

## Debt <br> Management Report

2000-2001


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2000-2001

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Table of Contents
Foreword by the Minister of Finance ..... 5
Purpose of the Report ..... 7
Highlights of 2000-01 ..... 9
2000-01 Debt Management Environment ..... 10
Fiscal Developments ..... 10
Budgetary Results ..... 10
Financial Requirements/Source ..... 11
Composition of the Federal Debt ..... 12
Market Developments ..... 14
Public Debt Costs ..... 16
Report on 2000-01 Debt Programs ..... 17
Domestic Debt ..... 18
Fixed-Coupon Marketable Bonds and Bond Buybacks ..... 18
Real Return Bonds ..... 18
Treasury Bills ..... 18
Retail Debt ..... 18
Foreign Debt ..... 19
Canada Bills ..... 19
Canada Notes ..... 19
Euro Medium-Term Notes ..... 19
Foreign-Currency-Denominated Bonds ..... 19
Cross-Currency Swaps ..... 19
Debt Management Strategy: 2000-01 Initiatives ..... 20
Maintaining a Well-Functioning Market ..... 21
Bond Program ..... 22
Government of Canada Securities Statistics ..... 22
Bond Buyback Program ..... 24
Treasury Bill Program ..... 24
Stripping and Reconstitution of Bonds ..... 25
Pilot Cash Management Bond Buyback Program. ..... 25
Market Transparency and Electronic Trading ..... 25
Retail Debt ..... 26
Maintaining a Prudent Debt Structure ..... 26
The Cost/Risk Trade-Off ..... 27
Assessing the Cost/Risk Trade-Off - Measures and Targets ..... 28
Fixed-Rate Share ..... 29
Maturity Profile ..... 31
Average Term to Maturity ..... 32
Cost at Risk ..... 33
2000-01 Cost/Risk Analysis Results ..... 35
Maintaining a Diversified Investor Base ..... 36
Diversified Investor Base ..... 36
Domestic Holdings of Government of Canada Debt ..... 37
Foreign Debt and Assets Management Strategy ..... 39
Level of Reserves ..... 39
The Gap Between Foreign Currency Assets and Liabilities ..... 40
Collective Action Clauses ..... 40
Risk Management Framework ..... 41
Management of the Government's Cash Balances ..... 41
Proposed New Cash Management Investment Framework ..... 42
Annex 1: Federal Debt Management Framework ..... 43
Legal Authorities ..... 43
Institutional Responsibilities ..... 43
Domestic Debt Operations ..... 44
Domestic Distribution System ..... 45
Foreign Debt Operations ..... 46
Retail Debt Operations ..... 46
Annex 2: Government of Canada Market Debt Instruments ..... 47
Fixed-Coupon Marketable Bonds ..... 47
Treasury Bills ..... 47
Government of Canada Real Return Bonds ..... 47
Canada Savings Bonds ..... 48
Canada Premium Bonds ..... 48
Canada Bills ..... 49
Canada Notes ..... 49
Euro Medium-Term Notes ..... 49
Cross-Currency Swaps. ..... 50
Annex 3: Glossary ..... 51
Reference Tables ..... 53

## Foreword by the Minister of Finance

The federal government paid down $\$ 17.1$ billion of its debt in 2000-01, its largest debt paydown ever. In the last four years the federal government has reduced its debt by $\$ 35.8$ billion. Net public debt now stands at $\$ 547.4$ billion. This represents 51.8 per cent of gross domestic product (GDP), compared to almost 71 per cent in 1995-96.

Reducing the debt by this amount is saving the Government $\$ 2.5$ billion each year in interest payments. Reducing Canada's debt burden makes our country less vulnerable to economic shocks, such as higher interest rates or slowdowns in economic activity. This added measure of financial security is particularly crucial today given the current slowdown in the global economy. Canada is not immune to the effects of this slowdown.

Against this backdrop, it is important that Canadians be equipped with timely, comprehensive and transparent information about how the debt is managed so that they can hold the Government accountable for its decisions - decisions that affect the long-term financial security of the nation and the well-being of individuals.

The Debt Management Report fulfills this need by providing a detailed account of the federal government's debt operations, including the composition of the debt, its distribution, and the mechanisms and activities through which it is prudently managed in the interests of Canadians.

I want to take this opportunity to assure Canadians of the Government's unwavering commitment to prudence in the management of public finances. Sound financial management is a key part of our strategy to sustain an economic environment that can offer Canadians more jobs, higher incomes and a better quality of life.

The Honourable Paul Martin, P.C., M.P.
Minister of Finance
Ottawa, November 2001

## Purpose of the Report

The Debt Management Report provides a detailed account of the federal government's borrowing and cash management operations in the past fiscal year (April 1, 2000 to March 31, 2001).

Debt-servicing costs are the largest spending program of the federal government, and the effective management of the programs that give rise to these costs is important to all Canadians. The Report provides a comprehensive account of the context within which the debt is managed, its composition and changes during the year, and strategic initiatives. The Report's major reference point is the Debt Management Strategy, published before the start of the fiscal year.

Timely and transparent information of this kind is of use to market participants and ensures public accountability. To this end, both reports are tabled annually in Parliament and are available on the Department of Finance Web site at www.fin.gc.ca.

The net public debt has been reduced by some \$36 billion since 1996-97.

## The

Government
undertook
a number of
initiatives to enhance the Government of Canada securities market.

Foreign
exchange
reserves were
increased and
a risk management framework developed.

## Highlights of 2000-01

- In 2000-01 the federal government continued to reduce its level of indebtedness. The Government's net public debt was reduced by $\$ 17.1$ billion to $\$ 547.4$ billion, and it is down $\$ 35.8$ billion from its peak in 1996-97. Net public debt as a percentage of GDP dropped to 51.8 per cent in 2000-01 from a peak of 70.7 per cent in 1995-96. In 2000-01 alone the net debt-to-GDP ratio dropped by 6.1 percentage points, the largest drop since 1948-49. This is the fifth consecutive year in which the debt-to-GDP ratio has declined, and it is at its lowest level since 1985-86.
- The Government's principal debt strategy objectives for 2000-01 were to maintain a prudent financial position and to maintain and enhance the functioning of the Government of Canada securities market.
- The structure of Canada's debt stock was managed in keeping with a continuing target of having two-thirds of the Government's total interest-bearing debt in fixed-rate form. Maintenance of a two-thirds debt structure balances prudence and continuing access to lowest-cost sources of funds.
- A number of initiatives were undertaken in 2000-01 to enhance the market for Government of Canada securities and improve the Government's treasury operations, including:
- in April 2000 the pilot bond buyback program was implemented on an ongoing basis to assist in the maintenance of primary bond market liquidity;
- in June 2000 a market proposal to remove the ceiling on the reconstitution of government bonds with common maturity dates was approved and implemented in February 2001, enhancing liquidity in the secondary market;
- in July 2000 a new framework for the investment of the Government's cash balances aimed at broadening participation by investors and enhancing risk management was issued for comment; and
- in January 2001 a pilot cash management bond buyback program was launched in order to smooth the Government's cash needs and usage of the Treasury bill program.
With respect to the management of the Government's foreign debt and assets, the following actions of note were taken in 2000-01:
- the level of international reserves was increased to US $\$ 33.5$ billion at March 31, 2001, from US\$31.1 billion at March 31, 2000, substantially meeting the Government's objective of bringing the level of reserves in line with that of comparable sovereigns;
- in April 2000 the Government announced its intention to adopt collective action clauses in its future foreign currency bond and note issues, providing leadership to the international community with respect to the development of an orderly framework for debt restructuring by debtors and creditors; and
- a comprehensive risk management framework for the foreign asset/liability portfolio was developed, including a collateral management system to manage the Government's credit risk with private sector counterparts.


## 2000-01 Debt Management Environment

Changes in the level of the Government's debt and its annual debt costs are affected by developments on two fronts: the Government's fiscal results and the path of interest rates over the year. This section provides a brief summary of these developments and their consequences.

## Fiscal Developments

## Budgetary Results

The
Government recorded a budgetary surplus of \$17.I billion.

In 2000-01 the Government recorded a budgetary surplus of $\$ 17.1$ billion. This follows surpluses of $\$ 3.5$ billion in 1997-98, $\$ 2.9$ billion in 1998-99 and $\$ 12.3$ billion in 1999-2000. Over the past four years the Government's net public debt has been reduced by $\$ 35.8$ billion. It stood at 51.8 per cent of GDP in 2000-01, down from a peak of 70.7 per cent in 1995-96. This ratio is generally recognized as the most appropriate indicator of the debt burden as it measures debt relative to the ability of the Government and the country's taxpayers to finance it. In 2000-01 alone the net debt-to-GDP ratio declined by 6.1 percentage points, the largest drop since 1948-49. This is the fifth consecutive year in which the debt-to-GDP ratio has declined, and it is at its lowest level since 1985-86 (see Chart 1).

Chart 1
Net Debt-to-GDP Ratio


Source: Department of Finance.

## Financial Requirements/Source

There was a financial source, including foreign exchange transactions, of \$10.2 billion.

Canada is the only G-7 nation to record a financial source for five consecutive years.

The budgetary surplus of $\$ 17.1$ billion, combined with a net source of funds from non-budgetary transactions of $\$ 1.8$ billion, produced a financial source (excluding foreign exchange transactions) of $\$ 19.0$ billion, following a financial source of $\$ 14.6$ billion in 1999-2000. The results for 2000-01 mark the fifth consecutive year that the Government has recorded a financial source (excluding foreign exchange transactions). Including foreign exchange transactions, primarily relating to supplementing foreign exchange reserves, the net financial source was $\$ 10.2$ billion for 2000-01. Of this amount, $\$ 10.0$ billion was used to reduce market debt and $\$ 0.2$ billion was held in cash.

Financial requirements/source (excluding foreign exchange transactions) is a measure of the Government's financial position that is broadly comparable to the measure of budgetary balance used by other major industrialized countries, including the United States. On this basis, Canada is the only Group of Seven (G-7) country to report a financial source for five consecutive years.

The Budgetary Surplus and Financial Source, 2000-01

| Budgetary surplus | (\$ billions) |
| :--- | :---: |
| Net source of funds from non-budgetary transactions | 17.1 |
| Financial source (excluding foreign exchange transactions) | 1.8 |
| Net requirement of funds from foreign exchange transactions | $19.0^{\star}$ |
| Net financial source | $(8.8)$ |
| 10.2 |  |

The budgetary balance is presented on a modified accrual basis of accounting, recording government liabilities when they are incurred, regardless of when the cash payment is made, and recording tax revenues only when the cash is received.
In contrast, financial requirements/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 specified purpose accounts and changes in other financial assets and liabilities. These activities are included as part of non-budgetary transactions.
*Numbers do not add due to rounding.

## Composition of the Federal Debt

There are several measures of the debt.

Gross and net public debt, as well as market debt, have all declined in recent years.

Reports on the federal government's debt and debt management strategy use certain terms to describe the debt: gross public debt, market debt, non-market debt and net public 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 2001 totalled $\$ 632.9$ billion, down from a peak of $\$ 640.7$ billion in 1996-97 (see Chart 2).

## Market Debt

Market debt is the portion of debt that is funded in the credit markets and actively managed by the Government. It consists of marketable bonds, Treasury bills, Canada Savings Bonds (CSBs) and Canada Premium Bonds (CPBs), foreign-currency-denominated marketable bonds, short-term paper bills, and non-marketable bonds held by the Canada Pension Plan (CPP). At March 31, 2001, market debt outstanding was $\$ 446.4$ billion. In 2000-01 the level of market debt declined by $\$ 10.0$ billion (see Chart 2).

Chart 2
Evolution or Gross Public Debt and Market Debt


Source: Public Accounts of Canada.

## Non-Market Debt

Non-market debt includes liabilities held by the Government outside the credit markets. This includes money owed to public sector pensions, the CPP and other accounts, and the Government's current liabilities and allowances. In 2000-01 non-market debt was $\$ 186.5$ billion, up from $\$ 182.3$ billion in 1999-2000.

## 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 from $\$ 564.5$ billion in 1999-2000 to $\$ 547.4$ billion in 2000-01. The Government's financial assets increased by $\$ 11.3$ billion to $\$ 85.5$ billion in 2000-01, primarily due to a continued increase in the Government's foreign exchange reserves.

The net public debt-to-GDP ratio is generally recognized as the most appropriate indicator of the debt burden as it measures debt relative to the ability of the Government and the country's taxpayers to finance it. This ratio dropped to 51.8 per cent in 2000-01 from a peak of 70.7 per cent in 1995-96.

Figure 1 - Total Public Debt as at March 31, 2001
(\$ millions)


## Market Developments

Interest rates declined in 2000-01, reflecting the easing of monetary conditions.

The yield curve reverted to a positive normal slope over the year.

The domestic financial market environment was stable for the first three quarters of the 2000-01 fiscal year, and then became more volatile towards fiscal year-end. The fourth quarter of the fiscal year was marked by declines in equity prices, a global economic slowdown and US dollar strength. In Canada economic growth was healthy through 2000 and core inflation remained within the 1 to 3 per cent target range. Short-term interest rates rose modestly during the first half of 2000 as the Bank of Canada raised its target rate for overnight loans from 5.25 per cent to 5.75 per cent, then fell in 2001 as the Bank reduced the target rate from 5.75 per cent in January 2001 to 5.00 per cent in March 2001. These developments are consistent with those in the US.

Government yield curves (i.e. the structure of interest rates from short-term to long-term rates) in Canada and the US began the year in the unusual situation of being inverted or downward sloping (for Canada see Chart 3). This reflected a number of factors, including expectations regarding the direction of monetary policy, concerns about reductions in the supply of government securities in an environment of budgetary surpluses, especially at longer terms to maturity, and a high degree of confidence in long-term inflation performance. By the end of the year government yield curves had returned to a normal upward sloping curve, much of which is attributable to a sharp drop in yields at the short to medium ends of the curve. Relative to US rates, Canadian interest rates were lower until November, when US rates moved below Canadian rates across all maturities (see Charts 4, 5 and 6).

Chart 3
Canada Yield Curve, March 2000 and March 2001 \%


[^0]Chart 4
3-Month Treasury Bill Rates, 2000-01
\%


Sources: Bank of Canada and Federal Reserve Board.

Chart 5
10-Year Government Bond Rates, 2000-01
\%


Sources: Bank of Canada and Federal Reserve Board.

Chart 6
Long-Term Government Bond Rates, 2000-01
\%


Sources: Bank of Canada and Federal Reserve Board.

## Public Debt Costs

Public debt charges have continued to fall relative to GDP.

The Government spent about 24 cents of every dollar of revenue in 2000-01 to pay the interest on the public debt, down from its peak of 36 cents in 1995-96, and now at its lowest rate since 1981-82. Public debt charges as a percentage of GDP declined to 4.0 per cent in 2000-01 from 4.3 per cent in 1999-2000 (see Chart 7).

Chart 7
Public Debt Charges
\% of GDP
$\qquad$


[^1]
## Report on 2000-01 Debt Programs

Market debt As of March 31, 2001, market debt outstanding comprised $\$ 279.9$ billion in
declined from $\$ 456.4$ billion in 1999-2000 to $\$ 446.4$ billion in 2000-OI.
fixed-coupon marketable bonds, $\$ 15.1$ billion in real return bonds (RRBs), ${ }^{1}$ $\$ 88.7$ billion in Treasury bills, $\$ 26.1$ billion in CSBs and CPBs, $\$ 3.5$ billion in CPP bonds and $\$ 33.2$ billion in foreign-currency-denominated securities (see Table 1). In addition, the Government had $\$ 2.7$ billion in interest rate swaps and $\$ 24.9$ billion in cross-currency swaps outstanding as of March 31, 2001. Taking into account the effect of cross-currency swaps, foreign currency obligations were 12.3 per cent of market debt.

This section provides details on the operations of each major debt program. In 2000-01 the stock of Treasury bills decreased by $\$ 11.2$ billion while the stock amounts of other instruments remained largely unchanged. For information on the federal debt management framework, see Annex 1. For descriptions of the individual programs, see Annex 2.

