FISCAL RULES: THEORETICAL ISSUES AND HISTORICAL EXPERIENCES

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ABSTRACT

Fiscal indiscipline is a feature of many developed countries. It is generally accepted that the source of the phenomenon lies in the common pool problem, the fact that recipients of public spending to fail to fully internalize the costs that taxpayers must assume. As a result, democratically elected governments are led to postpone tax collection, or to cut spending. Solving the fiscal discipline problem requires internalizing this externality. This calls for adequate institutions or for rules, or both. This paper reviews the various types of solutions that have been discussed in the literature and surveys a number of experiments. With the European debt crisis in mind, the paper pays particular attention to the common pool problem that emerges in federal states. The main conclusions are the following. First, rules are unlikely to exist unless they come with supporting institutions. Second, fiscal institutions are neither necessary nor sufficient to achieve fiscal discipline, but they help. Third, because institutions must bind the policymakers without violating the democratic requirement that elected officials have the power to decide on budgets, effective arrangements are those that give institutions the authority to apply legal rules or to act as official watchdogs.

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1. Introduction

The European sovereign debt crisis is an unwelcome reminder that no country can ignore the requirement of fiscal discipline. It should also clarify many issues on the nature of fiscal discipline and on the ways to achieve it. We knew it all, but a few aspects have been made more concrete.

The crisis illustrates how slowly fiscal discipline can assert itself. Governments can run budget deficits for years, even decades before facing the wrath of financial markets, first, and of their emergency lenders next. This is illustrated for the OECD countries by Table 1, which shows the percent of years when a country has run a budget deficit since 1960. This should happen about half of the time in a disciplined-government country, and indeed this is what is found for Denmark, New Zealand and Sweden (Norway being a clear outlier because of its intergenerational saving into the Petroleum Fund). For all other countries, except Finland, deficits have occurred in 4 years out of 5, or more, with two countries (Italy and Portugal) achieving a perfect 100%. The table also shows that the last time when Austria, Greece and France achieved a surplus was before the first oil shock. Thus deficits can be the rule, with few exceptions, for 50 years or more while these countries record AAA or close ratings.[1]

Table 1. Percent years of deficit over 1960-2011

	Australia	Austria	Belgium	Canada	Germany
Percent	80%	82%	96%	76%	78%
Last surplus	2008	1974	2006	2007	2008

	Denmark	Spain	Finland	France	U.K.
Percent	48%	78%	20%	90%	84%
Last surplus	2008	2007	2008	1974	2001

	Greece	Ireland	Italy	Japan	Netherlands
Percent	80%	80%	100%	68%	88%
Last surplus	1972	2007		1992	2008

	Norway	New Zealand	Portugal	Sweden	USA
Percent	4%	46%	100%	42%	92%
Last surplus	2011	2008		2008	2000

Sources: *Economic Outlook*, OECD and Eichengreen and Wyplosz (1994) for older data.
Note: Sample starts later for Australia (1962), Canada (1961), Spain (1962) and Portugal (1977).

The euro area countries currently under IMF-EU programs (Greece, Ireland and Portugal) have all expressed shock at finding themselves under market pressure. This may reflect a

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[1] It can be argued that primary budget balances offer a more acurate description of government behavior. Time series are shorter (going back to 1970 at best). They provide a similar picture, although highly indebted governments do much better, and are available from the author upon request. It remains that the budget laws, voted by parliaments, highlight the overall blance, which represents what policymakers explicitly decide upon.

misleading conviction that debt crises only occur in developing or emerging market countries. It also reflects that years and decades of lenient appraisal by the financial markets and rating agencies can come to a surprisingly abrupt end. Sudden stops have long been seen as a very serious threat, quite possibly reflecting self-fulfilling phenomena. Debts can grow unnoticed until they get noticed. They represent the kind of vulnerability that gives rise to self-fulfilling crises.

Three unmistakable implications follow. First, fiscal discipline is not a year-by-year concept, in sharp contrast with the prescription of the Stability and Growth Pact. It is a medium to long-term characteristic, which may allow for significant temporary slippages along with eventual offsetting surpluses. Second, a good track record is not sufficient to rule bad equilibria.[2] A solid budgetary framework is a necessary, but not a sufficient condition because private debts can become public debts in crisis situations. Finally, the policy dominance issue is a concern that no central bank can escape, no matter how independent it may be.

Von Hagen and Harden (1994) take a wide view of what constitutes a budget process, including arrangements within the government. The thrust of their analysis is that, year in and year out, fiscal discipline is achieved either when the Finance Minister is given enough authority to control the process, or when the political forces that support the government agree to adequate contracts. Hallerberg et al. (2009) provides some supporting empirical evidence in the case of European countries. The present paper takes a different, but related approach. It directly looks at two types of processes, fiscal numerical rules and fiscal institutions. This is in line with the recent literature, see .e.g. Kopits and Symanski (2001), Wyplosz (2005) and Debrun et al. (2009).

