95	651.6	55.1	0	441.0	44.4	31.4	7.97
1995-96	694.6	56.9	0	469.5	47.9	35.3	7.34
1996-97	711.9	61.7	0	476.9	53.8	33.0	6.66
1997-98	713.4	63.7	0	467.3	56.8	31.0	6.64
1998-99	717.7	64.5	66.6	460.4	58.5	30.8	6.70
1999-00	716.3	66.5	66.6	456.4	59.1	30.5	6.15
2000-01	715.0	67.8	67.6	446.4	60.5	30.7	6.11
2001-02	704.3	67.4	67.6	442.3	60.1	27.4	5.56
2002-03	700.1	65.8	65.8	439.8	61.2	25.2	5.32

¹ For interest-bearing debt as of March 31. Calculation methodology may vary slightly from year to year. The definition of interest-bearing debt has changed slightly in 2002-03 to reflect the adoption of the full accrual basis of accounting.

² Average over the year. Comparative figures for prior years are not available.

Sources: Public Accounts of Canada, Bank of Canada Review, Department of Finance estimates.

Reference Table II
Government of Canada Outstanding Market Debt

Fiscal years ending March 31	Payable in Canadian dollars					Payable in foreign currencies					Total market debt	
	Treasury bills	Marketable bonds	Retail debt	CPP bonds	Total	Marketable bonds	Canada Bills	Canada Notes ¹	Standby drawings	Term loans		Total
	(C\$ millions)											
1977-78	11,295	21,645	18,036	84	51,060	181	0	0	850	0	1,031	51,664
1978-79	13,535	26,988	19,443	96	60,062	3,319	0	0	2,782	1,115	7,216	66,640
1979-80	16,325	33,387	18,182	113	68,007	3,312	0	0	359	1,030	4,701	72,021
1980-81	21,770	40,976	15,966	136	78,848	3,236	0	0	355	1,046	4,637	83,138
1981-82	19,375	43,605	25,108	154	88,242	3,867	0	0	0	550	4,417	93,167
1982-83	29,125	48,473	32,753	171	110,522	4,872	0	0	0	362	5,234	116,562
1983-84	41,700	56,976	38,403	189	137,268	4,306	0	0	510	398	5,214	142,901
1984-85	52,300	69,354	42,167	205	164,026	4,972	0	0	1,909	1,172	8,053	172,719
1985-86	61,950	81,163	44,607	445	188,165	9,331	0	0	2,233	2,247	13,811	201,229
1986-87	76,950	94,520	43,854	1,796	217,120	9,120	1,045	0	0	2,047	12,212	228,611
1987-88	81,050	103,899	52,558	2,492	239,999	8,438	1,045	0	0	2,257	11,740	250,809
1988-89	102,700	115,748	47,048	3,005	268,501	6,672	1,131	0	0	934	8,737	276,301
1989-90	118,550	127,681	40,207	3,072	289,510	4,364	1,446	0	0	0	5,810	294,562
1990-91	139,150	143,601	33,782	3,492	320,025	3,555	1,008	0	0	0	4,563	323,903
1991-92	152,300	158,059	35,031	3,501	348,891	3,535	0	0	0	0	3,535	351,885
1992-93	162,050	178,436	33,884	3,505	377,875	2,926	2,552	0	0	0	5,478	382,741
1993-94	166,000	203,373	30,866	3,497	403,736	5,019	5,649	0	0	0	10,668	413,975
1994-95	164,450	225,513	30,756	3,488	424,207	7,875	9,046	0	0	0	16,921	440,998
1995-96	166,100	252,411	30,801	3,478	452,790	9,514	6,986	310	0	0	16,810	469,547
1996-97	135,400	282,059	32,911	3,468	453,838	12,460	8,436	2,121	0	0	23,017	476,852
1997-98	112,300	293,987	30,302	3,456	440,045	14,590	9,356	3,176	0	0	27,122	467,291
1998-99	96,950	294,914	28,810	4,063	424,737	19,655	10,171	6,182	0	0	36,008	460,427
1999-00	99,850	293,250	27,115	3,427	423,642	21,464	6,008	5,168	0	0	32,640	456,406
2000-01	88,700	293,879	26,457	3,404	412,440	20,509	7,228	5,695	0	0	33,432	445,724
2001-02	94,200	292,910	24,229	3,386	414,725	19,652	3,355	4,405	0	0	27,412	442,137
2002-03	104,600	286,289	22,878	3,369	417,136	14,412	2,603	4,533	0	0	21,548	436,684

Note: Subcategorization of Government of Canada debt is in accordance with Bank of Canada reports, which may vary slightly from Public Accounts categories due to differences in classification methods. The total outstanding market debt may not equal the sum of the parts due to slight differences between the Bank of Canada's and Department of Finance's numbers.

¹ Includes EMTNs.

Sources: Bank of Canada Review, Department of Finance.

Reference Table III
Average Weekly Domestic Market Trading in Government of Canada Securities, April 2002 to March 2003

	Marketable bonds					Total marketable bonds	Total
	Treasury bills	3 years and under	3 to 10 years	Over 10 years	Real return bonds		
	(\$ millions)						
April 2002	20,488	27,240	31,334	9,985	102.38	68,661	89,149
May 2002	18,392	31,613	32,566	10,144	96	74,419	92,811
June 2002	22,640	34,571	33,222	6,638	404.53	74,835	97,475
July 2002	23,202	33,049	35,059	6,929	188.28	75,225	98,428
August 2002	20,063	36,767	37,578	6,182	248.73	80,776	100,840
September 2002	25,044	33,727	32,021	5,801	325	71,874	96,918
October 2002	24,558	30,153	37,050	6,238	427.02	73,867	98,425
November 2002	22,028	32,099	42,387	8,675	290.73	83,451	105,479
December 2002	21,298	23,963	24,317	5,028	247.63	53,555	74,853
January 2003	20,102	28,461	26,447	6,099	302.46	61,310	81,412
February 2003	21,958	39,075	37,891	8,311	349.53	85,626	107,584
March 2003	23,136	42,211	42,618	9,038	766	94,633	117,769

Source: Bank of Canada, Banking and Financial Statistics.

Reference Table IV

Distribution of Domestic Holdings of Government of Canada Securities
PART A — Treasury Bills, Canada Bills, Bonds,¹ Canada Savings Bonds and Canada Premium Bonds

Year end	Persons and unincorporated businesses	Non-financial corporations	Bank of Canada	Chartered banks	Quasi- banks ²	Life insurance companies and pension funds	Public and other financial institutions ³	All levels of government ⁴	Total ⁵
1976	17,932	395	8,242	8,666	716	1,436	2,273	730	40,390
1977	20,277	321	10,268	9,601	1,048	2,271	3,114	1,014	47,914
1978	22,723	403	12,001	9,896	1,537	3,738	4,017	1,721	56,036
1979	23,144	374	13,656	10,156	1,684	6,716	4,103	2,878	62,711
1980	24,253	555	15,858	10,002	2,771	9,274	5,561	4,248	72,522
1981	33,425	520	17,100	10,003	2,452	10,569	5,342	4,194	83,605
1982	42,320	2,267	15,428	11,233	3,288	13,151	9,177	4,654	101,518
1983	50,306	5,502	16,859	15,107	5,551	17,816	9,984	5,321	126,446
1984	60,748	6,783	17,184	15,164	4,887	24,039	11,978	7,166	147,949
1985	74,331	7,387	15,668	15,198	5,706	31,068	15,086	10,106	174,550
1986	71,073	6,259	18,374	17,779	7,277	34,887	18,414	11,293	185,356
1987	83,732	8,591	20,201	16,012	6,400	38,870	19,547	13,918	207,271
1988	86,591	8,634	20,606	21,115	7,492	42,460	19,028	17,186	223,112
1989	81,566	11,402	21,133	20,804	9,854	48,037	23,950	17,840	234,586
1990	80,079	11,797	20,325	24,224	10,460	52,984	26,051	19,574	245,494
1991	72,945	11,580	22,370	35,792	12,091	57,846	33,054	21,015	266,693
1992	70,930	13,696	22,607	44,555	12,428	62,042	39,396	20,222	285,876
1993	61,221	10,359	23,498	60,242	11,229	69,917	45,321	18,397	300,184
1994	52,842	12,039	24,902	70,063	9,992	78,545	52,847	24,967	326,197
1995	48,867	12,048	23,590	76,560	10,947	87,467	59,044	26,324	344,847
1996	46,187	10,013	25,556	74,789	10,952	90,174	71,514	24,828	354,013
1997	39,924	10,470	27,198	67,715	7,054	94,991	79,445	25,509	352,306
1998	33,537	8,525	27,911	66,375	6,659	99,687	79,895	28,174	350,763
1999	37,118	9,290	29,075	54,080	7,944	108,656	81,257	28,394	355,814
2000	33,259	9,062	31,726	58,269	2,842	108,752	73,911	30,280	348,101
2001	33,979	7,643	37,204	65,396	3,561	99,744	76,482	34,341	358,350
2002	22,860	8,417	38,859	66,057	3,307	97,463	81,521	33,436	351,920