Table 1
Composition of Federal Market Debt, 2000-01

|  | March 31, 2000 outstanding | New issues | Maturing | Repurchase | March 31, 2001 outstanding | Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (\$ billions) |  |  |  |  |
| C\$-denominated |  |  |  |  |  |  |
| Fixed-coupon |  |  |  |  |  |  |
| marketable bonds | 280.6 | 38.5 | 33.9 | $5.3^{* * * *}$ | 279.9 | -0.7 |
| Real return bonds* | 13.3 | 1.8 | - | - | 15.1 | 1.8 |
| Treasury bills** | 99.9 | 174.3 | 185.5 |  | 88.7 | -11.2 |
| Retail debt | 26.5 | 3.2 | 3.7 | - | 26.1 | -0.4 |
| Total domestic debt | 420.3 |  |  |  | 409.7 | -10.6 |
| Foreign-currency-denominated |  |  |  |  |  |  |
| Canada Bills | 6.0 | 31.2 | 30.2 | - | 7.2 | 1.2 |
| Foreign bonds*** | 21.4 | - | 2.2 | - | 20.7 | -0.7 |
| Canada Notes | 1.1 | 0.6 | 0.0 | - | 1.6 | 0.5 |
| Euro Medium-Term Notes | 4.1 | - | 0.6 | - | 3.7 | -0.4 |
| Total foreign debt | 32.6 |  |  |  | 33.2 | 0.6 |
| CPP bonds and notes | 3.6 | 1.3 | 1.3 | - | 3.5 | -0.1 |
| Total market debt | 456.4 |  |  |  | 446.4 | -10.0 |

Note: As at March 31, 2001, the total amount of interest-rate and cross-currency swaps outstanding stood at C\$27.6 billion (see Reference Table XI). Numbers may not add due to rounding.

* Includes CPI adjustment.
** These securities are issued at 3-, 6- and 12-month maturities and therefore are 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.
*** Includes $\$ 492.0$ million in securities assumed by the Government of Canada on February 5, 2001, on the dissolution of Petro Canada Limited.
**** Includes bond buyback program and the pilot cash management bond buyback program.
Source: Public Accounts of Canada.

[^2]
## Domestic Debt

## Fixed-Coupon Marketable Bonds and Bond Buybacks

Gross issuance of bonds was $\$ 38.5$ billion.
\$I. 4 billion in RRBs were issued.

The Treasury bill stock fell by \$II.2 billion.

The retail debt stock fell by $\$ 400$ million.

Fixed-coupon marketable bonds are issued at 2-, 5-, 10- and 30-year maturities on a regular basis. These bonds are non-callable and pay semi-annual coupon payments. Bond buybacks occur with every bond auction and allow the Government to buy back bonds in order to assist in the maintenance of primary bond market liquidity. In 2000-01 gross issuance of bonds of $\$ 38.5$ billion consisted of $\$ 14.1$ billion in 2 -year bonds, $\$ 10.5$ billion in 5 -year bonds, $\$ 10.1$ billion in 10 -year bonds and $\$ 3.8$ billion in 30 -year bonds. $\$ 33.9$ billion of bonds matured during the year. Bond buybacks and cash management bond buybacks totalled $\$ 5.3$ billion. Net new issuance of fixed-coupon marketable bonds during the year, taking into account buybacks and maturities, declined by $\$ 0.7$ billion (gross issuance less repurchases less maturing issues), bringing the stock of outstanding marketable bonds down to $\$ 279.9$ billion as at March 31, 2001.

## Real Return Bonds

Government of Canada RRBs are issued at the long end of the maturity curve. Unlike standard fixed-coupon marketable bonds, interest payments on RRBs are adjusted for changes in the CPI, i.e. inflation. 2000-01 issuance of RRBs totalled $\$ 1.4$ billion, increasing the level of outstanding RRBs from $\$ 12.1$ to $\$ 13.5$ billion (from $\$ 13.3$ to $\$ 15.1$ billion including the CPI adjustment) as at March 31, 2001 (see Reference Table X).

## Treasury Bills

Treasury bills are auctioned every two weeks in 3 -, 6 - and 12 -month maturities and pay out at maturity at par (face) value. The stock of outstanding Treasury bills declined by $\$ 11.2$ billion during the 2000-01 fiscal year to a level of $\$ 88.7$ billion at March 31, 2001. In 2000-01 the Government issued $\$ 174.3$ billion in new Treasury bills, down from $\$ 213.6$ billion in 1999-2000 (see Reference Table VI).

## Retail Debt

There are two types of retail debt: CSBs and CPBs. CSBs are available in regular interest and compound interest forms. They provide minimum guaranteed interest rates and may increase if market conditions warrant. CSBs can be registered only in the name of residents of Canada. CPBs offer a higher rate of interest at the time of issue compared to CSBs on sale at the same time. CPBs' announced interest rates for the posted periods do not change once the issue date has passed. In 2000-01 the level of outstanding debt held by domestic retail investors - CSBs and CPBs - decreased from $\$ 26.5$ billion to $\$ 26.1$ billion.

## Foreign Debt

## Canada Bills

Canada Bills outstanding rose by US\$500 million.

Canada Bills are promissory notes denominated in US dollars and mature not more than 270 days from their issue. These securities are issued for foreign exchange reserve funding purposes only. In 2000-01 the level of outstanding Canada Bills increased from $\$ 6.0$ billion (US $\$ 4.1$ billion) to $\$ 7.2$ billion (US $\$ 4.6$ billion)

## Canada Notes

Canada Notes outstanding
rose
US\$300 million due to a US\$400-million yen bond issue that was very well received.

EMTNs outstanding fell US\$260 million.

Canada Notes are promissory notes denominated in foreign currencies for terms of nine months or longer at a fixed or floating rate. They are issued for foreign exchange reserve funding purposes only. The stock of outstanding Canada Notes rose from $\$ 1.1$ billion to $\$ 1.6$ billion during 2000-01. Public market borrowing by Canada during the year (apart from Canada Bills issuance) took the form of a single issue: a five-year 50 -billion yen (equivalent to some $\$ 625$ million or US $\$ 400$ million) note launched in March. The issue was successfully placed with U.K., European and US institutional investors and received favourable public comments.

## Euro Medium-Term Notes

The Euro Medium-Term Note (EMTN) program was introduced in March 1997 to diversify the sources of cost-effective funding for Canada's foreign exchange reserves. Notes issued under the new program can be denominated in a range of currencies and structured to meet investor demand. Obligations are usually swapped to US dollars, the primary currency held in the foreign exchange reserves. In 2000-01 there were no new EMTN transactions, and the total outstanding decreased from $\$ 4.1$ billion (US $\$ 2.60$ billion) to $\$ 3.7$ billion (US\$2.34 billion).

## Foreign-Currency-Denominated Bonds

No global bonds were issued.

Apart from the yen bond issue under the Canada Notes program, there was no new global bond issuance in 2000-01. A total of $\$ 800$ million of foreign currency bonds matured in 2000-01.

## Cross-Currency Swaps

US\$2.5 billion
was raised
by 37 cross-
currency swaps.

At the beginning of a cross-currency swap, the Government of Canada receives a principal amount in US dollars or euros from the counterparty in exchange for a Canadian-dollar principal payment sourced from domestic bond issues. At the end of the swap contract the Government repays the US-dollar principal amount and receives the Canadian-dollar principal payment. In 2000-01 the federal government raised $\$ 3.9$ billion (US $\$ 2.5$ billion) by entering into 37 cross-currency swaps (see Reference Table XI).

## Debt Management Strategy: 2000-01 Initiatives

Key strategic objectives are to maintain a prudent debt structure and a well-functioning market.

The fundamental debt management objective is to raise stable, low-cost funding for the Government. Key strategic objectives are to maintain a prudent debt structure and a well-functioning market for Government of Canada securities. (Debt Management Strategy 2000-01 outlined the debt management plan for 2000-01 and is available on the Department of Finance Web site at www.fin.gc.ca.)

The following sections report on the Government's initiatives designed to address these strategic goals. The section entitled "Maintaining a Well-Functioning Market" details the initiatives taken to maintain a well-functioning market in Government of Canada securities. The section entitled "Maintaining a Prudent Debt Structure" reports on the key measures and analysis used in determining the target debt structure. "Maintaining a Diversified Investor Base" reports on developments in the investor base of Government of Canada bonds, including domestic and non-resident holdings. And the section entitled "Foreign Debt and Assets Management Strategy" reports on the management of foreign debt and assets.

## Federal Debt Management Strategy Summary

## Fundamental Objective

Raise stable, low-cost funding for the Government.

## 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 Government manages the composition of the debt to help protect its fiscal position from unexpected increases in interest rates and to limit refinancing needs. The Government raises all the required funding for its operational needs in the domestic market. Currency and interest rate risks arising in the management of the Government's foreign reserves portfolio are minimized to the extent possible by matching the currency and duration of assets and liabilities.
Transparency, liquidity and regularity: The Government places emphasis on transparency, liquidity and regularity in the design and implementation of its debt programs in order to maintain a well-functioning domestic market.
Diversification: The Government uses a range of financial sources and borrowing terms to maintain a diversified investor base.
- Market integrity: The Government works with market participants and regulators to maintain the integrity and attractiveness to investors of the Government of Canada securities market.
- Consultations: The Government actively seeks input from market participants on major adjustments to the federal debt and cash management programs.
- Best practices: The Government seeks to ensure that its operational framework and practices are in line with the best practices of other comparable sovereign borrowers and the private sector.
For more information on the general framework within which the federal debt is managed, see Annex 1.


## The

## Government

 continues to place emphasis on the principles of transparency, liquidity and regularity.Market participants are consulted regularly.

A number of initiatives were undertaken in
2000-OI to enhance the functioning of the Government of Canada securities market.

## Maintaining a Well-Functioning Market

A well-functioning Government of Canada securities market helps to ensure low-cost financing for the federal government over time by providing efficiency for investors, thereby attracting broad participation in the market. The Government's operating principles of transparency, liquidity and regularity are operationalized by borrowing and repurchasing securities in the domestic market on a regular, pre-announced basis in key segments of the market, building large bond benchmarks and maintaining transparent rules for participation at Government of Canada securities auctions.

Federal government securities play a key role in Canada's fixed-income market by providing the benchmark against which other instruments are priced, hedged and traded. The Government monitors auction results, secondary market turnover and transaction costs in the Government of Canada securities market as indicators of liquidity and market efficiency. It also works closely with market participants to address issues of market function and integrity. Market participants are consulted regularly on the Government's debt strategy and adjustments to its domestic debt programs. Through this approach the Government seeks to maintain a high standard of transparency, improve the attractiveness of the market for investors, and take into account market views in decisions on debt management operations.

In recent years the Government has made a number of adjustments to its operations to enhance the liquidity of the market, such as moving to biweekly Treasury bill auctions, increasing benchmark bond target sizes and introducing a bond buyback program.

In 2000-01 the federal government undertook a number of initiatives to maintain and enhance a well-functioning market in its securities, including:

- increasing target benchmark bond sizes for 5-, 10- and 30-year bonds from $\$ 7$ billion- $\$ 10$ billion to $\$ 9$ billion- $\$ 12$ billion to enhance liquidity;
- approving new rules related to stripping and reconstitution of Government of Canada bonds to improve secondary market liquidity;
- implementing the pilot bond buyback program on an ongoing basis and expanding the range of eligible securities to support the maintenance of a liquid new bond issue market;
- implementing a pilot cash management bond buyback program to reduce the peak levels of government cash balances and improve the functioning of the Treasury bill program;
- reviewing the structure of the Treasury bill program to ensure it meets investor needs; and
- continuing discussions with market participants and regulators on the regulatory framework for electronic trading systems in the domestic fixed-income market.

These initiatives are discussed in more detail in the following sections.

Bond benchmark targets were increased for 5-, Io- and 30-year bonds.

## Bond Program

In consultations held before the 2000-01 debt strategy was established, market participants were generally pleased with the design and functioning of the Government of Canada bond market, but indicated that benchmark targets could be increased to maintain Canada's position in an environment of ever-higher global standards. Accordingly, in its 2000-01 debt strategy the Government increased target benchmark sizes for 5-, 10- and 30-year bonds from $\$ 7$ billion- $\$ 10$ billion to $\$ 9$ billion-12 billion.

Annual Government of Canada bond turnover decreased to 11.5 times the outstanding stock in 2000-01 from 11.7 times in 1999-2000. While the level of trading activity globally has diminished over the past two years, Canada's bond market remains one of the most active sovereign bond markets in the world based on indicators of the liquidity of the market. These include the volume of transactions and turnover ratios comparable to those of other G-7 countries, with the exception of the US (see Charts 8 to 12).

## Government of Canada Securities Statistics

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 2000 of 11.0, behind only the United States, which had a stock turnover level of 19.4.

Chart 8
Sovereign Bond Turnover Ratios


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

* Data for Japan unavailable for 2000.

Source: Bank of Canada.

## Market Activity

The volume of transactions in the Government of Canada bond market has grown significantly since 1990. Total marketable bond trading volume was $\$ 3,424$ billion in 2000-01, a 1.8-per-cent decrease from 1999-2000. The annual turnover ratio was 11.5 in 2000-01 compared to 11.7 in 1999-2000 (see Chart 9). 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 2000-01 total Treasury bill turnover was $\$ 1,039$ billion. The annual turnover ratio was 13.0 in the second quarter of 2001 (see Chart 10).

Chart 9
Government of Canada Bonds Trading Volume and Turnover Ratio


Chart 10
Government of Canada Treasury Bills Trading Volume and Turnover Ratio


An active repo market is a hallmark of a well-functioning government securities market. The total turnover for Government of Canada bond repos in 2000-01 decreased to $\$ 17,511$ billion from \$18,037 billion in 1999-2000. Furthermore, the annual turnover ratio for bond repos in 2000-01 was 58.6 (see Chart 11). The Treasury bill repo market volume in 2000-01 was $\$ 1,235$ billion and the annual turnover ratio was 14.8 (see Chart 12).

Chart 11
Government of Canada Bond Repos Trading Volume and Turnover Ratio


Chart 12
Government of Canada Treasury Bill Repos Trading Volume and Turnover Ratio


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. There is an active futures contract based on benchmark 5- and 10-year Government of Canada bonds (the CGF and CGB contracts). Open interest of the futures contract on 10-year Government of Canada bonds increased to 55,469 in 2000, an 88-per-cent increase from 1999. The CGB contract continues to be an actively traded contract, setting a new daily trading volume record on November 27, with 50,880 contracts traded, surpassing the two-year-old record of 41,649 set in 1998.

The bond buyback program was implemented on an ongoing basis and the range of maturities expanded.

## Bond Buyback Program

To enhance liquidity in the market of Government of Canada securities, a pilot bond buyback program was implemented in 1998-99. The program allows the Government to buy back less liquid bonds, thus supporting a liquid new bond issue market. More specifically, repurchases of outstanding bonds are funded by issuance of new benchmark bonds, increasing the size of the bond program beyond the level needed to meet the Government's financial requirements.

An internal evaluation of the pilot, which included feedback from market participants, took place in late 1999. The evaluation indicated that the program has been successful in meeting its objectives. As a result, in its 2000-01 debt strategy the Government implemented the bond buyback program on an ongoing basis. The program was expanded to include bonds with maturities across a wider range of the yield curve in order to encourage the participation of a wider range of market participants. Specifically, the program was expanded from bonds with maturities up to 2011 to include bonds with maturities up to 2022.

The repurchase program has enabled the Government to conduct larger auctions in 1998-99, 1999-2000 and 2000-01 than would have been the case in the absence of a buyback program (see Table 2). An additional benefit of the program was improved secondary market liquidity, as trading increased in less liquid bonds targeted for repurchases under the program.

The size of the annual bond buyback program and the number of transactions depend on several factors, including the desired size of the new issuance and buyback program, market feedback and financial requirements. The size of the program was also affected by the quality of offers received. To protect the integrity of the program, the Government retains the right to repurchase less than the target amounts in cases where offers are not competitive.

Table 2
Bond Buyback Program

|  | $1998-99$ | $\mathbf{1 9 9 9 - 2 0 0 0}$ | 2000-01 |
| :--- | :---: | :---: | :---: |
| Amount repurchased |  | $(\$$ millions $)$ |  |

## Treasury Bill Program

The Treasury bill program
structure was reviewed to ensure it continues to meet investor needs.

