THE ROLE OF FISCAL RULES IN DETERMINING FISCAL PERFORMANCE

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1. Introduction[1]

The topic of fiscal rules has attracted significant attention over the last decade, as several countries have adopted fiscal rules in an attempt to eliminate large deficits. More recently, fiscal rules have been the subject of renewed interest as countries consider how to adapt fiscal policy for times of surplus and how to ensure long-term sustainability of fiscal policy, particularly in light of pressures related to population ageing.

The purpose of this paper is to examine the importance of fiscal rules in determining fiscal performance. By necessity, the focus is on the role for rules in fiscal consolidation; most countries under consideration have not yet achieved surpluses or have only done so recently. As such, it is too early to evaluate the effectiveness of rules in maintaining surplus positions. The paper begins with a brief summary of the rationale for fiscal rules and concerns related to their implementation. Section 3 compares fiscal rules in Canada with similar practices in the United States, the European Economic and Monetary Union, Germany, Japan, New Zealand and Sweden. Fiscal rules at the subnational level in the United States and Canada are also reviewed. General observations about the role of fiscal rules are drawn from a comparison of the evolution of total government structural balances in the above-mentioned countries and in countries without legislated fiscal rules during the fiscal consolidation of the mid-1990s. Section 4 reviews a selection of recent empirical studies addressing fiscal rules and section 5 concludes.

Before proceeding, it is necessary to clarify this paper's definition of "fiscal rule", as there are many possible definitions. A broad definition

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[1] This paper builds on Brunnen and Pilon (1996).

could encompass the set of rules and regulations according to which budgets are drafted, approved and implemented (as used to define "budgetary institutions" in Alesina and Perotti (1999)). For the purpose of this paper, however, a much narrower definition is chosen: a "fiscal rule" is defined as a statutory or constitutional restriction on fiscal policy that sets a specific limit on a fiscal indicator such as the budgetary balance, debt, spending, or taxation. In other words, the focus is restricted to rules that impose a specific, binding constraint on the government's range of policy options. Policy rules or guidelines that are not legislated are not considered to be fiscal rules in this analysis, because although they may influence the decisions of the government, they do not impose binding constraints on present or future governments.

This paper focuses on the experiences of industrialized countries with fiscal rules. However, it should be noted that other countries, particularly Latin American countries, have had interesting experiences with fiscal rules as well. Appendix A provides a brief summary of fiscal rules currently in place in three major Latin American countries.

2. Why Legislated Fiscal Rules?

In theory, discretionary policy can achieve the same outcomes as fiscal rules, and should in fact be superior because it allows greater flexibility. However, many have suggested that this is not the case in practice. The literature identifies a number of potential problems that fiscal rules may be used to address[2]. For example, numerous political economy studies describe how electoral pressures may lead politicians to adopt a short time horizon, resulting in socially suboptimal policy choices (see, for example, Cukierman and Meltzer (1986) or Nordhaus (1975)). Tufte (1978) and Rogoff (1990) demonstrate how government spending or taxes may be influenced by a political budget cycle. Alesina and Tabellini (1990) show that when successive governments have different policy preferences, public debt may be used strategically to influence the choices of successors, in which case the equilibrium level of debt will be higher than is socially optimal. Weingast, Shepsle and Johnsen (1981) demonstrate how political institutions may systematically bias public decisions toward larger than efficient projects as legislators fail to

[2] For a more extensive analysis of the political economy of budget deficits, see Alesina and Perotti (1995).

internalize the full cost of programs that benefit their geographical constituencies but that are funded at the national level. In light of these various types of potential distortions, fiscal rules may be viewed as the best available replacement for a benevolent social planner.

In practice, fiscal rules have been adopted for a wide variety of reasons, for example: (a) to ensure macroeconomic stability, as in post-war Japan; (b) to enhance the credibility of the government's fiscal policy and aid in deficit elimination, as in some Canadian provinces; (c) to ensure long-term sustainability of fiscal policy, especially in light of population ageing, as in New Zealand; or (d) to minimize negative externalities within a federation or international arrangement, as in the European Economic and Monetary Union. Underlying most fiscal rules is a sense that present or future governments, for any number of reasons, may not be willing or able to implement optimal fiscal policy measures without external pressure. However, this line of argument may be refuted by the fact that several countries, such as Canada, have implemented successful fiscal adjustments in recent years without legislated fiscal rules, as discussed in section 3.

The enactment of fiscal rules raises a number of issues concerning flexibility, credibility, and transparency. One of the main concerns about fiscal rules is that they may be overly restrictive and limit a government's ability to engage in legitimate countercyclical fiscal policy when required. As such, legislation must be written in such a way that it provides some flexibility, in order to be functional, yet not be so flexible that it becomes a non-binding constraint. This concern is addressed in greater detail in section 4.

In addition, rules should be transparent. As such, they should not be overly complicated, and should be easy to monitor and defined in terms of fiscal indicators that cannot be easily manipulated. As for credibility, the rule should be viewed as permanent. This leads to the question of whether the fiscal rule should be implemented by statutory or constitutional law, the latter being far more difficult to change or revoke. Due to the costs of changing a constitutional rule of law, it is likely that a constitutional fiscal rule will be less explicit in its policy specification. At the same time, it is likely that it will stand the test of time. By comparison, a statutory fiscal rule has the advantage of increased clarity, yet is more likely to be altered over time. Thus, there is a trade-off between longevity and clarity. An additional concern with respect to constitutional rules is that they may transfer the interpretation of an economic target or rule from policymakers to constitutional court judges. A final issue related to credibility is that of enforcement – there must be some mechanism to enforce the rule.

However, fiscal discipline is not guaranteed even in the presence of the most effective fiscal rules; political commitment is also necessary if rules are not to be circumvented. For example, Milesi-Ferretti (2000) demonstrates that when a government has a margin for "creative accounting", the imposition of a fiscal rule may entail a trade-off between costly "window-dressing" and real fiscal adjustment.