(\$ millions)

Reference Table IV (cont'd)
 Distribution of Domestic Holdings of Government of Canada Securities
 PART B — Treasury Bills, Canada Bills, Bonds,¹ Canada Savings Bonds and Canada Premium Bonds

Year end	Persons and unincorporated businesses	Non-financial corporations	Bank of Canada	Chartered banks	Quasi-banks ²	Life insurance companies and pension funds	Public and other financial institutions ³	All levels of government ⁴	Total ⁵
1976	44.40	0.98	20.41	21.46	1.77	3.56	5.63	1.81	100.00
1977	42.32	0.67	21.43	20.04	2.19	4.74	6.50	2.12	100.00
1978	40.55	0.72	21.42	17.66	2.74	6.67	7.17	3.07	100.00
1979	36.91	0.60	21.78	16.19	2.69	10.71	6.54	4.59	100.00
1980	33.44	0.77	21.87	13.79	3.82	12.79	7.67	5.86	100.00
1981	39.98	0.62	20.45	11.96	2.93	12.64	6.39	5.02	100.00
1982	41.69	2.23	15.20	11.07	3.24	12.95	9.04	4.58	100.00
1983	39.78	4.35	13.33	11.95	4.39	14.09	7.90	4.21	100.00
1984	41.06	4.58	11.61	10.25	3.30	16.25	8.10	4.84	100.00
1985	42.58	4.23	8.98	8.71	3.27	17.80	8.64	5.79	100.00
1986	38.34	3.38	9.91	9.59	3.93	18.82	9.93	6.09	100.00
1987	40.40	4.14	9.75	7.73	3.09	18.75	9.43	6.71	100.00
1988	38.81	3.87	9.24	9.46	3.36	19.03	8.53	7.70	100.00
1989	34.77	4.86	9.01	8.87	4.20	20.48	10.21	7.60	100.00
1990	32.62	4.81	8.28	9.87	4.26	21.58	10.61	7.97	100.00
1991	27.35	4.34	8.39	13.42	4.53	21.69	12.39	7.88	100.00
1992	24.81	4.79	7.91	15.59	4.35	21.70	13.78	7.07	100.00
1993	20.39	3.45	7.83	20.07	3.74	23.29	15.10	6.13	100.00
1994	16.20	3.69	7.63	21.48	3.06	24.08	16.20	7.65	100.00
1995	14.17	3.49	6.84	22.20	3.17	25.36	17.12	7.63	100.00
1996	13.05	2.83	7.22	21.13	3.09	25.47	20.20	7.01	100.00
1997	11.33	2.97	7.72	19.22	2.00	26.96	22.55	7.24	100.00
1998	9.56	2.43	7.96	18.92	1.90	28.42	22.78	8.03	100.00
1999	10.43	2.61	8.17	15.20	2.23	30.54	22.84	7.98	100.00
2000	9.55	2.60	9.11	16.74	0.82	31.24	21.23	8.70	100.00
2001	9.48	2.13	10.38	18.25	0.99	27.83	21.34	9.58	100.00
2002	6.50	2.39	11.04	18.77	0.94	27.69	23.16	9.50	100.00

(%)

Reference Table IV (cont'd)
 Distribution of Domestic Holdings of Government of Canada Securities
 PART C — Treasury Bills and Canada Bills

Year end	Persons and unincorporated businesses	Non-financial corporations	Bank of Canada	Chartered banks	Quasi-banks ²	Life insurance companies and pension funds	Public and other financial institutions ³	All levels of government ⁴	Total ⁵
1976	171	125	1,964	4,219	52	44	515	193	7,283
1977	394	136	2,461	4,949	143	98	1,020	311	9,512
1978	576	198	3,567	5,517	193	261	1,554	519	12,385
1979	785	165	4,345	6,690	65	245	1,550	843	14,688
1980	1,493	288	5,317	7,500	619	460	2,431	1,512	19,620
1981	1,019	369	5,431	8,597	343	560	2,187	1,082	19,588
1982	1,237	1,930	2,483	10,034	1,357	1,244	5,008	1,199	24,492
1983	3,766	5,146	2,595	12,879	3,180	2,587	5,376	1,286	36,815
1984	7,454	6,275	3,515	12,997	2,792	3,876	6,544	2,498	45,951
1985	13,340	6,517	3,985	12,629	3,651	3,924	8,129	4,136	56,311
1986	16,158	4,875	7,967	15,161	4,709	3,592	10,164	3,416	66,042
1987	17,733	7,232	9,682	11,498	3,725	4,806	9,589	5,002	69,267
1988	20,213	7,414	9,945	15,224	5,614	7,648	9,133	7,726	82,917
1989	29,156	9,668	11,124	17,410	8,116	9,664	12,908	9,251	107,297
1990	36,461	10,756	10,574	17,841	8,976	11,737	13,298	9,388	119,031
1991	30,423	10,437	13,093	24,382	9,089	12,386	17,636	10,417	127,863
1992	32,901	11,254	14,634	27,989	9,646	13,639	19,907	8,726	138,696
1993	27,459	9,657	16,876	29,901	9,222	17,085	22,336	7,151	139,687
1994	17,562	8,499	18,973	30,415	6,879	14,376	22,021	10,631	129,356
1995	16,296	9,204	18,298	30,865	7,760	15,315	25,183	10,603	133,524
1996	10,474	8,285	17,593	23,470	5,493	13,520	32,752	6,264	117,851
1997	5,966	6,858	14,233	19,448	3,133	8,944	32,653	3,803	95,038
1998	1,291	6,215	10,729	16,713	2,392	4,529	32,508	3,578	77,955
1999	8,539	6,662	8,584	9,814	3,234	8,128	36,932	3,497	85,390
2000	7,568	6,735	8,090	6,188	685	7,222	31,087	5,108	72,683
2001	8,744	6,990	11,427	9,969	675	10,401	37,154	6,838	92,198
2002	551	5,894	11,639	18,869	708	12,768	40,087	7,115	97,631

(\$ millions)

Reference Table IV (cont'd)
 Distribution of Domestic Holdings of Government of Canada Securities
 PART D—Treasury Bills and Canada Bills

Year end	Persons and unincorporated businesses	Non-financial corporations	Bank of Canada	Chartered banks	Quasi- banks ²	Life insurance companies and pension funds	Public and other financial institutions ³	All levels of government ⁴	Total ⁵
1976	2.35	1.72	26.97	57.93	0.71	0.60	7.07	2.65	100.00
1977	4.14	1.43	25.87	52.03	1.50	1.03	10.72	3.27	100.00
1978	4.65	1.60	28.80	44.55	1.56	2.11	12.55	4.19	100.00
1979	5.34	1.12	29.58	45.55	0.44	1.67	10.55	5.74	100.00
1980	7.61	1.47	27.10	38.23	3.15	2.34	12.39	7.71	100.00
1981	5.20	1.88	27.73	43.89	1.75	2.86	11.16	5.52	100.00
1982	5.05	7.88	10.14	40.97	5.54	5.08	20.45	4.90	100.00
1983	10.23	13.98	7.05	34.98	8.64	7.03	14.60	3.49	100.00
1984	16.22	13.66	7.65	28.28	6.08	8.44	14.24	5.44	100.00
1985	23.69	11.57	7.08	22.43	6.48	6.97	14.44	7.34	100.00
1986	24.47	7.38	12.06	22.96	7.13	5.44	15.39	5.17	100.00
1987	25.60	10.44	13.98	16.60	5.38	6.94	13.84	7.22	100.00
1988	24.38	8.94	11.99	18.36	6.77	9.22	11.01	9.32	100.00
1989	27.17	9.01	10.37	16.23	7.56	9.01	12.03	8.62	100.00
1990	30.63	9.04	8.88	14.99	7.54	9.86	11.17	7.89	100.00
1991	23.79	8.16	10.24	19.07	7.11	9.69	13.79	8.15	100.00
1992	23.72	8.11	10.55	20.18	6.95	9.83	14.35	6.29	100.00
1993	19.66	6.91	12.08	21.41	6.60	12.23	15.99	5.12	100.00
1994	13.58	6.57	14.67	23.51	5.32	11.11	17.02	8.22	100.00
1995	12.20	6.89	13.70	23.12	5.81	11.47	18.86	7.94	100.00
1996	8.89	7.03	14.93	19.91	4.66	11.47	27.79	5.32	100.00
1997	6.28	7.22	14.98	20.46	3.30	9.41	34.36	4.00	100.00
1998	1.66	7.97	13.76	21.44	3.07	5.81	41.70	4.59	100.00
1999	10.00	7.80	10.05	11.49	3.79	9.52	43.25	4.10	100.00
2000	10.41	9.27	11.13	8.51	0.94	9.94	42.77	7.03	100.00
2001	9.48	7.58	12.39	10.81	0.73	11.28	40.30	7.42	100.00
2002	0.56	6.04	11.92	19.33	0.73	13.08	41.06	7.29	100.00