Fiscal rules come in a large variety of forms but they share the characteristic of imposing numeral norms. These norms can concern the budget balance, public spending or government revenues. The limitations of rules are well known (Kydland and Prescott, 1977): because they are fundamentally arbitrary and non-contingent, rules must be sometimes suboptimal, which creates a serious time-consistency problem. This argues in favor of institutions, meaning formal arrangements that are designed to prescribe actions optimally designed to respond to unforeseen contingencies. Unfortunately, the conditions required for fiscal institutions to be effective are rarely met in practice.

The next section examines the theoretical foundations for fiscal rules and their empirical relevance. Section 3 presents the theory behind the need to adopt restraints on the budgetary process. Section 4 then describes the various forms of rules. Section 5 considers a number of arrangements and draw policy implications. The last section concludes.

In the present paper I define restrictively fiscal rules as numerical rules (Kopits and Symanski, 2001). This definition excludes institutions, i.e. formal procedures that do not rely on quantitative restraints but that shape the budgetary process. Both rules and institutions have a role to play because it is desirable to constrain policymakers. Indeed, policymakers display a deficit bias for fundamental reasons, which are examined in Section 3 below.

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[2] Both Spain and Ireland achieved large debt reductions in the years leading to the financial crisis. Yet, they had to deal with the consequences of their housing price bubbles, they were not able to reassure the financial markets that they had the ability to eventually close their deficits.

2. The deficit bias: theory and evidence

In the absence of any deficit bias, we would observe budgets to be alternatively in deficit and in surplus depending on economic and/or political conditions. These fluctuations would be mainly driven by business cycles when fiscal policy is run countercyclically, as should be. The frequency of balance fluctuation could also be longer when governments borrow to invest during a catch-up phase, or because of war efforts, or else in the aftermath of a financial crisis that has led the government to bail some of its banks out. Fiscal discipline is present when, over the long run, the debt-to-GDP ratio is stationary.[3] The point is illustrated in Figure 1, which compares Greece and Ireland and provides two main messages. First, after a period of quick accumulation, Ireland has rolled its debt back in the 1990s, a strong signal of discipline. The Greek debt, on the other hand, has enormously increased over the whole period, yet it has been stationary over the two decades preceding the crisis. Second, why did disciplined Ireland loose control of its debt after 2007and run afoul of markets at about the same time as Greece? The answer is that the authorities allowed for a build-up of private debts (public sector salaries were also raised in an era of plenty). When the housing price bubble blew up, the banking system collapsed and the government was compelled to rescue its banks. This illustrates an important point: fiscal discipline may be threatened in a myriad of ways that have apparently nothing to do with the regular budget. Fiscal discipline is hard to assess because unexpected spending needs may arise.

Figure 1. Debt/GDP ratios for Greece and Ireland – 1961-2009
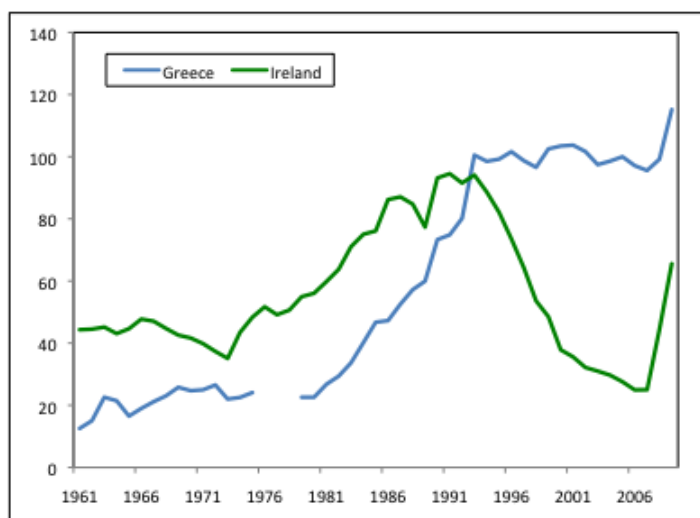
Source: Historical public debt database, IMF (2010)

Why ever should governments be fiscally undisciplined? After all, the budget constraint cannot be avoided. If it is ignored, it re-establishes itself through inflation or defaults. A large literature identifies a number of reasons that explain the widespread deficit bias

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[3] Formally, fiscal discipline requires that the government be solvent, i.e. that the transversality condition be upheld. This condition can never be tested because it refers to the future evolution of the public debt. Debt stationarity is one way to make the transversality condition operational.

phenomenon.[4] Although many reasons have been advanced (Wren-Lewis, 2011, offers and exhaustive list), two of them seem to dominate. The first one is the tendency to push out the discipline burden to future governments or even to future generations. The second reason is the interplay of democratic processes and interest group politics. Politicians enhance their (re)election probabilities by catering to interest groups and providing public largesses, at the expense of future taxpayers. Even when there is an understanding that the process is unstable, finding political support to rein in deficits may be impossible or long to achieve, along the lines of attrition games (Alesina and Drazen, 1991)

Shifting the debt burden to future governments and spending above taxing level can both be seen as a manifestation of the common pool problem, which arises when the beneficiaries of public spending (or tax advantages) ignore the externality that they impose on all other taxpayers. "Money grab" by pressure groups is an intra-temporal externality while pushing out taxes on future generations is an inter-temporal externality.