3. An Assessment of Fiscal Rules in Practice

This section provides an overview of fiscal rules in various countries, under the Maastricht Treaty, and at the subnational level in the U.S. and Canada, as summarized in Table 1. The most common type of fiscal rule is a restriction on the budgetary balance. These often take the form of balanced budget requirements, as in many of the U.S. states and Canadian provinces. Inasmuch as these rules often apply only to the current budget, they are equivalent to the "golden rule", which specifies that deficits may only be run in order to fund investment. Restrictions on the budgetary balance may also be expressed in terms of specific target levels, as under the Maastricht Treaty. Another common type of fiscal rule consists of debt targets or restrictions, as implemented in the Maastricht Treaty, most American states and some Canadian provinces. Alternatively, there may be tax or expenditure limits, such as in the U.S., Sweden and several American states. In addition, jurisdictions may require a general referendum to be called to approve major taxation initiatives, as in some American states and certain Canadian provinces. Among the jurisdictions under consideration, the most comprehensive series of enacted fiscal rules were found at the subnational level, in several Canadian provinces and American states.

By their nature, legislated fiscal rules are intended to be permanent. As such, they should be designed to apply over the economic cycle. Indeed, most of the fiscal rules that are currently in force may be useful for maintaining surpluses as well as for eliminating deficits. One possible exception is the system of expenditure limits in the U.S., the value of which has been questioned since the emergence of large and growing surpluses.

It should be noted that both the United Kingdom and Australia enacted legislation in 1998 setting out broad fiscal policy guidelines to increase transparency and accountability in the conduct of fiscal policy. The legislation in both countries established a new set of reporting requirements and principles to guide the conduct of fiscal policy. However, neither framework includes legislated numerical targets. Rather, the emphasis is placed on requiring government to clearly set out its fiscal strategy and targets. Because these frameworks do not impose binding constraints on present and future governments in terms of numerical rules, they are not considered legislated fiscal rules for the purpose of this paper. Nevertheless, both countries provide useful examples of non-legislated rules and targets, so their fiscal frameworks are discussed in the following overview.

Table 1

Fiscal Rules at a Glance

	Budgetary Balance Controls	Debt Restrictions	Tax or Expenditure Controls	Referendum for New Taxes
US: Gramm-Rudman-Hollings Legislation, 1985	X			
US: Budget Enforcement Act 1990 onward			X	
Maastricht Treaty	X	X		
Germany	X			
Japan, 1997-98	X	X	X	
New Zealand	X			
Sweden			X	
Federal Canada, 1991/92-95/96			X	
American States	48	40	27	3
Canadian Provinces	8	3	2	4

3.1 International Overview of Fiscal Rules

3.1.1 United States

At the federal government level in the United States, deficit controls were introduced in 1985 through the Gramm-Rudman-Hollings (GRH) legislation (the Balanced Budget and Emergency Deficit Control Act). It imposed an annual deficit reduction schedule for a five-year period, with a balanced budget set for 1991, which was later revised to 1993. The Act covered on-budget items (i.e., excluding Social Security trust funds) and deficit objectives were to be accomplished mainly through spending cuts. Without an agreement on cuts to achieve the targeted deficit, automatic across-the-board cuts in spending for most discretionary and some mandatory programs had to take place.

Ultimately, both the 1991 and 1993 targets were missed by significant amounts. One of the main reasons for this outcome was that the targets were applied to the *projected*, rather than the *actual* deficits. In using overly optimistic economic and fiscal forecasts, budgetary projections could easily meet the targets, while the actual deficit exceeded the limit every year.

The legislation was replaced by the Budget Enforcement Act of 1990 (BEA), which shifted the focus away from deficit targets toward expenditure and revenue controls. Similar to the GRH legislation, the BEA applies only to the on-budget accounts. It sets annual dollar limits on discretionary spending, which are adjusted annually for revisions to technical assumptions, emergency appropriations, and certain other reasons. Pay-as-you-go rules apply to any new legislation affecting mandatory spending and revenue, meaning that new legislation may not impose net costs. A sequestration procedure is triggered if aggregate discretionary appropriations enacted for a fiscal year exceed that year's spending caps or if a fiscal year's aggregate mandatory spending and receipts legislation is considered to entail a net cost. As an improvement over the GRH legislation, the BEA applies only to parts of the budget that are under the direct control of lawmakers, not to fluctuations rooted in the economy nor changes in the cost of existing entitlement programs. The 1990 BEA applied to fiscal years 1990 to 1995, although it was extended to fiscal year 1998 by the Omnibus Budget Reconciliation Act of 1993. The Balanced Budget Act of 1997 extended the provisions through fiscal year 2002.

While the original BEA limits have sometimes been surpassed, the legislation has been credited with improving fiscal discipline (Schick (2000)) and limiting the costs associated with new legislation (OECD (1999)). The spending caps were designed with a view to balancing the budget by 2002, but this goal was attained much earlier, in 1998, mainly as a result of strong economic growth. In light of the rising surpluses, the spending restrictions have increasingly been viewed as unnecessarily tight.

The administration's FY2001 budget plan proposed that spending caps be raised and extended to 2010, such that government operations could be maintained at currently enacted levels, with discretionary spending rising in line with inflation.

3.1.2 The Fiscal Criteria of the Maastricht Treaty

The 1992 Maastricht Treaty set out convergence criteria that must be satisfied in order for countries to participate in the European Economic and Monetary Union (EMU). The main goal of the agreement in terms of fiscal policy is to ensure fiscal discipline in member countries in order to prevent fiscal crises that would negatively affect other countries. Under the Treaty, fiscal discipline is to be judged on the basis of two main criteria: (1) whether the government deficit as a percentage of GDP exceeds the reference value of 3 per cent of GDP; and (2) whether the ratio of gross government debt to GDP exceeds the reference value of 60 per cent of GDP. Exceptions may be made with respect to the deficit criterion if the ratio of the deficit to GDP has declined significantly and is close to the reference value, or if the excess is only temporary and the ratio remains close to the reference value. Exceptions may be made with respect to the debt criterion if the debt-to-GDP ratio is diminishing at an acceptable pace.

