

Canadian Government Debt 2006

A Guide to the Indebtedness of Canada and the Provinces

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Executive summary

The net direct debt of all three levels of government in Canada fell from \$832.7 billion to \$798.4 billion between 1999/2000 and 2003/2004. This is a small drop compared to the growth since 1990/1991 when net debt was \$533 billion. There are several reasons that even a small reduction in debt is good news. First, governments have begun to balance their books and some have started paying down their debt. Second, continued economic growth will help reduce the ratio of debt to gross domestic product (GDP), currently at 65.6%. Third, a constant or declining debt stock will demand a smaller portion of government revenues. As a result, some of the 10.7% of revenues currently being spent on interest charges can be used for further debt relief or tax cuts.

The bad news is that the \$34.3 billion drop in debt was more than offset by increases in other liabilities such as program obligations, which grew significantly from 1999 to 2003. The net increase in total liabilities over this period was \$259.4 billion. The growth in obligations under programs such as the Canada and Quebec Pension Plans, the Old Age Security, and the Medicare system has been a focus of this debt study for many years. Specifically, the concern lies in the size of these obligations and what this implies for the future health of these programs. Largely due to increases in program obligations, in 2003/2004 federal, provincial, and local liabilities added up to \$171,032 for each Canadian taxpayer or \$85,525 for each Canadian citizen.

Ontario has the largest total liabilities per capita at \$92,490, followed by Quebec (\$88,778) and Alberta (\$87,630). Prince Edward Island has the smallest total government liabilities per capita at \$64,841, followed by New Brunswick (\$65,810) and Manitoba (\$70,340). With the exception of Alberta, all provinces have total liabilities greater than 200% of annual GDP. If the government of Quebec taxed 100% of all income generated, it would still take them over two and a half years to pay of all their debt and cover all program obligations.

Definition of liabilities

Total liabilities include direct debt, debt guarantees, contractual commitments, contingent liabilities, and obligations. Direct debt includes the accumulated net debt incurred by a government and all its agencies. [1] Debt guarantees are issued by govern-

[1] Net debt refers to the total stock of securitized liabilities owed by a government minus its financial assets. That is, gross debt minus financial assets equals net debt. Net debt is the appropriate focus for analysis because it focuses on liabilities that have been adjusted for the financial resources that a government holds.

ments on behalf of privately held companies and government business enterprises. Contingent liabilities are potential claims, which may become actual depending on the outcome of uncertain future events while contractual commitments are the government's legally binding contracts to pay for future services rendered or goods provided. Unfunded liabilities include programs and benefits, such as Old Age Security (OAS), the Canada Pension Plan (CPP), and Medicare, that government has committed itself to providing.

The most pressing concern—unfunded liabilities of government programs

The largest portion of total liabilities is made up of the unfunded liabilities of government programs such as the Canada and Quebec Pension Plans (CPP/QPP), Old Age Security (OAS), and Medicare. These programs are at least partially unfunded in the sense that the estimated future stream of contributions falls short of the expected future payouts of benefits. The unfunded liability of Medicare alone grew by 28.5% between 1999 and 2003. In total, CPP, OAS, and Medicare unfunded liabilities grew by 19.7% during the five-year period covered in this study.

At their inception, these programs were based on the assumption that population demographics, economic growth rates, and wage increases prevalent in the 1960s would persist. It was considered favourable social and economic policy to transfer a small amount of money from a large group of younger workers to benefit a small group of relatively poor retirees. These assumptions have proven false. Birth rates have declined, income growth has stagnated, and mortality rates have decreased. In 1956, the proportion of the Canadian population that was under 20 years of age was 39.4% while the proportion of those over 65 was 7.7%. By 2004, the ratio of those under 20 years old to the total population had decreased to 24.6% and the ratio of those over 65 had increased to 13.0%. Estimates of these ratios for Canada predict that those under 20 will make up only 20.1% of the total population by 2040 while those over 65 will make up 24.3% [Office of the Superintendent of Financial Institutions, Actuarial Services Division, 2005]. Demographic changes will continue to undermine the ability of these plans to provide the intended level of benefits at the current rate of taxation.

These unfunded liabilities have important implications about how future surpluses should be distributed between spending, tax cuts, and debt reduction. In addition, unfunded liabilities also raise concerns about the structure of current spending. Governments should determine what percentage of their revenue will likely be required by existing programs over the next 50 years and, since we do not know how we are going to pay for the programs to which we have already committed ourselves, provide a detailed rationale for any new spending to Canadians.

In addition, the size of unfunded liabilities calls into question the structure of “pay-as-you-go” systems. At present, governments are using current contributions to pay the benefits of current CPP/QPP recipients. Similarly, OAS and Medicare are paid out of general government revenue. But, governments should be accumulating funds in individual or even collective personal accounts to meet future payments.

Canada compared to the world

International comparisons allow Canadians to get an idea of the relative severity of Canada’s direct debt burden. With a ratio of debt to discretionary income per person of 35.8%, Canada ranks 35th overall among 108 jurisdictions. More important than the overall rankings are the relative rankings generated by comparison with other high-income nations. [2] Canada has the ninth-highest debt burden among 20 high-income countries.

Summing up—where do we go from here?

The good news gives us cause for some small celebration as the pain of deficit elimination continues to yield rewards. However, we must be cautious to ensure that we do not permit apathy to erode the recent gains in fiscal security. We must be vigilant that we do not assume new and larger obligations and we must be prudent in forming policies to deal with those that already exist. Hopefully, the bad news associated with unfunded liabilities will focus attention on the long-term problems built into our existing social programs and encourage Canadians to consider all the alternatives for achieving the goals of these programs.

[2] The World Bank segments economies according to 2003 GNI per capita in US dollars. The groups are: low income \$765 or less; lower-middle income \$766–\$3,035; upper-middle income, \$3,036–\$9,385; and high income, \$9,386 or more.

Government liabilities—what are they?

Government debt—the accumulation of budget deficits and capital borrowing—has been, and still is, a serious issue in Canada. In 2003/2004, Canadian governments spent approximately 10.7% of their total revenues and over 4.1% of gross domestic product (GDP) servicing the existing debt. While many governments have made attempts to balance their books, all ten provinces, except Alberta, had consolidated (provincial + local) budget deficits in 2003/2004. The federal government, on the other hand, had a budget surplus in 2003/2004. There is constant pressure on governments to deviate from a course of fiscal propriety as the unlimited demand for government programs collides with a limited capacity to raise revenues.

This study provides Canadians with an accessible account of the total indebtedness of each of the provinces and the federal government; reminds them that, although progress has been made in some provinces and territories, all jurisdictions remain heavily indebted; and, examines how Canadian governments compare, both nationally and internationally, in the area of direct government debt.

While governments have been focused on balancing their books (few other than Alberta have focused on reducing the debt), an overly optimistic picture is often painted. That is, the primary focus of governments in Canada has been their direct debt and not other types of liabilities. A liability can be either a debt or an obligation and, in the context of government finance, the distinction between the two is critical. Governments must repay *debts* (e.g. the money owed to bondholders) or they default on their loans. Governments can eliminate or reduce *obligations* through statutory changes that cancel or change the coverage of programs. These program obligations include the promises to pay benefits under the Canada and Quebec Pension Plans, Old Age Security (OAS), and Medicare. For example, the government could reduce the obligations of the CPP by increasing the age at which one becomes eligible to collect retirement benefits from 65 to, say, 69. Obligations are not debt; they are promises to perform certain duties or pay a stream of benefits in the future. Throughout this study, liability includes debts and obligations.

Categories of government liabilities

Total government liabilities can be placed in four categories: (1) direct debt, (2) debt guarantees, (3) contingent liabilities and contractual commitments, and (4) program obligations. Before examining each category, it is important to distinguish between gross and net debt. Gross debt refers to the total stock of securitized liabilities owed by a government. Statistics of gross debt are used to determine the total debt burden to

taxpayers. Gross debt minus financial assets equals net debt. Net debt is the appropriate focus for analysis because it reveals liabilities that have been adjusted for the financial resources that a government holds. For instance, two jurisdictions may have the same amount of gross debt but, if one has a greater stock of financial assets (cash and securities), it will have a smaller net debt. For comparative purposes, we use statistics for net debt throughout this report.

1 Direct debt

Direct debt refers to the accumulated debt incurred by a government and its agencies and constitutes a direct legal contract. The government enters into a contract with creditors to obtain funds for current financing in exchange for regular interest payments and repayment of the principal at some future date. Direct debt represents the amount that governments are legally bound to repay or face default.

