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Fiscal policy under rules and restrictions

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Chapter 1

Introduction

In the last fifteen years several countries around the globe have adopted stringent fiscal measures, in particular fiscal rules and restrictions, in order to guarantee (or at least *signal*) fiscal discipline.

Fiscal rules and restrictions are not a recent phenomenon. As Basseto and Sargent (2006) mention, types of golden rules were followed by several national governments already in the eighteenth and nineteenth centuries. However, in recent years probably more fiscal restrictions have been adopted than ever before.

Fiscal restrictions have been adopted for a wide variety of reasons, for example: (i) to ensure macroeconomic stability; (ii) to enhance the credibility of fiscal discipline and aid in deficit elimination; (c) to ensure long-term sustainability of fiscal policy, especially in light of population ageing; or (d) to minimize negative externalities within a federation or international arrangement. Underlying most fiscal rules and restrictions is a sense that present or future governments may not be willing or able to implement optimal fiscal policy measures without external pressure (Kennedy and Robbins, 2001).

Perhaps the most prominent example of this new generation of fiscal restrictions are the fiscal rules imposed by the Treaty on the European Union (the “Maastricht Treaty” – MT), ratified in 1992, and specified in more detail in the Stability Growth Pact (SGP) ratified in 1998. However, several countries outside the EU have adopted rules that mimic the EU rules.

The introduction of such rules and restrictions can have substantial macroeconomic effects. This thesis studies some of those effects. Chapter 2 compares from a theoretical perspective restrictions on the public debt versus restrictions on the primary deficit. This analysis is motivated by proposals to give a more prominent role to debt rather than deficits in the SGP. There is no consensus in the literature what is the most desirable type of restriction. Proponents of debt-based restrictions claim that debt levels give a more accurate picture of the sustainability of a government’s finance than deficit levels (see, for example, Wyplosz, 2005). Critics, on the other hand, argue that incumbent governments should not be penalized for the overaccumulation of debt by previous administrations. Hence, restrictions on the primary deficit would be fairer while still guaranteeing fiscal sustainability. Chapter 2, therefore, explores these issues by analyzing differences in the

economy's responses and in the welfare consequences under the two types of fiscal restrictions.

Chapter 3 contains a political-economy analysis of the consequences of fiscal restrictions for structural reforms. Many countries are currently confronted with the simultaneous need to pursue fiscal discipline and to implement structural reforms, such as making their labor and product markets more flexible and reforming their welfare and pension systems. Those needs should not be seen in isolation. In fact, the two are tightly related to each other, as structural reforms are conducive to maintaining the long-term sustainability of the public finances. Nevertheless, it has been argued that fiscal restrictions, while in principle beneficial for fiscal discipline, may in the short run conflict with the willingness to conduct structural reforms. Therefore, Chapter 3 analyzes in the context of a political-economy framework the incentives for a government to implement structural reforms that yield long-run benefits in the presence of electoral uncertainty and a deficit restriction that reduces the scope for providing short-run compensation to the losers from the reform. The analysis is closely related to the debate about the recent reform of Europe's SGP, which now takes more explicit account of the short-run costs of certain structural reforms.

In Chapter 4 we investigate how effective Europe's fiscal restrictions have been in disciplining fiscal policy. The analysis separates the MT-period and the SGP-period, disentangling the effects of the Treaty provisions on the fiscal efforts of the Euro zone candidate members from the effects of the SGP once countries had made it into the Eurozone. We estimate fiscal reaction functions for a panel of 11 members of the Euro zone (except Luxembourg) using the cyclically adjusted primary deficit (CAPD) as the dependent variable. Controlling for fixed effects and relevant economic and political variables, we examine (i) whether the average level of the CAPD and (ii) its response to the output gap have changed between the MT- and SGP-periods, and (iii) how the CAPD reacted in cases when the reference deficit level was exceeded. Chapter 4 also makes similar comparisons between fiscal behavior in the EU and that in a number of other OECD countries.

Finally, Chapter 5 concludes this thesis summarizing the main results and policy implications derived from the previous chapters. That chapter also discusses some of the main gaps in the literature on fiscal rules and restrictions, and suggests potential directions for future research in this field.

Before proceeding to those analyses, this introduction presents a brief survey of the literature on why, how and where fiscal rules and restrictions are implemented.

1.1 Why are fiscal rules and restrictions implemented?

Wyplosz (2005) claims that the role of fiscal rules and restrictions is to promote fiscal discipline by ensuring fiscal solvency. In a simple set up, this can be represented by a government that issues bonds (B_t), raises taxes revenues (T_t), and purchases goods from private agents (G_t) in each period t . The government's period- t flow budget constraint

reads:

$$B_{t+1} = (1 + r) B_t + G_t - T_t,$$

where B_{t+1} is the stock of bonds (public debt) in period $t + 1$ and r is the debt interest rate which, for convenience, we assume constant. Finally, and for simplicity, we assume that G_t and T_t are deterministic.

Independent of the government's objectives, the role of fiscal restrictions would be to ensure fiscal solvency, i.e. that the government's intertemporal budget constraint is always fulfilled:

$$(1 + r)B_t = \sum_{s=t}^{\infty} \left(\frac{1}{1 + r} \right)^{s-t} (T_s - G_s) \Leftrightarrow \lim_{s \rightarrow \infty} \frac{B_{s+1}}{(1 + r)^s} = 0. \quad (1.1)$$

However, fiscal rules or restrictions may neither be necessary nor sufficient to guarantee that (2.11) is satisfied. For example, the constraint can be compatible with a succession of deficits ($T - G < 0$) followed by a series of surpluses. Imposing restrictions on the deficits would therefore be unnecessary. So, why are fiscal restrictions imposed in practice? This section tries to answer this question by discussing other main arguments in the literature on fiscal restrictions.

1.1.1 Deficit biases and other motivations on why to implement fiscal rules and restrictions

Another main argument for placing limits on the degree of fiscal policy discretion stems from the fact that democratically elected governments seem to have biases toward excessive deficits and debt. Fatás (2005), for instance, identifies four main biases in fiscal policy discussed in the literature, which are:

(a) *Volatile fiscal policy.* Discretionary changes in fiscal policy (changes in taxes or spending around election times) can have an effect on macroeconomic outcomes, and as a result, can bring undesirable volatility to the economy. Incompetent or greedy politicians can also generate substantial volatility in fiscal policy instruments.

(b) *Procyclical fiscal policy.* In response to economic fluctuations, fiscal policy should be countercyclical, such that the budget surplus should increase in booms and decrease in recessions in order to smooth out fluctuations in income. There is evidence, however, that in many cases spending increases in excess of the increase in taxes in good times (procyclical fiscal policy). One reason can be the misinterpretation by politicians of cyclical increases in revenue as structural, which would lead them to mistakenly cut tax rates or increase spending.

(c) *Excessive deficits and unsustainable budgetary plans.* Governments may not fully internalize the costs of additional debt. One main reason for that is described via *common-pool* models (see, for example, Drazen, 2004; Coeuré and Pisani-Ferry, 2005; Fatás, 2005; Anett, 2006; and Krogstrup and Wyplosz, 2006). This class of models stresses that politicians, who represent different groups and vested interests, have no incentive to constrain their spending demands given that the costs are shared by the population as a whole. So,

the common pool problem appears whenever there is more than one decision maker involved in setting the budget (Krogstrup and Wyplosz, 2006). Thus, when decision makers compete for their preferred public goods, they fail to internalize the cost of their choices on current and future cost in terms of higher taxes needed for debt service and repayment, leading to a deficit bias. Another political argument for excessive deficits concerns bureaucratic behavior, or *budget maximization*. Bureaucrats try to maximize their budgets since a higher budget translates into both higher salaries and more power in a typical principal-agent problem with asymmetric information (Drazen, 2004). A third argument stressing political factors is that deficits are used to constrain successor governments who may have different spending preferences (Alesina and Tabellini). Finally, a transitory accumulation of debt can also be caused by the postponement of fiscal adjustment after a cyclical downturn.

The last type of bias highlighted by that Fatás (2005) is *(d) intergenerational unfairness/inequity*. Children and the unborn do not have lobbying power in that they cannot vote, and are thus underrepresented in the political process. Hence, the short horizons under which governments and politicians operate, and that fact that future generations cannot participate in the political process, can result in excessive deficits in the present, which build up public debt and pass it on as a burden to those generations (see also Basseto and Sargent, 2006; and Morris et al., 2006).

Drazen (2004), Wyplosz (2005), and Morris et al. (2006) further mention that fiscal policy may also suffer from a deficit bias driven by time inconsistency. In parallel with monetary policy, fiscal policy has a long-run and a short-run objective. The long-run objective is debt sustainability. In the short run though, fiscal policy may also stabilize output over the business cycle. For instance, this is the only stabilization tool left at the national level in the European monetary union. Then, a standard argument for rules over discretion for a social welfare maximizing policymaker concerns cases where first, individual behavior depends on expectations about future policy, and second, the policymakers is limited in his choice of policy instruments. If he can change policies over time, he will often have the incentive to announce one policy for the future and then implement a different policy when it comes time to carry out his policy announcement. Rules, therefore, would aim at binding fiscal policy in the short run.