The Maastricht Treaty provisions were strengthened by the Stability and Growth Pact (SGP), which ensures that countries sustain their commitment to fiscal prudence once they have joined the EMU. The SGP was adopted in 1997 and took effect when the euro was launched on January 1, 1999. In addition to the Treaty's debt and deficit rules, the SGP requires that member states set medium-term objectives of budgetary positions close to balance or in surplus, in order to provide sufficient flexibility to allow the operation of automatic fiscal stabilizers while remaining within the 3 per cent deficit limit. This last point is considered to be especially important since member countries can no longer rely on the exchange rate instrument to dampen economic shocks.

The SGP also provides for increased monitoring, with an annual review of the stability programmes of countries participating in the euro area (and convergence programmes of those not participating in the euro area). The programmes set out medium-term targets and the adjustment path toward the targets. The Council of Ministers assesses and delivers an opinion on each programme, based on the recommendation of the European Commission. In addition, the Council and Commission regularly monitor the implementation of the programmes and can recommend corrective action if a significant divergence from the medium-term budgetary objective or the adjustment path is identified.

In the case of an excessive deficit in a country participating in the euro area, a course of remedial action will be proposed, which must be implemented within ten months. Otherwise, the country may be subject to sanctions in the form of a mandatory non-interest bearing deposit, which varies in size with the magnitude of the excessive deficit, up to a maximum of 0.5 per cent of GDP. If the excessive deficit is eliminated within two years, the deposit will be returned to the country. If it is not eliminated within that time frame, the deposit will become a fine.

By 1998, eleven of the fifteen EU member states had met the convergence criteria and agreed to participate in EMU. As of the European Commission's Autumn 2000 forecast, all eleven EMU participants were expected to comply with the deficit criterion in 2000. Seven countries were expected to have gross debt levels at or below the 60 per cent reference level, while the others had decreasing debt ratios and were thus considered to be in compliance with the criteria.

The Maastricht Treaty fiscal criteria are generally credited with having accelerated fiscal consolidation in the EU countries. For example, France faced a fiscal crisis in the early 1990s, with the total government deficit peaking at 6 per cent of GDP in 1993. However, the fiscal situation improved significantly over the following years, largely due to discretionary policy undertaken by the government in order to comply with the Maastricht Treaty. By 1998, the deficit was under 3 per cent, consistent with the convergence criteria.

3.1.3 Germany

Germany has a history of fiscal rules dating back to 1969. In that year, a constitutional rule was introduced which requires a balanced budget, but allows borrowing for investment expenditure (i.e., the golden rule). This rule applies to the federal government and the entirety of its budget – including consolidated federal enterprises and special funds. In addition, some states' constitutions include the golden rule.

The constitution specifies exceptions from a balanced budget during times of macroeconomic disequilibrium or war, and an important German policy mandate is that restrictive fiscal policy should not destabilize the economy or restrict growth and prosperity. On several occasions, the Constitutional Court has ruled that the need to stabilize the economy warranted borrowing in excess of investment. Overall, the constitutional fiscal rule poses only a minor constraint to the government and has not prevented deficits.

More importantly, Germany is subject to the Maastricht Treaty and the Stability and Growth Pact. As discussed earlier, these have imposed effective constraints and fiscal discipline on European governments. Since the Maastricht Treaty applies at the general government level, the German federal government has proposed to determine legally binding allocations of the Maastricht deficit limit between the federal government and the states, as well as across states.

3.1.4 Japan

Japan has had a legislated fiscal rule since 1947, which prescribes that bond issuance be limited to raising funds for financing public works. The rule covers only the general account budget of the central government, which represents only about 25 per cent of the central government's total budget. However, since 1975, deficit-financing bonds have been issued on a regular basis in addition to construction bonds, which are exclusively for public works. Moreover, the distinction between construction and deficit-financing bonds became less clear as constructions bonds were issued to cover more and more spending categories. As such, the fiscal rule has not proven to be a binding constraint since 1975.

In order to address the deficit which had persisted through the early to mid-1990s, especially in light of future ageing-related pressures, the government engaged in fiscal tightening and passed the Fiscal Structural Reform Law in 1997. The legislation provided that the sum of the central and local government deficits as a percentage of GDP should be reduced to 3 per cent or less by FY2003 (from around 6 per cent in FY1997). Furthermore, it provided that the amount of deficit-financing bonds should be reduced every fiscal year and issuance of such bonds should cease by FY2003. The legislation also required that numerical limits be set for expenditures in each major programme from FY1998 to FY2000. Finally, it specified that the sum of taxes, payroll contributions and the deficit should not exceed 50 per cent of GDP.

However, the fiscal tightening initiated in 1997 was too much for the economy to bear. Under pressure from the Asian economic crisis and the failure of some major Japanese financial institutions, the economy fell into recession. In response, the government revised the Fiscal Structural Reform Law in May 1998 to introduce more flexibility, and then formally suspended its application in November 1998. Since that time, the government has followed expansionary policies and the general government gross debt-to-GDP ratio has skyrocketed, reaching 105.3 per cent in 1999 (OECD (2000)).

3.1.5 New Zealand

In 1994, the Fiscal Responsibility Act (FRA) was enacted in New Zealand to improve the conduct of fiscal policy by setting out principles of responsible fiscal management and by promoting accountability and a long-term focus in fiscal planning. In contrast to the Maastricht Treaty, the FRA places more emphasis on transparency than on numerical targets. It requires that the government run annual operating surpluses in order to achieve unspecified "prudent" levels of Crown debt. Once these levels have been achieved, they must be maintained by, on average, avoiding an operating deficit. It also provides that sufficient levels of Crown net worth (total Crown assets less total Crown liabilities) be maintained in case of future adverse conditions. Temporary departures from these principles are allowed as long as the government specifies the reasons for the departure and sets out how and when it will return to the principles. The FRA does not include any sanctions, but sets out detailed reporting requirements, including a requirement to publish the government's long-term fiscal policy objectives.