(%)

Reference Table IV (cont'd)
 Distribution of Domestic Holdings of Government of Canada Securities
 PART E—Bonds¹

Year end	Persons and unincorporated businesses	Non-financial corporations	Bank of Canada	Chartered banks	Quasi-banks ²	Life insurance companies and pension funds	Public and other financial institutions ³	All levels of government ⁴	Total ⁵
1976	17,761	270	6,278	4,447	664	1,392	1,758	537	33,107
1977	19,883	185	7,807	4,652	905	2,173	2,094	703	38,402
1978	22,147	205	8,434	4,379	1,344	3,477	2,463	1,202	43,651
1979	22,359	209	9,311	3,466	1,619	6,471	2,553	2,035	48,023
1980	22,760	267	10,541	2,502	2,152	8,814	3,130	2,736	52,902
1981	32,406	151	11,669	1,406	2,109	10,009	3,155	3,112	64,017
1982	41,083	337	12,945	1,199	1,931	11,907	4,169	3,455	77,026
1983	46,540	356	14,264	2,228	2,371	15,229	4,608	4,035	89,631
1984	53,294	508	13,669	2,167	2,095	20,163	5,434	4,668	101,998
1985	60,991	870	11,683	2,569	2,055	27,144	6,957	5,970	118,239
1986	54,915	1,384	10,407	2,618	2,568	31,295	8,250	7,877	119,314
1987	65,999	1,359	10,519	4,514	2,675	34,064	9,958	8,916	138,004
1988	66,378	1,220	10,661	5,891	1,878	34,812	9,895	9,460	140,195
1989	52,410	1,734	10,009	3,394	1,738	38,373	11,042	8,589	127,289
1990	43,618	1,041	9,751	6,383	1,484	41,247	12,753	10,186	126,463
1991	42,522	1,143	9,277	11,410	3,002	45,460	15,418	10,598	138,830
1992	38,029	2,442	7,973	16,566	2,782	48,403	19,489	11,496	147,180
1993	33,762	702	6,622	30,341	2,007	52,832	22,985	11,246	160,497
1994	35,280	3,540	5,929	39,648	3,113	64,169	30,826	14,336	196,841
1995	32,571	2,844	5,292	45,695	3,187	72,152	33,861	15,721	211,323
1996	35,713	1,728	7,963	51,319	5,459	76,654	38,762	18,564	236,162
1997	33,958	3,612	12,965	48,267	3,921	86,047	46,792	21,706	257,268
1998	32,246	2,310	17,182	49,662	4,267	95,158	47,387	24,596	272,808
1999	28,579	2,628	20,491	44,266	4,710	100,528	44,325	24,897	270,424
2000	25,691	2,327	23,636	52,081	2,157	101,530	42,824	25,172	275,418
2001	25,235	653	25,777	55,427	2,886	89,343	39,328	27,503	266,152
2002	22,309	2,523	27,220	47,188	2,599	84,695	41,434	26,321	254,289

(\$ millions)

Reference Table IV (cont'd)
Distribution of Domestic Holdings of Government of Canada Securities
PART F—Bonds¹

Year end	Persons and unincorporated businesses	Non-financial corporations	Bank of Canada	Chartered banks	Quasi- banks ²	Life insurance companies and pension funds	Public and other financial institutions ³	All levels of government ⁴	Total ⁵
1976	53.65	0.82	18.96	13.43	2.01	4.20	5.31	1.62	100.00
1977	51.78	0.48	20.33	12.11	2.36	5.66	5.45	1.83	100.00
1978	50.74	0.47	19.32	10.03	3.08	7.97	5.64	2.75	100.00
1979	46.56	0.44	19.39	7.22	3.37	13.47	5.32	4.24	100.00
1980	43.02	0.50	19.93	4.73	4.07	16.66	5.92	5.17	100.00
1981	50.62	0.24	18.23	2.20	3.29	15.63	4.93	4.86	100.00
1982	53.34	0.44	16.81	1.56	2.51	15.46	5.41	4.49	100.00
1983	51.92	0.40	15.91	2.49	2.65	16.99	5.14	4.50	100.00
1984	52.25	0.50	13.40	2.12	2.05	19.77	5.33	4.58	100.00
1985	51.58	0.74	9.88	2.17	1.74	22.96	5.88	5.05	100.00
1986	46.03	1.16	8.72	2.19	2.15	26.23	6.91	6.60	100.00
1987	47.82	0.98	7.62	3.27	1.94	24.68	7.22	6.46	100.00
1988	47.35	0.87	7.60	4.20	1.34	24.83	7.06	6.75	100.00
1989	41.17	1.36	7.86	2.67	1.37	30.15	8.67	6.75	100.00
1990	34.49	0.82	7.71	5.05	1.17	32.62	10.08	8.05	100.00
1991	30.63	0.82	6.68	8.22	2.16	32.75	11.11	7.63	100.00
1992	25.84	1.66	5.42	11.26	1.89	32.89	13.24	7.81	100.00
1993	21.04	0.44	4.13	18.90	1.25	32.92	14.32	7.01	100.00
1994	17.92	1.80	3.01	20.14	1.58	32.60	15.66	7.28	100.00
1995	15.41	1.35	2.50	21.62	1.51	34.14	16.02	7.44	100.00
1996	15.12	0.73	3.37	21.73	2.31	32.46	16.41	7.86	100.00
1997	13.20	1.40	5.04	18.76	1.52	33.45	18.19	8.44	100.00
1998	11.82	0.85	6.30	18.20	1.56	34.88	17.37	9.02	100.00
1999	10.57	0.97	7.58	16.37	1.74	37.17	16.39	9.21	100.00
2000	9.33	0.84	8.58	18.91	0.78	36.86	15.55	9.14	100.00
2001	9.48	0.25	9.69	20.83	1.08	33.57	14.78	10.33	100.00
2002	8.77	0.99	10.70	18.56	1.02	33.31	16.29	10.35	100.00

Note: Because of timing and valuation differences, The National Balance Sheet Accounts data contained in this table are not necessarily on the same basis as other data elsewhere in this publication (most of the data in this report are on a par-value basis—that is, outstanding securities are valued at par). For this reason, although the two sets of data yield very similar information, the data in this table are not strictly comparable with other data in this publication.

¹ Includes bonds denominated in foreign currencies.

² Includes Quebec savings banks, credit unions and caisses populaires, trust companies and mortgage loan companies.

³ Includes investment dealers, mutual funds, property and casualty insurance companies, sales, finance and consumer loan companies, accident and sickness branches of life insurance companies, other private financial institutions (not elsewhere included), federal public financial institutions, and provincial financial institutions.

⁴ Includes Government of Canada holdings of its own debt, provincial, municipal and hospital holdings, and holdings of the Canada Pension Plan and the Quebec Pension Plan.

⁵ May not add due to rounding.

Source: Statistics Canada, The National Balance Sheet Accounts.

Reference Table V
Non-Resident (Direct) Holdings of Government of Canada Debt

As at March 31	Marketable bonds ¹	Treasury bills and Canada Bills (C\$ billions)	Total	Total as per cent of total market debt (%)
1979	5.0	0.9	5.9	8.9
1980	5.6	0.7	6.3	8.7
1981	6.8	1.1	7.9	9.5
1982	8.8	1.1	9.9	10.6
1983	10.0	1.6	11.6	10.0
1984	10.3	2.6	12.9	9.0
1985	14.5	4.6	19.1	11.1
1986	22.1	3.0	25.1	12.5
1987	30.3	4.7	35.0	15.3
1988	33.0	9.3	42.3	16.9
1989	41.3	15.7	57.0	20.6
1990	49.9	13.3	63.2	21.5
1991	57.6	16.1	73.7	22.8
1992	63.6	23.0	86.6	24.6
1993	80.1	28.3	108.4	28.3
1994	79.3	34.0	113.3	27.4
1995	73.7	39.2	112.9	25.6
1996	84.1	37.7	121.8	25.9
1997	91.8	27.7	119.4	25.0
1998	94.3	20.0	114.3	24.5
1999	86.6	19.4	106.0	23.0
2000	85.7	14.2	99.9	21.9
2001	83.5	10.5	94.0	21.1
2002	74.0	7.4	81.4	18.4
2003	80.7	8.5	89.2	20.3

Note: Numbers may not add due to rounding.