Related to the latter is also the bias due to coordination problems with the policy mix: fiscal and monetary policies (Wyplosz, 1999). Both governments and central banks are concerned with inflation and output gap. The outcome is the existence of two biases: an inflation bias and budget deficit bias. The central bank is ultimately deciding on the inflation rate and is responsible for the inflation bias. Given the legislature nature of the budgetary process, governments act less frequently than central banks do. They must anticipate the central bank's ultimate choice of inflation, possibly influencing its choice by affecting output. Thus, governments set their budget with several motivations in mind: the output-inflation trade-off and the central bank's own perception of, and reaction to,

this trade-off. The result is the perception by governments of a trade-off between inflation and the budget deficit. This makes then the two authorities strategic substitutes, the more inflation is tolerated by the central bank, the less incentive for the government to attempt to expand through a deficit. Conversely, the more expansionary is the deficit the lower is the central bank's incentive to inflate.

Finally, *fiscal illusion*, a notion already formalized by Buchanan and Wagner (1977), can be also considered as an origin of deficit bias. Faced with deficit-financed expenditure, voters overestimate the value of the expenditure and underestimate the future tax burden. Hence, popular policies such as higher spending and/or lower taxes, even if not sustainable, create incentives for politicians to behave myopically. This is especially true in periods preceding elections, giving rise to *electoral cycles*. Such behavior is also likely to lead to asymmetric stabilization with higher deficits during recessions and more limited or no surpluses in booms.

Even though all those possibilities of deficit biases, why should we care about them? As Fatás (2005) explains, they cause governments to set a fiscal stance that is not appropriate given the cyclical position of the economy. The accumulation of debt leads either to default or to a large fiscal adjustment. In both cases, negative effects on economic volatility and the business cycle might occur as a consequence of the crisis or the large fiscal adjustment. Thus, in many cases the build up of excessive deficits leads to scenarios that can be a source of business cycle volatility.

Moreover, those deficit biases may be even greater in a monetary union (see Tornell and Velasco, 2000; Coeuré and Pisani-Ferry, 2005; and Anett, 2006). With a common currency, the exchange rate risk and the related interest rate risk premium associated with bad fiscal policy takes a much longer time to show up, decreasing the potential disciplinary effect of fiscal policy. Price stability might also be jeopardized if the monetary policymaker faces pressure to lower interest rates and inflate away the debt. Moreover, a country running into fiscal difficulties could be bailed out by other countries or by the common central bank, especially if this path would stave off a banking system crisis, which could increase moral hazard (see, for instance, De Grauwe, 2003; Buti and Giudice, 2004; and De Grauwe, 2006).

However, a monetary union can also induce greater fiscal discipline, ruling out therefore the need for fiscal rules. A monetary union dilutes the strategic influence of any single government over the monetary authority, since it is only one of several governments in that position and all may not face the same circumstances (Masson and Patillo, 2001). Nevertheless, fiscal policy coordination may have the perverse effect of once again strengthening the hand of the governments over the central bank (Beetsma and Bovenberg, 1998). A second favorable effect of a monetary union is to provide an "agency of restraint" over macroeconomic policies (Collier, 1991). By joining the union, countries voluntarily sign on to conservative monetary and fiscal policies, and hence would be reinforcing domestic tendencies in that direction. This is more likely to be effective if there is some external

link and external currency peg. For instance, the CFA franc zones in the Western African countries have a fixed peg to the French franc (now the euro), as well as a guarantee of convertibility of their currency from the French Treasury.

Therefore, the debate on the costs and benefits of fiscal policy rules and restrictions is a complex one, as it deals with a variety of economic issues for which there is no clear consensus. Fatás (2005) points at least two levels of the discussion where there is disagreement and often a lack of clarity. The first relates to what constitutes good (or bad) fiscal policy. For him, while there is consensus that, if left alone, policy makers will make fiscal policy decisions far from their optimal level, there is no consensus on what constitutes poor fiscal policy management, and, more importantly, what its costs are. The second issue that follows is how to build fiscal policy rules that are optimal.

1.2 How are fiscal rules and restrictions implemented?

One approach to ensuring fiscal discipline would be to rely financial markets (see, for example, Wyplosz, 1997, Morris et al., 2006, and De Grauwe, 2007). To the extent that markets price risks correctly, the demand for the public debt issued by the various governments could act as both a barometer and a constraint. However, historical experience suggests skepticism about the ability of markets to impose discipline in this way. As Morris et al. (2006) discuss, there is a widespread perception that, due to asymmetric information and incentive problems, the reactions of financial markets to fiscal developments can be deficient (i.e. they exhibit delayed, volatile and non-linear behavior).¹ Given the difficulties of markets in inducing fiscal discipline, this section describes some of the types of fiscal rules and restrictions imposed to ensure such discipline. It also describes some of the issues related to the design of those restrictions.

1.2.1 Classes of fiscal restrictions

Several different designs of fiscal restrictions are currently implemented in the world. These can be divided in different classes.

Numerical rules

Legislated quantitative fiscal constraints on fiscal policy (or *target-oriented* approach - von Hagen and Harden, 1995) are perhaps the most well known class of fiscal restrictions. These rules can be broadly defined as a permanent constraint on fiscal performance (Gold-fajjn and Guardia, 2004), or more formally, as a statutory or constitutional restriction on fiscal policy that sets a specific limit (or an upper ceiling) on a fiscal indicator such as

¹Balassone et al. (2004) suggest that the effectiveness of the markets in inducing fiscal discipline requires certain conditions: no government body should have privileged access to the market, the market should have access to all the information necessary to evaluate the financial conditions of each government, bailing out troubled governments should not be allowed, and the public authorities should react to market signals.

the budgetary balance, debt, spending or taxation (Kennedy and Robbins, 2001). As this last definition mentions, they may take several forms, for example: restrictions on deficit financing, including balanced-budget laws; expenditure ceilings; numerical targets for fiscal variables; borrowing rules; and restrictions on issuance of debt (Drazen, 2004). Their severity, moreover, depends on the degree of coverage of the government sector, the fiscal indicator chosen, and the threshold being targeted (Buti and Giudice, 2004).

Golden Rules Among the numerical fiscal rules, one that has been discussed extensively in the literature is the so-called “*golden rule*”. (see Blanchard and Giavazzi, 2003; and Creel, 2003). This type of fiscal rule is contingent on the amount of public investment. It attenuates fiscal restrictions, when debt (deficit) is generated to boost public investment. The usual argument used is that fiscal constraints should not restrain public investment, which increases the stock of capital and therefore, output. Instead, it should reward government expenditures that promote a more productive economy, even though the possibility that public investment pays for itself do not receive strong empirical support (see Fatás, 2005).

Moreover, a “golden rule” provides a proper accounting framework. Capital expenditures are different from current expenditures. It also provides a framework to think about debt sustainability. Given that net investment represents an increase in the assets of the government, it should be removed from the borrowing constraints even if the goal is to keep net debt equal to zero. Golden rules help also to mitigate the strong contractionary effects on output of fiscal consolidations, facilitating the success and public (and political) survival of those consolidations. In this way, they also ensure popular support. Given the different nature of public investment and the fact that it is perceived by some as a productive investment, leaving it out of the strict constraints on fiscal policy rules might look more reasonable in the eye of the public and therefore, find less political opposition.

Another strong arguments in favor of a “golden rule” are those of transparency and intergenerational fairness (see Fatás, 2005; and Basseto and Sargent, 2006). Transparency follows immediately from the first two points. Given their different nature, only by separating current and capital expenditures governments can provide an accurate and transparent picture of the fiscal policy stance. Regarding intergenerational equity, there is a need to differentiate between expenditures that benefit the current generation and those whose benefits will be spread over the current and future generations. While some forms of expenditure should be financed by current revenues (so that they are paid by the current generation), there is no reason to force the current generation to pay for spending that will render services over a long horizon (see also Basseto and Sargent, 2006).

Nevertheless, Eichengreen (2003) points as the main problem of golden rules the identification of productive public investment. As the author comments, governments on the verge of violating a fiscal target or upper threshold would be tempted to relabel current spending as public investment. More fundamentally, not all public investments are equally

productive; not all public construction projects have positive rates of return. In the same vein, Beetsma and van der Ploeg (2007) highlight the political bias that this type of rule may create for too much public investment and government borrowing. Those authors demonstrate that indeed in a partisan set up, governments have incentives to over-invest in ideologically motivated public investment projects.

Procedural restrictions

Restrictions imposed on the procedure by which fiscal decisions are taken (or *procedure-oriented* approach - von Hagen and Harden, 1995) are another type of fiscal constraint. These restrictions may concern fiscal policy formulation, as well as the actual execution of policy. They may involve institutional arrangements according to which government budgets are presented, adopted, and executed.

Buti and Giudice (2004), for instance, divide these procedures in "hierarchical" and "collegial". They claim that the former is more conducive to fiscal discipline than the latter. Hierarchical procedures attribute strong authority to the *prudent* finance minister to overrule spending ministers during the intragovernmental preparation of the budget, limiting in this way the ability of the parliament to amend the government's budget proposals (delegation) and avoiding the common-pool problem (van der Ploeg, 2007).²

Commitment, whereby the different parties negotiate a "fiscal contract" involving strict budget targets, is another type of procedure or budgetary coordination. Those authors claim that delegation may be more suited to single-party governments, or where there are few policy differences on the budget. Commitment is the more logical choice for diverse coalitions, where the threat of breaking up the government serves as the enforcement mechanism. Finally, the mixed system is the one whereby the finance minister is granted a strong role in setting the budget, and this is followed by a negotiated agreement with parliament. This system may work well with single-party minority governments, where the budget is set by one party and then negotiated with the opposition to secure passage through parliament.