Although the Act does not specify numerical debt targets, the government has defined its targets for fiscally prudent levels of debt. The present goal is to reduce gross debt to below 30 per cent of GDP and net debt to below 20 per cent of GDP. The government has generally been successful in meeting its goals. The target of running operating surpluses has been achieved since the FRA came into force. Moreover, net debt fell from around 50 per cent of GDP in the early 1990s to below 30 per cent in 1996-97, and it is expected to fall below 20 per cent in 2001-02. However, it is difficult to assess the contribution of the fiscal rules to the improvement in New Zealand's fiscal situation; the success was likely due to a combination of the fiscal rules, improved reporting requirements, better economic conditions and political commitment.

3.1.6 Sweden

Sweden's Fiscal Budget Act of 1996 requires Parliament to set nominal expenditure limits for 27 expenditure areas of the central government, including transfers to other levels of government, for a three-year period. Each year, Parliament sets new limits for the third year, and the ceilings are set so as to ensure that outlays fall as a proportion of GDP. The measures were strengthened in 1999 through a prohibition on using allocations transferred from previous years. Although the spending caps are not accompanied by sanctions, to date they are considered to have been effective controls. Overall, Sweden has achieved significant improvements since it undertook its fiscal consolidation programme in 1994-95.

3.1.7 Canada

At the federal level in Canada, the Federal Spending Control Act set limits on program spending from 1991-92 to 1995-96. It covered all program spending, with the exception of that under major self-financing programs, such as expenditures under the Unemployment Insurance Act.

The Act permitted overspending in one year if offset in the following two years. If spending were under the limit for a fiscal year, the difference could be allocated to a subsequent fiscal year. In addition, upward adjustments in annual spending were allowed if associated with an equivalent increase in revenues. Finally, the Auditor General was required to express an opinion as to compliance with the Act.

Spending levels were lower than the set limits in every year except 1992-93 (part of underspending in 1991-92 was allocated to 1992-93 to cover the excess spending). Moreover, actual spending from 1991-92 to 1995-96 was $23.4 billion under the aggregate spending control limits. Overall, the legislation did not prove to be necessary for controlling spending and therefore was not extended beyond 1995-96.

More importantly, the government introduced a number of non-legislated policy rules that contributed significantly to the dramatic improvement in Canada's federal finances in the 1990s. In 1994, the government adopted the practice of basing budget planning on economic assumptions near the low end of the range of private sector forecasts, in order to minimize the risk of taking inappropriate policy actions as a result of overly-optimistic economic assumptions. In addition, the government began setting two-year rolling deficit targets, with an ultimate goal of a balanced budget. In 1995, the government introduced a Contingency Reserve in its budget planning, to protect against adverse changes in the economy or forecasting errors. If not needed, the reserves were applied to deficit reduction. Through prudent economic planning assumptions and an emphasis on credible, short-term fiscal targets, with a firm commitment to meet these targets, the federal government was able to move from a deficit to a surplus position.

In 1998, the federal government committed to follow a non-legislated Debt Repayment Plan, under which a $3-billion Contingency Reserve is set aside each year and is devoted to debt reduction if not needed. In the 2000 budget plan, the government announced that the extra economic prudence, which was previously included in revenue and expenditure projections, will now be explicitly shown, in order to facilitate evaluation of the credibility of the fiscal projections. When the extra prudence is not required, it will become part of future planning surpluses. In addition, the government recently stated that in the future, it will announce each fall whether a greater amount than the $3-billion Contingency Reserve should be devoted to that year's debt paydown, depending on the economic and fiscal circumstances at the time. As a result of the Debt Repayment Plan and the growing economy, the ratio of net public debt to GDP has been reduced from a peak of 71.2 per cent in 1995-96 to 58.9 per cent in 1999-2000.

3.2 Overview of Non-Legislated Numerical Rules

3.2.1 Australia

The Charter of Budget Honesty, passed in 1998, introduced a fiscal framework in Australia similar to that in New Zealand. The Charter requires governments to set out their medium-term fiscal strategy in each budget as well as their short-term fiscal objectives and targets, although it does not place any constraints on the nature of the targets.

The government's original debt target was to reduce the Commonwealth general government net debt-to-GDP ratio to half of its 1995-96 level by the turn of the century. This target has been comfortably met, with net debt falling from a peak of almost 20 per cent of GDP in 1995-96 to around 7 per cent in 2000-01. About two-thirds of the reduction reflects privatization proceeds, with the remaining third coming from budget surpluses.

The government's current medium-term objective is to balance the budget over the economic cycle. Consistent with this goal, the government aims to continue running surpluses over the short term. As a supplementary objective, the government also aims to improve its net worth (a measure that includes physical as well as financial assets). Recent projections indicate that positive net worth could be achieved by 2003-04. It would seem that the strategy of requiring government to set out clear objectives, without dictating what these objectives should be, has served Australia well.

3.2.2 United Kingdom

The United Kingdom adopted similar legislation in 1998, which set out principles to guide the conduct of fiscal policy (the key principles are transparency, stability, responsibility, fairness and efficiency). In addition, the legislation requires that the government table in Parliament a code for fiscal stability setting out its fiscal strategy in accordance with these principles.

The current government's fiscal code is guided by two rules: The "golden rule", under which borrowing should be used only to finance investment; and the "sustainable investment rule", which states that public sector net debt is to be held at a stable and prudent level, which the government currently defines as below 40 per cent of GDP. Both rules are designed to apply over the economic cycle.

To date, the government has been successful in meeting its goals. Public sector net debt was brought down from 44 per cent of GDP in 1996-97 to 36.8 per cent in 1999-00.

