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Canadian Government Debt 2008

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 \$800.4 billion to \$791.2 billion between 2000/01 and 2004/05. This is a small drop compared to the growth since 1990/91 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 61.3%. Third, a constant or declining debt stock will demand a smaller portion of government revenues. As a result, some of the 9.5% of revenues currently being spent on interest charges can be used for further debt relief or tax cuts.

The bad news is that the \$9.2 billion drop in debt was more than offset by increases in other liabilities such as program obligations, which grew significantly from 2000 to 2004. The net increase in total liabilities over this period was \$243.9 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 2004/05 federal, provincial, and local liabilities added up to \$150,211 for each Canadian taxpayer or \$75,942 for each Canadian citizen.

Quebec has the largest total liabilities per capita at \$81,820 followed by Ontario (\$80,580) and Alberta (\$76,870). Prince Edward Island records the smallest total government liabilities per capita at \$58,028, followed by New Brunswick (\$61,056) and Manitoba (\$62,504). With the exception of Alberta, provinces have total liabilities as a percentage of GDP in excess of 150%. If the government of Quebec taxed 100% of all income generated, it would still take them almost 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 governments on behalf of privately held companies and government business enterprises.

[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 analyses because it focuses on liabilities that have been adjusted for the financial resources that a government holds.

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 OAS alone grew by 27.3% between 2000 and 2004. In total, CPP, OAS, and Medicare unfunded liabilities grew by 22.9% 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 favorable 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 24.4% and the ratio of those over 65 had increased to 13.1%. Estimates of these ratios for Canada predict those under 20 to account for only 17.2% of the total population by 2040 while those over 65 will account for 26.5% (Statistics Canada 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 justify any new spending to Canadians in light of the fact that we do not know how we are going to pay for the programs to which we have already committed ourselves. In addition, the size of unfunded liabilities calls into question the structure of “pay-as-you-go” systems. That is, rather than accumulating funds in individual or even collective personal accounts

for future payment, 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.

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 34.9%, 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 (high-income nations, as defined by the World Bank, are those with average incomes in excess of \$10,066). Canada records the 13th highest debt burden among twenty high-income countries.

Summing up—where do we go from here?

The good news should give 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.

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 2004/05, Canadian governments spent approximately 9.5% of their total revenues and over 3.7% of gross domestic product (GDP) servicing the existing debt. While many governments have made attempts to balance their books, still three provinces, Newfoundland and Labrador, Quebec and Ontario; had consolidated (provincial + local) budget deficits in 2004/05. The federal government, on the other hand, maintained a budget surplus for 2004/05. 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.

The purposes of this study are to provide Canadians with an accessible account of the total indebtedness of each of the provinces and the federal government; to remind them that, although progress has been made in some provinces and territories, all jurisdictions remain heavily indebted; and, to examine how Canadian governments compare, both nationally and internationally, in the areas 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 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 refers to debts plus 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 focuses on 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 as financial assets ultimately reduce the burden of gross debt.

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 civil service employees 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 their 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. 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. 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. [1] 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.

[1] While the acceleration of 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 \$3,500, 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 local government liabilities. Using consolidated provincial and local data accurately represents the total debt for which taxpayers in each province are responsible. In other words, provinces with a high concentration of spending authority at the local level and thus the possibility of large local government deficits and debt can appear to have lower liabilities than other provinces if only provincial figures are used.

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 \$21.3 billion. Ontario and Quebec are the most indebted provinces with direct debt of \$106.7 billion and \$114.98 billion respectively. Quebec makes the largest use of debt guarantees and,

Table 1: Total government liabilities [a] (\$millions), 2004/05

	Direct Debt	Debt Guarantees	Contingent Liabilities and Contractual Commitments	Program Obligations	Total Government Liabilities
British Columbia	17,182	148	2,669	44,245	64,244
Alberta	(21,282)	13,857	15,875	46,530	54,980
Saskatchewan	8,304	101	7,827	9,053	25,284
Manitoba	11,855	788	812	10,428	23,883
Ontario	106,730	14,075	29,951	160,403	311,159
Quebec	114,980	42,279	32,049	228,093	417,401
New Brunswick	6,141	2,463	508	6,310	15,423
Nova Scotia	11,822	240	2,086	8,619	22,767
Prince Edward Island	1,348	34	93	1,105	2,581
Newfoundland & Labrador	10,783	1,636	282	4,148	16,850
Yukon Territory	(300)	25	143	328	196
Northwest Territories [b]	284	252	1,308	988	2,832
All Provinces	267,847	75,898	93,604	520,251	957,600
Federal Government	523,344	52,895	90,823	804,645	1,471,707
Canada (All Inclusive)	791,191	128,793	184,427	1,324,896	2,429,307