2 Debt guarantees

Debt guarantees are issued by governments on behalf of privately held companies and government business enterprises (Crown corporations) to stabilize those companies, provide capital, or lure firms to locate within a specific region by offering preferential financing. In the event that the firm fails, a debt guarantee would become a claim on government revenues—direct debt.

The principal problem with debt guarantees is that they create distortions in the marketplace. Firms rejected in the marketplace by entrepreneurs and investors use debt guarantees and subsidies to secure financing for on-going operations or expansion. Government intervention eliminates the discipline of the marketplace that allows profitable firms to flourish while forcing unproductive firms to improve or fail. Governments actively divert investment capital away from firms that the market favours towards firms that the government identifies as priorities.

3 Contingent liabilities and contractual commitments

Contingent liabilities

Contingent liabilities are potential claims, which may become actual depending on the outcome of uncertain future events. Examples are lawsuits against a government regarding tax refunds and the federal government's callable share capital in international organizations (shares of international companies that are paid in part with subsequent calls for payments) that could require payment to these agencies. The contingent liabilities to which the relevant government can affix a value are included in this report; those that the government cannot reasonably assess are not included.

Contractual commitments

The nature of government activity results in some large multi-year contracts and obligations. These are called contractual commitments because the government has a legally binding contract to pay for future services rendered or goods provided. Operating and capital leases are examples of contractual commitments. Governments can enter into long-term agreements with private firms that provide office space for government operations like Air Care testing centers and liquor distribution branches in British Columbia. Major contractual commitments that are estimated by governments are included in this report.

4 Program obligations

Obligations are the largest component of total liabilities and the most troubling because, while debt levels have stabilized, obligations continue to grow. In general, this category of liability consists of programs that Canadian governments have committed themselves to providing but that are not considered entitlements. In most cases, these programs, unlike direct debt, can be reduced or eliminated by changing or eliminating the relevant program. The main obligations that Canadians are familiar with are the Canada Pensions Plan (CPP) and the Quebec Pension Plan (QPP), Old Age Security, and Medicare, Canada's public health-care system. Benefits paid by Workers' Compensation Boards and pension plans for civil service employees are also program obligations but these programs have relatively small unfunded liabilities or none at all.

Program obligations are either paid out of general government revenue or have specific dedicated funding sources such as payroll taxes. If, at any point, one of these programs has a shortfall between the future stream of funding and future obligations, it has an unfunded liability.

Public-sector pension plans—little or no unfunded liabilities

Pension plans for employees of the civil service operate on an accumulated benefit formula. Put simply, individuals contribute to a program for a specified period, accumulating assets that are used to finance benefits to be received later. Thus, each individual has a legal claim on a specific amount accrued during the term of employment. Most provincial governments have recently committed themselves to eliminating unfunded liabilities in these plans; the federal government's plans are already in surplus.

Worker's Compensation Boards—little or no unfunded liabilities

There has been a general trend toward the increased independence of provincial Worker's Compensation Boards (WCB) in recent years. This increased independence has been associated with a move to fully funded status in most provinces and, as a result, WCB unfunded liabilities are not covered in this report.

Canada and Quebec Pension Plans—substantial unfunded liabilities

The Canada Pension Plan (CPP) and the Quebec Pension Plan (QPP) are largely pay-as-you-go systems where today's contributions are used to pay for the benefits of today's recipients. [1] In 1997, amendments to the CPP transformed it into a partial accumulated-benefits system. That is, increases in the contribution rate (5.85% in 1998) were accelerated to reach 9.9% by 2003 in order to increase the amount in the CPP reserve fund. [2] From inception, the target for the reserve fund was that it be large enough to provide two years of benefits. The new target is for the reserve fund to be large enough for five years of benefits. The Canada Pension Plan Investment Board was created to invest and manage funds in the reserve. While these alterations have improved the CPP system, it is still essentially a pay-as-you-go system in which benefits paid to each generation are financed from the contributions of the following generation.

Old Age Security—substantial unfunded liabilities

The Old Age Security (OAS), incorporating Old Age Security, the Guaranteed Income Supplement, and the Spouse's Pension Allowance, is paid for out of the federal government's general revenue. It has no stock of assets or even a specific funding source set aside to pay for its benefits.

Medicare—substantial unfunded liabilities

Medicare is a provincial responsibility and is funded by both the provincial and federal levels of government; the provinces pay for the bulk of Medicare spending. Like the OAS, Medicare is paid for out of general revenue. It has no stock of assets or a specific funding source set aside to pay for its benefits.

A detailed explanation of the methodology used to determine the extent of unfunded liabilities is presented below. For the purposes of calculating total government liabilities, estimates of the unfunded liabilities of the CPP, QPP, OAS, pension plans for civil-service employees, and of the Medicare system are used.

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- [1] For ease of presentation, only the CPP is discussed below since the CPP and QPP have the same structure and comments about the CPP also apply to the QPP.
- [2] While the accelerated increase in the contribution rate has attracted the greatest public attention, other reforms provided equal or greater savings. The largest saving, for example, came from freezing the basic exemption at \$3500, which effectively increases the pool of individuals who contribute to the CPP each year.

Government liabilities—how much?

Estimates of total government liabilities

Table 1 shows all four categories of liabilities for each of the provinces, the federal government, and Canada as a whole. Provincial data includes the liabilities of local governments. Using consolidated provincial and local data provides an accurate representation of the total debt for which taxpayers in each province are responsible. Otherwise, if only provincial figures are used, provinces with a high concentration of spending authority at the local level—and thus the possibility of local governments with large deficits and high debt—can appear to have lower liabilities than other provinces.

As a result of aggressively paying down its debt, Alberta is the only province in which financial assets are greater than gross debt and, thus, has a negative direct net debt of \$15.6 billion. Ontario and Quebec are the most indebted provinces with direct debt of \$107.0 billion and \$112.7 billion, respectively. Quebec makes the largest use of

Table 1: Total government liabilities [a] (\$millions), 2003/2004

	Direct Debt	Debt Guarantees	Contingent Liabilities and Contractual Commitments	Program Obligations	Total Government Liabilities
British Columbia	19,513	167	2,589	67,070	89,339
Alberta	(15,620)	13,065	11,945	68,759	78,149
Saskatchewan	9,242	129	7,542	14,088	31,001
Manitoba	11,498	950	817	16,090	29,355
Ontario	107,025	14,066	28,821	246,554	396,466
Quebec	112,674	43,221	23,951	261,729	441,575
New Brunswick	6,330	461	576	9,700	17,067
Nova Scotia	12,039	271	1,054	13,199	26,563
Prince Edward Island	1,361	28	84	1,696	3,169
Newfoundland & Labrador	10,705	1,657	252	6,265	18,879
Yukon Territory	(281)	43	66	516	344
Northwest Territories [b]	227	237	430	1,484	2,378
All Provinces	274,713	74,295	78,126	707,150	1,134,285
Federal Government	523,648	54,112	85,661	910,778	1,574,199
Canada (All Inclusive)	798,361	128,407	163,788	1,617,928	2,708,484

Note a: Provincial data includes liabilities of local governments. Note b: Includes Nunavut.

Sources: Statistics Canada, Federal and Provincial Public Accounts, Office of the Superintendent of Financial Institutions; calculations by the authors.

debt guarantees and, as a result, is potentially on the hook for more than \$43.2 billion dollars, over \$29 billion more than second place Ontario (\$14.1 billion). In addition, Quebec has the largest total government liability among the provinces at \$441.6 billion, followed closely by Ontario (\$396.5 billion). British Columbia has the third-largest total liabilities (\$89.3 billion).

Table 1 shows two important results. First, figures of indebtedness released by governments are far too optimistic in that they only account for direct debt. Direct debt in Canada (all inclusive) accounts for a mere 29.5% of total government liabilities. Second, separating provincial and federal liability figures does not account for the true indebtedness of each province. For example, while Alberta should be commended for aggressively paying down their direct debt, taxpayers in Alberta are still responsible for their portion of federal liabilities. Since federal liabilities are ultimately the responsibility of the taxpayers in each of the provinces, they are allocated to each province in this study. Federal liabilities are allocated according to the share of federal tax revenues collected from each province. (See the appendix, page 28, for more details on methodology.)