In the comparison between the two classes of fiscal restrictions, von Hagen and Harden (1995) argue that a *target-oriented* approach is adequate when the externality problem is large but the private gains from spending are relatively small, while a *procedure-oriented* approach is needed when the private gains from spending are large. Those authors suggest that the choice between these two approaches depends on the political environment of the government under consideration. Specifically, multi-party coalition governments will find a target-oriented approach more adequate as it emphasizes collective decision making rather than dominance of one or a few leading cabinet members.

²Van der Ploeg (2007) shows that a *prudent* minister of finance is one who deliberately underestimates future national income and the tax base, and sets the tax rate accordingly higher and public spending lower in order to minimize common-pool distortions.

Nevertheless, Drazen (2004) suggests that a fiscal restriction is more likely to be effective the more it addresses the specific cause of the problem, which then would favor procedural- instead of numerical rules. In addition, Fatás (2005) surveys empirical studies and shows that the design of budget processes (*e.g.* the relative power assigned to the Finance Minister and the importance given to budgetary targets), or different degrees of political constraints (*e.g.* number of veto points in the budgetary decisions) can have a significant impact on the size of budget deficits, on the success of fiscal consolidations, and on the volatility of discretionary changes in the budget.

Given those last points in favor of procedural restrictions, Drazen (2004) asks why there exists often a preference for simple numerical rules? A key reason according to him may be that both policymakers and the public are not convinced that procedural reforms will yield as unambiguous a discipline as simple numerical targets. A drawback of numerical rules, however, is the incentive to creative accounting, which entails a loss of information about the government's true budgetary situation and may reduce the credibility of the commitment to fiscal discipline. Two points discussed later in this chapter.

Stabilization funds

An alternative class of fiscal restriction pursued in a number of resource-abundant economies consists in accumulating part of the resource revenues in a stabilization fund, for smoothing the impact of short-term volatility, or in an endowment fund, for promoting long-term sustainability. A fund can make the treatment of resource earnings more visible, if subject to strict transparency requirements and if transfers between the fund and the government budget are embedded in a coherent macroeconomic framework. Because a basic function of the fund is to cover the budget deficit (while reflecting changes in government net financial worth), the fund cannot be separated from budgetary operations. Thus, potentially, the fund becomes the centerpiece of any effort to establish fiscal rules to ensure stability in the short run and sustainability in the long run.

Fiscal policy committees

Another proposal that has attracted a lot of attention is that of creating independent Fiscal Policy Committees (FPC) responsible for fiscal stabilization policy to overcome the political bias problems in fiscal policy (see, for instance, Eichengreen et al., 1999; Jonung and Larch, 2004; Andersen, 2005; Buti et al., 2005; and Wyplosz, 2005).

Andersen (2005) and Buti et al. (2005) comment that various proposals have been made in the literature for the structure and mandate for such committee. The main idea is that politicians should decide on the overall structure of fiscal policy depending on the political preferences for public sector activities given the constraint of fiscal sustainability. The FPC is entrusted with the responsibility for short run changes in fiscal policy aiming at stabilizing the economy. A more soft version of the idea is that the FPC does not have any formal decision power, but could be entrusted with the task of monitoring and

assessing policy proposals and decisions thereby improving visibility and transparency, raising the political cost of opportunistic policies. As such, however, they appear more as a complement than as a substitute for numerical rules.

Therefore, while intellectually appealing, several authors conclude that one problem with the proposal is that it implicitly relies on the perception that it is possible to separate the tasks of allocation distribution and stabilization for governments. However, fiscal policy to a larger extent relates to distributional issues. Hence, the separation between setting a target for the budget balance (to be entrusted to the FPC) and the allocative and distributive functions (to remain in the responsibility of government and parliament) may turn out to be difficult. Another point is that an attempt to separate stabilization and allocation may restrict the feasible policy options. It is therefore hardly realistic to foresee politicians accepting the idea of an independent FPC as easily as an independent central bank for monetary policy.

Eichengreen et al. (1999) advocate this type of proposal, in particular, to Latin American countries. Those authors mention that institutional reforms are often thought of as choices between rules and discretion. Rules strengthen the ability to commit at the cost of flexibility; they are appropriate for economies which place a premium on the credibility of the policy process and operate in a relatively stable environment. In turn, discretion maximizes the responsiveness of policy; it is attractive to economies that place a premium on flexibility in a volatile environment. But those authors claim that a credibility-flexibility trade-off is unattractive for Latin America, where a history of high inflation implies a high shadow price of credibility, but at the same time the volatility of the economic environment implies a high shadow price of flexibility. So, for them an alternative that combines credibility with flexibility is to delegate the decision over the maximum permissible change in the public debt - the debt change limit (DCL) - to an independent national authority (i.e. an FPC). They argue that an independent agency with monitoring capacity and enforcement powers would be able to provide the signaling functions for external creditors currently supplied by the IMF. The advantages of a FPC relative to relying on the IMF are two-fold. First, unlike IMF programs, which tend to be negotiated only in times of crisis, the FPC would monitor the budget continuously, making fiscal policy less disruptive and the commitment to sound public finances more credible. Second, any restriction placed on the fiscal prerogatives of the Congress would be domestic in origin rather than being imposed from outside.

Nevertheless, as already briefly mentioned, the enactment of any of those fiscal rules and restrictions raises a number of issues regarding flexibility, credibility, and transparency. So, the rest of this section is devoted to the analysis of those concerns.

1.2.2 Flexibility of fiscal restrictions and countercyclical fiscal policy

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 (Kennedy and Robbins, 2001). In many OECD countries, as Chapter 4 of this thesis evinces, fiscal policy has a positive bias in the sense that expenditures are raised in a recession, but are not lowered in an expansion to balance the budget over the cycle.

A formal theoretic motivation for why fiscal policy should be countercyclical comes from Andersen (2005), for instance. That author, as many others, defends that fiscal policy should then primarily be left to the automatic stabilizers, which can be interpreted as providers of social or implicit insurance. They can be seen as the response to aggregate shocks and also serving a purpose in addressing idiosyncratic shocks.

However, do fiscal rules really hinder countercyclical fiscal policy? The empirical evidence is mixed. Some studies claim that the Maastricht Treaty and the SGP made European policy makers give up on output stabilization, concentrating instead on not letting the primary deficit get too large during recessions (Hughes-Hallet and Lewis, 2005; Cimadomo, 2007; and Chapter 4 of this thesis). Other authors, however, suggest that fiscal rules do not hinder countercyclical fiscal policy (e.g. Galí and Perotti, 2003; and Canova and Pappa, 2004). Canova and Pappa (2004), in particular, claim that over the last two decades, fiscal policy in the US and Europe has hardly focused on macroeconomic stabilization in any case. That happens for two complementary reasons. First, given the lags in the legislative process, discretionary fiscal policy may be unable to counteract business cycle fluctuations. Second, since automatic stabilizers are roughly given at business cycle frequencies, and since their share in total expenditure is typically large, also the non-discretionary component of expenditure cannot vary substantially over the cycles.

Furthermore, supporters of fiscal restrictions suggest that the medium term benefits of limiting government actions dominate the short run costs incurred by the inability of fiscal policy to react to business cycle conditions. This argument is usually based on two principles. First, by limiting the ability of governments to run politically motivated deficits and unsustainable levels of debt, fiscal constraints make governments more credible, reduce the suboptimality of political games, and induce a smoother path for taxes, which is the optimal policy to follow in a number of theoretical models. Second, since fluctuations in expenditure may have been themselves a source of undesirable fluctuations, restraining fiscal policy may actually stabilize the economy.

1.2.3 Credibility and enforcement of fiscal rules and restrictions

Credibility is perhaps the main concern regarding the adoption of fiscal rules and restrictions. Drazen (2004), for instance, analyzes how legislated rules, especially on outcomes, can be effective and make policy more credible than simply an announced commitment

to the same goal. For him, governments truly committed to fiscal discipline build a reputation for sound budget policy and hence make credible their announcements to that effect, while governments not committed to fiscal discipline find ways to get around fiscal rules and restrictions. So, rules matter when politicians are predisposed to act in a fiscally disciplined manner. They strengthen politicians who want to be fiscally prudent, but they do not stand in the way of those who are determined to spend more than the rules allow (Schick, 2004). In this way, rules are not necessarily self-enforcing; they have to be willed into existence and sustained by political commitment and broad public consensus.

Nevertheless, those two authors see important differences between promises that have no legal backing *per se* and laws. One primary difference is that laws have *penalties* attached to them, so that there are explicit costs to breaking them. They (and institutions in general) *raise the cost* and *lower the benefit* from deviating from a given policy. In this way, a balanced-budget restriction in the constitution sends the signal that a society attaches fundamental importance to it. However, since constitutional laws are meant as an extreme form of commitment (and hence loss of flexibility), Drazen (2004) suggests that this solution should be used for fiscal restraint when other solutions have been tried, but have repeatedly failed.

