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Quebec's Government Indebtedness: Unnoticed, Uncontrolled

Edited by Sean Speer

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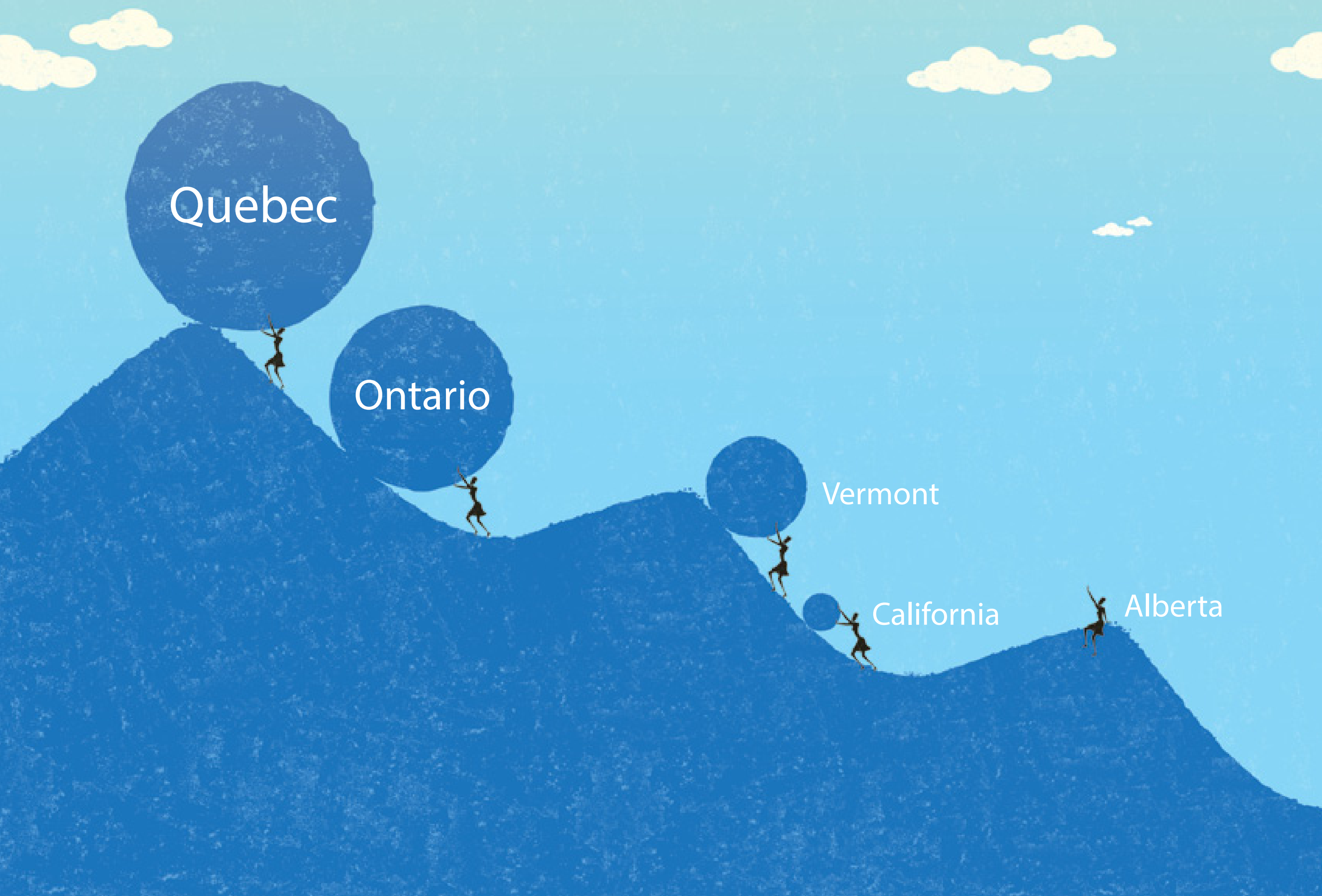

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Executive Summary

Jason Clemens and Sean Speer

Quebec is Canada's most indebted province. It currently has the largest government debt of any Canadian province when measured relative to the size of its economy (GDP). This dubious distinction and its implications for the Quebec economy, the government, and the population have attracted only limited attention in the province.

The essays collected in this publication are designed to provide readers, particularly Quebec readers, with a better sense of where the province's indebtedness stands today, expectations for the future, and warnings about the likely costs of inaction.

Part of the reason for gathering this collection together was to respond to the limited debate in the province—and to the Quebec government's inaction—despite the magnitude of the province's government debt. In fact, the government recently delayed its plan to eliminate the province's deficit and seems poised to continue growing its debt levels.[1]

The essays in this collection point to the immediate challenges facing the province, compare its indebtedness with that of other Canadian provinces and several US states, and provide different scenarios for its future.

The truth about Quebec's indebtedness

The first essay provides a basic primer on the current state of Quebec's indebtedness. The collaborative effort between Quebec-based economist Filip Palda and the Fraser Institute's Charles Lammam and Hugh MacIntyre explains the general details of Quebec's government indebtedness, how it has evolved over time, and some of the consequences of the province's high level of indebtedness.

As the authors explain, Quebec's net direct debt has grown in nominal terms—that is, without adjusting for the effects of inflation—from $37.6 billion in 1990/91 to $175.5 billion in 2012/13. This indebtedness level now represents

1. The Quebec government tabled its 2014/15 budget on February 20, 2014. The fiscal data in this essay series do not reflect budget changes.

49 percent of Quebec's GDP, the highest percentage of all Canadian provinces. Interest payments on the debt (what is typically called debt service costs) were $9.8 billion in 2012/13, or over 11 percent of government revenue.

These figures actually understate the province's indebtedness because they do not account for debt accumulated by other levels of government in Quebec, or indirect debt such as that coming from government leases or pension liabilities. Once these other factors are incorporated into the calculation, the full magnitude of Quebec's high level of government indebtedness becomes clear. After accounting for its share of the federal debt and for the province's municipal debt, Quebec's total net direct debt from all levels of government is $307 billion or 85.8 percent of its GDP. Finally, once indirect debt from the federal, provincial, and municipal levels of government are added, Quebec's overall government debt increases to $955.7 billion for 2011/12, or nearly 277 percent of the provincial economy.

Clearly, Quebec's government indebtedness is worryingly high and requires public engagement and government action.

Quebec's government debt: not just the most indebted in Canada

The second essay, by Marc Joffe, Sean Speer, and Frazier Fathers, compares Quebec's indebtedness to that of its neighbours in Canada and the United States.

When compared to Ontario, Quebec's net debt as a share of GDP is higher and its debt service costs as a share of revenue greater. These findings may surprise some readers; Ontario's indebtedness has received considerable media and political attention while Quebec's has attracted less notice. But the fact is plain: Quebec's indebtedness is the highest among Canada's provinces.

The authors also compare Quebec's debt level with that of 24 US states—including New York, which, like Ontario, has attracted considerable attention for its high government debt. (The essay compares the bonded debt of each jurisdiction, rather than net debt, because US states generally do not complete financial reports in the same rigorous manner as Canadian provinces, which means net debt statistics are not readily available for the US comparators. Bonded debt is a fair representation of indebtedness and captures almost all of Quebec's outstanding debt.)

Quebec's total gross outstanding bonded debt for 2011 (the last year for which we have data) was $160.8 billion, representing approximately 47 percent of the province's GDP, a level that greatly exceeds that found in any of the 24 States examined. At 17.1 percent of GDP, Vermont has the highest bonded debt-to-GDP ratio in the United States. Quebec's debt is more than 2.5 times that level. New York, which has the highest total bonded debt in the United States, reaches levels close to Quebec's in real terms, but when expressed as a share of GDP, its bonded debt is only 12.3 percent of the state's GDP.

Quebec's debt servicing costs are also very high; as a share of government revenues, its debt services rates are the highest amongst Canadian provinces and more than double the worst US state when interest payments on total bonded debt are shown as a share of revenue. If the province's debt was divided up equally amongst all Quebeckers, it would be 16 percent higher than the next Canadian province ($21,787 for Quebec vs. $18,717 for Ontario), and its per person bonded debt would be more than double that of the worst US state ($20,162 for Quebec vs. $9,021 for Alaska).

This comparative analysis shows that Quebec's indebtedness has reached such a level that the province's residents must insist that the government take action to curb the province's debt.

Gazing into the future: possible scenarios for Quebec's indebtedness

The third and final essay in the collection projects possible future deficits and debt levels based not only on the status quo, but on alternative policies the Quebec government might choose to follow. Fraser Institute Senior Fellow Joel Emes, along with Sean Speer, carried out this analysis to give Quebeckers a sense of where the provincial debt will likely head if the government takes no action.

Emes begins the essay by examining and explaining how Quebec arrived at a point where net debt in the province grew to reach roughly half of the province's economy by 2012/13. This is important because, as the entire collection outlines, this significant debt accumulation has contributed to much higher interest payments for the province than it would otherwise have to bear.

The essay presents a series of possible projections of Quebec's future deficits and debt. It first projects Quebec's future debt assuming the status quo is largely maintained. The assumptions are based on current market conditions and patterns of taxation and spending consistent with those from the previous 10-year period. Emes concludes that given this established pattern of fiscal behaviour, Quebec's net debt could reach over 57 percent of GDP by 2022/23.

Emes then considers alternative scenarios and the necessary steps that could bring provincial debt growth under better control. The government's own debt target of 45 percent requires limited policy change to achieve relative to the status quo. But the author also discusses what would need to be done to lower Quebec's debt-to-GDP ratio to 23 percent, the 2012/13 weighted average of the other provinces. This more ambitious plan would require a significant departure from recent spending levels, including maintaining program spending at 1 percent per year for a decade (which would represent a cut in real per capita spending) or eliminating all capital expenditures over the same period. These alternative scenarios illustrate that any real break from recent trends will require a full debate about the role of government in Quebec and involve major reforms in the delivery of provincial government services.

Overall, this collection strives to give Quebeckers a better sense of the province's government debt, how it accumulated, how it compares with other jurisdictions, and what steps might be taken to bring it under control.

1. The State of Quebec's Indebtedness

Filip Palda, Hugh MacIntyre, and Charles Lammam

The Quebec government has officially backed away from a previous commitment to balance the provincial budget in 2013/14 and said that it will now balance in 2015/16.[1] This delay in balancing the budget will only add to the existing legacy of debt accumulated by the province. And that legacy of debt is not insignificant: Quebec currently has the largest debt level of any Canadian province when measured relative to the size of its economy. The importance of Quebec's indebtedness has simply not received the public attention it deserves, nor does it seem to be a pressing priority for the provincial government.[2]

The purpose of this essay is to examine the overall state of Quebec's indebtedness and highlight the magnitude of the problem. The essay is broken up into three sections. The first defines a particular type of government indebtedness and the one that receives most attention, namely direct debt, and discusses why it matters. The second section examines various measures of Quebec's direct debt. The final section discusses another type of government indebtedness that includes government liabilities beyond direct debt, referred to as indirect debt, and how such liabilities can impact the government's financial position.

1. Québec, Ministère des Finances et de l'Économie (2013). *Update on Québec's Economic and Financial Situation: Fall 2013*. Government of Québec. Available at <http://www.finances.gouv.qc.ca/documents/Autres/en/AUTEN_updateFall2013.pdf>.

2. The Quebec government has stated an objective for reducing its gross direct debt from 53.6 percent to 45.0 percent of the total economy (a 16 percent reduction) between 2012/13 and 2025/26. But given this target is far into the future (over a 14-year period), the timeline can hardly be called a pressing priority. See Québec, Ministère des Finances et de l'Économie (2013). *Update on Québec's Economic and Financial Situation: Fall 2013*. Government of Québec: D17. Available at <http://www.finances.gouv.qc.ca/documents/Autres/en/AUTEN_updateFall2013.pdf>.

Chapter 1 in Sean Speer, ed., *Quebec's Government Indebtedness: Unnoticed, Uncontrolled*. Quebec Prosperity Initiative.

1. What is Government indebtedness and why does it matter?

Government indebtedness refers to legal commitments or contracts of a government with an individual or a group regarding the borrowing and repaying of financial obligations as well as commitments to provide certain benefits or transfers to qualifying individuals or groups. Put another way, government indebtedness means that the government owes people money in the future, either as a result of borrowing or as a result of a promised stream of future benefits.

Many different types of indebtedness exist for the government but the most commonly talked about is direct debt, which refers to the accumulated borrowing by a government and its agencies over time. Direct debt constitutes a direct legal contract or obligation on the part of the government to repay these borrowings. Another way to think about direct debt is deferred taxation. That is, debt incurred today plus interest is money that will have to be repaid by taxes in the future.[3] Other forms of indebtedness that do not fall under the definition of direct debt are referred to as indirect debt. In Quebec's Public Accounts, direct debt includes the debt of government departments and agencies as well as health and social services networks.[4]

Quebeckers should be concerned about their government's direct debt for many reasons. For a start, empirical research has found that a negative relationship exists between high public direct debt and economic growth.[5] This negative relationship can be explained in different ways but one important

3. For seminal work on debt as future taxes, see: Barro, Robert (1974). Are Government Bonds Net Wealth. *Journal of Political Economy* 82, 6: 1095–1117. For a less technical work, see: Law and Clemens (1998). The Ricardian Equivalence Theorem: Back to the Future? *Fraser Forum* (February). Available at <http://oldfraser.lexi.net/publications/forum/1998/february/terminology.html, as of December 11, 2013>.

4. Québec, Ministère des Finances et de l'Économie (2013). *Public Accounts 2012-2013: Volume 1*. Government of Quebéc. Available at <http://www.finances.gouv.qc.ca/documents/Comptespublics/en/CPTEN_vol1-2012-2013.pdf>.

