Debt Management Strategy

2003–2004

Canada

Debt Management Strategy

2003–2004

Department of Finance Canada
Ministère des Finances Canada

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Foreword by the Minister of Finance

I am pleased to table before Parliament the *Debt Management Strategy* of the Government of Canada for fiscal year 2003–04. This document outlines the Government's debt objectives and strategy in the coming fiscal year.

Canada's commitment to prudent financial management is paying off. The Government has reduced the debt in each of the past five years for a total of $47.6 billion. The Government has recently presented its sixth balanced budget and is committed to balanced budgets in each of the next two fiscal years. The federal debt-to-GDP (gross domestic product) ratio decreased from 67.5 per cent in 1995–96 to 46.5 per cent in 2001–02. With continued economic growth, the debt burden is expected to fall to about 40 per cent in 2004–05. According to the Organisation for Economic Co-operation and Development, the total government debt burden in Canada is expected to be second best among Group of Seven (G-7) countries by 2004. This is a substantial improvement on an absolute basis from our standing of second worst in 1995.

Our improved macroeconomic environment, including low and stable inflation and interest rates, will enable the Government of Canada to reduce the share of debt issued at fixed rates to achieve debt cost savings that can be used to meet the priorities of Canadians.

Lower debt costs are the dividends of Canada's fiscal and economic progress. However, the country's debt still remains substantial and it will continue to be prudently structured with the majority in fixed-rate form. Maintaining a balanced and prudent approach to the management of the country's finances will help ensure that Canada maintains its status as a world-leading economy.

The Honourable John Manley, P.C., M.P.
Deputy Prime Minister and Minister of Finance
Ottawa, March 21, 2003

Purpose of This Publication

The *Debt Management Strategy* is an annual publication of the Department of Finance that provides information on the Government of Canada's objectives and strategies for managing the outstanding stock of debt within the context of the fiscal environment.

The Government publishes a companion document, the *Debt Management Report*, which reports on the Government's debt operations over the previous fiscal year and provides detailed information on outstanding debt. This publication is available shortly after the release of the Public Accounts in the fall.

Highlights of the 2003–2004 Debt Strategy

- As announced in the February 2003 budget, the target for the fixed-rate share of the debt will be reduced from two-thirds to 60 per cent over the next five years to achieve debt cost savings, while retaining a prudent debt structure.
- To maintain a well-functioning market in Government of Canada securities, the change in the debt structure will be made gradually through increases in the Treasury bill program and reductions in the bond program. The Government will continue to consult with market participants at regular intervals.
- In 2003–04, the move towards a lower fixed-rate debt structure will involve the following:
  - The size of the Treasury bill program will increase from about $105 billion to a level of approximately $120 billion by the end of 2003–04.
  - The total amount of marketable bonds issued in 2003–04 will be about $40 billion, similar to 2002–03. Net bond issuance of about $30 billion will also be similar to 2002–03.
  - The planned amount of bond buybacks is in the order of $13 billion, similar to 2002–03. Switch buybacks will be modestly increased and cash buybacks slightly reduced.
  - The bond stock will decrease from approximately $265 billion to $255 billion due to maturities and continued cash management bond buyback operations.
  - The 10-year bond benchmark will be lowered from $12 billion–$15 billion to $10 billion–$14 billion, to allow the maintenance of an annual 10-year benchmark cycle.
  - For cash management purposes, the auction size of 2-year bonds may be reduced from $3.5 billion to as low as $2.5 billion when the benchmark is fungible with a large outstanding bond.
  - Treasury bill auctions will be moved from 12:30 p.m. to 10:30 a.m. on a trial basis, as suggested by market participants. Cash management bond buyback operations will follow Treasury bill auctions.

Debt and Cash Management Framework

Effective management of the federal debt is important to all Canadians as the annual debt-servicing cost is the largest single spending program of the federal government. The federal debt management framework is an important component of the Government's objective of maintaining a fiscal advantage for Canadians.

Debt Management Objectives

The fundamental debt management objective is to provide stable, low-cost funding for the Government.

The fundamental objective of debt management is to provide stable, low-cost funding to meet the financial obligations and liquidity needs of the Government of Canada. A key strategic objective is to maintain a well-functioning market for Government of Canada securities. A well-functioning market contributes to keeping costs low.

Debt Management Principles

Public debt is managed according to a set of key principles.

The following operational principles guide the federal government's pursuit of these objectives:

- Prudence: Manage the composition of the debt to help protect the Government's fiscal position from unexpected increases in interest rates. Manage reserves within a framework that mitigates currency and interest rate risks. Manage the Receiver General cash position to ensure that adequate liquidity is maintained at reasonable cost to the Government.
- Effectiveness: Emphasize transparency, liquidity and regularity in the design and implementation of domestic debt programs in order to maintain a well-functioning domestic market.
- Diversification: Borrow using a variety of instruments and range of maturities to keep costs low and maintain a diversified investor base.
- Market integrity: Work with market participants and regulators to enhance the integrity and attractiveness to investors of Government of Canada securities.
- Consultations: Seek input from market participants on major adjustments to the federal debt and cash management programs.
- Best practices: Ensure that the operational framework and practices are in line with the best practices of other comparable sovereign borrowers and the private sector.

Debt Management General Strategy

The Government operationalizes these principles in the following manner:

Domestic Market

- The Government structures the maturity profile of the debt in a way that balances lower financing costs with reasonable cost stability and refinancing risk under a wide range of potential future interest rate environments over the long term. The target debt structure is established using long-term analysis and is not based on a particular interest rate outlook (see "Balancing Prudence and Cost: Debt Structure" on page 19).

The Government borrows regularly in domestic markets.

- To enhance the functionality of the market, the Government borrows on a regular, pre-announced basis in key segments of the market, builds large bond benchmarks and maintains a set of rules for participation at Government of Canada securities auctions.[1]
- The Government maintains a diversified investor base by auctioning nominal bonds, real return bonds and Treasury bills in the wholesale market and by selling savings products to Canadians in the retail market.[2]

Foreign Currency

The Government borrows as required to maintain the foreign reserves portfolio.

- The Government of Canada funds its foreign exchange reserves through diverse sources and structures the maturity of the debt to limit refinancing risk.
- The Government of Canada's foreign exchange reserves are composed of a range of diversified assets, determined by asset portfolio objectives and market conditions.
- Foreign liabilities are matched with reserve assets to immunize currency and interest rate risks.