Another way in which fiscal rules and restrictions can make the commitment to fiscal discipline more credible than simply an announcement commitment to deficit is the *signal* itself that their adoption conveys (Drazen, 2004). This is particularly true in emerging markets (Kopits, 2004-a). However, the effectiveness of signaling in enhancing reputation and reducing vulnerability depends on public perception of the authorities' readiness to match policy announcement with commensurate action (Kopits, 2004-b).

Enforcement is another very difficult question that arise in designing balanced-budget rules (Poterba, 1996). Adequate enforcement requires that compliance with a restriction is assessed *ex post* and not only *ex ante* (Morris et al, 2006). Many fiscal rules and restrictions have both explicit monitoring of the fiscal authority by some other agency as well as explicit penalties. The formalization, and the consequent visibility, of a rule may create new mechanisms and reduce the costs to monitor compliance. Another type of penalty is that failure to meet a fiscal policy target triggers an automatic expenditure cut of some sort.

There are other penalizations as well. Rules and restrictions cannot force legislators to be fiscally responsible; however, they may significantly increase the public's awareness of deviations from fiscal responsibility by means of negative publicity. Therefore, further compliance with those constraints should be open to scrutiny by individual citizens or groups, who should be able to request an investigation. However, the power to voters to influence policymakers's behavior depend on the degree of budget transparency and on the possibility that the deficit bias occurs due to electoral incentives and not because of the political institutions *per se* (Debrun and Kumar, 2007).

Further, penalties for non-compliance should be sufficiently large. It should also be

difficult for politicians to change the rules themselves. In the same line, Schick (2004) argues that fiscal restrictions may be even more powerful if they are an embedded norm that have been upheld for generations. For that author, many contemporary budget innovations seek to alter the cost-benefit ration of budgetary politics. These restrictions changes are effective only when budgeting is transparent, the media and interest group are attentive, and citizens feel they can influence public policy.

Therefore, the influence that rules and restrictions have on fiscal behavior depends on their design and the way in which they are implemented. At least, one of three types of enforcement: 1) exogenous enforcement, 2) self-enforcement, 3) signaling to external players; must be in place (Braun and Tommasi, 2004). In particular, the restrictions and their rationale need to be understood and supported by all parties concerned (i.e. politicians, voters and markets) and credible enforcement mechanisms need to be in place (Morris et al., 2006). Thus, next section summarizes some of the principles gathered in the literature that should drive the design of fiscal restrictions.

1.2.4 Guidelines and optimal design of fiscal rules and restrictions

Fatás (2005) argues that even though fiscal constraints seem to restrain the behavior of the government, they can also have undesirable side effects. In the trade-off between the positive effects they have on budget outcomes and the costs they impose because of their restrictiveness, there are several optimality principles and guidelines for their design around which the literature seems to have found a consensus (see Kopits and Symanski, 1998; Buti et al., 2003, 2005; Perry, 2003; and Morris et al., 2006). Those are:

- *Well defined*: The indicators that serve as targets, their institutional coverage (e.g. general versus central government) and the specification of escape clauses should be clear in order to facilitate monitoring and prevent creative accounting.
- *Transparent*: The goal that fiscal rules are designed to achieve has to be clear. As such, they should not be overly complicated and should not be easy to manipulate. Accounting, forecasting and institutional arrangements should be clearly communicated, thereby reducing the scope for creative accounting or misrepresentation of facts.
- *Adequate*: Rules and restrictions should be geared to the corresponding policy objective.
- *Simple*: Rules should be simple in order to enhance their appeal to politicians and the public.
- *Flexible*: Not all circumstances that affect public finances can be anticipated, and some flexibility is desirable to accommodate exogenous shocks beyond the control of the authorities, for example, by allowing the operation of the automatic stabilizers.

- *Consistent*: Fiscal restrictions should be consistent both internally and with other macroeconomic policies or policy rules.
- *Enforceable*: For a rule or restriction to be effective, it needs to be easily enforced. Hence, they should be backed by appropriate constitutional or legal norms, and the consequence of non-compliance, whether in the form of financial, judicial or reputational sanctions, should be clearly agreed upon.
- *Efficient*: Fiscal rules and restrictions should be supported by efficient policy actions.

Kopits and Symanski (1998) and Morris et al. (2006) point out that no fiscal constraint can fully combine all those desirable attributes, so when designing a restriction the policymaker has to balance those principles and find the best design given its policy objectives.

In addition, for Eichengreen et al. (1999) and Beetsma and Debrun (2007), in theory, contingent rules (rules with escape clauses) combine the advantages of the rules- and discretion-based approaches. Policy is constrained by rules except in the event of an observable, independently verifiable contingency not of the authorities own making. A contingent rule could, for instance, require that the budget be balanced except in the event of an exogenous macroeconomic disturbance or to allow the implementation of structural reforms (see Chapter 3 of this thesis; and Ribeiro and Beetsma, forthcoming). However, in practice it is difficult to satisfy the prerequisites for the operation of contingent rules. If the contingency cannot be observed and verified, politicians will be inclined to invoke it even when it has not occurred. If the contingency is manipulable, the authorities may provoke its occurrence in order to relax the rules-based constraint. Under these circumstances, the existence of an escape clause may be destabilizing.

In the context of a monetary union, Coeuré and Pisani-Ferry (2005) emphasize three desirable properties of a fiscal framework. It should be conducive to public finance sustainability; it should leave room for stabilisation; it should not discourage, and possibly encourage, structural reform. Moreover, the use of expenditure rules in a supranational context should be disregarded (see Buti et al., 2005). First, uniform spending rules would *de facto* impose homogeneous social preferences to politically heterogeneous countries while country-specific rules would be difficult to enforce. Second, spending norms do not refer to the fiscal variables which can produce negative externalities: while a rising deficit or debt level in one country can create area-wide problems, a rising expenditure level as such does not have negative repercussions on other countries. Moreover, expenditure rules cannot prevent deficit and debt increases stemming from tax cuts. Therefore, they would have to be complemented by a debt rule, which would prevent countries to expose themselves and the others of the union to a debt default (De Grauwe, 2007). Third, since no uniform expenditure to GDP ratio can be prescribed, countries would be required to indicate targets for the expenditure ratio consistent with the desired deficit ratio.

For economies with large reserves of nonrenewable resources Bjerkholt and Niculescu (2004) argue that fiscal policy must contend with the additional tasks of phasing in the resource revenue, reallocating over time the resource earnings relative to the depletion and earnings profile, and protecting against the destabilization and possible default due to unfulfilled expectations. Those authors suggest that a balanced-budget rule might not be a desirable option for two reasons. First, an economy drawing down natural resource wealth, taking the depletion rate as given, may have good reasons for intertemporal redistribution of the liquidated wealth, including to generations living beyond the terminal phase of exploitation. Second, even absent intertemporal concerns, a balanced budget rule would need to be modified (by specifying in terms of a structural balance) to avert procyclical impact of high volatility in resource earnings; in other words, revenue used would have to be decoupled from the current resource earnings.

For emerging markets, Perry (2003) suggests that structural balance rules should form the basis of future attempts to establish Fiscal Responsibility Laws (FRLs) and Stabilizing Transfers for subnationals. Like Bjerkholt and Niculescu (2004), that author assesses that most recent designs of FRL rely excessively on rigid quantitative ceilings that do not take into account the effects of shocks or the economic cycle. They are thus likely to accentuate procyclicality of fiscal policies and to prove non sustainable in the end. Those countries that are not yet in the capacity of adopting credible structural balance frameworks and rules, may benefit from considering more simple rules that would limit (real) expenditure growth to a moving average of past (real) revenues increases. Structural goals would be set according to fiscal consolidation needs. Thus, a country that starts below a sustainable structural balance should set goals that permit a gradual approximation to the required level. Perry (2003) also believes that it would be useful if the IMF decide to use systematically a structural balance framework when examining and discussing the fiscal stance of all countries and set the goals of programs accordingly. Moreover Kopits (2004-b) claims that permanent balanced-budget requirements or limits on public debt, implemented convincingly with the aim of reducing the public debt ratio to a sustainable path, over time can confer considerable benefits, including a likely decline in risk premia and thus in interest rates. In turn, the falling cost of capital paves the way for increased private investment and growth.

On the other hand, Braun and Tommasi (2004), argue against what they call a simplistic view that sees the writing of numerical limits on fiscal variables as the solution to fundamental fiscal problems. They suggest that international organizations should take a more comprehensive approach when dealing with fiscal problems of developing countries. Such an approach requires a deep understanding of the determinants of undesirable fiscal outcomes in each particular case, which in turn requires some explicit political analysis.

The gist of their argument is that the root of fiscal problems lies in politico-institutional factors, such as the incentives for fiscal profligacy at the local level caused by inadequate federal tax-sharing schemes, or the incentives for public spending caused by principal-agent

type of problems. But for them, fiscal rules that do not address these underlying issues have a limited capacity to solve fiscal problems, and might even be counterproductive.

1.2.5 Subnational fiscal policy restrictions

In the context of subnational fiscal restrictions, Braun and Tommasi (2004) and Gonzalez et al. (2004) diagnose that the poor subnational fiscal behavior comes from large vertical fiscal imbalances, tax-sharing regimes with little incentives to raise taxes, several political motives by which the federal government would be willing to bail out provinces, and lack of enforcement of intergovernmental agreements.