Table 2 presents total government liabilities by province with federal liabilities allocated to the provinces according to their share of federal tax revenues. Includ-

Table 2: Total consolidated government liabilities [a] (\$millions), 2003/2004

	Direct Debt	Debt Guarantees	Contingent Liabilities and Contractual Commitments	Program Obligations	Total Government Liabilities
British Columbia	82,762	6,703	12,936	198,240	300,640
Alberta	49,222	19,766	22,552	185,371	276,911
Saskatchewan	22,528	1,502	9,715	41,179	74,924
Manitoba	26,671	2,518	3,299	49,246	81,735
Ontario	339,532	38,093	66,856	689,449	1,133,929
Quebec	216,278	53,927	40,899	354,194	665,299
New Brunswick	15,477	1,406	2,072	30,467	49,423
Nova Scotia	24,486	1,557	3,090	39,013	68,146
Prince Edward Island	2,960	193	346	5,384	8,883
Newfoundland & Labrador	16,613	2,268	1,218	19,303	39,402
Yukon Territory	205	93	146	1,749	2,193
Northwest Territories [b]	1,626	382	659	4,331	6,998
Canada (All Inclusive)	798,361	128,407	163,788	1,617,928	2,708,484

Note a: Federal liabilities are allocated to each province based on a five-year average of the provincial contribution to federal revenues. Assets, liabilities, and unfunded liabilities of the Canada Pension Plan (CPP) are distributed using a five-year average of the contributions of each jurisdiction to the CPP. Note b: Includes Nunavut.

Sources: Statistics Canada, Federal and Provincial Public Accounts, Office of the Superintendent of Financial Institutions; calculations by the authors.

ing the province's share of federal liabilities in the provincial calculation dramatically changes the amount of total liability taxpayers face in each province. Ontario's total liabilities increase from \$396.5 billion to over \$1.1 trillion, the largest among the provinces. Quebec has the second-largest total liability, \$665.3 billion; and British Columbia, the third-largest, \$300.6 billion. Alberta's direct debt increases from -\$15.6 billion to \$49.2 billion when its portion of the federal debt is included.

There is, of course, an obvious problem with comparing absolute figures of total liabilities. That is, absolute figures do not take into account the differences in the populations or the size of the economies of the Canadian jurisdictions. Two indicators used to compare the relative indebtedness of the provinces and federal government are total liabilities per capita and as a percentage of gross domestic product (GDP). Table 3 shows the relative figures for each of the four liability categories (as in Table 2, federal liabilities are allocated to the provinces).

Relative measures of total liabilities produce rather striking results. Among the provinces, it is Alberta that has the smallest direct debt per capita (\$15,577) while

Table 3: Total consolidated government liabilities, per capita and as a percentage of GDP, [a] 2003/2004

	Direct Debt		Debt Guarantees		Contingent Liabilities and Contractual Commitments		Program Obligations		Total Government Liabilities	
	per capita	% GDP	per capita	% GDP	per capita	% GDP	per capita	% GDP	per capita	% GDP
British Columbia	19,919	56.7	1,613	4.6	3,113	8.9	47,711	135.8	72,356	206.0
Alberta	15,577	28.8	6,255	11.5	7,137	13.2	58,662	108.3	87,630	161.8
Saskatchewan	22,641	61.9	1,509	4.1	9,764	26.7	41,386	113.1	75,301	205.9
Manitoba	22,953	70.7	2,167	6.7	2,839	8.7	42,381	130.6	70,340	216.7
Ontario	27,694	68.8	3,107	7.7	5,453	13.6	56,236	139.7	92,490	229.8
Quebec	28,860	85.7	7,196	21.4	5,458	16.2	47,264	140.3	88,778	263.6
New Brunswick	20,609	69.8	1,873	6.3	2,759	9.3	40,569	137.4	65,810	222.8
Nova Scotia	26,160	85.3	1,664	5.4	3,301	10.8	41,680	135.9	72,805	237.3
Prince Edward Island	21,607	77.0	1,411	5.0	2,523	9.0	39,300	140.0	64,841	231.0
Newfoundland & Labrador	32,072	91.6	4,378	12.5	2,352	6.7	37,265	106.5	76,066	217.3
Yukon Territory	6,618	15.4	3,008	7.0	4,701	10.9	56,415	131.3	70,742	164.6
Northwest Territories [b]	22,904	34.8	5,374	8.2	9,282	14.1	61,006	92.7	98,566	149.8
Canada (All inclusive)	25,210	65.6	4,055	10.6	5,172	13.5	51,089	133.0	85,525	222.7

Note a: Federal liabilities are allocated to each province based on a five-year average of the provincial contribution to federal revenues. Assets, liabilities, and unfunded liabilities of the Canada Pension Plan (CPP) are distributed using a five-year average of the contributions of each jurisdiction to the CPP. Note b: Includes Nunavut.

Sources: Statistics Canada, Federal and Provincial Public Accounts, Office of the Superintendent of Financial Institutions; calculations by the authors.

Newfoundland's per-capita direct debt is a staggering \$32,072. Likewise, direct debt as a percentage of GDP ranges from 28.8% in Alberta to 91.6% in Newfoundland. Even more worrisome are figures for total government liabilities. Ontario has the largest total liabilities per capita at \$92,490 followed by Quebec with \$88,778 and Alberta with \$87,630. Prince Edward Island records the smallest total government liabilities per capita at \$64,841, followed by New Brunswick with \$65,810 and Manitoba with \$70,340. With the exception of Alberta, provinces have total liabilities as a percentage of GDP in excess of 200%. If the government of Quebec taxed 100% of all income generated, it would still take over two and one-half years to pay of all its debt and cover all program obligations.

Table 4 shows the growth rate of each category of liability from 1999/2000 to 2003/2004. The good news is that each province has decreased its direct debt as a percentage of GDP. Alberta leads the way with a 50.1% reduction in direct debt as a percentage of GDP over the last five years. Newfoundland and Labrador and Ontario follow Alberta: Newfoundland and Labrador has reduced its direct debt as a percentage of GDP by 27.8% and Ontario, by 21.1%.

Two provinces have increased their program obligations relative to GDP: New Brunswick experienced a 0.4% increase and Saskatchewan a 0.1% in program

Table 4: Growth of total consolidated government liabilities as a percentage of GDP, [a] 1999/2000–2003/2004

	Direct Debt	Debt Guarantees	Contingent liabilities and Contractual Commitments	Program Obligations	Total Government Liabilities
British Columbia	(16.5)	(19.5)	20.1	(2.1)	(6.3)
Alberta	(50.1)	(19.9)	4.7	(17.9)	(25.3)
Saskatchewan	(19.2)	(25.7)	23.6	0.1	(5.0)
Manitoba	(12.4)	4.2	(4.6)	(0.4)	(4.7)
Ontario	(21.1)	(34.8)	20.0	(1.1)	(8.7)
Quebec	(16.5)	(19.7)	4.1	(0.3)	(7.7)
New Brunswick	(19.8)	0.1	(26.8)	0.4	(8.2)
Nova Scotia	(17.6)	(40.6)	(12.9)	(5.1)	(11.5)
Prince Edward Island	(12.9)	(10.8)	(22.8)	(4.0)	(8.2)
Newfoundland & Labrador	(27.8)	(18.6)	(16.2)	(21.1)	(23.8)
Yukon Territory	(36.6)	(21.3)	(45.3)	(5.8)	(14.5)
Northwest Territories [b]	(36.5)	(16.3)	(31.4)	(23.0)	(27.1)
Canada (All inclusive)	(22.5)	(24.7)	10.5	(3.8)	(10.7)

Note a: Federal liabilities are allocated to each province based on a five-year average of the provincial contribution to federal revenues. Assets, liabilities, and unfunded liabilities of the Canada Pension Plan (CPP) are distributed using a five-year average of the contributions of each jurisdiction to the CPP. Note b: Includes Nunavut.

Sources: Statistics Canada, Federal and Provincial Public Accounts, Office of the Superintendent of Financial Institutions; calculations by the authors.

obligations as a percentage of GDP from 1999/2000 to 2003/2004. The most significant decrease in program obligations as a percentage of GDP among the provinces occurred in Newfoundland and Labrador, which decreased obligations as a percent of GDP by 21.1% since 1999/2000. While progress has been made in some provinces, decreases in program obligations as a percentage of GDP have been less than 5% in all but three provinces. Total liabilities in each province as a percent of GDP decreased in all jurisdictions but this is largely the result of decreasing relative direct debt, not program obligations.