[1] See the section "Domestic Distribution System" in Annex 1 of the 2001–02 *Debt Management Report*, available on the Department of Finance Web site at www.fin.gc.ca.

[2] See Annex 2 of the 2001–02 *Debt Management Report*.

Debt Management Environment

Fiscal Outlook

Budgetary Balance

The Government projects balanced budgets or better for 2002–03 and for each of the next two fiscal years.

The Government's fiscal policy sets the context for debt management operations. The federal government recorded budgetary surpluses over the previous five fiscal years and reduced the federal debt by $47.6 billion. As announced in the February 2003 budget, the Government is committed to maintaining balanced budgets or better for 2002–03 and for each of the next two fiscal years.

Contingency Reserve and Debt Reduction

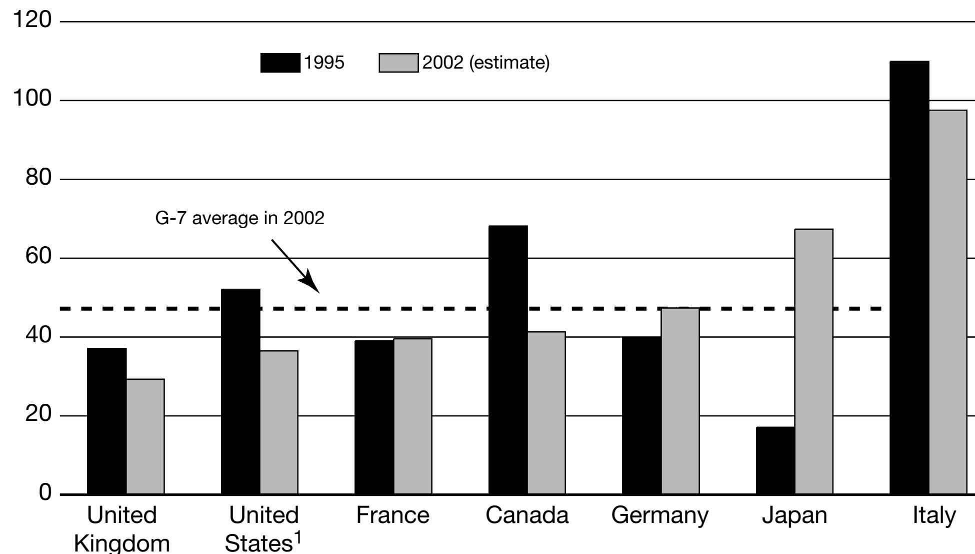
The Government of Canada sets aside an annual Contingency Reserve of $3 billion to cover risks arising from unforeseen circumstances and variations in budget planning. The Contingency Reserve, if not needed, will be used to reduce federal debt.

The debt-to-GDP ratio is on a downward track.

Combined with forecast economic growth, the federal debt-to-GDP ratio—the level of debt in relation to the country's annual income—remains on a downward track. On an accrual basis, the federal debt (accumulated deficit) as a percentage of the economy is projected to fall to 44.5 per cent in 2002–03, down from its peak of 67.5 per cent in 1995–96. With the commitment to balanced budgets in each of the next two fiscal years, it is forecast to decline to about 40 per cent in 2004–05.

In terms of international debt burden comparisons, taking into account the accounting methods of various sovereigns, the debt burden of Canada's total government sector has declined the fastest among G-7 countries since the mid-1990s. Between 1995 and 2002, Canada's net financial liabilities as a percentage of GDP (akin to the debt-to-GDP ratio) declined by 26.8 percentage points. Consequently, Canada's total government debt burden moved below the G-7 average, and only the United Kingdom and the United States are expected to have lower debt burdens than Canada in 2003.

Total Government Net Financial Liabilities
(per cent of GDP)



[1] Adjusted to exclude certain government employee pension liabilities, in order to be comparable with other countries' measures.

Source: *OECD Economic Outlook,* No. 72 (December 2002); Federal Reserve, *Flow of Funds Accounts of the United States* (December 2002); Department of Finance calculations.

Financial Balance (Excluding Foreign Exchange Transactions)

The key measure used for debt management planning is the Government's financial balance.

The key budgetary measure for debt management planning is the financial balance—requirement or source—rather than the budgetary balance (see box on page 15). The budgetary balance is presented on a full accrual basis, recognizing revenues and expenses when they are incurred. In contrast, the financial balance is on a cash basis, representing the actual cash flow sources and uses related to budgetary items.

Foreign Exchange Transactions

The movement in the value of foreign currencies compared to the Canadian dollar engenders revaluation gains or losses in the value of the foreign exchange reserves. Canada's commitment to the International Monetary Fund (IMF) also results in foreign denominated funds flowing between Canada and the IMF. These transactions may either raise or lower the size of the net financial balance.

Measuring the Government's Fiscal Position: Budgetary Balance and Financial Balance

The budgetary balance and financial balance measures used in the *Debt Management Strategy* are based on the Public Accounts accounting framework. The Public Accounts provide information to Parliament on the Government's financial activities, as required under the Financial Administration Act. The measures are provided on a fiscal-year basis ending March 31.