¹ Includes bonds denominated in foreign currencies.

Source: Statistics Canada, Canada's International Transactions in Securities.

Reference Table VI (cont'd)
Fiscal 2002-03 Treasury Bill Program

Settlement Date	Maturing			New issues			Net increment			Average tender yields								
	CMB ¹	3 mo	6 mo	12 mo	Total	CMB ¹	3 mo	6 mo	12 mo	Total	Cumulative	O/S ²	CMB ¹	3 mo	6 mo	12 mo		
(\$ millions)																		
03-Oct-2002	-	-	-	-	-	-	-	-	-	-	-	8,000	102,200	-	-	-	-	
10-Oct-2002	2,000	4,400	-	3,500	9,900	-	4,700	1,900	1,900	8,500	-1,400	6,600	100,800	-	-	2.81	2.92	3.11
17-Oct-2002	-	-	-	-	-	-	-	-	-	-	-	6,600	100,800	-	-	-	-	-
24-Oct-2002	-	4,400	3,800	-	8,200	2,750	4,700	1,900	1,900	11,250	3,050	9,650	103,850	2.70	2.81	2.93	3.20	
31-Oct-2002	-	-	-	-	-	-	-	-	-	-	-	9,650	103,850	-	-	-	-	-
07-Nov-2002	-	4,700	-	3,600	8,300	-	5,000	2,000	2,000	9,000	700	10,350	104,550	-	-	2.73	2.82	2.94
14-Nov-2002	-	-	-	-	-	-	-	-	-	-	-	10,350	104,550	-	-	-	-	-
21-Nov-2002	-	4,400	3,800	-	8,200	-	4,700	1,900	1,900	8,500	300	10,650	104,850	-	-	2.73	2.82	2.96
28-Nov-2002	-	-	-	-	-	1,750	-	-	-	1,750	1,750	12,400	106,600	2.70	-	-	-	-
05-Dec-2002	2,750	4,400	-	3,500	10,650	-	4,400	1,800	1,800	8,000	-2,650	9,750	103,950	-	-	2.73	2.83	3.07
12-Dec-2002	-	-	-	-	-	-	-	-	-	-	-	9,750	103,950	-	-	-	-	-
19-Dec-2002	-	4,400	3,700	-	8,100	1,000	4,100	1,700	1,700	8,500	400	10,150	104,350	2.69	2.70	2.81	2.99	
26-Dec-2002	-	-	-	-	-	-	-	-	-	-	-	10,150	104,350	-	-	-	-	-
02-Jan-2003	2,750	4,400	-	3,500	10,650	-	3,800	1,600	1,600	7,000	-3,650	6,500	100,700	2.67	2.78	2.89	-	
09-Jan-2003	-	-	-	-	-	-	-	-	-	-	-	6,500	100,700	-	-	-	-	-
16-Jan-2003	-	4,700	3,700	-	8,400	-	4,100	1,700	1,700	7,500	-900	5,600	99,800	2.69	2.82	2.97	-	
23-Jan-2003	-	-	-	-	-	3,000	-	-	-	3,000	3,000	8,600	102,800	2.73	-	-	-	
30-Jan-2003	-	4,700	-	3,600	8,300	-	4,700	1,900	1,900	8,500	200	8,800	103,000	2.81	2.30	3.24	-	
06-Feb-2003	-	-	-	-	-	-	-	-	-	-	-	8,800	103,000	-	-	-	-	-
13-Feb-2003	3,000	5,000	3,600	-	11,600	-	4,100	1,700	1,700	7,500	-4,100	4,700	98,900	2.83	2.94	3.25	-	
20-Feb-2003	-	-	-	-	-	750	-	-	-	750	750	5,450	99,650	2.65	-	-	-	
27-Feb-2003	-	4,700	-	3,500	8,200	-	4,700	1,900	1,900	8,500	300	5,750	99,950	-	-	2.86	3.03	3.28
06-Mar-2003	-	-	-	-	-	-	-	-	-	-	-	5,750	99,950	-	-	-	-	-
13-Mar-2003	750	4,400	3,600	-	8,750	-	4,700	1,900	1,900	8,500	-250	5,500	99,700	3.00	3.19	3.39	-	
20-Mar-2003	-	-	-	-	-	2,500	-	-	-	2,500	2,500	8,000	102,200	2.93	-	-	-	
27-Mar-2003	-	4,100	-	3,500	7,600	1,500	4,700	1,900	1,900	10,000	2,400	10,400	104,600	2.99	3.14	3.37	3.66	
Total	19,750	116,500	46,900	43,200	226,350	23,750	117,400	47,800	47,800	236,750	10,400	363,850	5,262,250					

¹ Cash management bill.

² Outstanding.

Source: Bank of Canada.

Reference Table VII
Fiscal 2002-03 Treasury Bill Auction Results

Auction date	Term (months)	Issue amount (\$ millions)	Average price (\$)	Average yield (%)	Bid coverage	Tail (basis points)	Auction date	Term (months)	Issue amount (\$ millions)	Average price (\$)	Average yield (%)	Bid coverage	Tail (basis points)
09-Apr-02	12	1,800	95.840	4.527	1.565	1.1	08-Oct-02	12	1,900	98.591	2.866	1.969	1.1
09-Apr-02	3	4,400	98.808	4.493	1.452	1.7	08-Oct-02	3	4,700	99.213	2.955	1.842	0.9
09-Apr-02	6	1,800	97.960	4.525	2.021	1.0	08-Oct-02	6	1,900	97.200	2.889	1.919	0.7
23-Apr-02	12	4,700	95.767	4.432	1.733	1.3	22-Oct-02	12	4,700	99.323	2.540	1.852	1.7
23-Apr-02	3	4,700	97.871	4.363	1.939	1.0	22-Oct-02	3	4,700	98.848	2.532	2.306	0.6
23-Apr-02	6	1,900	98.830	4.410	1.544	1.8	22-Oct-02	6	1,900	97.543	2.627	2.013	1.2
07-May-02	12	1,900	98.066	4.284	1.831	1.1	05-Nov-02	12	2,000	97.739	2.320	2.086	0.8
07-May-02	3	4,700	98.855	4.313	1.942	0.7	05-Nov-02	3	5,000	99.391	2.281	1.805	0.9
07-May-02	6	1,900	95.969	4.380	2.095	0.4	05-Nov-02	6	2,000	98.881	2.269	1.989	0.8
21-May-02	12	1,900	95.617	4.597	1.745	1.3	19-Nov-02	12	1,900	97.620	2.543	1.514	1.7
21-May-02	3	4,700	97.828	4.453	2.028	0.7	19-Nov-02	3	4,700	99.411	2.207	1.753	1.3
21-May-02	6	1,900	98.832	4.401	1.862	0.9	19-Nov-02	6	1,900	98.948	2.309	2.088	0.9
04-Jun-02	12	1,900	95.863	4.501	1.916	0.9	03-Dec-02	12	1,800	99.453	2.048	1.831	0.9
04-Jun-02	3	4,700	98.854	4.317	1.851	0.7	03-Dec-02	3	4,400	98.987	2.052	1.896	0.6
04-Jun-02	6	1,900	98.025	4.378	2.420	0.2	03-Dec-02	6	1,800	97.712	2.348	1.929	0.5
18-Jun-02	12	1,900	98.874	4.392	2.212	0.8	17-Dec-02	12	1,700	97.797	2.349	1.814	0.6
18-Jun-02	3	4,700	98.842	4.242	2.221	0.5	17-Dec-02	3	4,100	99.467	1.996	2.065	0.4
18-Jun-02	6	1,900	97.906	4.289	2.220	0.4	17-Dec-02	6	1,700	99.061	2.059	1.942	0.5
02-Jul-02	12	1,800	95.750	4.629	1.891	0.4	30-Dec-02	12	1,600	99.490	1.911	1.799	0.9
02-Jul-02	3	4,400	98.842	4.364	1.909	0.5	30-Dec-02	3	3,800	97.775	2.276	1.906	0.9
02-Jul-02	6	1,800	97.984	4.470	2.067	0.8	30-Dec-02	6	1,600	99.022	1.981	1.881	1.3
16-Jul-02	12	1,800	95.753	4.448	1.714	0.5	14-Jan-03	12	1,700	97.973	2.151	1.706	1.3
16-Jul-02	3	4,400	98.894	4.164	1.910	0.3	14-Jan-03	3	4,100	99.492	1.901	1.810	1.2
16-Jul-02	6	1,800	97.918	4.265	2.194	0.8	14-Jan-03	6	1,700	99.105	1.961	1.989	0.7
30-Jul-02	12	1,900	96.121	4.209	2.045	0.5	28-Jan-03	12	1,900	99.475	1.966	1.935	1.0
30-Jul-02	6	1,900	98.166	4.058	2.092	0.6	28-Jan-03	3	4,700	97.619	2.446	1.955	0.9
30-Jul-02	3	4,700	98.930	4.029	2.056	0.6	28-Jan-03	6	1,900	98.953	2.122	2.006	0.6
13-Aug-02	12	1,800	96.078	4.093	1.822	0.7	11-Feb-03	12	1,700	97.673	2.484	1.842	0.8
13-Aug-02	3	4,400	98.951	3.950	1.825	0.8	11-Feb-03	3	4,100	99.019	2.152	2.085	0.8
13-Aug-02	6	1,800	98.059	3.969	2.077	0.8	11-Feb-03	6	1,700	99.466	2.001	1.903	0.9
27-Aug-02	12	1,800	96.394	3.901	2.228	0.4	25-Feb-03	12	1,900	99.447	2.070	1.747	1.0
27-Aug-02	3	4,400	98.264	3.838	2.288	0.7	25-Feb-03	3	4,700	98.903	2.224	1.790	0.6
27-Aug-02	6	1,800	98.989	3.805	1.754	0.9	25-Feb-03	6	1,900	97.436	2.639	1.650	1.1
10-Sep-02	12	1,800	96.742	3.377	1.957	1.3	11-Mar-03	12	1,900	97.158	3.050	1.601	2.0
10-Sep-02	3	4,400	99.109	3.348	1.657	10.2	11-Mar-03	3	4,700	98.891	2.436	1.791	1.3
10-Sep-02	6	1,800	98.342	3.381	1.828	2.3	11-Mar-03	6	1,900	99.426	2.152	1.881	0.8
24-Sep-02	12	1,800	99.191	3.039	1.802	1.1	25-Mar-03	12	1,900	98.659	2.725	2.058	0.7
24-Sep-02	3	4,400	97.214	2.989	2.092	0.9	25-Mar-03	3	4,700	99.375	2.343	2.005	0.7
24-Sep-02	6	1,800	98.649	2.975	2.149	0.5	25-Mar-03	6	1,900	96.643	3.483	2.077	0.7
Total									213,000				