3.3 *Overview of Subnational Fiscal Rules in Canada and the U.S.*

3.3.1 *American States*[3]

All but two American states have provisions requiring a balanced budget. Most states are subject to the relatively loose requirement that the governor submit a balanced budget. In addition, 40 states require the legislature to pass a balanced budget, and 34 require the governor to sign a balanced budget. Most states have constitutional requirements or a combination of constitutional and statutory requirements; only five rely solely on statutory requirements. A majority of states are subject to more stringent provisions that prevent them from carrying deficits over into the next fiscal year or the next two-year budget period. Typically, state fiscal rules carry no sanctions and apply only to general funds, excluding separate accounts such as the capital account and accounts for social insurance and employee retirement.

In addition to balanced budget rules, 27 states have tax and expenditure limitations, which set limits on annual revenue or expenditure increases. Of those with expenditure limits, most limit appropriations to some index of inflation, often state personal income growth or a certain percentage of state personal income. Three states require voter approval to increase revenues.

Furthermore, most states have some form of constitutional or statutory limits on the issuance of general obligation debt (debt which is guaranteed by all government funds and the government's ability to raise taxes). Most limits are based on a formula involving state revenues or appropriations, while some states impose maximum dollar limits. Fourteen states allow general obligation debt to be overridden by a referendum or supermajority vote, and a few states prohibit the issuance of general obligation debt altogether.

Despite the balanced budget provisions, states generally can run small, temporary deficits. However, strong economic growth over recent years has enabled most states to run surpluses and build up reserves (most have "rainy day" funds) in case of economic slowdown.

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3 All statistics taken from National Asociation of State Budget Officers (1999).

3.3.2 Canadian Provinces and Territories

Nine provinces and territories have enacted or tabled fiscal rules. Each fiscal rule requires balanced budgets, except in the Yukon, where deficits are permitted as long as no net debt is accumulated. Fiscal rules cover the consolidated budget in every jurisdiction, except Saskatchewan and the Yukon, where it is the general revenue fund in the former case and the non-consolidated Public Accounts in the latter case.

Most provinces require a balanced budget on an annual basis. However, New Brunswick and Saskatchewan are required to balance their budgets over a four-year period. In Quebec and Ontario, deficits may be offset by previously accumulated surpluses. Similar to Quebec's legislation, British Columbia requires that deficits be gradually eliminated before achieving balanced budgets. Deficits are permitted in Nova Scotia, Quebec and Ontario as long as they are offset in the next fiscal year. Manitoba's legislation includes a Fiscal Stabilization Fund representing up to 5 per cent of annual expenditure to offset unforeseen fluctuations in revenue. Many jurisdictions also have provisions for exceptional events such as a major disaster. In terms of using surpluses, Alberta's legislation specifies how excess revenues can be used and Nova Scotia limits spending on new programs to existing budgets.

Several provinces have chosen to also target debt reduction and elimination. Manitoba has a debt repayment schedule incorporated into the law, whereby a minimum of $75 million ($96 million in 2000-01) is deposited every year into a *Debt Repayment Fund* to be applied against the general purpose debt and/or pension liability at least every 5 years. In Saskatchewan, the legislation states that a four-year debt management plan must be tabled, although there are no specific requirements except that surpluses must go towards debt reduction. After eliminating its net debt (excluding pension obligations), Alberta legislated a 25-year debt repayment schedule, to eliminate the accumulated debt by 2025. Finally, in the Yukon, deficits are permitted, but the legislation prohibits net debt accumulation. Although Nova Scotia does not have a debt repayment plan, legislation requires a reduction in the amount of foreign currency exposure.

Ontario, Manitoba, Alberta and the Yukon have taxation-by-referendum approval rules. Ontario's legislation is the most comprehensive, applying to personal income, corporate, retail sales, employer health, gasoline and fuel, provincial land and education taxes. In Manitoba, a referendum must be called for any major tax increases, whereas in Alberta, it applies to the implementation of a retail sales tax. In the Yukon, a referendum is required for increases or implementation of new taxes covered by the *Income Tax Act* and *Fuel Oil Tax Act*.

Ontario, Manitoba, British Columbia and the Yukon have legislated penalties for not achieving the fiscal targets. Ontario's legislation applies to members of the Executive Council, whereby salaries are reduced by 25 per cent in the first year of a deficit and 50 per cent for each year thereafter. For Manitoba, ministerial salaries are cut by 20 per cent in the first year of a deficit and by 40 per cent if there are two or more consecutive deficits. British Columbia's legislation reduces salaries of the Executive Council by 20 per cent if balance targets are not met. The Yukon has the strictest of all legislation as an election is triggered if any net debt is accumulated.

From discussions with the provinces, one of the main advantages of legislated fiscal restrictions is that they increase the Finance Ministers' bargaining power to promote unpopular fiscal measures within the Cabinet. Essentially, policymakers can quote the rules as an external constraint in reference to internal allocations of limited funds.

3.4 International Comparison of Fiscal Outcomes

In order to give a general indication of the success in fiscal consolidation in countries with and without fiscal rules, this section examines the change from 1995 to 1999 in the structural balances of the countries discussed earlier. Structural balances are used in order to control for the effects of the business cycle. Data are presented for the total government sector, although for the purpose of this comparison, countries are classified on the basis of whether they have fiscal rules at the central government level. In Canada's case, it should be noted that many of the provinces had fiscal rules in place over this period. However, the deficit in the mid-1990s was much greater at the federal level; in 1995, the federal deficit accounted for approximately 73 per cent of the total government deficit. Therefore, most of the consolidation was achieved at the federal level, where there were no fiscal rules. Moreover, roughly three quarters of the total provincial deficit in 1995 was attributable to the province of Ontario, which did not adopt fiscal rules until 1999.

The period of 1995 to 1999 was chosen because it represents a time of fiscal retrenchment in most countries and because it allows for a logical separation of countries according to whether they have legislated fiscal rules (Canada's limits on program spending ended in 1995, and Sweden adopted expenditure limits in 1996). EU countries are classified according to whether they joined the EMU when it came into being (this approach assumes that the countries that joined the EMU considered the convergence criteria as a binding constraint).