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.

as a result, is potentially on the hook for more than \$42.3 billion dollars, over \$28 billion more than second place Ontario (\$14.1 billion). In addition, Quebec has the largest total government liability among the provinces at \$417.4 billion, followed by Ontario (\$311.2 billion). British Columbia records the third largest total liabilities (\$64.2 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 32.6% 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 Appendix 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. Including the province's share of federal liabilities in the provincial calculation dramatically changes

Table 2: Total consolidated government liabilities [a] (\$millions), 2004/05

	Direct Debt	Debt Guarantees	Contingent Liabilities and Contractual Commitments	Program Obligations	Total Government Liabilities
British Columbia	80,796	6,577	13,709	163,053	264,135
Alberta	45,616	20,618	27,485	152,804	246,523
Saskatchewan	21,320	1,417	10,085	33,252	66,074
Manitoba	26,848	2,303	3,414	40,564	73,130
Ontario	337,348	37,384	69,973	555,851	1,000,556
Quebec	218,275	52,719	49,975	296,688	617,657
New Brunswick	15,214	3,380	2,083	25,238	45,914
Nova Scotia	24,214	1,492	4,237	31,814	61,757
Prince Edward Island	2,937	195	369	4,507	8,008
Newfoundland & Labrador	16,747	2,239	1,317	16,087	36,391
Yukon Territory	172	73	225	1,451	1,920
Northwest Territories [b]	1,705	396	1,555	3,588	7,243
Canada (All Inclusive)	791,191	128,793	184,427	1,324,896	2,429,307

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.

the amount of total liability taxpayers face in each province. Ontario's total liabilities increase from \$311.2 billion to over \$1.0 trillion, the largest among the provinces. Quebec (\$617.7 billion) and British Columbia (\$264.1 billion) trail Ontario recording the second and third largest total liabilities respectively. Alberta's direct debt increases from -\$21.3 billion to \$45.6 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 presents 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, Alberta records the smallest direct debt per capita (\$14,224) while the per-capita direct debt of Newfoundland & Labrador is a staggering \$32,393. Likewise, direct debt as a percentage of GDP ranges from 24.1% in Alberta to 86.8% in Newfoundland.

Table 3: Total consolidated government liabilities, per capita and as a percentage of GDP, [a] 2004/05

	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	19,223	51.3	1,565	4.2	3,262	8.7	38,794	103.6	62,844	167.8
Alberta	14,224	24.1	6,429	10.9	8,570	14.5	47,647	80.6	76,870	130.1
Saskatchewan	21,427	52.7	1,424	3.5	10,136	25.0	33,419	82.3	66,406	163.5
Manitoba	22,947	67.4	1,969	5.8	2,918	8.6	34,670	101.8	62,504	183.5
Ontario	27,168	65.3	3,011	7.2	5,635	13.5	44,765	107.6	80,580	193.6
Quebec	28,914	83.0	6,984	20.1	6,620	19.0	39,302	112.9	81,820	234.9
New Brunswick	20,231	64.6	4,495	14.4	2,770	8.9	33,561	107.2	61,056	195.1
Nova Scotia	25,814	80.7	1,591	5.0	4,517	14.1	33,917	106.0	65,839	205.8
Prince Edward Island	21,285	73.5	1,410	4.9	2,674	9.2	32,659	112.8	58,028	200.5
Newfoundland & Labrador	32,393	86.8	4,330	11.6	2,548	6.8	31,116	83.3	70,388	188.5
Yukon Territory	5,536	12.5	2,344	5.3	7,253	16.4	46,799	105.8	61,932	140.0
Northwest Territories [b]	23,349	31.6	5,419	7.3	21,298	28.8	49,148	66.5	99,214	134.2
Canada (All inclusive)	24,733	61.3	4,026	10.0	5,765	14.3	41,417	102.6	75,942	188.2

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.

Even more worrisome are figures for total government liabilities. Quebec has the largest total liabilities per capita at \$81,820 followed by Ontario (\$80,580) and Alberta (\$76,870). Prince Edward Island records the smallest total government liabilities per capita at \$58,028, followed by New Brunswick (\$61,056) and Manitoba (\$62,504). With the exception of Alberta, provinces have total liabilities as a percentage of GDP in excess of 150%. If the government of Quebec taxed 100% of all income generated, it would still take them almost two and a half years to pay off all their debt and cover all program obligations.