Note: 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.

Source: Bank of Canada.

Reference Table VIII
Fiscal 2002-03 Canadian-Dollar Marketable Bond Program

Offering date	Delivery date	Maturity date	Maturing	Gross	Bond repurchase	Net
(\$ millions)						
Fixed-coupon bonds						
2002	2002					
April 17	April 1	June 1, 2012	5,450	-	-	-5,450
May 1 ¹	April 22		-	2,400	150	2,250
May 15	May 1	June 1, 2033	1,662	-	-	-1,662
May 29	May 6	September 1, 2007	-	500	477	23
	May 21	December 1, 2004	-	2,400	500	1,900
	May 31		-	3,500	700	2,800
	June 1		4,000	-	-	-4,000
	June 25	June 1, 2012	-	500	357	143
	July 15	June 1, 2033	-	1,900	600	1,300
	July 22	September 1, 2007	-	600	647	-47
	July 31	June 1, 2012	-	2,500	600	1,900
	August 6	September 1, 2007	-	2,400	473	1,927
	August 14	December 1, 2004	-	3,000	700	2,300
	August 28		7,330	-	-	-7,330
	September 3		-	600	372	228
	September 25 ¹	June 1, 2012	-	600	294	306
	October 9 ¹	June 1, 2012	-	2,400	600	1,800
	October 30	June 1, 2013	-	2,400	246	2,154
	November 13	September 1, 2008	-	400	390	10
	November 20 ¹	June 1, 2033	-	3,500	700	2,800
	November 27	June 1, 2005	-	-	-	-4,000
	December 2	June 1, 2013	4,000	600	329	-797
	December 11 ¹	September 1, 2008	1,068	400	432	-32
	December 18 ¹		-			
2003	2003					
January 15	January 20	June 1, 2033	-	1,700	600	1,100
January 30 ¹	February 3	June 1, 2005	1,717	400	486	-1,803
February 5	February 10	June 1, 2013	-	2,400	153	2,247
February 19	February 24	September 1, 2008	-	2,400	436	1,964
February 26 ¹	March 3	June 1, 2033	-	300	281	19
March 5	March 7	June 1, 2005	-	3,500	608	2,892
March 19 ¹	March 24	June 1, 2013	-	600	443	157
March 26 ¹	March 31	September 1, 2008	-	400	491	-91

Reference Table VIII (cont'd)
Fiscal 2002-03 Canadian-Dollar Marketable Bond Program

Offering date	Delivery date	Maturity date	Maturing	Gross	Bond repurchase	Net
Real Return Bonds						
(\$ millions)						
2002	2002					
June 5	June 10	December 1, 2031	-	400	-	400
September 11	September 16	December 1, 2031	-	300	-	300
December 4	December 9	December 1, 2031	-	400	-	400
2003	2003					
March 12	March 17	December 1, 2031	-	300	-	300
Total fiscal year 2002-2003			25,227	43,700	12,065	6,408

* Maturing date.

Source: Bank of Canada.

¹ Buyback on a switch basis.

Reference Table IX
Fiscal 2002-2003 Marketable Bond Auction Results

Auction date	Term (years)	Maturity date	Coupon rate (%)	Issue amount (\$ millions)	Average price (\$)	Average yield (%)	Auction coverage	Tail (basis points)
17-Apr-02	10	1-Jun-12	5.25	2,400	96.445	5.717	2.41	0.8
15-May-02	5	1-Sep-07	4.50	2,400	96.136	5.348	2.43	1.0
29-May-02	2	1-Dec-04	4.25	3,500	99.503	4.462	2.34	0.8
05-Jun-02	30	1-Dec-31	4.00*	400	108.954	3.510	3.26	n/a
10-Jul-02	30	1-Jun-33	5.75	1,900	99.978	5.751	2.36	0.9
31-Jul-02	10	1-Jun-12	5.25	2,500	99.356	5.334	2.64	1.1
14-Aug-02	5	1-Sep-07	4.50	2,400	100.936	4.291	2.43	0.8
28-Aug-02	2	1-Dec-04	4.25	3,000	101.109	3.730	2.31	0.5
11-Sep-02	30	1-Dec-31	4.00*	300	112.710	3.317	3.08	n/a
30-Oct-02	10	1-Jun-13	5.25	2,400	99.476	5.316	2.43	1.0
13-Nov-02	5	1-Sep-08	4.25	2,400	98.780	4.493	2.43	0.5
27-Nov-02	2	1-Jun-05	3.50	3,500	99.500	3.711	2.25	0.9
04-Dec-02	30	1-Dec-31	4.00*	400	110.807	3.410	3.00	n/a
15-Jan-03	30	1-Jun-33	5.75	1,700	104.162	5.467	2.74	0.6
05-Feb-03	10	1-Jun-13	5.25	2,400	100.848	5.142	2.49	0.3
19-Feb-03	5	1-Sep-08	4.25	2,400	98.710	4.517	2.49	0.3
05-Mar-03	2	1-Jun-05	3.50	3,500	99.588	3.692	2.42	0.6
12-Mar-03	30	1-Dec-31	4.00*	300	124.267	2.769	3.31	n/a
Total				37,800				

Note: 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.

* Real return bonds.

Source: Department of Finance.

Reference Table X

Outstanding Government of Canada Canadian-Dollar Marketable Bonds as at March 31, 2003

Maturity date	Amount (\$ millions)	Coupon rate (%)	Maturity date	Amount (\$ millions)	Coupon rate (%)
Fixed-coupon					
01-Jun-03	1,124	5.75	01-Jun-08	9,030	6.00
01-Jun-03	6,505	7.25	01-Jun-08	3,258	10.00
01-Sep-03	8,230	5.25	01-Sep-08	5,600	4.25
01-Oct-03	452	9.50	01-Oct-08	425	11.75
01-Dec-03	5,907	5.00	01-Mar-09	246	11.50
01-Dec-03	8,579	7.50	01-Jun-09	9,380	5.50
01-Feb-04	929	10.25	01-Jun-09	669	11.00
01-Jun-04	7,000	3.50	01-Oct-09	330	10.75
01-Jun-04	7,900	6.50	01-Mar-10	89	9.75
01-Jun-04	541	13.50	01-Jun-10	10,400	5.50
01-Sep-04	10,377	5.00	01-Jun-10	2,473	9.50
01-Oct-04	274	10.50	01-Oct-10	142	8.75
01-Dec-04	6,500	4.25	01-Mar-11	710	9.00
01-Dec-04	7,700	9.00	01-Jun-11	15,000	6.00
01-Mar-05	497	12.00	01-Jun-11	669	8.50
01-Jun-05	7,400	3.50	01-Jun-12	11,600	5.25
01-Sep-05	10,920	6.00	01-Jun-13	6,000	10.25
01-Sep-05	1,065	12.25	15-Mar-14	2,169	11.25
01-Dec-05	6,548	8.75	01-Jun-15	1,232	10.50
01-Mar-06	276	12.75	15-Mar-21	1,392	10.50
01-Sep-06	10,000	5.75	01-Jun-21	2,079	9.75
01-Oct-06	771	14.00	01-Jun-22	899	9.25
01-Dec-06	7,040	7.00	01-Jun-23	8,054	8.00
01-Mar-07	205	13.75	01-Jun-25	8,738	9.00
01-Jun-07	8,806	7.25	01-Jun-27	9,323	8.00
01-Sep-07	10,400	4.50	01-Jun-29	13,900	5.75
01-Oct-07	485	13.00	01-Jun-33	9,200	5.75
01-Mar-08	624	12.75	Total	270,062	

Reference Table X (cont'd)
 Outstanding Government of Canada Canadian-Dollar Marketable Bonds as at March 31, 2003

Maturity date	Amount (\$ millions)	Coupon rate (%)
Real return bonds		
01-Dec-2021	5,175	4.25
01-Dec-2026	5,250	4.25
01-Dec-2031	5,800	4.00
Total¹	16,225	

¹ Real return bond figures show gross issue amount only—the consumer price index adjustment is not shown here.