The evolution of structural balances relative to GDP from 1995 to 1999 indicates that most countries achieved some degree of fiscal consolidation over this period (Table 2). Notable exceptions are Japan, which was engaging in deficit spending in an effort to combat a major economic downturn, and New Zealand, which had already attained a financial surplus in 1995. The improvement in the structural balance was particularly strong in Sweden, Italy, the U.K., Canada and Australia. In other words, major improvements were made in countries both with and without fiscal rules.

Table 2

Total Government Structural Balance
(percent of GDP)

	1995	1996	1997	1998	1999	Change from 1995 to 1999
Countries with legislated fiscal rules						
United States	-3.0	-2.3	-1.1	0.0	0.7	3.7
Germany	-2.7	-2.4	-1.6	-1.2	-0.5	2.2
France	-4.6	-2.8	-1.7	-1.8	-1.3	3.3
Italy	-7.2	-6.5	-2.0	-2.0	-0.8	6.4
New Zealand	2.5	2.4	1.7	2.5	0.7	-1.8
Sweden	-6.9	-1.9	-0.5	2.9	2.1	9.0
EU11 weighted average	-4.1	-3.0	-1.4	-1.3	-0.6	3.5
Countries without legislated fiscal rules						
Canada	-4.4	-1.6	1.0	0.9	2.3	6.7
Japan	-3.1	-4.4	-3.6	-4.2	-6.0	-2.9
United Kingdom*	-5.0	-3.8	-2.1	0.2	1.1	6.1
Australia*	-3.5	-2.0	-0.4	0.3	1.6	5.1

Source: OECD Economic Outlook, December 2000.
Note: The United Kingdom and Australia have legislated fiscal frameworks with non-legislated numerical rules, as discussed in section 4.2.

Naturally, such comparisons do not permit strong conclusions regarding the role of fiscal rules, since other important factors, such as political considerations, are not held constant. For example, we cannot go so far as to conclude that fiscal rules are not necessary for fiscal success; in some of the above countries, such as some of the euro area countries, such consolidation might not have been possible without the imposition of strict rules. However, we can conclude from the above evidence that having legislated fiscal rules is *not* a necessary condition for successful fiscal consolidation in *all* countries.

In addition, it is important to note that industrialized countries' experience with fiscal rules at the national level is relatively short, and the time frame studied above does not encompass any major recession in developed countries. In other words, fiscal rules have not yet been seriously tested. The real test of whether countries will respect their fiscal rules when they become binding and whether adherence to such rules will be harmful or beneficial to these countries will come with the next major recession.

4. Selected Recent Empirical Studies

This section reviews a selection of recent empirical studies on fiscal rules, which address the following themes: (a) whether fiscal rules are effective; (b) how the characteristics of fiscal rules are related to their effectiveness; (c) whether fiscal rules limit a government's ability to engage in countercyclical fiscal policy; and (d) the relationships among political and budgetary institutions and fiscal consolidation.

4.1 Effectiveness

The fundamental question addressed by empirical research on fiscal rules is whether they are effective. Poterba (1996, 1997) reviews the nature of balanced budget requirements at the U.S. state level and considers the empirical evidence in the current literature. His findings suggest that changes in budget rules and, more broadly, fiscal institutions can affect fiscal policy outcomes.

In a study on the effectiveness of tax and expenditure limits, Stansel (1994) shows that the relative rate of growth of spending in states with tax and expenditure limits declined significantly within five years of the implementation of the limits. Moreover, the relative decline in the growth of state taxes was also significant in the five years immediately following the tax and expenditure limit enactment. It is difficult to determine if the relative declines in the rates of spending and taxation growth are due to the enactment of the tax and expenditure limits, the determination of the government in power to reduce the relative growth rates or some other unspecified variable. Given this correlation, however, the introduction of a tax and expenditure limit could potentially be used as a signal of commitment to reduce tax and expenditure growth on the part of policymakers.

A Canadian econometric study by Kneebone and McKenzie (1997) examines the Alberta government's past reactions to unanticipated shocks to expenditures and revenues. They find evidence of asymmetric behaviour – unexpected losses in revenue did not affect the current budget, whereas unexpected increases in revenue were built into current revenue plans. They suggest that Alberta's legislation at the time may have been a response to this asymmetry, as it required higher than expected revenues to be used for debt reduction and prohibited the government from budgeting the entirety of forecasted corporate income tax and natural resource revenues.

Eichengreen and Bayoumi (1994) explore the impact of fiscal rules on state general obligation bond yields. Their evidence indicates that, for average levels of debt-to-gross state product, tax rates, and lagged state unemployment, if a state without a tax and expenditure limit enacts one of the more strict tax and expenditure limits, interest costs would decline by nearly 50 basis points. Eichengreen and Bayoumi argue that a tax and expenditure limit reduces the likelihood of future surges of borrowing and hence the likelihood of default.

Poterba and Rueben (1999), on the other hand, find that tax and expenditure limits lead to different outcomes in terms of borrowing costs. Similar to Bayoumi and Eichengreen, they find that states with expenditure limits face lower borrowing rates than states without such limits. However, they find that states with tax limitation legislation face higher borrowing costs than states without similar laws, presumably because tax restrictions may limit a government's ability to pay interest on its bonds. As for laws that restrict deficits, they confirm that states with weak laws face higher borrowing costs than those with strict laws. Along the same lines, Goldstein and Woglom (1992) find that states with limitations on borrowing face a lower cost of borrowing.