5. One of the most influential papers examining the connection between government debt and economic growth is by Harvard professors Carmen Reinhart and Kenneth Rogoff. See: Reinhart, Carmen, and Kenneth Rogoff (2010). Growth in a Time of Debt. *American Economic Review* 100, 2 (May): 573–78. After examining 44 countries over 200 years, Reinhart and Rogoff found that higher public debt is associated with lower economic growth. While a calculation mistake was uncovered in their original analysis, their initial finding about the connection between high public debt and low economic growth still held after the appropriate correction was made. For information on how Professors Reinhart and Rogoff responded to the detected error and the resulting criticisms of their work, see: Reinhart, Carmen, and Kenneth Rogoff (2013, April 25). Debt, Growth and the Austerity Debate. *New York Times*. Available at <http://www.nytimes.com/2013/04/26/opinion/debt-growth-and-the-austerity-debate.html?_r=0>, as of July 22, 2013. Other research has also found that public debt is negatively related to growth. For further details see: Égert, Balázs (2012). *Public Debt, Economic Growth and Nonlinear Effects: Myth or Reality?* OECD Economics Department Working Papers, No. 993, OECD Publishing; Cecchetti, Stephen G., M.S. Mohanty, and Fabrizio Zampolli (2011). *The Real Effects of Debt*. BS Working Papers No. 352. Bank for International Settlement; Kumar, Manmohan S., and Jaejoon Woo (2010). *Public Debt and Growth*. IMF Working Paper 10/174. International Monetary Fund; Checherita, Cristina, and Philipp Rother (2010). *The Impact of High and Growing Government Debt on Economic Growth: An Empirical Investigation for the Euro Area*. Working Paper Series No. 1237. European Central Bank.

explanation relates to the impact of government debt on private investment.[6] When government debt expands, it can cause long-term interest rates to rise, which in turn increases the cost of private-sector borrowing. Higher borrowing costs can then discourage private capital investment, which is a key driver of long-term economic growth.[7]

High public direct debt can also displace other government priorities. As a government is required to make ever-larger interest payments on growing debt, less government revenue is left over for important priorities like tax relief and spending on public programs like health care, education, and social services. Importantly, debt levels alone do not determine the magnitude of interest payments: the interest rate, or the cost of borrowing, also has an impact. Canadian governments are currently borrowing at historically low rates so there is a risk that interest rates could rise, which would increase the cost of servicing existing government debt. Governments that maintain a relatively large amount of debt, like the Quebec government, are especially vulnerable to interest rate increases.

2. Quebec's direct debt

This section examines four measures of direct debt: net direct debt, net direct debt as a share of the economy, net direct debt per person, and net direct debt per income taxpayer. The purpose is to establish a better understanding of the magnitude of Quebec's indebtedness as it pertains to direct debt. Recall that direct debt refers to a legal contract or obligation to pay back money that was borrowed.

There are two principal measures used for direct debt: gross and net direct debt. Gross direct debt is simply the total outstanding amount of borrowings accumulated over time. Gross direct debt, however, does not account for the financial resources of a government. In 2012/13, Quebec's gross direct debt was $237.5 billion.[8]

The second and more commonly used measure is net direct debt, which does account for financial assets. Specifically, net direct debt is gross direct debt minus financial assets (such as cash and securities). The net direct debt of Quebec for 2012/13 is $175.5 billion.[9]

Adjusting for financial assets to calculate net debt is critical when comparing jurisdictions. Two jurisdictions with similar gross debt but markedly

6. Égert, Balázs (2012). *Public Debt, Economic Growth and Nonlinear Effects: Myth or Reality?* OECD Economics Department Working Papers, No. 993, OECD Publishing.

7. The authors acknowledge that recently low interest rates have added fuel to the fire and encouraged governments in general to take on more debt because of the low servicing costs.

8. Québec, Ministère des Finances et de l'Économie (2013). *Public Accounts 2012-2013: Volume 1*. Government of Québec. Note that the Quebec government tabled its 2014/15 budget on February 20, 2014. The fiscal data in this essay series do not reflect budget changes.

9. Québec, Ministère des Finances et de l'Économie (2013). *Public Accounts 2012-2013: Volume 1*. Government of Québec.

different financial assets will experience materially different effects from debt. The jurisdiction with greater financial assets would be better able to manage and sustain higher levels of gross debt given its ability to liquidate financial assets and pay down debt if needed. Because net debt accounts for financial assets, looking at net debt figures rather than gross debt figures more readily explains the differences in the effects of debt.

Quebec's net debt

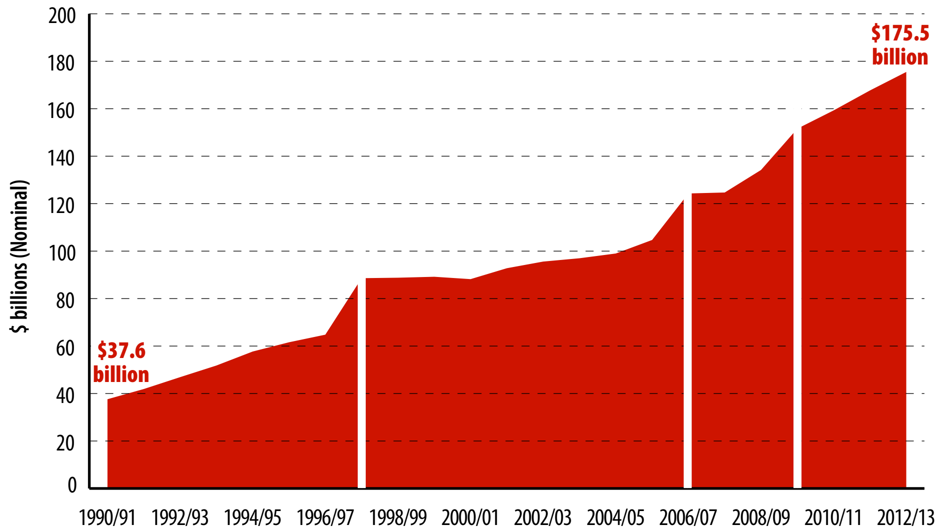
To get a sense of the historical pattern of Quebec's net direct debt, **Figure 1.1** illustrates the provincial amounts since 1990/91; the underlying data are presented in **Table 1.1**.[10] In nominal terms—that is, without adjusting for the effects of inflation—the province's net direct debt was $37.6 billion in 1990/91 and grew to $175.5 billion in 2012/13.

Figure 1.2 compares changes in Quebec's net direct debt (according Public Accounts data) between 1990/91 and 2012/13 with changes in the size of the provincial economy (measured by gross domestic product, or GDP), population, and the general price level (inflation). The information in Figure 1.2 is presented in the form of an index which captures changes in each variable in a comparative manner. By giving each variable an index value of 100 in the starting year (1990/91), we can more clearly see subsequent changes in relation to the initial year's value. Figure 1.2 illustrates that increases in Quebec's net direct debt have considerably outpaced growth in GDP, population growth, and inflation.

Just as different households can carry different amounts of debt, different governments can sustain different debt levels. A key indicator of a government's ability to carry debt is its jurisdiction's level of income; jurisdictions that generate more income can, other things being equal, carry larger debt because of their greater ability to pay. The most widely used measure that makes such an adjustment compares net direct debt to the size of the economy (measured by GDP). In 2012/13, Quebec's net direct debt was estimated to be 49.0 percent of GDP.

10. It is important to note that there were changes in the accounting treatment of Québec's government finances in 1997/98, 2006/07, and 2009/10. As a result, the net direct debt data are not strictly comparable over the entire 1990/91 to 2012/13 period. Despite these limitations, Public Accounts data were used because it is the only available data source that covers the entire period from 1990/91 to 2012/13. Accounting changes in 1997/98 increased the reported net debt by $13.3 billion; for information on the 1997/98 change, see: Ministère des Finances (1998). *Public accounts 1997-1998: Volume 1*. Government of Québec. Available at <http://collections.banq.qc.ca/ark:/52327/bs16114>. Accounting changes in 2006/07 increased the reported net debt by $19.1 billion; for information on the 2006/07 change, see: Québec, Ministère des Finances et de l'Économie (2007). *Update on Québec's Economic and Financial Situation: Fall 2007*. Government of Québec; Québec, Ministère des Finances et de l'Économie (2007). *Public Accounts 2006-2007: Volume 1*. Government of Québec. Available at <http://www.finances.gouv.qc.ca/documents/Comptespublics/en/CPTEN_vol1-2006-2007.pdf>. Accounting changes in 2009/10 increased the reported net debt by $7.6 billion; for information on the 2009/10 change see: Québec, Ministère des Finances et de l'Économie (2010). *Public Accounts 2009-2010: Volume 1*. Government of Québec. Available at <http://www.finances.gouv.qc.ca/documents/Comptespublics/en/CPTEN_vol1-2009-2010.pdf>.

Figure 1.1: Quebec Net Direct Debt, 1990/91–2012/13



Note: There were changes in the accounting treatment of Quebec's government finances in 1997/98, 2006/07, and 2009/10 (white lines on graph). As a result, the net direct debt data are not strictly comparable over the entire period from 1990/91 to 2012/13. Despite these limitations, Public Accounts data were used because it is the only available data source that covers the entire period from 1990/91 to 2012/13. Statistics Canada's now terminated Financial Management System includes a data series that ends in 2007/08. That data series was compared to the Public Accounts to ensure that the trend reported in Figure 1.1 is accurate in the overlapping years.

Sources: Canada, Ministry of Finance (2012). *Fiscal Reference Tables*. • Québec, Ministère des Finances et de l'Économie (1999–2013). *Public Accounts 1998-1999: Volume 1*; *Public Accounts 2000-2001: Volume 1*; *Public Accounts 2000-2001: Volume 1*; *Public Accounts 2001-2002: Volume 1*; *Public Accounts 2002-2003: Volume 1*; *Public Accounts 2003-2004: Volume 1*; *Public Accounts 2004-2005: Volume 1*; *Public Accounts 2005-2006: Volume 1*; *Public Accounts 2006-2007: Volume 1*; *Public Accounts 2007-2008: Volume 1*; *Public Accounts 2008-2009: Volume 1*; *Public Accounts 2009-2010: Volume 1*; *Public Accounts 2010-2011: Volume 1*; *Public Accounts 2011-2012: Volume 1*; *Public Accounts 2012-2013: Volume 1*.

Figure 1.3 displays Quebec's net direct debt as a share of the economy from 1990/91 to 2012/13 (see Table 1.1 for the underlying data). While the figure shows a general pattern of increasing net direct debt, there was a period of decreasing debt after 1997/98. Following 2007/08, however, there has been steady growth in Quebec's net direct debt-to-GDP ratio with a considerable upsurge in 2009/10, when it climbed 12.2 percent in a single year.[11]

Net direct debt per person and per income-tax payer

Yet another way to measure net direct debt is on a per-person basis. Each Quebecker's share of provincial government net direct debt was $21,708 in 2012/13.[12] To put that in perspective, the average annual income per person

11. Part of that increase was due to changes in the accounting treatment of Québec's government direct debt. See footnote 10 for more details.

12. Québec, Ministère des Finances et de l'Économie (2013). *Public Accounts 2012-2013: Volume 1*. Government of Québec; Statistics Canada (2013) *Estimates of population, by age group and sex for July 1, Canada, provinces and territories*. CANSIM Table No. 051-0001. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=0510001&paSer=&pattern=&stByVal=1&p1=1&p2=37&tabMode=dataTable&csid=>; calculations by authors.

Table 1.1: Quebec Net Direct Debt and as a Share of GDP, 1990/91–2012/13

	Net direct debt ($ billions nominal)	Net direct debt as a share of GDP (%)
1990/91	37.6	24.1
1991/92	41.9	26.5
1992/93	46.9	29.1
1993/94	51.8	31.4
1994/95	57.7	33.1
1995/96	61.6	34.0
1996/97	64.8	35.1
1997/98*	88.6	45.9
1998/99	88.8	44.2
1999/00	89.2	41.3
2000/01	88.2	38.2
2001/02	92.8	38.9
2002/03	95.6	38.4
2003/04	97.0	37.4
2004/05	99.0	36.5
2005/06	104.7	37.3
2006/07*	124.3	42.7
2007/08	124.7	40.8
2008/09	134.2	42.8
2009/10*	151.6	48.0
2010/11	159.3	48.3
2011/12	167.7	48.6
2012/13	175.5	49.0

Note: * There were changes in the accounting treatment of Québec's government finances in 1997/98, 2006/07, and 2009/10. As a result, the net direct debt data are not strictly comparable over the entire period from 1990/91 to 2012/13. Despite these limitations, Public Accounts data were used because it is the only available data source that covers the entire period from 1990/91 to 2012/13. Statistics Canada's now terminated Financial Management System includes a data series that ends in 2007/08. That data series was compared to the Public Accounts to ensure that the trend reported in Table 1 is accurate in the overlapping years.

Sources: Figure 1.1. • Statistics Canada (2013). *Gross domestic product, expenditure-based, provincial and territorial*. CANSIM Table No. 384-0038. Available at: <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=3840038&paSer=&pattern=&stByVal=1&p1=1&p2=-1&tabMode=dataTable&csid=>. • Calculations by authors.

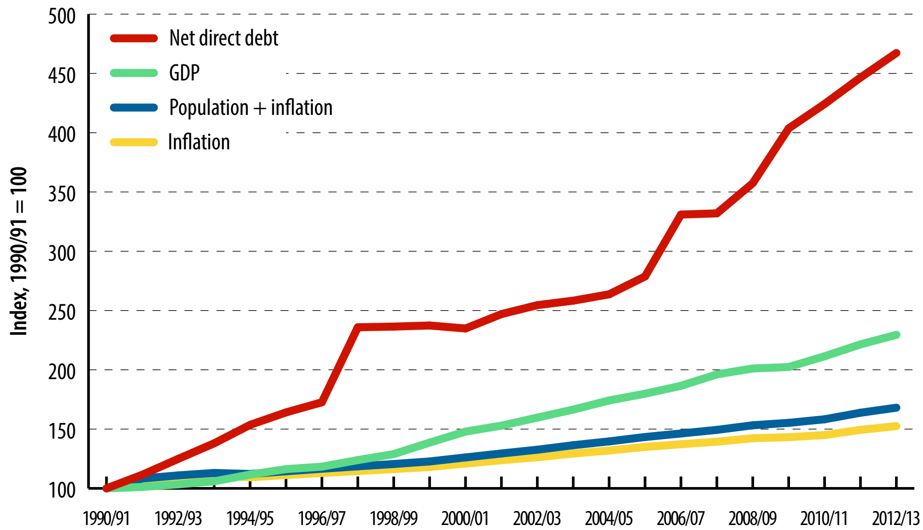
in Quebec for 2012 was $37,106, which means the average share of provincial government direct debt was 58.5 percent of average individual annual income in 2012.[13]

Of course, the burden of current contributions to debt repayment is not distributed evenly among the Quebec population. Children, for example, generally do not pay directly into government finances so in the short-term contribute little to debt repayment, although in the long-term, current Quebec children and future immigrants will share the burden of debt repayment. Since personal income taxes make up the largest portion of all taxes paid by Quebeckers,[14] Quebec income-tax payers bear a larger share of the immediate

13. Statistics Canada (2013). *Estimates of population, by age group and sex for July 1, Canada, provinces and territories*. CANSIM Table No. 051-0001. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=0510001&paSer=&pattern=&stByVal=1&p1=1&p2=37&tabMode=dataTable&csid=>; Statistics Canada (2013). *Selected indicators – Households*. CANSIM Table No. 384-0042. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=3840042&pattern=384-0037..384-0042&tabMode=dataTable&srchLan=-1&p1=-1&p2=31>; calculations by authors.

14. Palacios, Milagros, and Charles Lammam (2013). *Canadians Celebrate Tax Freedom Day on June 10, 2013*. Fraser Alert (June). Available at <http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/tax-freedom-day-2013.pdf>.