The Treasury bill stock was reduced sharply in the latter half of the 1990s as the Government increased the fixed-rate share of the debt stock. Liquidity and trading activity has fallen over the period. Annual Treasury bill turnover declined to 12.3 times the amount of the stock in 2000-01 from 13.2 in 1999-2000 (see Chart 10 for quarterly results). In the spring of 1999 and again in the fall of 2000, the Government asked market participants for views on a restructuring of the program to improve liquidity. The majority of market participants continued to indicate that they prefer to maintain the existing biweekly auctions of three tranches of Treasury bills; as a result, no changes were made.

The
Government approved the removal of the ceiling on the reconstitution of Government of Canada
bonds to enhance
secondary
market
liquidity.

A pilot cash management bond buyback program was implemented.

## Stripping and Reconstitution of Bonds

Stripping involves separating bonds into individual interest and principal payment components, while reconstitution involves collecting individual components to create synthetic whole bonds - the opposite of stripping. Market participants use these techniques to match the supply and demand for certain securities.

In June 1999 the Investment Dealers Association of Canada (IDA) requested that the federal government approve the removal of the ceiling on the reconstitution of Government of Canada securities to improve secondary market liquidity. The ceiling limited the amount of a given bond, held in the Canadian Depository for Securities Limited (CDS), that could be reconstituted to the amount previously stripped.

In June 2000 the federal government announced its support for the IDA's request, viewing the initiative as an additional tool for enhancing liquidity in the Government of Canada securities market, particularly for benchmark securities, and as a complement to the regular bond buyback program. The new rule was implemented by the CDS in February 2001. Market participants stripped and reconstituted a total of $\$ 4.5$ billion and $\$ 5.8$ billion face value of securities respectively during the first week following the rule change, clearly indicating that the initiative has been helpful to the market.

## Pilot Cash Management Bond Buyback Program

To help in smoothing the Government's cash requirements and to aid the functioning of the Treasury bill program, a pilot program of cash management bond buybacks was implemented in January 2001. The purpose of the program is to reduce the peak levels of government cash balances needed to redeem upcoming large bond maturities. This involves buying back large bonds with less than 12 months before they mature. The program also helps to smooth out seasonal fluctuations in Treasury bill issuance by reducing cash requirement peaks.

The first cash management buyback of $\$ 500$ million was held on January 16, 2001. Following this, $\$ 1$ billion worth of bonds were repurchased in February and March, for a total of $\$ 2.5$ billion for fiscal year 2000-01.

## Market Transparency and Electronic Trading

The Government supports improving market transparency to provide assurance that transaction pricing is fair and to enhance the attractiveness of the fixed-income market for a wide array of investors. In particular, this has involved the development of a screen-based, real-time information system (CanPx) that was established by dealers and inter-dealer brokers in 1999. CanPx provides market participants with best bid and offer prices and trading volumes in a range of benchmark fixed-income securities, and gives Canada a transparency standard that is in line with the practices of comparable sovereign countries.

The Department of Finance and the Bank of Canada actively contributed to discussions on the development of a regulatory framework for alternative trading systems.

The Retail Debt Program continues to provide Canadians access to safe and secure savings instruments.

The
Government maintains a debt structure that balances prudence with continuing access to lowest-cost sources of funds.

Electronic commerce in wholesale fixed-income markets is growing rapidly internationally. The Government has a strong interest in the development of wholesale market e-commerce initiatives that would promote the maintenance of a liquid and efficient domestic fixed-income market. In 2000-01 the Department of Finance and the Bank of Canada actively contributed to discussions with Canadian securities regulators and market participants on the design of a regulatory framework for alternative trading systems that encourages their development and contributes to enhanced market transparency and efficiency.

## Retail Debt

Canadians were able to purchase both CSBs and CPBs during a six-month period between October 2, 2000, and April 1, 2001. The CSB featured one-year pricing and cashability of the principal at any time, with no interest payable if cashed within three months of its purchase date. The CPB featured longer-term pricing higher than the CSB, but with cashability reduced to once a year. Both bonds have registered retirement savings plan and registered retirement income fund options. CPBs made up the larger share of total sales, contributing to the diversification of the Government's investor base.

The Retail Debt Program continues to provide Canadians access to safe and secure savings instruments. To increase access and improve the distribution of retail products for the Government, several initiatives were undertaken. The direct option of purchasing CSBs and CPBs by telephone was enhanced and provided the Department of Finance with valuable information. In the payroll channel, an on-line application form was successfully piloted. As well, a Web site transmission option was introduced that allows small and medium-sized businesses to submit employee payroll deduction data directly to the Bank of Canada. For further information on retail debt plans and operations, see the Canada Investment and Savings Web site at www.csb.gc.ca.

## Maintaining a Prudent Debt Structure

While the debt stock is on a downward trend, it remains large. Managing a large stock of debt exposes the Government to financial risk arising from changes in interest rates. The Government's strategic objective is to maintain a debt structure that balances prudence with continuing access to lowest-cost sources of funds.

This section describes the Government's approach to maintaining a prudent debt structure and reports on analytical work done in 2000-01. The capacity of the Government debt managers to assess risk is continually being upgraded in line with the best practices of other sovereigns. In keeping with comments made by the Auditor General of Canada in his April 2000 report on the Government's debt management programs, "Managing Canada's Debt: Facing New Challenges," this section of the report has been expanded to enhance understanding of the measures used by the Government and to present current analytical results.

## The Cost/Risk Trade-Off

There is a trade-off between keeping costs low and ensuring they are stable over time.

In establishing its debt structure, the Government trades off keeping borrowing costs low against ensuring that any additional debt-servicing costs resulting from unexpected increases in interest rates do not exceed its tolerance for risk. This trade-off reflects the fact that longer-term debt instruments are generally more costly and less risky than shorter-term debt instruments. To be more specific, long-term maturity instruments such as Government of Canada bonds typically have higher debt-servicing costs (i.e. pay higher coupon rates) than short-term instruments such as Treasury bills. On the other hand, the fixed-coupon rates of outstanding bonds are known with certainty, and therefore result in lower interest rate risk compared to Treasury bills, which mature each year and need to be refinanced at the then-prevailing market interest rates (see Chart 13).

Chart 13
Costs/Risk Trade-Off Depends on the Type and Amount of Government-Issued Securities That Compose the Debt Structure


Note: See Annex 2 for more information on Government of Canada market debt instruments that make up the debt.

The Government takes a long-term strategic view in choosing a target debt structure in order to have reasonable, and lasting, cost stability under a range of potential interest rate environments. Although the fiscal situation has improved considerably in recent years, the stock of outstanding debt that is exposed to interest rate changes remains very large. Roughly one-quarter of the federal government's budgetary expenditures are debt-servicing charges, and sharp movements in interest rates have the potential to disrupt budgetary planning. An example of such a movement occurred in the late 1980s (see Chart 14).

Between March 1987 and March 1990, interest rates on Treasury bills nearly doubled while interest rates on 10-year government bonds increased only by about one-third. Debt costs were significantly affected as the debt structure at that time had a high proportion of short-term debt.

Chart 14
Short-Term and Long-Term Interest Rates
\%


Source: Department of Finance.

## Assessing the Cost/Risk Trade-Off - Measures and Targets

The
Government uses a number of tools to assess the cost/risk trade-off.

Debt managers gauge and describe the sensitivity of the debt structure to unexpected changes in interest rates by using various measures. Measures such as the fixed-rate share of the debt, average term to maturity and duration characterize the composition of the debt and indicate how much of or how often the debt structure is exposed to interest rate variations. Other measures, such as a simulation methodology called Cost at Risk, quantify directly the risk of incurring additional debt costs given a particular debt structure. These measures, consistent with the best practices of comparable sovereign borrowers, are used by the Government to evaluate the performance of past debt management and guide future debt management.

Targets for the main operational measure - fixed-rate share - have been established for many years and reported in previous Debt Management Reports. Average term to maturity and maturity profile are two other measures that have been used in previous years to complement the fixed-rate share analysis. Recently the range and sophistication of analysis of the cost/risk trade-off has been enhanced with the introduction of Cost at Risk. Work is currently ongoing on the addition of a duration measure to the toolkit.

The sections below describe each of the measures/targets used by the Government in managing the debt. Table 3 provides a quick reference to the four measures.

Table 3
Current Cost/Risk Measures

| Measure | What it measures | How it is used |
| :--- | :--- | :--- |
| Fixed-rate share | The portion of the debt held at <br> fixed interest rates <br> (those over 12 months) | As a general measure of the <br> interest rate sensitivity and a <br> target for the composition of <br> the debt |
| Maturity profile | The year-to-year distribution <br> of maturing debt | As a measure of refinancing <br> exposure over time |
| Average term to maturity | The average time remaining before <br> debt matures taking into account <br> principal repayments only | As an indicator of how quickly <br> changes in interest rates will <br> affect debt costs |
| Cost at Risk | The debt cost impact resulting <br> from interest rate exposure | As a measure of debt cost <br> variability associated with a <br> given debt structure |

## Fixed-Rate Share

The key operational measure and target that the Government uses is known as the fixed-rate share. The fixed-rate share 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 entire interest-bearing debt stock.

Generally speaking, debt-servicing costs increase (decrease) and financial risk decreases (increase) with a higher (lower) fixed-rate share. The fixed-rate share is a popular indicator among central governments because it is an intuitive measure that is fairly easy to compute and understand.

The Government currently targets a debt structure that is two-thirds fixed and one-third floating.

Following the sharp increase in interest rates in the late 1980s, the Government took measures to reduce the exposure of the debt stock to volatility in interest rates. The share of the debt stock at fixed rates increased from one-half in 1989-90 to an operational target of two-thirds in 1998-99. Since that time the debt has been managed to maintain a quarterly average fixed ratio within a range of $\pm 1$ per cent of the two-thirds target. The change in the composition of the debt structure was generally accomplished by reducing the stock of Treasury bills. For the past two fiscal years the debt has been managed around a target fixed-rate portion of two-thirds of the debt (see Chart 15).

Chart 15
Fixed-Rate Share of Interest-Bearing Debt at March 31


Source: Department of Finance.

As noted before, there can be a trade-off between risk reduction and debt-servicing costs. In the 1980s and early 1990s, when the debt had a high floating-rate component, debt-servicing costs tracked movements in interest rates (see Chart 16). Annual debt-servicing costs as a proportion of total debt generally floated between short- and long-term interest rates but varied significantly from year to year.

Chart 16
Interest Rates and Debt-Servicing Costs
\%


Source: Department of Finance.

The two-thirds fixed structure is prudent in view of potential interest rate volatility.

The maturity profile is managed to limit refinancing risk over time.

By establishing a more prudent two-thirds fixed-rate debt structure, the Government has reduced the sensitivity of its annual debt-servicing costs, and hence underlying balance, to changes in interest rates. This is illustrated in Chart 16 by the relatively stable debt-servicing cost line over the past five years. ${ }^{2}$ Currently debt-servicing costs exceed the present level of interest rates because a substantial portion of fixed-rate debt was borrowed in times of higher interest rates. In due course, however, it can be expected that overall debt-servicing costs will decline as debt that matures is refinanced at lower interest rates.

## Maturity Profile

The Government manages the maturity profile of the debt (i.e. the amount that matures, or comes due, in any given year) to limit its 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 17. The profile consists of a portion related to borrowing in previous years and a portion attributed to future refinanced borrowing. Initiatives to regularize bond refinancing into predictable benchmark securities have led to a gradual smoothing out of the maturity profile of the bond stock. In particular, there have been moves to build large benchmark bond issues for four maturities of domestic bonds (2-, $5-, 10$ - and 30 -year) and issue bonds at regular quarterly intervals.

Chart 17
Maturity Profile of Domestic Bonds


Note: Excludes Treasury bills. Projections assume future issuance remains at 2000-01 levels and excludes buybacks.
Source: Department of Finance.

[^3]ATM is used as an indicator of bow quickly changes in interest rates will affect debt costs.

Treasury bills, unlike bonds, mature within a year of their issuance and are therefore excluded from the maturity profile depicted in Chart 17. The decline in Treasury bill issuance in the late 1990s has also contributed to lowering the Government's refinancing risk. For example, in 1995 the Government was required to refinance, on average, $\$ 8$ billion per week in maturing Treasury bills, compared to an average of $\$ 3.6$ billion per week in 2000 .

Since the maturity profile characterizes the distribution of maturing debt, it cannot be summarized with a simple numerical measure. Because of this drawback, maturity profile analysis is combined with measures such as average term to maturity or duration.

## Average Term to Maturity

The average term to maturity (ATM) is the average lifespan of the financial instruments that make up the debt. Measured in years, ATM represents the average length of time before debt instruments mature and are subject to refinancing risk. Longer ATMs mean that debt instruments are rolled over less frequently, which implies less uncertainty regarding future debt costs. Debt structures with a high proportion of long-term debt have higher ATMs. Since long-term debt is usually issued at fixed rates, ATM is a complementary measure to the fixed-rate share indicator.

The ATM of marketable debt has increased from roughly 4 years in 1990 to 6.4 years in March 2001 (see Chart 18). The upward trend in ATM resulted from the increase in the fixed-rate share and a reduction in the stock of Treasury bills. These changes have brought the term structure of Canada's debt more in line with the debt structures of the other G-7 countries. The ATM should now gradually stabilize as the higher fixed-rate structure target has been achieved.

Chart 18
Average Term to Maturity of Marketable Debt
years
7.0


Source: Bank of Canada.

Cost at Risk measures the debt cost variability associated with different debt structures.

Duration is another way of measuring the length of time before refinancing risk occurs. Similar to ATM, higher duration values reflect lower refinancing risk. Compared to ATM, duration is a more sophisticated and accurate way of measuring refinancing risk because, in addition to capturing the risk of refinancing principal amounts at maturity, it looks at the refinancing risk associated with coupon or interest payments that occur through the life of debt instruments. Because duration considers financial flows through the life of the debt instrument, the duration will be shorter than the ATM of the same structure. At the end of March 2001 the Government's debt had a duration of 4.4 years, excluding swaps.

## Cost at Risk

The Government has recently enhanced its long-term cost/risk sensitivity analysis by introducing a more comprehensive measure known as Cost at Risk (CaR). CaR contributes to the Government's debt management decisions by quantifying the risk directly in terms of potential debt cost. This measure is similar to the well-known Value at Risk measure used extensively throughout the financial community.

CaR is a sophisticated and rigorous way of identifying whether the risk of higher debt-servicing costs, measured in dollars, falls within the Government's tolerance level for risk. CaR analysis involves simulating future debt costs using approximately 1,000 possible interest rate scenarios. The analysis is performed with various debt structures in order to better determine the relationship between debt structure, debt costs and risk. The purpose of the simulations is to identify the dollar amount of additional debt costs that would occur with a certain probability.

Figure 2 - Cost at Risk Analytical Framework


The CaR analysis framework is depicted in Figure 2. First, a large number of interest rate scenarios are generated, based on a theoretical model from the economic literature, to represent the full range of plausible developments in the interest rate term structure. The outstanding stock of debt is considered and several issuance strategies are developed. The simulation is then performed for all interest rate scenarios to generate a statistical distribution of possible debt costs and the cash flows for each issuance strategy. The average debt cost and CaR statistic are extracted from the obtained distribution along with projected cash flows. The cash flows are then used to forecast the fixed-rate share and maturity profile indicators.

The statistical distribution for the debt costs has the general shape of the distribution in Figure 3. As a rule of thumb, scenarios with a large positive (negative) shock to interest rates lead to high (low) future debt costs. However, the central tendency is for most shocks to be small in nature. The debt structure is seen as prudent when there is only a 5 -per-cent probability that an increase in interest rates causes debt costs to exceed the defined tolerance level. In other words, when evaluating different debt structures (or issuance strategies), a key factor is whether or not CaR falls within a risk tolerance range that is acceptable to the Government.

It should be noted that unlike other measures such as fixed-rate share, ATM and duration, CaR is not an objective measure because it depends on several assumptions. In particular, experience has shown that results are very sensitive to the interest rate scenarios employed. The Government is continuing to develop the CaR analysis.

