Working Paper 97-15 / Document de travail 97-15

The Effects of Budget Rules on Fiscal Performance and Macroeconomic Stabilization

by
Jonathan Millar

Bank of Canada  Banque du Canada

ISSN 1192-5434
ISBN 0-662-25942-4

Printed in Canada on recycled paper

Bank of Canada Working Paper 97-15

June 1997

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Financial Markets Department, Bank of Canada

Acknowlgments

The author would like to thank Gilles Bérubé, Pierre Duguay, Tiff Macklem, David Moloney, Bruce Montador, Ron Parker, Jean-François Perrault, and seminar participants at the Bank of Canada for their helpful comments and advice. Without such input, this paper would not have been completed. However, the author retains responsibility for the views expressed in this paper and any factual errors within it. The author would also like to thank Per Homer, who provided technical assistance, and Patricia Buchanan, who was responsible for the final edit.

Abstract

Budget rules can be defined as legislated or constitutional constraints on government deficits, taxes, expenditures, or debt. This paper reviews the budget rules recently legislated in six of Canada's provinces and both of its territories, as well as budget rules in other OECD countries. In theory, budget rules appear to be justified if their cost in terms of foregone fiscal stabilization is outweighed by benefits such as discouraging government debt accumulation and reduced risk premiums on government borrowing. Recent empirical evidence on the effectiveness of budget rules and their consequences for fiscal stabilization is examined in detail. In light of this evidence, the paper assesses the possible implications of budget-rule legislation in Canada on fiscal performance, macroeconomic stabilization, and monetary policy.

Résumé

Les règles budgétaires peuvent être définies comme des contraintes établies par voie législative ou constitutionnelle en vue de limiter les déficits, les dépenses ou l'endettement des administrations publiques ou les impôts. L'auteur examine les lois récemment adoptées en ce sens par les assemblées législatives de six provinces canadiennes et des deux territoires, ainsi que celles en vigueur dans d'autres pays de l'OCDE. En théorie, l'adoption de règles budgétaires peut se justifier si la perte de latitude au chapitre de la stabilisation macroéconomique est contrebalancée par certains avantages (par exemple l'effet dissuasif exercé sur l'endettement de l'État et la réduction des primes de risque applicables aux emprunts publics). Les résultats empiriques d'études consacrées récemment à l'efficacité des règles budgétaires et aux répercussions de ces dernières sur les efforts de stabilisation sont analysés en détail. À la lumière de ces résultats, l'auteur évalue les conséquences que l'adoption de règles budgétaires au Canada pourrait avoir pour la gestion des finances publiques, la stabilisation macroéconomique et la politique monétaire.

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Introduction

In recent decades, the governments of many industrialized countries have run systematic budget deficits that do not seem to reflect tax smoothing or extraordinary spending requirements. The fact that deficits have persisted despite public concern and political rhetoric to address the problem has prompted renewed interest in placing formal restraints on fiscal activities to control debt accumulation. Indeed, provincial governments in Alberta, Saskatchewan, Manitoba, Québec, New Brunswick, and Nova Scotia have recently "bound themselves" with legislated fiscal restrictions.[1] However, past experience in other countries reveals that budget rules, and especially legislated fiscal restraints, have had mixed effectiveness. Even in instances where budget outcomes improved in the presence of budget constraints, it is difficult to determine whether other factors were responsible. As well, many argue that budget rules reduce social welfare by limiting the output-stabilization and tax-smoothing roles of fiscal policy.

This paper examines recent theoretical and empirical literature on the effects of budget rules on government finances and macroeconomic performance. The main objective is to determine the potential implications of recently adopted budget rules in Canada on fiscal performance, fiscal stabilization, output volatility, and monetary conditions. The paper is organized as follows. Section 1 describes the formal budget constraints adopted in Canada and other countries, and provides an informal discussion of their role. This section also points out that, although empirical evidence suggests that constitutional restraints may be more effective than legislated rules for encouraging fiscal discipline, political factors will probably preclude federal and provincial governments in Canada from adopting constitutional budget constraints. The second section considers the theoretical justifications for budget rules. Section 3 reviews recent empirical studies on the efficacy of budget rules, concentrating on their fiscal and macroeconomic impact. The final section explores some potential implications of the recently legislated budget constraints in Canada on fiscal performance, macroeconomic stabilization, and monetary conditions.

Recent research suggests that budget rules are theoretically justified if the social benefits of foregone fiscal stabilization are outweighed by the benefits of avoiding government debt accumulation, and the potential for reduced risk premiums on government borrowing rates. Empirical evidence confirms that stringent anti-deficit rules improve government finances and

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1. The governments of the Northwest Territories and the Yukon have also recently enacted anti-deficit legislation.

reduce borrowing rates more effectively than less stringent rules, although evidence is limited on whether the mere existence of such rules is beneficial. Studies also confirm that deficit-constraining rules reduce fiscal offsets to demand shocks, which may increase output volatility.

It appears that monetary authorities in Canada may be able to compensate partially (through their actions to maintain predetermined inflation-control targets) for any lost fiscal stabilization that may arise due to these anti-deficit constraints. However, this compensation could occur with more of a lag than with automatic fiscal stabilizers, and would apply only to shocks that affect demand at a national level. In response to more localized shocks, the provinces (and territories) that have adopted anti-deficit legislation still appear to possess a number of potential mechanisms that may allow them to ease temporarily the restriction that these budget constraints place on fiscal stabilization.

The budget rules recently proposed and legislated in Canada could possibly increase the volatility of aggregate demand, and therefore lead to greater variability in the monetary conditions desired by the Bank of Canada (for given inflation targets). However, these budget rules will probably help improve government finances, and contribute to an overall reduction in interest rates by decreasing premiums demanded by lenders for the risk that high debt and deficits will lead to eventual default on debt obligations.

1. Budget rules in Canada and other countries

1.1 Canada

Many of Canada's provinces, and both of its territories, have recently enacted balanced-budget and/or debt-reduction legislation. Only British Columbia, Ontario, Prince Edward Island, and Newfoundland do not currently have some type of legislated budget restriction.[2] The federal government also has no such legislation. Appendix A contains the names of the budget rules which have been passed by the Canadian provinces and territories, as of the date of writing, and their dates of assent.

Alberta's government introduced the Deficit Elimination Act in 1993, requiring the province's deficit to be eliminated by 1996/97. Then, in 1995, Alberta introduced the Debt

2. The premier of Ontario recently stated his government's intention to introduce balanced-budget legislation in the future that would also require referendum approval for any legislated tax increases. In the meantime, the province intends to cut the annual salary of its cabinet ministers by 25 per cent if the yearly budget targets announced in its 1996 budget are not achieved (*The Globe and Mail* 18/04/97).

Retirement Act that requires the province's budget to be balanced every year after 1995/96, and also sets out extensive debt-repayment requirements. The province's 1996/97 stock of net debt (excluding pension liabilities) is to be eliminated in stages by the 2009/10 fiscal year, with intermediate requirements for 2000/01 and 2005/2006.[3] In order to achieve these targets, the government must apply at least the first $450 million of any realized budgetary surplus in excess of this amount towards the elimination of the province's net debt.[4] If its realized budgetary surplus for a given year is smaller than $450 million, the government must apply at least $100 million towards retiring its net debt, unless the debt-reduction target for that year was achieved in the previous fiscal year. However, the legislation does allow for expenditures to be authorized notwithstanding the balanced-budget requirement if an emergency or disaster occurs. As well, the provincial government is required (under separate legislation) to obtain referendum approval in order to introduce a retail sales tax.[5]

Saskatchewan in 1995 passed its Balanced Budget Act which requires the government after each election to prepare four-year fiscal plans in which forecasted expenditures cannot exceed revenues. Surpluses must be applied to the province's debt-reduction account. To ensure accountability, the government must present regular updates of their progress under the plan, identifying any unforeseen circumstances which might threaten progress. Such contingencies would not be considered in evaluating the government's fiscal performance.

Manitoba in 1995 legislated the Balanced Budget, Debt Repayment and Taxpayer Protection and Consequential Amendments Act which prohibits budget deficits for any year, commencing with the year 1995/96. Deficits that do occur must be offset in the following fiscal year. Unlike other provinces, the Manitoba legislation includes an explicit mechanism to penalize its government for not abiding by its balanced-budget requirement. The salaries of cabinet members would be reduced by 20 per cent the year after a realized deficit, and by 40 per cent if successive deficits occur. These requirements would not apply to deficits resulting from natural disasters, the threat of war, or a revenue decline of at least 5 per cent. As well, the act specifies

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3. The original provisions of the act required the province's stock of net debt (excluding pension liabilities) to be eliminated in stages by the 2021/2022 fiscal year, but a later amendment shortened this repayment period.

4. *The Globe and Mail* 04/04/97. Prior to 1997/98, the Alberta government had been required to apply any realized budgetary surplus towards the elimination of the province's net debt.

5. The premier of Alberta has also announced his government's intention to introduce new legislation which would require referendum approval for any future increases in the province's personal and corporate income tax rates (*The Globe and Mail* 16/04/97).

mandatory payments to a debt-retirement fund after 1996/97. Instalments must be made out of this fund at least every five years to reduce the province's general purpose debt. Finally, the legislation provides taxpayer protection by requiring a referendum to increase income, sales, or payroll taxes.

In 1993, the government of New Brunswick established in legislation its "objective" of achieving an operating account balance on a cumulative basis from 1993/94 to 1995/96, and all subsequent four-year fiscal periods. The operating account excludes net capital expenditures and net special purpose account expenditures. The Balanced Budget Act introduced by the province in 1995 extended the previous legislation to prohibit cumulative overall budget deficits in all ensuing four-year fiscal periods. The impact of any decrease in federal transfers occurring over the last half of each four-year period would not have to be offset within the period in order to fulfil this requirement. The government of New Brunswick also intends to incorporate a debt-reduction plan into its existing Balanced Budget Act which, by means of gradually increasing annual debt-repayment targets, aims to reduce the province's net debt by about $2.5 billion by the end of the 2013/14 fiscal year.

The province of Nova Scotia legislated an Expenditure Control Act which applied to the four-year fiscal period commencing in 1994/95. This legislation established declining targets for net operating expenditures and net capital expenditures, which were set to decrease by 10 per cent and 20 per cent respectively over the course of the four-year fiscal period. The success of this legislation led to its being supplanted by the Financial Measures Act in 1996. This statute requires the province's appropriated budget expenditures not to exceed forecasted revenues from the 1996/97 fiscal year onward. Actual expenditures may exceed appropriated expenditures only by a maximum of one per cent for any year. If a deficit occurs, the government must obtain an offsetting surplus in the following fiscal year. Any realized surpluses not required to offset such deficits must be applied to retiring the province's debt or reducing taxes. However, the province's legislature can pass a resolution to override these requirements for any year.

Québec passed An Act Respecting the Elimination of the Deficit and a Balanced Budget in December 1996. This legislation sets decreasing limits on deficit levels between 1996/97 and 1998/99. Thereafter, the province will be required to balance its budget. These restrictions would not apply in the event of overruns of $1 billion or more due to specified contingencies which are: (1) a disaster having a major impact on revenues or expenditures; (2) a significant deterioration of economic conditions; or (3) a substantial reduction in federal transfer payments. However, the

government would be required to eliminate such overruns over no more than five years. Overruns of less than $1 billion must be offset with an equivalent surplus in the subsequent fiscal year.

Although there is currently no balanced-budget legislation in place in British Columbia, the province did adopt such legislation in 1991. The Taxpayer Protection Act required a balanced budget on a cumulative basis over the succeeding five-year period. Also, spending growth was to be limited to average GDP growth over the previous five years. This act was quickly repealed by a new provincial government early in 1992.

Canada's two territories have also recently enacted legislation aimed at preventing debt accumulation. The original version of Deficit Elimination Act adopted by the Northwest Territories in 1995 required the government's budgetary expenditures in any given fiscal year to be no more than one per cent greater than budgetary revenues. As well, if a deficit occurred that met this expenditure requirement, the territorial government was to achieve an offsetting surplus in the subsequent fiscal year. If the government failed to comply by either of these stipulations, the province's Legislative Assembly could recommend that the appointments of Executive Council members be revoked, after giving consideration to whether the circumstances underlying the lack of compliance were within the "reasonable control" of Council members.[6] The territory later amended this legislation to require declining deficit levels in 1996/97 and 1997/98, which would lead to a balanced-budget requirement for 1998/99. The appointments of Executive Council members may still be revoked if the required deficit levels are not achieved in any given fiscal year, subject to the scrutiny of the Legislative Assembly. The amended act does not apply beyond the 1998/99 fiscal year.

The Yukon in 1996 enacted the Yukon Taxpayer Protection Act which aims to prevent *any* debt creation or accumulation by the government. This legislation forbids the government to run a deficit in any given fiscal year that cannot be offset by previously accumulated assets. If a previously accumulated deficit exists, the government must present a plan to eliminate it. The act is backed by a particularly stringent means of enforcement: If the government does not meet its deficit requirements in any given fiscal year, it must dissolve parliament by February 1 of the

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6. In 1996, the territorial government amended the Deficit Elimination Act slightly, specifying declining deficits until 1997/98, after which the budget must be balanced. Any overruns from these levels must be offset in the subsequent fiscal year.

following year, initiating a general election. In addition, the government may not increase income taxes or fuel oil taxes, nor implement any new taxes, without referendum approval.

No balanced-budget legislation is currently in place at the federal level. However, federal government expenditures were constrained under the Spending Control Act from 1991/92 through 1995/96. This legislation set limits for aggregate program spending which were met for each of these years. However, subsequent budgets became successively more restrictive than the legislation, so the current government did not extend the act beyond 1995/96. In 1990, federal legislation put the federal unemployment insurance program on a self-financed basis, allowing the government to increase employer/employee contribution rates when necessary to prevent large cumulative deficits in the Unemployment Insurance account. More recent changes to this legislation aim to secure an accumulated surplus in the U.I. account large enough to eliminate the potential need to increase premium rates during economic downturns. In sum, these provisions effectively establish an informal budget constraint on the operation of the U.I. program (now known as Employment Insurance).