Figure 1.2: Index Comparison between Net Direct Debt, GDP, Population, and Inflation, 1990/91–2012/13



Notes: * There were changes in the accounting treatment of Quebec's government finances in 1997/98, 2006/07, and 2009/10. As a result, the net direct debt data are not strictly comparable over the entire 1990/91 to 2012/13 period. Despite these limitations, Public Accounts data were used because it is the only available data source that covers the entire period from 1990/91 to 2012/13. Statistics Canada's now terminated Financial Management System includes a data series that ends in 2007/08. That data series was compared to the Public Accounts to ensure that the trend reported in Figure 1.2 is accurate in the overlapping years. ** Inflation is measured by changes in Statistics Canada's consumer price index (CPI).

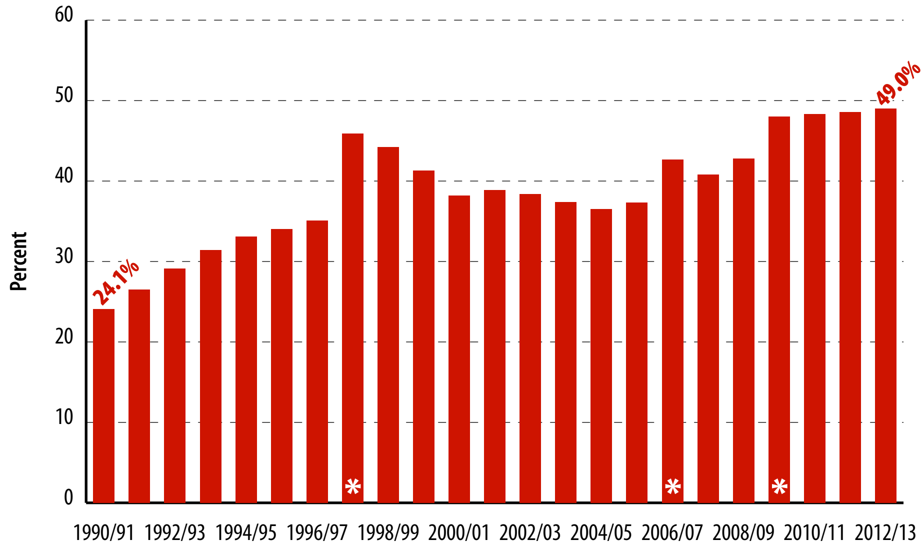
Sources: Figure 1.1. • Statistics Canada (2012). *Estimates of population, by age group and sex for July 1, Canada, provinces and territories*. CANSIM Table No. 051-0001. <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retLang=eng&id=0510001&paSer=&pattern=&stByVal=1&p1=1&p2=37&tabMode=dataTable&csid=>. • Statistics Canada (2013). *Gross domestic product, expenditure-based, provincial and territorial*. CANSIM Table No. 384-0038. <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=3840038&paSer=&pattern=&stByVal=1&p1=1&p2=-1&tabMode=dataTable&csid=>. • Statistics Canada (2013). *Consumer Price Index (CPI), 2009 basket*. CANSIM Table No. 326-0021. <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=3260021&paSer=&pattern=&stByVal=1&p1=1&p2=37&tabMode=dataTable&csid=>. • Calculations by authors.

burden of government debt repayment. It is therefore informative to present net direct debt on the basis of Quebeckers who filed *taxable* income tax returns (referred to as income-tax payers, herein). In 2011/12, the year for which the most recent income tax data are available, Quebec's net direct debt was $43,804 per income-tax payer.[15] It should be noted, however, that the burden of the debt does not distribute evenly across income-tax payers. Due to the progressive nature of Quebec's tax system, upper income Quebeckers will shoulder a disproportionate share.[16]

15. Québec, Ministère des Finances et de l'Économie (2013). *Public Accounts 2012-2013: Volume 1*. Government of Québec; Canada Revenue Agency (2013). *Preliminary Income Statistics - 2013 Edition*. Government of Canada; calculations by authors.

16. Progressivity means that as one earns more income, s/he pays proportionately more in taxes. For instance, in the 2013 tax year Quebec had four statutory rates in its provincial personal income tax system. The tax system is designed to be progressive with higher income earners paying a higher marginal tax rate.

Figure 1.3: Quebec Net Direct Debt as Share of GDP, 1990/91–2012/13



Note: There were changes in the accounting treatment of Quebec's government finances in 1997/98, 2006/07, and 2009/10 (✱). As a result, the net direct debt data are not strictly comparable over the entire period from 1990/91 to 2012/13. Despite these limitations, Public Accounts data were used because it is the only available data source that covers the entire period from 1990/91 to 2012/13. Statistics Canada's now terminated Financial Management System includes a data series that ends in 2007/08. That data series was compared to the Public Accounts to ensure that the trend reported in Figure 1.3 is accurate in the overlapping years.

Source: Table 1.1.

Servicing direct net debt

A key issue associated with large and growing direct debt is the tendency for interest payments on the debt ("debt servicing") to displace other government priorities. In 2012/13, the Quebec government spent $9.8 billion on debt servicing costs. In other words, the Quebec government had to pay nearly $10 billion in interest alone before it could spend on other public programs or begin repaying debt. On a per-person basis, the amount spent on servicing direct debt equalled $1,217 per Quebecker.[17]

A more telling way to consider the cost of interest charges is by the share of government revenues they consume. In 2012/13, debt service payments consumed over 11 percent of Quebec's total government revenue, which meant that more than 11 cents of every dollar collected by the provincial government through taxes or other means was spent servicing the debt and not on other priorities like much-needed tax relief, important public programs, or even debt reduction.[18]

17. Québec, Ministère des Finances et de l'Économie (2013). *Public Accounts 2012-2013: Volume 1*. Government of Québec; calculations by authors.

18. Québec, Ministère des Finances et de l'Économie (2013). *Public Accounts 2012-2013: Volume 1*. Government of Québec; calculations by authors.

Quebec taxpayers also responsible for federal and municipal government direct debt

The discussion thus far has focused on the direct debt of the provincial government, but Quebec taxpayers are also responsible for federal and municipal government direct debt. A complete accounting of direct government indebtedness therefore ought to consider these other levels of government.

Quebec's share of federal direct debt can be estimated based on the share of federal tax revenue that comes from Quebec taxpayers.[19] The federal net direct debt for 2012/13 is $671.4 billion.[20] Based on an 18.0 percent share of federal tax revenue, Quebec's share of federal debt is estimated at $121.2 billion.[21] Quebec's share of federal net direct debt is equal to 33.9 percent of the provincial economy or $14,989 per person. Combining Quebec's estimated share of federal net direct debt with the provincial amount ($175.5 billion) results in a total federal-provincial net direct debt of $296.7 billion, which equals 82.9 percent of provincial GDP.

Now add the value of Quebec's municipal net direct debt, which is estimated to be $10.3 billion in 2012/13.[22, 23] The municipal net direct debt is equal to 2.9 percent of Quebec's economy or $1,274 per person. Total net direct debt from all levels of government in Quebec is therefore $307.0 billion. That works out to 85.8 percent of the provincial economy or $37,971 per person.

Summary

A summary of Quebec's provincial, municipal, and federal share of direct debt is contained in **Table 1.2**. For each level of government, direct debt is expressed in total value, as a share of the provincial economy, and per person.

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19. Federal tax revenues include personal and corporate income taxes and taxes on production and imports.
20. Canada, Ministry of Finance (2013). *Public Accounts of Canada 2013, Volume I*. Government of Canada.
21. There are a number of ways to calculate the provincial share of federal debt. Our calculations use the provincial taxpayers' contribution to federal tax revenues since it reflects the distribution of the tax burden among the provinces. A five-year average of the percentage of Quebec's contribution to federal tax revenues was applied to the federal net direct debt to estimate Quebec's share of the federal debt. The most recent data available are for 2009; an average was calculated between 2005 and 2009. Statistics Canada (2011). *Government sector revenue and expenditure, provincial economic accounts*. CANSIM Table 384-0004. Available at <http://www5.statcan.gc.ca/cansim/a26;jsessionid=814D225CCF24FF2ECCC743BF047AD649?lang=eng&retrLang=eng&id=3840004&pattern=3840004..3840013&tabMode=dataTable&srchLan=-1&p1=-1&p2=-1>.
22. This figure only includes long-term debt and does not include debt from other types of local government, such as local school boards. Québec, Ministère des Finances et de l'Économie (2013). *Update on Québec's Economic and Financial Situation: Fall 2013*. Government of Québec: D.19.
23. Quebec's municipal net debt figure for 2012/13 is an estimate. The estimate is based on the historical trend for the ratio between municipal gross and net debt in Quebec from 1990/91 to 2006/07. Statistics Canada (2010). *Balance sheet of federal, provincial and territorial general and local governments*. CANSIM Table 385-0014. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=3850014&paSer=&pattern=&stByVal=1&p1=1&p2=50&tabMode=dataTable&csid=>; Québec, Ministère des Finances et de l'Économie (2013). *Update on Québec's Economic and Financial Situation: Fall 2013*. Government of Québec: D.19; calculations by authors.

3. Quebec's indirect debt

When pundits, policy analysts, and people in general discuss government indebtedness, they usually are referring to direct debt. But direct debt is only part of total government indebtedness. Other types of liabilities facing the Quebec government include contractual agreements such as leases that the government is legally obliged to adhere to, and commitments to provide certain benefits and transfers to qualifying individuals such as the Quebec Pension Plan (QPP). Such obligations are collectively referred to as indirect debt and they represent a claim on government resources that can have a negative impact upon government finances. To fully understand the extent of Quebec's total government indebtedness, one needs to consider indirect debt.

Many of the problems associated with direct debt also apply to indirect debt. For one thing, indirect debt can eventually become direct debt. If a government is unable to finance the indirect debt liability, it has a limited number of options, one of which is to borrow money. But additional government borrowing can adversely affect economic growth. The other available options—raising taxes or displacing resources from other government programs—also have negative consequences.[24] The bottom line is that a relatively high level of indirect debt makes managing government finances over the longer term much more difficult and can ultimately lead to reduced economic growth or other undesirable outcomes.

Like direct debt, Quebec taxpayers are responsible not only for provincial indirect debt but also municipal and federal indirect debt. The discussion below focuses primarily on provincial indirect debt but an estimate of Quebec's overall indirect indebtedness including its portion of federal indirect debt is also provided. For each category of provincial indirect debt there is a corresponding category at the federal level. The estimates of indirect debt for Quebec are drawn from a Fraser Institute publication, which provides estimates for the 2011/12 fiscal year—the latest year possible.[25]

Indirect debt can be placed in three categories: (1) debt guarantees, (2) contingent liabilities and contractual commitments, and (3) program obligations.

Debt guarantees

Debt guarantees are issued by governments on behalf of privately held companies and Crown corporations to encourage the financing of such firms at lower than market rates. Governments provide this advantage to stabilize those

24. Some consequences would arguably be worse than others. Increasing taxes and incurring direct debt would both slow economic growth, while reducing spending in less critical areas would largely be a transitional problem for those no longer receiving the benefits. Program reforms, however, can achieve the dual purpose of reduced spending and improved outcomes.

25. For a more detailed discussion of total government liabilities and the source for indirect debt estimates cited in this essay, see: Palacios, Milagros, Hugh MacIntyre, and Charles Lammam (forthcoming). *Canadian Government Debt 2014: A Guide to the Indebtedness of Canada and the Provinces*. Fraser Institute.

Table 1.2: Summary of Quebec's Direct Debt, 2012/13

	$ billions	$ per person	Share of provincial economy (%)
Provincial net direct debt	175.5	21,708	49.0
Share of federal net direct debt	121.2	14,989	33.9
Municipal net direct debt*	10.3	1,274	2.9
Total	**307.0**	**37,971**	**85.8**

Note: * Municipal net direct debt was estimated by using the average ratio of gross and net direct debt for the last five years of available data from Statistics Canada. The average ratio was applied to the gross municipal debt available in Quebec's 2013 fiscal and economic update. This figure only includes long-term debt and does not include debt from other all types of local government such as local school boards.

Sources: Table 1.1. • Québec, Ministère des Finances et de l'Économie (2013). *Update on Québec's Economic and Financial Situation: Fall 2013.* • Statistics Canada (2010). *Balance sheet of federal, provincial and territorial general and local governments*. CANSIM Table No. 385-0014. <http://www5.statcan.gc.ca/cansim/a47>. • Statistics Canada (2013). *Gross domestic product, expenditure-based, provincial and territorial*. CANSIM Table No. 384-0038. <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=3840038&paSer=&pattern=&stByVal=1&p1=1&p2=-1&tabMode=dataTable&csid=>. • Statistics Canada (2013). *Estimates of population, by age group and sex for July 1, Canada, provinces and territories*. CANSIM Table No. 051-0001. <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=0510001&paSer=&pattern=&stByVal=1&p1=1&p2=37&tabMode=dataTable&csid=>. • Calculations by authors.

companies or lure firms to locate within a specific region. In the event that the firm fails or is otherwise unable to meet its financial obligations, a debt guarantee would become direct debt. For example, most of Hydro-Quebec's debt is guaranteed by the Quebec government.[26] Debt guarantees by the provincial government are estimated to be $40.0 billion in 2011/12, the highest of any provincial government.[27] If the Quebec government had to make good on its debt guarantees, it would put additional strain on public finances.

Contingent liabilities and contractual commitments

Contingent liabilities are potential claims that may become actual claims depending on the outcome of uncertain future events. An example would be lawsuits against a government where the government may have to pay compensation. The Quebec government had $862 million worth of legal claims made against it as of 2011/12.[28] The government is also responsible for a $3.1 billion environmental contingent liability on contaminated land.[29]

Contractual commitments are legally binding contracts to pay for future services rendered or goods provided. Operating and capital leases are examples

26. Hydro-Québec (2013). *Questions about Hydro-Québec's Debt*. Available at <http://www.hydroQuébec.com/investor-relations/faq.html>, as of May 30, 2013.
27. Palacios, Milagros, Hugh MacIntyre, and Charles Lammam (forthcoming). *Canadian Government Debt 2014: A Guide to the Indebtedness of Canada and the Provinces*. Fraser Institute.
28. Québec, Ministère des Finances et de l'Économie (2012). *Public Accounts 2011-2012: Volume 1*. Government of Québec: 131.
29. Québec, Ministère des Finances et de l'Économie (2012). *Public Accounts 2011-2012: Volume 1*. Government of Québec: 131.

of contractual commitments. In the 2011/12 fiscal year, the Government of Quebec calculated that it had $35.1 billion in contractual commitments.[30]

Both contingent and contractual government liabilities have the potential to add to Quebec's direct debt.[31] In 2011/12, the Quebecgovernment was responsible for $39.2 billion of contingent liabilities and contractual commitments.