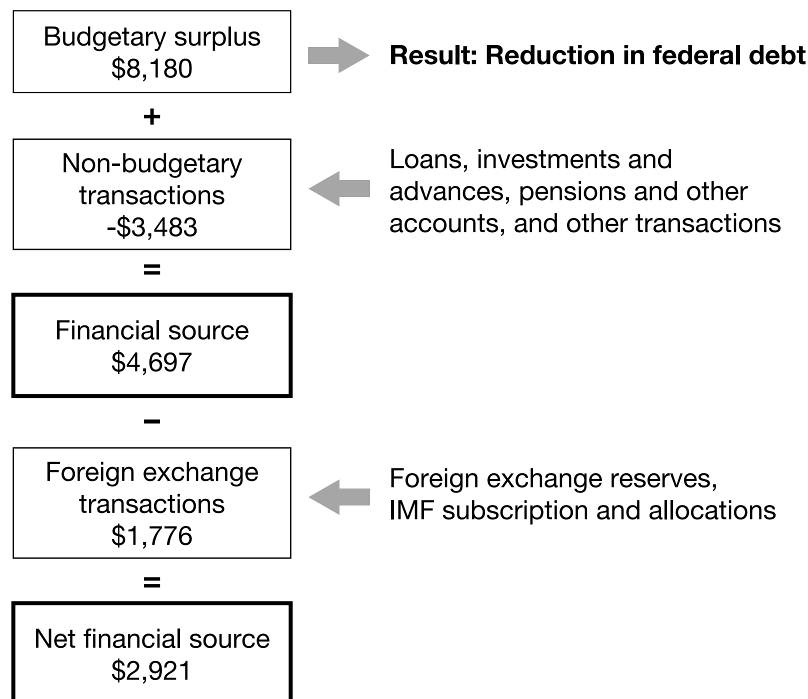
The budgetary balance—deficit or surplus—is one measure of the Government's financial situation. Consistent with the recommendations of the Auditor General, the Government is moving to full accrual accounting in 2002–03. This will enhance transparency and decision making by providing a more complete accounting of government activities than under the previous modified accrual accounting framework. Under a full accrual basis of accounting, revenues and expenses are recorded when they are incurred, regardless of when the actual cash flows occur. For more information see Annex 6 of the February 2003 *Budget Plan*, available on the Department of Finance Web site at www.fin.gc.ca.

The financial balance—requirement or source—provides a measure of the net cash position of the Government. In contrast, the budgetary balance also includes obligations incurred by the Government during the course of the year for which the cash transaction does not take place until future years. The financial requirement/source only includes the cash outlay related to these obligations.

The net financial balance includes foreign exchange transactions, which represent all transactions in international reserves held in the Exchange Fund Account and commitments to the IMF. The net financial balance corresponds closely to the unified budget balance measure used in the United States.

The chart below provides an illustration of the various elements of the Government's budgetary framework, based on the 2001–02 fiscal year:

Transactions for the Year Ending March 31, 2002
(in millions of dollars)



Source: *The Budget Plan* (2003), Department of Finance.

Net Financial Balance Outlook

For 2002–03, the Government expects a domestic financial balance of $3.4 billion.

For 2002–03, the Government expects to achieve a domestic financial balance of $3.4 billion. A net financial source, which takes into account foreign exchange transactions, is also expected, mainly due to the revaluation effects in the Exchange Fund Account.

The Government expects a financial requirement in 2003–04.

The Government expects modest financial requirements in 2003–04. These include the funding of the Canada Student Loans Program and the proposed transfer of Canada Pension Plan (CPP) operating balances, currently held by the Government, to the CPP Investment Board, as proposed in legislation currently before Parliament. The CPP funds transfer would involve switching non-market debt to market debt, which would engender a cash requirement but would not have any effect on the level of federal debt.

Debt Composition

The market debt component of federal government liabilities is the focus of debt strategy.

Debt management operations focus on market debt, which is only one component of the total federal government liabilities and financial assets. The other component of the gross debt, non-market debt, is taken into account in debt strategy planning, but is not subject to debt management strategy initiatives. Non-market debt includes federal public sector pension liabilities and the Government's accrued liabilities. The chart below illustrates the relationships between the components of the federal debt, based on the 2001–02 fiscal year.

Total Federal Debt as of March 31, 2002
(in billions of dollars)

Market debt
$442.3

+

Non-market debt
$252.8

=

Gross debt
$695.1

-

Financial assets
$132.1

=

Net debt
$563.0

-

Non-financial assets
$55.3

=

Federal debt
(accumulated deficit)
$507.7

Fixed-rate marketable bonds, Treasury bills, real return bonds, foreign debt, retail debt

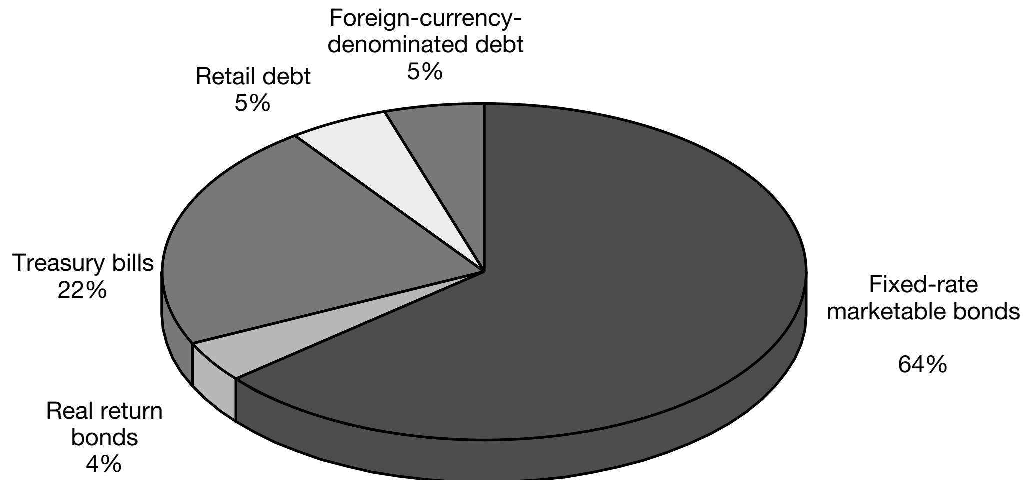
Pensions and other liabilities

Cash, foreign exchange reserves, loans, investments and advances

Source: *The Budget Plan* (2003), Department of Finance.

The federal government's market debt consists of fixed-rate marketable bonds, real return bonds, Treasury bills, retail debt (Canada Savings Bonds and Canada Premium Bonds) and foreign-currency-denominated debt. Financial assets held by the Government include operating cash balances, loans and investments, and foreign exchange reserves. Non-financial assets include land, buildings and infrastructure, and vehicles.

Forecast Composition of Market Debt
March 31, 2003



Note: Excludes bonds issued to the Canada Pension Plan.
Source: Department of Finance.

Market Debt Outlook

Some modest market debt retirement is expected in 2002–03.

The federal debt declined by $8.2 billion in 2001–02 and by $47.6 billion over the past five fiscal years. Market debt, the portion of the federal debt that is funded in capital markets, declined by $4.1 billion in 2001–02 and by $34.6 billion over the past five fiscal years. A further decline is expected in 2002–03.