The common pool problem is inherent to democratic systems unless the voters are perfectly homogeneous and care about their descendants exactly as they care about themselves. It should not come as a surprise therefore that the deficit bias, the tendency of governments to run far too frequently deficits is such an ubiquitous phenomenon, as evidenced in Table 1. In fact, the surprise is that some countries could be free of the bias; finding out how they do so is a main objective of the present paper.

A weakness of Table 1 is that it does not take into account the relative sizes of deficits and surpluses, nor does that is take into account the growth rate. For example, Japan only had deficits over 68% of the years, but its 2011 debt, at 204% of GDP according to the OECD, is vastly larger than that of the Netherlands, where it stands at 78% of GDP while deficits have occurred in 88% of the same years. A theoretically better gauge is the evolution of the debt as ratio to GDP. A country can be said to have been fiscally disciplined if this ratio has been stationary over a sustained period.[5] Unfortunately, the powers of stationarity tests are famously weak. This is why Table 2 presents the results of two opposite tests: the standard ADF test (Augmented Dickey Fuller), which asks whether a series is non-stationary and the KPSS test (Kwiatkowski, Phillips, Schmidt and Shin), which asks the opposite question, namely whether a series is stationary. Being weak, both tests tend to not reject the hypothesis being tested. This is indeed what is often found when looking at countries for which comparable data on the debt-to-GDP ratios exist going back to1960. The sample stops in 2006, in order to avoid the exceptional increases associated with the financial crisis.

Table 2 indicates whether any of these two hypotheses is rejected by the corresponding test. Because of low test power, non-rejection of the null hypothesis is probably often misleading. More interesting, therefore, is when the test is rejected but even so the combination of both tests can yield ambiguous results. Of the 19 countries included in the sample, non-stationarity is only rejected twice by the ADF test, for Belgium and the U.K. but, in both instances, stationarity is also rejected by the KPSS test. The opposite case, when neither stationarity nor non-stationarity is rejected occurs twice, in the cases of Ireland and the Netherlands. For the

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[4] A synthetic treatment is offered by Persson and Tabellini (2000).

[5] The proper concept is the transversality condition, but it cannot be observed. Requiring that the debt be stationary is a sufficient but not necessary condition. An alternative is to look at fiscal policy reaction functions as in Bohn (1998), Gali and Perroti (2003) and Wyplosz (2006), and check whether a dynamic stability condition is satisfied.

remaining 15 countries, non-stationarity is not rejected while stationarity is rejected, suggesting that fiscal indiscipline is indeed the rule, with no clear exception. Interestingly, the debt crisis has (so far) only affected two of these 15 countries as well as Ireland, which is classified as ambiguous.

3. An analysis of policy rules

The previous section has shown that the deficit bias is widespread among developed countries. It has also argued that the intra and intertemporal common pool phenomena are likely to be key reasons for the deficit bias. This bias is often cited as an argument for intervention in the political process that drives the preparation, adoption and execution of the budget. The precise form of this intervention must be carefully tailored to achieve a second best outcome.

Table 2. Stationarity tests – 1960-2006

Test	Null	Australia	Austria	Belgium	Canada	
ADF	Non stationary			reject*		
KPSS	Stationary	reject**	reject***	reject**	reject**	
Conclusion		non stationary	non stationary	ambiguous	non stationary	

Test	Null	Finland	France	Germany	Greece	Ireland
ADF	Non stationary					
KPSS	Stationary	reject**	reject***	reject***	reject***	
Conclusion		non stationary	non stationary	non stationary	non stationary	ambiguous

Test	Null	Italy	Japan	Netherlands	New Zealand	Norway
ADF	Non stationary					
KPSS	Stationary	reject***	reject***		reject*	reject**
Conclusion		non stationary	non stationary	ambiguous	non stationary	non stationary

Test	Null	Portugal	Spain	Turkey	UK	USA
ADF	Non stationary				reject*	
KPSS	Stationary	reject**	reject**	reject**	reject**	reject**
Conclusion		non stationary	non stationary	non stationary	ambiguous	non stationary

Source: Abbas et al. (2010)
Note: The sample includes all countries for which the data cover the period the period 1960-2006, after filling in some missing observations with linear interpolation. The ADF test looks for a unit root while the KPSS test computes an LM statistic concerning the variance of a random walk component in the decomposition of the original series into a constant and a random walk. All tests apply the Newey-West procedure to determine the bandwidth. Confidence level: 1% (***), 5% (**), 10%(*).