Program obligations

Program obligations consist of programs in which the government has committed itself to providing benefits or services in the future. These programs create an obligation for future governments (they can, however, be reduced or eliminated). Examples of such programs in Quebec include health care and the Quebec Pension Plan (QPP).[32]

Program obligations become a major problem for government finances when they are unfunded liabilities. 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. It is estimated that Quebec's provincial government had unfunded liabilities of $389.4 billion in 2011/12.[33]

Governments can deal with unfunded liabilities either by increasing taxes, taking on debt, reducing spending on other programs, reforming the program so that government revenues cover the obligation, or some combination. The QPP provides an example of how an unfunded liability affects government finances and fiscal policy. A government actuarial report in 2010 found that by 2013 the benefit payouts from the QPP Fund would be greater than the payroll tax contributions to the fund.[34] Like the Canada Pension Plan (CPP) Fund, the QPP Fund has reserves that it invests, but the same actuarial report showed that by 2039 the reserves in the QPP would be completely depleted. The Quebec government responded by steadily increasing the QPP payroll tax of 9.9 percent in 2011 to 10.8 percent by 2017. In effect, the Government

30. Québec, Ministère des Finances et de l'Économie (2013). *Public Accounts 2012-2013: Volume 1*. Government of Québec: 142.

31. Public-private partnerships (P3s) could also be thought of as contributing to indirect debt because they are contractual agreements for the public partner to provide payment to the private partner on the condition that the private partner delivers contractually agreed upon services. In Quebec, however, P3 commitments are recorded as direct debt: Québec, Ministère des Finances et de l'Économie (2013). *Budget Plan: Budget 2013-2014*. Government of Québec: C.55. For more information on P3s, see Lammam, Charles, Hugh MacIntyre, and Joseph Berechman (2013). *Using Public-Private Partnerships to Improve Transportation in Canada*. Fraser Institute. Available at <http://www.fraserinstitute.org/research-news/display.aspx?id=19848>.

32. Another example of an unfunded liability can be the pensions of government workers.

33. Palacios, Milagros, Hugh MacIntyre, and Charles Lammam (forthcoming). *Canadian Government Debt 2014: A Guide to the Indebtedness of Canada and the Provinces*. Fraser Institute.

34. Québec, Régie des Rentes du Québec (2010). *Actuarial Report of the Québec Pension Plan as at 31 December 2009*. Government of Québec. Available at <http://www.rrq.gouv.qc.ca/SiteCollectionDocuments/www.rrq.gouv.qc/Anglais/publications/regime_rentes/analyse_actuarielle_2009_en.pdf>.

of Quebec increased taxes to help cover the unfunded liability. Raising taxes, however, has a well-documented negative impact on economic growth.[35] So, while the unfunded liability was reduced and additions to direct debt avoided, it came at the cost of future potential economic growth.

Summary

A summary of the provincial indirect debt figures presented in this section is contained in **Table 1.3**. In addition, and to provide a more complete picture of indirect debt faced by Quebec taxpayers, Quebec's share of federal indirect debt is also displayed in the table. In total, combined provincial and federal indirect debt in Quebec equals $626.5 billion.

Table 1.4 sums up the size of Quebec's total combined federal, provincial, and local government direct and indirect debt for the 2011/12 fiscal year.[36] The total figure is $955.7 billion, which translates to $119,354 for every Quebecker or 276.8 percent of GDP.

Conclusion

Provincial government direct debt in Quebec was $175.5 billion in 2012/13 or 49.0 percent of the provincial economy and this share has grown in recent years. The picture is bleaker after account is taken of municipal direct debt and the share of federal direct debt for which Quebec taxpayers are responsible. Consolidated government direct net debt in Quebec totalled $307.0 billion in 2012/13 or 85.8 percent of the provincial economy.

A critical yet often missed component of government indebtedness is indirect debt. And here, a cursory look shows Quebec taxpayers face even greater government indebtedness through debt guarantees, contingent liabilities and contractual commitments, and program obligations. Altogether, total government indebtedness in Quebec—including the direct and indirect debt of all levels of government—is estimated at $955.7 billion in 2011/12; this works out to $119,354 for each Quebecker and 276.8 percent of the provincial economy.

With the provincial government recently pushing back the target date for a balanced budget by two years, it is likely that Quebec's government indebtedness will continue to grow. Growth in government puts the future prosperity of Quebecers at risk through the possibility of reduced economic growth and lower living standards.

35. For a comprehensive review of the effects of taxes on economic growth, see: Palacios, Milagros, and Kumi Harischandra (2008). The Impact of Taxes on Economic Behaviour. In Jason Clemens (ed.), *The Impact and Cost of Taxation in Canada: The Case for Flat Tax Reform* (Fraser Institute): 3–32.

36. Quebec's total direct debt reported in Table 1.4 is not directly comparable to the figures reported in Table 1.2 because the sources used in the tables differ (Statistics Canada and Quebec Fiscal Update, respectively). Table 1.4 includes a broader definition of local government than Table 1.2. Also, in Table 1.2 municipal direct debt only contains long-term debt while Table 1.4 includes short-term debt. Different sources were used because at the time of writing Statistics Canada did not yet have local government debt available for 2012/13.

Table 1.3: Quebec's Indirect Debt ($billions), 2011/12

	Provincial indirect debt	Share of federal indirect debt	Total
Debt guarantee	40.0	45.1	85.1
Contingent liabilities and contractual obligations	39.2	22.3	61.5
Program obligations	389.4	90.5	479.9
Total	**468.5**	**157.9**	**626.5**

Notes: Palacios et al. (2014) calculate Quebec's share of federal government debt use the provincial taxpayers' contribution to federal tax revenues since it reflects the distribution of the tax burden among the provinces. A five-year average of the percentage of Quebec's contribution to federal tax revenues was applied to the federal net direct debt to estimate Quebec's share of the federal debt. The figures in this table do not include local indirect debt.

Source: Palacios, Milagros, Hugh MacIntyre, and Charles Lammam (forthcoming). *Canadian Government Debt 2014: A Guide to the Indebtedness of Canada and the Provinces*. Fraser Institute.

Table 1.4: Total Government Indebtedness in Quebec (federal, provincial, and local combined), 2011/12

	$ billions	$ per person	Share of GDP (%)
Direct debt	329.3	41,119	95.4
Debt guarantee	85.1	10,632	24.7
Contingent liabilities and contractual obligations	61.5	7,675	17.8
Program obligations	479.9	59,928	139.0
Total	**955.7**	**119,354**	**276.8**

Notes: Quebec's total direct debt reported in Table 1.4 is not directly comparable to the figures reported in Table 1.2 because the sources used in the tables differ considerably (Statistics Canada and Quebec Fiscal Update, respectively). Table 1.4 uses a broader definition of local government than Table 1.2 and also municipal direct debt in Table 1.2 only contains long-term debt while Table 1.4 includes short-term debt as well as a wider range of liabilities. Different sources had to be used because at the time of writing Statistics Canada did not yet have data on local government debt available for 2012/13. The figures in this table do not include local indirect debt.

Source: Palacios, Milagros, Hugh MacIntyre, and Charles Lammam (forthcoming). *Canadian Government Debt 2014: A Guide to the Indebtedness of Canada and the Provinces*. Fraser Institute.

2. Comparing the Indebtedness of Quebec and Its Neighbours

Marc Joffe, Sean Speer, and Frazier Fathers

Introduction

As highlighted earlier in this essay series, Quebec's provincial indebtedness is significant despite the lack of public attention to the subject. Quebec's reported net direct debt was $37.6 billion in 1990/91 and grew to $175.5 billion in 2012/13.[1] This growth of Quebec's indebtedness has been a long-term trend that has persisted despite the passing of balanced budget legislation in 1996 and past attempts to control spending.[2]

The purpose of this essay is to compare the debt situation in Quebec to that in other jurisdictions in Canada and the United States. This comparison will help not only reveal the magnitude of Quebec's debt by providing context but it will also show that the lack of attention being paid to the situation is a danger to the future of all Quebeckers. This analysis will be conducted in two phases: first, we will compare Quebec's debt to Canadian jurisdictions with a particular focus on its larger neighbour, Ontario; second, the focus of this essay will shift

1. It is important to note that there were changes in the accounting treatment of Quebec's government finances in 1997/98, 2006/07, and 2009/10. That means the net direct debt data are not comparable over the entire period from 1990/91 to 2012/13. We cannot say for certain how much of the change from $37.6B to $175.5B is due to increases in debt and how much is due to accounting reforms that merely recognized existing debt. For information on the 1997/98 change, see: Québec, Ministère des Finances et de l'Économie (2006). *History*. Available at <http://www.finances.gouv.qc.ca/en/page.asp?sectn=8&contn=47>. For information on the 2006/07 change, see: Quebec, Ministère des Finances et de l'Économie (2007). *Update on Quebec's Economic and Financial Situation: Fall 2007*. Government of Quebec; Quebec, Ministère des Finances et de l'Économie (2007). *Public Accounts 2006-2007: Volume 1*. Government of Quebec. Available at <http://www.finances.gouv.qc.ca/documents/Comptespublics/en/CPTEN_vol1-2006-2007.pdf>.

2. Chassin, Youri (March 2012). *The Debt of the Quebec Government*. Viewpoint. Montreal Economic Institute. Available at <http://www.iedm.org/files/lepoint0312_en.pdf> as of July 25, 2013.

Chapter 2 in Sean Speer, ed., *Quebec's Government Indebtedness: Unnoticed, Uncontrolled*. Quebec Prosperity Initiative.

to the bond market as a means of examining Quebec's debt in comparison to a number of jurisdictions in United States with a particular emphasis on New York, which has attracted considerable attention for its level of indebtedness.[3]

Net debt comparisons

Debt in Canada tends to be measured using one of two means of accounting: gross and net debt. Gross debt accounts for the total amount of debt that has been accumulated over time. Net debt begins with the same measure as the total gross debt but subtracts the value of any financial assets that are held. In Canada, net debt is the more commonly used tool as a measure of debt, as the value of assets can play a key role in determining the sustainability of a jurisdiction's debt levels.

Of all the provinces in confederation, Ontario's debt situation has garnered the most media and political attention. The provincial government struck a commission in March 2011 to report on the government's finances and to set out recommendations to stabilize its deficits and debt. The commission was mandated to "examine long-term, fundamental changes to the way government works" in light of the province's persistent deficits.[4] Its report—which was released in February 2012—called for sweeping reforms to address the province's "serious fiscal challenges."[5]

A recent series of essays published by the Fraser Institute[6] documented Ontario's poor fiscal position and what may happen in the future. The findings were sobering. The province's debt levels are now higher than California's when using a similar comparator and increasingly look similar to where Greece was in the 1980s before its public finances spiraled out of control.

In the last fiscal year completed, 2012/13, Ontario recorded a deficit of roughly $9.2 billion, representing a total of 1.36 percent of GDP.[7] This was down from a little over $13.0 billion (1.93 percent of GDP) in the previous year.

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3. A December 2012 report by a task force consisting of former Federal Reserve chair Paul Volcker and former lieutenant governor Richard Ravitch looked at New York's fiscal situation, along with that of five other major states. The report found major structural problems in these states's budgeting, including unsustainable growth in major expenditures such as Medicaid and employee pension funds. See: State Budget Crisis Task Force (2012). *New York Report*. Available at <http://www.statebudgetcrisis.org/wpcms/wp-content/images/NY-Report.pdf>.

4. Government of Ontario (March 29, 2011). *Turning the Corner to a Better Tomorrow: 2011 Ontario Budget*. Toronto, ON: Department of Finance, Government of Ontario. Available at <http://www.fin.gov.on.ca/en/budget/ontariobudgets/2011/papers_all.pdf>.

5. Commission on the Reform of Ontario's Public Services (February 15, 2012). *Public Services for Ontarians: A Path to Sustainability and Excellence*. Toronto, ON: Commission on the Reform of Ontario's Public Services, Government of Ontario. Available at <http://www.fin.gov.on.ca/en/reformcommission/chapters/report.pdf>.

6. Clemens, Jason, and Niels Veldhuis (2013). *The State of Ontario's Indebtedness: Warning Signs to Act*. Fraser Institute. Available at <http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/state-of-ontarios-indebtedness.pdf>.

7. Government of Ontario (2013). *Creating Jobs and Growing the Economy: 2013 Ontario Economic Outlook and Fiscal Review*. November 7. Toronto, ON: Department of Finance, Government of Ontario. Available at <http://www.fin.gov.on.ca/en/budget/fallstatement/2013/>. Calculations by authors.

However, the Ontario government expects the 2013/14 deficit to increase to $11.7 billion, representing 1.70 percent of GDP.[8] This year's deficit will be the sixth consecutive year of deficit spending beginning in 2008/09. The result of these deficits—between 2008/09 to 2012/13 (excluding the projected deficit in 2013/14)—has been an accumulation of new debt amounting to $61.9 billion representing a 39.5 percent increase in net debt since 2007/08.[9] Ontario's net debt increased by 61.0 percent between 2007/08 and 2012/13 from $156.6 billion to $252.1 billion after accounting for all factors including accumulated deficits.

So it is pretty clear, then, that Ontario's debt levels are a reason for concern. And this is why, in spite of a lack of action on the part of the government, the issue is generating debate in the province.

Quebec's debt situation

Quebec began to run deficits in 2008/09 and over the same five-year span these deficits added $10.9 billion dollars in new debt.[10] Quebec's net debt increased by 41.2 percent between 2007/08 and 2012/13 from $124.3 to $175.5 billion after accounting for all factors including accumulated deficits. It was scheduled to return to balance at the end of the current fiscal year but its recent economic and fiscal update revised this plan. The government is now projecting a $2.5 billion deficit in 2013/14 (rather than a return to balance) and a $1.75 billion deficit in 2014/15.[11] Still, despite this setback it appears on the face of it that Quebec's public finances are in a better position than Ontario's (**Table 2.1**). But when one examines the debt situation in the context of the size of the province's economy a slightly different story emerges.

A common way to compare debt levels between two jurisdictions is as a share of GDP. This is because a government's ability to raise tax revenues is directly tied to the level of economic activity. It is useful to express a jurisdiction's debt as a percentage of GDP because the ratio provides a sense of its capacity to generate tax revenue and service its debt. As **Figure 2.1** illustrates, Quebec's net debt as a share of GDP approaching 50 percent is by far the highest among the provinces. Indeed it is currently 12 percentage points higher than Ontario's (37.4 percent) even though that province carries almost $77 billion dollars more in total net debt and has experienced a larger increase in net debt in recent years.[12]

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8. Government of Ontario (2013). *Creating Jobs and Growing the Economy*.
9. Government of Ontario (2013). *Creating Jobs and Growing the Economy*. Calculations by authors.
10. TD Bank Economics (2013). *Government Budget Balances and Net Debt (As of November 29, 2013)*. Toronto, ON: TD Bank Financial. Available at <http://www.td.com/document/PDF/economics/budgets/gov_budget_20131129.pdf>. Calculations by authors.
11. These figures are the same as the 2014/15 budget but the rest of the fiscal data in this essay do not reflect changes announced in the recent provincial budget.
12. Government of Ontario (2013). *Ontario's Economic Outlook and Fiscal Plan*. May 2. Toronto, ON: Department of Finance, Government of Ontario. Available at <http://www.fin.gov.on.ca/en/budget/ontariobudgets/2013/bk1.pdf>; TD Bank Economics (2013). *Government Budget Balances and Net Debt (As of November 29, 2013)*. Toronto, ON: TD Bank Financial. Available at <http://www.td.com/document/PDF/economics/budgets/gov_budget_20130702.pdf>. Calculation by authors.