The budget rules legislated by the provinces and territories vary considerably in stringency. Unlike the constraints of other provinces, the restrictions enacted by Saskatchewan and Nova Scotia apply to *forecasted* (rather than *realized*) budget balances. Also, the balanced-budget requirements of both Saskatchewan and New Brunswick apply to multi-year periods, so each could legally sustain deficits in any given year. The debt-retirement provisions in this legislation range from explicit targets (Alberta) to non-existent targets (New Brunswick and Québec). With the exception of Alberta and the Yukon, none of the acts seems to clearly restrict the ability of governments to create new debt. As well, only the legislation of Manitoba and the two territories include explicit mechanisms that would penalize their governments for not abiding by their respective anti-deficit restrictions. Appendix B compares the provincial and territorial anti-deficit legislation according to some of the various characteristics that differentiate them in terms of stringency. Among the provinces, Manitoba and Alberta's anti-deficit legislation appear to be the most stringent considering these criteria, given that: (1) in both cases the restrictions apply to realized balances and single-year budget periods; (2) Manitoba's act contains explicit penalties for not achieving a budgetary surplus; and, (3) Alberta's legislation clearly states debt-reduction targets that must be achieved by their government. Yet, the anti-deficit legislation of the Yukon appears to be even more stringent than that of Manitoba and Alberta, considering that it imposes

an extremely harsh penalty for non-compliance (an election), applies to realized annual budgetary balances, and contains no apparent escape clause.

Yet it should be noted that the mechanisms to enforce this legislation are not well defined for any of the provinces and territories. With the exception of the Yukon, all of the provincial and territorial anti-deficit legislation contains various types of escape clauses that would allow governments to bypass the constraints, typically if specified contingencies occur. Since the conditions for exercising these clauses are generally not concrete, and no external mechanisms (beyond political opposition) exist to monitor their use, they could be used to circumvent the constraints in future years. Moreover, it is uncertain whether these statutory restrictions can be enforced on provincial and/or territorial governments, *regardless* of whether they apply these escape clauses or not. Indeed, governments could amend, or even repeal this anti-deficit legislation if compliance becomes particularly costly. Although the courts have been mentioned as a possible enforcement mechanism in some of the previous literature on government deficit constraints, it is doubtful whether a provincial or territorial government would expose itself to a potential court case when it could amend or repeal its legislation to avoid this possibility.

In contrast, a *constitutional* constraint would probably be much more difficult for the provinces to circumvent. Indeed, some tentative empirical evidence seems to support the claim that constitutional restraints encourage fiscal discipline more effectively.[7] However, the provinces and/or the federal government are unlikely to adopt constitutional constraints. First, if past experience is any indication, making changes to Canada's constitution to incorporate budget constraints would be politically difficult, if not impossible. Second, it is doubtful whether the provinces or the federal government would be willing to bind themselves to constitutional budget constraints, which could be much more difficult to overturn in future years.

So far, it is difficult to determine whether the anti-deficit constraints legislated by many of the provinces have been effective in encouraging fiscal discipline. Although the provinces that have adopted anti-deficit constraints have generally enjoyed improved fiscal performance in recent years, this has also been true in general for the provinces that have not adopted constraints. Appendix C contains charts that show the budgetary outcomes of all the provinces and territories in Canada on a public accounts basis since 1980/81. From these charts, it is apparent that all of the provinces (including the ones without constraints) have generally made considerable progress

7. See Bohn and Inman (1996).

since the early 1990s towards eliminating their budgetary deficits. Although the accomplishments of the provinces that have adopted anti-deficit constraints are in some cases particularly impressive, in most of these cases, it appears that much of the progress towards deficit elimination occurred *before* these restrictions took effect.

The widespread success of the provinces at deficit elimination in recent years can probably be attributed to at least two factors. First, financial markets hastened fiscal discipline in the early 1990s by increasing the borrowing costs of provincial governments with borrowing paths that were perceived to be unsustainable.[8] Second, and perhaps reflecting this fact, the public became increasingly tolerant of fiscal austerity, giving the current governments of all the provinces more scope than their predecessors to undertake necessary cutbacks. Indeed, it is quite likely that much of the success at deficit elimination has been driven by a change in public preferences regarding deficit and/or debt reduction, rather than the existence of anti-deficit constraints. The constraints that have been legislated by many of the provinces are to some extent a manifestation of this change in tastes, reflecting a desire to secure *future* fiscal discipline once more sustainable budget balances have been achieved. These constraints may serve the added function of granting increased credibility to the government's commitment to fiscal discipline in provinces that may have lacked such discipline in the past, since the high visibility of this legislation could potentially magnify the costs associated with any future lack of restraint. These potential costs include adverse movements in government borrowing rates due to a loss of confidence by financial markets and credit rating agencies, as well as political costs in the form of negative voter sentiment.

With these considerations in mind, some very tentative comparisons between the fiscal performance of the provinces with and without anti-deficit constraints can be made. In 1995/96, all four of the provinces with anti-deficit legislation in place achieved a budgetary surplus. In 1996/97 (the most recently completed fiscal year), five of the six provinces bound by anti-deficit legislation realized an overall budgetary surplus.[9] The exception, Québec, realized a deficit that was slightly better than its allowable maximum for 1996/97 of $3.275 billion, the first year in which its legislation was in effect. The Northwest Territories and the Yukon, which also had new anti-deficit constraints in effect for 1996/97, expect to realize relatively small deficits which are in accordance

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8. For example, all of the provinces received credit rating downgrades since 1986. In the most extreme case, Saskatchewan's debt rating was reduced five times by Standard and Poor's between 1986 to 1992.
9. As per 1997 budget estimates on public accounts basis.

with their respective legislated requirements.[10] In comparison, only two of the six provinces without anti-deficit legislation in place achieved a surplus in 1995/96 (Prince Edward Island and Newfoundland), and none of the four provinces without such constraints in effect during 1996/97 realized a budgetary surplus.[11] Note, however, that the deficits posted in 1996/97 by three of the provinces without anti-deficit legislation (British Columbia, Prince Edward Island, and Newfoundland) were relatively small in percentage-of-GDP terms.[12] While the budgetary deficit of Ontario, the fourth province without a legislated budget constraint, remains sizable at 2.3 per cent of GDP in 1996/97, the province's fiscal performance has also improved considerably since its deficit peaked at 4.4 per cent of GDP in 1992/93.[13] Moreover, all four of the provinces that do not currently have anti-deficit legislation are projected to achieve balanced budgets within the medium term. Thus, while recent fiscal outcomes suggest that the provinces with anti-deficit constraints *may* have achieved slightly better budgetary results than those without constraints (based on the somewhat narrow criteria of having achieved a budgetary surplus), it remains unclear whether this "superior" performance will be sustained in future years. Indeed, given (1) the limited number of outcomes that have been observed under these legislated anti-deficit constraints, and (2) the fact that some of the provinces are still in the midst of extensive fiscal consolidation, it is probably too early to assess whether these rules have actually helped to improve fiscal outcomes.

It is even less apparent whether the market's perception of debt riskiness has improved for those provinces which have legislated budget constraints compared to those provinces which have not. For instance, in 1996, the average yield spread over 10-year government of Canada benchmark bonds for the provinces with legislated budget constraints was only moderately lower than the average for provinces without restrictions.[14] Moreover, between 1994 and 1996, the decrease in average weekly yield spreads for the provinces with and without constraints has been identical

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10. As per 1997 territorial budget estimates. In 1995/96, the Northwest Territories realized a small budgetary deficit, while the Yukon realized a budgetary surplus.
11. Québec and Nova Scotia passed their anti-deficit legislation in 1996.
12. According to 1997 provincial budget estimates. The deficits achieved by British Columbia, Prince Edward Island, Newfoundland in 1996/97 were $395 million (0.3 per cent of GDP), $7 million (0.3 per cent of GDP) and $29 million (0.3 per cent of GDP), respectively.
13. As per Ontario public accounts and 1997 Ontario Budget (deficits) and Statistics Canada (GDP).
14. The average weekly spread in 1996 for the six provinces with legislated budget constraints was 27 basis points (22 without Québec), and 32 basis points for the four provinces without constraints.

(note that most of the legislation was passed in 1995 and 1996).[15] A much more formal analysis of provincial yield spreads is needed to determine whether the anti-deficit constraints legislated by the provinces have improved the market's perception of their financial situation.

1.2 United States

Unlike Canada's limited experience with budget rules, U.S. states have used balanced-budget and debt-limitation restrictions extensively. In fact, 49 of the 50 states have some form of balanced-budget restriction, of which 3 are statutory and 46 are established by state constitution.[16] In many cases, these restrictions have been present since the nineteenth century. However, there is significant heterogeneity in the scope and stringency of these requirements. Typically, the restriction applies to only part of the total budget.[17] Most states require their governor to *submit* a balanced budget and/or their legislature to *pass* a balanced budget.[18] Only 24 states have no deficit carry-over provisions, thereby prohibiting their government from borrowing to cover a *realized* deficit. The majority of states also have some sort of debt-limitation law. Most of these states limit general-obligation debt either nominally or as a percentage of state revenues, taxable property, or other funds.[19] Some also require a legislative majority or even a public referendum to issue new debt. Over the last two decades, many states have also adopted formal tax and expenditure limitations (TELs). Interestingly, there are virtually no formal mechanisms to enforce any of these budget rules, suggesting that reputation and history play a prominent role in compliance.[20]

Since only one state has no budget rule, it is difficult to determine whether the existence of a budget rule affects the fiscal behaviour of state governments. Casual observation does indicate that states have generally had lower deficit and debt-to-GDP levels than Canadian provinces.[21]

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15. As measured by the decrease in the average weekly spread for 10-year bond yields over the Government of Canada Benchmark from 1994 to 1996. This decrease averaged 27 basis points for the four provinces without legislated constraints, the same as the six provinces with legislated constraints.
16. The exception is the state of Vermont.
17. According to National Association of State Budget Officers (1992), the balanced-budget restrictions of 48 states apply to the operating budget (general fund), while some states extend this to special funds (34 states), trust funds (30), and capital spending funds (33).
18. Forty-four states require a balanced budget to be submitted, while 37 states require a balanced budget to be passed.
19. According to the Advisory Committee on Intergovernmental Relations (ACIR) (1986).
20. Theoretically, enforcement could be pursued through state courts, although this mechanism has not been used to date.
21. According to ACIR (1996), the aggregate gross direct (general purpose) debt of the U.S. states was 6.2 per cent of U.S. GNP in 1992. In contrast, the aggregate gross direct debt of the provinces and territories was 35.1 per cent of GDP in 1991/92 on a standardized public accounts basis (Statistics Canada's Financial Management System).

However, such cross-country comparisons are misleading, since it is difficult to account for the myriad of other factors that affect fiscal performance, including significant differences in government responsibilities.

The U.S. federal government has also experimented with budget rules over the last decade, with limited success. In 1986, the Gramm-Rudman-Hollings (GRH) Bill was enacted. For 1986 to 1991, it set specific deficit targets that declined linearly to zero. Although provisions of the act required automatic across-the-board expenditure cuts in years when forecasted deficits did not meet targets, the realized deficit continually missed these targets, even after they were revised upwards in later years (see Appendix D). Owing to this failure, GRH was supplanted in 1990 by the Budget Enforcement Act (BEA). Under this legislation, official baseline deficit forecasts were made at the beginning of each year for a six-year period. Policy changes during that year could not increase the estimated deficit for any of the six years in the "budget window" above the baseline projection. Although this requirement was continually met, actual deficits systematically exceeded estimates, undermining the BEA's modest objective of preventing deficit growth. Thus, casual observation suggests that these statutes did not change deficit outcomes. Despite this apparent failure, budget rules remain politically popular in the United States. In 1993, the BEA was supplanted by similar legislation, the Omnibus Budget Enforcement Act, which provides for deficit reduction through a variety of tax increases and constraints on discretionary spending. As well, balanced-budget amendments to the U.S. Constitution were recently proposed and narrowly defeated in Congress.[22]

1.3 The European Community

Another prominent example of budget constraints can be found in the list of prerequisites for entry into the European Monetary Union (EMU), specified in the 1992 Maastricht Agreement. Eligible countries must achieve, inter alia, deficit and debt-to-GDP ratios below 3 per cent and 60 per cent (respectively) in the 1997 fiscal year. However, these preconditions are flexible.[23] Whether eligible countries meet the criteria will be assessed ultimately by the European Monetary

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22. The U.S. Senate defeated a balanced-budget amendment proposal for the second time in June 1996, after defeating a similar proposal 14 months earlier.

23. More specifically, a candidate country's deficit-to-GDP ratio may exceed the 3 per cent criteria if it has declined "substantially and continuously" to a level "close to" the reference value. Similarly, a candidate's debt-to-GDP ratio may exceed the 60 per cent criteria if it is "sufficiently diminishing" and is approaching the reference value at a "satisfactory pace."

Institute (the forerunner of the proposed European central bank). These rules were adopted over concern that the insolvency of some members could have serious negative spillover effects that could threaten the stability of the monetary union. For example, an insolvent member could pressure the new European central bank to monetize their debt, which could compromise the anti-inflationary credibility of monetary policy or damage union cohesiveness. Preliminary evidence indicates that changes in budget behaviour have occurred to meet these criteria.[24]

1.4 Germany

Germany's federal government, under the German Basic Law of 1969 (which was updated in 1990 for re-unification), is bound by a constitutional requirement that its budget be balanced in any given fiscal year, although the government may borrow to finance investment expenditures. The restriction does not apply during years in which the country is either in macroeconomic disequilibrium or at war. In practice, this requirement does not seem to have been a stringent constraint on the German government, which has (among other things) often justified borrowing in excess of investment expenditures on the basis of macroeconomic stabilization, with the approval of the country's Constitutional Court.

1.5 Japan

The government of Japan is also bound by a statutory budget restriction established under the Public Finance Law enacted in 1947. This restriction, which applies only to the central government's general account, allows borrowing only for the purpose of financing infrastructure investments. Although this constraint seemed effectively to limit debt accumulation by the Japanese government for many years, it virtually ceased to be a binding restriction in 1975 when the government began to resort to deficit-financing bonds through supplementary budgets (whose balances are not restricted by the balanced-budget requirement). At present, expenditures under the general account represent only about one quarter of the central government's total budgetary expenditures, so the anti-deficit restriction does not appear to be a meaningful constraint on the government's overall budgetary balances.

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24. According to the OECD *Economic Outlook* of December 1996, only Finland and Luxembourg are projected to meet both these requirements if the two criteria are strictly applied in 1997. However, many countries are projected to approach the reference values.

1.6 New Zealand

Unlike the rule-oriented approaches discussed above, the Fiscal Responsibility Act passed by New Zealand in 1994 is based upon fiscal guidelines that grant the government considerable flexibility. The legislation requires the country's central government to manage its budgetary balances according to some defined "principles of responsible fiscal management." One of these principles is that the government should generate ongoing budgetary surpluses in order to reduce its net public debt to "prudent levels" (the meaning of which is not explicitly defined). Another principle implies that, once a "prudent" debt level is achieved, the government would be required to balance its operating budget, on average. However, within the scope of these guidelines, the government is allowed substantial flexibility to run temporary budget imbalances, provided that it specifies both the reasons for the departure, and a time frame in which they expect a return to balances more consistent with "responsible fiscal management." Although the New Zealand government has achieved annual operating surpluses to date since this legislation was enacted, it is probably too early to assess whether this statute will foster fiscal discipline over the long term.