Exposure to foreign currencies

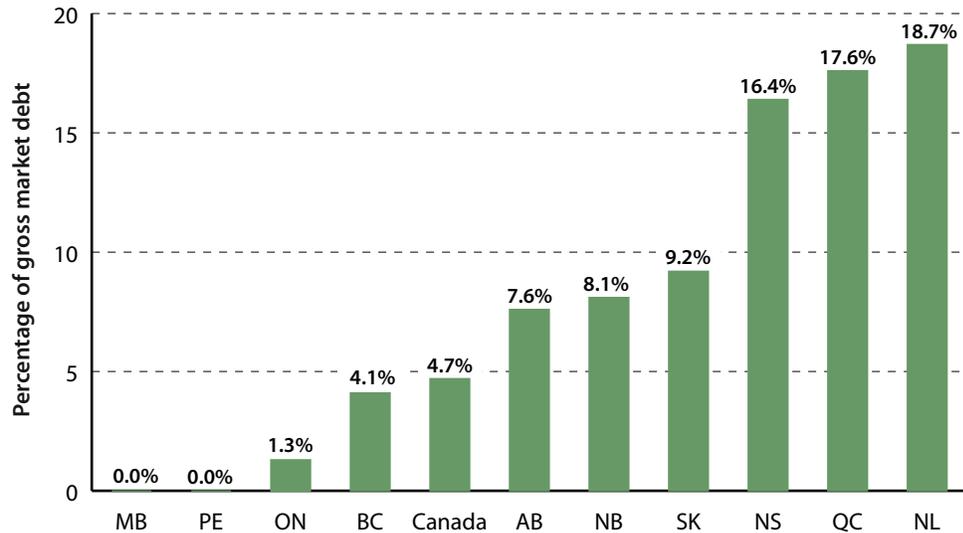
A significant portion of the debt of many provinces is denominated in a foreign currency. The necessity of paying interest on, and ultimately redeeming, bonds issued in foreign currencies imposes an additional risk on taxpayers. A significant deterioration in the value of the Canadian dollar correspondingly increases the cost of servicing the debt held in foreign currencies while a rise in the Canadian dollar reduces these costs. [3] In general, this means that the provinces are “speculating” on exchange markets unless, like Alberta and British Columbia, they receive revenues such as resource royalties that are themselves effectively linked to the exchange rate. Figure 1 illustrates the proportion of total direct debt that each province holds in foreign currencies. The province of Newfoundland and Labrador is heavily exposed to foreign-exchange risk as bonds denominated in foreign currency account for 18.7% of its direct debt. Quebec and Nova Scotia also have a relatively high degree of foreign-exchange exposure: bonds denominated in foreign currency account for 17.6% and 16.4% of direct debt. Relative to the other jurisdictions, Ontario faces a small amount of foreign-exchange risk as bonds denominated in foreign currency make up only 1.3% of direct debt. Manitoba and Prince Edward Island have no foreign-exchange exposure.

Interest charges

Interest represents the cost of past consumption and investment that has been financed through deficit spending and debt financing. In 2003/2004, Canadian governments spent \$50.0 billion on interest payments, which accounts for 4.1% of GDP and 10.7% of total government revenues. Figure 2 illustrates the proportion of government revenues consumed by interest charges. Interest payments on direct debt account for 17.4% of federal government revenues, 11.8% of provincial revenues, and 4.2% of local revenues.

[3] Most provinces have benefited from the rapid appreciation of the Canadian dollar, which has decreased their exposure in recent years.

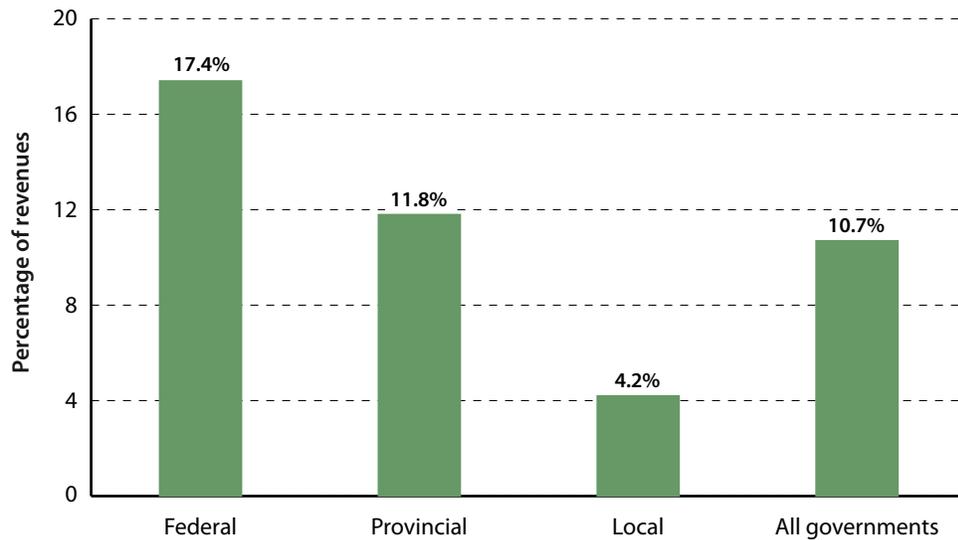
Figure 1: Foreign exchange exposure, 2003



Note: Exposure is net of hedges.

Source: Dominion Bond Rating Service.

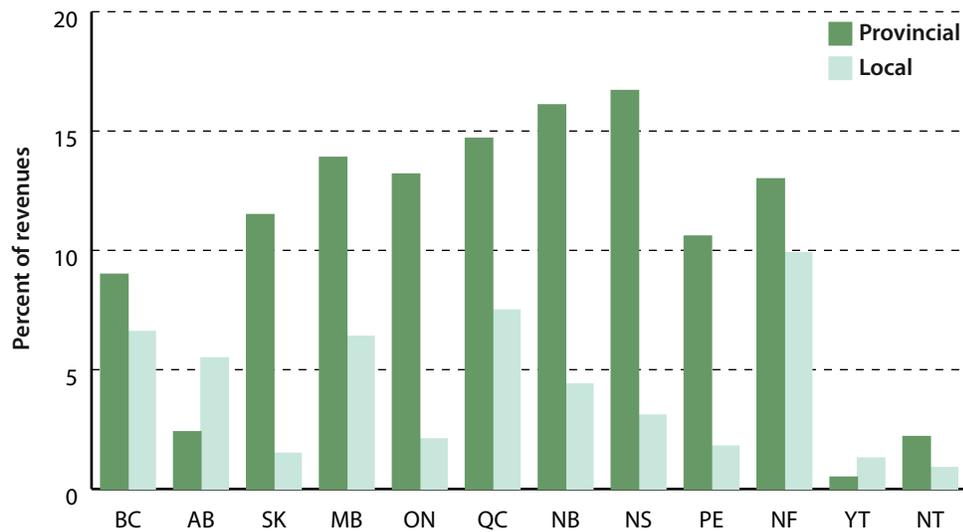
Figure 2: Interest charges as a percentage of revenues, 2003/2004



Sources: Statistics Canada, Financial Management System; calculations by the authors.

Figure 3 shows the share of government revenues allocated to interest payments for provincial and local governments. Provincial debt charges vary considerably, from 2.4% in Alberta to 16.7% in Nova Scotia. Local debt charges vary from 1.5% in Saskatchewan to 9.9% in Newfoundland and Labrador. This expense to current taxpayers illustrates foregone tax cuts in order to service the costs of previous deficit-financed program expenditures.

Figure 3: Provincial and local interest charges, 2003/2004



Sources: Statistics Canada, Financial Management System; calculations by the authors.

Summing up—total liabilities

The level of total liabilities accumulated by Canadian governments is enormous. Total liabilities, including direct debt, debt guarantees, contingent liabilities, contractual commitments and program obligations, amount to \$85,525 for every Canadian citizen, \$171,032 for each taxpayer, and 222.7% of GDP. These statistics show that Canadian governments have accumulated an unsustainable level of liabilities: even if governments taxed 100% of every dollar of income generated in a given year, it would take over two years to pay back the debt and fully fund all programs.

The notion that Canadians owe \$524 billion (the approximate net federal debt) ignores federal obligations and other liabilities as well as all the liabilities of the provincial and local governments: total government liabilities amount to \$2.7 trillion. The changes that federal and provincial governments have already made to deal with their debts are only a small fraction of the changes that must be made. Significant restructuring of government programs and further decreases in direct debt are necessary.

The most pressing concern—unfunded liabilities of government programs

The size and complexity of the unfunded liabilities associated with the Canada and Quebec Pension Plans (CPP/QPP), Old Age Security (OAS), and Medicare (Canada’s health-care system) require that this category of liability receive special discussion. Taken together, the unfunded liabilities of CPP/QPP, OAS, and Medicare are responsible for 63.3% of Canada’s total liabilities. Unfunded liabilities of civil-service pensions account for only 3.2% of total liabilities but are discussed briefly for the sake of completeness.