Therefore, Braun and Tommasi (2004) suggest a general strategy to improve that behavior that should include: (a) reforms to the electoral mechanisms to lower the dependency of national legislators on local party elites; (b) reforms to the instruments of legislative interaction between the President and Congress; (c) reforms to the budget to curtail some Executive discretion, limiting the ability to perform bailouts; (d) institutional reforms to intergovernmental relations; (e) reforms to the tax-sharing agreement to improve the connection between the taxes raised and the public goods consumed within each jurisdiction; (f) macro-fiscal rules to guide through this transition towards a more cooperative fiscal stance.

Moreover, in order to improve fiscal performance in a sustainable and efficient manner, those authors highlight the need to focus on the determinants of fiscal behavior. In each country, the main deficiencies need to be identified, together with a complete diagnostic of their fiscal and political determinants. For them, fiscal rules and restrictions can be a useful instrument to accompany the transition path. On the other hand, an excessive focus on rules might lead to a risky sense of security when one sees such rules in place.

Regarding stabilization rules for national-to-subnational fiscal transfers, Gonzalez et al. (2004) argue that the following conditions should be in place before establishing them: (i) subnational governments should be credit constrained; (ii) the national government should have stable access to credit and quality debt management; (iii) there should not exist severe structural fiscal imbalances, either within or across levels of government. In other words, neither level of government faces unsustainable cyclically adjusted fiscal deficits. In addition, subnational governments do not spend excessively with financing by automatic transfers.

For that author, the federal level should play the predominant role in macroeconomic stabilization. In these circumstances, it would be efficient for the federal level to stabilize federal transfers during the downturn, so that it would be the one to borrow. However, if the federal government is on the brink of insolvency, or if there are long-term structural imbalances at the subnational level being financed by the current system of transfers, the stabilizing transfers may only complicate or even worsen the initial problems.

Moreover, there are at least four types of arrangements for subnational governments that protect themselves with a cushion against macroeconomic shocks. First, subnational

governments may maintain some margin to increase their revenue. Second, they may keep spending flexibility, especially with a deferrable investment program, without allowing close to 99 percent of revenue to finance wages and debt service. Third, they may build a state reserve to pursue other alternatives. Fourth, they may establish a secure credit line, available in times of fiscal distress.

All in all, the design of fiscal rules and restrictions must carefully balance incentives and constraints and include intratemporal and intertemporal considerations. As Canova and Pappa (2004) comment, critics and supporters of fiscal constraints do agree on one fact: deficits and debts have distributional effects which may have long lasting repercussions and, therefore, when designing the fiscal restriction these repercussions should be taken into account.

1.3 Where are fiscal rules implemented?

This section summarizes some of the most important experiences with fiscal rules around the world recently. We start by discussing the Maastricht Treaty and Stability and Growth Pact in the European Union. Then, we describe some other recent experiences with fiscal rules both in developing and developed countries.³

1.3.1 The Stability and Growth Pact

Historical background: the last sixty years of fiscal policy in Europe

Buti and Sapir (2006) makes a historic review of fiscal policy in Europe since the end of the Second World War. They divide those sixty years of public finance in Europe in two main periods: the ‘Golden Age’ between 1945 to 1973, and the most recent thirty years.

As those authors describe, in the first thirty years, Europe witnessed a ‘Golden Age’ of growth, stability and social cohesion, created by the post-war economic and social environment. Throughout that period, the size of welfare state increased considerably in Europe. By 1970 the share of total government expenditure in GDP reached between 35 and 40 percent in most countries - not considerably higher than in the United States, where total government expenditure stood at 32 percent of GDP.

Those authors claim that most of the economists in that period followed Musgrave (1959) and perceived the government as having three major economic roles: the provision of public goods and other measures to correct for market failures and improve the allocation of resources; the redistribution of income to achieve equitable distribution of income among households; and the stabilization of economic activity to attain high levels of employment

³One should be careful on comparing those rules though. In particular, the European with other national fiscal rules, since as Wyplosz (1997) well highlights, in true federations, the central government is as large as the lowest-level governments, and is in charge of macroeconomic stabilization. In Europe, in contrast, the equivalent of a central government is the European Commission, which is not allowed to run deficits and whose spending is irrelevant in terms of the Europe Union’s gross domestic product.

with reasonable stability of prices. Higher taxes and social expenditures were seen as means not only to improve the distribution of income, but also to improve the allocation of resources and growth (by correcting market failures in the labour market) and to promote the stabilization of output. Moreover, the high growth rates helped to keep debt under control thereby ensuring the sustainability of public finances. There appeared to be no trade-off between allocative efficiency, redistribution and stabilization.

Buti and Sapir (2006) show, however, that the favorable development with respect to debt sustainability during that period was due mainly to a ‘snow ball’ effect rather than to underlying public finance decisions. The combination of high GDP growth rates and low real interest rates produced negative ‘snow ball’ effects that led to substantial declines in public debts. In that period, public finance also tended to play a stabilization role, in particular after 1961. Public debt decreased in ‘good times’ and increased in ‘bad times’ in Germany and Italy, for instance.

Turning to the most recent thirty years, the period from the mid-1970s to the mid-1980s was characterized by a combination of slow growth and high unemployment, resulting in increased demands for social protection and leading to severe consequence for public finances. The share of total government expenditure in GDP grew rapidly after 1973, reaching 45-50 percent in many European countries in 1985 - an increase of more than 10 percentage points compared to 1970.

By the mid-1980s, as those authors comment, Europe was stuck in a negative spiral: lower GDP growth and employment rates meant increasing public expenditure, which required increasing public revenue, which in turn implied higher social contributions and higher direct taxes, thereby reducing the incentive to work and to invest, hence further reducing the prospects for output and employment growth.

For them, the reason why Europe seemed durably trapped in this spiral was twofold. First, the shocks to the system were long-lasting. The slowdown of growth was initially not perceived as permanent which led policy makers to bet on stabilization rather than adjustment. After the two oil shocks of 1973 and 1979, Europe was confronted then with population ageing, the information technology revolution and globalization, all of which substantially increased the demand for social protection. Second, the system seemed politically unable to reform itself and to establish a new social contract aimed at increasing growth and preserving social welfare.

During that period, public debt increased during both good and bad times in France, Germany and Italy. By contrast, in the United Kingdom, public debt continued to decrease during both good and bad times. In other words, from 1973 till the mid-1990s there was an emergence of trade-offs between allocative efficiency and redistribution.

The combination of high levels of public expenditure and a high share of it devoted to social spending is therefore the main feature of European public finance for the past 30 years. It contrasts sharply with the situation that prevailed during the 30 years after World War Two, when public expenditure was much lower and the share of it devoted to

social spending was also lower.

This high level trend of public expenditure was already identified in the beginning of the discussion regarding the formation of the European Union. The Delors' report, a document prepared in 1989 under the chairmanship of the then President of the European Commission (Jacques Delors), already outlined as necessary institutional arrangements to guarantee fiscal stability. This report portrayed the path towards economic and monetary union and culminated in the famous Maastricht Treaty, signed by the finance and foreign ministers of the European Union on 7 February 1992 in the Dutch city which gives its name.

The design of the Maastricht Treaty and the SGP⁴

The Maastricht Treaty (MT) updates and incorporates the 1957 Treaty of Rome, the founding act of the European Community, and incorporates the Single European Act implemented in 1992 (free movements of goods, people and capital). It is based on a strict stability orientation. The founders of the European Union were aware that only a monetary union based on growth and price stability could be successful and that for this it would be necessary to acquire the unqualified confidence of citizens and markets alike in the single European currency (Stark, 2001). In terms of fiscal policy, its main goal was to ensure that only countries with a sufficiently good fiscal track record could enter the euro area in order to prevent fiscal crises that would negatively affect other countries (see Articles 101 to 104 of that Treaty).

The Treaty sets out convergence criteria that must be satisfied in order for countries to participate in the European Economic and Monetary Union (EMU). It is formally structured around three stages. The first stage began in 1992 with the formal ratification of the treaty. During the second stage, started in January 1994, national central banks were given formal independence and ceased to grant direct loans to their nation's treasuries. The shift to the second stage also coincided with the establishment of the European Monetary Institute (EMI), with two main functions. One was to prepare the creation of the European Central Bank, whose statutes and mission are actually laid out in the Maastricht Treaty. The other function of the EMI was to oversee the 'convergence criteria' which is used to decide which countries are ready to enter the monetary union, marking the beginning of Stage III. This happened in January 1, 1999 when a sufficient number of countries met the convergence criteria.

Under the Treaty, fiscal discipline was 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 could be made with respect to the deficit criterion if the ratio of the deficit to GDP has declined significantly and was close

⁴For more information on the creation of the SGP and how that pact works see, for example, Stark, 2001; Costello, 2001; and Cabral, 2001.

to the reference value, or if the excess was only temporary and the ratio remained close to the reference value. Exceptions could be made with respect to the debt criterion if the debt-to-GDP ratio was diminishing at an acceptable pace.