2. Theoretical arguments for and against budget rules

2.1 Budget rules in a world without deficit biases

Theoretical analyses of fiscal policy typically utilize the "benevolent social planner" paradigm that ignores imperfections due to politics and other factors. In this framework, a binding budget or public debt restriction can only reduce social welfare by preventing the social planner from implementing optimal policies that require temporary budget imbalance. This suggests that binding budget constraints would be justified if deficit biases exist that impose costs greater than the benefits of fiscal discretion.

Two theoretical arguments typically used to criticize anti-deficit rules fall within this general context. First, standard Keynesian models suggest that government can encourage output stability by using countercyclical fiscal policy. Therefore, to the extent that smoothing the output path improves social welfare, changes in the budget balance should be procyclical. Even in the absence of discretionary policy, the inherently procyclical nature of many revenue categories (due to the dependency of most government revenue categories on current income) and the countercyclical behaviour of some expenditures should act as "automatic" stabilizers. Anti-deficit constraints might compromise this stabilizing role, especially for negative demand shocks. In fact,

such constraints could be *destabilizing* if fiscal authorities are forced to adopt restrictive measures to offset revenue shortfalls when negative demand shocks occur, which could amplify the decline in output.[25] However, since budget rules do not preclude large surpluses, the response of fiscal authorities would not necessarily be destabilizing in the presence of positive demand shocks.

Note that the loss in fiscal stabilization implied by anti-deficit constraints may not be as large for governments that are *already* burdened with high levels of debt when the constraint is adopted. In such cases, fiscal offsets to demand shocks could be more limited than otherwise, due (among other factors) to increasingly onerous debt service charges, and political pressure to reduce the debt. In this context, the potential costs of foregone fiscal stabilization caused by constraints may be reduced, at least while active attempts are being made by government to reduce debt to more acceptable levels. However, if anti-deficit constraints are adopted as a preventative measure against "excessive" debt accumulation and will remain in place even when the debt level is back to a more acceptable level, the potential costs of foregone fiscal stabilization may remain a concern in the long run.

A second criticism of anti-deficit rules follows Barro's (1979) "tax-smoothing" hypothesis that posits social planners can minimize the deadweight losses of distortionary taxes by adopting a smooth path for marginal tax rates when government expenditures and revenues fluctuate. To implement this, governments must either use their expenditures as the sole instrument to offset temporary fiscal imbalances, or have the flexibility to run deficits when spending or revenues deviate from long-term trends. If frequent tax changes are necessary to abide by deficit or debt restrictions, the welfare-distorting effects of taxation may increase.

Anti-deficit and anti-debt constraints may limit the discretion of policymakers to adopt optimal policies in a number of other ways, as well. For instance, anti-deficit rules could prevent policymakers from making socially optimal public infrastructure investments, the omission of which would have undesirable consequences on the welfare of future generations. Indeed, to some extent, it may be socially equitable to run deficits to finance such investments, since the cost can be shared among the present and future generations that will profit from their existence.[26] Yet

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25. King, Plosser and Rebelo (1988) show this can also be true in a real business cycle model where government spending is completely financed with income taxes.

26. This consideration may merit budget constraints that apply only to the operating budget (which excludes capital spending), rather than the overall budgetary surplus. Notably, the budget constraints of most U.S. states apply only to the operating balance.

another negative consequence of fiscal rules is that governments could lose the flexibility to use debt to reallocate welfare intertemporally when it is socially equitable to do so. For instance, during the Second World War, many governments accumulated high levels of government debt in order to postpone some of the taxation which would be necessary to fund the ongoing war effort. In this manner, the government helped to reduce some of the hardship which would have otherwise occurred during the war, by allowing subsequent generations (which would presumably be more well-off) to share in the financing burden.

2.2 Budget rules in a world with deficit biases

Once imperfections in the budget process are introduced, constraining fiscal discretion may be justified despite the potential costs described above. For example, if policymakers do not fully internalize the cost of debt accumulation on future generations, they may choose present deficit and debt levels above what is socially optimal. Myopia and other complexities of the policy formation and implementation process may bias democratic governments towards high spending and systematic deficit financing.[27] Although full discretion would be optimal without these distortions, the real allocational and intergenerational effects of debt accumulation may make external constraints a desirable second-best solution.

Yet fiscal rules may have other costs and benefits in addition to those associated with preventing "excessive" debt accumulation, once imperfections such as uncertainty and information limitations are taken into account. One possible cost, as Alesina and Perotti (1996) argue, is that rigid constraints motivate politicians to circumvent the rules by using "creative accounting" and other measures that reduce the transparency of the budget process. This behaviour may be socially costly, since it may prevent voters from recognizing the true cost of policies enacted by their government.

Alternatively, if rules are viewed by markets as effective "safeguards" against unsustainable fiscal policy, they may lower government borrowing rates by reducing the perceived risk of default on, or monetization of, government debt. As well, rules could prevent mis-timed discretionary fiscal policy (due, for example, to unpredictable policy lags) from being a *source* of instability.

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27. In a Canadian context, Devereux (1993) provides an interesting discussion of a potential deficit-financing bias on the part of the provinces due to an externality arising from the possibility that either the federal government or the central bank will help "bail them out" if they become insolvent. Corsetti and Roubini (1992) and Alesina and Perotti (1996) each provide general reviews of the literature discussing possible causes of government deficit bias.

Also, recent theoretical evidence suggests a link between price stability and government debt sustainability which may make fiscal constraints desirable. In general, a government's debt is sustainable if its finances satisfy an intertemporal budget constraint: the current real government debt must equal the present value of its future stream of expected primary surpluses, inclusive of seigniorage transfers from the central bank. Thus, for debt repayment to be credible (*ceteris paribus*), an indebted government must be perceived by financial markets to be capable and willing to run future surpluses sufficient to meet this constraint. Canzoneri and Diba (1996) argue that excessive government debt accumulation may jeopardize the central bank's ability to achieve long-run price stability. Using the intertemporal budget constraint, the authors demonstrate that a country's central bank can "lose control" of the price level if financial markets do not perceive the government's intertemporal budget constraint to be satisfied. In such cases, the price level will be determined by the dictates of debt solvency, rising to deflate the real value of nominal debt until the intertemporal budget constraint is met with equality. The authors argue that, in order for a government's debt repayment to be credible, its primary surplus must tend to increase as indebtedness rises. Therefore, anti-deficit constraints that effectively require the primary surplus to respond to the level of debt could help ensure that the government's degree of fiscal solvency does not influence the price level. Indeed, fiscal constraints which require an *overall* budget balance, if effective, would be theoretically sufficient to ensure that the intertemporal budget constraint is satisfied.[28]

2.3 Alternatives to rigid budget rules

The use of rigid constraints to moderate potential deficit biases and to provide credibility for future fiscal discipline may seem somewhat extreme to some, given the existence of alternative mechanisms that could possibly provide these benefits without placing a "severe" restriction on budgetary balances.

For instance, financial markets may help discipline governments that run persistent deficits by increasing borrowing costs or limiting the availability of credit as borrowing becomes excessive. Studies by Goldstein and Woglom (1991), Bayoumi and Eichengreen (1994), Bayoumi and

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28. In fact, an overall budget balance is *more than* sufficient to ensure government debt viability. In an infinite-horizon case with constant real interest rates, it can be shown that the intertemporal budget constraint will be satisfied if the government runs a primary surplus in each future period that increases in line with the interest payment on its outstanding debt.

Woglom (1995) and Fillion (1996) provide empirical support for the argument that markets increase government borrowing costs as debt accumulates. This is supported by the observation that provincial bond spreads in Canada tend to increase as the province's debt-to-GDP ratio rises in comparison to other provinces. If these "market-based" incentives are sufficient to impose discipline, governments could retain the flexibility to adopt output-stabilizing and tax-smoothing fiscal policies. However, the question of whether the incentives provided by financial markets are strong enough to discipline government borrowing effectively is open to debate. The fact that many governments have accumulated debt levels that are generally perceived as "excessive," despite the disincentives provided by financial markets, may give anecdotal evidence that this mechanism is not (or has not been) a sufficient "safeguard." Note that this does not suggest that financial markets do not play a significant role in *limiting* government debt accumulation. Indeed, there is no shortage of anecdotal evidence that financial markets can inhibit government borrowing, especially at high levels of debt.

Another alternative approach to moderate potential deficit biases which may be less costly than a rigid constraint is to adopt flexible rules. For example, the provinces have opted for balanced-budget legislation that gives some discretion to run deficits when hit by such adverse events as disasters or significant reductions in revenues. However, these contingency clauses may subvert deficit control unless concrete criteria and monitoring mechanisms exist to prevent cheating. A second "flexible" option adopted by some provinces is to subject budget constraints to multi-year time horizons, allowing deficits in some years when unfavourable conditions occur, providing they are offset elsewhere during the time horizon. While incorporating such "flexible" options may make anti-deficit constraint less costly in terms of foregone fiscal policy, they may limit the effectiveness of the constraint and weaken its credibility in financial markets, making it less worthwhile to adopt.

Yet another, less stringent form of budget constraint is one that is adopted as a transitionary "tool" for debt and/or deficit reduction and that can be removed once debt has been reduced to a more acceptable level. There are a number of reasons why even a "transitionary" budget rule could improve the probability of achieving a deficit- or debt-reduction objective. First, a budget rule may give credibility to intended future restraint despite a lack of fiscal discipline by past governments, since the high visibility of government greatly increases the political costs of not achieving fiscal objectives. Second, a budget rule is probably more likely to be perceived as an *external* constraint

on the budget process, which takes precedence over other objectives. This may help to diminish the political cost of the policy changes required for greater fiscal restraint. Finally, an established budget rule may be a means of ensuring that subsequent governments inherit the same fiscal priorities, since the constraint would probably be politically costly to remove if it is perceived as useful.

Unlike the U.S. states, whose budget constraints are generally long-established and predominantly constitutional, it remains to be seen whether the budget constraints legislated by Canadian provinces will be a permanent feature of the budget process. However, the fact that these constraints are statutory would seem to allow future governments the option of removing them once debt has been reduced to acceptable levels. Thus, regardless of the intentions of current governments, there is a distinct possibility that the budget rules adopted by many provinces will not be permanent. The costs and benefits of such a "temporary" constraint may differ from a permanent rule in a number of respects. On the one hand, while budget constraints may imply ongoing costs in terms of foregone fiscal stabilization and tax smoothing, these costs may not be as great if the budget constraint is adopted only temporarily, especially if fiscal policy is already constrained by "excessive" debt levels. On the other hand, while this approach may be less costly, it may also be less beneficial. In particular, it does little to moderate deficit biases in the long run, which may be the fundamental reason to adopt such a constraint. As well, it may be easier for a government to abandon a constraint that is perceived as temporary if the fiscal adjustments necessary to abide by it are particularly costly.

Given this theoretical background, the agenda of recent empirical research has been to verify that budget rules actually improve budget outcomes, and to determine whether the loss of fiscal discretion implied by such constraints has a significant effect on output variability. A related topic is to examine whether more stringent rules have greater effectiveness. Studies have also analysed other costs and benefits, such as the possibility that budget rules reduce government borrowing rates.

3. Empirical evidence

Probably the biggest obstacle to determining the effects of fiscal restraints empirically is the endogeneity problem. While budget rules and fiscal outcomes may be correlated in the data, causality is difficult to establish. Rules may be the result of past outcomes, or both variables could

be jointly correlated with other excluded variables. If political institutions represent completely the electorate's preferences, as Riker (1980) argues, then preferences determine both rules and outcomes. One approach used by Alesina and Perotti (1996) is to argue that fiscal institutions (such as budget rules) are relatively constant because changing them is costly and difficult in the short to medium run. Therefore, only *extremely* unsatisfactory rules will be changed. Beyond this, researchers typically include proxy variables for voter preferences as control variables in their regressions, to limit spurious results due to the joint correlation of rules and outcomes with omitted voter-preference variables. However, spurious correlations may still occur if the proxies do not fully capture the omitted variables. Poterba (1996) suggests that endogeneity could be limited by modelling the evolution of rules using instrumental variables that are independent of past fiscal policy. But, finding valid instruments is a difficult task.

In addition, there is a lack of useful data on the historical experience with budget rules. Many recent cases of budget rules in OECD countries provide only a limited number of observations. There is also little variability in the *types* of budget rules used, making it difficult to assess the effects of novel restraints. As well, sufficient data must be available to control for political and/or institutional factors that may influence the budget outcome under a given constraint. Researchers typically rely on two data sources: (1) the U.S. state experience with budget rules; and (2) the U.S. federal government's deficit-reduction legislation since 1986. Note that cross-country studies are difficult because of the need to control for unidentified country-specific factors that affect fiscal outcomes. Given the nearly exclusive reliance of studies on U.S. data, it is difficult to generalize the conclusions of these studies to other countries or regimes.

Another difficulty is to determine what constitutes a budget rule. While most analysts confine themselves to legislated or constitutional constraints on deficits, taxes, expenditures, and debt, others interpret "budget rules" as synonymous with fiscal institutions, encompassing all rules and regulations governing the behaviour and interaction of legislators in the budget process.[29] Even under a narrow definition, controlling for such factors as legislative voting procedures and the effective degree of opposition the government faces may be important because the institutional environment will influence the effectiveness of otherwise identical restrictions.

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29. These analyses include Alesina and Perotti (1996) and von Hagen and Harden (1994).

A review of the empirical research can profitably be organized and discussed under four broad questions:

Does the presence of a budget rule affect fiscal behaviour?

Does the stringency of rules change their effectiveness?

Do budget rules impede the output-stabilization and tax-smoothing roles of fiscal policy?

Do budget rules influence government and/or private borrowing costs?

3.1 Does the presence of a budget rule affect fiscal outcomes?

Unfortunately, the extensive experience of U.S. states with balanced-budget constraints is of little help in investigating this issue. Since states typically have had these rules for more than a century, little or no data exist before the implementation of such constraints. Therefore, it is difficult to assess what their impact has been on the fiscal performance of the states (notwithstanding the problems associated with the evolution of fiscal preferences and institutions over such a long period). Also, since only one state does not have a balanced-budget constraint, cross-section or panel data regressions would likely give spurious results. Despite a limited number of observations, one useful data source is the U.S. federal government's experience under the GRH (1986) and BEA (1990) legislation. Another useful source is the experience of states with and without tax and expenditure limitations (TELs), which provides a rich panel data set. Overall, studies relying on these last two sources of data provide mixed evidence on whether budget rules actually change fiscal behaviour.

Under the GRH legislation, a sequestration procedure was to reduce outlays for non-exempt programs if official deficit projections (given the enacted budget) failed to meet prespecified targets. Using a model to simulate spending in the absence of GRH, Hahm *et al.* (1992) conclude that the act reduced spending on programs subject to sequestration. However, Gramlich (1990) finds that most of the reduction in the primary deficit-to-GDP ratio achieved under the GRH could be attributed to output growth and tax changes adopted before GRH. The remainder of the reduction in the primary deficit was largely due to lower defence spending, which Gramlich argues is more attributable to reduced public support than to GRH.