In particular, if the goal is to reduce the deficit bias via a reformed budget process, then the policy intervention needs to target the political failure that gives rise to deficit bias, in effect internalizing the common pool externality as shaped by the political process. Von Hagen (2002) concludes that the solution depends on the electoral process and the form of government. In particular rules, which are time-inconsistent by construction are likely to be dominated by institutions, as argued in Wyplosz (2005). On the other hand, political acceptability of fiscal policy institutions seems highly limited if one judges from the small number of countries that have adopted some, as described in see Section 5. Numerical rules,

on the other hand, are widespread and they often have been successful, so far at least. For this reason it is worthwhile to examine fiscal rules with an open mind. This section starts with theoretical considerations, asking how fiscal rules fare on four key dimensions: the time inconsistency problem, burden sharing across generations in ageing societies, capture by special interests and government hierarchies.

3.1. Time inconsistency

As a commitment device, a rule is vulnerable to time inconsistency. Indeed, there will always be instances when it is suboptimal to abide by previous commitments. Much as a rule that can be easily evaded is useless, a rule that is strictly set stands not to be respected in some situations.[6] Two main implications follow. First, it must be recognized that there exist unforeseeable events likely to break the rule. The usual solution is to write escape clauses into the rule. Escape clauses however cannot be fully contingent, because too many relevant events are unforeseeable. This opens up a major risk of circumvention. Second, some foreseeable events may warrant foreseeable adjustments to the rule without affecting its disciplinary effect. This is clearly the case for cyclical fluctuations. While each business cycle is *sui generis*, in principle it is possible for counter-cyclical fiscal policies to be compatible with debt stability. It is also desirable because procyclical policies are particularly subject to time inconsistency.

3.2. Ageing and burden shifting to future generations

The common pool temptation is nearly irresistible in the face of an ageing population. Ageing has two origins: increases in life duration and reduced fertility. The first one is slow and, presumably, permanent. The second one probably is a one-off event (i.e. fertility will remain low) that will create a new steady state with a permanently smaller population. As is well known, the resulting demographic transition between two steady states creates a situation whereby the next generation, the first one to be less numerous, faces a larger burden than the previous and the following ones. Part of the increase comes from higher health costs, which each generation should finance for itself.

But another part od the impact of the demographic transition, probably the bulk, comes from the need to pay for retirement benefits. In a pay-as-you-go system, each generation cares for the previous one and will be taken care of by the next one; clearly the demographic transition breaks the fairness of this arrangement at the expense of the generation in-between. The common pool problem implies that the first generation, the baby-boomers, will endeavor to shift the burden to the next one. Indeed, estimates by the European Commission (2009) indicate that, given current policies, 20 of the 27 EU countries will raise the annual costs of pension by more than 2% of GDP by 2060. The average additional cost for these countries is estimated to represent 5.8% of GDP.

Reducing this considerable burden shift requires that current voters approve paying more taxes, receiving less pension benefits or work longer. Several countries have started to move in this direction. These moves can be seen as numerical rules that affect some specific elements of the budget. Even though not all countries have enacted such rules, or not sufficiently so, the fact that voters are willing to support such decisions illustrates one important advantage of rules when they are transparent: they make the externality clear and its internalization acceptable.

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[6] The financial crisis is a good example. Many governments sincerely committed to fiscal discipline ended up reluctantly opening up large deficits.

An alternative and intriguing interpretation is that the current generation expects the next one to shift the burden as well to the following one, which would do the same, etc. This could be optimal inter-generational burden smoothing. Yet another possibility is that the externality could be entirely internalized within families if baby-boomers leave adequate bequests. This would be a way of reducing wealth redistribution – and perpetuating inequalities.

3.3. Capture

The standard common pool effect describes interest groups vying for financial favors from the government, under the assumption that the corresponding taxes will be paid for mostly by others. In equilibrium, each interest group pays for all the favors, an externality that is the source of a deficit bias. Obviously, the solution to the common pool problem is that the government rejects all favors, carrying out spending and transfers purely on the basis of welfare principles exactly as the mythical benevolent dictator would do. The deficit bias arises because there is no benevolent dictator, only governments that court the support of voters and that are captured to varying degrees by interest groups. A number of empirical studies provide indirect support to this interpretation, showing that any source of heterogeneity (income inequality, political fragmentation, ethnic diversity) that enhances externalities *ceteris paribus* leads to larger deficits.[7]

The response to the common pool problem is to centralize the budget process in order to centralize the externalities. A large number of solutions have been proposed and many of them have been implemented. They all aimed at improving the governance of the budget process, reflecting the fact that the deficit bias can be seen as a political failure, a weakness of democratic systems.[8] The following sections examine and evaluate these solutions.

3.4. Central and local governments and international aspects

Of particular interest is the relationship between central and sub-central governments. This situation opens up an additional common pool problem when local governments may reasonably expect to receive transfers from the central (or higher-up) governments.[9] As a result, sub-central governments are subject to two mutually reinforcing sources of a deficit bias.

A similar situation arises at the international level when a national government receives external financing, either as part of regular transfers or as bailouts. This is why the IMF only provides loans and requires that these loans be senior and fully serviced. The same applies to World Bank lending, with the exception of IDA grants to the poorest countries.