In 2003–04, the Government expects to fund its cash requirements within the existing level of borrowing authority (see box below).

Borrowing Authority

Under the Financial Administration Act, the Government has standing authority to refinance market debt maturing in a fiscal year.

Parliamentary approval must be obtained to raise new market debt, in the form of a borrowing authority bill. Once obtained, the authority to raise debt levels generally extends through the remainder of the fiscal year and lapses at the start of the next fiscal year.

Currently available new borrowing authority is limited to a $4-billion non-lapsing contingency from the 1996–97 Borrowing Authority Act.

2003–2004 Debt Management Strategy

Balancing Prudence and Cost: Debt Structure

The Government maintains a prudent debt structure.

One of the Government's key objectives in managing the debt is to strike the appropriate balance between low financing costs and cost stability. In general, borrowing long-term debt is less risky, but more costly, than borrowing short-term debt. The Government maintains a prudent debt structure to protect its fiscal position from unexpected increases in interest rates and to limit annual refinancing needs. One of the measures of prudence is the fixed-rate share of debt—that is, the share of the debt that does not need to be refinanced within a year.

During the 1990s, the Government raised the fixed-rate share of the federal debt from one-half to two-thirds to provide more cost stability in an environment of fiscal and current account deficits, volatile interest rates and high debt levels.

Over the past five years, Canada's fiscal and economic position has strengthened.

Over the past five years, our economic and fiscal position has strengthened. Canada now has low and stable inflation and interest rates, strong employment growth, lower foreign indebtedness and a current account surplus. The federal debt level has fallen by over $47 billion and is at its lowest level, relative to the size of the economy, in nearly two decades. The reduction in the debt level has provided Canada with greater financial stability, reduced vulnerability to events happening beyond our borders, and contributed to the restoration of Canada's triple-A credit rating.

As a result of these positive economic and fiscal developments, the Government is now in a position to reduce the fixed-rate portion of the debt. While this reduction is being taken to lower future financing costs, the debt structure remains prudent, with a majority of the debt being fixed-rate.

The target for the fixed-rate portion of the debt will be reduced from two-thirds to 60 per cent.

As announced in the February 2003 budget, the Government now intends to reduce the target for the fixed-rate portion of the debt from two-thirds to 60 per cent. The reduction will begin in the upcoming fiscal year and will be implemented in an orderly and transparent manner over the next five years to allow the market time to adjust to the required changes in debt stocks.

Based on the budget outlook, the planned change to the debt structure is expected to reduce the Government's net debt-servicing costs by up to $750 million during the five-year transition period and by up to $500 million, on average, each year thereafter. These savings can be used to meet the priorities of Canadians.

The decision to lower the fixed-rate target is not based on a particular interest rate outlook. Analytical work using stochastic simulation (see the Annex) was used to assess the balance between the costs and risks of alternative debt structures. The analysis uses dynamics of historical interest rates observed over the period 1994–2002 and assumes that this interest rate environment continues to prevail over the coming years.

A prudent debt structure will still be maintained, with the majority of the debt being fixed-rate.

Compared to the current two-thirds debt structure, the lower fixed-rate structure would modestly raise the Government's short-term exposure to adverse movements in interest rates. For example, a 100-basis-point increase in interest rates along the entire yield curve would raise federal net debt-servicing costs[3] by $1.1 billion in the first year with a 60-per-cent fixed-rate structure, compared to $800 million for a two-thirds debt structure. By comparison, the impact of the same interest rate shock was estimated at $1.8 billion in the mid-1990s.

The change in the debt structure is expected to lower debt costs.

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

The target 60-per-cent debt structure would also continue to prudently limit the need to refinance a large portion of the debt in any given period.

Maintaining a Well-Functioning Market

Maintaining a well-functioning market for Government of Canada securities is important.

As the sovereign and major borrower in the fixed-income marketplace, the Government needs to sustain a liquid and efficient market for Government of Canada securities for the purpose of providing stable low-cost funding for the Government. Moreover, this provides key pricing and hedging tools for market participants and thereby contributes to the health of the broader fixed-income market.

A number of operational initiatives will be taken to enhance the effectiveness of auctions and buyback operations.

In 2003–04, a number of operational initiatives will be taken to enhance the effectiveness of Government of Canada auctions and buyback operations, specifically for the purposes of increasing liquidity and participation and reducing risks borne by market participants (see next section for full details).

In developing its debt program plans, the Government conducts extensive consultations with market participants. Reports on topics of discussion and views received from market participants are posted on the Bank of Canada's Web site at www.bankofcanada.ca. A summary of comments received during recent consultations has been published concurrently with the release of this document. As in past years, the Government plans to consult further with market participants on potential adjustments to debt program plans during the 2003–04 fiscal year.

The full range of initiatives being undertaken to maintain and enhance operational effectiveness in the areas of domestic debt, cash and reserves management is summarized in the following table and detailed in the following sections of the publication.

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[3] That is, the increase in debt-servicing costs net of the increased earnings on interest-bearing assets.

2003–2004 Debt Strategy Plan

2003–2004 Debt Strategy Action Plan and Intended Results

Debt Structure

Objective: *Gradually reduce the fixed-rate share of debt.*

Action for 2003–04:	Intended Result:
■ Reduce the fixed-rate share of debt from 67 per cent towards a medium-term target of 60 per cent.	➔ Achieve lower debt charges, while continuing to prudently mitigate the risk to the budget framework.
■ Increase the size of the Treasury bill program from about $105 billion in 2002–03 to approximately $120 billion in 2003–04. ■ Issue about $40 billion of bonds in 2003–04, similar to the amount in 2002–03. Due to large bond maturities and continued cash management bond buyback operations, the bond stock is expected to decrease by some $10 billion. ■ Continue a similar level of bond buybacks as in 2002–03 of about $13 billion.	➔ Facilitate market adjustment to changes in the bond and Treasury bill stock.
■ Maintain a stable maturity profile.	➔ Limit the need to refinance a large portion of debt in any given period.