Table 4 presents the growth rate of each category of liability from 2000/01 to 2004/05. The good news is that each province has decreased its direct debt as a percentage of GDP. Alberta leads the way with a 41.0% reduction in direct debt as a percentage of GDP over the last five years. Newfoundland and Labrador and Saskatchewan follow Alberta, Newfoundland and Labrador having reduced its direct debt as a percentage of GDP by 22.8%, and Saskatchewan, by 18.8%.

All provinces except Newfoundland and Labrador, Alberta and Nova Scotia, have increased their program obligations relative to GDP. Specifically, increases in program obligations as percentage of GDP range from 5.3% in Quebec to 1.6%

Table 4: Growth of total consolidated government liabilities as a percentage of GDP, [a] 2000/01–2004/05

	Direct Debt	Debt Guarantees	Contingent liabilities and Contractual Commitments	Program Obligations	Total Government Liabilities
British Columbia	(15.0)	(20.7)	(19.3)	1.6	(5.9)
Alberta	(41.0)	(11.4)	(10.1)	(6.5)	(16.3)
Saskatchewan	(18.8)	(26.9)	13.4	1.9	(5.2)
Manitoba	(9.9)	1.3	(28.4)	3.8	(3.7)
Ontario	(16.3)	(30.0)	(11.5)	4.1	(6.4)
Quebec	(11.3)	(20.2)	7.9	5.3	(3.5)
New Brunswick	(18.5)	138.5	(15.8)	3.5	(2.2)
Nova Scotia	(18.1)	(23.9)	(10.8)	0.0	(9.3)
Prince Edward Island	(9.1)	(6.2)	(32.0)	2.2	(4.6)
Newfoundland & Labrador	(22.8)	(16.4)	(33.2)	(12.4)	(18.6)
Yukon Territory	(22.6)	(32.5)	12.5	4.9	0.4
Northwest Territories [b]	(29.0)	(25.6)	(31.0)	(24.4)	(27.1)
Canada (All inclusive)	<u>(17.6)</u>	<u>(20.8)</u>	<u>(7.1)</u>	<u>2.0</u>	<u>(7.3)</u>

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.

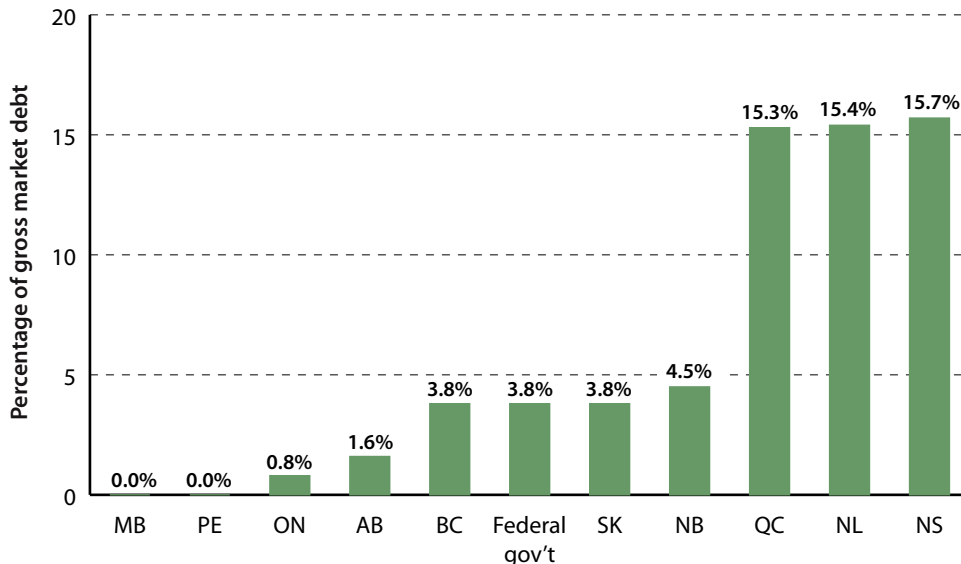
Sources: Statistics Canada, Federal and Provincial Public Accounts, Office of the Superintendent of Financial Institutions; calculations by the authors.

in British Columbia. Only Newfoundland and Labrador and Alberta registered decreases in program obligations as a percentage of GDP by 12.4% and 6.5% respectively. Program obligations as a percentage of GDP in Nova Scotia did not register any changes since 2000/01.