Moreover, studies by Reischauer (1990) and Auerbach (1994) indicate that superficial budget manipulations were prevalent under both GRH and the BEA. Reischauer (1990) finds that approximately half the reduction in the total deficit under GRH was achieved through one-shot

fiscal measures which only temporarily improved the deficit. Mandatory spending cuts under the automatic sequestration procedure were avoided because official projections systematically underestimated the deficit that would result from the enacted budget. Auerbach (1994) shows that similar deficit underprojections continued to circumvent meaningful reform under the BEA. As well, policymakers often shifted the timing of revenues and expenditures so that projected deficit increases would occur after the six-year planning horizon used under the BEA.

However, the BEA legislation may have prompted some meaningful changes in fiscal behaviour. Poterba (1996) presents evidence that caps on annual discretionary spending contained in the act accelerated a long-standing trend of decreasing discretionary spending as a proportion of government expenditures and GDP. Both these percentages diminished rapidly after the BEA was adopted, suggesting that these spending caps may have been effective.

Numerous studies have examined whether state TELs have restricted government expenditure growth. Until recently, cross-sectional studies typically concluded that TELs are ineffective. However, these studies did little to control for economic and political factors which could affect their results. Two recent papers by Reuben (1995) and Shadbegian (1996) make significant innovations.

Utilizing panel data for all states between 1972–1987, Shadbegian (1996) regresses expenditures against the existence of tax and/or expenditure limits, while accounting for differences in personal income growth and other factors across states. Income growth is included to capture the fact that TELs typically restrict expenditure (or tax) increases to growth in state personal income.[30] His main finding is that the dependence of state tax and expenditure restrictions on the growth rate of personal income makes them more effective in states that have low income growth. Thus, while less formal analyses tend to indicate that TELs do not limit state expenditure growth on average, it is the *design* of these restrictions that is to fault for this ineffectiveness. Indeed, TELs do seem to restrict expenditure growth effectively in states where the rate of personal income growth is below average.

Reuben (1995) uses a novel approach to control for the problem of endogeneity of fiscal rules. She explicitly models the evolution of TELs using historical data on variations in state institutions and political factors that facilitate their passage. Such treatment is more feasible for

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30. Other TELs limit growth in expenditures to population growth, a predetermined and fixed percentage increase in nominal terms, or a fixed percentage of estimated general revenues plus funds not used in previous years.

TELs than for balanced-budget laws since the adoption of TELs by states has been relatively recent, so more detailed data exist. In contrast, balanced-budget restrictions were typically adopted by states in the 19th century. When OLS regressions that treat TELs as exogenous are performed, these constraints are found to have statistically insignificant effects on state expenditures. However, when the evolution of these constraints is treated as endogenous within the regression model, TELs are shown to have a significant negative effect on spending. Along with Shadbegian's results, this provides indirect evidence that the existence of budget rules can effectively change budget behaviour.

Overall, evidence on whether changes in budget rules affect fiscal behaviour is difficult to interpret. While the U.S. federal government experience with statutory budget rules seems discouraging, one could clearly argue that these restraints were poorly designed, since they could easily be circumvented by superficial budget manipulations and future legislation. Also, it is difficult to design statistical tests that use these data because few observations exist in each case. Without formally controlling for the endogeneity problem, favourable empirical results may partially reflect the impact of changes in public tastes for deficit reduction. However, the results of Shadbegian (1996) and Reuben (1995) are a promising indication that the existence of a budget rule can change fiscal behaviour. More definitive results may be obtained in future years as additional data become available from recently adopted constraints outside the United States.

3.2 Does the stringency of rules change their effectiveness?

The extensive U.S. state experience with budget rules is ideal for investigating this question, since the stringency of balanced-budget laws varies considerably across states. Studies typically use panel data to determine whether more stringent rules improve state budget balances. The general conclusion is that more stringent rules deliver better fiscal outcomes. However, the stringency of budget rules must be balanced against other institutional and political factors that have considerable impact.

The U.S. Advisory Committee on Intergovernmental Relations (ACIR) (1986) performed the first such study. Using a single-year cross-section regression that accounted for different economic and fiscal characteristics, a weakly significant positive relationship was found between a state's general-fund balance and an index for the stringency of its balanced-budget restriction. Von Hagen (1990) used non-parametric techniques to examine the impact of more stringent

balanced-budget and debt-limitation restrictions on the states' average guaranteed debt-to-income ratio or debt-per-capita between 1975 and 1985. His central conclusion was that, while more rigid restrictions raise the probability of low guaranteed debt ratios, they also induce substitution of non-guaranteed for guaranteed debt. More stringent constraints skew the frequency distribution of the average debt-to-income (and debt-per-capita) ratio to the left, increasing the probability of low levels, while not affecting the likelihood attached to very high debt ratios. Increased stringency significantly reduces the *median* of the distribution, but not the mean. Also, since debt limitations restrict only general obligation debt, more constrained states tend to circumvent these restrictions by issuing more *non-guaranteed* debt through off-budget agencies.

The main criticism of these two studies is that neither controlled for political factors, so their results suffer from omitted variable bias. In particular, the effects of divided governments, the electoral cycle, and the political affiliation of the governing party are ignored. Divided government occurs if the two legislative houses are controlled by different parties, or when the governing party does not control either legislative chamber. These factors should be controlled for, since party preferences, political opposition, and election considerations may influence the effectiveness of otherwise identical constraints. Another weakness is that both studies used the ACIR index as a measure of budget-rule stringency. While using this index may allow researchers to identify whether the *overall* stringency of a given state's budget rule encourages fiscal discipline, it does not allow the importance of *specific* budget-rule stipulations to be identified. Subsequent papers have addressed these problems.

Using panel data from 1968–1987, Alt and Lowry (1994) simulate the path of state deficits in response to economic shocks, based on regressions that include variables for a number of individual features that affect overall budget-rule stringency. As well, the authors include variables for the political affiliation of both legislative chambers and the executive. Their central conclusion is that divided governments influence the effectiveness of budget constraints. *Ceteris paribus*, policymakers facing the more stringent "no–deficit–carry-over" requirement react more quickly to budget imbalances. However, this response is impeded by divided governments. Also, the political affiliation of the government matters: Republican governments react more quickly to deficits than do Democrat governments. Regardless of the political composition of government, legislators were found over that period to increase revenues in response to deficits, rather than cutting expenditures. Unfortunately, the paper's results may not be that conclusive because the overall budget balance is

used rather than the narrower general-fund balance, to which limitations normally apply. Since the broader deficit measure contains revenues and expenditures that are not restricted, omitted variables may still bias results.

Poterba (1994) controls for political factors *and* uses an appropriate deficit measure. This paper examines how states with fiscal constraints of varying stringency (as measured by the ACIR index) alter taxes and expenditures in the short run when faced with *unexpected* deficits.[31] His main finding is that governments facing tighter constraints reduce outlays more rapidly, but temporarily, in response to deficit shocks. In response to unexpected surpluses, these states tend to increase "rainy day funds" rather than increasing spending or reducing taxation. His results confirm that divided governments respond less rapidly to unexpected deficits, as do governments where an election is imminent. The effect of the government's political affiliation is not addressed. Unlike Alt and Lowry (1994), his results suggest that states adjust both taxes and outlays to correct deficits, although tax limitation laws significantly limit their response. A possible shortcoming of this study is the very short data sample (1988–1992) on which it relies.

Bohn and Inman (1996) perform the most rigorous examination of the effectiveness of individual budget-rule provisions to date, controlling for a myriad of political and economic factors not considered in previous studies. Their analysis uses a two-stage regression procedure on panel data for 47 states with anti-deficit constraints from 1970–1991.[32] The authors' results confirm that more rigid enforcement mechanisms are associated with better fiscal outcomes. In particular, their evidence suggests that "no–deficit–carry-over" requirements are the most effective budget constraint. States with no–carry-over provisions have a higher probability of obtaining a general-fund surplus and higher long-run surpluses than those where carry-over is allowed. Multi-year budget periods make such no–deficit–carry-over provisions even more effective, provided that no

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31. Poterba constructs the "unexpected" deficit for a given state as follows. A "revenue shock" is calculated as the difference between actual revenues and projected revenues at the beginning of the budget period (and therefore contingent on projected output), less any change in revenues resulting from tax changes enacted during the budget period. The "expenditure shock" is calculated as the difference between actual outlays and forecasted expenditures at the beginning of the budget period, less any changes in expenditures resulting from policies enacted during that budget period. Therefore, these measures *include* taxation and expenditure changes due to unexpected economic conditions. The "deficit shock" for a given period is then defined as the expenditure shock minus the revenue shock.

32. More specifically, the state general-fund balance is regressed against economic, financial, and political control variables to obtain fixed-effects coefficients for each state. These estimated coefficients are then regressed against variables representing the stringency of alternative budget rules to determine their effectiveness. Their results are not substantially changed when a random-effects specification is used for the coefficients in the first stage of the procedure.

amendment is allowed later in the budget period. Debt restrictions and a line-item veto provision for the state governor also decrease deficits significantly. The larger surpluses induced by no–carry-over provisions are typically achieved through permanently lower expenditures. These surpluses are generally used to increase the state's "rainy day" fund to a higher steady-state level, or to pay down short-term debt. The increased "rainy day" fund balance can be used to offset future deficits when adverse economic conditions occur.

Unlike previous studies, Bohn and Inman also consider the effect of more stringent *enforcement mechanisms* on fiscal outcomes. The authors note that a state's balanced-budget requirement could ultimately be enforced by its supreme court, despite the fact that this mechanism has not been used to date. Although this seems to suggest that the courts play no role in enforcing state budget constraints, Bohn and Inman argue that this could also be interpreted as evidence that the courts are an effective enforcement mechanism, if politicians consider a publicized court case too costly to risk. As evidence of the role of the courts in enforcement, the authors find that states where the members of the supreme court are electorally accountable have greater fiscal discipline, perhaps because state legislators perceive elected members to be more likely to rule against them in a potential court case than members appointed by government. In addition, their results give tentative evidence that constitutional budget requirements are more effective than statutory requirements, since they are very difficult to overturn.[33] Although this result was not statistically significant, this probably reflects the fact that only 3 of the 47 states in their sample had statutory budget constraints. But, the claim is further supported by evidence (discussed earlier in this paper) suggesting that the statutory budget constraints adopted by the U.S. federal government over the last decade did not effectively encourage deficit reduction. In sum, the results of Bohn and Inman seem to suggest that constraints enforced by external mechanisms are more effective.

Alesina and Perotti (1996) perform a comprehensive analysis on the effects of varying budget institutions on fiscal outcomes, reviewing empirical literature by various authors based on data from Latin America and selected OECD countries. Their major finding is that budget procedures have a substantial impact on budget outcomes. Generally, they find that more *hierarchical* and *transparent* procedures best promote fiscal discipline. Hierarchical processes give

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33. To be overturned, constitutionally based requirements typically require either a legislative vote with at least a two-thirds majority or a referendum vote with super majority approval. In contrast, statutory constraints require only a majority of support in the state legislature to be overturned.

more power to the treasury minister in formulating the budget, limiting the input of other ministers and the legislature in the amendment process. In this environment, the minister can make difficult spending and taxation decisions which may not be possible when other constituents have more influence. This is consistent with the previous finding that divided state governments in the U.S. reduce the effectiveness of budget constraints, since greater political opposition implies a more collegial process. Transparency ensures that the real costs and benefits of budget policies cannot be hidden from the electorate. Otherwise, governments can strategically use “budget tricks” such as overly optimistic deficit forecasts to manipulate the information and beliefs of voters.

In sum, studies provide convincing evidence that the form of a budget constraint matters, in addition to the economic and political context. More stringent constraints with strong enforcement mechanisms enhance the possibility of fiscal discipline. It is probably not unreasonable to conclude from this evidence that establishing anti-deficit or debt-limitation rules improves fiscal outcomes, despite the lack of direct evidence comparing regimes *with* and *without* such rules.

3.3 Do budget rules impede output-stabilizing or tax-smoothing fiscal policy?

The disciplinary benefits of budget rules should be weighed against the social costs of foregone output stabilization or tax smoothing. Evidence is extremely limited on whether fiscal constraints compromise tax smoothing. However, studies generally suggest that anti-deficit rules make fiscal policy less countercyclical. It has not been clearly determined whether this has a significant effect on output volatility. In particular, the effects of the imposition of a new constraint on output are difficult to ascertain due to the endogenous responses of monetary policy and private behaviour to the change.

Bohn and Inman (1996) use a unique approach to test whether state fiscal constraints compromise tax smoothing. Theoretically, a government following tax-smoothing fiscal policy would minimize fluctuations in marginal income tax rates, so changes in tax rate levels would be unpredictable. This implies that time series of marginal tax rates should follow a random walk without drift. To find evidence of tax smoothing, the authors perform separate unit root tests on the time series of average tax rates for each of 47 states from 1970–1991. Average rates are used as a proxy for marginal rates (the theoretically appropriate measure), so the authors implicitly assume a monotonic relationship between marginal and average rates. The test strongly rejects the

hypothesis of a random walk. Cross-section regressions using the estimated mean-reversion coefficients indicate that they are not correlated to the stringency of each state's fiscal rules. Thus, under the assumptions of the paper, fiscal constraints do not appear responsible for any failure of states to engage in tax smoothing.

Bayoumi and Eichengreen (1995) ask whether more stringent fiscal constraints compromise the output-stabilization role of fiscal policy. Data from 1971–1992 indicate that the budget balances of state governments tended to move procyclically (on aggregate), despite fiscal restrictions. More severe fiscal constraints are found to reduce the variability of fiscal balances over the business cycle, largely by making expenditures less responsive to changes in income. Regressions using international data give some evidence that the degree of fiscal stabilization in countries with federal structures is lower if subordinate governments have fiscal constraints. In the U.S. case, regressions indicate that state fiscal stabilization represents only about one-sixth of the fiscal offset provided by the federal government. To assess whether the reduced variability of state budget balances decreases output stability, Bayoumi and Eichengreen perform a simulation using the IMF's MULTIMOD model of the U.S. economy. Their results indicate that more stringent constraints greatly amplify output shocks applied to the model, thus increasing output variability. However, this result may be due more to the properties of MULTIMOD than those of the actual U.S. economy. Indeed, a later study by Alesina and Bayoumi (1996) using a direct regression finds that, although more stringent budget rules reduce the variability of state fiscal balances, they do not affect state output variability.[34]

This approach is duplicated by Bohn and Inman (1996) using alternative measures of the fiscal balance and the business cycle. Their results confirm that more rigid budget rules reduce the responsiveness of both the state general fund and overall budget balance to the business cycle. The magnitude of this effect is much smaller when unemployment changes are used as a cyclical indicator, rather than changes in output growth. However, the conclusion that more stringent budget rules reduce the cyclical variability of the budget deficit appears robust across alternative measures of the budget balance and the business cycle, at least for U.S. state data.