Figure 3 - Measuring the Risk of Future Debt Charges


Cost at Risk analysis indicates that
the current two-
thirds fixed-rate
debt structure
helps to control
interest rate exposure.

## 2000-01 Cost/Risk Analysis Results

Analysis was done in 2000-01 on the cost/risk trade-off using the current two-thirds fixed-rate structure and two alternative debt structures - one with a 5 -per-cent higher and one with a 5-per-cent lower fixed-rate debt share. Assuming no changes to interest rates, the 62-per-cent fixed-rate debt structure is the less costly among the three debt structures. However, in the event that interest rates increase by 100 or 300 basis points (i.e. 1 per cent or 3 per cent), the 62 -per-cent debt structure becomes more costly than the two other higher fixed-rate debt structures. (Note that the comparisons of alternative debt structures are only indicative because it is impossible to specify what debt issuance decisions would have been taken had the Government been operating with alternative fixed-rate share targets.) ${ }^{3}$

The analysis indicates that increasing the fixed-rate share of the debt to two-thirds has significantly reduced interest rate exposure. For example, the first-year impact on net debt-servicing costs ${ }^{4}$ of a 100-basis-point shock in interest rates in 2000-01 would be $\$ 900$ million under the current structure, compared to $\$ 1.8$ billion at the time of the 1995 budget. Such a shock would add approximately 15 basis points to the effective interest rate on the debt in the first year. That is, net debt-servicing costs to net debt would increase by 0.15 per cent. It is estimated that net debt-servicing costs under a 100-basis-point shock would increase by $\$ 1.1$ billion ${ }^{5}$ under a lower fixed-rate share of 62 per cent - some $\$ 200$ million higher than under the current two-thirds fixed-rate share.

With a more severe 300-basis-point shock, the degree of protection afforded by a higher debt structure is proportionally larger. For example, the impact on net debt-servicing costs would be about $\$ 500$ million higher with a 62 -per-cent fixed-rate share than with a 67-per-cent fixed-rate share.

The analysis also indicates that the reduction of interest rate exposure from raising the fixed-rate share of the debt has a cost. Fixed-rate debt issued since 1996-97 generally paid higher interest rates than Treasury bills in 2000-01, so costs might have been lower by about $\$ 100$ million in 2000-01 ( 2 basis points) had the Government not increased the fixed-rate share beyond the 62-per-cent level achieved in 1996-97. It is important to note that this cost differential may vary substantially from year to year based on the term structure of interest rates.

[^4]Sensitivity analysis shows that there is a low probability that interest rate shocks would disrupt the fiscal framework.

Chart 19
Sensitivity Analysis: First-Year Impact on Net Debt Charges


Note: Values represent estimated deviation from actual debt costs.
Source: Department of Finance.

The difference in costs depicted in Chart 19, for example, reflects a relatively flat term structure (i.e. a smaller difference between short-term and long-term interest rates) compared to historical averages, which would tend to reduce the cost difference between shorter- and longer-term securities.

Results of the most recent CaR analysis, based on upgraded assumptions and methodologies, indicate that with the two-thirds fixed-rate structure in place on March 31, 2001, there is a high probability that the impact of most interest rate shocks would not disrupt the fiscal framework.

## Maintaining a Diversified Investor Base

## Diversified Investor Base

A diversified investor base is
maintained to
ensure active demand for Government of Canada
securities, thereby reducing funding costs.

A diversified investor base helps to reduce funding costs by ensuring that there is active demand for Government of Canada securities. The federal government pursues diversification of its investor base by maintaining a liquid and transparent domestic wholesale debt program that is attractive to a wide range of investors, and in foreign borrowings through the use of a broad array of sources of funds. In addition, Canada Investment and Savings, the Government's retail debt agency, contributes to a diversified investor base by offering savings products designed to suit the needs of individual Canadians.

## Domestic Holdings of Government of Canada Debt

In 2000 (the latest year for which figures are available) life insurance companies and pension funds accounted for the largest share of domestic holdings of Government of Canada market debt (31.2 per cent), followed by public and other financial institutions such as investment dealers and mutual funds (see Chart 20). Taken together, they accounted for 52.6 per cent of domestic holdings.

There was a significant shift in the distribution of holdings of Government of Canada market debt in the 1990s. Life insurance companies' and pension funds' share grew from 21.6 per cent in 1990 to 31.2 per cent in 2000. Bonds and bills held by public and other financial institutions also increased sharply over the 1990-2000 period - from 10.6 per cent in 1990 to 21.4 per cent in 2000 . Much of the increase is attributable to a significant increase in holdings by mutual funds. Chartered banks' share of holdings of market debt increased from 9.5 per cent in 1990 to 17.6 per cent in 2000 , while the share of persons and unincorporated businesses decreased by more than 23 percentage points to 9.4 per cent of domestic holdings. The latter change can largely be attributed to the shift towards more interest in equity investments by Canadians, particularly in recent years.

However, in the past year there have been no major changes in the distribution of holdings of government debt. Reference Table IV shows the evolution of the distribution of domestic holdings of Government of Canada debt since 1976.

Chart 20

## Distribution of Domestic Holdings of <br> Government of Canada Market Debt as of December 31

1990-\$245.5 billion


2000-\$348.6 billion


Note: Numbers do not add due to rounding.
Source: Statistics Canada, The National Balance Sheet Accounts.

Foreign debt is used exclusively to raise foreign exchange reserves.

## Foreign Debt and Assets Management Strategy

The Government of Canada borrows in foreign currencies exclusively to raise foreign exchange reserves for the Exchange Fund Account. The reserves in the Exchange Fund Account are maintained as a source of liquidity and can be used to promote orderly conditions in the foreign exchange market for the Canadian dollar. Further details on the management of international reserves is available in Exchange Fund Account - Annual Report, available on the Department of Finance Web site at www.fin.gc.ca.

The key objectives of Canada's reserve program are to:
ensure that an appropriate level of reserves is maintained while minimizing the cost of carrying reserves;

- immunize to the extent possible currency and interest rate risks by selecting reserve assets that match the liabilities in currency and duration; and
maintain diversified funding sources and a prudent liability structure to help manage refinancing needs.


## Level of Reserves

The level of foreign exchange reserves has been increased in recent years.

In recent years the Government has made a steady effort to increase Canada's international reserves with the objective of bringing the level more in line with that of comparable sovereigns. Reserves have been increased from US $\$ 11.9$ billion at December 31, 1992, to US $\$ 33.5$ billion at March 31, 2001 (see Chart 21). With the increases, the Government has made substantial progress in meeting its objective.

In 2000-01 international reserves increased by US\$2.4 billion while foreign currency debt increased by US $\$ 0.4$ billion. ${ }^{6}$ Foreign exchange reserves increased as a result of cross-currency swaps of domestic obligations and purchases of US dollars in the spot foreign exchange market.

Chart 21
Canada's International Reserves, December 1992 to March 31, 2001


Sources: Department of Finance; International Monetary Fund, International Financial Statistics.

[^5]
## The Gap Between Foreign Currency Assets and Liabilities

The gap between foreign assets and liabilities is being reduced over time.

Canada has led
the world in introducing
collective action
clauses to
promote
international financial
stability.

Foreign currency liabilities came to exceed liquid foreign currency assets (i.e. cash, deposits and securities) in the Exchange Fund Account in recent years, largely as a result of extensive foreign exchange intervention and important commitments to the International Monetary Fund in 1998. Consistent with the Government's policy of immunizing currency and interest rate risk in Canada's reserve program, the Government is taking steps to bring foreign currency liabilities in line with foreign currency assets.

In December 1998 the Department of Finance, in collaboration with the Bank of Canada, implemented a program of purchases of US dollars in the foreign exchange markets. The proceeds of sales of Canadian dollars are used to reduce US-dollar-denominated liabilities. This program is conducted by the Bank in its role as fiscal agent for the Government in its management of the federal debt.

Purchases of US dollars are small in relation to the large daily flows in foreign exchange markets and are undertaken with sensitivity to market conditions. The objective is to close the gap between foreign currency assets and liabilities over the next few years. When the program was implemented, the gap was some US $\$ 13$ billion, and substantial progress has been made in closing it: as of March 31, 2001, the gap between foreign currency liabilities (US $\$ 36.6$ billion) and liquid foreign currency assets (US $\$ 30.2$ billion) stood at some US $\$ 6.3$ billion.

## Collective Action Clauses

In April 2000 Canada announced that it was adopting collective action clauses in its future foreign currency bond and note issues. Collective action clauses in bond contracts facilitate debt restructuring by providing an orderly framework for debtors and creditors.

By bringing in collective action clauses, Canada indicated that it was helping to lead the process of having collective action clauses adopted by all countries. These clauses are part of Canada's effort to promote international financial stability and reduce the risk and severity of global financial crises. In recent years there has been a growing consensus that the wider use of collective action clauses in international bond contracts could contribute to a more orderly resolution of financial crises.

The documentation governing Canada's two foreign currency note programs (the Euro Medium-Term Note and Canada Note programs) has been modified to ensure that all future issuance under these programs includes collective action clauses. Future global bond issues by Canada will also include these clauses.

The
Government is developing a collateral management framework to better manage the Government's credit risk.

## Risk Management Framework

The Government has in place a comprehensive risk management framework for identifying and managing treasury risk, including market, credit, operational and legal risks related to the financing and investment of the foreign exchange reserves. The Government's risk management policies call for prudent management of treasury risks based on best practices. Standards for risk tolerance are very prudent, with market risks generally immunized and high credit quality and diversification standards followed.

In June 2000 the Minister of Finance approved a new framework and limits governing credit exposure to commercial financial institution (FI) counterparties with respect to the Government's foreign currency reserve portfolio. The framework is consistent with best practices in credit risk management and includes a rigorous, comprehensive credit risk system and credit exposure limits on counterparties across all lines of business.

In this context, the Government is proceeding with the development of a collateral management framework to better manage the Government's credit risk to FI counterparties associated with cross-currency swaps and forward contracts. Collateral management systems are increasingly the norm in capital markets as a way of managing credit risk associated with swaps. The effect of collateralization is to limit the exposure to the FI counterparty to the transaction by holding collateral when there is a material risk of loss.

## Management of the Government's Cash Balances

The main cash management objective is to ensure that the Government has sufficient cash available to meet its operating and liquidity requirements.

The main objectives of the federal government's cash management operations are to ensure that the Government has sufficient cash available to meet its operating and liquidity requirements, and to invest cash in a prudent, cost-effective manner. Currently the federal government invests its cash balances with a limited number of deposit-taking institutions (participants in the Large-Value Transfer System) through a twice-daily auction process.

Management of the Government's cash balances requires forecasting and monitoring of its daily receipt and disbursement flows, as well as an ongoing borrowing program to refinance maturing debt and maintain the balances at targeted levels. There are inherent and large uncertainties in forecasting daily changes in cash balances 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. An adequate level of cash balances must be maintained at all times to meet these operational requirements and provide an appropriate liquidity cushion for the Government's financial operations.

The level of the Government's daily cash balances averaged $\$ 10.2$ billion in fiscal 2000-01, up from $\$ 8.4$ billion in fiscal 1999-2000. Earnings on term deposits averaged 5.61 per cent versus 4.78 per cent the previous year. Compared to the weighted cost of Treasury bill borrowings, the Government earned a positive spread by 4 basis points in 2000-01.

## Proposed New Cash Management Investment Framework

A new cash In 1999-2000 the Department of Finance and the Bank of Canada undertook a management framework is being implemented. review of the investment framework for the Government's domestic cash balances, as part of ongoing efforts to ensure that the Government's financing and investing operations are efficient and cost-effective and meet the standards of best practices appropriate for a sovereign government. The review led to the release of a discussion paper in July 2000 on changes to the auction framework and subsequent consultations with market participants.

The proposed changes to the framework are designed to increase competition in the auction of cash balances and to strengthen the management of risks, in particular the credit risks involved in the investment of cash balances. In summary, it was proposed that access to the auctions be opened to all significant participants in the domestic money market to ensure competitive returns are earned on cash balances and to diversify the Government's counterparties. The Government also proposed to introduce a credit risk management system through the use of credit ratings, credit lines and collateral agreements. At the end of 2000-01 work was continuing on the refinement of these proposals.

## Annex 1

## Federal Debt Management Framework

## Legal Authorities

The Financial Administration Act (FAA) provides the statutory framework under which the Minister of Finance borrows money for the Government in financial markets. The FAA states that the Minister cannot borrow money without the authority of Parliament. Parliament authorizes the Minister to borrow new funds through borrowing authority acts. The Minister is authorized by the FAA to refinance maturing debt without further parliamentary authority. The Act provides the Minister with the authority to use modern financial and risk management tools and techniques such as interest rate and currency swaps, options, futures and forwards in the conduct of the Government's financial operations and for risk management purposes. In addition, the Act provides the Minister of Finance with legislative authority to establish rules governing the sale of the Government's debt.

In addition to the FAA, the Bank of Canada Act provides statutory authority for the Bank of Canada to act as the Government's fiscal agent. The Currency Act establishes the Exchange Fund Account and provides statutory authority for the Minister of Finance to manage the Account.

## Institutional Responsibilities

The Department of Finance, including Canada Investment and Savings (CI\&S), the Government's retail debt agency, manages federal market debt in conjunction with the Bank of Canada. The Financial Markets Division of the Department of Finance provides analysis and develops policies and recommendations for the federal government's borrowing programs, for the investment of the Government's cash and reserve assets, and for the management of financial risks.

The Division works with the Bank of Canada, the Government's fiscal agent, on all aspects of debt management. As fiscal agent, the Bank of Canada is specifically responsible for the operational aspects of debt management, for example, conducting the auctions of government debt, issuing debt instruments, making interest payments and conducting foreign currency borrowing operations. The Bank also has responsibility for monitoring market activities and advising on debt management policy issues, as well as operating the Government's Risk Management Unit.

CI\&S is a special operating agency of the Department of Finance, and its primary responsibility is the day-to-day management of the Retail Debt Program. CI\&S, working in consultation with the Bank of Canada and the Financial Markets Division, is responsible for developing the Retail Debt Program's strategic direction and managing the front office aspects of the program.

## Domestic Debt Operations

Domestic borrowings are done strategically, i.e. securities are issued on a regular, transparent basis to maximize investor interest and participation. Marketable bonds, real return bonds (RRBs) and Treasury bills are sold via auction, with the Bank of Canada operating as the Government's fiscal agent, to Government of Canada securities distributors and end-investors. Tenders are submitted to the Bank of Canada via the electronic auction system CARS (Communications, Auctions and Reporting System).

Bonds are auctioned on a quarterly basis in the 2-, 5 - and 10-year maturities, and on a semi-annual basis in the 30 -year maturity. Bonds may be either new maturities or reopenings of previously auctioned bonds. New issues are generally reopened several times in order to increase the size of the issue to the target benchmark bond size.

The bond auction calendar, setting out details of the planned quarterly issuance of marketable bonds, is published by the Bank of Canada prior to the start of each quarter. Final details, including the amounts to be auctioned, the maturity date, and the amount outstanding in the case of bond reopenings, are released one week prior to the auction.

Bond sales take place via multiple-price auctions, with the exception of RRBs, which are sold via single-price auctions. Government securities distributors and investors may submit competitive tenders or non-competitive tenders. For multiple-price auctions, competitive bids are accepted in rising order of yield (declining order of price) until the full amount of the issue being auctioned is allotted, while non-competitive bids are allotted at the average of the accepted competitive bids. For single-price auctions of RRBs, bonds are allotted at the price equivalent of the highest real yield of accepted competitive tenders, plus accrued interest and inflation adjustment.

Regular buyback operations in the 2-, 5-, 10- and 30-year maturities are held shortly after periodic corresponding bond auctions. The Bank of Canada publishes with the bond auction calendar the target amount of bonds the Government intends to buy back during the quarter. Final details of individual operations, including the target amount to be bought back and the basket of eligible bonds, are released one week prior to the auction with the release of bond auction under announcement.

Cash management buyback operations target large bonds with less than 12 months before they mature. They are held on an irregular basis to suit government cash management needs. These operations are held on Tuesday mornings before Treasury bill auctions. Details of individual operations, including the target amount to be bought back and the basket of bond targets, are announced one week in advance with a release of the Treasury bill tender announcement.