The European monetary union can be seen as an intermediate case between a federal arrangement and a purely international agreement. There exist regular transfers, under the structural funds program and the common agricultural policy, which together absorb the bulk of a small budget (about 40% of a budget that represents about 1% of European GDP). Yet,

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[7] The classics are Roubini and Sachs (1989) and Alesina and Perotti (1995). For a recent contribution, see Larch (2010).

[8] A survey of recent changes is IMF (2009).

[9] See e.g. Alesina et al. (2001) and Krogstrup and Wyplosz (2010). Pisauro (2003) notes that, on top of the common pool problem, there exists a moral hazard problem created by the possibility of a bailout of local governments by the central government. While the mechanics of bailouts are indeed different from those of transfers, a bailout can be seen as part of the more general common pool problem.

for some countries, these transfers amount to several percentage points of GDP.[10] The crucial question is whether a government can be bailed out in case of budgetary difficulties. Within the monetary union, the no-bailout clause (art. 125) was intended to be the to the international common pool problem. As is well known, the clause has been ignored and bailouts have been handed out to three member countries (at the time of writing). In order to compensate for the corresponding deficit bias incentive, a strengthened Stability and Growth Pact is currently under adoption.

4. Arrangements for fiscal policy discipline

Arrangements to limit the deficit bias must offset the incentives generated by the common pool problem. Whatever form they take, they must act as a constraint on the budgetary process and therefore on those who decide on the budget. The challenge is that those who have incentives to allow for a deficit bias are asked to adopt arrangements that will eliminate or reduce these incentives. There are basically three possibilities: 1) Delegation to an agent; 2) Binding numerical rules; 3) A better budgetary process.

4.1. The democratic requirement

All democracies share the property that budgets are set jointly by the executive and the legislative branches. Budgets require approval by elected bodies, essentially because fiscal policy is redistributive. Taking from some to give to others is only legitimate if it is the outcome of an uncontroversial democratic process ("no taxation without representation"). Any constraining arrangement must be democratically legitimate. How do potential solutions to the deficit bias measure up to this requirement?

A first solution is to delegate some aspects of fiscal policy to an unelected agent. This may well be the first-best solution. Indeed, the deficit bias can be reduced or eliminated through delegation to an agent who is not exposed to pressure by interest groups. Taking power out of the hands of elected officials in favor of bureaucrats may seems excessive but that is exactly what is achieved with central bank independence.[11] Monetary policy, however, has limited redistribution effects, mostly between borrowers and lenders as the result of interest rate changes. In the absence of inflation, these effects are likely to be reversed along the cycle. For this reason, delegation of monetary policy is different from delegation of budgetary responsibilities. Even though delegation could be limited to just setting the budget balance, which has limited redistributive effects, it is not observed in practice. Delegation to non-elected officials appears to be difficult, if not impossible.[12]

Numerical rules are more acceptable because they are self-imposed by the very elected officials that they are designed to bind. In fact, rules are like laws that restrict freedom for the common good. Governments and Parliaments routinely operate under such laws, many of which are inscribed in constitutions. Naturally, elected officials wish to avoid limits on their own freedom of action. Since laws can be amended or even repudiated, the challenge is not just to have such limits adopted, but that they remain in place when they become binding. There are several instances of potentially useful rules that were rescinded when they were

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[10] Schuknecht et al. (2008) find that EU countries that are net beneficiaries of transfers face a lower risk premium *ceteris paribus*, and that the same applies to Canadian provinces.

[11] In non-economic matters, other references include a Supreme Court of Justice and Constitutional Courts.

[12] Wren-Lewis (2011) makes a similar point.

needed most. This is the case of Europe's Stability and Growth Pact or of former Chancellor of the Exchequer Gordon Brown's self-imposed fiscal responsibility principle. Another example is the US Gramm-Rudman-Hollings deficit reduction law of 1985; the annual deficit target was raised in 1987 when it proved politically difficult to meet.

The last solution avoids any formal straightjacket. Instead, it aims at encouraging policymakers to internalize among themselves the externalities that give rise to the deficit bias. Various solutions have been suggested. Hallerberg et al. (2009) distinguish between two categories: delegation and contract. Under delegation, some power is vested with a player, for example the Finance Minister, whose role is to achieve fiscal discipline. Under contract, the political parties that join in a governing coalition agree upon fiscal discipline. Hallerberg et al. note that the success of any arrangement depends on whether it is compatible with the political backstage. For example, coalition governments are unlikely to devolve strong power to a Finance Minister who necessarily represents one party and its supporting interest groups. Another type of attempt at improving the budget process is to empower somewhat the administration, seen as less likely to bend to pressure groups. In this case the bureaucrats do not make decisions but sort out and shape the options that are presented to policymakers.