Weise (1996) estimates a vector auto-regression (VAR) model with quarterly U.S. aggregate data from 1958 to 1994 to examine the impact of monetary and fiscal policy stabilizers.

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34. Specifically, the authors use a cross-sectional regression of state output volatility (calculated using an annual output sample between 1965 and 1992) against the ACIR budget-rule stringency index.

He includes in his specification separate equations for the reaction functions of monetary and fiscal policy.[35] His main finding is that both fiscal and monetary policy have had a large stabilizing role in the United States.[36] Weise compares the impulse responses for a baseline simulation of the model with cases where feedback (federal) fiscal policy and monetary policy are suppressed, determining that both policies significantly dampened output shocks. Much of this appears to be due to "automatic stabilizers" (changes in the budget balance induced by the output gap), although deliberate countercyclical fiscal policy appears to also be effective. Whether these results suggest that output variability would increase if the fiscal authority were constrained by a budget rule is uncertain. As the Lucas critique would suggest, the estimated coefficients of the monetary policy response function would not be invariant to such a change. Tests by Weise verify that these estimated coefficients are not structural. Thus, while simulations indicate that suppressing fiscal policy would (*ceteris paribus*) amplify output shocks, these tests suggest that the reaction function of the monetary authority will adjust when the countercyclical fiscal stimulus is removed.

Overall, these studies give inconclusive support for the theoretical claim that budget rules may increase the variability of output. Fiscal constraints appear to reduce the cyclical variability of the budget surplus, which implies less fiscal offset to output shocks. However, evidence is mixed on whether this reduces output stability significantly. Simulating the effect of a new fiscal constraint on output volatility is particularly difficult, because the change may prompt adjustments in the responses of private agents and monetary authorities. Future research using data from recently adopted fiscal rules may be useful both to clarify these results and, possibly, to generalize them across regimes.

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35. The VAR model can be described briefly as follows. The reaction function for monetary policy (which uses the federal funds rate as its instrument) includes a contemporaneous policy shock variable, and a feedback component for contemporaneous and lagged values of output, lagged values of the federal funds rate, and lagged values of the real federal budgetary balance (the fiscal policy instrument). The reaction function for fiscal policy has an identical structure, with the exception that it includes a feedback term for the contemporaneous federal funds rate. Output is a function of its own lagged values, lagged values of the two policy instruments, and a contemporaneous shock term.

36. This finding contrasts with that of Romer and Romer (1994) who find that fiscal policy has had only a minor role in output stability since WWII, with a large role for monetary policy. However, their model did not include monetary and fiscal policy reaction functions. Weise uses a VAR specification (rather than their single equation approach) that explicitly contains both reaction functions.

3.4 Do budget rules lower government and/or private borrowing rates?

A few papers explore the relationship between budget rules and government borrowing costs, generally concluding that more stringent budget constraints lower the risk premium on debt issues.

Goldstein and Woglom (1991) examine panel data for yields on general obligation bonds with comparable maturities and features. The data set covers 39 states between 1973 and 1991. Overall, more stringent budget rules are found to decrease government borrowing costs. Their estimates suggest that the most stringent budget rules reduce risk premiums by a somewhat negligible five basis points below rules of average stringency. Bayoumi and Woglom (1995) confirm these results, using a non-linear specification for the supply curve for loanable funds in which the borrowing cost depends on the state's degree of indebtedness. Using this specification, they find evidence that borrowing costs rise at an increasing rate as the debt-to-GDP ratio increases. At average levels of debt, varying the stringency of budget constraints can change risk premiums by over 50 basis points.[37] The authors also find evidence that capital markets begin to ration credit to state governments at "high" levels of debt to GDP, although the debt-to-GDP level at which credit rationing begins is higher when the state has a more rigid fiscal constraint.[38]

These results indicate that more stringent budget rules have greater credibility to markets. Similar studies could potentially be performed for bond yield data for Canadian provinces with and without budget rules. However, it would be necessary to use yields for bonds with directly comparable maturities and features, so risk premium differences would reflect only default risk. Such an analysis could help clarify whether the introduction of a budget constraint reduces risk premiums.

4. Some implications of budget rules for fiscal performance, economic stabilization, and monetary conditions in Canada

4.1 Fiscal performance

A reasonable general conclusion from the recent economics literature is that stringent budget constraints encourage a more effective fiscal discipline, although political and economic

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37. The degree that risk premiums change as stringency increases is dependent on the level of debt for this specification. Therefore, this 50-point decrease is not directly comparable with the 5-point decline mentioned by Goldstein and Woglom (1991).

38. Bayoumi and Eichengreen (1994) obtain very similar results, using an almost identical procedure.

conditions are important. This suggests that recently adopted provincial balanced-budget constraints will probably promote fiscal discipline, although they may vary considerably in their effectiveness.

Factors such as penalties for not achieving budgetary balance, deficit constraints that apply to realized balances (rather than projected balances), explicit debt-retirement provisions, and referendum requirements for tax increases imply greater stringency, while potential escape clauses imply less stringency. This would seem to suggest that the legislated constraints that contain some of the more "stringent" provisions (particularly Manitoba, Alberta, and the Yukon) may encourage fiscal discipline more effectively in the future. Yet, despite the varying stringency of these provincial budget rules on paper, other political factors (such as the tastes of the electorate for deficit and/or debt reduction) and economic considerations (such as the extent of negative output shocks and their magnitude) will undoubtedly be important determinants of the relative fiscal discipline of the provinces.

Moreover, as was argued in Section 1 of this paper, the mechanisms for enforcing these constraints are not well-defined. The provinces can potentially circumvent these constraints in a number of ways, such as exercising the various escape clauses that have been incorporated into these statutes, amending the existing provisions of the legislation, or repealing these laws altogether. While the political costs of these options may serve as a considerable deterrent to using them, it is easy to envision cases in which employing them may be less costly than the taxation and/or spending changes necessary to abide by the constraint, or facing a possible court challenge for not abiding by it. In any case, this legislation will probably make any lack of fiscal discipline more visible and thus enhance electoral accountability. Indeed, *reputation* and *accountability* could become the most important means of enforcement for the provincial anti-deficit legislation over time, particularly if the constraints become permanently entrenched. Electoral accountability could prove to be a more effective enforcement mechanism for the provinces than for the U.S. states, since voters may be able to assign blame for budget outcomes more easily in Canada than in the United States.[39]

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39. States typically have a bicameral legislative and an executive, whose control can be divided among political parties. Alt and Lowry (1994) argue this makes it difficult to assign blame for outcomes.

4.2 Fiscal policy and macroeconomic stabilization

The fiscal balances of the governments that have adopted anti-deficit rules will probably be less affected by cyclical conditions. Yet, given the inconclusiveness of past empirical studies, it is debatable whether the loss of countercyclical fiscal offsets implied by these anti-deficit rules will actually contribute to increased macroeconomic instability in Canada. On the one hand, evidence does suggest that provincial fiscal policy has provided a substantial proportion of the total countercyclical fiscal response to output shocks in Canada over the last few decades. Bayoumi and Eichengreen (1995) estimate that the provinces provided approximately 33 per cent of total fiscal offset to output movements from 1970 to 1989. Another study by Bayoumi and Laxton (1994) estimates that these provincial offsets grew substantially relative to federal offsets between 1970 and 1993, as fiscal activity by the provinces increased, and in the post-1984 period, as federal fiscal policy became increasingly constrained by higher debt levels. Thus, the implementation of budget rules could reduce the total fiscal offsets provided in response to demand shocks, especially for adverse shocks.

On the other hand, many of the "automatic" fiscal stabilizers in Canada, such as employment insurance, are under the control of the federal government. Since automatic stabilizers are widely regarded as the most effective fiscal tool for output stabilization in Canada, the destabilizing effects of provincial (and territorial) anti-deficit constraints could be limited. Note, however, that the provinces constrained by anti-deficit legislation may collectively create an "automatic" *cyclical* stimulus in response to some adverse demand shocks which may at least partially offset the automatic stabilizers provided by the various levels of government in Canada. Yet, it remains to be seen whether this will be the case, especially considering the discretionary mechanisms still possessed by the provinces (such as escape clauses and "rainy day" funds) which allow them to increase temporarily the flexibility of their budgetary balances in response to significant demand shocks.

In any case, if the budget rules enacted by the provinces are indeed effective, the federal government could eventually provide a much greater proportion of the total countercyclical fiscal stimulus in Canada.[40] This arrangement could be advantageous if it deters governments from

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40. As an example of this type of an arrangement, Bayoumi and Eichengreen (1995) estimate that the U.S. federal government has typically provided approximately 86 per cent of the total combined fiscal offset to U.S. output movements, based on a data set between 1970 and 1989.

adopting *discretionary* measures aimed at *short-term* stabilization, measures which are often destabilizing in practice due to (among other things) lags in recognition and decision-making (see Fenton and Montador (1991)). However, such an arrangement would not place any restrictions on federal government finances, so "excessive" debt accumulation at the federal level could remain a concern. Indeed, von Hagen and Eichengreen (1996) give empirical evidence from a sample of 49 countries that central governments tend to accumulate a greater debt (as a proportion of revenues) when stringent fiscal restraints are placed on subordinate governments. Another disadvantage of this arrangement is that the provinces would lose some discretion to adopt fiscal measures to offset localized negative shocks.

Federal anti-deficit legislation is another long-run possibility. If such legislation were effective, fiscal stabilization in Canada could be further diminished. Also, the possibility that budget constraints would increase short-run economic fluctuations would be magnified. An illustration of this potential is the behaviour of unemployment insurance contribution rates in the early 1990s. To prevent excessive deficits on the U.I. account due to high unemployment, several large increases in contribution rates took place between 1991 and 1994. These rate increases probably contributed to reduce employment during that period (see Parker (1995)). However, it may be possible to design a "flexible" anti-deficit constraint for the federal government which provides the benefits of long-term fiscal discipline and increased credibility with less of a cost in terms of reduced fiscal stabilization by means of automatic stabilizers.

4.3 The response of monetary policy and monetary conditions

4.3.1 Shocks affecting demand at a national level

Monetary policy could help compensate for at least some of any lost fiscal stabilization that may arise due to the anti-deficit constraints adopted by many of the provinces and the territories. The maintenance of predetermined inflation targets requires the Bank of Canada to adjust monetary conditions in response to perceived changes in the output gap, easing monetary conditions when it perceives an increase in the spare capacity of the economy, and tightening them when output is perceived to be approaching capacity. Therefore, if the budget constraints currently in place in Canada inhibit (or perhaps, invert) any countercyclical offset provided by the fiscal policy of the provinces in response to changes in aggregate demand growth, then (granted that there is no

offsetting reaction from federal fiscal policy) monetary authorities would potentially expect a greater or lesser degree of excess demand after shocks have occurred and adjust monetary conditions accordingly (see Thiessen (1996)).

However, at least two caveats should be mentioned that may limit the extent that monetary authorities can help compensate for any lost fiscal stabilization at the national level. First, given that monetary conditions affect aggregate demand with lags of long and uncertain duration (generally thought to range between six to eight quarters), monetary policy cannot provide an offset to aggregate demand shocks in the short term as rapidly as automatic fiscal stabilizers. Second, the countercyclical reaction of monetary policy discussed in the preceding paragraph assumes that there are no additional complications (such as uncertainty in financial markets about Canada's commitment to its inflation-control targets) that may, in some cases, make such a response inappropriate.

4.3.2 Shocks affecting demand at a local level

An important limitation on the extent that monetary authorities can compensate for any lost fiscal stabilization arising from anti-deficit constraints is the fact that monetary policy is concerned with aggregate economic conditions, not isolated shocks to particular regions of the country. Therefore, the provinces and territories constrained by anti-deficit legislation may lose a potentially useful tool for stabilizing their local economy in response to localized demand shocks. However, to the extent that "localized" fiscal stabilization measures are effective (which some might debate, given the inevitability of leakages to other regions in an open economy), provincial and territorial governments still appear to possess a number of potential tools that could temporarily increase the flexibility of their fiscal balances when these regional shocks occur. These mechanisms include the activation of escape clauses that have typically been incorporated into anti-deficit legislation, the use of fiscal stabilization funds accumulated from past budget surpluses, and varying the remittance of dividends by off-budget agencies to budgetary revenues.[41]

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41. For example, the government of Saskatchewan often varies its annual dividend from its liquor and gaming agency (the Saskatchewan Liquor and Gaming Authority) in order to stabilize its budget balance.

4.3.3 Possible asymmetries in the reaction of provincial governments to output shocks and their implications for the conduct of monetary policy

Also of interest, regarding the response of monetary authorities to output shocks in the presence of anti-deficit constraints, is the fact that the potential asymmetry in the reaction of fiscal authorities constrained by anti-deficit rules to prospective deficits and surpluses may have different implications for monetary policy, depending on the nature of the shock. For example, when negative aggregate demand shocks occur, a greater easing of monetary conditions may be necessary to achieve a given inflation target due to the smaller (or inverted) countercyclical cyclical response of fiscal policy. Similar adjustments to monetary conditions may be less necessary for positive demand shocks, since the provinces with anti-deficit constraints would not be required to offset surpluses. However, if constrained governments also react to offset budget surpluses, similar changes in the response of monetary conditions may be necessary to maintain a given inflation target when favourable shocks to aggregate demand and potential output occur.

4.4 Changes in risk premiums and possible repercussions for economic growth

Finally, current and future budget rules could influence interest rates via changes in risk premiums. As evidence indicates, stringent budget rules may help reduce the borrowing rates of governments that have high levels of debt to GDP, by increasing the credibility of continued fiscal discipline. If such rules successfully foster future fiscal restraint and consequently help to reduce the level of debt to GDP over time, government risk premiums could decline further as the risk of default and/or monetization perceived by financial markets diminishes. Both these effects could help lower overall interest rates by decreasing the perception of uncertainty held by prospective lenders about the general ability of Canadian borrowers to service their debts in the future.

Such a reduction in overall interest rates may confer additional economic benefits. In particular, reduced interest rates (due to lower risk premiums and/or smaller aggregate government borrowing requirements) could increase investment in the economy, encouraging greater economic growth in the long run. As well, lower interest rates would make it easier for governments in Canada to service their existing debts in the future without making destabilizing changes in tax rates and spending levels. Indeed, empirical studies give a promising indication that budget rules may have benefits beyond promoting financial discipline that should be weighed against the any potential costs in terms of foregone fiscal policy.