Regular buyback and cash management buyback operations are settled on a cash basis and take place via multiple-price reverse auctions. Competitive offers are accepted in decreasing order of yield (increasing order of price) until the target amount to buy back is met. The target amounts may not be purchased if the offers do not meet the Government's fair value criteria.

Treasury bills are sold via auction on a discount basis. Those with terms to maturity of approximately 3,6 and 12 months are currently auctioned on a biweekly basis, generally on a Tuesday for delivery Thursday. Under the biweekly issuance pattern, new 3 -month Treasury bills are issued at each biweekly auction; new 6 - and 12 -month Treasury bills are offered in the same week and then reopened once at the next regular auction two weeks later.

The terms for auctions for Government of Canada securities, the terms of participation at auctions, and the quarterly bond auction schedule and auction results are available on the Bank of Canada's Web site at www.bankofcanada.ca.

## Domestic Distribution System

The participation of distributors and end-investors at Government of Canada debt auctions is governed by a set of auction rules and terms of participation introduced in October 1998.

There are 23 government securities distributors that participate in the primary distribution of bonds and Treasury bills. All must be either members or affiliate members of the Investment Dealers Association of Canada (IDA) and have their core trading and sales operation for Government of Canada securities in Canada.

Under the auction rules and terms for participants, there are specific bidding limits that apply to government securities distributors and end-investors at Treasury bill and bond auctions. The limits vary by distributor based on the firms' relative market activity in the primary and secondary market for the securities. Separate bidding limits apply for Treasury bill and bond auctions. All government securities distributors also have ongoing reporting responsibilities to provide the Bank of Canada with market information involving Government of Canada securities. In addition, all bidders at auction of Government of Canada securities, including customers, must abide by IDA Policy No. 5 governing standards for trading of debt securities in Canada.

Government securities distributors that maintain a certain threshold of activity in the primary and secondary market for Government of Canada securities become primary dealers, and form part of the core group of distributors of Government of Canada securities. The primary dealer classification can be attained in either Treasury bills or marketable bonds, or both. Primary dealers assume a number of responsibilities with respect to Government of Canada securities - they must comply with minimum bidding requirements for every auction so as to provide coverage at auctions as a group, and consistently make two-sided markets to a broad customer base.

## Foreign Debt Operations

Foreign currency debt is made up of a short-term US-dollar commercial paper program (Canada Bills), two medium-term note programs (Canada Notes and Euro Medium-Term Notes) and large public bond issues. These securities are issued on an opportunistic basis when required and when market conditions are favourable. The Government also obtains foreign-denominated funding through purchases of US dollars in the spot foreign exchange market and through crosscurrency swaps of domestic obligations.

## Retail Debt Operations

The Government sells Canada Savings Bonds (CSBs) and Canada Premium Bonds (CPBs), referred to as non-marketable savings instruments, to individuals, or "retail" investors who are Canadian residents.

Two principal channels are used for sales of CSBs and CPBs: the Payroll Savings Program and financial institutions. The Payroll Savings Program allows employees of employers sponsoring the program to purchase CSBs during the sales campaign through payroll deductions.

During the six-month sales period (October-March) Canadians can also purchase CSBs and CPBs wherever they bank or invest, including banks and trust companies, investment dealers, savings and loan companies and credit unions. Additionally, Canadians, on a pilot basis, can purchase CSBs and CPBs directly from the Government by telephone.

## Annex 2

## Government of Canada Market Debt Instruments

## Fixed-Coupon Marketable Bonds

Effective October 1995 Government of Canada marketable bonds are issued in global certificate form only whereby a global certificate for the full amount of the bonds is issued in fully registered form in the name of CDS \& Co., a nominee of the Canadian Depository for Securities Limited (CDS). The bonds must be purchased, transferred or sold, directly or indirectly, through a participant of the Debt Clearing Service, which is operated by CDS, and only in integral multiples of \$1,000 (face value). Prior to December 1993 Government of Canada bonds were issued in coupon-bearer and fully registered form, and were available in denominations ranging from $\$ 1,000$ to $\$ 1,000,000$. Between December 1993 and September 1995 Government of Canada bonds were issued only in fully registered form. All Canadian-dollar marketable bonds are non-callable and pay a fixed rate of interest semi-annually.

## Treasury Bills

Effective November 1995 all new issues of Treasury bills are issued is global certificate form only whereby a global certificate for the full amount of the Treasury bill is issued in fully registered form in the name of CDS \& Co., a nominee of the CDS. Treasury bills must be purchased, transferred or sold, directly or indirectly, through a participant of the Debt Clearing Service, which is operated by CDS, and only in integral multiples of $\$ 1,000$ (face value). Prior to November 1995 Treasury bills were issued in bearer form and were available in denominations ranging from $\$ 1,000$ to $\$ 1,000,000$.

The Government of Canada also periodically issues cash management bills (CMBs). CMBs are Treasury bills with maturities of less than three months (they can be as short as one day) used as a source of short-term financing for the Government. CMB auctions can take place on any business day, typically for next-day delivery, but on some occasions for same-day delivery.

## Government of Canada Real Return Bonds

Government of Canada real return bonds (RRBs) pay semi-annual interest based upon a real interest rate. Unlike standard fixed-coupon marketable bonds, interest payments on RRBs are adjusted for changes in the consumer price index (CPI). The CPI, for the purposes of RRBs, is the all-items CPI for Canada, not seasonally adjusted, published monthly by Statistics Canada. The semi-annual nominal coupon payments are calculated as follows:
coupon payment ${ }_{i}=$ real coupon rate $/ 2 \times\left(\right.$ principal + inflation compensation $\left.{ }_{i}\right)$ where inflation compensation ${ }_{i}=\left(\left(\right.\right.$ principal $\times$ reference $\mathrm{CPI}_{\mathrm{i}} /$ reference $\left.\mathrm{CPI}_{\text {base }}\right)$ - principal).

Reference CPI for the first day of any calendar month is the CPI for the third preceding calendar month. The reference CPI for any other day in a month is calculated by linear interpolation between the reference CPI applicable to the first day of the month in which such day falls and the reference CPI applicable to the first day of the month immediately following. The reference $\mathrm{CPI}_{\text {base }}$ for a series of bonds is the reference $\mathrm{CPI}_{\mathrm{i}}$ applicable to the original issue date for the series.

At maturity bondholders will receive, in addition to a coupon interest payment, a final payment equal to the sum of the principal amount and the inflation compensation accrued from the original issue date, i.e. final payment $=$ principal + ((principal x reference $\mathrm{CPI}_{\text {maturity }} /$ reference $\left.\mathrm{CPI}_{\text {base }}\right)$ - principal).

These bonds must be purchased, transferred or sold, directly or indirectly, through a participant of the Debt Clearing Service and only in integral multiples of $\$ 1,000$ (face value).

## Canada Savings Bonds

Canada Savings Bonds (CSBs) are offered for sale by most financial institutions in Canada. In addition, a significant number of organizations sponsor the Payroll Savings Program, thus allowing many Canadians to purchase CSBs through payroll deductions.

Except in certain specific circumstances, CSBs can be registered only in the name of residents of Canada. They are available in both regular interest and compound interest forms. For those CSBs which are certificated, denominations range from $\$ 100$ ( $\$ 300$ for a regular interest bond) to $\$ 10,000$. All CSBs are non-callable and, except in certain limited circumstances, non-transferable.

CSBs provide minimum guaranteed annual interest rates. The minimum guaranteed annual interest rate will be increased if market conditions warrant, but the bondholder will not earn less than the rate announced for that series for the posted period. CSBs are cashable at any time and, after the first three months, pay interest up to the end of the month prior to encashment. Principal and interest are fully backed by the Government of Canada.

## Canada Premium Bonds

The Canada Premium Bond (CPB) was introduced by the Government of Canada in 1998. Like CSBs, CPBs are offered for sale at most financial institutions in Canada.

CPBs offer a higher rate of interest at the time of issue compared to the CSB on sale at the same time, and are redeemable once a year on the anniversary date of the issue and during the 30 days thereafter without penalty. Once an issue date has passed, the announced interest rates for the posted period will not be changed. CPBs are available in both regular interest and compound interest forms. The compound interest bond is available for as little as $\$ 100$ while the regular interest bond is available starting from $\$ 300$. Principal and interest are fully backed by the Government of Canada and this bond is non-callable.

## Canada Bills

Canada Bills are promissory notes denominated in US dollars and issued only in book-entry form. They mature not more than 270 days from their date of issue, and are discount obligations with a minimum order size of US $\$ 1,000,000$ and a minimum denomination of US $\$ 1,000$. Delivery and payment for Canada Bills occur in same-day funds through Chase Manhattan Bank in New York City.

Primary distribution of Canada Bills occurs through five dealers: CIBC Wood Gundy Inc., Credit Suisse First Boston Corporation, Goldman, Sachs \& Co., Lehman Brothers Inc. and RBC Dominion Securities Inc. Rates on Canada Bills are posted daily for terms of one to six months.

Canada Bills are issued for foreign exchange reserve funding purposes only.

## Canada Notes

Canada Notes are promissory notes usually denominated in US dollars and available in book-entry form. They are issued in denominations of US $\$ 1,000$ and integral multiples thereof. At present the aggregate principal amount outstanding issued under the program is limited to US $\$ 10.0$ billion. Notes can be issued for terms of nine months or longer, and can be issued at a fixed or a floating rate.

The interest rate or interest rate formula, issue price, stated maturity, redemption or repayment provisions, and any other terms are established by the Government of Canada at the time of issuance of the notes and will be indicated in the Pricing Supplement. Delivery and payment for Canada Notes occur through the Bank of New York.

The notes are offered on a continual basis by the Government through five dealers: Credit Suisse First Boston Corporation, Goldman, Sachs \& Co., Lehman Brothers Inc., Nesbitt Burns Securities Inc. and Scotia Capital Markets (USA) Inc. The Government may also sell notes to other dealers or directly to investors.

Canada Notes are issued for foreign exchange reserve funding purposes only.

## Euro Medium-Term Notes

Euro Medium-Term Notes (EMTNs) are medium-term notes issued outside the United States and Canada. Government of Canada EMTNs are sold either by dealers in the dealer group, or by dealers who are not in the dealer group but who are acting as the Government's agent for the particular transaction (called reverse inquiry). EMTNs are sold on a bought-deal basis (i.e. the dealer purchasing EMTNs is responsible for the sale of the notes) and on an intermittent basis.

The Arranger for the EMTN program is Morgan Stanley Dean Witter. The London-based dealer group includes CIBC World Markets plc, Goldman Sachs International, J.P. Morgan Securities Ltd., Nomura International, TD Securities, Deutsche Bank, Merrill Lynch International, Morgan Stanley Dean Witter, RBC Dominion Securities and Warburg Dillon Read.

The EMTN program further diversifies the sources of cost-effective funding for the foreign exchange reserves. Notes issued under this program can be denominated in a range of currencies and structured to meet investor demand.

EMTNs are issued for foreign exchange reserve funding purposes only.

## Cross-Currency Swaps

A cross-currency swap is an agreement that exchanges one type of return for another (e.g. a fixed for a floating rate of interest) and the principal amount for the term of the swap. Cross-currency swaps of domestic obligations are a costeffective alternative to foreign-currency-denominated bond issues as a means of meeting the Government's targets for longer-term foreign currency funding.

## Annex 3

## Glossary

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 spending.

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 requirements/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. interestearning 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.
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, and internal debt owed mainly to the superannuation fund for government employees and other current liabilities.
interest-bearing debt: Consists of unmatured debt, or market debt, and the Government's liabilities to internally held accounts such as federal employees' pension plans.
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 (e.g. Canada Savings Bonds), foreign-currency-denominated bonds and bills, as well as bonds issued to the Canada Pension Plan.
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.
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.
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.
Reference Tables
I Gross Public Debt, Outstanding Market Debt and Debt Charges ..... 55
II Government of Canada Outstanding Market Debt ..... 56
III Average Weekly Domestic Market Trading in Government of Canada Securities, April 2000 to March 2001 ..... 57
IV Distribution of Domestic Holdings of Government of Canada Securities ..... 58
V Non-Resident (Direct )Holdings of Government of Canada Debt ..... 64
VI Fiscal 2000-01 Treasury Bill Program ..... 65
VII Fiscal 2000-01 Treasury Bill Auction Results ..... 66
VIII Fiscal 2000-01 Canadian-Dollar Marketable Bond Program ..... 67
IX Fiscal 2000-01 Marketable Bond Auction Results ..... 68
X Outstanding Government of Canada Canadian-Dollar Marketable Bonds as at March 31, 2001 ..... 69
XI Government of Canada Swaps Outstanding as at March 31, 2001 ..... 71
XII Bond Buyback Program - Operations 2000-01 ..... 73
XIII Canada Savings Bonds and Canada Premium Bonds, Fiscal 1983-84 to Fiscal 2000-01 ..... 74
XIV Crown Corporation Borrowings as at March 31, 2001 ..... 75
Reference Table I
Gross Public Debt, Outstanding Market Debt and Debt Charges

| Fiscal years ending March 31 | Gross public debt |  |  |  | Outstanding market debt |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Outstanding | Fixed-rate portion ${ }^{1}$ | Average fixed-rate portion ${ }^{2}$ | Total debt charges | Outstanding | Fixed-rate portion | Total debt charges | Average interest rate |
|  | (\$ billions) | (\%) | (\%) | (\$ billions) | (\$ billions) | (\%) | (\$ billions) | (\%) |
| 1985-86 | 274.8 | 51.9 | 0 | 25.4 | 201.2 | 36.7 | 20.7 | 10.66 |
| 1986-87 | 308.9 | 50.9 | 0 | 26.7 | 228.6 | 36.9 | 21.5 | 9.34 |
| 1987-88 | 340.1 | 51.2 | 0 | 29.0 | 250.8 | 38.2 | 23.1 | 9.61 |
| 1988-89 | 371.5 | 49.6 | 0 | 33.2 | 276.3 | 37.2 | 26.5 | 10.82 |
| 1989-90 | 397.2 | 49.9 | 0 | 38.8 | 294.6 | 38.1 | 31.4 | 11.20 |
| 1990-91 | 433.3 | 50.4 | 0 | 42.6 | 323.9 | 38.5 | 34.3 | 10.72 |
| 1991-92 | 467.4 | 50.7 | 0 | 41.2 | 351.9 | 38.9 | 32.4 | 8.86 |
| 1992-93 | 503.9 | 50.4 | 0 | 38.8 | 382.7 | 39.0 | 29.4 | 7.88 |
| 1993-94 | 546.4 | 53.3 | 0 | 38.0 | 414.0 | 42.7 | 28.0 | 6.75 |
| 1994-95 | 584.8 | 55.1 | 0 | 42.0 | 441.0 | 44.4 | 31.4 | 7.97 |
| 1995-96 | 624.7 | 56.9 | 0 | 46.9 | 469.5 | 47.9 | 35.3 | 7.34 |
| 1996-97 | 640.7 | 61.7 | 0 | 45.0 | 476.9 | 53.8 | 33.0 | 6.66 |
| 1997-98 | 638.5 | 63.7 | 0 | 40.9 | 467.3 | 56.8 | 31.0 | 6.64 |
| 1998-99 | 640.3 | 64.5 | 66.6 | 41.4 | 460.4 | 58.5 | 30.8 | 6.70 |
| 1999-00 | 638.7 | 66.5 | 66.6 | 41.6 | 456.4 | 59.1 | 30.5 | 6.15 |
| 2000-01 | 632.9 | 67.8 | 67.6 | 42.1 | 446.4 | 60.5 | 30.7 | 6.11 |

Note: Variances in the maturity structure of the debt will cause the fixed ratio to vary modestly on a monthly basis.
${ }^{1}$ As of March 31 and after adjusting for non-interest-bearing liabilities. Definition of fixed debt may vary slightly from year to year to accommodate changes in the debt structure.
${ }^{2}$ 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 |