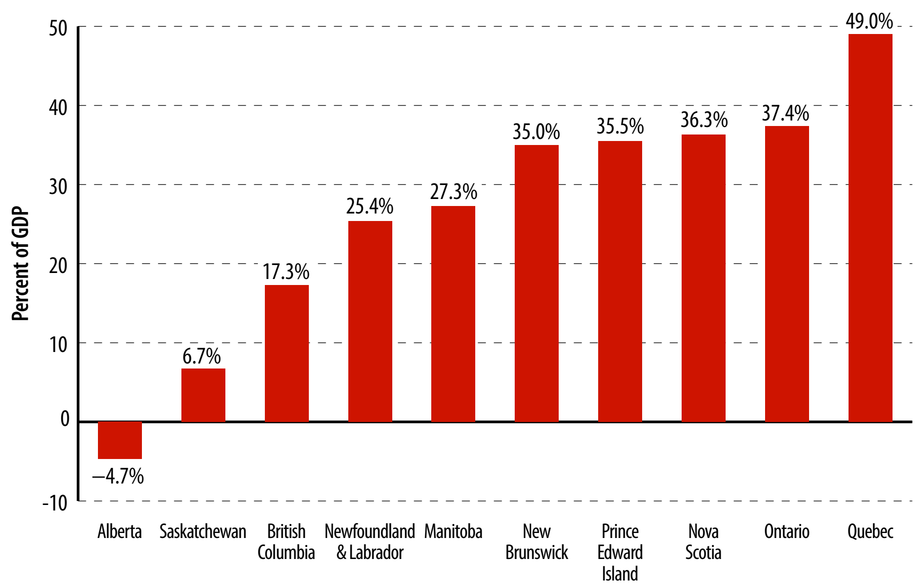
Table 2.1: Quebec and Ontario Deficit and Debt, 2007/08–2012/13

	Debt in 2007-08	Sum of Deficits, 2008-09–2012-13	Other Debt Increases,* 2008-09–2012-13	Debt in 2012-13
		Deficits and debt ($ billions)		
Ontario	156.6	61.9	33.6	252.1
Quebec	124.3	10.9	40.3	175.5
		Debt as a percentage of GDP		
Ontario	26.2			37.4
Quebec	40.6			49.0

Note: *No adjustment has been made for Quebec's 2009-10 accounting reform.

Sources: TD Economics (2014). *Government Budget Balances and Net Debt (As of January 6, 2014)*. <www.td.com/economics>, as of January 10, 2014. • Quebec, Ministry of Finance and the Economy (2013). *Update on Quebec's Economic and Financial Situation, Fall 2013*. • Ontario, Ministry of Finance (2013). *Creating Jobs and Growing the Economy, Ontario Economic Outlook and Fiscal Review*. • Statistics Canada (2014). *Gross domestic product, income-based, provincial and territorial, annual (dollars)*. Table 384-0037. <http://www5.statcan.gc.ca/cansim/home- accueil?lang=eng>, as of January 10, 2014.

Figure 2.1: Net Direct Debt as a Share of GDP, by Province, 2012/13



Sources: Alberta, Treasury Board and Finance (2013). *Government of Alberta Annual Report, 2012-2013*. • British Columbia, Ministry of Finance (2012). *Public Accounts, 2011/12*. • Manitoba, Ministry of Finance (2013). *Province of Manitoba Annual Report for the Year Ended March 31, 2013*. • New Brunswick, Ministry of Finance (2013). *Public Accounts for the Fiscal Year Ended 31 March 2013*. • Newfoundland & Labrador, Ministry of Finance (2013). *Budget 2013: A Sound Plan, a Secure Future*. • Nova Scotia, Ministry of Finance (2013). *Public Accounts for the Fiscal Year Ended March 31, 2013*. • Ontario, Ministry of Finance (2013). *Public Accounts of Ontario 2012-2013*. • Prince Edward Island, Ministry of Finance, Energy, and Municipal Affairs (2013). *Estimates of Revenue and Expenditure 2013-2014*. • Quebec, Ministère des Finances et de l'Économie (2013). *Public Accounts 2012-2013: Volume 1*. • Saskatchewan, Ministry of Finance (2013). *Public Accounts 2012-13*. • Statistics Canada (2013). *Gross domestic product, expenditure-based, provincial and territorial*. CANSIM Table No. 384-0038. • Calculations by authors.

When looked at on a per-capita basis, rather than as a share of GDP, every Quebecker held approximately $21,700 in outstanding net debt in 2012/13. This is the highest level in Canada (see **Figure 2.2**). Although second-ranked Ontario carries substantially more net debt in total, the province's larger population and bigger economy help mitigate the negative impacts and distribute the debt burden to a certain extent. Alberta is the only province where citizens are not currently responsible for any provincial debt because, for the time being at least, its financial assets exceed its net debt.

As the data show, Quebec's indebtedness is the highest among the provinces when presented as a percentage of GDP or on a per-capita basis. This type of comparison with other provinces—including Ontario whose debt problems have been well-documented—provides Quebeckers with a useful way to understand the extent of their province's indebtedness.

Another way to illustrate Quebec's relative indebtedness is its debt service costs compared to other Canadian provinces (**Figure 2.3**). The first essay has already shown the high cost of Quebec's interest payments on the province's debt. The fact is these payments as a share of provincial revenue, 11.4 percent, exceed those in every other province—the next closest is Newfoundland & Labrador at 11.2 percent. As a point of illustration: Alberta's is the lowest at 1.3 percent.

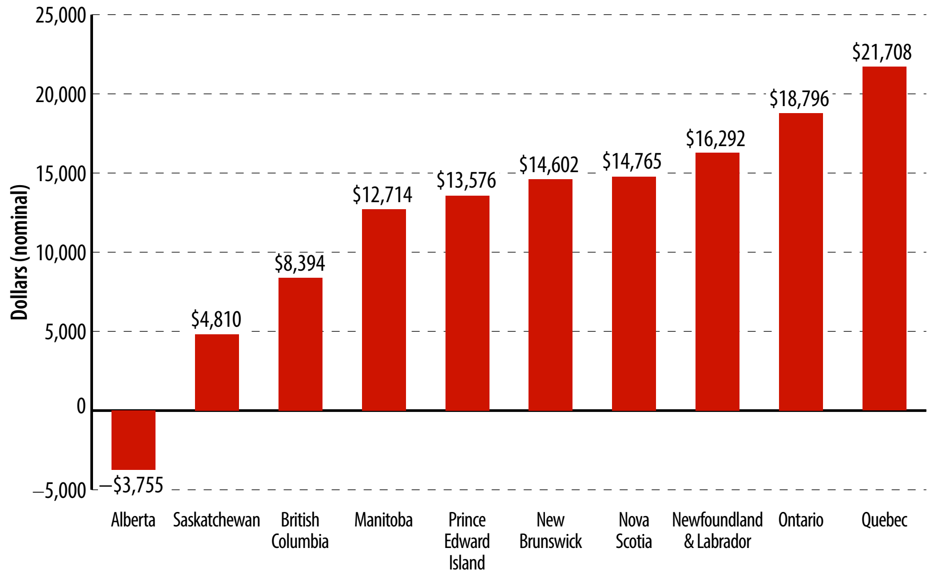
Bonded debt—Quebec's debt versus debt levels of US states

There is considerable value in also comparing Quebec's indebtedness to that of its American neighbours to gain a wider context for Quebec's debt issue. Yet before doing so it is important to recognize different constitutional considerations. Unlike Canadian provinces, US states have their own constitutions distinct from the national constitution that often set out state-specific constitutional rules that can restrict the fiscal powers of the respective state government. Of particular interest for this essay is the constitutional requirement in many states for a balanced budget. While some provinces have experimented with balanced budget legislation (legislating certain fiscal rules but not enshrining them in a constitution) with varying success, the lack of a constitutional requirement has limited its effectiveness. The primary challenge with a statutory or legislated balanced budget is that governments can repeal or waive such laws if fiscal conditions change or a successor government has different views on deficits and debts. American constitutional requirements are more difficult or complex to alter or revise.[13]

After recognizing these constitutional differences, it is then necessary to reconcile accounting distinctions between Canadian provinces and US states.

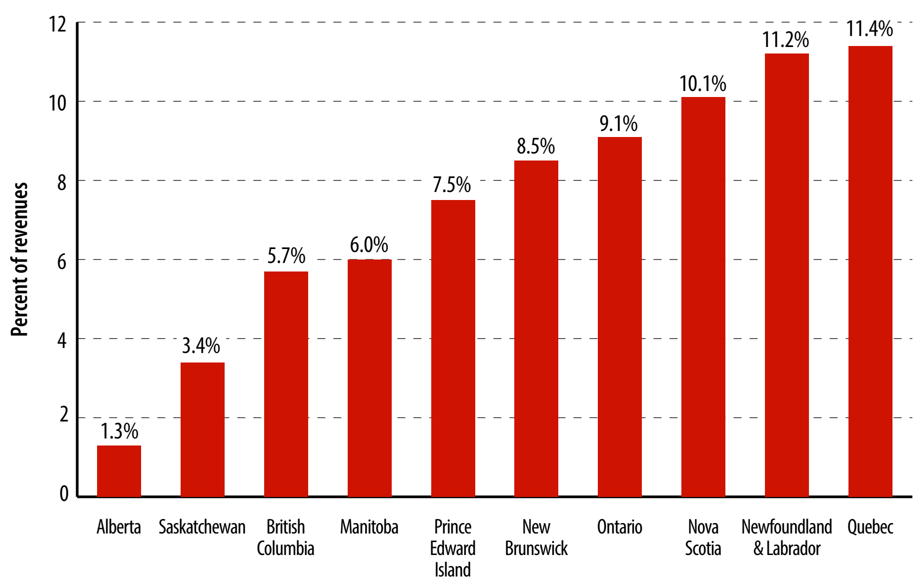
13. For more on Canada/US experiences, see Clemens, Jason, Todd Fox, Amela Karabegović, Sylvia LeRoy, and Niels Veldhuis (2003). *Tax Expenditure Limitations: The Next Step in Fiscal Discipline*. Fraser Institute; and Zycher, Benjamin (May 2013). *State and Local Spending: Do Tax and Expenditure Limits Work?* American Enterprise Institute.

Figure 2.2: Net Direct Debt per Capita, by Province, 2012/13



Sources: Figure 2.1. • Statistics Canada (2013). CANSIM Table 051-0001. *Estimates of Population, by Age Group and Sex for July 1, Canada, Provinces and Territories, Annual*. CANSIM Table 051-0001. Available at <http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/demo02a-eng.htm>.

Figure 2.3: Debt Service Costs as Share of Total Revenues, by Province, 2012/13



Source: Figure 2.1.

The concept of net debt is not used in US public accounting, so a different metric is required to compare the debt burdens of Quebec and its American neighbours. A readily available measure is the value of bonds and comparable debt instruments outstanding. This is referred to as bonded debt.

Note that our bonded debt measure does not include local government debt. In Canada, local government debt is a small portion of combined local-provincial debt. In the United States, local debts make up a large share of the consolidated local-state sum. However, states are not responsible for debts incurred by local governments.

Quebec's total gross outstanding bonded debt for 2011 was \$160.8 billion, representing approximately 47 percent of the province's GDP.[14] For reference, this compares to Quebec's total public-sector debt[15] of approximately \$235 billion in 2011, representing approximately 68 percent of GDP. Quebec's bonded debt level represents approximately 68 percent of its total public-sector debt, which is slightly lower than the estimated ratio of net to total public-sector debt, which is about 71 percent.[16]

Using bonded debt let us compare Quebec's indebtedness with a selection of American states as a percentage of GDP in 2011 (**Figure 2.4**). To show a wide sample, 24 states were selected, including the ten states with the highest bonded debt as a percentage of GDP, the five states with the lowest bonded debt-to-GDP ratio, and the ten most populous states. New York is listed as both one of the ten most populous states and one of the ten most indebted states, which brings the total to 24 selected states. Included in these selected states are the four of Quebec's neighbouring American jurisdictions: New York, Maine, New Hampshire, and Vermont.

New York's debt position is a useful comparison not just because of its physical proximity to Quebec. The state's public finances have attracted considerable attention for rising debt levels and growing entitlement liabilities such as public-sector pensions. It is also been found to have the lowest level of economic freedom among US states—a distinction it shares with Quebec among Canadian provinces.[17] It is clear from the data that both jurisdictions

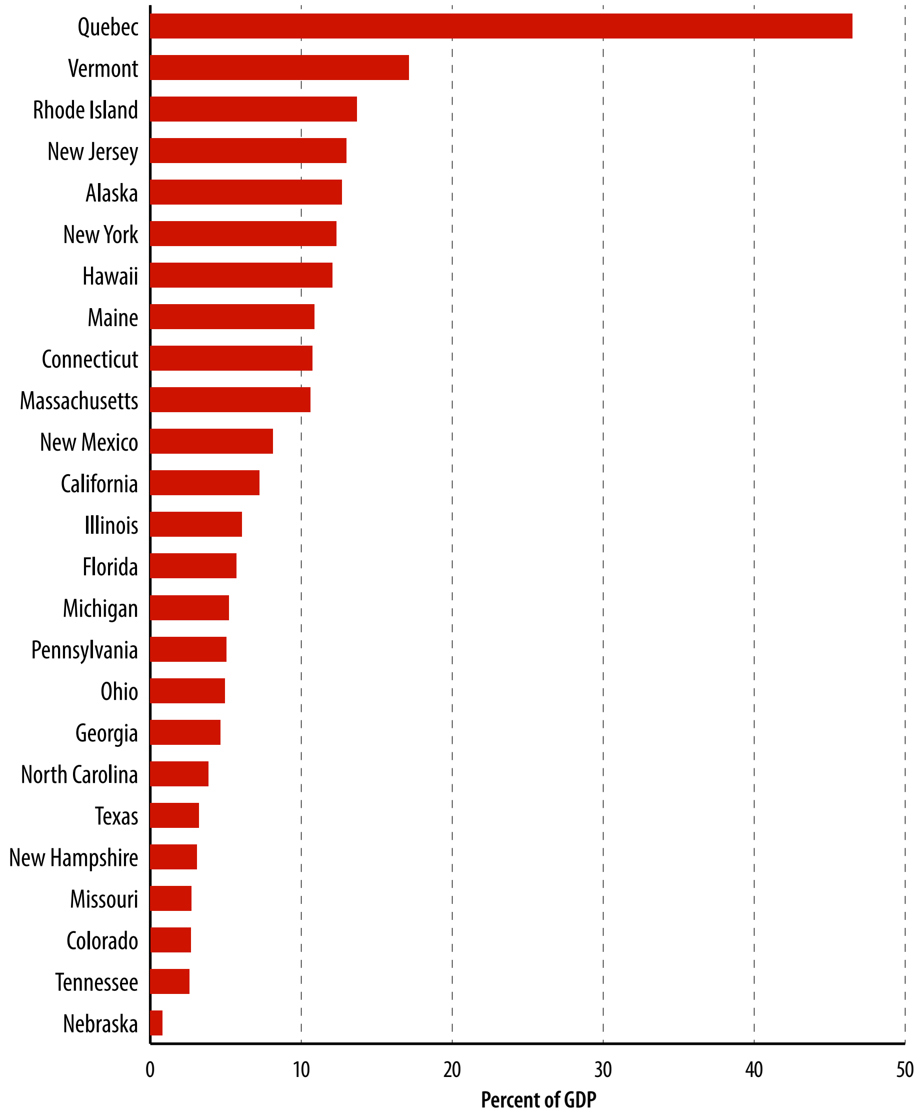
14. Joffe, Marc (2013). Bond Debt—US and Canada (2008 and 2011). Unpublished database for Fiscal Studies. Fraser Institute.