4.5 Avenues for future research

A number of topics raised in this paper present promising avenues for future research. For example, as more data becomes available in future years for the fiscal outcomes of provinces that have adopted anti-deficit constraints in Canada, there will be an opportunity to conduct further empirical studies to determine whether the existence of these rules improved budget outcomes, an issue still somewhat unresolved in the current literature. As well, future studies could examine whether the anti-deficit rules introduced by the provinces have helped to decrease risk premiums and/or improved the probability of obtaining a higher credit rating.[42] Such studies may provide an opportunity to determine whether the conclusions of the existing literature, which are based almost exclusively on U.S. data, can be generalized across countries and legislative systems.

Another potential line of research is to investigate the implications of alternative anti-deficit constraints on the dynamic behaviour and distribution of key economic aggregates in response to various types of economic shocks, under a given monetary policy rule. Such an analysis could employ an approach similar to the one used in a paper presented at a recent Bank of Canada conference by Black, Macklem, and Rose (1997). In this paper, stochastic simulations are performed, using a dynamic structural model calibrated to resemble the Canadian economy, to assess the implications of alternative monetary policy rules (all seeking price stability as their ultimate objective) on the dynamic behaviour and distribution of key aggregates in response to selected economic disturbances. Such an approach applied to the context of anti-deficit constraints may help to clarify whether these restrictions will have a destabilizing influence when shocks occur once endogenous responses in the behaviour of private agents and monetary authorities are taken into account.

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42. A study on the impact of anti-deficit legislation on government borrowing rates could employ an approach similar to Bayoumi and Woglom (1996), or an extension of the approach used in a Canadian context by Mattina and Delorme (1997). The methodology used by Cheung (1996) may be useful in determining whether anti-deficit constraints influence the probability of a province obtaining a particular credit rating and/or the probability of a prospective credit rating upgrade or downgrade.

Appendix A: Anti-deficit legislation adopted by the provinces and territories and their dates of assent

Alberta:

Deficit Elimination Act (May 14, 1993)

Balanced Budget and Debt Retirement Act (April 24, 1995)

Saskatchewan:

The Balanced Budget Act (May 18, 1995)

Manitoba:

The Balanced Budget, Debt Repayment and Taxpayer Protection and Consequential Amendments Act (November 3, 1995)

Québec:

An Act Respecting the Elimination of the Deficit and a Balanced Budget (December 19, 1996)

New Brunswick:

An Act Respecting the Balancing of the Ordinary Expenditures and the Ordinary Revenues of the Province (May 7, 1993)

Balanced Budget Act (April 13, 1995)

Nova Scotia:

Financial Measures Act (May 17, 1996)

Northwest Territories:

Deficit Elimination Act (April 27, 1995)

The Yukon:

Yukon Taxpayer Protection Act (April 26, 1996)

Appendix B: Characteristics of provincial/territorial anti-deficit legislation

Province/ Territory	Apply to *Realized* Deficits	Concrete Debt Elimination Provisions	Single-year Budget Period	Penalties for not achieving balance	Referendum Requirement for Tax Changes	Escape Clauses
Alberta	Yes	Yes	Yes	No	No[d]	Yes
Saskatchewan	No	No	No[b]	No	No	Yes
Manitoba	Yes	Yes	Yes	Yes	Yes	Yes
Québec	Yes	No	Yes	No	No	Yes
New Brunswick	Yes	No[b]	No[c]	No	No	Yes
Nova Scotia	No[a]	No	Yes	No	No	Yes
Northwest Territories	Yes	No	Yes	Yes	No	Yes
The Yukon	Yes	No	Yes	Yes	Yes	No

a Realized expenditures may not exceed budgeted expenditures by more than one per cent. Realized deficits must be offset in following fiscal year.

b New Brunswick plans to introduce debt-elimination provisions in the near future.

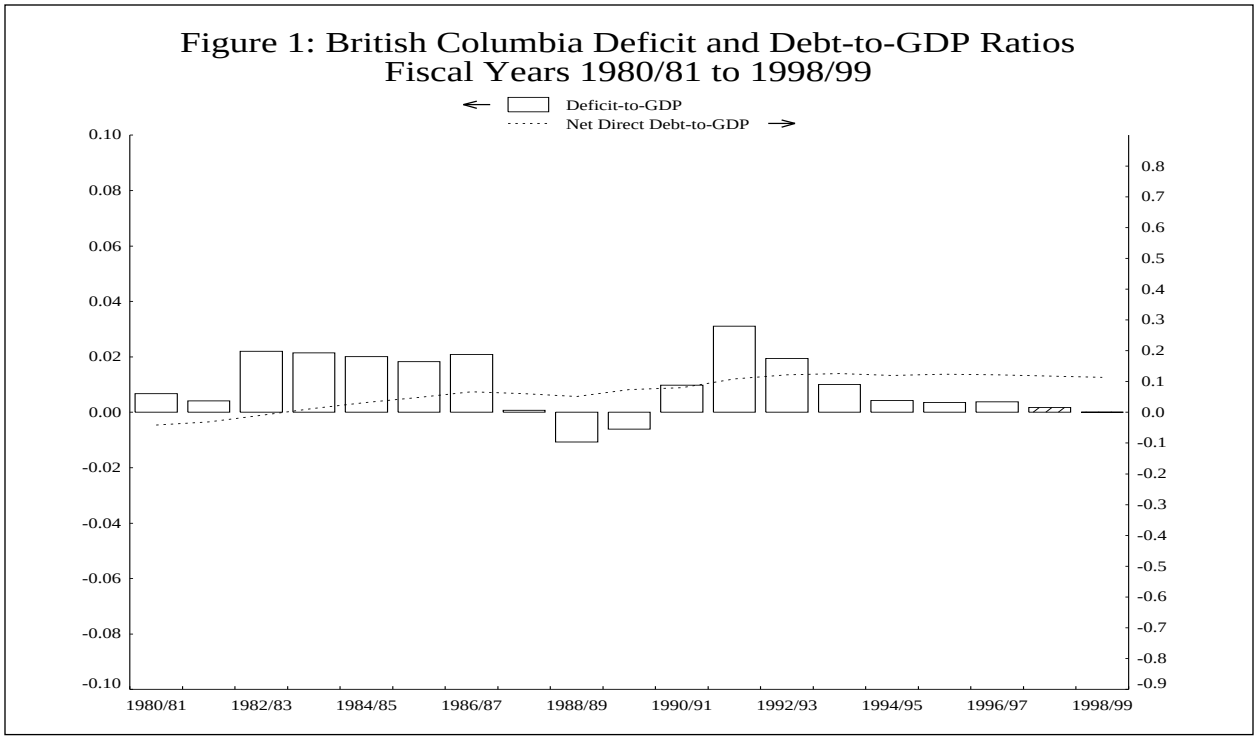
c Four-year budget period.

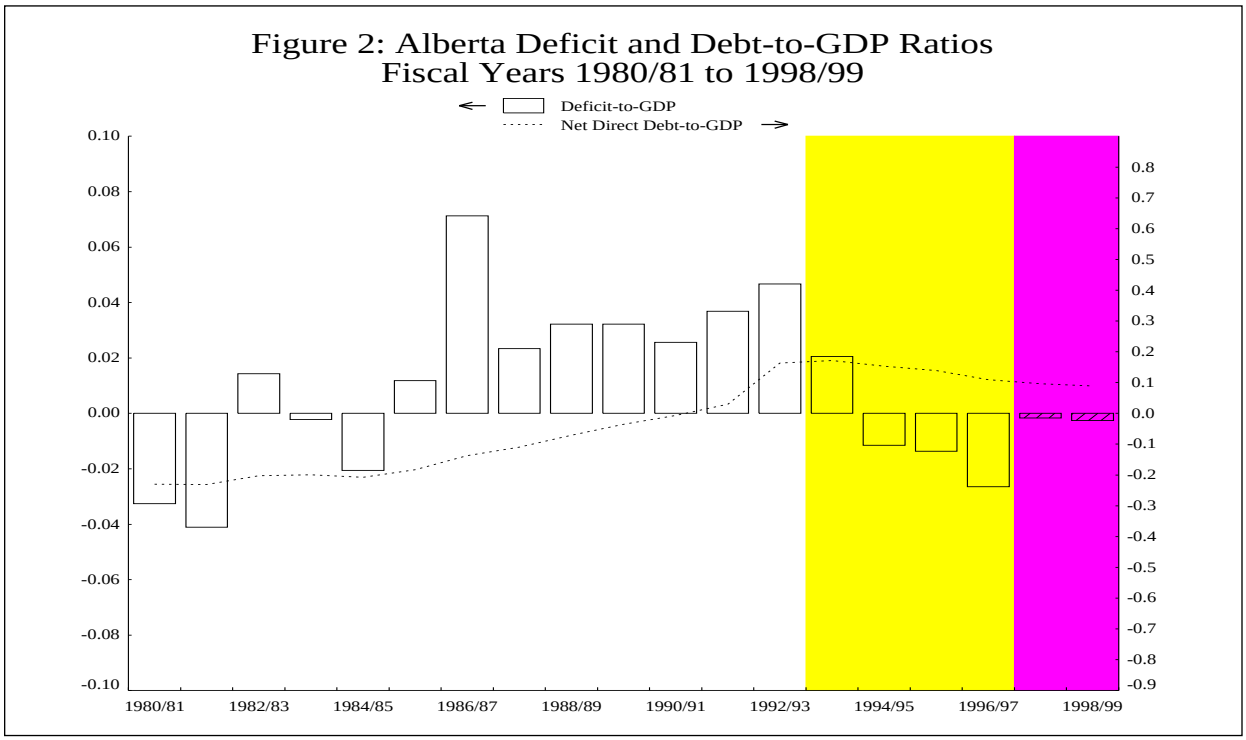
d Alberta's provincial government has announced its intention to introduce such a requirement (*The Globe and Mail* 16/04/97). The province does currently have a referendum requirement for the introduction of a retail sales tax.

Appendix C: Budget deficits and net direct debt of Canada's provinces and territories (for the fiscal years 1980/81 to 1998/99)

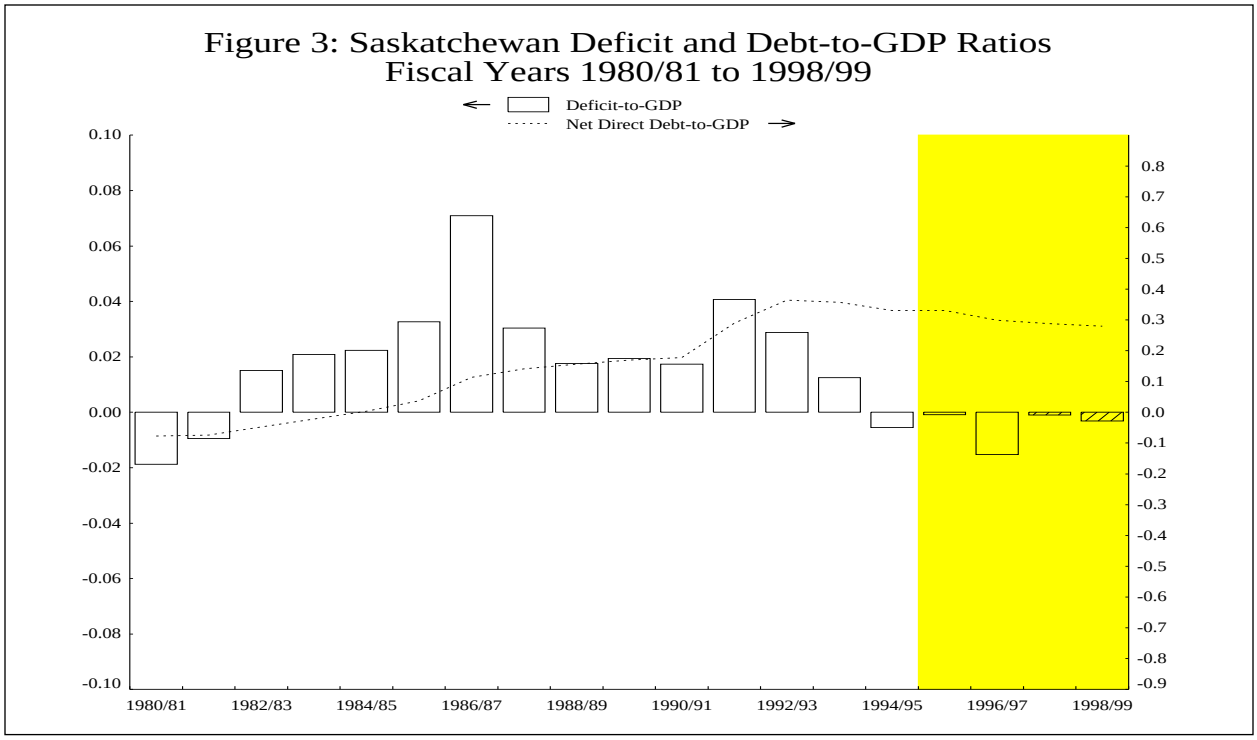
Figures 1 through 12 chart the budgetary deficit and net direct debt to GDP of each of the Canada's provinces and territories for fiscal years 1980/81 through 1996/97, and projections (when available) for fiscal years 1997/98 and 1998/99 (as per 1997 provincial and territorial budgets). The shaded areas represent periods with budget rules in effect in the province or territory.

Sources: Department of Finance *Fiscal Reference Tables* (October 1996), 1997 Provincial and Territorial Budgets, and Statistics Canada.