[^6]Reference Table III
Average Weekly Domestic Market Trading in Government of Canada Securities, April 2000 to March 2001

|  | Treasury bills | Marketable bonds |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 3 years and under | 3 to 10 years | Over 10 years | Real return bonds | Total marketable bonds |  |
|  | (\$ millions) |  |  |  |  |  |  |
| April 2000 | 24,040 | 20,818 | 28,414 | 10,469 | 133 | 59,834 | 83,874 |
| May 2000 | 22,164 | 20,815 | 28,243 | 9,279 | 317 | 58,654 | 80,818 |
| June 2000 | 22,283 | 26,054 | 34,561 | 8,010 | 164 | 68,789 | 91,072 |
| July 2000 | 18,019 | 21,866 | 29,557 | 5,486 | 223 | 57,132 | 75,151 |
| August 2000 | 18,091 | 22,424 | 29,932 | 6,042 | 106 | 58,504 | 76,595 |
| September 2000 | 20,040 | 33,329 | 31,958 | 8,542 | 240 | 74,069 | 94,109 |
| October 2000 | 17,699 | 23,674 | 27,865 | 9,589 | 721 | 61,849 | 79,548 |
| November 2000 | 17,730 | 25,885 | 27,710 | 7,853 | 198 | 61,646 | 79,376 |
| December 2000 | 20,066 | 21,515 | 26,933 | 9,976 | 214 | 58,638 | 78,704 |
| January 2001 | 17,006 | 32,129 | 32,658 | 9,787 | 187 | 74,761 | 91,767 |
| February 2001 | 20,381 | 33,250 | 32,399 | 8,250 | 257 | 74,156 | 94,537 |
| March 2001 | 23,401 | 39,957 | 35,199 | 8,954 | 180 | 84,290 | 107,691 |

[^7]Reference Table IV
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 | Quasibanks ${ }^{2}$ | Life insurance companies and pension funds | Public and other financial institutions ${ }^{3}$ | All levels of government | Total ${ }^{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (\$ millions) |  |  |  |  |  |  |  |  |
| 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 | 22,740 | 403 | 12,001 | 9,896 | 1,537 | 3,738 | 4,017 | 1,721 | 56,053 |
| 1979 | 23,143 | 374 | 13,656 | 10,156 | 1,684 | 6,716 | 4,103 | 2,878 | 62,710 |
| 1980 | 24,253 | 555 | 15,858 | 10,002 | 2,771 | 9,274 | 5,561 | 4,248 | 72,522 |
| 1981 | 33,125 | 520 | 17,100 | 10,003 | 2,452 | 10,569 | 5,342 | 4,194 | 83,305 |
| 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 | 74,332 | 7,387 | 15,668 | 15,198 | 5,706 | 31,068 | 15,086 | 10,106 | 174,551 |
| 1986 | 71,073 | 6,259 | 18,374 | 17,779 | 7,277 | 34,887 | 18,414 | 11,293 | 185,356 |
| 1987 | 83,711 | 8,591 | 20,201 | 16,012 | 6,400 | 38,870 | 19,547 | 13,918 | 207,250 |
| 1988 | 86,574 | 8,634 | 20,606 | 21,115 | 7,492 | 42,460 | 19,028 | 17,186 | 223,095 |
| 1989 | 81,549 | 11,402 | 21,133 | 20,804 | 9,854 | 48,037 | 23,950 | 17,840 | 234,569 |
| 1990 | 80,060 | 11,797 | 20,325 | 24,224 | 10,460 | 52,984 | 26,051 | 19,574 | 245,475 |
| 1991 | 72,880 | 11,580 | 22,370 | 35,792 | 12,091 | 57,846 | 33,054 | 21,015 | 266,628 |
| 1992 | 70,869 | 13,696 | 22,607 | 44,555 | 12,428 | 62,042 | 39,396 | 20,222 | 285,815 |
| 1993 | 61,163 | 10,359 | 23,498 | 60,242 | 11,229 | 69,917 | 45,321 | 18,397 | 300,126 |
| 1994 | 52,751 | 12,039 | 24,902 | 70,063 | 9,992 | 78,559 | 52,847 | 24,967 | 326,120 |
| 1995 | 48,733 | 12,048 | 23,590 | 76,560 | 10,947 | 87,484 | 59,044 | 26,324 | 344,730 |
| 1996 | 46,104 | 10,013 | 25,556 | 74,789 | 10,952 | 90,231 | 71,514 | 24,828 | 353,987 |
| 1997 | 39,872 | 10,470 | 27,198 | 67,715 | 7,054 | 95,102 | 79,445 | 25,429 | 352,285 |
| 1998 | 37,542 | 8,525 | 27,911 | 65,636 | 6,659 | 100,056 | 79,895 | 23,070 | 349,294 |
| 1999 | 33,464 | 9,290 | 29,075 | 57,880 | 6,884 | 108,084 | 81,318 | 28,351 | 354,346 |
| 2000 | 32,600 | 9,064 | 31,726 | 61,269 | 3,451 | 108,771 | 74,456 | 27,296 | 348,633 |

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

| Year end | Persons and unincorporated businesses | Non-financial corporations | Bank of Canada | Chartered banks | Quasibanks ${ }^{2}$ | Life insurance companies and pension funds | Public and other financial institutions ${ }^{3}$ | All levels of government | 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 | 40.57 | 0.72 | 21.41 | 17.65 | 2.74 | 6.67 | 7.17 | 3.07 | 100.00 |
| 1979 | 36.90 | 0.60 | 21.78 | 16.20 | 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 | 39.76 | 0.62 | 20.53 | 12.01 | 2.94 | 12.69 | 6.41 | 5.03 | 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 | 40.39 | 4.15 | 9.75 | 7.73 | 3.09 | 18.76 | 9.43 | 6.72 | 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 | 7.61 | 100.00 |
| 1990 | 32.61 | 4.81 | 8.28 | 9.87 | 4.26 | 21.58 | 10.61 | 7.97 | 100.00 |
| 1991 | 27.33 | 4.34 | 8.39 | 13.42 | 4.53 | 21.70 | 12.40 | 7.88 | 100.00 |
| 1992 | 24.80 | 4.79 | 7.91 | 15.59 | 4.35 | 21.71 | 13.78 | 7.08 | 100.00 |
| 1993 | 20.38 | 3.45 | 7.83 | 20.07 | 3.74 | 23.30 | 15.10 | 6.13 | 100.00 |
| 1994 | 16.18 | 3.69 | 7.64 | 21.48 | 3.06 | 24.09 | 16.20 | 7.66 | 100.00 |
| 1995 | 14.14 | 3.49 | 6.84 | 22.21 | 3.18 | 25.38 | 17.13 | 7.64 | 100.00 |
| 1996 | 13.02 | 2.83 | 7.22 | 21.13 | 3.09 | 25.49 | 20.20 | 7.01 | 100.00 |
| 1997 | 11.32 | 2.97 | 7.72 | 19.22 | 2.00 | 27.00 | 22.55 | 7.22 | 100.00 |
| 1998 | 10.75 | 2.44 | 7.99 | 18.79 | 1.91 | 28.65 | 22.87 | 6.60 | 100.00 |
| 1999 | 9.44 | 2.62 | 8.21 | 16.33 | 1.94 | 30.50 | 22.95 | 8.00 | 100.00 |
| 2000 | 9.35 | 2.60 | 9.10 | 17.57 | 0.99 | 31.20 | 21.36 | 7.83 | 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 | Quasibanks ${ }^{2}$ | Life insurance companies and pension funds | Public and other financial institutions ${ }^{3}$ | All levels of government ${ }^{4}$ | Total ${ }^{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (\$ millions) |  |  |  |  |  |  |  |  |
| 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 | 17,712 | 7,232 | 9,682 | 11,498 | 3,725 | 4,806 | 9,589 | 5,002 | 69,246 |
| 1988 | 20,196 | 7,414 | 9,945 | 15,224 | 5,614 | 7,648 | 9,133 | 7,726 | 82,900 |
| 1989 | 29,138 | 9,668 | 11,124 | 17,410 | 8,116 | 9,664 | 12,908 | 9,251 | 107,279 |
| 1990 | 36,443 | 10,756 | 10,574 | 17,841 | 8,976 | 11,737 | 13,298 | 9,388 | 119,013 |
| 1991 | 30,358 | 10,437 | 13,093 | 24,382 | 9,089 | 12,386 | 17,636 | 10,417 | 127,798 |
| 1992 | 32,840 | 11,254 | 14,634 | 27,989 | 9,646 | 13,639 | 19,907 | 8,726 | 138,635 |
| 1993 | 27,401 | 9,657 | 16,876 | 29,901 | 9,222 | 17,085 | 22,336 | 7,151 | 139,629 |
| 1994 | 17,476 | 8,499 | 18,973 | 30,415 | 6,879 | 14,385 | 22,021 | 10,631 | 129,279 |
| 1995 | 16,173 | 9,204 | 18,298 | 30,865 | 7,760 | 15,321 | 25,183 | 10,603 | 133,407 |
| 1996 | 10,438 | 8,285 | 17,593 | 23,470 | 5,493 | 13,530 | 32,752 | 6,264 | 117,825 |
| 1997 | 5,382 | 6,858 | 14,233 | 19,448 | 3,133 | 8,956 | 32,653 | 4,354 | 95,017 |
| 1998 | 2,398 | 6,215 | 10,729 | 15,974 | 2,392 | 4,570 | 32,508 | 1,700 | 76,486 |
| 1999 | 5,889 | 6,662 | 8,584 | 12,814 | 2,758 | 7,013 | 37,011 | 3,191 | 83,922 |
| 2000 | 6,187 | 6,735 | 8,090 | 9,188 | 574 | 6,766 | 31,260 | 2,415 | 71,215 |

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 | Quasibanks ${ }^{2}$ | Life insurance companies and pension funds | Public and other financial institutions ${ }^{3}$ | All levels of government | 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 | 25.58 | 10.44 | 13.98 | 16.60 | 5.38 | 6.94 | 13.85 | 7.22 | 100.00 |
| 1988 | 24.36 | 8.94 | 12.00 | 18.36 | 6.77 | 9.23 | 11.02 | 9.32 | 100.00 |
| 1989 | 27.16 | 9.01 | 10.37 | 16.23 | 7.57 | 9.01 | 12.03 | 8.62 | 100.00 |
| 1990 | 30.62 | 9.04 | 8.88 | 14.99 | 7.54 | 9.86 | 11.17 | 7.89 | 100.00 |
| 1991 | 23.75 | 8.17 | 10.25 | 19.08 | 7.11 | 9.69 | 13.80 | 8.15 | 100.00 |
| 1992 | 23.69 | 8.12 | 10.56 | 20.19 | 6.96 | 9.84 | 14.36 | 6.29 | 100.00 |
| 1993 | 19.62 | 6.92 | 12.09 | 21.41 | 6.60 | 12.24 | 16.00 | 5.12 | 100.00 |
| 1994 | 13.52 | 6.57 | 14.68 | 23.53 | 5.32 | 11.13 | 17.03 | 8.22 | 100.00 |
| 1995 | 12.12 | 6.90 | 13.72 | 23.14 | 5.82 | 11.48 | 18.88 | 7.95 | 100.00 |
| 1996 | 8.86 | 7.03 | 14.93 | 19.92 | 4.66 | 11.48 | 27.80 | 5.32 | 100.00 |
| 1997 | 5.66 | 7.22 | 14.98 | 20.47 | 3.30 | 9.43 | 34.37 | 4.58 | 100.00 |
| 1998 | 3.14 | 8.13 | 14.03 | 20.88 | 3.13 | 5.97 | 42.50 | 2.22 | 100.00 |
| 1999 | 7.02 | 7.94 | 10.23 | 15.27 | 3.29 | 8.36 | 44.10 | 3.80 | 100.00 |
| 2000 | 8.69 | 9.46 | 11.36 | 12.90 | 0.81 | 9.50 | 43.90 | 3.39 | 100.00 |

Reference Table IV (cont'd)
Distribution of Domestic Holdings of Government of Canada Securities
PART E - Bonds ${ }^{1}$

| Year end | Persons and unincorporated businesses | Non-financial corporations | Bank of Canada | Chartered banks | Quasibanks ${ }^{2}$ | Life insurance companies and pension funds | Public and other financial institutions ${ }^{3}$ | All levels of government ${ }^{4}$ | Total ${ }^{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (\$ millions) |  |  |  |  |  |  |  |  |
| 1976 | 1,277 | 270 | 6,278 | 4,447 | 664 | 1,392 | 1,758 | 537 | 16,623 |
| 1977 | 1,690 | 185 | 7,807 | 4,652 | 905 | 2,173 | 2,094 | 703 | 20,209 |
| 1978 | 1,929 | 205 | 8,434 | 4,379 | 1,344 | 3,477 | 2,463 | 1,202 | 23,433 |
| 1979 | 3,736 | 209 | 9,311 | 3,466 | 1,619 | 6,471 | 2,553 | 2,035 | 29,400 |
| 1980 | 4,890 | 267 | 10,541 | 2,502 | 2,152 | 8,814 | 3,130 | 2,736 | 35,032 |
| 1981 | 6,759 | 151 | 11,669 | 1,406 | 2,109 | 10,009 | 3,155 | 3,112 | 38,370 |
| 1982 | 7,374 | 337 | 12,945 | 1,199 | 1,931 | 11,907 | 4,169 | 3,455 | 43,317 |
| 1983 | 6,813 | 356 | 14,264 | 2,228 | 2,371 | 15,229 | 4,608 | 4,035 | 49,904 |
| 1984 | 9,906 | 508 | 13,669 | 2,167 | 2,095 | 20,163 | 5,434 | 4,668 | 58,610 |
| 1985 | 11,483 | 870 | 11,683 | 2,569 | 2,055 | 27,144 | 6,957 | 5,970 | 68,731 |
| 1986 | 9,827 | 1,384 | 10,407 | 2,618 | 2,568 | 31,295 | 8,250 | 7,877 | 74,226 |
| 1987 | 10,959 | 1,359 | 10,519 | 4,514 | 2,675 | 34,064 | 9,958 | 8,916 | 82,964 |
| 1988 | 11,501 | 1,220 | 10,661 | 5,891 | 1,878 | 34,812 | 9,895 | 9,460 | 85,318 |
| 1989 | 8,713 | 1,734 | 10,009 | 3,394 | 1,738 | 38,373 | 11,042 | 8,589 | 83,592 |
| 1990 | 8,174 | 1,041 | 9,751 | 6,383 | 1,484 | 41,247 | 12,753 | 10,186 | 91,019 |
| 1991 | 5,215 | 1,143 | 9,277 | 11,410 | 3,002 | 45,460 | 15,418 | 10,598 | 101,523 |
| 1992 | 2,147 | 2,442 | 7,973 | 16,566 | 2,782 | 48,403 | 19,489 | 11,496 | 111,298 |
| 1993 | 1,140 | 702 | 6,622 | 30,341 | 2,007 | 52,832 | 22,985 | 11,246 | 127,875 |
| 1994 | 1,764 | 3,540 | 5,929 | 39,648 | 3,113 | 64,174 | 30,826 | 14,336 | 163,330 |
| 1995 | 202 | 2,844 | 5,292 | 45,695 | 3,187 | 72,163 | 33,861 | 15,721 | 178,965 |
| 1996 | 1,276 | 1,728 | 7,963 | 51,319 | 5,459 | 76,701 | 38,762 | 18,564 | 201,772 |
| 1997 | 3,202 | 3,612 | 12,965 | 48,267 | 3,921 | 86,146 | 46,792 | 21,075 | 225,980 |
| 1998 | 6,814 | 2,310 | 17,182 | 49,662 | 4,267 | 95,486 | 47,387 | 21,370 | 244,478 |
| 1999 | 28 | 2,628 | 20,491 | 45,066 | 4,126 | 101,071 | 44,307 | 25,160 | 242,877 |
| 2000 | 775 | 2,329 | 23,636 | 52,081 | 2,877 | 102,005 | 43,196 | 24,881 | 251,780 |