Awareness of the deficit and debt on the part of the public helped push federal and provincial governments to stop using deficit financing for the most part and to begin to decrease Canada’s debt burden. Similarly, attention paid to the CPP unfunded liability because of the triennial actuarial reports that are required by statute helped initiate the reforms to that program to put it on a more solid financial footing. The main difference between the problems that have been dealt with, at least partially—deficits, debt, and the CPP—and those that have not—OAS and Medicare—comes down to the attention that each type of liability receives. Deficits and debts are intuitively simple concepts as people experience them in their personal everyday lives. The CPP unfunded liability, while far from simple, is at least reported and discussed regularly. The Medicare unfunded liability is rarely discussed and few people are aware of the size of the OAS program, much less its unfunded liability. Using Statistics Canada’s microsimulation model (the Social Policy Simulation Database and Model or SPSD/M) and detailed data from Statistics Canada and the Canadian Institute for Health Information, The Fraser Institute has generated estimates of the unfunded liability of OAS and Medicare. The unfunded liability estimates for the CPP/QPP, OAS, and Medicare from 1999 to 2003 are presented in table 5. This section introduces the the Fraser Institute’s Unfunded Liability Model and describes how Canada got its current burden of unfunded liabilities.

Table 5: Summary of unfunded liabilities for major government programs (\$billions)

Fiscal Year	CPP	OAS	Medicare	Total
1999	483.5	372.4	432.2	1,288.1
2000	443.0	395.8	449.7	1,288.5
2001	466.1	422.1	509.0	1,397.1
2002 [a]	507.5	441.8	529.9	1,479.2
2003	516.3	470.0	555.3	1,541.6
Change, 1999–2003 (%)	6.8%	26.2%	28.5%	19.7%

Note a: 2002 figures for CPP are not available and were therefore estimated using historical data.

Sources: Office of the Chief Actuary, Office of the Superintendent of Financial Institutions Canada, Canada; calculations by authors.

Funding structure

The Canada/Quebec Pension plans, Old Age Security, and Medicare are designed like insurance plans: individuals contribute to a program for a specified period of time, accumulating benefits that are to be received at a later date. Unfortunately, in the sphere of public liability, only workers' compensation boards and pension plans for civil-service employees operate on an accumulated-benefit formula. The remaining programs are funded on a "pay-as-you-go" system. Rather than accumulate funds in individual or even collective personal accounts for future payment, current contributions are used to pay the benefits of current recipients.

The source of funds also varies among programs. The Canada and Quebec Pension Plans, the pension plans for civil-service employees, and the workers' compensation boards derive their funding from direct payroll deductions. Old Age Security and the health-care system are financed through general government tax revenues.

Analysis of unfunded liabilities

The essence of the analysis of unfunded liabilities is the actuarial valuation, which assesses the ability of a program to finance the stated benefits for a specific time given the contribution rates, expected investment returns, and specific economic and demographic assumptions. The purpose of the valuation is to determine the current long-term deficit or surplus of program obligations of Canadian jurisdictions. Unfunded liability estimates for Old Age Security (OAS) and Medicare are produced using a model developed by The Fraser Institute.

The Fraser Institute constructed its unfunded liability model because previous estimates of "unfunded liabilities" for OAS and Medicare by the Office of the Superintendent of Financial Institutions (OSFI) only considered the stream of benefits to be paid out and, therefore, greatly exaggerated Canada's liabilities from these programs. To be accurate, the OSFI's estimates should be described as "estimates of future liabilities" and calculating the present value of the future stream of benefits, as the previous models did, tells only part of the story; the other part is the funding for these programs. Although there are no explicit revenue streams attached to these programs, they do have a payment stream associated with them through general revenue. In order to have a true analysis of unfunded liabilities for OAS and Medicare, such as this publication presents, both the discounted stream of future benefits and the discounted stream of future contributions must be calculated. The appendix (page 28) explains how The Fraser Institute's unfunded liability model was built.

Actuarial valuations are extremely sensitive to their underlying assumptions. Both sets of estimates, for OAS and for Medicare, use the same basic assumptions used

in the compilation of the Canada Pension Plan estimate [Office of the Superintendent of Financial Institutions, Actuarial Services Division (OSFI-ASD), 2004]: namely, a discount rate of 6.0%, price increases (measured by the consumer price index) of 2.7%, and a nominal rate of wage growth of 3.9%. Changes in these underlying assumptions can cause significant changes in the results. Actuaries normally conduct valuations every three years and modify assumptions, if warranted, based on new economic conditions. All past and current unfunded liability figures in this report make use of consistent assumptions.

At their inception, the CPP/QPP, OAS, and Medicare system were based upon similar assumptions and philosophies. It was assumed that the mix of ages in the population, the rate of economic growth, and the wage increases of the 1960s would continue indefinitely. It was considered favourable social and economic policy to transfer a small amount of money from a large group of younger workers to benefit a small group of relatively poor retirees. These assumptions were entirely wrong. Birth rates have declined, income growth has stagnated, and mortality rates have decreased. In 1956, the proportion of the Canadian population that was under 20 years of age was 39.4% while the proportion of those over 65 was 7.7%. By 2004, the ratio of those under 20 years old to the total population had decreased to 24.6% and the ratio of those over 65 had increased to 13.0%. Estimates of these ratios for Canada predict those under 20 will account for only 20.1% of the total population by 2040 while those over 65 will account for 24.3% [OSFI-ASD, 2005]. These demographic changes have undermined the ability of the retirement programs and the health-care system to provide the intended level of benefits; and will continue do so. Because of these demographic changes, the policy of transferring a small amount of money from a large group of younger workers to benefit a small group of relatively poor retirees has become, in fact, a policy of using large deductions from a small group of workers with stagnant incomes to sustain a large group of relatively wealthy retirees.

Canada and Quebec Pension Plans (CPP/QPP)

The CPP's unfunded liability was \$516 billion in 2003, 6.8% higher than in 1999 (\$484 billion). The QPP is not included in table 5 because it does not have an official unfunded liability estimate. That said, the generally accepted rule is that, since the CPP and QPP are set up and modified in the same ways, changes in the CPP's valuation will be reflected in the QPP's valuation. The QPP is roughly one-third the size of the CPP.

Old Age Security (OAS)

After the costs of servicing debt, OAS is the largest spending commitment the federal government has. OAS spending was \$26.9 billion or 13.6% of total federal spending in 2003/2004. Expenditures on OAS grew by 21.8% between 1999/2000 and 2003/2004. The OAS's unfunded liability has grown by 26.2% between 1999 and 2003, from \$372.4 billion to \$470.0 billion.

Medicare

Spending on Medicare is the largest expenditure category in all of the provinces' budgets and, although difficult to determine exactly, a large expenditure in the federal budget. According to Statistics Canada, Medicare spending was \$89.9 billion in 2003/2004 and has grown by 39.8% between 1999/2000 and 2003/2004. Medicare's unfunded liability has grown by 28.5% between 1999 and 2003, from \$432.2 billion to \$555.3 billion.

Total unfunded liabilities for major government programs

Taken together, the unfunded liabilities of the CPP, OAS, and Medicare represent over \$1.5 trillion. This figure has grown by 19.7% since 1999, when it was at \$1.3 trillion. These unfunded liabilities are enormous obligations. The unfunded liabilities of the federal retirement-income support programs and the health-care system are currently estimated at 127% of GDP in Canada. Restructuring retirement-income support programs should be initiated immediately to eliminate the intergenerational wealth transfer and to ensure that needy seniors do not suffer for the policy mistakes of government.

Health-care funding is primarily provided through general tax revenue even though it is consumed according to a normal insurance pattern. There continues to be lengthy waiting lists for a wide range of procedures in every province and an aging population will place tremendous pressures on the health-care system [Esmail et al., 2005]. Unless governments make changes soon, these pressures will likely lead to higher general tax rates or a further reduction in services.

Public-sector pension plans

The federal and provincial governments have benefit funds for their pension plans for government employees. Most provincial governments have committed themselves to the elimination of the actuarial deficits by a set deadline. The Federal government currently maintains a surplus of \$6.9 billion in its pension plans. Table 6 summarizes the most recently available actuarial valuations for the provincial and federal government's pension plans. This table is presented for illustrative purposes only as unfunded liabilities of public-sector pensions are included in the direct debt figures to maintain consistency with Statistics Canada data. Surplus amounts for the provinces are not included in this study, again to maintain consistency with the Statistics Canada's data. The surpluses in federal government's employee pension plans have been deducted from gross direct debt because Bill C-78, effective as of April 2000, allows the Government of Canada to keep the accumulated surpluses in these funds.