Domestic Debt Programs

Objective: *Maintain diversified sources of funding and a well-functioning market.*

Action for 2003–04:	Intended Result:
Continue regular issues of marketable bonds in four maturity sectors, Treasury bills in three maturity sectors and index-linked bonds in wholesale markets, as well as a retail debt program.	Keep costs low and mitigate funding risk by diversifying borrowing across investor segments, instruments and maturities.
Continue to borrow on a pre-announced basis, seek input from market participants on major adjustments to programs, and provide timely notices of government policy decisions.	Maintain transparency and efficiency.
Maintain current benchmark target sizes for 2-, 5- and 30-year bonds.	Maintain a liquid market for on-the-run issues and building-benchmark issues.
Reduce 10-year benchmark size from $12 billion–$15 billion to $10 billion–$14 billion to maintain an annual benchmark.	Support liquidity in the swap and futures market and enhance international demand.
Modestly increase the amount of buybacks on a switch basis and slightly lower the amount of bonds repurchased on a cash basis.	Support new bond issuance and maintain the time required to build benchmarks.
Implement the cash management bond buyback (CMBB) program on a regular basis.	Smooth cash requirements by reducing peak cash balances needed to redeem upcoming large maturities.
Reduce the 2-year auction size to a minimum of $2.5 billion when the benchmark is fungible with a large outstanding bond.	Enhance the bidding process and participation.
Move Treasury bill auctions from 12:30 p.m. to 10:30 a.m. on a trial basis. Schedule CMBB after Treasury bill auctions.	Enhance the bidding process and participation.
Consider further reductions in operational turnaround times.	Reduce market participants’ risk.

Cash Management

Objective: *Invest government balances prudently while obtaining an appropriate rate of return.*

Action for 2003–04:

- Broaden the list of participants in collateralized cash management operations.

Intended Result:

- Reduce exposure to counterparty credit risk and encourage more competitive bidding at cash management auctions.

Foreign Reserves and Debt Programs

Objective: *Improve the cost-effectiveness of funding foreign reserve assets.*

Action for 2003–04:

- Continue to use cross-currency swaps.

Intended Result:

- Reduce the cost of carrying reserve assets.

Domestic Debt Programs

The adjustments to debt programs required in 2003–04 will be relatively modest. The gross bond and buyback programs will remain at similar levels to those of 2002–03, with the stock of bonds decreasing from $265 billion to $255 billion due to maturities and cash management bond buyback operations during the year. The Treasury bill program will increase by about $15 billion in 2003–04.

Fixed-Rate Marketable Bond Program

Bond program activity and issuance frequency will be maintained.

In 2003–04 some $35 billion of bonds will be maturing. Gross bond program issuance in 2003–04 is planned to be about $40 billion.

In 2003–04, the Government will continue to hold quarterly auctions of 2-, 5- and 10-year bonds, and semi-annual 30-year bond auctions. As in previous years, a transparent quarterly calendar of auctions will be posted on the Bank of Canada Web site shortly before the start of each quarter.

The 2-, 5- and 30-year benchmark target sizes will remain unchanged.

The 2-, 5- and 30-year benchmark target sizes will remain unchanged from last year (2-year bonds: $7 billion to $10 billion, 5-year bonds: $9 billion to $12 billion, and 30-year bonds: $12 billion to $15 billion). The benchmark sizes will be achieved through reopenings where a particular bond issue is sold at several auctions until the benchmark target range is reached.

The 10-year benchmark size will be reduced to $10–$14 billion.

The 10-year benchmark target range will be reduced from $12billion–$15 billion to $10 billion–$14 billion to maintain an annual cycle for the benchmark-building process. This initiative will ensure the availability of a current, liquid 10-year security and support a liquid futures market by maintaining a viable basket of eligible government securities. Debt strategy consultations conducted in December 2002 indicated that market participants strongly favour the issuance of one 10-year benchmark per year to encourage international demand as well as liquidity in the swap and futures market in Canada.

To address cash management challenges associated with a large amount of bonds maturing on the same date, the 2-year auction size may be, on occasion, as little as $2.5 billion when the building benchmark is interchangeable with a large outstanding bond.

Bond Buyback Program

There are two types of bond buyback programs—regular bond buybacks and cash management bond buybacks. Regular bond buybacks permit the maintenance of a liquid new bond issue program by buying back older, less liquid bonds with a remaining term to maturity from 1 to 25 years. The buyback program is sizeable and plays a strategic role in maintaining an active new issue bond program. The second kind of buyback program, called cash management bond buyback, aids in the management of the Government's cash balances by buying back bonds maturing within the next 18 months.

Regular Bond Buyback Operations

Regular bond buyback operations can be conducted on a cash basis or a switch basis.

Bond buyback operations can be conducted on a cash or switch basis. Bond buyback operations on a cash basis involve the exchange of less liquid bonds for cash and are conducted shortly after auctions of similar maturity bonds. Bond buyback operations on a switch basis involve the exchange of less liquid bonds for new issue bonds on a duration-neutral basis and are conducted at other times in each quarter.

The Government intends to conduct roughly the same level of bond buyback operations in 2003–04.

The Government plans to conduct about $13 billion in bond buyback operations in 2003–04, similar to 2002–03. The amount of buybacks on a switch basis will be increased by approximately $1 billion to approximately $6 billion, while buybacks on a cash basis will be reduced by about $200 million to $7 billion. The target size of the bond buyback programs and the timing of operations will be announced through the quarterly bond auction calendar published by the Bank of Canada at www.bankofcanada.ca.

Buybacks on a switch basis will be continued and increased.

To broaden participation in buyback operations, buybacks on a switch basis were introduced on a pilot basis in December 2001. Market participants have received the program very well and the size objectives of the program have been achieved. The pilot program will be continued and increased in size in 2003–04, as operational parameters are assessed and potentially adjusted to improve the program's effectiveness.

The framework for net position reporting will apply to switch buybacks.

To ensure market integrity, a framework for the reporting of net positions, similar to the one applying to auctions, will be implemented for buybacks on a switch basis in 2003–04.

Illiquid bonds may be removed from the basket of eligible bonds for buyback operations on a cash basis.

To ensure efficient operations, illiquid bonds may be removed from buyback operations on a cash basis. These illiquid bonds will continue to be included in the basket for buyback operations on a switch basis.

A list of outstanding Government of Canada bonds, including their maturity dates, is contained in the 2001-02 *Debt Management Report* , which is available on the Department of Finance Web site at www.fin.gc.ca. The list will also be available in the forthcoming annual publication, *Summary of Government of Canada Direct Securities and Loans*, which will be posted on the Bank of Canada's Web site.