However, evidence from Mattina and Delorme (1996) highlights factors apart from fiscal rules that can also ensure fiscal discipline; their research indicates that discipline imposed by market mechanisms can be effective in encouraging fiscally responsible policies. They use an approach based on methodology similar to that of Bayoumi, Goldstein and Woglom (1995) to estimate the supply of credit available to three Canadian provinces as a function of the yield spread[4]. The spread may be regarded as the default risk associated with a particular province. The underlying hypothesis contends that the financial community demands a risk premium that rises at an increasing rate with respect to protracted debt accumulation. The Canadian evidence supports the existence of a non-linear supply curve consistent with the hypothesis of a "market-based fiscal discipline". The non-linear supply curves suggest that the yield spread begins to accelerate rapidly once the debt-to-GDP ratios of two provinces diverge by 35 to 50 percentage points.

4.2 *Nature of Fiscal Rules and Effectiveness*

Research on fiscal rules has also attempted to determine how the nature of fiscal rules is related to their effectiveness. Poterba (1994) explores the dynamics of U.S. state taxes and expenditures in the late 1980s and early 1990s and finds that more restrictive U.S. state fiscal institutions, particularly annual balanced budget requirements and tax and expenditure limits, are correlated with more rapid fiscal adjustment to unexpected deficits.

A study by von Hagen (1991) examines the effectiveness of debt limits and balanced budget requirements in U.S. states by comparing fiscal performance indicators in states with and without debt limits and in states with varying degrees of strictness in terms of their balanced budget requirements. His analysis suggests that the presence of debt limits or stringent balanced budget requirements affects the distributions of per capita state debt, the debt-to-income ratio, and the ratio of nonguaranteed to guaranteed debt. He finds that there is a higher percentage of states with high ratios of nonguaranteed to guaranteed debt in the state groups with

4 The study estimated the supply functions for Ontario, Québec and Nova Scotia. The yields spreads and debt-to-GDP ratios are expressed in terms of the respective British Columbian figure.

debt limits or with more stringent balanced budget requirements. Given that state debt limits routinely restrict only guaranteed debt and that balanced budget requirements only target on-budget or general account activities, this would suggest that states endeavour to avoid the full impact of fiscal rules through accounting measures.

However, this assertion is refuted by research by Bohn and Inman (1996). They use data from the U.S. states from 1970-1991 to explore the effectiveness of different types of rules. They conclude that there is little to suggest that balanced budget rules shift deficits into other fiscal accounts. They also find that tighter balanced budget rules are associated with higher state surpluses. Their analysis indicates that the most effective rules are constitutional (as opposed to statutory) requirements that apply to the end-of-year balance, rather than ex-ante budget requirements, and are enforced by an independently elected state supreme court.

Alesina et al. (1999) use data from twenty Latin American and Caribbean countries from 1980 to 1992 to examine the effectiveness of their budget institutions. They create an index of budgetary institutions that takes account of various forms of borrowing constraints, the role of a macroeconomic plan in constraining the budget process and rules regarding modification of the budget. Their findings indicate that there is a significant negative relation between the stringency of the constraints and the size of the primary deficit.

4.3 Fiscal Rules and Stabilization

One of the main areas of research regarding fiscal rules focuses on determining whether such rules constrain the government's ability to use fiscal policy to smooth business cycle fluctuations. Research in this regard has been limited to the U.S. states and has produced somewhat mixed results.

Using state level data from 1971 to 1990, Bayoumi and Eichengreen (1995) find that states with relatively smaller cyclical offsets tend to have more stringent fiscal constraints. Specifically, they find that moving from no fiscal restraints to the most stringent restrictions lowers the fiscal offset to income fluctuations by around 40 per cent (the fiscal offset is a measure of the sensitivity of the level of the fiscal balance to real output). In addition, they conduct simulations that indicate that such a reduction in fiscal stabilizers could lead to a significant increase in the variance of aggregate output.

However, Alesina and Bayoumi (1996) show that although tighter fiscal rules are associated with lower cyclical variability of the fiscal balance, this does not lead to increased state output variability. Using U.S. state data from 1965 to 1992, they find no statistically significant relation between the variability of real state output and the stringency of fiscal controls. They speculate that this may arise simply because stabilization at the state level may not be very important, or because tighter controls limit politically motivated and potentially destabilizing fluctuations in the surplus as well as limiting countercyclical policies, leading to an uncertain impact on output variability.

Conversely, Levinson (1998) points out that Alesina and Bayoumi (1996) do not control for unobserved state characteristics that may be correlated with business cycle fluctuations and the existence of state fiscal controls. He suggests that the size of the state is correlated with its ability to affect business cycle fluctuations through countercyclical fiscal policy, and posits that if state fiscal policy matters more in large states than small states, then the difference between business cycle fluctuations in states with lenient versus strict fiscal controls should be greater for large states than for small states. He then shows that although states with stricter rules do not have higher volatility on average (from 1969 to 1995), the difference in volatility between states with lenient and strict rules is indeed greater among large states than among small states. From this he concludes that there is evidence that strict balanced budget rules do exacerbate business cycle fluctuations.

4.4 Political Economy Aspects

Yet another interesting line of research explores the relationships among the political system, budgetary institutions and fiscal consolidation. Hallerberg and von Hagen (1999) use pooled time series data from the EU states from 1981-94 to contradict earlier studies, which contend that proportional representation systems are more deficit-prone than pluralist systems. Instead, they show that the presence of either negotiated spending targets or delegation of power to a strong finance minister is key in limiting deficit growth. Moreover, they conclude that one-party majority governments, most common in pluralist systems, are most suited to delegation to a strong finance minister, while multi-party coalitions, most common in proportional representation systems, would generally do better with commitment to negotiated fiscal targets.

Stein, Talvi and Grisanti (1999) reach a somewhat different conclusion with respect to Latin American countries. First, they find that countries whose electoral systems exhibit a large degree of proportionality tend to have more procyclical fiscal policies, larger governments and larger deficits. Next, using an index of budgetary institutions similar to that used in Alesina et al. (1999), but for the period from 1990 to 1995, they find that constraints on the deficit, a greater concentration of power in the finance minister and in the executive, and greater transparency in budget procedures all tend to lower deficits and debt. Contrary to Hallerberg and von Hagen's (1999) conclusions for European countries, they do not find evidence that strong budgetary institutions neutralize the potentially negative effect of a large degree of proportionality in electoral systems on government deficits in Latin American countries.