15. Public-sector debt includes the government's gross debt as well as the debt of Hydro-Québec, municipalities, universities other than the Université du Québec and its constituent universities, and other government enterprises. Québec, Ministère des Finances et de l'Économie (2013). *Budget Plan: Budget 2013-14*. Quebec City, QC: Department of Finance, Government of Quebec: D.20. Available at <http://www.budget.finances.gouv.qc.ca/Budget/2013-2014/en/documents/budgetplan.pdf>.

16. Québec, Ministère des Finances et de l'Économie (2013). *Update on Quebec's Economic and Financial Situation: Spring 2013*; Statistics Canada (2013). *Gross domestic product, expenditure-based by province and territory*. CANSIM Table 384-0038. Available at <http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/econ15-eng.htm>; calculation by authors.

17. Stansel, Dean, and Fred McMahon (2013). *Economic Freedom of North America 2013*. Fraser Institute. Available at <http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/economic-freedom-of-north-america-2013.pdf>.

Figure 2.4: Quebec's Bonded Debt Compared to That of US States as a Share of GDP, 2011



Source: Marc Joffe (2013). Bond Debt—US and Canada (2008 and 2011). Unpublished database for Fiscal Studies, Fraser Institute.

have debt levels that need to be confronted or they will continue to consume a significant share of revenues in the form of debt servicing and could require tax increases in the future.

Quebec's bonded debt expressed as a share of the economy far exceeds any American jurisdiction. Quebec's bonded debt of $161 billion represents 46.6 percent of GDP. The highest level of bonded debt to GDP in the United States is found in Vermont, which has a bonded-debt-to-GDP ratio of 17.1 per cent. New York's total bonded debt is close to, but still less than, Quebec's at $142.7 billion.[18]

18. State data is reported in US dollars. For comparative purposes, the nominal dollar values were converted to Canadian dollars based on the conversion rates as at June 30, 2011: USD 1.0380.

But, when expressed as a percentage of GDP the contrast with Quebec is considerable: New York's bonded debt represents only 12.3 percent of the state's GDP.

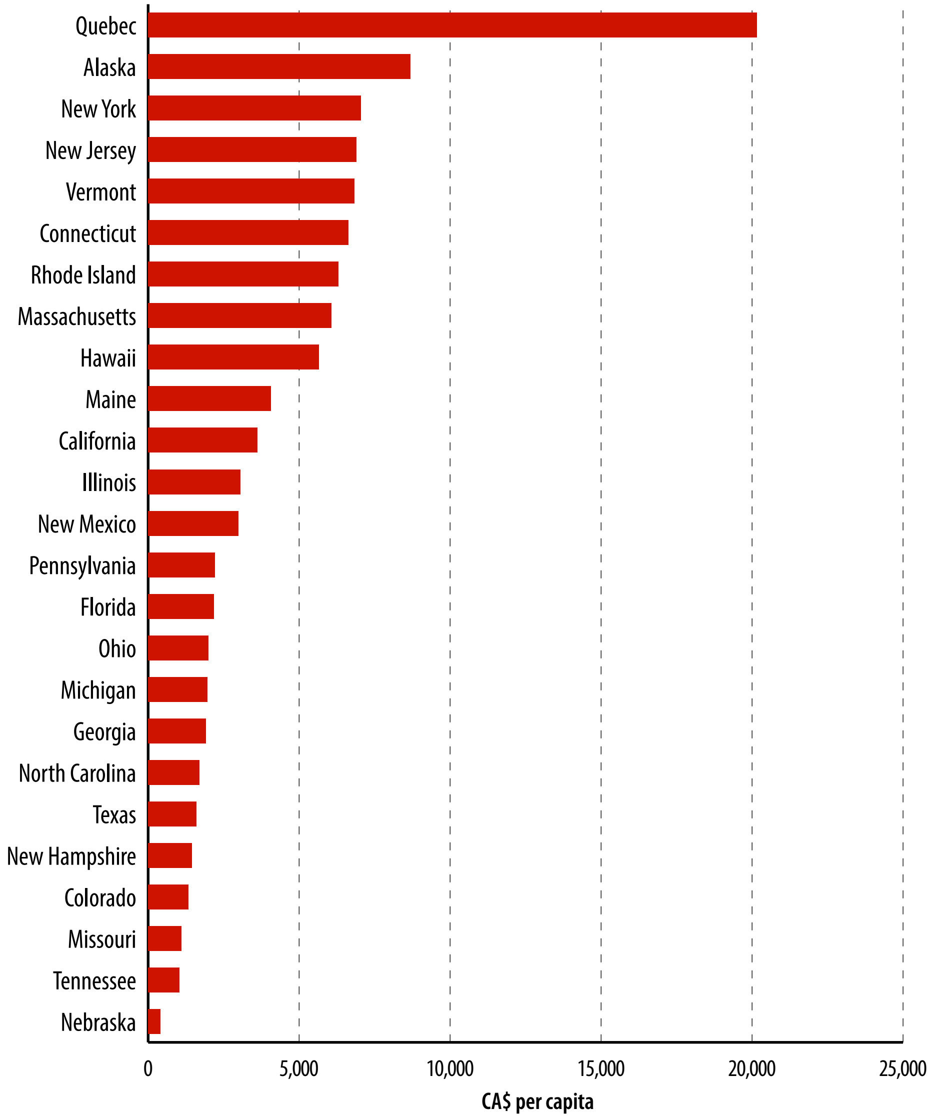
There are, of course, differences in the distribution of government spending responsibilities between Canada and the United States. Generally speaking, the US federal government and US local governments account for greater spending and debt shares than their Canadian counterparts. The reason this matters for our comparison is that the provinces have more spending responsibilities than the states do and, all else equal, this could help explain why they have higher debts than US states. All else is not equal, however, as the provinces also have higher revenue shares than states and, unlike provinces, states are not responsible for local government debts. Regardless, Quebec's high indebtedness holds up when using different debt metrics, although the gaps between Quebec and the worst-performing states are smaller. Quebec's provincial-local debt-to-GDP ratio is 61.2 percent while the US state-local ratios range from New Hampshire at 8.1 percent (best) to New York at 19.4 percent (24th among the 25 comparator jurisdictions). Adding federal debts (distributed by population rather than revenue contribution to maintain comparability with US figures) moves Quebec to 105.1 percent (seventh best), which is near the better ranked US states in the range of New Mexico at 138.4 percent (25th) to Alaska at 78.4 percent (first). However, backing out the $3.7 trillion of extraordinary growth in the US federal debt between 2008 and 2011 pushes Quebec back down to 23rd among the 25 comparator jurisdictions. So, Quebec's all-government debt compares relatively well to the states included here only because of the double-digit growth in US federal debt that began with the recent recession.

Using a per-capita measure (**Figure 2.5**), further illustrates Quebec's relatively high level of indebtedness in comparison with these US states. The debt burden that is carried by an individual Quebecer is more than double the amount borne by the worst American case ($20,162 for Quebec and $8,691 for Alaska). At the other end of the spectrum, Nebraska holds the lowest per-capita bonded debt at $403 per person. New York's per-capita bonded debt is the second largest among the US states surveyed as part of this analysis and its per-capita debt of $7,050 is only 35 percent less than Quebec's.

As with all debt, interest must be paid on the outstanding balance. These interest payments are consuming government resources that could be put towards tax relief, other spending priorities, or paying off the principle value of the outstanding debt. The cost of these debt-servicing charges is based on both the size of the debt and interest rates. Interest rates on American and Canadian bonded debt have been at historically low levels[19] but they are bound to rise in the future (historically low rates are unlikely to persist). A combination of a growing debt burden and rising interest rates could create a perfect storm that squeezes government revenue and contributes to rising annual deficits and greater debt.

19. Joffe, Marc (2012). *Provincial Solvency and Federal Obligations*. McDonald-Laurier Institute. (October): 34.

Figure 2.5: Quebec's Bonded Debt Compared to That of US States, per Capita, 2011

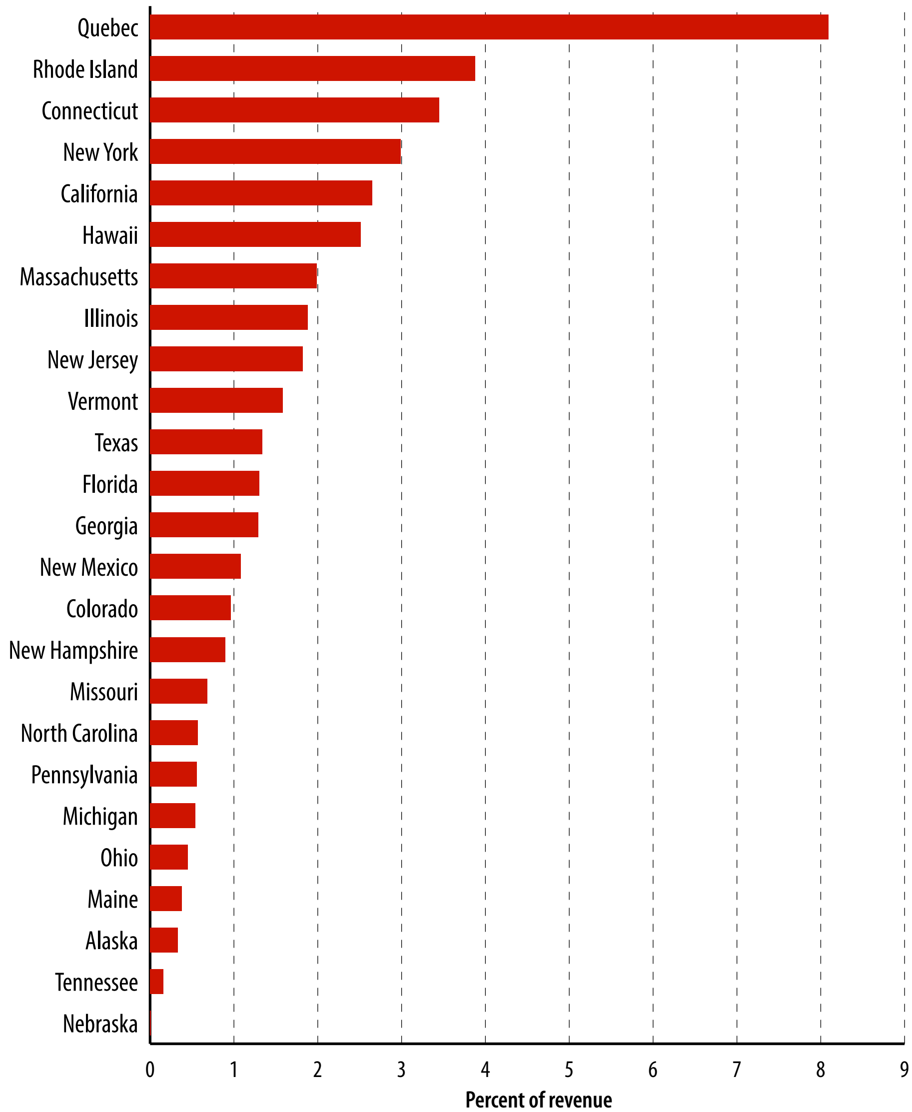


Note: State data is reported in US dollars. For comparative purposes, the nominal dollar values were converted to Canadian dollars based on the conversion rates as at June 30, 2011: USD 1.0380.
Source: Marc Joffe (2013). Bond Debt—US and Canada (2008, 2011). Unpublished database, Fiscal Studies, Fraser Institute.

With respect to interest payments, Quebec fares poorly compared to the American jurisdictions (**Figure 2.6**). Just over 8 percent (8.09 percent) of Quebec's revenues are used to service its debt burden. This is more than double the rate of Rhode Island's debt charges of 3.88 percent, which is highest among the surveyed states.[20] New York's debt charges are third highest among the US states and still almost 65 percent lower than those paid by Quebec.

20. As an example, average yields on Government of Canada Marketable Bonds (over 10 years) have been below 4.0 percent since January 2010. The last time they were this low was the early-to-late 1950s. Source: Bank of Canada, Department of Monetary and Financial Analysis.

Figure 2.6: Interest Expense on the Bonded Debt of Quebec and US States as Share of Total Revenue, 2011



Source: Marc Joffe (2013). Bond Debt—US and Canada (2008 and 2011). Unpublished database for Fiscal Studies, Fraser Institute.

Although some consideration has to be given to differing interest rates and credit ratings in Canada and the United States as well as the various sub-national jurisdictions, the fact that Quebec is paying more than double the percentage of revenues on debt charges than the worst American jurisdictions is concerning. Of course, the global recession of 2008 and the piecemeal recovery that has followed have kept interests rates low. But Quebec is still spending a significant share of its revenue to service its debt obligations. This could increase if interest rates were to rise. An increase in interest rates would result in an even higher share of revenues being consumed by interest payments.

Conclusions

Ontario's worsening debt situation has received considerable public attention. Quebec's position has thus far drawn less attention. The comparison with Ontario is illuminating as a result. While Ontario has accumulated more debt over the past five years and has a larger overall debt stock, Quebec's debt-to-GDP ratio is 12 percentage points higher and its debt per capita is $2,912—or almost 16 percent—higher. As the essay has shown, both of these figures place Quebec the worst among Canadian provinces in terms of its indebtedness.