Reference Table IV (cont'd)
Distribution of Domestic Holdings of Government of Canada Securities
PART F - Bonds ${ }^{1}$

| Year end | Persons and unincorporated businesses | Non-financial corporations | Bank of Canada | Chartered banks | Quasibanks ${ }^{2}$ | Life insurance companies and pension funds | Public and other financial institutions ${ }^{3}$ | All levels of government | Total ${ }^{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (\%) |  |  |  |  |  |  |  |  |
| 1976 | 7.68 | 1.62 | 37.77 | 26.75 | 3.99 | 8.37 | 10.58 | 3.23 | 100.00 |
| 1977 | 8.36 | 0.92 | 38.63 | 23.02 | 4.48 | 10.75 | 10.36 | 3.48 | 100.00 |
| 1978 | 8.23 | 0.87 | 35.99 | 18.69 | 5.74 | 14.84 | 10.51 | 5.13 | 100.00 |
| 1979 | 12.71 | 0.71 | 31.67 | 11.79 | 5.51 | 22.01 | 8.68 | 6.92 | 100.00 |
| 1980 | 13.96 | 0.76 | 30.09 | 7.14 | 6.14 | 25.16 | 8.93 | 7.81 | 100.00 |
| 1981 | 17.62 | 0.39 | 30.41 | 3.66 | 5.50 | 26.09 | 8.22 | 8.11 | 100.00 |
| 1982 | 17.02 | 0.78 | 29.88 | 2.77 | 4.46 | 27.49 | 9.62 | 7.98 | 100.00 |
| 1983 | 13.65 | 0.71 | 28.58 | 4.46 | 4.75 | 30.52 | 9.23 | 8.09 | 100.00 |
| 1984 | 16.90 | 0.87 | 23.32 | 3.70 | 3.57 | 34.40 | 9.27 | 7.96 | 100.00 |
| 1985 | 16.71 | 1.27 | 17.00 | 3.74 | 2.99 | 39.49 | 10.12 | 8.69 | 100.00 |
| 1986 | 13.24 | 1.86 | 14.02 | 3.53 | 3.46 | 42.16 | 11.11 | 10.61 | 100.00 |
| 1987 | 13.21 | 1.64 | 12.68 | 5.44 | 3.22 | 41.06 | 12.00 | 10.75 | 100.00 |
| 1988 | 13.48 | 1.43 | 12.50 | 6.90 | 2.20 | 40.80 | 11.60 | 11.09 | 100.00 |
| 1989 | 10.42 | 2.07 | 11.97 | 4.06 | 2.08 | 45.91 | 13.21 | 10.27 | 100.00 |
| 1990 | 8.98 | 1.14 | 10.71 | 7.01 | 1.63 | 45.32 | 14.01 | 11.19 | 100.00 |
| 1991 | 5.14 | 1.13 | 9.14 | 11.24 | 2.96 | 44.78 | 15.19 | 10.44 | 100.00 |
| 1992 | 1.93 | 2.19 | 7.16 | 14.88 | 2.50 | 43.49 | 17.51 | 10.33 | 100.00 |
| 1993 | 0.89 | 0.55 | 5.18 | 23.73 | 1.57 | 41.32 | 17.97 | 8.79 | 100.00 |
| 1994 | 1.08 | 2.17 | 3.63 | 24.27 | 1.91 | 39.29 | 18.87 | 8.78 | 100.00 |
| 1995 | 0.11 | 1.59 | 2.96 | 25.53 | 1.78 | 40.32 | 18.92 | 8.78 | 100.00 |
| 1996 | 0.63 | 0.86 | 3.95 | 25.43 | 2.71 | 38.01 | 19.21 | 9.20 | 100.00 |
| 1997 | 1.42 | 1.60 | 5.74 | 21.36 | 1.74 | 38.12 | 20.71 | 9.33 | 100.00 |
| 1998 | 2.79 | 0.94 | 7.03 | 20.31 | 1.75 | 39.06 | 19.38 | 8.74 | 100.00 |
| 1999 | 0.01 | 1.08 | 8.44 | 18.56 | 1.70 | 41.61 | 18.24 | 10.36 | 100.00 |
| 2000 | 0.31 | 0.93 | 9.39 | 20.69 | 1.14 | 40.51 | 17.16 | 9.88 | 100.00 |

[^8]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 federal government 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 | Total | Total as per cent of total market debt |
| :---: | :---: | :---: | :---: | :---: |
|  |  | (C\$ billions) |  |  |
| 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 | 91.5 | 28.7 | 120.2 | 25.2 |
| 1998 | 94.1 | 22.4 | 116.5 | 24.9 |
| 1999 | 85.9 | 21.8 | 107.7 | 23.4 |
| 2000 | 84.6 | 16.6 | 101.2 | 22.2 |
| 2001 | 83.4 | 10.4 | 93.8 | 21.0 |

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
Fiscal 2000-01 Treasury Bill Program

|  | Maturing |  |  |  |  | New issues |  |  |  |  | Net increment |  |  | Average tender yields |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Date | CMB ${ }^{1}$ | 3 mo | 6 mo | 12 mo | Total | CMB ${ }^{1}$ | 3 mo | 6 mo | 12 mo | Total | Total | Cumulative | o/s ${ }^{2}$ | CMB ${ }^{1}$ | 3 mo | 6 mo | 12 mo |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | (\%) |  |  |  |
| 06-Apr-2000 | 5,250 | - | - | - | 5,250 | - | - | - | 1,900 | - | -5,250 | -5,250 | 94,600 |  |  |  |  |
| 13-Apr-2000 | - | 3,600 | 3,400 | - | 7,000 | - | 3,800 | 1,700 | 1,700 | 7,200 | 200 | -5,050 | 94,800 |  | 5.35 | 5.58 | 5.87 |
| 20-Apr-2000 | 2,000 | - | - | - | 2,000 | - | - | - | 1,600 | - | -2,000 | -7,050 | 92,800 |  |  |  |  |
| 27-Apr-2000 | - | 3,800 | - | 3,000 | 6,800 | - | 3,400 | 1,600 | - | -6,600 | -200 | -7,250 | 92,600 |  | 5.45 | 5.7 | 5.99 |
| 11-May-2000 | - | 3,800 | 3,200 | - | 7,000 | - | 3,000 | 1,500 | 1,400 | 6,000 | -1,000 | -8,250 | 91,600 |  | 5.66 | 5.9 | 6.25 |
| 25-May-2000 | - | 3,800 | - | 2,900 | 6,700 | - | 3,000 | 1,500 | 1,400 | 6,000 | -700 | -8,950 | 90,900 |  | 5.75 | 6.01 | 6.33 |
| 08-Jun-2000 | - | 4,000 | 3,100 | - | 7,100 | - | 2,900 | 1,300 | 1,500 | 5,500 | -1,600 | -10,550 | 89,300 |  | 5.64 | 5.8 | 6.11 |
| 22-Jun-2000 | - | 4,200 | - | 3,300 | 7,500 | - | 2,900 | 1,300 | 1,600 | 5,500 | -2,000 | -12,550 | 87,300 |  | 5.55 | 5.84 | 6.04 |
| 06-Jul-2000 | - | 4,200 | 3,500 | - | 7,700 | - | 2,900 | 1,300 | 1,700 | 5,500 | -2,200 | -14,750 | 85,100 |  | 5.55 | 5.77 | 5.99 |
| 20-Jul-2000 | - | 3,800 | - | 3,700 | 7,500 | - | 2,900 | 1,300 | 1,800 | 5,500 | -2,000 | -16,750 | 83,100 |  | 5.63 | 5.82 | 6.02 |
| 03-Aug-2000 | - | 3,400 | 3,600 | - | 7,000 | - | 3,200 | 1,400 |  | 6,000 | -1,000 | -17,750 | 82,100 |  | 5.65 | 5.79 | 5.97 |
| 17-Aug-2000 | - | 3,000 | - | 4,000 | 7,000 | - | 3,200 | 1,400 | 1,900 | 6,000 | -1,000 | -18,750 | 81,100 |  | 5.66 | 5.79 | 5.92 |
| 24-Aug-2000 | - | - | - | - | - | 3,000 | - | - | 2,000 | 3,000 | 3,000 | -15,750 | 84,100 | 5.69 |  |  |  |
| 31-Aug-2000 | - | 3,000 | 3,600 | - | 6,600 | 2,000 | 3,500 | 1,500 | - | 8,500 | 1,900 | -13,850 | 86,000 | 5.74 | 5.62 | 5.77 | 5.92 |
| 07-Sep-2000 | 3,000 | - | - | - | 3,000 | - | - | - | 2,000 | - | -3,000 | -16,850 | 83,000 |  |  |  |  |
| 14-Sep-2000 | 2,000 | 2,900 | - | 3,900 | 8,800 | - | 3,200 | 1,400 | 2,000 | 6,000 | -2,800 | -19,650 | 80,200 |  | 5.6 | 5.7 | 5.89 |
| 28-Sep-2000 | - | 2,900 | 3,500 | - | 6,400 | - | 3,200 | 1,400 | 1,900 | 6,000 | -400 | -20,050 | 79,800 |  | 5.56 | 5.72 | 5.81 |
| 12-Oct-2000 | - | 2,900 | - | 3,400 | 6,300 | - | 3,200 | 1,400 | - | 6,000 | -300 | -20,350 | 79,500 |  | 5.62 | 5.77 | 5.87 |
| 26-Oct-2000 | - | 2,900 | 3,100 | - | 6,000 | - | 3,200 | 1,400 | 1,800 | 6,000 | - | -20,350 | 79,500 |  | 5.62 | 5.74 | 5.82 |
| 09-Nov-2000 | - | 3,200 | - | 3,200 | 6,400 | - | 3,200 | 1,400 | 1,600 | 6,000 | -400 | -20,750 | 79,100 |  | 5.68 | 5.82 | 5.93 |
| 23-Nov-2000 | - | 3,200 | 2,800 | - | 6,000 | - | 3,200 | 1,400 | 1,600 | 6,000 | - | -20,750 | 79,100 |  | 5.74 | 5.88 | 5.97 |
| 07-Dec-2000 | - | 3,500 | - | 3,100 | 6,600 | - | 3,200 | 1,400 | 1,600 | 6,000 | -600 | -21,350 | 78,500 |  | 5.55 | 5.65 | 5.67 |
| 21-Dec-2000 | - | 3,200 | 2,600 | - | 5,800 | - | 3,200 | 1,400 | 1,700 | 6,000 | 200 | -21,150 | 78,700 |  | 5.56 | 5.58 | 5.56 |
| 04-Jan-2001 | - | 3,200 | - | 3,500 | 6,700 | - | 3,500 | 1,500 |  | 6,500 | -200 | -21,350 | 78,500 |  | 5.45 | 5.38 | 5.24 |
| 18-Jan-2001 | - | 3,200 | 2,700 | - | 5,900 | - | 3,800 | 1,600 | 1,400 | 7,000 | 1,100 | -20,250 | 79,600 |  | 5.24 | 5.18 | 5.10 |
| 01-Feb-2001 | - | 3,200 | - | 3,600 | 6,800 | - | 4,100 | 1,700 | 1,700 | 7,500 | 700 | -19,550 | 80,300 |  | 5.14 | 5.05 | 4.97 |
| 15-Feb-2001 | - | 3,200 | 2,900 | - | 6,100 | - | 4,100 | 1,700 |  | 7,500 | 1,400 | -18,150 | 81,700 |  | 5.13 | 5.01 | 4.98 |
| 01-Mar-2001 | - | 3,200 | - | 3,600 | 6,800 | 2,000 | 4,100 | 1,700 | 1,800 | 9,500 | 2,700 | -15,450 | 84,400 | 5.07 | 4.8 | 4.74 | 4.72 |
| 15-Mar-2001 | - | 3,200 | 2,800 | - | 6,000 | - | 4,100 | 1,700 | 1,800 | 7,500 | 1,500 | -13,950 | 85,900 |  | 4.66 | 4.64 | 4.64 |
| 29-Mar-2001 | - | 3,200 |  | 3,500 | 6,700 | 2,000 | 4,100 | 1,700 |  | 9,500 | 2,800 | -11,150 | 88,700 | 4.83 | 4.6 | 4.58 | 4.58 |
| Total | 12,250 | 87,700 | 40,800 | 44,700 | 185,450 | 9,000 | 88,100 | 38,600 | 39,400 | 74,300 | -11,150 |  |  |  |  |  |  |

[^9]Reference Table VII
Fiscal 2000-01 Treasury Bill Auction Results


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.
Reference Table VIII
Fiscal 2000-01 Canadian-Dollar Marketable Bond Program

| Offering date | Delivery date | Maturity date | Maturing | Gross | Bond repurchase | Net |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | (\$ millions) |  |  |
| Fixed-coupon bonds 20002000 |  |  |  |  |  |  |
| April 19 | April 24 | June 1, 2029 |  | 1,900 |  | 1,900 |
| April 26 | May 1 | June 1, 2011 | 1,575 | 2,600 |  | 1,025 |
| May 10 | May 15 | September 1, 2005 |  | 2,800 |  | 2,800 |
| May 10 | May 15 |  |  |  | 463 | -463 |
| June 7 | June 15 | December 1, 2002 |  | 3,600 |  | 3,600 |
|  | July $4^{*}$ |  | 3,075 |  |  | -3,075 |
| June 26 | August 1 | June 1, 2011 |  | 2,600 |  | 2,600 |
| June 26 | August 1 |  |  |  | 500 | -500 |
| August 9 | August 15 | September 1, 2005 |  | 2,700 |  | 2,700 |
|  | September 1* |  | 8,800 |  |  | -8,800 |
| September 13 | September 15 | December 1, 2002 |  | 3,500 |  | 3,500 |
| October 11 | October 16 | June 1, 2029 |  | 1,900 |  | 1,900 |
| October 11 | October 16 |  |  |  | 369 | -369 |
| October 25 | October 30 | June 1, 2011 |  | 2,400 |  | 2,400 |
| November 8 | November 14 | September 1, 2006 |  | 2,500 |  | 2,500 |
| November 8 | November 14 |  |  |  | 500 | -500 |
| November 22 | November 24 | June 1, 2003 |  | 3,500 |  | 3,500 |
|  | December 1 |  | 7,000 |  |  | -7,000 |
|  | December 15* |  | 500 |  |  | -500 |
| 2001 |  |  |  |  |  |  |
| January 16 | January 18 |  |  |  | 500 | -500 |
| January 24 | January 29 | June 1, 2011 |  | 2,500 |  | 2,500 |
| January 24 | January 29 |  |  |  | 500 | -500 |
|  | February $1^{*}$ |  | 425 |  |  | -425 |
| February 7 | February 12 | September 1, 2006 |  | 2,500 |  | 2,500 |
| February 7 | February 12 |  |  |  | 500 | -500 |
| February 13 | February 15 |  |  |  | 1,000 | -1,000 |
|  | March $1^{*}$ |  | 12,567 |  |  | -12,567 |
| March 13 | March 15 |  |  |  | 1,000 | -1,000 |
| March 14 | March 16 | June 1, 2003 |  | 3,500 |  | 3,500 |
| Real return bonds 2000 |  |  |  |  |  |  |
| May 31 | June 5 | December 1, 2031 |  | 350 |  | 350 |
| August 30 | September 5 | December 1, 2031 |  | 350 |  | 350 |
| December 6 | December 11 | December 1, 2031 |  | 350 |  | 350 |
| 2001 |  |  |  |  |  |  |
| February 28 | March 5 | December 1, 2031 |  | 350 |  | 350 |
| Total fiscal year 2000-2001 |  |  | 33,942 | 39,900 | 5,332 | 626 |