Cash Management Bond Buybacks

The cash management bond buyback program will be made permanent in 2003–04.

To help in smoothing the Government's cash requirements, a pilot program of cash management bond buybacks (CMBB) was implemented in 2000–01. The pilot program was continued in 2002–03 as operational parameters and effectiveness were assessed and adjusted. During debt strategy consultations, market participants expressed strong support for the program. From the Government's perspective, the program is successfully meeting its objectives. Therefore the CMBB program will be made permanent in 2003–04.

Real Return Bonds (RRBs)

In 2003–04, the Government plans to issue approximately $1.5 billion of RRBs.

Similar to 2002–03, the Government plans to issue approximately $1.5 billion of RRBs in 2003–04 through quarterly price auctions.

The Government will be reviewing the RRB program in light of the evolution of the macroeconomic environment, the new debt structure target and the objectives of the program. The review will include consultations with market participants.

Treasury Bill Program

Based on the budget outlook and plans for attaining the new 60-per-cent target for the fixed-rate portion of the debt, the stock of Treasury bills is expected to be about $120 billion by the end of 2003–04.

The Treasury bill auction time will be moved on a trial basis from 12:30 p.m. to 10:30 a.m.

Recent consultations have indicated that market participants favour moving Treasury bill auctions to before noon, when market liquidity and participation are at a peak. Starting April 22, 2003, the Treasury bill auction time will be moved on a trial basis from 12:30 p.m. to 10:30 a.m. and CMBB operations will be conducted shortly after Treasury bill auctions.

Domestic Market Development

The Department of Finance and the Bank of Canada have an ongoing dialogue with market participants and regulators on the development of the fixed-income market in Canada. Ongoing discussions are focused on the development and regulation of electronic trading systems. Electronic trading systems, which are just appearing in Canada, have the potential to significantly improve the transparency and efficiency of the fixed-income market.

Retail Debt Program

In 2003–04, the Government will continue to focus on keeping the non-marketable retail debt portfolio and costs aligned with a declining debt environment while investing in innovation to maintain a vibrant and creative Retail Debt Program.

Targeted initiatives will continue to focus on increasing access and diversifying the investor base through the deployment of new cost-effective electronic processing and new products and services, and by evolving the brand through integrated and cost-effective marketing. Details on specific initiatives will be announced at the appropriate time.

Management of the Government's Cash Balances

The Government manages its cash balances in order to ensure that it has sufficient cash on hand to meet its operating and liquidity requirements. The cash balances are invested through twice daily auctions.

A new framework brings the management of cash balances in line with best practices of other sovereigns.

In September 2002, the Government implemented a new framework to bring the Government's operations in line with the best practices of other governments and market participants.

The two key modifications to the framework are the introduction of a credit management system, using credit ratings, credit lines and collateral (through sale and repurchase agreements) to better manage credit risk, and a broadening of the list of eligible counterparties to encourage more competitive bidding at the auctions.

The new framework applies to the morning auction, where the bulk of the cash balances are auctioned. The afternoon auction will continue to be used to invest the Government's residual cash balances and will remain uncollateralized and limited to Large Value Transfer System participants—unchanged from the previous framework.

No further modifications to the framework are planned for 2003–04.

The new system is working well and overall uncollateralized exposure, as well as exposure to individual institutions, has been reduced considerably. No further modifications to the framework are planned for 2003–04 and the Government will continue its efforts to bring new participants into the framework.

Foreign Reserves Debt Programs

The Government holds foreign exchange reserve assets in the Exchange Fund Account to provide the Government with foreign currency liquidity and to provide the funds needed to help promote orderly conditions for the Canadian dollar in foreign exchange markets. Further details on the management of international reserves are available in the *Exchange Fund Account Annual Report*, available on the Department of Finance Web site at www.fin.gc.ca.

The Government's foreign currency reserve assets, and liabilities financing those assets, are managed on a portfolio basis.

The Government's foreign currency reserves are funded through foreign currency liabilities. The foreign currency reserve assets, and liabilities financing those assets, are managed on a portfolio basis, based on many of the same principles used by other sovereigns and private sector financial institutions, including prudent risk management principles.

The key objectives of reserves management are:

- Ensure that an appropriate level of reserves is maintained while minimizing the cost of carrying reserves (i.e. the difference between interest paid on foreign currency liabilities and the interest earned on reserve assets).
- Immunize interest rate and currency risks by selecting reserve assets that match the duration and currency of liabilities.
- Maintain diversified funding sources and a prudent liability structure to help manage refinancing needs.

Funding Sources

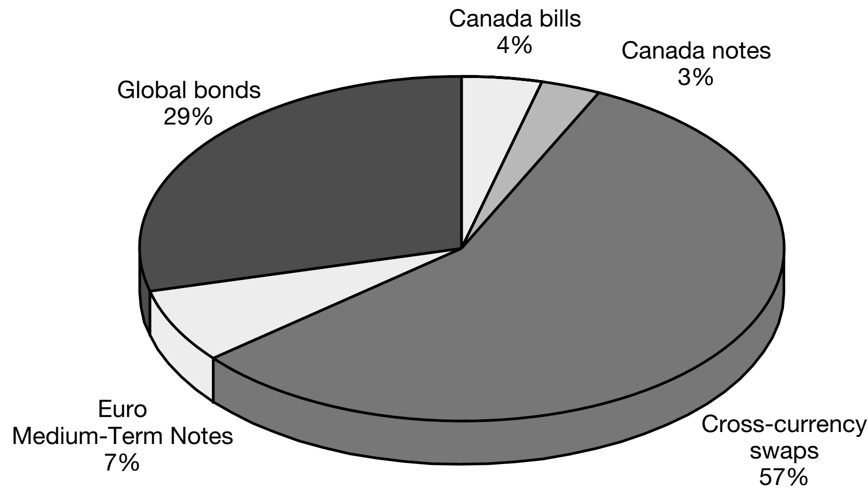
The Government has been using cross-currency swaps to obtain highly cost-efficient funding.

The Government has access to a wide range of sources to fund its foreign currency assets. These sources include a short-term US-dollar discount note program, medium-term note issuance in various markets, cross-currency swaps of domestic obligations, international bond issues, and purchases of US dollars in foreign exchange markets. Cross-currency swaps have proven to be a particularly cost-effective alternative, and have been actively used in recent years.