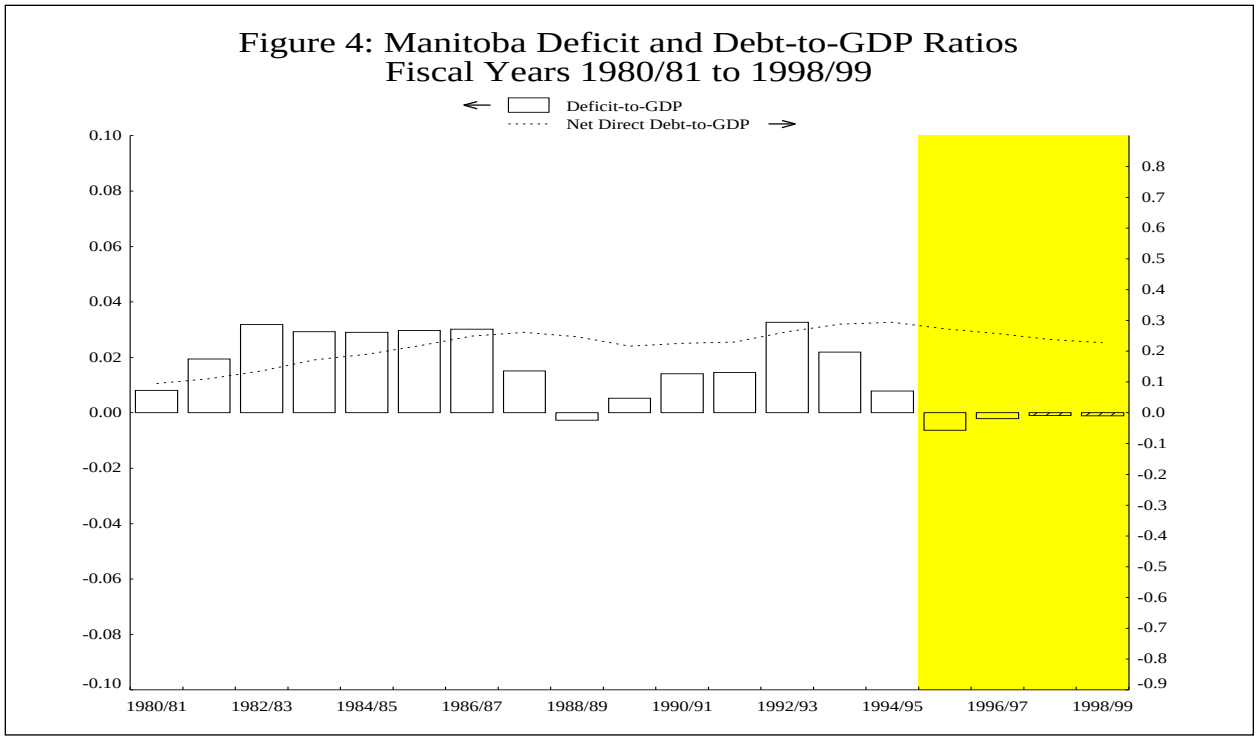




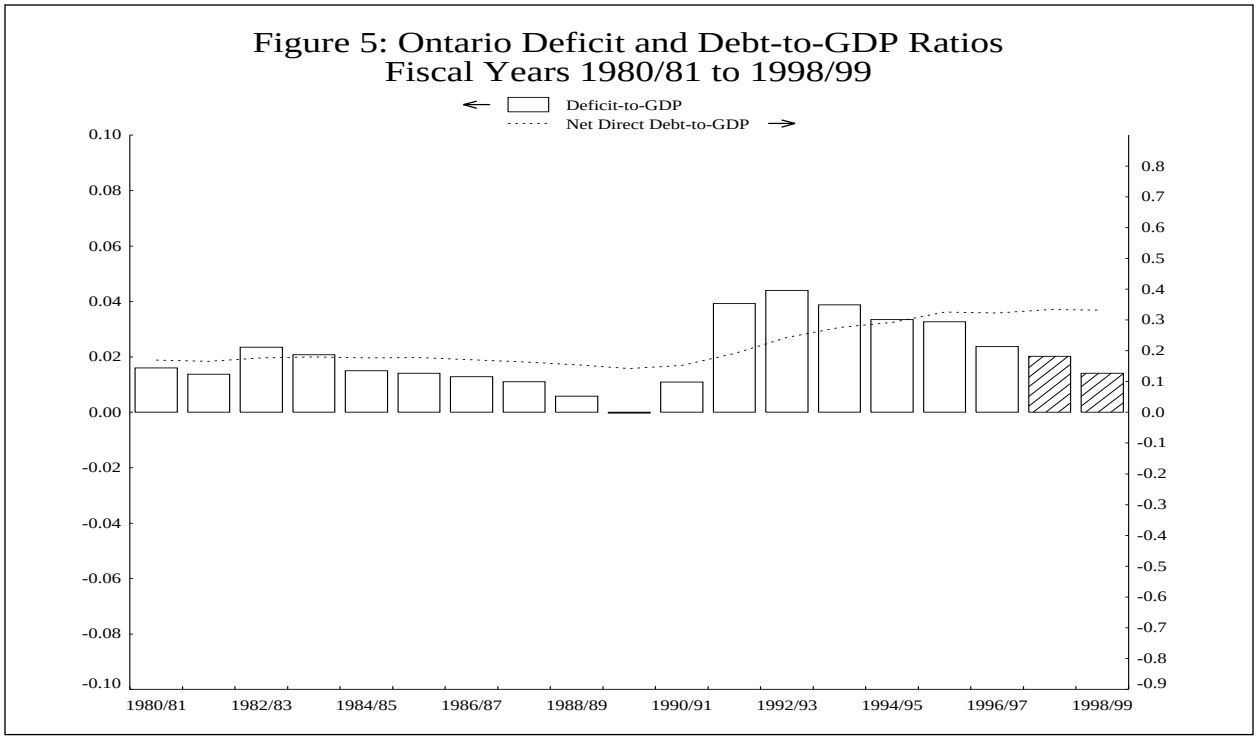
The Deficit Reduction Act was passed by the Alberta government in 1993 and applies to the period 1993/94 to 1996/97; the Debt Retirement Act was passed in 1995 and applies from 1997/98 onward.

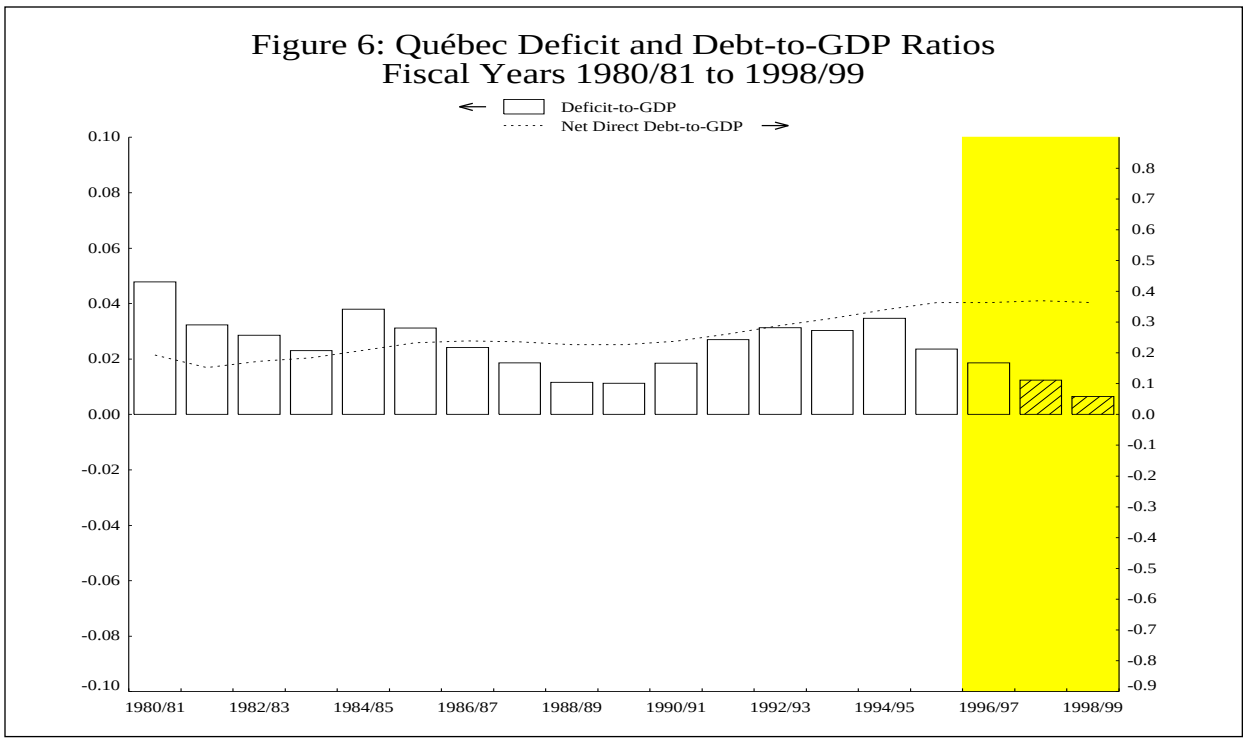


The Balanced Budget Act was passed by the government of Saskatchewan in 1995 and applies from 1995/96 onward.

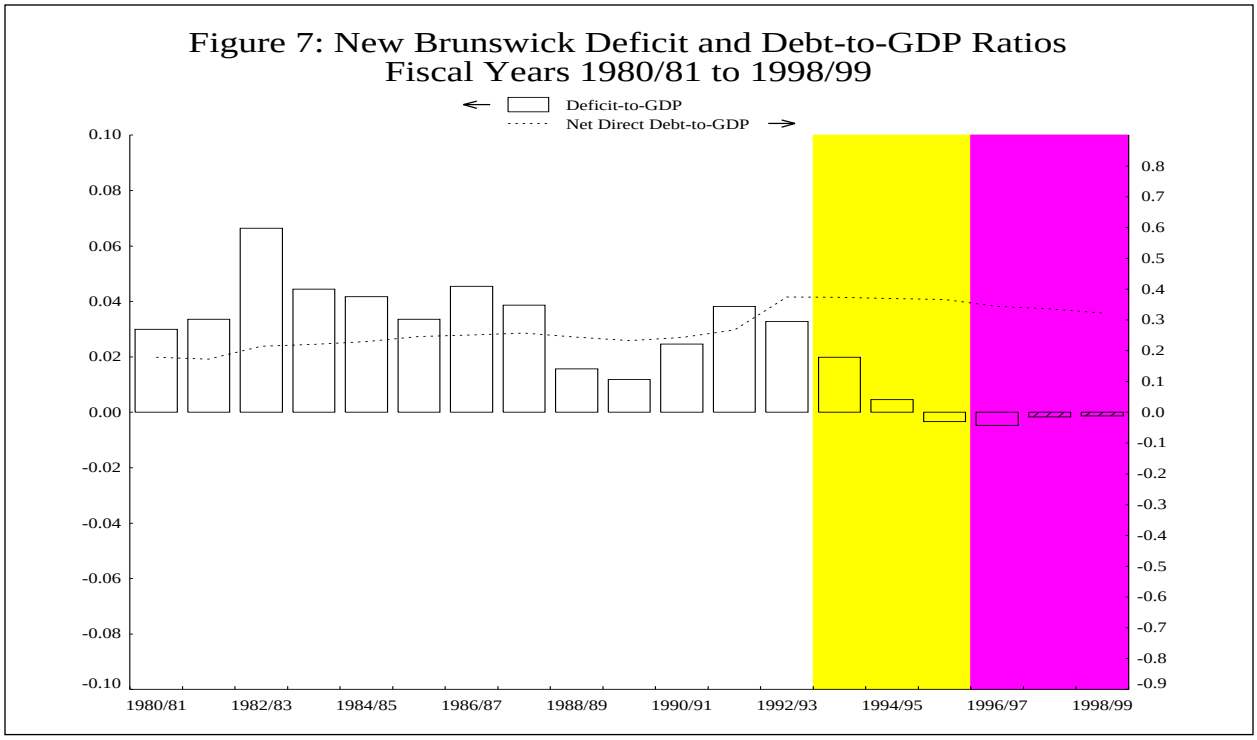


The Balanced Budget, Debt Repayment and Taxpayer Protection Act was passed by the Manitoba government in 1995 and applies from 1995/96 onward.

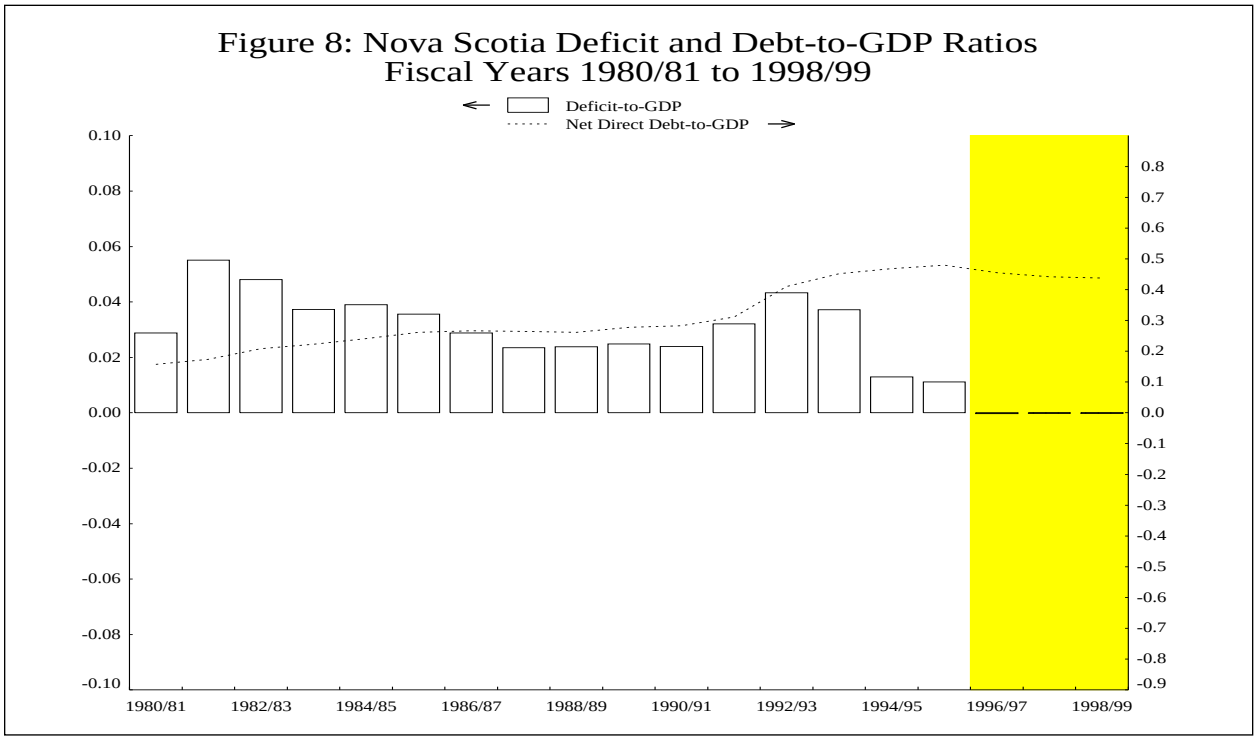




An Act Respecting the Elimination of the Deficit and a Balanced Budget was passed by the Québec government in 1996, and applies from 1996/97 onward.



An Act Respecting the Balancing of the Ordinary Expenditures and the Ordinary Revenues of the Province (which did not constrain capital expenditures) was passed by New Brunswick in 1993 and applied from 1993/94 to 1994/95; the Balanced Budget Act (which requires an overall budget balance) was passed in 1995 and applies from 1996/97 onward.



The Financial Measures Act was passed by Nova Scotia in 1996 and applies from 1996/97 onward.