The MT 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 and its “excessive deficit procedure” were settled in June 1997 and took effect when the euro was launched on January 1, 1999; even though the first thoughts on them were first presented during a meeting of the ECOFIN in Brussels on September 1995 (Stark, 2001). The “excessive deficit procedure” makes permanent one of the entry convergence criteria, the 3 percent deficit/GDP ceiling. It defines the ‘exceptional conditions’ under which a country may be temporarily allowed to breach the ceiling, and it specifies how noncompliant countries will face first private, and then public reprimands, before being fined. Moreover, the SGP also 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 was considered to be especially important since member countries can no longer rely on the exchange rate instrument to dampen economic shocks.

The SGP also provided 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). Each country must submit every year to the EU Commission its budget forecasts for the three following years. In the case of an excessive deficit in a country participating in the euro area, a course of remedial action would be proposed, which should be implemented within ten months. Otherwise, the country could be subject to sanctions in the form of a mandatory non-interest bearing deposit, which could vary in size with the magnitude of the excessive deficit, up to a maximum of 0.5 per cent of GDP. If the excessive deficit was eliminated within two years, the deposit would be returned to the country. If it is not eliminated within that time frame, the deposit would become a fine.

Reform of the SGP

The SGP nevertheless proved to be a hard policy to be implemented and enforced. Therefore, on 22 and 23 March 2005, the EU finance ministers reached a deal on reforms to the pact at an extraordinary meeting in advance of the EU summit of heads of state and government in June of the same year. This reform changed several items of the previous pact in its both preventive and corrective arm.

Under the preventive arm, Morris et al. (2006) discuss that the reform introduced various refinements to the earlier provisions concerning the setting of an progress towards sound medium-term budgetary positions and to the elements that are to be taken into account when assessing Member States’ fiscal positions. These include:

- *The definition of the medium-term budgetary objective and the adjustment path toward it:* Rather than being required to target "close to balance or in surplus" budgetary positions, each Member State now presents its own country-specific medium-term objective (MTO) and its stability and convergence program on the basis of debt ratios and potential growth rates, which is then assessed by the Council. Targets are specified in structural terms, i.e. cyclically-adjusted and net of the effects of temporary measures, and range between a deficit of 1% of GDP and a small surplus. The latter applies to high-debt, slow-growth countries. A more articulated set of provisions concerns also the path towards the medium term objectives, though a minimum annual adjustment of 0,5% of GDP has to be ensured (Buti et al., 2005; and Morris et al., 2006).
- *Taking into account structural reforms:* Member states may be allowed to deviate from the MTO or the adjustment path towards it if they undertake structural reforms in a move closer to that advocated in Chapter 3 of this thesis. In this context, special attention is paid to pension reforms which introduce multi-pillar systems that include a mandatory, fully funded pillar. However, "only reforms which have direct long-term cost-saving effects, including by raising potential growth, and therefore a verifiable positive impact on the long-term sustainability of public finances, will be taken into account. Implicit liabilities will also be taken into account in the future, once further technical innovations allow the Council to agree on criteria and methodological aspects.

Regarding the changes in the corrective arm, they go in direction of introducing more flexibility into the EDP, in particular by relaxing, adding specificity, or clarifying the availability of various escape clauses. The changes include:

- *The definition of "severe economic downturn":* It is now a negative annual real GDP growth rate or an accumulated loss of output during a protracted period of very low annual real GDP growth relative to potential growth.
- *Specification of the "other relevant factors":* When evaluating deficits exceeding the 3% limit, the Commission will take into account a number of factors as: cyclical conditions to the implementation of the Lisbon agenda and policies to foster R&D and innovation; debt sustainability and the overall quality of public finances; financial contributions to international solidarity and fiscal burdens related to European unification.
- *Extension of procedural deadlines:* A number of procedural deadlines have been extended. In particular, in the event that a country is found to have an excessive deficit, the deadline to correct it has been extended from one year to two, and this period can be extended further in the event of "unexpected adverse economic events

with major unfavorable budgetary effects during the excessive deficit procedure”. So, countries could have as long as five years to correct their deficit (Chang, 2006).

- *Unexpected Adverse events and repeated recommendations*: The original SGP did not explicitly provide for the reissuance of Council recommendations or for the extension of deadlines for the correction of excessive deficits as those discussed above.
- *Increase the focus on debt sustainability*: Nevertheless, no agreement could be reached on a quantitative definition of the satisfactory pace of debt reduction.

Thus, while the basic rules, notably the 3% and 60% limits on deficit and debt in relation to GDP have remained in place, the reformed pact is more flexible, provides more explicit scope for exercising judgement and discretion than in its original version, and puts a new emphasis on public finance sustainability.

Among those changes, perhaps the most important was in the governance of the Pact (Coeuré and Pisani-Ferry, 2005). First, a consensus has emerged to give to the Commission the right to send an early warning to member countries without the approval of the Council. Second, with the reformed pact, the eurozone has moved away from its initial emphasis on governance by fixed rules and has reintroduced discretion. Moreover, the new Pact also acknowledges the importance of quality, timeliness and reliability of fiscal statistics and pledges to ensure the independence, integrity and accountability of both national statistics offices and Eurostat (Buti et al., 2005).

Overall, Morris et al. (2006) point that reactions to the reformed Pact have been mixed. Proponents of the reform consider that better adaptation of the rules to differing economic circumstances and needs will enhance commitment to them and thereby facilitate their enforcement. Opponents, by contrast, have criticized the changes as representing a watering-down of the rules, making them more complex and less transparent, and as a sign of a lack of commitment to fiscal discipline on the part of the Member States of the European Union. It has also not addressed the essential problem of weak enforcement provisions, considered by many to be the main shortcoming of the Pact.

1.3.2 Other fiscal constraints in the world

Besides the European Union, a number of other countries and regions have also introduced fiscal rules and restrictions. In most cases, these constraints impose limits on public spending and are multiannual, so that they cannot be circumvented by shifting some specific items, especially public investment, to further years. Others concern specific budgetary items or stipulate, as in the US, that additional spending must be matched by additional revenues (pay-as-you-go). Such rules do not directly concern fiscal discipline. However, since fiscal discipline is often the consequence of increased spending not matched by increased revenues, these rules may also have a disciplinary effect (Wyplosz, 2005).

In emerging market economies, the adoption of fiscal constraints has been much more recent and limited mainly to Latin America (see Kopits, 2004-a). In some cases rules were

introduced following a financial crisis; in others they were adopted to reduce vulnerability to a potential crisis. Often the immediate motivation has been to reverse the buildup of public debt, to restore fiscal sustainability and, more generally, to enhance the credibility of macroeconomic management. In addition, in some regions, mainly Central and Eastern Europe, rules and restrictions are increasingly viewed as an anchor in the convergence to a broader monetary union. (Kopits, 2004-a).

In practically all these countries, fiscal policy constraints have been embedded in a rules-based monetary framework. The latter includes an inflation-targeting regime (Brazil, Chile, Colombia, Mexico, Peru, Poland), a currency board arrangement (Estonia, and until recently Argentina), or a dollarized regime (Ecuador). In this sense, fiscal rules can be viewed as means to reduce or eliminate fiscal dominance in macroeconomic policy.

Several countries have established targets for the phased reduction of the debt-GDP or debt-revenue ratio (Brazil), or limits on the debt-GDP ratio (Poland). The debt-ratio target or ceiling usually presupposes, either implicitly or explicitly (Brazil), an annual operational target in terms of a minimum primary surplus.

Generally, the institutional coverage of the restrictions depends on the degree of fiscal decentralization and autonomy of various levels of government. Fiscal constraints can also be specified in a constitutional provision (Mexico, Poland), high-level legislation (Brazil), or ordinary legislation (India) that applies to governments over successive electoral cycles. Alternatively, they may merely consist of a policy guideline declared by a given government and not necessarily binding on future governments (Chile, Estonia, earlier in Indonesia).

In terms of contents, the statute may be very detailed (Brazil), specifying not only the nature of the restrictions, but also detailed procedural rules governing compliance. At the other end of the spectrum, it may define a broad framework (India). Rarely, in the case of top-down subnational government rules (Colombia), deviation from the rule is subject to financial penalties. However, in most countries, noncompliance, especially by the national government is punished with loss of reputation toward the electorate or financial markets (self-enforcement of the rules).

The rest of this section brings a small summary of some of the recent experiences with fiscal rules in the international scenario.

Argentina

In September 1999, the Argentine Congress passed the Fiscal Responsibility Law (see, for example, Kennedy and Robbins, 2001; Braun and Tommasi, 2004; and Cooper et al., 2005). This law set a ceiling for the non-financial public sector deficit between 1999 and 2002 and required its decline such that balance would 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 prohibited the creation of off-budget items and set out new reporting requirements, limiting the growth of expenditures. Penalties for civil servants who do not implement the

budget were provided and transparency measures to increase the availability of information regarding the state of public finances were included. This Fiscal Responsibility Law was modified by the 2001 Budgetary Law, which relaxed the deficit ceilings and extended the date at which budget balance should be achieved until 2005

At the subnational level, several governments followed the national example and passed fiscal solvency rules. These rules differ across provinces in some of their characteristics, as well as in the degree to which they have been adhered to; but most of them include limits on government debt and requirements regarding the timely and accurate publication of fiscal information.

Australia

The Charter of Budget Honesty, passed in 1998, introduced a fiscal framework in Australia that 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 (see Kennedy and Robbins, 2001).