Source: Bank of Canada.

Reference Table XI
Government of Canada Swaps Outstanding as at March 31, 2003

Domestic interest-rate swaps		Cross-currency swaps of foreign obligations	
Maturity date	Coupon ¹	Notional amount	Maturity date
	(%)	(\$ millions)	(US\$ millions)
01-Feb-2004	10.25	50	16-Jul-2003
Total		50	26-Nov-2004
			26-Nov-2004
			30-Nov-2004
			30-Nov-2004
			22-Dec-2004
			03-Oct-2007
			31-Jan-2008
			Total
			1,428
Foreign interest-rate swaps			
Maturity date	Coupon ¹	Notional amount	
	(%)	(US\$ millions)	
19-Nov-2007	4.00	25	
05-Nov-2008	5.25	200	
05-Nov-2008	5.25	500	
05-Nov-2008	5.25	500	
Total		1,225	

¹ Refers to the coupon of the underlying bond that was swapped.

Reference Table XI (cont'd)
 Government of Canada Swaps Outstanding as at March 31, 2003

Cross-currency swaps of domestic obligations			Cross-currency swaps of domestic obligations		
Maturity date	Notional amount	Currency paid	Maturity date	Notional amount	Currency paid
	(US\$ millions)			(US\$ millions)	
01-Sep-03	55.00	EUR	01-Jun-04	55.00	EUR
01-Sep-03	55.00	EUR	01-Jun-04	55.00	EUR
02-Sep-03	50.00	USD	01-Jun-04	55.00	EUR
02-Sep-03	50.00	USD	01-Jun-04	55.00	EUR
02-Sep-03	50.00	USD	01-Jun-04	100.00	USD
01-Oct-03	76.00	EUR	01-Jun-04	50.00	USD
01-Oct-03	109.00	EUR	01-Jun-04	100.00	USD
01-Oct-03	65.00	USD	01-Jun-04	50.00	USD
01-Dec-03	55.00	EUR	01-Jun-04	50.00	USD
01-Dec-03	55.00	EUR	01-Sep-04	55.00	EUR
01-Dec-03	55.00	EUR	01-Sep-04	61.00	EUR
01-Dec-03	325.00	USD	01-Sep-04	55.00	EUR
01-Dec-03	65.00	USD	01-Sep-04	55.00	EUR
01-Dec-03	65.00	USD	01-Oct-04	55.00	EUR
01-Dec-03	65.00	USD	01-Oct-04	50.00	USD
01-Feb-04	38.00	EUR	01-Oct-04	75.00	USD
01-Feb-04	55.00	EUR	01-Oct-04	111.00	USD
01-Feb-04	55.00	EUR	01-Oct-04	55.00	USD
01-Feb-04	55.00	EUR	01-Dec-04	55.00	EUR
01-Feb-04	55.00	EUR	01-Dec-04	82.00	EUR
01-Feb-04	100.00	USD	01-Mar-05	55.00	EUR
01-Feb-04	75.00	USD	01-Mar-05	250.00	USD
01-Feb-04	100.00	USD	01-Mar-05	65.00	USD
01-Feb-04	100.00	USD	01-Mar-05	250.00	USD
01-Feb-04	50.00	USD	01-Sep-05	55.00	EUR
01-Feb-04	50.00	USD	01-Sep-05	55.00	EUR
01-Feb-04	50.00	USD	01-Sep-05	33.00	EUR
01-Jun-04	82.00	EUR	01-Sep-05	33.00	EUR
01-Jun-04	55.00	EUR	01-Sep-05	55.00	EUR
01-Jun-04	55.00	EUR	01-Sep-05	82.00	EUR
01-Jun-04	82.00	EUR	01-Sep-05	82.00	EUR
01-Jun-04	55.00	EUR	01-Sep-05	82.00	EUR
01-Jun-04	55.00	EUR	01-Sep-05	82.00	EUR

Reference Table XI (cont'd)
 Government of Canada Swaps Outstanding as at March 31, 2003

Cross-currency swaps of domestic obligations			Cross-currency swaps of domestic obligations		
Maturity date	Notional amount	Currency paid	Maturity date	Notional amount	Currency paid
01-Sep-05	82.00	EUR	01-Sep-06	55.00	EUR
01-Sep-05	100.00	USD	01-Oct-06	55.00	EUR
01-Dec-05	55.00	EUR	01-Oct-06	50.00	USD
01-Dec-05	55.00	EUR	01-Oct-06	50.00	USD
01-Dec-05	55.00	EUR	01-Dec-06	55.00	EUR
01-Dec-05	55.00	EUR	01-Dec-06	55.00	EUR
01-Dec-05	55.00	EUR	01-Dec-06	82.00	EUR
01-Dec-05	55.00	EUR	01-Dec-06	82.00	EUR
01-Dec-05	82.00	EUR	01-Dec-06	55.00	USD
01-Dec-05	55.00	EUR	01-Mar-07	27.00	EUR
01-Dec-05	55.00	EUR	01-Jun-07	55.00	EUR
01-Dec-05	55.00	EUR	01-Jun-07	55.00	EUR
01-Dec-05	55.00	EUR	01-Jun-07	109.00	EUR
01-Dec-05	55.00	EUR	01-Jun-07	55.00	EUR
01-Dec-05	55.00	EUR	01-Jun-07	250.00	USD
01-Dec-05	55.00	EUR	01-Jun-07	250.00	USD
01-Dec-05	55.00	EUR	01-Jun-07	250.00	USD
01-Dec-05	55.00	EUR	01-Oct-07	55.00	EUR
01-Dec-05	55.00	EUR	01-Oct-07	55.00	EUR
01-Dec-05	82.00	EUR	01-Oct-07	55.00	EUR
01-Dec-05	82.00	EUR	01-Oct-07	27.00	EUR
01-Dec-05	50.00	USD	01-Mar-08	82.00	EUR
01-Dec-05	50.00	USD	01-Mar-08	55.00	EUR
01-Dec-05	50.00	USD	01-Mar-08	75.00	USD
01-Dec-05	54.00	USD	01-Mar-08	100.00	USD
01-Dec-05	500.00	USD	01-Mar-08	50.00	USD
01-Mar-06	55.00	EUR	01-Mar-08	200.00	USD
01-Mar-06	82.00	EUR	01-Mar-08	50.00	USD
01-Mar-06	82.00	EUR	01-Mar-08	50.00	USD
01-Mar-06	55.00	EUR	01-Jun-08	55.00	EUR
01-Mar-06	55.00	EUR	01-Jun-08	55.00	EUR
01-Mar-06	50.00	USD	01-Jun-08	55.00	EUR
01-Mar-06	54.00	USD	01-Jun-08	55.00	EUR

Reference Table XI (cont'd)
 Government of Canada Swaps Outstanding as at March 31, 2003