Figure 9: Prince Edward Island Deficit and Debt-to-GDP Ratios
Fiscal Years 1980/81 to 1998/99

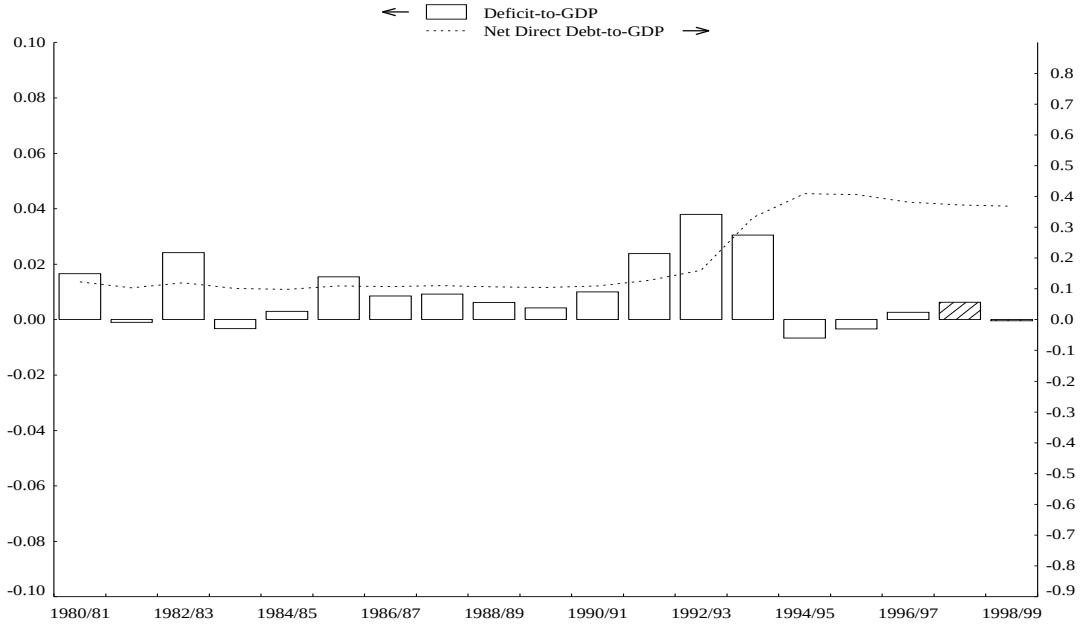
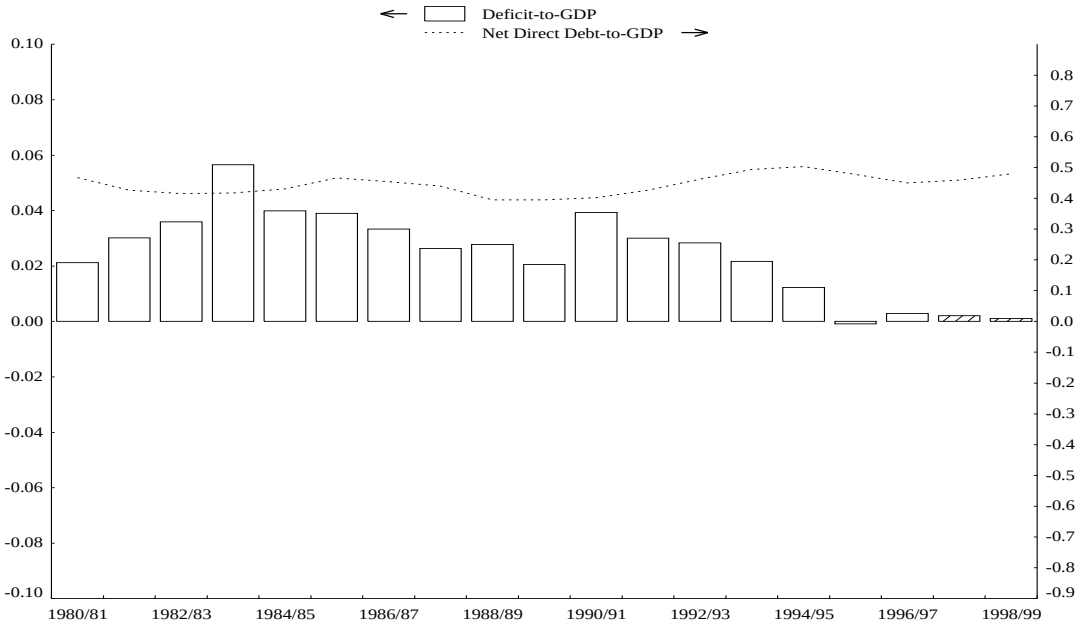
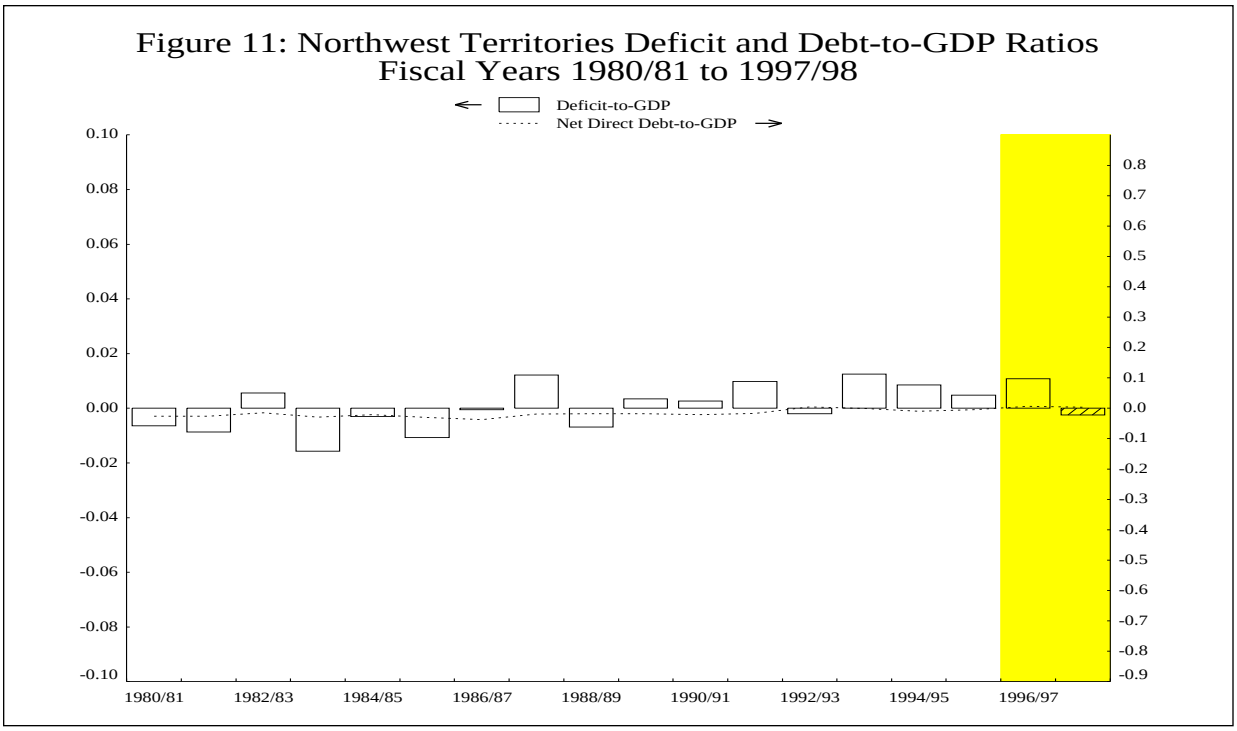
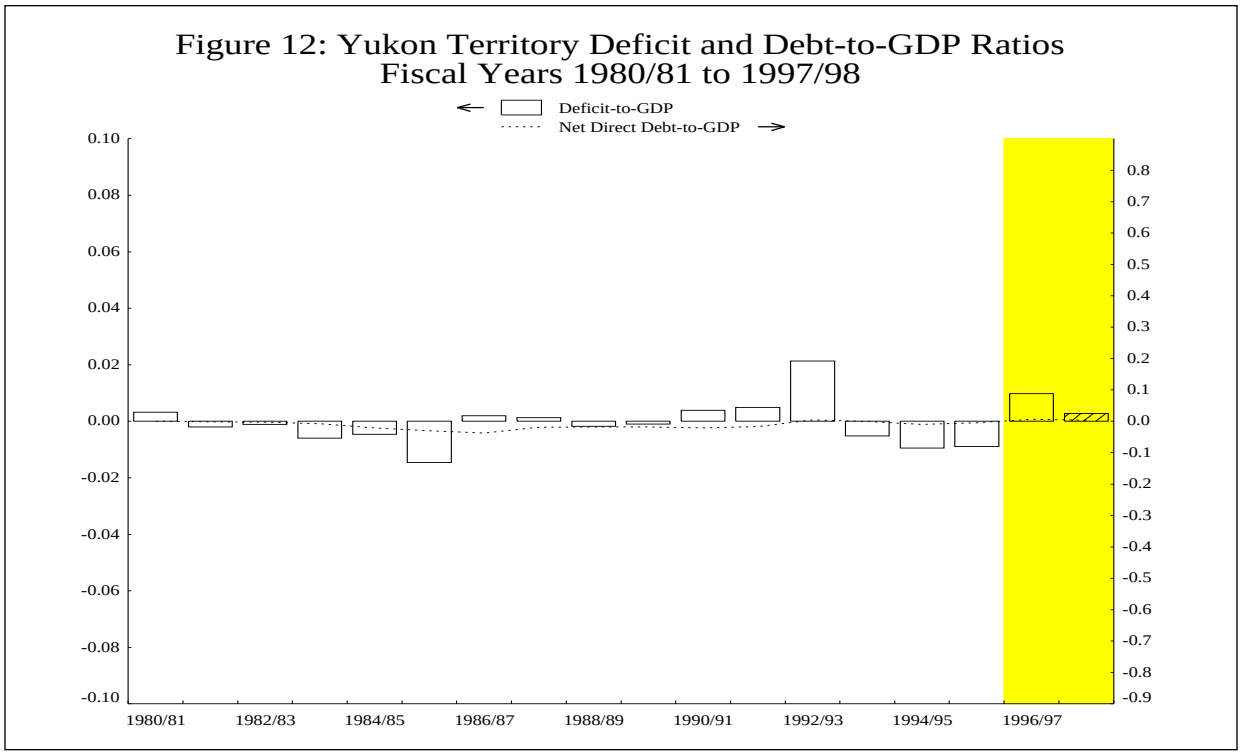


Figure 10: Newfoundland Deficit and Debt-to-GDP Ratios
Fiscal Years 1980/81 to 1998/99



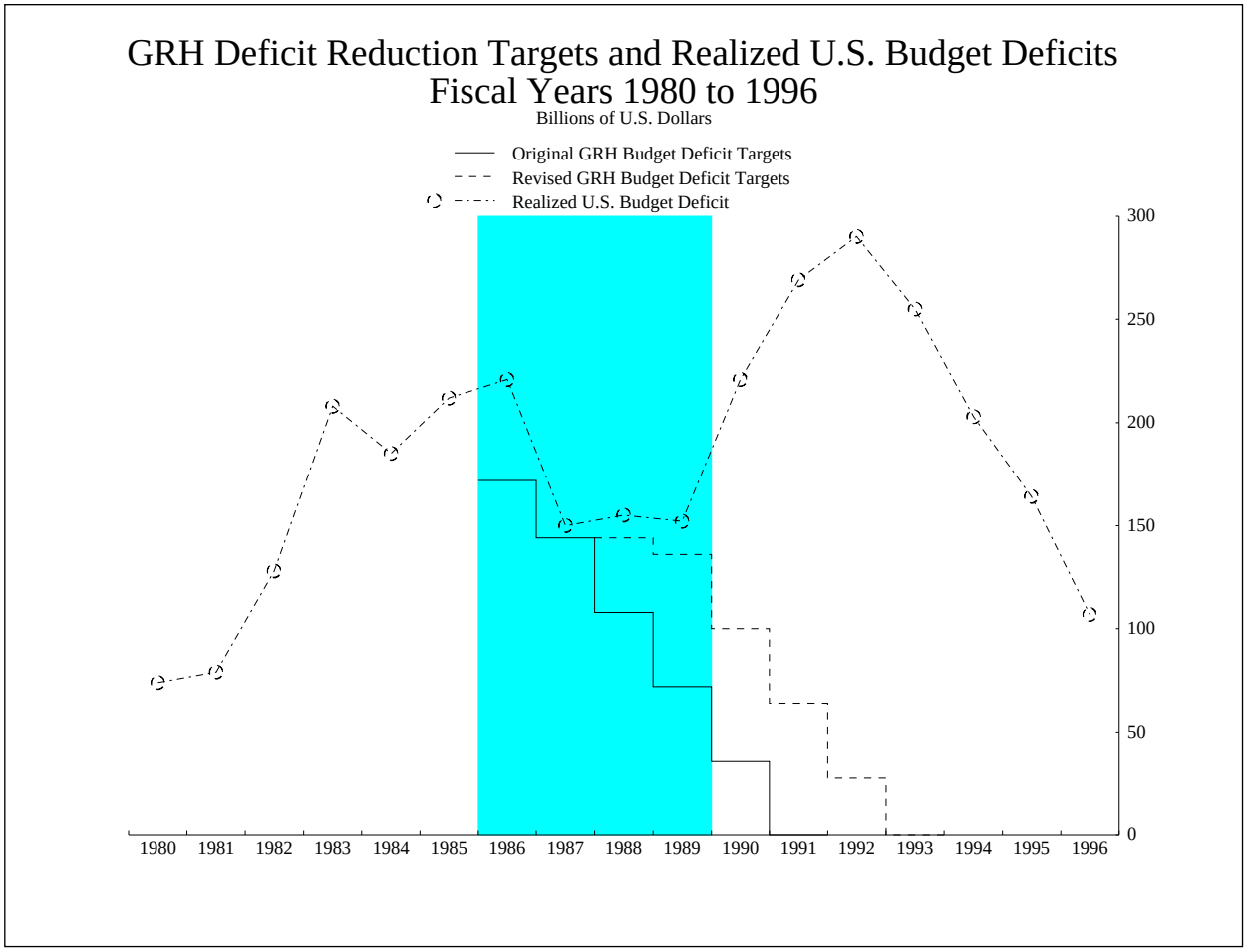


The Deficit Elimination Act was originally passed by the government of the Northwest Territories in 1995, and applies from 1996/97 to 1998/99.



The Yukon Taxpayer Protection Act was passed by the Yukon government in 1996 and applies from 1996/97 onward.

Appendix D: Realized United States budget deficit (1980–1996) and GRH deficit reduction targets



Note: The shaded area represents fiscal years in which the GRH legislation was in effect (1986-1989). Although the legislation was originally enacted in 1985, the GRH deficit targets were revised upwards in 1987, and abandoned altogether when the BEA was enacted in 1990. *Sources*: Congressional Budget Office: *Economic and Budget Outlook (1998-2007)*, and OECD: *Economic Surveys; United States. (1989/90).*

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