4.2.   Types of Rules

Existing numerical rules vary from one country to another. They frequently stipulate upper limits on the budget balance, or on the debt, or on spending, or they set lower limits on tax revenues. Quite often, several of these limits are combined. Some rules apply year by year, others define limits over several years, sometimes over the entire business cycle or over the duration of a government. Some are national, with subcentral government components. The European monetary union's Stability and Growth Pact is a supranational rule.[13] According to IMF (2009), 80 countries have adopted some rule or another.

In theory, if they are well designed and implemented, fiscal rules can eliminate the deficit bias. In practice, however, rules are often disappointing. A first difficulty harks back to the old debate on rules vs. discretion, and the time inconsistency problem. Because rules can never be fully contingent, situations may arise that would make any rule very costly to respect. The financial crisis, which has led to cumulated debt increases of some 30% of GDP in many developed economies, is a case in point.

For this reason, any rule must be flexible enough to accommodate unforeseeable contingencies. As a consequence, the precise design of rules becomes of the utmost importance. The presumption is that rules should be simple to be understood by policymakers and citizens alike, but flexibility is bound to come at the expense of simplicity. Consider for example strict balanced budget rules, which imply procyclical fiscal policies. In order to avoid procyclicality, and possibly to encourage countercyclicality, the rule must target the budget over a whole cycle or be stated in terms of a cyclically adjusted measure. Since business cycles cannot be predicted, an over-the-cycle rule can lose much of its meaning, although solutions have been proposed, as discussed below. Cyclical correction is more art than science and is not easily comprehended by the public at large, which opens the door to manipulations and, quite possibly, to an eventual repeal.

More generally, rules can always be manipulated. Crucially, since they are forward-looking budgets are constructed on the basis of assumptions about economic and financial conditions

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[13] Both African monetary unions and the East Caribbean monetary union also operate supranational fiscal rules.

over the next fiscal year. This gives much leeway to the government, often enough to loosen the rule. Independent *ex post* evaluations of outcomes is a solution, but it involves judgment and, anyway, evaluations will always come too late.[14]

Furthermore, the democratic requirement articulated in the previous section implies that the politics of fiscal rules is not encouraging. A government subject to the deficit bias can fairly easily convince its public opinion that today's circumstances are special and that technocratic arrangements should not stand in the way of serving people's interests. In addition, rules only work if noncompliance is sanctioned with a high degree of certainty. In democracies, however, voters seldom sanction governments that fail to deliver on their promises, unless they violate the law. Fiscal discipline rarely defines election outcomes – otherwise we would not observe the frequent lapses documented in Table 1. Legal sanctions require that the law be written in precise enough terms to face powerful challenges, which runs against the simplicity principle. Worse, laws can always be changed at the worst time if they are time-inconsistent. Debrun (2011) provides an example where a rule is time inconsistent for the currently elected government but not for the public at large.

This all implies that fiscal rules are unlikely to be a panacea. This is indeed what the evidence suggests, see for example Kopits (2001), Guichard et al. (2007) and IMF (2009). On the other hand, Debrun and Kumar (2007) provide panel-data estimates of the impact of fiscal rules on the primary budget balance and find that rules can be effective. Yet, the evidence is not overwhelming. This may be because rules differ too widely in their details for valid cross-section comparisons. It may also reflect that the unobserved political and institutional context matters. Another interpretation, suggested by Debrun and Kumar (2007), is that the evidence may suffer from reverse causality, namely that disciplined governments may wish to adopt rules as a way of cementing and signaling their determination.

4.3. Rules vs. institutions

The limits of rules may be seen as making fiscal institutions an attractive alternative. Defined broadly to include non-numerical rules, fiscal institutions encompass a wide variety of arrangements. Examples include the (possibly partial) delegation of the budget process to an independent body, intra-governmental agreements, multi-year programming and codes of good behavior. The advantage of institutions is that they are less likely to be time-inconsistent, if only because they do not require specifying all contingencies that may arise and what to do when they arise. Institutions instead can have a mandate, to establish fiscal discipline in the long run, and they may involve people who can think. If these people are sufficiently independent and competent, they should do better than rules.

This means that institutions can work but only if they are well designed. What are the conditions for an effective design? Hallerberg et al. (2009) convincingly argue that there is no single answer to that question. In order to work well, institutions must be adapted to the political institutions, including electoral systems, types of governments and degree of ideological differences in society. They provide evidence that well-adapted institutions work.

Fiscal policy councils are a particular case of fiscal institutions. Their remits can vary all the way from just "telling the truth" to actually deciding on the budget balance. In the earlier case, the council is intended to be an official watchdog, one that benefits from official

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[14] A solution is to require that outruns be compensated, see the Swiss Debt Brake in Section 5.1.2. Even so, massive crises like the current one cannot be dealt with easily.

recognition and provides unbiased views. For example, the council may be formally consulted to evaluate the government forecasts of spending and income, which are based on forecasts of variables such as GDP growth, inflation, the interest and exchange rates, etc. Its own forecasts may be for mandatory use in budget planning or simply produced for advisory purposes.