Cross-currency swaps of domestic obligations			Cross-currency swaps of domestic obligations		
Maturity date	Notional amount	Currency paid	Maturity date	Notional amount	Currency paid
	(US\$ millions)			(US\$ millions)	
01-Jun-08	250.00	USD	01-Jun-09	50.00	USD
01-Jun-08	100.00	USD	01-Jun-09	70.00	USD
01-Jun-08	100.00	USD	01-Jun-09	100.00	USD
01-Jun-08	100.00	USD	01-Jun-09	50.00	USD
01-Jun-08	50.00	USD	01-Jun-09	100.00	USD
01-Jun-08	100.00	USD	01-Jun-09	70.00	USD
01-Jun-08	50.00	USD	01-Jun-09	65.00	USD
01-Jun-08	50.00	USD	01-Jun-09	109.00	EUR
01-Oct-08	82.00	EUR	01-Oct-09	55.00	EUR
01-Oct-08	82.00	EUR	01-Oct-09	55.00	EUR
01-Oct-08	55.00	EUR	01-Oct-09	55.00	EUR
01-Oct-08	55.00	EUR	01-Oct-09	55.00	EUR
01-Oct-08	70.00	USD	01-Oct-09	55.00	EUR
01-Oct-08	70.00	USD	01-Oct-09	82.00	EUR
01-Oct-08	50.00	USD	01-Oct-09	55.00	EUR
01-Mar-09	82.00	EUR	01-Oct-09	55.00	EUR
01-Mar-09	55.00	EUR	01-Oct-09	55.00	EUR
01-Mar-09	70.00	USD	01-Oct-09	55.00	EUR
01-Mar-09	65.00	USD	01-Oct-09	55.00	EUR
01-Mar-09	50.00	USD	01-Oct-09	55.00	EUR
01-Mar-09	75.00	USD	01-Oct-09	55.00	EUR
01-Mar-09	50.00	USD	01-Oct-09	82.00	EUR
01-Mar-09	50.00	USD	01-Oct-09	81.00	USD
01-Mar-09	100.00	USD	01-Oct-09	81.00	USD
01-Mar-09	75.00	USD	01-Oct-09	70.00	USD
01-Jun-09	55.00	EUR	01-Oct-09	83.00	USD
01-Jun-09	82.00	EUR	01-Oct-09	75.00	USD
01-Jun-09	55.00	EUR	01-Mar-10	55.00	EUR
01-Jun-09	82.00	EUR	01-Mar-10	55.00	EUR
01-Jun-09	82.00	EUR	01-Mar-10	55.00	EUR
01-Jun-09	82.00	EUR	01-Mar-10	55.00	EUR
01-Jun-09	55.00	EUR	01-Mar-10	82.00	EUR
01-Jun-09	82.00	EUR	01-Jun-10	55.00	EUR

Reference Table XI (cont'd)
Government of Canada Swaps Outstanding as at March 31, 2003

Cross-currency swaps of domestic obligations			Cross-currency swaps of domestic obligations		
Maturity date	Notional amount	Currency paid	Maturity date	Notional amount	Currency paid
(US\$ millions)					
01-Jun-10	55.00	EUR	01-Oct-10	82.00	EUR
01-Jun-10	44.00	EUR	01-Oct-10	50.00	USD
01-Jun-10	33.00	EUR	01-Mar-11	75.00	USD
01-Jun-10	55.00	EUR	01-Mar-11	75.00	USD
01-Jun-10	55.00	EUR	01-Mar-11	75.00	USD
01-Jun-10	55.00	EUR	01-Mar-11	50.00	USD
01-Jun-10	55.00	EUR	01-Mar-11	50.00	USD
01-Jun-10	55.00	EUR	01-Jun-11	55.00	EUR
01-Jun-10	55.00	EUR	01-Jun-11	55.00	EUR
01-Jun-10	55.00	EUR	01-Jun-11	82.00	EUR
01-Jun-10	55.00	EUR	01-Jun-11	75.00	USD
01-Jun-10	55.00	EUR	01-Jun-11	50.00	USD
01-Jun-10	55.00	EUR	01-Jun-11	50.00	USD
01-Jun-10	55.00	EUR	01-Jun-11	50.00	USD
01-Jun-10	55.00	EUR	01-Jun-11	50.00	USD
01-Jun-10	55.00	EUR	01-Jun-11	50.00	USD
01-Jun-10	55.00	EUR	01-Jun-11	50.00	USD
01-Jun-10	55.00	EUR	01-Jun-11	50.00	USD
01-Jun-10	68.00	JPY	01-Jun-11	50.00	USD
01-Oct-10	44.00	EUR	01-Jun-12	55.00	EUR
01-Oct-10	82.00	EUR	01-Jun-12	55.00	EUR
01-Oct-10	55.00	EUR	01-Jun-12	50.00	USD
01-Oct-10	55.00	EUR	01-Jun-12	50.00	USD
01-Oct-10	55.00	EUR	01-Jun-12	50.00	USD
01-Oct-10	55.00	EUR	01-Jun-12	50.00	USD
01-Oct-10	82.00	EUR	01-Jun-12	50.00	USD
01-Oct-10	82.00	EUR	01-Jun-12	50.00	USD
			Total	17,539.00	

Note: Numbers may not add due to rounding.

Source: Department of Finance.

Reference Table XII
Bond Buyback Program—Operations 2002-2003

Buyback date	Maturity date	Coupon (%)	Repurchased amount (\$ millions)	Buyback date	Maturity date	Coupon (%)	Repurchased amount (\$ millions)	
Buyback on cash basis								
17-Apr-02	01-Mar-09	11.5	2	31-Jul-02	01-Jun-09	11	2	
	01-Jun-09	5.5	20		01-Mar-11	9	23	
	01-Oct-09	10.75	20		15-Mar-14	10.25	317	
	01-Mar-10	9.75	7		01-Jun-15	11.25	221	
	01-Oct-10	8.75	9		15-Mar-21	10.5	32	
	01-Mar-11	9	56		01-Jun-21	9.75	1	
	15-Mar-14	10.25	36		01-Jun-22	9.25	4	
Total			150	Total			600	
15-May-02	01-Mar-05	12	9	14-Aug-02	01-Dec-05	8.75	230	
	01-Dec-05	8.75	213		01-Mar-06	12.5	2	
	01-Mar-06	12.5	6		01-Dec-06	7	175	
	01-Oct-06	14	21		01-Jun-07	7.25	60	
	01-Dec-06	7	155		01-Oct-08	11.75	3	
	01-Mar-07	13.75	1		01-Mar-09	11.5	3	
	Total				499	Total		
29-May-02	01-Jun-03	7.25	73	28-Aug-02	01-Oct-04	10.5	5	
	01-Sep-03	5.25	160		01-Mar-05	12	25	
	01-Feb-04	10.25	2		01-Dec-05	8.75	279	
	01-Sep-04	5	15		01-Mar-06	12.5	7	
	01-Dec-05	8.75	375		01-Dec-06	7	385	
	01-Dec-06	7	75		Total			701
	Total				700	Total		
10-Jul-02	01-Jun-21	9.75	296	13-Nov-02	01-Dec-06	7	149	
	01-Jun-22	9.25	304		01-Jun-07	7.25	30	
	Total		600		01-Jun-08	6	50	
					01-Oct-08	11.75	3	
					01-Mar-09	11.5	6	
					01-Jun-09	11	2	
					01-Oct-09	10.75	5	
Total			246	Total			246	

Reference Table XII (cont'd)
Bond Buyback Program—Operations 2002–2003

Buyback date	Maturity date	Coupon (%)	Repurchased amount (\$ millions)	Buyback date	Maturity date	Coupon (%)	Repurchased amount (\$ millions)	
27-Nov-02	01-Feb-04	10.25	150	05-Mar-03	01-Sep-04	5	25	
	01-Sep-04	5	82		01-Mar-05	12	42	
	01-Oct-04	10.5	15		01-Sep-05	6	180	
	01-Mar-05	12	44		01-Mar-06	12.5	13	
	01-Dec-05	8.75	355		01-Dec-06	7	221	
	01-Mar-06	12.5	3		01-Jun-07	7.25	127	
	01-Dec-06	7	51		Total			608
	Total		700	Total buyback on cash basis			7,066	
15-Jan-03	15-Mar-21	10.5	40	Buyback on switch basis 01-May-02	15-Mar-21	10.5	60	
	01-Jun-21	9.75	455		01-Jun-21	9.75	172	
	01-Jun-22	9.25	65		01-Jun-22	9.25	102	
	01-Jun-25	9	40		01-Jun-23	8	92	
	Total		600		01-Jun-25	9	52	
						Total		477
	05-Feb-03	01-Mar-11	9		39	19-Jun-02	01-Oct-08	11.75
15-Mar-21		10.5	47	01-Oct-09	10.75		27	
01-Jun-21		9.75	17	01-Mar-10	9.75		29	
01-Jun-22		9.25	50	01-Oct-10	8.75		8	
Total			153	01-Mar-11	9		58	
				01-Jun-15	11.25		230	
				Total			357	
19-Feb-03	01-Dec-06	7	90	17-Jul-02	01-Oct-06	14	9	
	01-Mar-07	13.75	28		01-Dec-06	7	637	
	01-Jun-07	7.25	150		Total		647	
	01-Oct-07	13	32		01-Oct-09	10.75	4	
	01-Mar-08	12.75	3		01-Mar-11	9	10	
	01-Jun-08	6	120		01-Jun-15	11.25	358	
	01-Oct-08	11.75	13		Total		372	
	Total		436	25-Sep-02				