Cross-currency swaps will continue to be the primary source of reserve funding.

In 2003–04, the precise mix of funding sources will depend on a number of considerations, including relative cost, market conditions and opportunities, and the desire to maintain a prudent foreign-currency-denominated debt maturity structure. It is expected that cross-currency swaps of domestic obligations will continue to be the primary source of reserve funding.

Forecast Composition of Foreign Currency Liabilities
March 31, 2003



Source: Department of Finance.

Risk Management

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 of sovereign treasury operations and private sector financial institutions. Standards for risk tolerance are very prudent, with market risks immunized and high credit quality and diversification standards followed.

Annex—Analytical Framework: Balancing Cost and Risk

By maintaining a prudent debt structure, the Government seeks to keep borrowing costs low while ensuring that the cost impact of unexpected increases in interest rates does not disrupt the budgetary framework.

In determining the composition and maturity profile of the debt, the Government takes a long-term perspective with respect to the trade-off between the cost and risk of issuing various forms of debt. The trade-off reflects the fact that, from a borrower's point of view, longer-term debt instruments are generally more costly and less risky than shorter-term debt instruments.

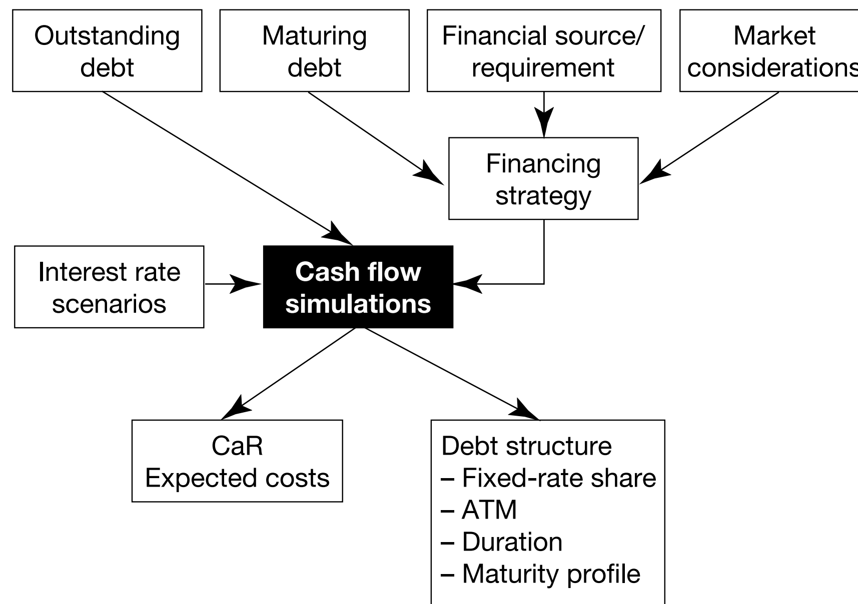
The trade-off between cost and risk occurs because long-term instruments such as Government of Canada bonds generally pay higher interest rates than short-term instruments such as Treasury bills. On the other hand, coupon payments of long-term bonds remain at a constant level until the bond matures, resulting in lower interest rate risk compared to short-term instruments, which need to be refinanced more often at prevailing market rates. The higher the proportion of short-term instruments, the higher the risk that an unfavourable interest rate movement could have a negative impact on annual debt costs.

As part of debt strategy planning, the fixed-rate debt structure is continually being reviewed to assess its suitability given changes in the fiscal and economic environment.

To assess the ability of the debt structure to limit the exposure to interest rate fluctuations, the Department of Finance and the Bank of Canada use simulation models to evaluate potential debt costs under a large number of interest rate scenarios. Among other measures, consideration is also given to the average term to maturity (ATM), duration and maturity profile of the debt.

Cost at Risk (CaR) is one of the key measures the Government uses to identify whether the risk of higher debt costs falls within the Government's tolerance for risk. CaR represents the difference between the maximum level of debt costs that could be anticipated with a high degree of certainty and the expected level of debt costs over a given time horizon.

The simulation framework that is used to model the cost and risk characteristics of alternative debt structures is depicted below. An important input into the model is the interest rate scenarios. For the analysis, 10,000 scenarios have been developed, based on a theoretical model from the economic literature and the dynamics of interest rates observed over the 1994–2002 period. These scenarios represent the full range of plausible developments in interest rates going forward. The analysis therefore assumes that the recent interest rate environment, characterized by relatively stable inflation and lower interest rate volatility, continues to prevail over the coming years.



Several financing strategies are developed, taking into account the fiscal outlook, amount of maturing debt and market considerations. The simulation is then performed for all interest rate scenarios to generate a statistical distribution of possible debt costs and various statistics for each financing strategy.

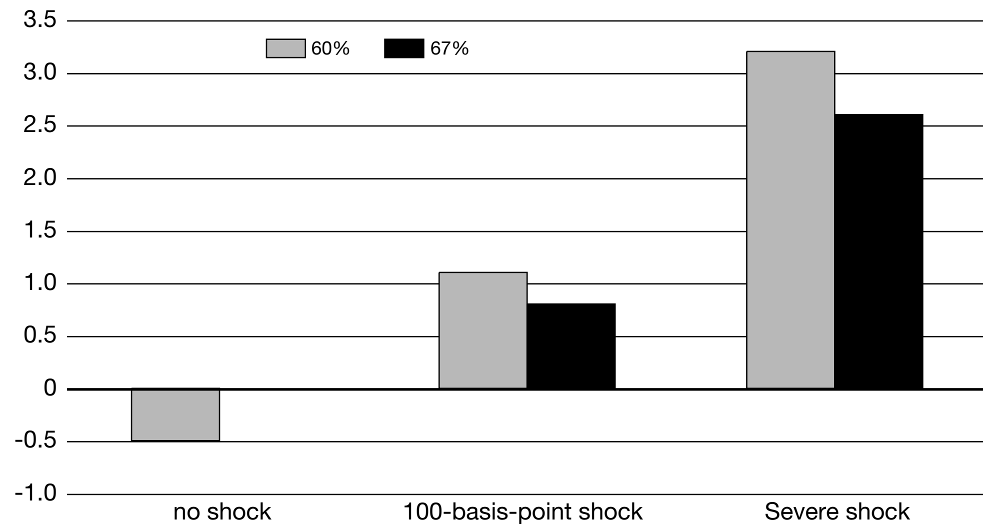
The CaR analysis conducted in 2002–03 indicates that, when viewed over a long-term horizon, the costs and risks of alternative debt structures within the range of 60 per cent to 67 per cent are fairly similar. Debt structures in this range would accommodate the impact of most interest rate shocks without unduly affecting the Government's fiscal framework.