[^10]Reference Table IX
Fiscal 2000-01 Marketable Bond Auction Results

| Auction date | Term | Maturity date | Coupon rate | Issue amount | Average price | Average yield | Auction coverage | Tail |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (years) |  | (\%) | (\$ millions) | (\$) | (\%) |  | (basis points) |
| 19-Apr-2000 | 30 | 01-Jun-2029 | 5.76 | 1,900 | 99.923 | 5.755 | 2.21 | 4.4 |
| 26-Apr-2000 | 10 | 01-Jun-2011 | 6.00 | 2,600 | 98.987 | 6.128 | 2.68 | 1.0 |
| 10-May-2000 | 5 | 01-Sep-2005 | 6.00 | 2,800 | 98.33 | 6.374 | 2.37 | 0.5 |
| 31-May-2000 | 30 | 01-Dec-2031 | 4.00* | 350 | 103.842 | 3.790 | 3.29 | n.a. |
| 7-Jun-2000 | 2 | 01-Dec-2002 | 6.00 | 3,600 | 99.857 | 6.065 | 2.44 | 0.8 |
| 26-Jul-2000 | 10 | 01-Jun-2011 | 6.00 | 2,600 | 100.79 | 5.899 | 2.47 | 1.1 |
| $9-A u g-2000$ | 5 | 01-Sep-2005 | 6.00 | 2,700 | 100.561 | 5.869 | 2.49 | 0.4 |
| 30-Aug-2000 | 30 | 01-Dec-2031 | 4.00* | 350 | 106.293 | 3.660 | 3.32 | n.a |
| 13-Sep-2000 | 2 | 01-Dec-2002 | 6.00 | 3,500 | 100.467 | 5.768 | 2.38 | 0.5 |
| 11-Oct-2000 | 30 | 01-Jun-2029 | 5.75 | 1,900 | 102.293 | 5.588 | 2.36 | 1.1 |
| 25-Oct-2000 | 10 | 01-Jun-2011 | 6.00 | 2,400 | 102.506 | 5.681 | 2.50 | 0.8 |
| 8-Nov-2000 | 5 | 01-Sep-2006 | 5.75 | 2,500 | 99.013 | 5.956 | 2.44 | 0.9 |
| 22-Nov-2000 | 2 | 01-Jun-2003 | 5.75 | 3,500 | 99.844 | 5.818 | 2.69 | 0.4 |
| 6 -Dec-2000 | 30 | 01-Dec-2031 | 4.00* | 350 | 110.415 | 3.450 | 2.89 | n.a. |
| 24-Jan-2001 | 10 | 01-Jun-2011 | 6.00 | 2,500 | 103.694 | 5.525 | 2.50 | 1.4 |
| 7-Feb-2001 | 5 | 01-Sep-2006 | 5.75 | 2,500 | 102.394 | 5.247 | 2.55 | 0.2 |
| 28-Feb-2001 | 30 | 01-Dec-2031 | 4.00* | 350 | 111.281 | 3.405 | 2.72 | n.a. |
| 14-Mar-2001 | 2 | 01-Jun-2003 | 5.75 | 3,500 | 102.207 | 4.684 | 2.17 | 0.6 |
| Total |  |  |  | 39,900 |  |  |  |  |

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, 2001

| Maturity date | Amount | Coupon rate | Maturity date | Amount | Coupon rate |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | (\$ millions) | (\%) |  | (\$ millions) | (\%) |
| Fixed-coupon |  |  |  |  |  |
| 01-May-2001 | 1,325 | 13.00 | 01-Oct-2006 | 958 | 14.00 |
| 01-Jun-2001 | 5,350 | 4.50 | 01-Dec-2006 | 9,100 | 7.00 |
| 01-Jun-2001 | 2,708 | 9.75 | 01-Mar-2007 | 319 | 13.75 |
| 01-Sep-2001 | 10,600 | 7.00 | 01-Jun-2007 | 9,500 | 7.25 |
| 01-Oct-2001 | 914 | 9.50 | 01-Oct-2007 | 611 | 13.00 |
| 01-Dec-2001 | 7,000 | 5.25 | 01-Mar-2008 | 750 | 12.75 |
| 01-Dec-2001 | 3,850 | 9.75 | 01-Jun-2008 | 9,200 | 6.00 |
| 02-Feb-2002 | 213 | 8.75 | 01-Jun-2008 | 3,258 | 10.00 |
| 15-Mar-2002 | 339 | 15.50 | 01-Oct-2008 | 628 | 11.75 |
| 01-Apr-2002 | 5,450 | 8.50 | 01-Mar-2009 | 400 | 11.50 |
| 01-May-2002 | 1,831 | 10.00 | 01-Jun-2009 | 9,400 | 5.50 |
| 01-Jun-2002 | 7,200 | 5.75 | 01-Jun-2009 | 673 | 11.00 |
| 15-Jul-2002 | 10,200 | 5.50 | 01-Oct-2009 | 756 | 10.75 |
| 01-Sep-2002 | 7,100 | 6.00 | 01-Mar-2010 | 300 | 9.75 |
| 01-Dec-2002 | 1,222 | 11.25 | 01-Jun-2010 | 10,400 | 5.50 |
| 15-Dec-2002 | 2,094 | 11.75 | 01-Jun-2010 | 2,474 | 9.50 |
| 01-Feb-2003 | 7,000 | 5.75 | 01-Oct-2010 | 184 | 8.75 |
| 01-Jun-2003 | 6,900 | 7.25 | 01-Mar-2011 | 1,256 | 9.00 |
| 01-Sep-2003 | 9,700 | 5.25 | 01-Jun-2011 | 10,100 | 6.00 |
| 01-Oct-2003 | 559 | 9.50 | 01-Jun-2011 | 669 | 8.50 |
| 01-Dec-2003 | 8,800 | 7.50 | 15-Mar-2014 | 3,125 | 10.25 |
| 01-Feb-2004 | 1,882 | 10.25 | 01-Jun-2015 | 2,327 | 11.25 |
| 01-Jun-2004 | 7,900 | 6.50 | 31-Dec-2019 | 25 | 10.19 |
| 01-Jun-2004 | 541 | 13.50 | 15-Mar-2021 | 1,797 | 10.50 |
| 01-Sep-2004 | 10,850 | 5.00 | 01-Jun-2021 | 4,435 | 9.75 |
| 01-Oct-2004 | 586 | 10.50 | 01-Jun-2022 | 2,399 | 9.25 |
| 01-Dec-2004 | 7,700 | 9.00 | 01-Jun-2023 | 8,200 | 8.00 |
| 01-Mar-2005 | 1,057 | 12.00 | 01-Jun-2025 | 8,900 | 9.00 |
| 01-Sep-2005 | 11,100 | 6.00 | 01-Jun-2027 | 9,600 | 8.00 |
| 01-Sep-2005 | 1,065 | 12.25 | 01-Jun-2029 | 12,000 | 5.75 |
| 01-Dec-2005 | 8,000 | 8.75 |  |  |  |
| 01-Mar-2006 | 626 | 12.50 |  |  |  |
| 01-Sep-2006 | 5,000 | 5.75 | Total | 280,406 |  |

Reference Table X (cont'd)
Outstanding Government of Canada Canadian-Dollar Marketable Bonds as at March 31, 2001

| Maturity date | Amount | Coupon rate |
| :--- | :---: | :---: |
|  | (\$ millions) | $(\%)$ |
| Real return bonds |  |  |
| 1-Dec-2021 | 5,175 | 4.25 |
| 1 -Dec-2026 | 5,250 | 4.25 |
| 1-Dec-2031 | 3,050 | 4.00 |
| Total $^{1}$ | $\mathbf{1 3 , 4 7 5}$ |  |
| ${ }^{1}$ 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, 2001

| Domestic interest-rate swaps |  |  | Cross-currency swaps of foreign obligations |  |
| :---: | :---: | :---: | :---: | :---: |
| Maturity date | Coupon ${ }^{1}$ | Notional amount | Maturity date | Notional amount |
|  | (\%) | (\$ millions) |  | (US\$ millions) |
| 01-Jun-2001 | 9.75 | 250 | 12-Jun-2001 | 26 |
| 01-Feb-2004 | 10.25 | 50 | 16-Jul-2003 | 65 |
| Total |  | 300 | 26-Nov-2004 | 495 |
| Foreign interest-rate swaps |  |  | 26-Nov-2004 | 341 |
| Maturity date | Coupon ${ }^{1}$ | Notional amount | 30-Nov-2004 | 63 25 |
|  | (\%) | (US\$ millions) | 22-Dec-2004 | 76 |
| 22-Jan-2002 | 5.125 | 300 | 03-Oct-2007 | 319 |
| 19-Nov-2007 | 4.00 | 25 | 31-Jan-2008 | 44 |
| 05-Nov-2008 | 5.25 | 200 | Total | 1,454 |
| 05-Nov-2008 | 5.25 | 500 |  |  |
| 05-Nov-2008 | 5.25 | 500 |  |  |
| Total |  | 1,525 |  |  |

Reference Table XI (cont'd)
Government of Canada Swaps Outstanding as at March 31, 2001

| 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) |  |
| 04-Sep-2001 | 1,000 | USD | 01-Sep-2005 | 100 | USD |
| 01-Apr-2002 | 50 | USD | 01-Sep-2005 | 150 | EUR |
| 01-May-2002 | 100 | USD | 23-Nov-2005 | 150 | USD |
| 01-Sep-2002 | 1,000 | USD | 01-Dec-2005 | 650 | USD |
| 01-Sep-2002 | 250 | EUR | 01-Dec-2005 | 200 | EUR |
| 28-Oct-2002 | 100 | USD | 01-Mar-2006 | 50 | USD |
| 15-Dec-2002 | 102 | EUR | 01-Mar-2006 | 96 | EUR |
| 15-Dec-2002 | 600 | USD | 01-Oct-2006 | 54 | EUR |
| 01-Feb-2003 | 52 | EUR | 01-Oct-2006 | 100 | USD |
| 01-Jun-2003 | 87 | EUR | 30-Oct-2006 | 250 | USD |
| 01-Jun-2003 | 125 | USD | 23-Nov-2006 | 150 | USD |
| 01-Sep-2003 | 105 | EUR | 01-Dec-2006 | 50 | EUR |
| 01-Sep-2003 | 150 | USD | 01-Mar-2007 | 24 | EUR |
| 01-Oct-2003 | 65 | USD | 01-Jun-2007 | 248 | EUR |
| 01-Oct-2003 | 182 | EUR | 01-Jun-2007 | 750 | USD |
| 30-Nov-2003 | 100 | USD | 01-Oct-2007 | 166 | EUR |
| 01-Dec-2003 | 156 | EUR | 01-Mar-2008 | 225 | USD |
| 01-Dec-2003 | 520 | USD | 01-Mar-2008 | 250 | USD |
| 01-Feb-2004 | 208 | EUR | 01-Jun-2008 | 800 | USD |
| 01-Feb-2004 | 525 | USD | 30-Sep-2008 | 50 | USD |
| 30-Mar-2004 | 100 | USD | 01-Oct-2008 | 190 | USD |
| 01-Jun-2004 | 350 | USD | 01-Mar-2009 | 535 | USD |
| 01-Jun-2004 | 564 | EUR | 01-Jun-2009 | 505 | USD |
| 01-Sep-2004 | 50 | EUR | 01-Oct-2009 | 440 | EUR |
| 01-Oct-2004 | 125 | USD | 1-Mar-2010 | 185 | EUR |
| 01-Oct-2004 | 212 | EUR | 01-Jun-2010 | 76 | YEN |
| 23-Nov-2004 | 100 | USD | 01-Jun-2010 | 540 | EUR |
| 01-Mar-2005 | 565 | USD | 01-Oct-2010 | 260 | EUR |
|  |  |  | Total | 14,789 |  |

[^11]Reference Table XII
Bond Buyback Program - Operations 2000-01

Source: Department of Finance.
Reference Table XIII
Canada Savings Bonds and Canada Premium Bonds, Fiscal 1983-1984 to Fiscal 2000-01

| Fiscal year | Gross sales | Net change | Outstanding at <br> fiscal year end |
| :--- | :---: | :---: | :---: |
|  |  | $(\$$ millions $)$ |  |
| $1983-84$ | 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 |
| $199-93$ | 9,23 | $-1,172$ | 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 |

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, 2001

| Borrowings from the market |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Corporation | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
| (\$ millions) |  |  |  |  |  |  |  |  |  |
| Export Development Corporation | 6,983 | 7,793 | 7,515 | 7,673 | 7,820 | 10,077 | 12,967 | 16,888 | 18,406 |
| Canadian Wheat Board ${ }^{1}$ | 6,966 | 7,283 | 7,321 | 6,377 | 6,474 | 6,698 | 6,786 | 542 | 425 |
| Business Development Bank of Canada | 2,352 | 2,602 | 2,723 | 3,045 | 3,371 | 3,839 | 4,223 | 4,723 | 5,102 |
| Farm Credit Corporation | 797 | 863 | 990 | 1,582 | 1,926 | 3,026 | 4,317 | 5,083 | 5,695 |
| Canadian National ${ }^{1}$ | 1,905 | 2,249 | 2,331 | - | - | - | - | - |  |
| Canada Mortgage and Housing Corporation | 152 | 1,573 | 3,630 | 5,906 | 7,866 | 9,934 | 10,633 | 10,801 | 11,672 |
| Canada Development Investment Corporation | 594 | 473 | - | - | - | - | - | - | - |
| Petro-Canada Ltd. | 455 | 501 | 504 | 490 | 432 | 443 | 471 | 338 | - |
| Petro-Canada ${ }^{1}$ | - | - | - | - | - | - | - | - | - |
| Canada Ports Corporation | 188 | - | - | - | - | 3 | 79 | 69 | - |
| Other | 97 | 239 | 235 | 297 | 226 | 258 | 222 | 196 | 100 |
| Total | 20,489 | 23,576 | 25,249 | 25,370 | 28,115 | 34,278 | 39,698 | 38,640 | 41,400 |
| ${ }^{1}$ This corporation is no longer a Crown corporation. |  |  |  |  |  |  |  |  |  |
| Source: Public Accounts of Canada. |  |  |  |  |  |  |  |  |  |
| Borrowings from the Consolidated Revenue Fund |  |  |  |  |  |  |  |  |  |
| Corporation | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
| (\$ millions) |  |  |  |  |  |  |  |  |  |
| Canada Mortgage and Housing Corporation | 8,181 | 8,075 | 7,835 | 7,263 | 6,938 | 6,708 | 6,298 | 6,152 | 5,852 |
| Canada Deposit Insurance Corporation | 3,085 | 3,151 | 2,160 | 1,627 | 855 | 395 | - | - | - |
| Farm Credit Corporation | 2,420 | 2,488 | 2,524 | 2,310 | 2,507 | 1,877 | 1,041 | 805 | 578 |
| Other | 819 | 415 | 307 | 233 | 204 | 179 | 551 | 77 | 84 |
| Total | 14,505 | 14,129 | 12,826 | 11,433 | 10,504 | 9,159 | 7,890 | 7,034 | 6,514 |

Note: Figures do not include "allowance for valuation."
Source: Public Works and Government Services Canada data.


[^0]:    Source: Bank of Canada.

[^1]:    Source: Public Accounts of Canada.

[^2]:    ${ }^{1}$ Includes consumer price index (CPI) adjustment.

[^3]:    ${ }^{2}$ Net debt-servicing cost is the following ratio: (Gross Public Debt Charges less Return on Investments)/(Total Interest-Bearing Debt less Financial Assets).

[^4]:    ${ }^{3}$ Certain assumptions need to be made regarding the composition of alternative portfolios. The general approach is to notionally transfer debt between marketable bonds and Treasury bills, implicitly assuming that any decision to operate with more or less fixed-rate debt would have been reflected by the stock of these two debt instruments.
    ${ }^{4}$ That is, the increase in debt-servicing costs net of the increased earnings on interest-bearing assets. The total impact on the budgetary balance would be about $\$ 1.1$ billion higher when considering the decline in value of the foreign reserves that would occur. However, this loss is not realized unless the assets are sold prior to their maturity.
    ${ }^{5}$ Under no changes in interest rates, a 62 -per-cent fixed-rate share has a lower net debt-servicing cost of $\$ 100$ million than the two-thirds structure. Under a 100 -basis-point-shock a 62 -per-cent fixed-rate share regime would increase by $\$ 1.1$ billion above the two-thirds fixed-rate share at the no-change level. The total increase in net debt-servicing costs under a 62-per-cent fixed-rate structure would therefore be $\$ 1.1$ billion.

[^5]:    ${ }^{6}$ Including $\$ 492$ million in securities assumed by the Government of Canada on February 5, 2001, on the dissolution of Petro Canada Limited.

[^6]:    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.

[^7]:    Source: Bank of Canada, Banking and Financial Statistics.

[^8]:    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.

[^9]:    Cash management bill.
    ${ }^{2}$ Outstanding.
    Source: Bank of Canada.

[^10]:    * Maturing date.

    Source: Bank of Canada.

[^11]:    ${ }^{1}$ Refers to the coupon of the underlying bond that was swapped.
    Source: Department of Finance.