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. 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. Nova Scotia is heavily exposed to foreign-exchange risk as bonds denominated in foreign currency account for 15.7% of its direct debt. Newfoundland & Labrador and Quebec also have a relatively high degree of foreign exchange exposure—bonds denominated in foreign currency account, in the first case, for 15.4% and, in the second, for 15.3% of direct

Figure 1: Foreign exchange exposure, 2004/05



Note: Exposure is net of hedges.
Source: Dominion Bond Rating Service.

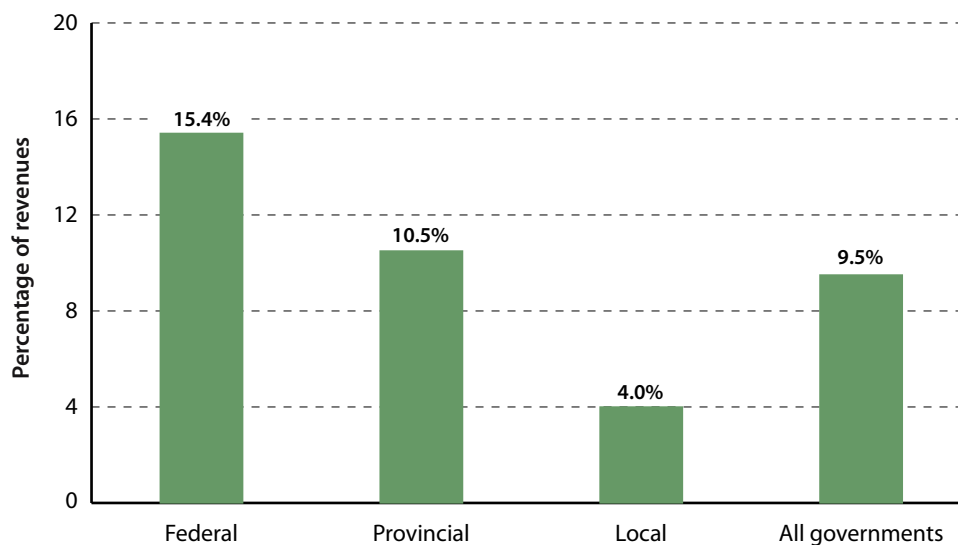
debt. Nova Scotia, however, has decreased the percentage of direct debt denominated in foreign currency by over 20 percentage points since 2000/01. Relative to the other jurisdictions, Ontario faces a small amount of foreign exchange risk as bonds denominated in foreign currency make up only 0.8% of direct debt. Prince Edward Island and Manitoba have no foreign exchange exposure.

Interest charges

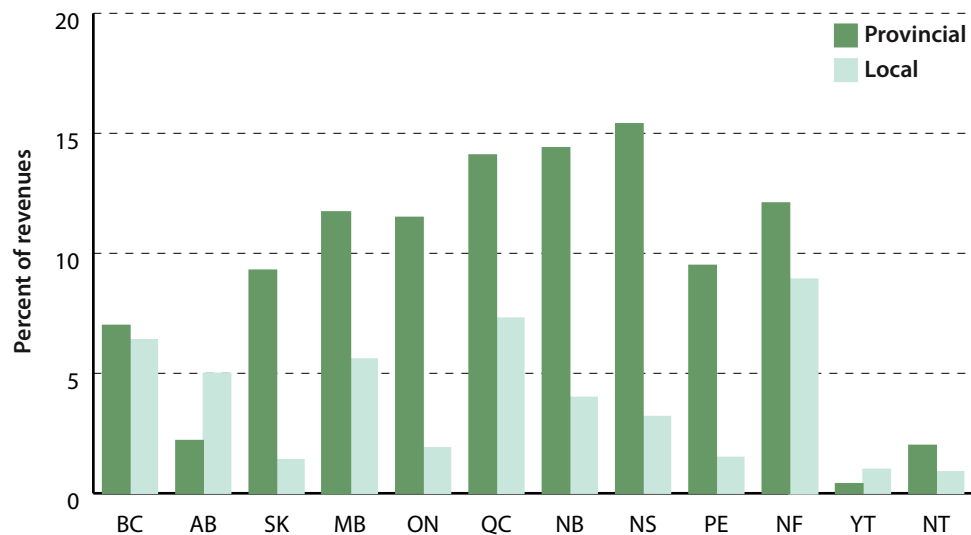
Interest represents the cost of past consumption and investment that has been financed through deficit spending and debt financing. In 2004/05, Canadian governments spent \$47.6 billion on interest payments, which accounts for 3.7% of GDP and 9.5% of total government revenues. Figure 2 illustrates the proportion of government revenues consumed by interest charges. Interest payments on direct debt account for 15.4% of federal government revenues, 10.5% of provincial revenues, and 4.0% of local revenues.