Table 6: Unfunded liabilities of pension plans for employees of the civil service

	Valuation Date	Unfunded Liabilities
Federal Government		(\$millions)
<i>Public Service</i>	March 31, 2002	(6,261)
<i>Canadian Forces</i>	March 31, 2002	(2,815)
<i>Royal Canadian Mounted Police</i>	March 31, 2002	(632)
<i>Members of Parliament Retirement</i>	March 31, 2001	(66)
<i>Federally Appointed Judges</i>	March 31, 2001	1,255
<i>Retirement Compensation Arrangements</i>	March 31, 2002	1,603
<i>Total</i>		<u>(6,916)</u>
British Columbia		(\$millions)
<i>Teacher's Pension Plan</i>	December 31, 2002	0
<i>Municipal Pension Plan</i>	December 31, 2000	0
<i>Public Service Pension Plan*</i>	March 31, 2002	0
<i>Members of the legislative Assembly Pension Plan</i>	March 31, 2002	3
<i>College Pension Plan*</i>	August 31, 2003	0
<i>Total</i>		<u>3</u>
Note: * British Columbia's Public Service Pension Plan and College Pension Plan are joint trusteeship plans in which control of the pension plans and their assets are assumed by a pension board. Thus, the government has no formal claim on pension fund surpluses and is liable for 50% of their unfunded liabilities. To date, the Public Service Pension Plan and College Pension Plan are in surplus.		
Alberta		(\$millions)
<i>Teacher's Pension Plan</i>	August 31, 2002	4,094
<i>Public Service Pension Plan</i>	December 31, 1998	0
<i>Public Service Management Pension Plan</i>	December 31, 2002	676
<i>Universities Academic Pension Plan</i>	December 31, 2002	171
<i>Special Forces Pension Plan</i>	December 31, 2001	68
<i>Management Employees Pension Plan</i>	December 31, 1999	0
<i>Members of the legislative Assembly Pension Plan</i>	March 31, 2003	50
<i>Total</i>		<u>5,059</u>
Saskatchewan		(\$millions)
<i>Teacher's Superannuation Fund</i>	June 30, 2003	2,490
<i>Public Service Superannuation Fund</i>	December 31, 2002	1,450
<i>Others (Judges of the Provincial Court Superannuation Plan, Saskatchewan Transportation Company Employees Superannuation Plan, Anti-TB League Employees Superannuation Plan, and the Saskatchewan Pension Annuity Fund)</i>	Various	83
<i>Total</i>		<u>4,023</u>

Table 6 (continued): Unfunded liabilities of pension plans for employees of the civil service

	Valuation Date	Unfunded Liabilities
Manitoba		(\$millions)
<i>Civil Service Superannuation Fund</i>	December 31, 2001	1,497
<i>Members of the legislative Assembly Plan</i>	March 31, 2003	28
<i>Teacher's Retirement Allowances Fund</i>	January 1, 2001	2,066
<i>Judges' Supplemental Pension Plan</i>	March 31, 2003	21
<i>Total</i>		<u>3,612</u>
Ontario		(\$millions)
<i>Teacher's Pension Plan</i>	January 1, 2000	0
<i>Public Service Pension Plan</i>	December 31, 1998	0
<i>Ontario Public Service Employee's Union</i>	March 31, 2001	0
<i>Total</i>		<u>0</u>
Quebec		(\$millions)
<i>RREGOP</i>	December 31, 1999	24,344
<i>PPMP</i>	December 31, 1999	5,214
<i>TPP & PPCT</i>	various	14,148
<i>CSSP</i>	December 31, 1999	4,952
<i>Other Plans</i>	various	3,827
<i>Total</i>		<u>52,485</u>
New Brunswick		(\$millions)
<i>Public Service Superannuation Plan</i>	April 1, 2003	21
<i>Teacher's Pension Plan</i>	April 1, 2003	125
<i>Early Retirement</i>	April 1, 1999	128
<i>Other (Judges', Members', Hospitals & Schools)</i>	Various	(2)
<i>Total</i>		<u>272</u>
Nova Scotia		(\$millions)
<i>Teacher's Pension Fund</i>	March 31, 2000	182
<i>Member's Retiring Allowance</i>	March 31, 2000	62
<i>Public Service Superannuation Fund</i>	March 31, 2000	(351)
<i>Sysco Pension Plan</i>	March 31, 2001	220
<i>Total</i>		<u>113</u>
Prince Edward Island		(\$millions)
<i>Teacher's Superannuation Fund</i>	April 1, 2002	154
<i>Civil Service Superannuation Fund</i>	April 1, 2002	6
<i>MLA Pension Fund (both plans)</i>	April 1, 2003	(3)
<i>Total</i>		<u>156</u>

Table 6 (continued): Unfunded liabilities of pension plans for employees of the civil service

	Valuation Date	Unfunded Liabilities
Newfoundland & Labrador		(\$millions)
<i>Teachers' Superannuation Fund</i>	August 31, 2003	1,943
<i>Public Service Pension Plan</i>	December 31, 2003	1,584
<i>Uniformed Services Plan</i>	December 31, 2003	180
<i>Members of the House of Assembly Plan</i>	December 31, 2003	51
<i>Provincial Court Judges'</i>	April 1, 2002	3
<i>Total</i>		<u>3,761</u>
Yukon Territory		(\$thousands)
<i>Legislative Assembly Retirement Allowances Plan</i>	March 31, 2002	(148)
<i>Total</i>		<u>(148)</u>
Northwest Territories		(\$thousands)
<i>Legislative Assembly Supplementary Allowance</i>	March 31, 2000	21,057
<i>Judge's Supplemental Pension Plan</i>	April 1, 2001	2,120
<i>Total</i>		<u>23,177</u>

Sources: Federal and provincial public accounts; various Departments of Finance.

Canada compared to the world

One way to assess the indebtedness of a nation is to compare it to other nations. Accordingly, a standard feature of the annual calculation of the total liabilities of Canadian governments has been a comparison with the debt levels of other countries. Countries are compared using the amount of debt per person within a country compared to discretionary income per person (the level of income earned above the subsistence level). This method of assessing debt levels by including income statistics takes into account the ability of nations to service their debt.

Table 7 ranks jurisdictions from best to worst on the basis of their debt calculated as a percentage of discretionary income. [4] The results for Canada and the provinces are remarkably poor. Newfoundland and Labrador ranks the lowest at 62nd out of 108 jurisdictions while Alberta ranks the highest of any Canadian province, 15th, with a ratio of 15.4%. This means that the debt per person accumulated by Alberta represents 15.4% of the average person's total annual income less an allowance for a minimum level of subsistence.

Norway, Finland, South Korea, Czech Republic, Slovak Republic, and Sweden, which took the top six spots in the overall ratings, have governments that are net providers of capital. All six governments have negative net debt, as indicated by the negative ratio in table 7, since they have more financial assets than gross debt.

Only one of the 14 former Soviet republics, Belarus, ranks within the top 20, down from nine in 2001 and seven in 1999. The principal reason for their success in 1999 was the Zero Option Agreement (1993), by which the newly formed Commonwealth of Independent States (CIS) assumed all the debt of the former Soviet Union while the new republics forfeited all claims against assets of the former Soviet Union [Boote *et al.*, 1995: 81]. The entire stock of external debt for the former Soviet republics consists of debt accumulated since 1993. The bulk of this debt was issued to “transform and stabilize the economy” and “finance imports” [Boote *et al.*, 1995: 82]. The former Soviet republics had an advantage in 1999 due to their relatively small debt stock. However, continued accumulation of debt since has quickly eroded this advantage.

More important than the overall rankings are the rankings of Canadian jurisdictions relative to other “high-income nations,” those with average incomes above \$9,386, [5] which are a level of economic development similar to that of Canada. Among these 21 high-income countries, Canada has the ninth highest debt burden (table 8).

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- [4] The underlying data used in table 7 differs from that reported in previous tables. See the appendix, page 28, for a detailed discussion of the differences.
- [5] The World Bank segments economies according to 2003 GNI per capita in US dollars. The groups are: low income \$765 or less; lower-middle income \$766–\$3,035; upper-middle income, \$3,036–\$9,385; and high income, \$9,386 or more.