The government's original debt target was to reduce the Commonwealth general government debt-to-GDP ratio to half of its 1995-96 level by the turn of the century, which was 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. The government's current medium-term objective is to balance the budget over the economic cycle. As a supplementary objective, the government also aims to improve its net worth (a measure that includes physical as well as financial assets).

Brazil

After the stabilization of inflation following the "Plano Real" in 1994 and the resultant abrupt reduction of Seigniorage revenues, several states and municipia became highly indebted in Brazil.⁵ To correct this effect of the stabilization, and given the balance of payments crisis in 1998/9, the "Lei de Responsabilidade Fiscal" (Fiscal Responsibility Law - FRL) was enacted in May 2000 (see, for example, Braun and Tommasi, 2004; Goldfajn and Guardia, 2004; and Fioravante et al., 2006).

Generally speaking, the FRL - considered by some the most comprehensive fiscal responsibility law introduced in Latin America (Buti and Giudice, 2004) - sets a framework for the conduct of fiscal policy, including budget planning, execution, and reporting re-

⁵The Brazilian federal constitution guarantees financial and administrative autonomy for subnational governments, assigns spending responsibilities to them, and clearly define their tax base and legal transfers from the federal government. Under this high degree of fiscal decentralization, 27 state and over 5500 local governments are responsible for approximately one-half of public expenditure, concentrated mainly in the provision of basic education, health, and public security. However, subnational government borrowing is directly controlled by the Senate. In addition, the Central Bank of Brazil sets limits on domestic bank credit to subnational governments. As in most countries, the Central Bank is forbidden to finance the nonfinancial public sector; it is not authorized to extend loans to any public sector entity or to purchase primary issues of government securities.

quirements. In contrast to the legislation in Argentina and Peru, Brazilian's law applies to all levels of government. It is intended to sustain the structural adjustment of public finances (allowing borrowing only to finance investment projects - golden rule), to constrain public indebtedness, and to limit payroll expenditures. To this end, the law establishes policy rules consisting of limits and targets for selected fiscal indicators over a three-year horizon, procedural rules (including transparency requirements), and corrective steps and legal sanctions for noncompliance. It also includes stricter limitations for the final year in office for politicians in an effort to limit the political business cycle. In addition, the government is required to meet the pre-announced operational target for primary balance, set in the Annual Budget Guidelines Law (LDO) in accordance with the debt limit.

In this regard, the most important innovation introduced by the FRL is the formulation of the debt ceiling for each level of government, which imposes that "net consolidated debt over the net current revenue" must not surpass the 1,2 limit. Moreover, the limit on payroll expenditure, a binding fiscal rule aimed at reversing the sharp growth of the public payroll in the 1990s, restricts payroll spending (defined as wages, salaries, and pensions) at 50 percent of net revenue for the federal government and at 60 percent for all subnational governments. Fioravante et al. (2006) argue, however, that numerical targets in the indicator of expenses with public servants payroll over the net current revenue, however, underweights other types of expenditures. Therefore, such limit do not imply a complete control of public expenditure. Besides, the expenditure ceiling stipulated ad hoc by the law can provide perverse incentives that harms the allocative efficiency of public resources.

Goldfajn and Guardia (2004) suggest that the new institutional framework contained in the FRL improves the transparency of fiscal activities, especially through comprehensive, timely, frequent, and detailed reporting at all levels of government. Budget documentation includes estimates of tax expenditures. In addition, the authorities are required to present a four-year medium-term macroeconomic budgetary framework (MBF), along with a clear statement of underlying macroeconomic assumptions, which then serves as the basis for the annual budget proposal.

Noncompliance with the rules is subject to corrective action and possible sanctions. Any excess over the debt limit prescribed for a given level of government has to be eliminated within one year. While the excess persists, new financing and discretionary transfers from the federal governments are prohibited; in addition, noncompliance may result in the banning of new debt and denial of credit guarantees. A list of governments that have exceeded the limit has to be published by the finance ministry on a monthly basis. Public officials in noncomplying governments are liable to criminal prosecution. The Fiscal Crime Law details penalties for mismanagement, ranging from fines to loss of job and ineligibility for public office for a maximum of five years, to imprisonment.

Canada

At the federal level in Canada, the Federal Spending Control Act set limits on program spending from 1991-92 to 1995-96 (see Kennedy and Robbins, 2001). It covered all program spending, with the exception of that under major self-financing programs, such as expenditure under the Unemployment Insurance Act.

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 below the middle of the range of private sector forecasts to minimize the risk of taking inappropriate policy actions as a result of fiscal forecasts based on overly-optimistic economic assumptions. In addition, the government began setting two-year rolling deficit targets, with an ultimate goal of a balanced budget.

On the subnational level, nine provinces and territories have enacted or tabled fiscal rules. Each fiscal rule requires balanced budgets, except in 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 and several of them have chosen to also target debt reduction and elimination.

Chile

The current Chile's fiscal rule, incepted in 2000 (see, for example, Perry, 2003; Fatás, 2005; and Wyplosz, 2005), consists of an explicit commitment to keep the structural surplus in one per cent of GDP each year. The structural balance is estimated by removing the effects of variations in copper prices and the economic cycle on revenues, therefore it allows the balance to fluctuate during the cycle. This rule forces the government to high surpluses during booms and high copper prices and allows to run moderate deficits during downturns and low copper prices.

Before that, Chile had long experience with Stabilization Funds, via the Chilean Copper Stabilization Fund (CPF), created in 1985. That fund was idealized to help stabilize fiscal revenues from the volatility of copper receipts. It was instrumental in facilitating fiscal surplus during the second half of the 1980s when copper prices were high. It specially helped to contain pressures of the new Democratic period, by keeping surplus out of reach of the political pressures inherent in the normal budgetary process (see Perry, 2003).

The fund's saving rules were automatic, based on a moving average reference of copper price. Unfortunately, the divestiture rules were not automatic. Authorities found in the downturn of 1998 and 1999 that previous surpluses and the savings in the CSF were not enough to facilitate a counter cyclical fiscal policy, leading the new government to search for the new rule.

Colombia

Colombia has also long experience with stabilization funds. Perry (2003) shows that the Colombian Coffee Fund was instituted with the objective of permitting some stabilization in the incomes of coffee growers along the cycle of international prices, as well as to enforce commitments under the International Coffee Quota arrangements. But it also had, as a side effect, significant fiscal stabilization properties that became major objective of government policy in the eighties and early nineties. Given the importance of coffee in the Colombian economy, booms and busts were closely associated with cycles in international coffee prices. As a para-fiscal institution, the Coffee Fund was not included in the Budget and was kept out of the normal fiscal political process, so their surpluses were kept from political eyes. The Fund lost importance during the nineties, as coffee became economically less important and oil took largely its place, so the attention changed towards the establishment of an Oil Stabilization Fund.

The Colombian Oil Stabilization Fund (OSF) instituted in 1995 uses automatic rules for both savings and retirement: it requires saving in excess revenues over the past moving averages and permits retirements up to the shortfalls of actual revenues from such previous averages. It was designed to tie the hand of authorities and “hide” from political view the expected surpluses during the impending increase of oil production and revenues from new discoveries, as excess revenues to be deposited in the Fund are not included in the budget. The OSF did accumulate significant amounts. However, it turned out to be less important than expected and did not avoid increased overall public expenditures during the boom in non-oil tax revenues, which led to significant increase in the deficit in the downturn (Perry, 2003).

At the subnational level, in 1997 the so-called Traffic Light Law was created (see, Braun and Tommasi, 2004). This law brought into effect a rating system for territorial governments, based on the ratios of interest to operational savings and of debt to current revenues. Highly indebted local governments (red light) were prohibited from borrowing, and intermediate cases (yellow light) were required to obtain permission from the Ministry of Finance. By this law, the central government aimed to limit the growth of subnational debt. However, as those authors point out the indebtedness law has not been fully effective.

Therefore, in a new attempt to implement fiscal rules to stabilize subnational finances, Colombia passed Law 617 in the year 2000, the so-called Subnational Fiscal Responsibility Law. The main features of this law are: (i) primary current expenditure must be exclusively financed by non earmarked current revenues, and should not exceed a fixed percentage, depending on the state or municipality category; (ii) expenditure for state legislatures is limited; (iii) across the board cuts should be put in place whenever effective non-earmarked current revenues are lower than budgeted, and state and municipal central administrators are not allowed to make transfers to their public entities; (iv) there are strict limits to municipality creation, proven non-viable municipalities have to merge; (v) when subnational governments do not comply with the limits imposed by the Law,

they have to adopt a fiscal rescue program to regain viability within the next two years; (vi) to promote transparency, there is an extensive list of characteristics and requirements for the election of governors, majors, legislators and their relatives.

Germany

Germany has a history of fiscal restrictions dating back to 1969 (see Kennedy and Robbins, 2001). 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. Obviously, as a member of the European Union, Germany is also subject to the Maastricht Treaty and Stability and Growth Pact.

India

India has also moved towards a restrictions-based approach to fiscal adjustment. The Fiscal Responsibility and Budget Management Law (FRBM) was enacted at the central government in August 2003 level (see Kochar and Purfield, 2004).