Figure 3 shows the share of government revenues allocated to interest payments for provincial and local governments. Provincial debt charges vary considerably, from 2.2% in Alberta to 15.4% in Nova Scotia. Local debt charges vary from 1.4% in Saskatchewan to 8.9% 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 2: Interest charges as a percent of revenues, 2004/05



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

Figure 3: Provincial and local interest charges, 2004/05

Source: 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 \$75,942 for every Canadian citizen, \$150,211 for each taxpayer, and 188.2% 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 more than a year and a half to pay back the debt and fully fund all programs.

The notion that Canadians owe \$514 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 \$2.4 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 59.2% of Canada's total liabilities. Unfunded liabilities of civil service pensions account for only 3.5% 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 put that program 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. See table 5 for estimates of the unfunded liability of CPP/QPP, OAS, and Medicare from 2000 to 2004. This section introduces the new models 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
2000	443.0	279.3	301.5	1,023.8
2001	466.1	299.2	323.0	1,088.4
2002 [a]	507.5	315.9	331.1	1,154.5
2003	516.3	337.8	347.0	1,201.1
2004	538.4	355.7	364.0	1,258.1
Change from 2000 to 2004 (%)	21.6%	27.3%	20.7%	22.9%

Note a: 2002 figures for CPP are not available. This number was estimated using previous data and assuming a linear-projection. Sources: Office of the Chief Actuary, Office of the Superintendent of Financial Institutions 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 unfunded liability model was constructed 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 over-estimated Canada's liabilities from these programs. To be accurate, the previous estimates should be described as "estimates of future liabilities."

Calculating the present value of the future stream of benefits, as the previous models did, tells only part of the story. The other part of the story 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 explains how The Fraser Institute's unfunded liability model was built.

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

the compilation of the Canada Pension Plan estimate (Office of the Superintendent of Financial Institutions); namely, a discount rate of 6.6%, price increases (measured by the consumer price index) of 2.5%, and a nominal rate of wage growth of 3.8%. 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 favorable 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 24.4% and the ratio of those over 65 had increased to 13.1%. Estimates of these ratios for Canada predict those under 20 to account for only 17.2% of the total population by 2040 while those over 65 will account for 26.5% (Statistics Canada 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 to 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 \$538.4 billion in 2004, 21.6% higher than in 2000 (\$443 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 \$27.4 billion or 13.2% of total federal spending in 2004/05. Expenditures on OAS grew by 20.8% between 2000/01 and 2004/05. The OAS's unfunded liability has grown by 27.3% between 2000 and 2004, from \$279.3 billion to \$355.7 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 \$94.6 billion in 2004/05 and has grown by 34.2% between 2000/01 and 2004/05. Medicare's unfunded liability has grown by 20.7% between 2000 and 2004, from \$301.5 billion to \$364.0 billion.

Total unfunded liabilities for major government programs

Taken together, the unfunded liabilities of the CPP, OAS, and Medicare represent over \$1.3 trillion. This figure has grown by 22.9% since 2000, when it was at \$1.0 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 97.5% 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., 2007). 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 \$12.6 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 data. The surpluses in federal government 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
<i>Federal Government</i>		(\$millions)
Public Service	March 31, 2002	(9,338)
Canadian Forces	March 31, 2002	(4,713)
Royal Canadian Mounted Police	March 31, 2002	(1,290)
Members of Parliament Retirement	March 31, 2004	(86)
Federally Appointed Judges	March 31, 2004	1,383
Retirement Compensation Arrangements	March 31, 2002	1,483
Total		(12,561)
<i>British Columbia</i>		(\$millions)
Teacher's Pension Plan*	December 31, 2002	0
Municipal Pension Plan*	December 31, 2000	0
Public Service Pension Plan*	March 31, 2002	0
Members of the legislative Assembly Pension Plan	March 31, 2002	3
College Pension Plan*	August 31, 2003	0
Total		3
Note: * British Columbia's Teacher's, Municipal, Public Service, and College Pension Plans 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.		
<i>Alberta</i>		(\$millions)
Teacher's Pension Plan	August 31, 2004	4,263
Public Service Pension Plan	December 31, 2002	8
Public Service Management Pension Plan	December 31, 2002	656
Universities Academic Pension Plan	December 31, 2004	185
Special Forces Pension Plan	December 31, 2001	63
Management Employees Pension Plan	December 31, 2003	13
Members of the legislative Assembly Pension Plan	March 31, 2003	47
Total		5,235
<i>Saskatchewan</i>		(\$millions)
Teacher's Superannuation Fund	June 30, 2003	2,555
Public Service Superannuation Fund	December 31, 2002	1,500
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)	Various	88
Total		4,143