This paper has also broadened the number of comparative jurisdictions to incorporate a number of US states, including New York, which is a relatively high-debt jurisdiction in the American context. While New York's public finances have generated considerable attention, including the creation of a task force mandated to study its "crisis", the fact is that Quebec is still worse off. An apples-to-apples comparison using bonded debt finds that Quebec's debt is, by every measure examined, much higher than New York's. The state's bonded debt as a percentage of GDP is 12.3 percent compared to Quebec's 46.5 percent. To put it another way: Quebec's bonded debt-to-GDP ratio is 34 percentage points higher than New York's. One reaches a similar finding when comparing their respective bonded debt per capita. New York's per-capita debt of $7,050 is only 35.0 percent of Quebec's per-capita amount of $20,162. And this translates into debt-servicing charges that, as a share of total revenue, are 65 percent less in New York than in Quebec. In sum, despite mounting concerns about New York's public finances, Quebec is in a much more difficult position that warrants greater public debate and further action to improve the province's fiscal direction.

The Quebec government's 2013/14 budget signaled some progress in this regard, including its plan to eliminate the deficit by the current fiscal year. But its economic and fiscal update revised its plan, delaying the elimination of the deficit by two years and accumulating further debt in the meantime. One of the consequences is that a growing share of provincial revenue will go towards servicing its debt obligations.

Low interest rates have allowed Quebec to lower its debt servicing costs relative to revenue but this benefit will not last forever. Servicing the province's debt is already consuming a considerable share of government revenues (and the highest percentage among the jurisdictions compared in this essay) and a spike in interest rates would likely result in an even greater portion of resources devoted to debt servicing instead of productive uses.

3. The Past and Future of Quebec's Public Debt

Joel Emes and Sean Speer

Introduction

The previous two essays have sought to illustrate Quebec's level of indebtedness and how it compares to other Canadian provinces like Ontario and US states like New York. The essays have shown the extent to which Quebec's public debt is the highest among the other jurisdictions surveyed and that Quebec faces a greater need to lower the debt levels than these other jurisdictions. The absence of deficit reduction would have a negative impact on future economic growth and would continue to expose Quebec to considerable interest rate risks, where higher rates would necessitate deep spending cuts and/or tax increases.

The purpose of this essay is to explain how the Quebec government budget (with its attendant deficits and debt) has evolved in the past and consider how it may evolve into the future. In effect, while the other two essays have described the province's current level of indebtedness, this one will briefly explain how it got here and what may happen going forward.

Predicting the future is difficult. This is less an indictment of our abilities than a recognition that the future can never be forecast perfectly. This is particularly true for government budgets because government spending reflects the choices of Quebecers, expressed through the democratic process and implemented (perhaps imperfectly) by their elected representatives, and those choices and preferences change over time. What is more important, drivers of budget outcomes—interest rates, economic growth rates, and inflation—are wont to change in unexpected ways. The 2008 global financial crisis and its impact on corporate profits, job creation, and government spending is a good example of this uncertainty. Consider as well the budgetary impacts of

Chapter 3 in Sean Speer, ed., *Quebec's Government Indebtedness: Unnoticed, Uncontrolled*. Quebec Prosperity Initiative.

unexpected and unpredictable natural catastrophes, such as the hurricane that swept through the north-east United States in October 2012, and one develops a healthy respect for forecasters.

We begin by providing a framework for understanding government budgets. It involves some arithmetic, but the equation we use is less important than the basic ideas that it represents, which are straightforward and familiar to anyone who is responsible for bringing income and costs into balance. We then apply this basic proposition to the Quebec government's fiscal history as described in its public accounts and budgets. This exercise will reveal the role played by various sources of debt accumulation and in so doing provide clues to what the future may look like. Finally, we turn to the speculative part of our exercise by looking into the future.

This analysis is rooted in previous work by Kneebone and Gres (2013), which considered different scenarios for Ontario's public debt. We follow their methodological approach and borrow explanatory text extensively from this paper. We claim as our own only the material used to present Quebec's case rather than Ontario's and any errors herein.

A framework for understanding the budget

At their most basic, government budgets are simple matters. Governments collect revenue through different forms of taxation such as personal income, corporate income, and sales taxes. Then they spend this revenue on services such as education, health, and infrastructure. But a government's revenue does not always offset its costs. When spending exceeds the amount raised in taxes, the government incurs a deficit that it needs to finance by issuing bonds and thereby adds to its outstanding debt. The previous two essays have discussed Quebec's accumulation of debt and what it means for the province.

Government budgeting is not all that different from household budgeting. Replace the word "tax" with "income" and the word "government" with "household" in the above narrative, and you have a good description of how we all budget in our personal lives. Like a household, then, governments face a budget constraint; they can only spend what they are able to collect in tax revenue or raise by borrowing.

The amount of borrowing we do as households is limited by our capacity to repay our debts. The most important consideration for determining our ability to carry debt is our income. Higher income means one has greater capacity to carry debt. Lower income means one has less capacity to carry (service and repay) debt. Also important is the interest rate we pay on our debt: as interest rates increase we find it more difficult to finance our debts and so we tend to cut back. All of this also applies to governments. Their budgeting problem is not substantially different from a household's. However, unlike any real-world household, a government is infinitely lived and therefore never needs to pay off its debt so long as it is able to find willing lenders. In addition, the economy is continually growing, apart from recessionary periods, so that government can sustain an ever-growing amount of debt so long as that debt does not outpace economic growth by too much for too long, again subject to the caveats above that the government must be able to access funds and service its debts (as well as bear the economic burdens of doing so, including higher interest rates, use of revenues for debt service, and reduced economic activity). Even these caveats are in many ways similar to, and have parallels with, the problems faced by households.

These insights have prompted economists to evaluate the performance of government budgets in part by examining how they deal with restrictions placed on them by some basic arithmetic. These evaluations revolve around what, to economists, is a simple equation:

$$\frac{D}{GDP} = \left(\frac{S-T}{GDP}\right) + \left(\frac{1+R}{1+G}\right)\left(\frac{D_{-1}}{GDP_{-1}}\right) + \left(\frac{Other}{GDP}\right)$$

So, what does this say? It says, first of all, that the amount of debt held by a government (D) should be evaluated as being big or small by comparing it to the government's ultimate source of income in that year—our collective incomes or what economists call Gross Domestic Product (GDP).[1] We will refer to the measure of debt relative to GDP (D/GDP) as the government's "debt burden". The right-hand side of this equation describes the factors that cause the size of the government's debt burden to grow or shrink.

The first consideration is described by the first term in brackets on the right-hand side of the equation. This measures the difference in what the government spends on programs (S)—health care, social assistance, and education are the big three—and what the government collects by way of tax revenue (T). The difference, called the "primary balance", is evaluated as being big or small by comparing it to our collective income, GDP.

If the primary balance is positive (if $S > T$), it is said to be in deficit and, as the equation shows, it causes government debt to grow. If it is negative ($S < T$), the primary balance is said to be in surplus and this causes government debt to shrink. The primary balance will play an important role in the discussion that follows. The size of the primary balance reflects choices the government makes about spending and taxation. It is the main tool by which governments can cause the level of debt to become more or less of a burden on the economy and a constraint on future fiscal choices.

The next factor influencing the size of the debt burden is described by the equation's second term. This term defines the influence on the debt burden of choices made in previous years. The size of that influence is the product of two factors. The first is the size of the debt burden incurred in previous years

1. Your bank manager makes a similar comparison when she calculates how serious your debt load is; she compares it to your income.

(D_{-1}/GDP_{-1}). This is important for the government in the current year because it must meet the obligation to pay interest on that debt. The interest rate it must pay is represented by R. The equation confirms what is intuitively obvious: a higher interest rate (R) and a larger debt incurred in previous years (D_{-1}/GDP_{-1}) will increase the current debt burden (D/GDP).

The second term on the right hand side of our equation also confirms something else that is intuitively obvious. Since we measure the burden of debt relative to our collective income, the faster our income grows the smaller our debt burden becomes.[2] In our equation, the rate of growth in our collective income is represented by G, and since it appears in the denominator a larger value decreases the debt burden.

Whereas the size of the primary balance reflects choices the incumbent government makes with respect to spending and taxation, the size of the second term on the right-hand side of our equation represents the limits placed on the current government by all previous governments and by the state of the economy. As can be seen from the equation, if R is larger than G, the current government must not only deal with an inheritance—previously accumulated debt—but one that is causing the debt burden to grow over time. When GDP growth exactly equals the interest rate paid on public debt, the relative debt burden on the economy remains unchanged—apart from any impact from a primary balance that is positive or negative.

The third term on the right is a residual that accounts for changes other than those captured by the two main terms discussed above. Although this paper is focused on net debt we must diverge slightly to explain what drives changes in this residual. Quebec's net debt equals gross debt less financial assets.[3] The value of these financial assets is small and does not change much and that means the factors that contribute the most to changes in gross debt also contribute the most to changes in net debt.[4] Changes in gross debt (and therefore net debt) are largely driven by: budgetary deficit (surplus); net capital expenditures; and, growth in the Generations Fund.[5] The first two terms discussed above are lumped together into "budgetary deficit (surplus)" when looking at gross debt. From all of this complication we are able to note in summary that the third term ($Other/GDP$) is primarily shaped by two forces: net capital expenditures, which increase the debt ratio, and growth in the Generations Fund, which decreases the ratio.

2. Your bank manager is always very pleased to hear your income has grown. The news tends to make her more accommodating of your requests for additional loans.

3. To be more accurate, net debt equals gross debt less financial assets *(net of other liabilities)*.

4. In the 2013/14 budget, financial assets (net of other liabilities) were $16.273 billion in 2011/12 (8.9 percent of gross debt) and were projected to be $15.693 billion in 2017/18 (7.5 percent of gross debt). See: Quebec, Ministry of Finance and the Economy (2012). *Budget Plan: Budget 2013-14*.

5. Gross debt also changes when there are changes in: investments, loans, and advances; net investment in the networks; and, "other factors". However, these items are relatively small and do not change much over time.

This framework for understanding the budgetary choices of governments highlights the following conclusions. First, the choices that a government makes with respect to spending (S) and taxes (T) are limited by the state of the economy at the time it takes office. In particular, if interest rates (R) are high relative to the rate of economic growth (G), then the current government must moderate spending and/or increase tax rates in order to deal with an inherited debt that yields a growing debt burden. If, on the other hand, interest rates (R) are low relative to the rate of economic growth (G) then the incumbent government has more freedom to choose levels of spending and taxation. Indeed, in this economic environment they may be able to afford to spend more than they collect in tax revenue and still reduce the debt burden.

The past

Quebec's net debt was 47.0 percent of GDP in 1997/98 and 50.5 percent in 2012/13.[6] However, two major accounting reforms over this period make generalizations difficult. As reported in the 2013/14 budget: net debt fell from 47.0 percent of GDP in 1997/98 to 38.6 percent in 2005/06; jumped by 5.4 percentage points in 2006/07 and 5.6 percentage points in 2009/10 due to accounting reforms; and increased slightly to end up at 50.5[7] percent in 2012/13.[8] **Figure 3.1** uses our equation to identify the sources of change in Quebec's debt burden over the period 1998/99 to 2012/13.[9] Quebec's net debt was 3.5 percentage points of GDP higher in 2012/13 than in 1997/98; setting aside the accounting reforms results in an overall net debt decrease of 7.7 percentage points, which is equal to the sum of all the bars over the period shown in Figure 3.1.

The height of the stacked bars above the zero line depicts factors that increased the government's debt ratio (D/GDP) in each year and the height of

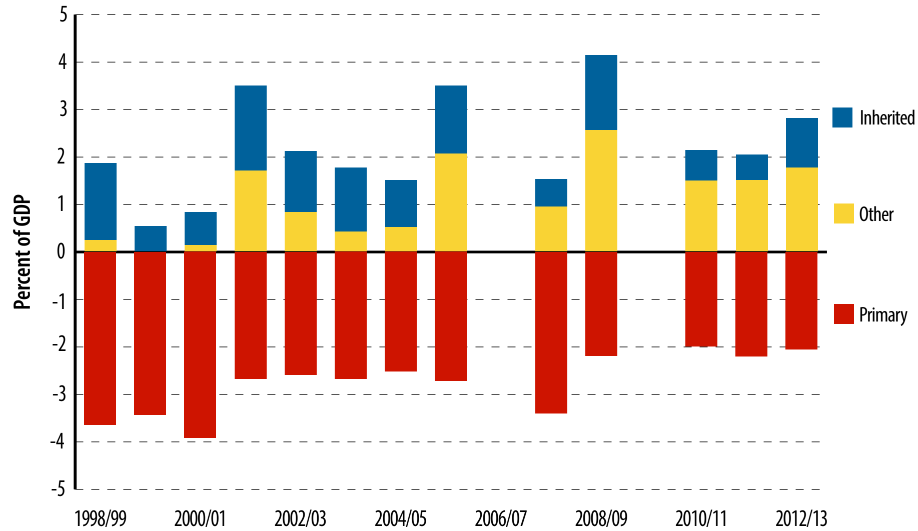
6. These ratios are based on "Net debt" as presented in Table I.15 in Quebec's 2013/14 budget and Volume I of the 2012/13 public accounts. See: Quebec, Ministry of Finance and the Economy (2012). *Budget Plan: Budget 2013-14*; Quebec, Ministry of Finance and the Economy (various years, 2001/02–2012/13). *Public Accounts, Volume I.* This paper uses the same GDP series as the 2013/14 budget to make the comparisons as comparable as possible. The different GDP series used in this paper produces a debt-to-GDP ratio of 50.5 while the same net debt figure with the current GDP series produces the 49.0 ratio presented in the second paper in this series.

7. Revised to match the value in the 2012/13 Public Accounts. See: Quebec, Ministry of Finance and the Economy (various years, 2001/02–2012/13). *Public Accounts, Volume I.*

8. This essay draws from the province's 2013/14 budget and does not reflect changes announced in the 2014-15 budget.

9. These calculations are based on financial data contained in Quebec's 2013/14 budget and various Public Accounts. See: Quebec, Ministry of Finance and the Economy (2012). *Budget Plan: Budget 2013 14*; Quebec, Ministry of Finance and the Economy (various years, 2001/02–2012/13). *Public Accounts, Volume I.* Changes in accounting rules limit the length of time we can use earlier figures on a comparable basis. The interest rate that we use in our calculations is an average of the interest rates paid by the government on many different types of debt of various terms to maturity. It is calculated by dividing debt servicing costs by the amount of debt from the previous year. Data on Quebec's GDP is reported on a calendar year (CY) basis whereas budgetary data are reported by fiscal year (April 1 to March 31). We use GDP from the calendar year that contains nine months of the relevant fiscal year.

Figure 3.1: Quebec—Annual Contributions to the Debt Ratio, 1998/99–2012/13



Note: The years immediately after accounting reforms (2006/07 and 2009/10) are not shown because the calculations underlying Figure 3.1 use the year-to-year change in the debt-to-GDP ratio.