The CaR results indicate that a fixed-rate share target of 60 per cent would result in lower debt-servicing costs compared to the two-thirds target while still maintaining a prudent debt structure. Over time, the expected debt cost savings with a lower fixed-rate structure would offset the potential volatility in debt costs due to interest rate risk and offer some prospect for overall lower debt costs.

Stress Testing

Research on simulation modelling has shown that results are often highly sensitive to the assumptions employed. The characteristics of the interest rate scenarios used in the CaR model are critical and, inevitably, subjective. Moreover, simulations may not adequately capture the impact of extreme interest rate shocks.

Debt Cost Sensitivity to Interest Rate Shocks
(in billions of dollars)



Source: Department of Finance.

The examination of severe interest rate scenarios remains an important factor considered in prudent debt management decisions. The above figure provides an illustration of the potential increase in costs after one year for a 60-per-cent and a two-thirds fixed-rate debt structure resulting from two interest rate shocks.

The 60-per-cent fixed-rate debt structure would be more exposed to a more severe interest rate shock than a two-thirds debt structure. The shock above, designed to resemble the increase in interest rates that occurred in 1994, would cause federal net debt-servicing costs to increase by about $3.2 billion in the first year for a 60-per-cent fixed-rate structure, compared to $2.6 billion for a two-thirds fixed-rate share. Over a medium-term period, however, the benefits of the two-thirds structure are offset by higher debt-servicing charges.

Average Term to Maturity

The average term to maturity of the debt will stabilize.

Average term to maturity (ATM), measured in years, represents the average length of time before debt instruments mature and are subject to refinancing risk. The ATM of marketable debt has increased from roughly 4 years in 1990 to 6½ years in March 2002, which is at the upper end of the range of comparable sovereigns. The upward trend in ATM resulted from the increase in the fixed-rate share, the reduction in the stock of Treasury bills, and the continued issuance of 30-year bonds. The decision to lower the fixed-rate share of the debt over the coming years will have the effect of stabilizing the ATM.

Glossary

average term to maturity (ATM): The average time remaining before debt matures, taking only principal amounts into account.

basis point: One basis point is equal to 0.0001, or 0.01%.

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.

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

buyback on a cash basis: The repurchase of bonds for cash. Used to maintain the size of a new issuance.

buyback on a switch basis: The exchange of outstanding bonds for new bonds in the benchmark being built. Used to maintain the size of a new issuance.

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

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

Canada Premium Bond (CPB): CPBs are a savings product for individual Canadians introduced by the Government of Canada in 1998. They are offered for sale by most Canadian financial institutions, offer a higher interest rate compared to CSBs, and are redeemable without penalty once a year on the anniversary of the issue date or during the 30 days thereafter.

Canada Savings Bond (CSB): CSBs are currently offered for sale by most Canadian financial institutions to individual Canadians. CSBs pay a competitive rate of interest that is guaranteed for one or more years. They may be cashed at any time and, after the first three months, pay interest up to the end of the month prior to encashment.

Contingency Reserve: Is included in the budget projections primarily to cover risks arising from unpredictable events or unavoidable inaccuracies in the models used to translate economic assumptions into detailed budget forecasts. If not needed, it is used to reduce the federal debt.

Cost at risk: A dollar risk measure that represents the potential excess debt charges over a one-year horizon that the debt manager is X% certain not to exceed.

cross-currency swap: An agreement that exchanges one type of obligation for another involving different currencies and the exchange of the principal amounts and interest payments.

duration: Weighted average term to maturity of a bond's cash flow, used as a measure of interest rate sensitivity.

electronic trading system: An electronic system that provides real-time information about securities and enables the user to execute financial trades.

Exchange Fund Account: The principal repository of Canada's official foreign reserves, used to provide foreign currency liquidity and promote orderly conditions for the Canadian dollar in the foreign exchange market.

federal debt: accumulated deficit, i.e., the sum of all surpluses and deficits in the past.

financial balance: 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 therefore the amount of new borrowing required from outside lenders to meet the Government's financing needs in any given year.

fixed-rate debt: The share of the gross debt that is maturing or being repriced in more than 12 months.

fixed-rate marketable bond: Market debt instrument issued by the Government of Canada and sold via public tender. These issues have a specific maturity date and a specified interest rate. All Canadian-dollar marketable bonds pay a fixed rate of interest semi-annually and are non-callable. They are transferable and hence can be traded in the secondary market.

fungible bond: A bond that has the same financial attributes as another; the bonds are interchangeable.

government securities distributor (GSD): GSDs are members of a group of investment banks and dealers through which the Government distributes Government of Canada Treasury bills and marketable bonds.

gross public debt: Total amount the Government owes. It consists of both market debt and internal debt owed mainly to the superannuation accounts 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.

marketable debt: A marketable debt instrument is issued by the Government of Canada and sold via public tender or syndication. These issues can be traded between investors while outstanding.

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

market transparency: Within the context of debt management, characterization of a bond market where debt management strategies and operations are known and well understood by market participants.

net debt: Federal gross public debt, net of financial assets.

non-marketable debt: Interest-bearing debt that is not traded in secondary markets.

non-market debt: Includes 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).

primary market: Market for new issues of securities.

real return bond (RRB): Government of Canada real return bonds pay semi-annual interest based upon a real interest rate. Unlike standard fixed-rate marketable bonds, interest payments on RRBs are adjusted for changes in the consumer price index.

secondary market: Market where securities are bought and sold after issuance.

sovereign market: Market for the debt issued by a government.

Treasury bill: Short-term obligation sold by public tender. Treasury bills with terms to maturity of 3, 6 or 12 months are currently auctioned on a biweekly basis.

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

yield curve: Graph based on the term structure of interest rates, plotting the yield of all bonds of the same quality with maturities ranging from the shortest to longest term available.