	Valuation Date	Unfunded Liabilities
<i>Manitoba</i>		(\$millions)
Civil Service Superannuation Fund	December 31, 2004	1,606
Members of the legislative Assembly Plan	March 31, 2003	29
Teacher's Retirement Allowances Fund	January 1, 2004	2,168
Judges' Supplemental Pension Plan	March 31, 2003	23
Total		3,826
<i>Ontario</i>		(\$millions)
Teacher's Pension Plan	January 1, 2003	0
Public Service Pension Plan	December 31, 1998	0
Ontario Public Service Employee's Union	March 31, 2004	0
Total		0
<i>Quebec</i>		(\$millions)
RREGOP	December 31, 1999	26,181
PPMP	December 31, 1999	5,659
TPP & PPCT	various	13,902
CSSP	December 31, 1999	4,870
Other Plans	various	4,007
Total		54,619
<i>New Brunswick</i>		(\$millions)
Public Service Superannuation Plan	April 1, 2004	(30)
Teacher's Pension Plan	April 1, 2004	39
Early Retirement	April 1, 1999	147
Other (Judges', Members', Hospitals & Schools)	Various	0
Total		157
<i>Nova Scotia</i>		(\$millions)
Teacher's Pension Fund	December 31, 2003	184
Member's Retiring Allowance	December 31, 2003	64
Public Service Superannuation Fund	December 31, 2003	322
Sysco Pension Plan	December 31, 2004	216
Total		787
<i>Prince Edward Island</i>		(\$millions)
Teacher's Superannuation Fund	April 1, 2002	154
Civil Service Superannuation Fund	April 1, 2002	6
MLA Pension Fund (both plans)	April 1, 2003	(3)
Total		156

	Valuation Date	Unfunded Liabilities
<i>Newfoundland & Labrador</i>		(\$millions)
Teachers' Superannuation Fund	August 31, 2003	2,044
Public Service Pension Plan	December 31, 2003	1,671
Uniformed Services Plan	December 31, 2003	175
Members of the House of Assembly Plan	December 31, 2003	40
Provincial Court Judges'	April 1, 2002	3
Total		3,934
<i>Yukon Territory</i>		(\$thousands)
Legislative Assembly Retirement Allowances Plan	March 31, 2002	(636)
Total		(636)
<i>Northwest Territories</i>		(\$thousands)
Legislative Assembly Supplementary Allowance	April 1, 2004	23,093
Judge's Supplemental Pension Plan	April 1, 2004	2,120
Total		25,213

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. [1] For instance, Alberta ranks 16th out of 108 jurisdictions with a ratio of 13.4%. This means that the debt per person accumulated by Alberta represents 13.4% of the average person's total annual income less an allowance for a minimum level of subsistence.

The ranking shows several interesting results. Norway, Luxembourg, Finland, South Korea, and the Czech Republic, which took the top five spots in the overall ratings, have governments that are net providers of capital. All five 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 30. There were nine in the top 30 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 present stock of external debt for the former Soviet republics consists of debt accumulated since 1993. Most 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 but continued accumulation of debt since has quickly eroded this advantage.

The results for Canada and the provinces are remarkably poor. Alberta ranks the highest of any Canadian province, 16th, while Newfoundland and Labrador ranks the lowest at 65th. Table 8 summarizes the rankings for Canadian jurisdictions.

More important than the overall rankings are the relative rankings in comparison with other high-income nations (those with average incomes in excess of \$10,066). [2] Table 9 presents the rankings of Canadian jurisdictions against high-income nations. Canada records the 13th highest debt burden among high-income countries.

[1] 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.