This fiscal responsibility legislation (FRL) establishes a broad framework for the conduct of fiscal policy by setting a medium-term target to guide fiscal policy formulation. The framework places increased emphasis on transparency in budget formulation, implementation, and assessment. Moreover, the FRBM requires the central government to eliminate the "revenue deficit" (broadly equivalent to the current deficit), of 4.25 percent of GDP, by March 2008. In addition, by setting the current balance as the medium-term target, it effectively subjects fiscal policy to a golden rule.

Nevertheless, the FRBM does not impose any financial or judicial penalties from breaching the current balance target, requiring only that the government report to parliament the reasons for the overturn. Breaches of the ultimate medium-term target, or of the annual targets set under the supporting rules, are permitted for reasons of natural disaster, national security, or other exceptional circumstances specified by parliament. The minister of finance is only required to report to parliament on the extenuating circumstances after missing the targets. Therefore, enforcement of this fiscal restriction relies only on the loss of reputation that the government experiences from not implementing the framework.

Kochar and Purfield (2004) also simulates the effect of elimination of growth-interest rate differential on government debt under the FRBM. These simulations suggest that

the exclusion of subnational governments from India's framework could complicate the achievement of fiscal sustainability.

Japan

Japan has had a legislated fiscal rule since 1947, which prescribes that bond issuance be limited to raising funds for financing public works (see Kennedy and Robbins, 2001). 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, the fiscal rule has not proven to be a binding constraint.

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 (see von Hagen, 2005). 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 the fiscal year of 2003 (from around 6 per cent in the fiscal year of 1997). Furthermore, it provided that the amount of deficit-financing bonds should be reduced every fiscal year and issuance of such bonds should cease by the fiscal year of 2003. 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 (see Chapter 4 of this thesis).

Mexico

Conesa et al. (2004) shows that in Mexico, fiscal consolidation and active debt management have been at the center of the authorities' economic strategy, especially since the 1995 crisis. Traditionally, fiscal policy management in that country has been guided by congressional authorization of yearly limits on net borrowing by the federal government and by Mexico City, based on the projected fiscal balance of the respective government. Similarly, each state congress must approve net borrowing by the state government. Under the Constitution, the federal and subnational governments are subject to the golden rule. Moreover, starting in 1998, contingent procedural restrictions have been introduced in the annual PEF (Federal Expenditure Budget) to absorb unexpected shocks, and to achieve fiscal targets. These restrictions have been changed over time as they are subjected to yearly revision by Congress.

Mexico has also made remarkable progress toward fiscal transparency in the recent years (Conesa et al., 2004). Starting in 1999, all information in the Federal Public Account and the PEF has been accessible electronically and a list of measures focusing on time limits, sequencing, and scope of the budget process to enhancing the efficiency of the budget process has been implemented.

At the subnational level, following several episodes of subnational bailouts in the aftermath of the 1995 financial crisis, Mexico has passed legislation to limit bailouts by the national government (see Braun and Tommasi, 2004). In 2000, the Zedillo administration established ex-ante, market based mechanisms in order to prevent excessive sub-national borrowing. At the same time, the administration attempted to convey a credible signal that it would no longer bail out local government debt. The new regulatory framework had four main components: (i) the president relinquished his power over discretionary transfers to states, thus limiting the ability of local government to “game” the federal government into bailing out them; (ii) the federal government gave up its role in securing debt with payments from the revenue sharing arrangement, which left the states and their creditors to assume the legal risks for the collateralization of debt; (iii) subnational debt was subjected to normal credit exposure ceilings, thus limiting the extent of financial-sector damage that one single state can cause and signaling that state debt must be evaluated on a basis similar with other debt; and (iv) bank’s capital risk weighting of loans to subnational governments was linked to the international rating of the borrowing government’s creditworthiness, making the pricing of bank loans a function of the underlying risk of the state government.

In addition, subnational governments are constitutionally barred from incurring liabilities, with foreign entities and from contracting liabilities in foreign currency. Mexico City may contract foreign debt, but only through the federal government. At a procedural level, borrowing by subnational governments (including Mexico City) against *participaciones* (federal transfers) as collateral must be registered with the purpose of monitoring the evolution of subnational public debt and guaranteeing the solvency of subnational governments.

As a further incentive to fiscal discipline at all levels of government, *participaciones* to states and municipalities are determined by collected federal revenue. This allows for a distribution of the risk associated with unexpected changes in revenue between the national and subnational governments, and accordingly, for sharing the burden of compensatory action at each government level.

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 (see Kennedy and Robbins, 2001). 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. 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. Although the Act does not specify numerical debt targets, the government has defined its targets for fiscally prudent levels of debt.

Norway

In Norway, developed on the basis of a wide political consensus following three decades of oil production, the combination of the fiscal rule with an oil fund has become the cornerstone of fiscal policy (Bjerkholt and Niculescu, 2004).

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 (Braun and Tommasi, 2004).

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 (Kennedy and Robbins, 2001). Each year, Parliament sets new limits for the third year, and the ceilings are set so as to ensure that outlays fall as proportion of GDP. The measures were strengthened in 1999 through a prohibition on using allocations transferred from previous years, even though the spending caps are still not accompanied by sanctions.

United Kingdom

The UK has a long tradition on institutions to constrain the level of debt, dating back to the Seventeenth Century (North and Weingast, 1989). More recently, since May 1997, the British government has consistently stated that it will keep to two strict fiscal ‘rules’: the golden rule (described above), and the sustainable investment rule (see Kennedy and Robbins, 2001; and Emmerson et al., 2005). The last rule sets the ratio of net public sector debt to GDP, over the economic cycle, at a ‘stable and prudent level’ defined as no more than 40% of GDP. For that, in 1998, the government adopted a similar legislation to Australia, setting out principles to guide its conduct of fiscal policy. In addition, according to the legislation, the government is required to table in Parliament its code for

fiscal stability and fiscal strategy in accordance with these principles. UK, as a member of the European Union, is also subject to the Maastricht Treaty and Stability and Growth Pact.

United States

The US is another country with long tradition on fiscal institutions and constraints at the state government level. At the federal government level, more recently, deficit controls were introduced in 1985 through the Gramm-Rudman-Hollings (GRH) legislation - the Balanced Budget and Emergency Deficit Control Act - (see Kennedy and Robbins, 2001). That legislation 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.

That legislation was replaced by the Budget Enforcement Act of 1990 (BEA), which shifted the focus away from deficits targets towards expenditure and revenue controls. The reason was the failure of the targets, in particular, in 1991 and 1993 due to overly optimistic economic and fiscal forecasts (Poterba, 1994).⁶ Similar to the GRH legislation, the BEA applies only to the on-budget accounts. A sequestration procedure is triggered if aggregate discretionary appropriations enacted for a fiscal year exceeded that year's spending caps or if a fiscal year's aggregate mandatory spending and receipts legislation is considered to entail a net cost

In the subnational level, all states but Vermont have a fiscal constraint on their ability to borrow (see Poterba, 1994; Bohn and Inman, 1996; Levinson, 1998; and Cooper et al., 2005). Levinson (1998) shows that around 1980 many states began enacting budget stabilization funds, often called "rainy day funds", that allow them to save for unexpected revenues shortfalls. Prior to 1981, few states had such funds. By 1983, 19 states had rainy days funds in place and by 1994, 45 states had them. Also in the latter period many states' unemployment insurance trust funds borrowed from the federal treasury, repaying the loans from payroll taxes during more prosperous years. That author, in line with Bohn and Inman (1996) and Poterba (1994), classifies the balanced budget rules (BBRs) used by American States in five types: (1) the governor has to submit a balanced budget (44 states); (2) the legislature has to pass a balanced budget (37 states); (3) the state may carry over a deficit but must correct it in the next fiscal year; (4) the state may not carry over a deficit into the next budget period (often two years long); and (5) the state may not carry over a deficit into the next fiscal year. The last two and strictest types of balanced-budget rules are present in 24 of the 37 states of type (2).

The first two BBRs are *ex ante* and impose no constraint on what happens at the end of the year if expenditures exceed revenues. The third BBR is also virtually irrelevant,

⁶The targets were applied to the *projected*, rather than *actual* deficits. Therefore, overly optimistic budgetary projections easily met the targets, while the actual deficit exceeded the limit every year (Kennedy and Robbins, 2001).

because states with such requirements may continue to carry over deficits from year to year, as long as at the beginning of each year revenues are forecast to match expenditures. Some states with BBRs of this type systematically overestimate future revenues and underestimate future expenditures. The fourth and fifth BBRs are binding, at least in principle. They require that adjustments be made when taxes revenues fall short of expenditures. The fourth BBR binds every budget period, which can be two years long for states with biennial budget cycles. The fifth binds every year, regardless of the length of the state's budget cycle. As Poterba (1994) mentions, the last two anti-deficit rules are more common in small states than large ones; seven of the ten largest states allow deficits to be carried forward to subsequent years. Moreover, these state fiscal rules may place limitations on projected, or actual, deficits and, typically, carry no sanctions, being applied 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.

Yet, enforcement of these balanced-budget rules is by the state's courts, with the state supreme court the ultimate arbiter. If the state supreme court is appointed by the governor or by the state legislature (i.e. by those accountable for the deficit), it is possible that enforcement of balanced-budget rules will be less strenuous (Bohn and Inman, 1996). Appointed supreme court may behave more like a government agency than a truly independent monitor of fiscal performance. As a consequence, the effectiveness of these constraints is disputed (Cooper et al., 2005).