Arreaza, Sørensen and Yosha (1999) expand on Hallerberg and von Hagen's (1999) conclusions and find that the government's ability to smooth consumption through government consumption and transfers is much higher in countries with either delegation of power or negotiated fiscal targets. In addition, they find that there is no statistical relation between the deficit and the amount of consumption smoothing in a given country. Thus, they conclude that the presence of effective budgetary institutions, as defined above, can lead to lower average deficits as well as efficient consumption smoothing via government deficit spending.

An interesting non-empirical analysis by Corsetti and Roubini (1996) addresses the relationship between fiscal rules and the level of government, and contends that fiscal rules are more suited to subnational governments than to national governments. They point out that states are aided in balancing their budgets by countercyclical transfers from the federal government, and that states' efforts to balance their budgets would otherwise have a much larger negative impact on their residents' income. They also note the supply- and demand-side macroeconomic effects of any action on the part of the federal government to balance the budget during a recession would be much greater than similar actions at the state level, since state revenues and expenditures represent a much smaller proportion of state income than do federal revenues and expenditures. Finally, they argue that insofar as individual states' business cycles are not perfectly synchronized, the actions of any given state trying to balance its budget do not have a national impact. Conversely, an attempt by the federal government to balance its budget during a recession could affect the whole country.

Corsetti and Roubini's arguments are complemented by Bayoumi and Eichengreen's (1995) findings, which emphasize the importance of central governments in providing fiscal stabilization. They find that the U.S. federal budget and social security provided about six-sevenths of the total fiscal offset to income fluctuations in the 1970s and 1980s, while state budgets provided only around one-seventh. Moreover, they find that central governments (including social security funds) in the U.S., Germany, Canada, Japan, France and the Netherlands provided similar degrees of fiscal stabilization from 1970 to 1989. Similarly, as mentioned in the section on fiscal stabilization, Alesina and Bayoumi (1996) suggest that their finding that the stringency of fiscal rules does not affect state output variability might reflect the fact that the state's role in stabilization is not very important. From this they conclude that, if this is the case, balanced budget rules may be effective for subnational governments, but not for national governments.

5. Conclusions

This paper attempts to shed light on the role of legislated fiscal rules in determining fiscal performance. The focus is placed on evaluating the role played by fiscal rules in the fiscal consolidation of the 1990s. Some of the conclusions reached in this respect may be extended to the role for rules in maintaining surpluses, but a thorough analysis of this issue is left for future research.

A review of the experiences of various countries as well as subnational levels of government suggests that fiscal rules can be useful tools for fiscal retrenchment, if properly designed. However, an examination of the structural balances of countries both with and without fiscal rules during the fiscal consolidation of the mid-1990s shows that fiscal rules are not necessary for successful fiscal consolidation in all cases. In addition, before making any judgements about the value of fiscal rules, it is important to note that fiscal rules at the national level have not yet been seriously tested; the real test will come with the next major recession.

The evidence from empirical studies generally supports these conclusions. Many studies find that fiscal rules do indeed have an impact on fiscal outcomes. In addition, research has attempted to identify certain characteristics of fiscal rules that tend to be associated with greater success, with some studies finding that stricter rules, rules that apply to the actual budgetary outcome, rather than forecasts, and constitutional rules that are enforced by an independent body seem to be the most effective. As for whether fiscal rules impede a government's ability to engage in countercyclical fiscal policy, empirical results have been mixed. However, recent research suggests that fiscal rules exacerbate business cycle fluctuations, although empirical work has yielded mixed results in this regard.

Finally, researchers have addressed how a jurisdiction's political institutions determine the appropriate type of budgetary institutions needed to ensure fiscal discipline. In this respect, some researchers have found that countries governed by multi-party coalitions, usually countries with proportional representation systems, can best control deficit growth through negotiated fiscal targets, while countries with pluralist systems are more likely to be able to achieve fiscal discipline through delegation of power to a strong finance minister. Similarly, some have suggested that fiscal rules are more appropriate at the subnational level than at the national level.

Overall, it would seem that there may be a role for legislated fiscal rules in certain cases, but that legislated rules are by no means necessary for achieving fiscal consolidation in all jurisdictions. Determining the conditions under which legislated fiscal rules are indeed necessary to ensure fiscal discipline, or determining when political commitment, non-legislated rules or a commitment to transparency would be sufficient, is an area for further research.

APPENDIX

FISCAL RULES IN LATIN AMERICA

This section provides a brief summary of fiscal rules currently in place in three major Latin American countries.

i) Argentina

In September 1999, the Argentine Congress passed the Fiscal Responsibility Law. The law sets a ceiling for the deficit and requires that it decline such that balance will be achieved in 2003. It also established a Fiscal Stabilization Fund, financed through tax revenues, to dampen the impact of cyclical fluctuations and external shocks on government revenues. In addition, the law prohibits the creation of off-budget items and sets out new reporting requirements. Finally, it provides for penalties for civil servants who do not implement the budget.

ii) Peru

Peru's Congress approved the Fiscal Transparency Law in December 1999, which sets limits on the deficit, the growth of government expenditure and the increase in public debt. Similar to Argentina's legislation, Peru's also established a fiscal stabilization fund to ensure savings in peak years that may be used in times of recession. Furthermore, it contains measures to encourage transparency and requires that the budget be prepared within a three-year macroeconomic framework.

iii) Brazil

In Brazil, the Fiscal Responsibility Law was enacted in May 2000. In contrast to the legislation in Argentina and Peru, Brazil's law applies to all levels of government. The law prohibits financial support operations among different levels of government, sets limits on personnel expenditures and requires that limits on the indebtedness of each level of government be set by the senate. It also includes measures to improve transparency and accountability. Separate legislation imposes penalties for violations of the Fiscal Responsibility Law by public officials.

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