[2] The World Bank segments economies according to 2004 GNI per capita (in US\$) into low income, \$825 or less; lower middle income \$826–\$3,255; upper middle income, \$3,256–\$10,065; and high income, \$10,066 or more.

Table 7: Canadian jurisdictions and other countries ranked by ratio of debt to discretionary income, 2004

Rank	Ratio	Rank	Ratio	Rank	Ratio
1 Norway	(107.3%)	37 Azerbaijan	35.1%	73 Tonga	58.6%
2 Luxembourg	(52.6%)	38 New Brunswick	36.4%	74 Turkey	58.7%
3 Finland	(46.4%)	39 United Kingdom	36.6%	75 Georgia	59.4%
4 Korea, Rep.	(30.6%)	40 Ontario	36.6%	76 Gabon	61.6%
5 Czech Republic	(9.7%)	41 Russian Federation	36.7%	77 Ecuador	61.8%
6 Australia	0.6%	42 Thailand	37.0%	78 Ukraine	63.5%
7 Sweden	0.7%	43 Manitoba	37.9%	79 Angola	66.0%
8 New Zealand	5.0%	44 Netherlands	38.0%	80 Seychelles	66.1%
9 Botswana	5.6%	45 Venezuela, RB	39.2%	81 Bosnia and Herzegovina	66.6%
10 Slovak Republic	6.0%	46 Mauritius	40.9%	82 Serbia and Montenegro	68.8%
11 Yukon Territory	7.0%	47 Brazil	41.1%	83 Bulgaria	69.7%
12 Fiji	8.8%	48 India	41.2%	84 Cape Verde	70.0%
13 Ireland	9.3%	49 Prince Edward Island	41.4%	85 St. Vincent & Grenadines	70.5%
14 Equatorial Guinea	9.5%	50 Portugal	41.5%	86 Panama	72.0%
15 Denmark	12.4%	51 Austria	42.3%	87 Armenia	75.8%
16 Alberta	13.4%	52 Hungary	43.3%	88 Indonesia	79.9%
17 South Africa	14.4%	53 United States	43.4%	89 Jamaica	81.5%
18 Iran, Islamic Rep.	14.7%	54 Macedonia, FYR	44.4%	90 Tunisia	81.7%
19 Poland	14.8%	55 Romania	44.6%	91 St. Kitts and Nevis	81.7%
20 China	17.0%	56 Lithuania	44.7%	92 Japan	83.5%
21 Northwest Territories	17.6%	57 Morocco	45.1%	93 Belgium	84.6%
22 Switzerland	17.8%	58 Nova Scotia	45.4%	94 Jordan	85.4%
23 Belarus	20.6%	59 Dominican Republic	45.7%	95 Sri Lanka	85.6%
24 Iceland	21.0%	60 France	45.8%	96 Kazakhstan	87.1%
25 Swaziland	22.3%	61 Quebec	46.7%	97 Pakistan	87.5%
26 Guatemala	24.1%	62 Colombia	47.2%	98 Greece	89.7%
27 Albania	24.8%	63 Malaysia	47.7%	99 Cameroon	91.4%
28 Trinidad and Tobago	24.9%	64 Germany	48.5%	100 Estonia	93.1%
29 Barbados	26.0%	65 Newfoundland & Labrador	48.7%	101 Italy	94.0%
30 Mexico	26.4%	66 Chile	49.1%	102 Dominica	96.6%
31 British Columbia	28.8%	67 Vanuatu	50.1%	103 Croatia	97.8%
32 Saskatchewan	29.6%	68 St. Lucia	51.8%	104 Latvia	98.1%
33 Algeria	30.3%	69 Peru	52.4%	105 Yemen, Rep.	98.5%
34 Costa Rica	33.7%	70 Maldives	53.6%	106 Philippines	100.0%
35 Canada	34.9%	71 Egypt, Arab Rep.	57.9%	107 Belize	100.3%
36 Spain	34.9%	72 El Salvador	58.6%	108 Syrian Arab Republic	104.3%

Sources: OECD, 2007; World Bank, 2007; Statistics Canada, Canadian Federal and Provincial Public Accounts, calculations by authors.