Reference Table XII (cont'd)
Bond Buyback Program—Operations 2002-2003

Buyback date	Maturity date	Coupon (%)	Repurchased amount (\$ millions)	Buyback date	Maturity date	Coupon (%)	Repurchased amount (\$ millions)
09-Oct-02	01-Jun-21	9.75	294	26-Feb-03	15-Mar-21	10.5	29
	Total		294			01-Jun-21	9.75
20-Nov-02	15-Mar-21	10.5	20		01-Jun-23	8	5
	01-Jun-21	9.75	111		01-Jun-25	9	30
	01-Jun-22	9.25	100		01-Jun-27	8	207
	01-Jun-23	8	49		Total		281
	01-Jun-25	9	40	19-Mar-03	01-Jun-10	5.5	70
	01-Jun-27	8	70			01-Oct-10	8.75
	Total		390		01-Mar-11	9	25
11-Dec-02	01-Mar-10	9.75	24		15-Mar-14	10.25	51
	01-Jun-10	9.5	2		01-Jun-15	11.25	267
	01-Mar-11	9	10		15-Mar-21	10.5	20
	15-Mar-21	10.5	103		Total		443
	01-Jun-21	9.75	120	26-Mar-03	01-Dec-06	7	444
	01-Jun-22	9.25	70			01-Oct-07	13
	Total		329		01-Oct-08	11.75	10
18-Dec-02	01-Dec-06	7	122		01-Oct-09	10.75	35
	01-Jun-07	7.25	245		Total		491
	01-Mar-09	11.5	3		Total buyback on switch basis		
	01-Oct-09	10.75	63		Cash management bond buyback		
	Total		432		09-Apr-02	5.75	45
30-Jan-03	01-Sep-04	5	351		01-Sep-02	5.5	388
	01-Oct-04	10.5	3		01-Dec-02	6	567
	01-Mar-05	12	98		Total		1,000
	01-Mar-06	12.5	28		23-Apr-02	5.75	1,000
	01-Oct-06	14	2		Total		1,000
	01-Oct-07	13	4				
	Total		486				

Reference Table XII (cont'd)
Bond Buyback Program—Operations 2002–2003

Buyback date	Maturity date	Coupon (%)	Repurchased amount (\$ millions)	Buyback date	Maturity date	Coupon (%)	Repurchased amount (\$ millions)	
07-May-02	01-Jun-02	5.75	117	08-Oct-02	01-Jun-03	5.75	1,000	
	Total		117		Total			1,000
04-Jun-02	01-Sep-02	5.5	75	22-Oct-02	01-Jun-03	5.75	810	
	01-Dec-02	6	114		01-Sep-03	5.25	185	
	01-Jun-03	5.75	311		01-Dec-03	7.5	5	
	Total		500		Total			1,000
02-Jul-02	01-Sep-02	5.5	500	05-Nov-02	01-Jun-03	5.75	0	
	Total		500		01-Jun-03	7.25	0	
	01-Sep-02	5.5	699		01-Sep-03	5.25	0	
16-Jul-02	01-Jun-03	5.75	140	01-Dec-03	01-Dec-03	5	0	
	Total		839		01-Dec-03	7.5	0	
	Total		839		Total			0
30-Jul-02	01-Sep-02	5.5	530	19-Nov-02	01-Dec-03	5	216	
	01-Jun-03	5.75	268		01-Dec-03	7.5	55	
	01-Jun-03	7.25	202		Total			271
	Total		1,000		Total			271
10-Sep-02	01-Dec-02	6	30	03-Dec-02	01-Dec-03	5	28	
	01-Jun-03	7.25	53		01-Dec-03	7.5	28	
	01-Sep-03	5.25	315		Total			56
	Total		398		Total			56
24-Sep-02	01-Sep-03	5.25	280	17-Dec-02	01-Jun-03	5.75	500	
	01-Dec-03	5	25		01-Dec-03	5	500	
	01-Dec-03	7.5	51		Total			1,000
	Total		356		Total			1,000

Reference Table XII (cont'd)
Bond Buyback Program—Operations 2002-2003

Buyback date	Maturity date	Coupon (%)	Repurchased amount (\$ millions)	Buyback date	Maturity date	Coupon (%)	Repurchased amount (\$ millions)
14-Jan-03	01-Jun-03	5.75	1,000	11-Mar-03	01-Jun-03	5.75	150
	Total		1,000		01-Sep-03	5.25	57
28-Jan-03	01-Jun-03	5.75	420	01-Dec-03	5	214	
	01-Jun-03	7.25	44	01-Dec-0	37.5	79	
	Total	5.25	36	Total		500	
11-Feb-03	01-Jun-03	5.75	977	25-Mar-03	01-Sep-03	5.25	387
	01-Jun-03	7.25	23		01-Dec-03	5	110
	Total		1,000		01-Dec-03	7.5	3
25-Feb-03	01-Jun-03	5.75	300	Total		500	
	01-Sep-03	5.25	50				
	Total		350	Total cash management bond buyback			12,887

Source: Department of Finance.

Reference Table XIII
Canada Savings Bonds and Canada Premium Bonds, Fiscal 1983–84 to Fiscal 2002–2003

Fiscal year	Gross sales	Net change (\$ millions)	Outstanding at fiscal year end
1983–84	11,584	5,650	38,403
1984–85	12,743	3,764	42,167
1985–86	15,107	2,440	44,607
1986–87	9,191	-22	44,585
1987–88	17,450	8,921	53,506
1988–89	14,962	-5,456	48,050
1989–90	9,338	-6,813	41,237
1990–91	6,720	-6,500	34,737
1991–92	9,588	1,151	35,888
1992–93	9,235	-1,172	34,716
1993–94	5,364	-3,089	31,627
1994–95	7,506	-96	31,531
1995–96	4,612	10	31,541
1996–97	5,747	2,050	33,591
1997–98	4,951	-2,796	30,795
1998–99	4,844	-2,187	28,608
1999–00	2,669	-1,510	27,098
2000–01	3,188	-531	26,567
2001–02	2,700	-2,338	24,229
2002–03	3,500	-1,351	22,878

Note: Figures are in accordance with Bank of Canada audited reports, which may vary from Public Accounts reports due to differences in classification.

Source: Bank of Canada.

Reference Table XIV
Crown Corporation Borrowings as at March 31, 2003

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Borrowings from the market Corporation													
Export Development Corporation	5,685	6,220	6,983	7,793	7,515	7,673	7,820	10,077	12,967	16,888	18,406	20,481	20,375
Canadian Wheat Board ¹	6,449	7,323	6,966	7,283	7,321	6,377	6,474	6,698	6,786	542	425	397	378
Business Development Bank of Canada	2,271	2,249	2,352	2,602	2,723	3,045	3,371	3,839	4,223	4,723	5,102	5,726	6,263
Farm Credit Corporation	1,128	813	797	863	990	1,582	1,926	3,026	4,317	5,083	5,695	7,096	8,082
Canadian National ¹	1,861	1,803	1,905	2,249	2,331	-	-	-	v	-	-	-	-
Canada Mortgage and Housing Corporation	-	96	152	1,573	3,630	5,906	7,866	9,934	10,633	10,801	11,672	11,372	11,091
Canada Development Investment Corporation	612	713	594	473	-	-	-	-	-	-	-	-	-
Petro-Canada Ltd.	1,656	980	455	501	504	490	432	443	471	338	-	-	-
Petro-Canada ¹	718	-	-	-	-	-	-	-	-	-	-	-	-
Canada Ports Corporation	-	200	188	-	-	-	-	3	79	69	-	-	-
Canada Post Corporation	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	150	56	63	114
Other	98	96	97	239	235	297	226	258	222	46	44	40	39
Total	20,478	20,493	20,489	23,576	25,249	25,370	28,115	34,278	39,698	38,640	41,400	45,175	46,342

¹ This corporation is no longer a Crown corporation.

Source: Public Accounts of Canada.

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Borrowings from the Consolidated Revenue Fund Corporation													
Canada Mortgage and Housing Corporation	8,484	8,419	8,181	8,075	7,835	7,263	6,938	6,708	6,298	6,152	5,852	5,696	5,476
Canada Deposit Insurance Corporation	1,225	1,785	3,085	3,151	2,160	1,627	855	395	-	-	-	-	-
Farm Credit Corporation	2,432	2,491	2,420	2,488	2,524	2,310	2,507	1,877	1,041	805	578	-	-
Other	934	975	819	415	307	233	204	179	551	77	84	104	38
Total	13,075	13,670	14,505	14,129	12,826	11,433	10,504	9,159	7,890	7,034	6,514	5,727	5,446

Note: Figures do not include "allowance for valuation."

Source: Public Works and Government Services Canada data.