Sources: Quebec, Ministry of Finance and the Economy (2012). *Budget Plan: Budget 2013-14*. • Quebec, Ministry of Finance and the Economy (various years, 2001-02–2012-13). *Public Accounts, Volume I*. • Statistics Canada (2013a). *Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual (persons unless otherwise noted)*. Table 051-0001. <http://www5.statcan.gc.ca/cansim/home-accueil?lang=eng>, as of November 20, 2013. • Statistics Canada (2013b). *Consumer Price Index (CPI), 2011 basket, annual (2002=100)*. Table 326-0021. <http://www5.statcan.gc.ca/cansim/home-accueil?lang=eng>, as of November 20, 2013. • Statistics Canada (2013c). *Gross domestic product (GDP), income-based, provincial economic accounts, *Terminated**. Table 384-0001. <http://www5.statcan.gc.ca/cansim/home-accueil?lang=eng>, as of November 20, 2013.

bars below the zero line depict those that decreased the ratio.[10] The ratio of debt to GDP increased in years when the bars above zero were larger than those below. Thus, in 2001/02, for example, the government's debt ratio increased by just over 0.8 percentage points. The figure identifies three sources of debt accumulation.

The blue bars identify the increase in the debt ratio due to the second term in our debt equation. As discussed above, this is the increase in the debt ratio that is due to the net influences of the interest rate and the growth rate of the economy acting on previously accumulated debt. The fact that these bars all lie above the zero line indicates that throughout this period governments in Quebec had to deal with the reality that the interest rates paid on its debt exceeded the growth rate of the economy ($R > G$). That is, throughout this period governments were dealing with the fact that financing the debt charges on previously accumulated debt was pushing the current level of debt ever higher relative to income. The sum of the blue bars shows that inherited debt acted to increase Quebec's net debt-to-GDP ratio by 14.1 percentage points between 1997/98 and 2012/13.

10. The years immediately after accounting reforms (2006/07 and 2009/10) are not shown because the calculations underlying Figure 1 use the year-to-year change in the debt-to-GDP ratio.

Dealing with the blue bars requires that the government set tax rates and establish spending programs that result in a primary surplus.[11] This in turn requires that the government's revenues exceed what it spends on programs. In Figure 1, the contributions of primary balances to changes in the debt burden are represented by the height of the orange bars.

That the red bars have been below the zero line since 1998/99 indicates that for this period governments were making fiscal choices with respect to taxes and program spending that were causing the debt burden to fall. In 2007/08, for example, the primary balance was such as to reduce the debt burden by 3.4 percentage points. This more than offset the fact that interest rates and the growth rate of the economy were acting to increase the debt burden by about 0.6 percentage points (as represented by the height of the blue bar) and that other factors were acting to increase debt by 1.0 percentage point (the yellow bar). The sum of the red bars shows that primary balances acted to decrease Quebec's net debt-to-GDP ratio by 36.0 percentage points between 1997/98 and 2012/13.

The yellow bars are a "catch-all" or residual that covers any changes in the debt ratio not explicitly captured by the first two terms (as represented by the blue and red bars). The sum of the yellow bars shows that "other" spending acted to increase Quebec's net debt-to-GDP ratio by 14.2 percentage points between 1997/98 and 2012/13.

The accounting reforms make it somewhat challenging to discern historical changes in the debt ratio. We can, for instance, observe that the ratio fell from 47.0 percent in 1997/98 to 38.5 percent in 2005/06 but that the majority of this improvement was wiped out as the ratio was revised upwards to 44.0 percent in 2006/07. The ratio shows minimal growth through to 2008/09 but then jumps by 5.6 points to 49.7 percent in 2009/10. The last three years show primary balances large enough to outweigh the impact of inherited debt but that net capital expenditures in the "other" category were large enough to result in yet another increase in the ratio.

The future

At its current level of 50.5 percent, Quebec's debt burden is large and servicing it consumes a considerable portion of Quebec's revenue. Moreover, the situation should be viewed not only on current conditions but also on what the future is likely to bring. Projections necessarily entail simplifying assumptions. The different scenarios outlined in this essay are not exhaustive but they do serve to give Quebeckers a sense of the different trajectories that could be facing their province and the types of steps needed to improve its debt position.

From now until fiscal year 2022/23, we assume that Quebec's GDP will grow at 3.5 percent. This is a bit slower than the average rate of growth

11. In terms of our equation, we need the first term in that equation—the primary balance—to take on a negative value.

experienced over the last decade (3.7 percent) and reflects ongoing global uncertainty. We assume the government will be able to pay an average interest rate of 6 percent on its outstanding debt. That is lower than what it paid over the decade prior to the recession (6.8 percent) but reflects an assumption on our part that debt bearing higher interest rates is being replaced by debt at lower interest rates. The difference between these values ($R > G$ by 2.5 percentage points) is smaller than the average difference over the last 10 years and so we assume conditions that would cause the debt burden to grow at a slower rate than if we were to use average values from the past decade.

We assume that own-source revenues (the sum of personal and corporation income taxes, consumption taxes, and other smaller sources) will grow at 4.0 percent per year. This is slightly slower than the rate of growth for the last ten years (4.3 percent) and so again reflects ongoing global uncertainty.[12] Federal cash transfers are estimated to grow at 3.8 percent per year; considerably slower than what has been experienced over the last decade (6.1 percent). This reflects our expectation that the federal government will follow through on its policy to restrain the growth in transfers and factors in specific growth rates announced for the Canada Health Transfer and the Canada Social Transfer. Broadly speaking, our assumptions with respect to revenue growth are consistent with there being no new taxes and no increases in existing tax rates except for those announced in the 2013/14 Budget.

On the spending side, we assume all categories of program spending will grow at the rates they did during the previous ten years. Thus spending on health and social services is assumed to grow at 5.7 percent per year, spending on education and culture at 3.3 percent per year, and spending on all other programs at 3.6 percent. Further, based on the average for the last five years, we assume that net capital expenditures add $4.7 billion to gross debt each year. Finally, we use the projections for the value of the Generations Fund contained in the 2013/14 Budget, with some important alterations. Specifically, we include only half the projected revenues from: heritage electricity; mining, oil, and gas royalties; and, the tax on alcoholic beverages; and we use a lower rate of return on investments (4.1 percent, based on the last five years' performance rather than the 7.1 percent inferred from the budget). We include only half the projected revenues from these sources because the amounts in the budget represent what the government hopes to be able to allocate to the fund. Many factors can affect the government's ability (or willingness) to follow through on these plans. Spending may end up higher than planned, efficiencies may not materialize, and revenues may be lower than projected. Even if the revenues for these three sources come in as planned, it is reasonable, in light of the uncertainty surrounding their ultimate destination, to lower the amount allocated to the fund.

12. Our assumption that the rate of growth in own-source revenues is about half a percentage point faster than the assumed rate of growth in GDP is consistent with what was observed in the previous ten-year period when the difference averaged 0.6 percentage points.

The Status Quo line in **Figure 3.2** shows the implication of these assumptions for the government's debt burden. The debt ratio is slated to increase from 50.5 percent in 2012/13 to 57.2 percent by 2022/23. This line reflects what could happen if existing spending patterns on programs, debt service, and net capital expenditures continue. Debt service continues to grow under this scenario and sums to $131 billion over the next ten years.

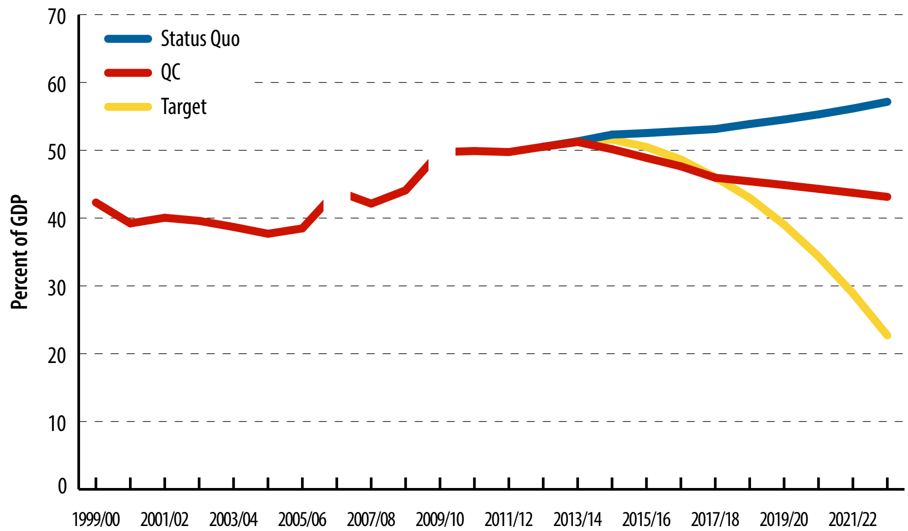
The Quebec government claims it recognizes the threat represented by rising debt levels and, in the 2013/14 budget, reaffirmed its commitment to lower its gross debt-to-GDP ratio to 45 percent and its debt representing accumulated deficits to 17 percent by 2025/26. The line marked "QC" in Figure 3.2 is one possible path to the level of net debt in 2022/23 implied by the gross debt target for 2025/26. This path is built on the 2017/18 projections included in last year's budget and is extended by assuming budget balance starting in 2013/14,[13] fairly high net capital expenditures averaging $5.9 billion per year, and a steadily increasing Generations Fund that would allow debt retirement to commence in 2018/19. The actual path under the government's plan could include deficits offset with lower net capital expenditures or larger increases in the Generations Fund or any combination of these factors that allows for a net debt *increase* of roughly $40 billion between 2012/13 and 2025/26. It is important to note that this scenario—the one represented by the government's own debt target—represents a small improvement over the status quo and actually requires only limited restraint by Quebec government. Under this scenario, debt service will add up to roughly $117 billion over the next decade or about $14 billion less than under the status quo.

To break from the Status Quo scenario and achieve its debt target the Quebec government would need only to: return to a balanced budget in 2016/17, after which they could return to historical rates of spending growth; limit net capital expenditures to $3.5 billion a year; and, realize Generations Fund growth as laid out for the Status Quo scenario.

What if the government chose a more ambitious debt target that brought the province's debt-to-GDP ratio to the 2012/13 weighted average of the other provinces' ratio, 23 percent (Figure 3.2, line "Target")? This would represent a meaningful reduction in Quebec's debt-to-GDP ratio and would require a change in its government spending trajectory. As we know, spending on health and social services grew at an annual average rate of 5.7 percent in the last ten years. Because this was considerably faster than the average rate of growth in GDP over the same period (3.7 percent), health care and social service spending was eating up an increasing proportion of Quebecers' collective income. The other spending categories grew at rates slightly below GDP growth. If the government sought to lower its net debt-to-GDP to 23 percent by 2022/23, it could reach this goal by first lowering all program spending

13. We have not adjusted this path to reflect the fact that the government now expects to return to balance in 2016-17 because the target remains in place.

Figure 3.2: Alternative Scenarios for Quebec's Debt Burden, 1999/00–2022/23



Note: The years immediately after accounting reforms (2006/07 and 2009/10) are not shown because the calculations underlying Figure 3.2 use the year-to-year change in the debt-to-GDP ratio.

Sources: Quebec, Ministry of Finance and the Economy (2012). *Budget Plan: Budget 2013-14*. • Quebec, Ministry of Finance and the Economy (various years, 2001/02–2012/13). *Public Accounts, Volume I*. • Statistics Canada (2013a). *Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual (persons unless otherwise noted)*. Table 051-0001. <http://www5.statcan.gc.ca/cansim/home-accueil?lang=eng>, as of November 20, 2013. • Statistics Canada (2013b). *Consumer Price Index (CPI), 2011 basket, annual (2002=100)*. Table 326-0021. <http://www5.statcan.gc.ca/cansim/home-accueil?lang=eng>, as of November 20, 2013. • Statistics Canada (2013c). *Gross domestic product (GDP), income-based, provincial economic accounts, *Terminated**. Table 384-0001. <http://www5.statcan.gc.ca/cansim/home-accueil?lang=eng>, as of November 20, 2013.

growth—including health and social services—to no more than 2.6 percent per year over the next ten years; and second, by keeping net capital expenditures at zero. To put this in perspective, maintaining net capital expenditures at zero for ten consecutive years would represent a major reduction in the province's capital spending over the past five years. Quebec's population grew an average of 0.8 percent per year since 2003 and inflation in Quebec over the same period averaged 1.9 percent. Maintaining annual program spending growth at 2.6 percent would not allow for any program expansions and would represent a significant shift relative to the past ten years. It would not, however, require cuts to existing programs.

There are, of course, numerous scenarios that would bring Quebec's net debt to GDP down to 23 percent by 2022/23. Another possibility, which allows for net capital expenditures of $4.7 billion per year, is to keep annual program spending growth to 1.0 percent. As above, this does not require program spending cuts in dollar terms but, as the rate is below that for population plus inflation, would require cuts in real per-capita spending. Debt service over the next ten years for this scenario would be roughly $104 billion, $13 billion less than the government's current plan (QC) and $27 billion less than the Status Quo.

Conclusion

This essay has sought to provide readers a sense of how Quebec's debt—which is the largest in the country—may evolve in the future.

The provincial government's most recent economic and financial update has pushed back the timelines for eliminating its budgetary deficit by two years to 2015/16. But the truth is that it will take more than just balancing the budget in the short-term if the Quebec government wants to lower the province's debt-to-GDP ratio and the attendant debt charges.

Looking ahead, we forecast that leaving tax rates unchanged and continuing to spend on programs at the same rate as it did in the last 10 years would cause the debt burden to grow to 57 percent of GDP. This illustrates the precarious path the province has been following and the need for reform. We have therefore considered the implications of some alternative scenarios, including what would be required to achieve the province's own debt-to-GDP target as set out in its recent budget and to bring the province's debt-to-GDP level to the current provincial average.

We limited our attention to scenarios that involve slowing the rate of program spending. Limiting the rate of growth in health and social service spending is the key. A program of spending restraint in this area that sees spending continue to grow but at a slower pace than was experienced in the past ten years would go a long way in avoiding the base-case scenario.

To achieve its own gross debt-to-GDP target of 45 percent by 2025/26, the Quebec government would need to make few changes to its past spending trends. The target is unambitious and would still leave Quebec with a significant debt burden.

A more ambitious target might be for the province to bring its debt-to-GDP ratio closer to the 2012/13 average of the other provinces. To achieve this goal the government would need to limit all program spending to 2.6 percent per year over the next ten years assuming that net capital expenditures are significantly curtailed relative to past spending. Alternatively the government could limit program spending growth to 1 percent per year and maintain net capital expenditures at $4.7 billion per year and still achieve the target. Either way, meeting this target would require the province to bring program spending to, or well below, the rate of growth in population and inflation. This of course would represent a significant departure from the Status Quo scenario and the province's trajectory in recent years.

If the Quebec government makes no changes to its recent spending patterns, the province's debt-to-GDP ratio could easily continue to grow over the next ten years, reaching over 57 percent by 2022/23. The debt reduction plan laid out in last year's budget involves little spending restraint and would see net debt continue to grow every year to 2025/26. Quebec will need to be more ambitious than this if it wants to reduce the absolute size of the debt and significantly lower its debt service costs.

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