Table 7: Canadian jurisdictions and other countries ranked by ratio of debt to discretionary income, 2003

Rank	Country	Debt / Discretionary Income	Rank	Country	Debt / Discretionary Income
1	Norway	(99.0%)	42	Azerbaijan	40.7%
2	Finland	(40.6%)	43	Austria	40.8%
3	Korea, Rep.	(30.9%)	44	Prince Edward Island	41.6%
4	Czech Republic	(7.7%)	45	Algeria	42.6%
5	Slovak Republic	(5.9%)	46	Thailand	43.0%
6	Sweden	(2.0%)	47	Romania	43.4%
7	Australia	2.3%	48	United States	43.9%
8	Botswana	7.4%	49	France	44.8%
9	Yukon Territory	8.3%	50	Venezuela, RB	45.8%
10	Iran, Islamic Rep.	10.3%	51	Vanuatu	45.9%
11	New Zealand	11.4%	52	Russian Federation	46.1%
12	Equatorial Guinea	11.7%	53	Nova Scotia	46.0%
13	Ireland	15.1%	54	Maldives	46.2%
14	Fiji	15.2%	55	Quebec	46.2%
15	Alberta	15.4%	56	Macedonia, FYR	46.9%
16	Denmark	17.3%	57	Dominican Republic	47.1%
17	Poland	17.4%	58	Lithuania	49.2%
18	Northwest Territories	18.6%	59	Germany	51.0%
19	Belarus	19.4%	60	Ukraine	51.1%
20	South Africa	19.4%	61	Malaysia	51.8%
21	China	20.4%	62	Newfoundland & Labrador	49.3%
22	Mexico	23.8%	63	Colombia	52.9%
23	Iceland	23.9%	64	Mauritius	53.4%
24	Guatemala	24.6%	65	Bosnia and Herzegovina	53.5%
25	Switzerland	24.8%	66	India	53.5%
26	Trinidad and Tobago	27.4%	67	Egypt, Arab Rep.	54.3%
27	Swaziland	27.7%	68	Brazil	55.0%
28	Barbados	28.5%	69	El Salvador	56.7%
29	Albania	29.8%	70	Morocco	57.4%
30	British Columbia	30.5%	71	St. Lucia	58.1%
31	Saskatchewan	33.3%	72	Peru	58.9%
32	Costa Rica	34.0%	73	Chile	64.9%
33	United Kingdom	35.1%	74	Tonga	66.7%
34	Spain	35.6%	75	Armenia	66.7%
35	Canada	35.8%	76	Turkey	67.9%
36	Netherlands	36.5%	77	Gabon	68.1%
37	Ontario	37.0%	78	St. Vincent & the Grenadines	69.2%
38	Portugal	37.3%	79	Tunisia	72.4%
39	New Brunswick	37.7%	80	Panama	74.3%
40	Hungary	37.8%	81	Ecuador	75.1%
41	Manitoba	38.1%	82	Cape Verde	76.7%

Rank	Country	Debt / Discretionary Income	Rank	Country	Debt / Discretionary Income
83	Jamaica	77.7%	96	Kazakhstan	93.9%
84	Japan	78.1%	97	St. Kitts and Nevis	94.5%
85	Bulgaria	78.1%	98	Italy	97.6%
86	Seychelles	79.5%	99	Greece	102.0%
87	Paraguay	80.9%	100	Indonesia	103.4%
88	Estonia	81.2%	101	Jordan	105.2%
89	Serbia and Montenegro	83.8%	102	Lebanon	107.1%
90	Latvia	86.1%	103	Djibouti	107.8%
91	Croatia	86.3%	104	Bhutan	111.7%
92	Sri Lanka	91.3%	105	Angola	117.5%
93	Georgia	91.4%	106	Uruguay	118.3%
94	Belgium	93.2%	107	Belize	119.0%
95	Grenada	93.7%	108	Bolivia	122.3%

Sources: OECD, *Economic Outlook 79*, May, 2006; World Bank, *World Development Indicators 2005*; Statistics Canada, Canadian federal and provincial government budgets, calculations by the authors

Table 8: Canadian jurisdictions and high-income countries ranked by ratio of debt to discretionary income, 2003

Rank	Overall Rank	Jurisdiction	Debt / Discretionary Income (\$US)	Rank	Overall Rank	Jurisdiction	Debt / Discretionary Income (\$US)
1	1	Norway	(99.0%)	17	35	Canada	35.8%
2	2	Finland	(40.6%)	18	36	Netherlands	36.5%
3	6	Sweden	(2.0%)	19	37	Ontario	37.0%
4	7	Australia	2.3%	20	39	New Brunswick	37.7%
5	9	Yukon Territory	8.3%	21	41	Manitoba	38.1%
6	11	New Zealand	11.4%	22	43	Austria	40.8%
7	13	Ireland	15.1%	23	44	Prince Edward Island	41.6%
8	15	Alberta	15.4%	24	48	United States	43.9%
9	16	Denmark	17.3%	25	49	France	44.8%
10	18	Northwest Territories	18.6%	26	52	Nova Scotia	46.0%
11	23	Iceland	23.9%	27	54	Quebec	46.2%
12	25	Switzerland	24.8%	28	60	Germany	51.0%
13	30	British Columbia	30.5%	29	59	Newfoundland & Labrador	49.3%
14	31	Saskatchewan	33.3%	30	84	Japan	78.1%
15	33	United Kingdom	35.1%	31	94	Belgium	93.2%
16	34	Spain	35.6%	32	98	Italy	97.6%

Sources: OECD, *Economic Outlook 79*, May, 2006; World Bank, *World Development Indicators 2005*; Statistics Canada, Canadian federal and provincial government budgets, calculations by the authors

Summing up—where do we go from here?

Step 1: Acknowledge the problem

Governments and taxpayers must recognize the extent of the liabilities that exist for Canada. Acknowledging total liabilities means recognizing both accumulated direct debt and Canada's enormous program obligations.

Step 2: Restructure government

A restructured, limited, government should focus its resources on necessary public services such as law enforcement and national defence. Further, federal and provincial governments must work together to clarify the responsibilities of each jurisdiction and to eliminate overlap in the provision of goods and services. Clemens et al., 2006 offers an innovative approach to restructuring government in Canada, calling for the elimination of the federal Canada Health Transfer and Canada Social Transfer coupled with reductions in federal taxes and increases in provincial taxes. Such a fundamental re-organization would clarify and eliminate overlap and duplication between levels of government and result in improved fiscal responsibility by re-establishing clearer lines of accountability and responsibility for critical areas such as health, education, and social assistance.

Step 3: Apply the fundamentals of balance sheets to government

The basic tenets of financial responsibility and disclosure that governments enforce for business must apply to governments. A broad standard for government accounting must include the notion of full and timely disclosure. Governments must report all of their activities in fully consolidated financial statements. Auditors-General often include reservations in their reviews of the Public Accounts because their respective governments did not fully consolidate their financial statements. Legislation must prevent governments from financing projects "off balance sheet" in order to avoid operating—technically—in a deficit position. Governments and investors do not tolerate this type of deception from business and voters should not accept such accounting malpractice from government.

In addition, governments should privatize profitable Crown corporations and government business enterprises and apply the proceeds to reducing debt. They must eliminate debt guarantees and subsidies for businesses—including government business enterprises—to reduce the state's distortionary intervention in capital markets.

Step 4: Control spending to balance budgets

Canadians are overtaxed in both absolute and relative terms. The average total tax rate for Canada was 46.2% in 2006, ranging from 42.7% in Alberta to 48.3% in Quebec (Veldhuis and Palacios, 2006). The only effective course of action towards fiscal balance is control of spending. Governments can and should implement further initiatives to reduce spending and encourage free-market competition.

Step 5: Revise the budget process

Provincial and federal budgets should provide full disclosure and consolidation of all spending, taxing, and borrowing requirements. Further, budgets should outline contingency plans to meet budget objectives if key economic assumptions or projections are wrong. The federal government has been doing this for a number of years by including a contingency item in expenditures. Recent budgets from the governments of Alberta, Ontario, and British Columbia have also included contingency reserves; all provincial governments should do likewise.

Given a revised budget system and the ability of governments to balance their budgets, debt reduction must become the priority. That is, budget surpluses should be used to reduce government debt which in turn would reduce interest payments and free resources that can then be used to enhance competitiveness and prosperity.

Step 6: Enact legislation to limit debt in the future

All jurisdictions should enact laws enforcing tax and expenditure limitations (TELS) and legislated plans for reducing their debt. This legislation should include strict penalties for politicians and bureaucrats who do not comply. Voters should demand that governments pass laws that would outline the specific process through which governments may raise taxes. For instance, laws that require a referendum before governments can raise taxes except in a crisis such as war would limit the ability of government to raise taxes and implement new program spending for political reasons. Strong tax and expenditure limitations have proven to be effective safeguards against mismanagement of public finances in American jurisdictions. [6]

[6] See *Tax and Expenditure Limitations: The Next Step in Fiscal Discipline* (Clemens et al., 2003) for a review of Tax and Expenditure Limitations (TELS) in the United States.

Conclusion

The Canadian public has generally accepted that there are negative consequences from government deficits and debt. However, this is only the first step in a larger movement towards fiscal balance. Canadian governments need to continue to balance their budgets and Canadians should persist in demanding that governments provide full disclosure in a timely manner and implement, and adhere to, reasonable plans for reducing their debt. Further, Canadians must encourage all levels of government to assess the viability of the various programs that currently maintain unfunded liabilities. Generational accounting done by The Fraser Institute shows that the total obligations resulting from the promises we have made to ourselves are not sustainable and must be restructured to take into account the impact of future demographic change in Canada.