Table 8: Canadian jurisdictions ranked by ratio of debt to discretionary income, 2004

Rank in Canada	Overall Rank	Jurisdiction	GDP (%)	Debt to ... Discretionary Income (%)	Rank in Canada	Overall Rank	Jurisdiction	GDP (%)	Debt to ... Discretionary Income (%)
1	11	Yukon Territory	6.9%	7.0%	8	40	Ontario	36.2%	36.6%
2	16	Alberta	13.3%	13.4%	9	43	Manitoba	37.3%	37.9%
3	21	Northwest Territories	17.5%	17.6%	10	49	Prince Edward Island	40.8%	41.4%
4	31	British Columbia	28.5%	28.8%	11	58	Nova Scotia	44.7%	45.4%
5	32	Saskatchewan	29.2%	29.6%	12	61	Quebec	46.0%	46.7%
6	35	Canada	34.0%	34.9%	13	65	Newfoundland & Labrador	48.1%	48.7%
7	38	New Brunswick	35.8%	36.4%					

Sources: OECD, 2007; World Bank, 2007; Statistics Canada, Canadian Federal and Provincial Public Accounts, calculations by authors.

Table 9: Canadian jurisdictions and high-income countries ranked by ratio of debt to discretionary income, 2004

Rank	Overall Rank	Jurisdiction	Debt / Discretionary Income (\$US)	Rank	Overall Rank	Jurisdiction	Debt / Discretionary Income (\$US)
1	1	Norway	(107.3%)	17	32	Saskatchewan	29.6%
2	2	Luxembourg	(52.6%)	18	35	Canada	34.9%
3	3	Finland	(46.4%)	19	36	Spain	34.9%
4	4	Korea, Rep.	(30.6%)	20	38	New Brunswick	36.4%
5	5	Czech Republic	(9.7%)	21	39	United Kingdom	36.6%
6	6	Australia	0.6%	22	40	Ontario	36.6%
7	7	Sweden	0.7%	23	43	Manitoba	37.9%
8	8	New Zealand	5.0%	24	44	Netherlands	38.0%
9	11	Yukon Territory	7.0%	25	49	Prince Edward Island	41.4%
10	13	Ireland	9.3%	26	50	Portugal	41.5%
11	15	Denmark	12.4%	27	51	Austria	42.3%
12	16	Alberta	13.4%	28	53	United States	43.4%
13	21	Northwest Territories	17.6%	29	58	Nova Scotia	45.4%
14	22	Switzerland	17.8%	30	60	France	45.8%
15	24	Iceland	21.0%	31	61	Quebec	46.7%
16	31	British Columbia	28.8%	32	65	Newfoundland & Labrador	48.7%

Sources: OECD, 2007; World Bank, 2007; Statistics Canada, Canadian Federal and Provincial Public Accounts, calculations by 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. Specifically, the authors call 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 46.5% in 2007, ranging from 41.2% in Alberta to 49.4% in Newfoundland and Labrador (Palacios and Veldhuis, 2007). 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 up 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. [1]

[1] See 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 accounting or financial background. For those who require more detail, a technical discussion of the methodology is included here. The following section 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 2004/05. 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 2004/05 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.

Table A1: Sources of Canadian data used in various calculations

Category	Source	Date
<i>Federal Government</i>		
Direct Debt	Statistics Canada (Financial Management System)	31-Mar-06
Debt Guarantees	Public Accounts	31-Mar-05
Contingent Liabilities and Contractual Commitments	Public Accounts	31-Mar-05
Obligations		
Canada Pension Plan	Statistics Canada (Financial Management System)	31-Mar-05
Unfunded Liabilities of CPP	OSFI	31-Dec-04
Old Age Security	The Fraser Institute's Unfunded Liabilities Model	31-Dec-04
Federal Employee Pension/Benefit Plans	Public Accounts	31-Mar-05
<i>Provincial Government</i>		
Direct Debt	Statistics Canada (Financial Management System)	31-Mar-05
Debt Guarantees	Statistics Canada (Financial Management System)	31-Mar-05
Contingent Liabilities and Contractual Commitments	Public Accounts	31-Mar-05
Obligations		
Unfunded Liabilities of Health Care System	The Fraser Institutes Unfunded Liabilities Model	31-Dec-04
Quebec Pension Plan	Statistics Canada (Financial Management System)	31-Mar-05
Provincial Employee Pension/Benefit Plans	Public Accounts	31-Mar-05
<i>Local Government</i>		
Direct Debt	Statistics Canada (Financial Management System)	31-Dec-04

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, 2004 are provided in the Optimal Funding of the Canada Pension Plan – Actuarial Study No. 6. 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 (OSFI) 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 6.6%, CPI increases of 2.5%, and nominal wage growth of 3.8%.

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 SPSPD/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.

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\$10,066.

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 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.

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