Up to now, there does not exist any fiscal policy council with the power to decide on the budget balance, probably because it would clash with the democratic requirement. On the other hand, councils with formal advisory roles have become frequent in recent years. Calmfors and Wren-Lewis (2011) list 11 independent councils with advisory or non-binding control roles in developed countries.[15] Debrun et al. (2009) report that similar councils have been set up in other developed or emerging-market countries (Japan, Chile, Indonesia, Jordan, Korea, Mexico). Several international institutions, including the IMF, the OECD and the European Commission have recommended the establishment of such councils.

A growing empirical literature has begun to evaluate the design and effectiveness of fiscal policy councils. Country studies, for example Calmfors (2010), IMF (2005) and Debrun et al. (2009), suggest that, in order to have a detectable disciplinary impact, fiscal councils must be allowed to make normative, quantified statements. Yet, it also appears that that the political costs for a government not to heed such advice are very limited.[16]

A fair conclusion is that advisory fiscal policy councils have made a tangible contribution to fiscal discipline in countries where policymakers have shown a willingness to listen to them, which is why they created them in the first place, a case of reverse causality. Elsewhere, the councils provide useful analyses and viewpoints but their recommendations are frequently ignored. Like fiscal rules, advisory fiscal policy councils are not a panacea.

4.4.   Rules *and* institutions

There is a tendency to consider rules and institutions as substitutes. Yet, the limitations of each approach suggest that combining them may help. Because they can never be adequately contingent, rules are too rigid and therefore time inconsistent; they simply cannot be respected in some situations. Fiscal institutions may be seen as too open-ended and therefore time inconsistent in the sense that they may be too flexible in the face of unforeseen events. But fiscal institutions that apply and interpret not fully contingent rules are promising. Like a Supreme Court that applies and interprets laws voted by the Parliament, or like a central bank that follows a flexible inflation-targeting rule, fiscal institutions can appeal to a rule to guide and justify their actions. Rules can be deviated from when needed without losing their credibility if an independent and competent institution authorizes such deviations. The examples that follow illustrate the benefits from combining rules and institutions.

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[15] These committees are in Austria (Government Debt Committee established in 1997), Belgium (High Council of Finance, 1989), Canada (Parliamentary Budget Office, 2008), Denmark (Economic Council, 1962), Germany (Council of Economic Experts, 1962), Hungary (Fiscal Council, 2008), Netherlands (Central Planning Bureau, 1947), Slovenia (Fiscal Council, 2010), Sweden (Fiscal Policy Council, 2007), the UK (Office for Budget Responsibility, 2010) and the US (Congressional Budget Office, 1975).

[16] A good example is Hungary. A fiscal policy committee was set up in 2008 but was effectively dismantled a couple of years later when a new government came to power.

5. Historical experiences

This section presents a few examples of fiscal arrangements from developed and emerging market countries. While most arrangements have been introduced rather recently, other countries have long sought to buttress fiscal discipline.

5.1. Central government rules and institutions

5.1.1. Netherlands

Following years of deficits, Netherlands started to build original arrangements in the early 1980s. These arrangements have been gradually refined. As Figure 2 shows, Netherlands has performed better than the other European countries. Its public debt has been reduced from 1993 onward, until the onset of the financial and economic crisis. Even though part of the measured (gross) debt reduction is related to asset sales and to natural gas revenues, the *prima facie* evidence – based on both timing and the fact that these actions have not been squandered – is that Netherlands has become fiscally disciplined following the adoption of its new fiscal policy regime.

Figure 2. Gross public debt in the Netherlands and the Eurozone (% of GDP)
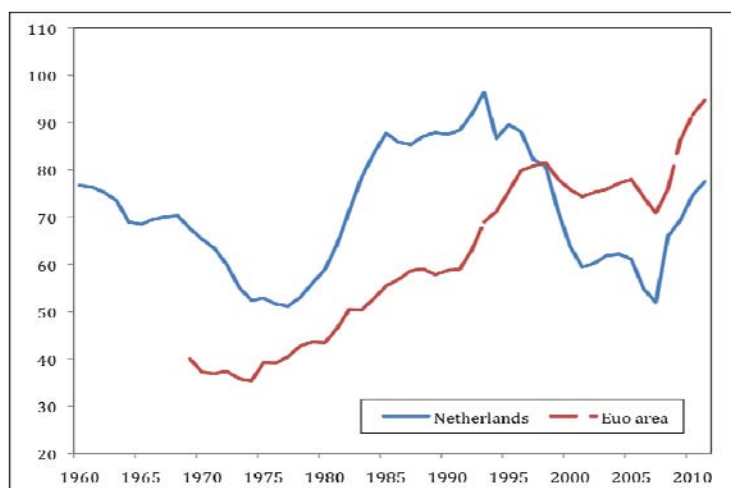
Source: AMECO, European Commission

The Dutch arrangement combines rules and institutions.[17] The key rule is a path for the budget ceiling, determined in constant euro and set for the duration of each parliament. The institutional setup is quite elaborate and rests on an explicit agreement among coalition parties before they take office and valid until the next election. Two bodies are involved: the CPB (Netherlands Bureau for Economic Analysis) and the SER (Social and Economic Council of the Netherlands).