In this study, we have provided background information to help the average Canadian understand the size, nature, and impact of public debt and other types of liabilities. Our most important message is that achieving and maintaining a balanced budget is only the first step towards fiscal responsibility. Debt reduction and the proper funding of obligations are also essential to Canada's economic health.

Appendix—methodology and data

This report was written for the non-specialist reader who does not have an extensive background in accounting or finance. For those who require more detail, a technical discussion of the methodology is included here. This appendix summarizes the methods used, and sources referenced, to calculate the figures for total government liability and the international comparison.

Methodology for computing total government liability for Canada

Unfortunately, government reporting of fiscal performance lags behind the events. As a result, totals for some of the liability categories for local net debt had to be estimated for 2003/2004. The basic projection technique was to extend the trend of the most recently available information. In order to apply an unbiased and fair rate of growth, an average rate of change was calculated using the five most recent years of actual data. The average rate of increase or decrease was then applied to the most recent year to estimate 2003/2004 values.

Data for Canada

The majority of the Canadian data in this report is from Statistics Canada's Financial Management System and the provincial and federal public accounts. Table A1 lists the sources for the Canadian data by category, giving the most recent reporting date for the various categories of liabilities.

There are a variety of methods that could be used to allocate federal liabilities, such as income per person, population, or some taxation-based measure. This study uses the provincial contribution to federal tax revenues because this reflects the distribution of the federal debt burden best. Applying federal liabilities this way generates different liability values for each province, a procedure that acknowledges and captures broad regional deviations. The calculations of tax shares encompass all federally mandated taxes, both direct and indirect. A five-year average of the federal tax-share statistic is applied to each category of federal liabilities to derive each province's share. To maintain consistency, this five-year average is applied to the historical federal liability figures.

The methodology is modified for the Canada and Quebec Pension Plans. Quebec is allotted the full value of the Quebec Pension Plan's assets, liabilities, and unfunded liabilities. The contributions of each province and of the two territories to the Canada Pension Plan are used to distribute the CPP's assets, liabilities, and unfunded liabilities.

Estimates of unfunded liabilities

Estimates of the unfunded liabilities of the Old Age Security system (OAS), Canada/Quebec Pension Plans (CPP/QPP), and Medicare for the cohort aged 18 and older as of December 31 for the year shown are included in this study.

Canada/Quebec Pension Plans

Unfunded liabilities of the CPP as at December 31, 2003 are provided in the *Actuarial Report (21st) on the Canada Pension Plan* [Office of the Superintendent of Financial Institutions, Office of the Chief Actuary, 2004]. The QPP estimates are based on the one-third rule of thumb (*i.e.*, the best estimate for the QPP unfunded liability is one-third of the CPP unfunded liability). There is no official estimate of the unfunded liability of the QPP.

Old Age Security and Medicare

The unfunded liability estimates for Old Age Security (OAS) and Medicare are from a model developed by The Fraser Institute. Previous estimates of the unfunded liabilities of OAS and Medicare by the Office of the Superintendent of Financial Institutions (OFSI) covered costs only and, therefore, greatly exaggerated the liabilities associated with these programs. The model we present in this report generates true unfunded liabilities by adding a funding source to the readily available cost data. Both sets of estimates use the same basic assumptions as those used in the compilation of the CPP estimate: a discount rate of 6.0%, CPI increases of 2.7%, and nominal wage growth of 3.9%.

Old Age Security

All components of the OAS program are considered: Old Age Security benefits, Guaranteed Income Supplement benefits, Spouse's Pension Allowance, and the recovery of OAS benefits through income taxes. Age-specific distributions of net OAS benefits are obtained from Statistics Canada's Social Policy Simulation Database and Model (SPSD/M). The funding for OAS and related benefits come from general revenue; for the purpose of this model, it is assumed that a portion of basic federal tax is assigned to pay for the benefits. Operationally, a surtax on basic federal tax sufficient to fund OAS benefits is created in the SPSD/M. Basic federal tax rates are reduced so that the change is revenue neutral. Federal revenue from the new basic federal tax rates plus the surtax on basic federal tax equals federal revenue from the original basic federal tax.

Medicare

The cost data for the Medicare estimate comes from the Canadian Institute for Health Information. Total spending on health care by the government sector, broken down by five-year age intervals (except for infants and the age group, 85 and older) is used. Spending on health care for those aged zero to 17 years is distributed equally to those aged 18

and older. The bulk of government health-care spending in Canada is provincial. The funding source for the provincial portion of health-care spending in this model is provincial personal income-tax revenue. In every year analyzed, government-sector health expenditures exceeded provincial personal income-tax revenues. The funding source for the federal portion of health-care spending in this model is a revenue-neutral surtax on basic federal tax. This surtax has the same basic structure as the OAS surtax described above. Note that the federal contribution to health spending is a residual from total government-sector health expenditures less provincial personal income-tax revenue. Federal health spending is treated this way because of the complexities associated with estimating the value of federal contributions to health care, post-secondary education, and welfare under the Canada Health and Social Transfer (CHST) block transfer. [1]

General

The age-specific revenue sources are adjusted to remove errors introduced into the model by rounding. There is a small (approximately 0.05%), negative impact on the unfunded liability estimates relative to the estimates without the correction.

International comparison

In preparing this report, we analyzed 108 jurisdictions from all income groups using the World Bank's definition of subsistence income, US\$1 per day. The World Bank's income categories were used to generate the threshold for a high-income country, a country with per-capita GDP greater than US\$9,386.

The World Bank's statistics, which are used for all of the middle-income and lower-income countries, assess only external debt and, therefore, under-estimate the debt of some countries that have the capacity to generate internal debt through domestic savings. Nevertheless, extensive research performed for previous editions of this study found that, in most cases, external debt is a useful approximation of total debt.

A combination of data from the World Bank and the Organisation for Economic Co-operation and Development (OECD) was used to calculate the debt of the high-income nations. The system of national accounts employed by the World Bank and the OECD to estimate the debt of OECD nations excludes a calculation of the unfunded liability of public pensions. Generally speaking, OECD nations provide generous public pension plans so, calculating their debt to include unfunded pension liabilities, as we did in the detailed section on Canada, would substantially increase the ratio of debt

[1] Estimates of the unfunded liability of Medicare are for 2003. At that time, the federal government had not yet split the CHST into the Canada Health Transfer (CHT) and the Canada Social Transfer (CST).

to income and lower the rankings of most of the OECD nations. Since few middle- and low-income countries have the financial ability to provide public pensions, their debt is not distorted to the same extent.

OECD debt figures for Canada differ greatly from data from Statistics Canada's Financial Management System (FMS). First, the OECD's data for Canada are taken from the National Accounts whereas the FMS is based on Public Accounts. Second, FMS data refer to the end of the fiscal year (March 31) while OECD data refer to the end of each calendar year. Thirdly, FMS data excludes the assets and liabilities of the Canada and Quebec Pension Plans while OECD data includes them. Finally, as mentioned above, the OECD excludes the unfunded liabilities of public pensions while the Statistics Canada includes them.

Table A1: Sources of Canadian data used in various calculations

Category	Source	Date
Federal Government		
<i>Direct Debt</i>	Statistics Canada (Financial Management System)	31-Mar-05
<i>Debt Guarantees</i>	Public Accounts	31-Mar-04
<i>Contingent Liabilities and Contractual Commitments</i>	Public Accounts	31-Mar-04
<i>Obligations</i>		
<i>Canada Pension Plan</i>	Statistics Canada (Financial Management System)	31-Mar-03
<i>Unfunded Liabilities of CPP</i>	OSFI	31-Dec-03
<i>Old Age Security</i>	The Fraser Institute's Unfunded Liabilities Model	31-Dec-03
<i>Federal Employee Pension/Benefit Plans</i>	Public Accounts	31-Mar-04
Provincial Government		
<i>Direct Debt</i>	Statistics Canada (Financial Management System)	31-Mar-04
<i>Debt Guarantees</i>	Statistics Canada (Financial Management System)	31-Mar-04
<i>Contingent Liabilities and Contractual Commitments</i>	Public Accounts	31-Mar-04
<i>Obligations</i>		
<i>Unfunded Liabilities of Health Care System</i>	The Fraser Institutes Unfunded Liabilities Model	31-Dec-03
<i>Quebec Pension Plan</i>	Statistics Canada (Financial Management System)	31-Mar-03
<i>Provincial Employee Pension/Benefit Plans</i>	Public Accounts	31-Mar-04
Local Government		
<i>Direct Debt</i>	Statistics Canada (Financial Management System)	31-Dec-03

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