The CPB is a technical agency that makes economic and budget forecasts. The originality of the Dutch approach is that it evaluates the budgetary implications of political party programs

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[17] For a detailed presentation, see Bos (2007).

before elections. After the election, the parties that form a coalition work out a binding medium-term program for the duration of the legislature. This program is evaluated by the CPB, taking into account its own macroeconomic projections. Then, as annual budgets are being prepared (preparations start two years ahead), the Ministry Finance relies exclusively of CPB forecasts and medium-term projections. As a highly respected neutral agency, the CPB thus takes the responsibility for macroeconomic and budget forecasts out of political hands.

The SER is a tripartite advisory body composed for one third of employers, one third trade unions and one third experts, including the CPB. It deals with the social security system and with pensions (and wage negotiations). Its recommendations are not binding on the government but influential when it can reach an agreement.

A key element is the required adoption of medium-term spending ceilings, for each ministry, at the beginning of the legislature. These ceilings are based on a detailed list of policy measures agreed upon in the coalition agreement. The agreement itself is built around explicit deficit and debt targets for the end of the legislature. There is no standard – and arbitrary – mandatory target numbers but, given that governments always involve several parties, the practice has a clear moderating impact.[18] There is a little bit of flexibility (1%) for shifting spending from one year to the next but "growth bonuses" are not usable later. The result is a tendency for procyclical policies. This aspect may be of limited importance for a small and very open economy. Taxes become the main macroeconomic instrument, under the scrutiny of the CPB, which evaluates debt sustainability.

The effectiveness of the Dutch arrangement can be traced to three elements. First, the combination of rules and institutions. Second, the fact that the numerical rule is not tied to a particular, arbitrary number but left to publicly visible negotiations among coalition partners. Third, they are well adapted to the Dutch political system. As argued by Hallerberg et al. (2009), legislative contracts work well in multi-party government coalitions.

5.1.2.   Switzerland and Germany

The constitutional rule adopted by Germany in 2009, is due to be fully implemented in 2016.[19] It is closely patterned after the Swiss "debt brake" that was adopted and written into the constitution in 2000 and came into force in 2003. Figure 3 shows that the rule has reversed the familiar trend of debt build-up, a reversal particularly spectacular as it has continued throughout the crisis.

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[18] Expenditures had crept up to almost 60% of GDP by the early 1980s. They went down to less than 45% before the crisis.

[19] It was initially planned to implement it in 2011 but this date has been pushed back because of the crisis. Interim arrangements start in 2011, however. A variant will apply to the Laender as of 2020.

Figure 3. Swiss public debt (% of GDP)
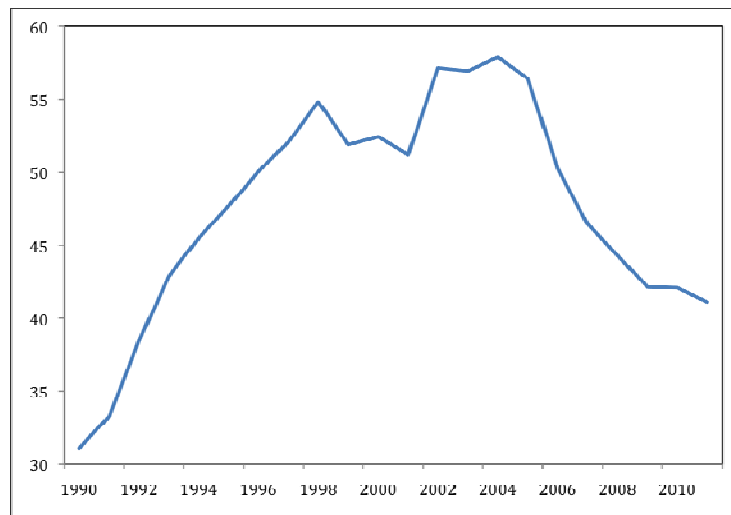
Source: Economic Outlook, OECD

The debt brake is a rule, with an escape clause that involves the Parliament. In the Swiss version, the rule specifies that the overall federal budget must be balanced over the cycle. This is achieved as follows. Any imbalance, positive or negative, is credited into a control account. If the cumulated amount is negative, it must be brought to balance "over the next few years". No requirement applies when the cumulated amount is positive. This clever arrangement implies that, over time and at the government's discretion, deficits must be compensated for by surpluses. The stipulation is flexible enough not to put the government in a pro-cyclical straightjacket. It can lead to prolonged slippages, though. In a country very sensitive to the rule of law, like Switzerland, such slippages are highly unlikely.[20] During the crisis, the debt brake figured prominently in policy debates and quite clearly shaped the policy response.

The arrangement includes an escape clause. In case of exceptional circumstances (deep recession, natural disasters and the like) the implied spending ceiling can be raised but this requires a qualified majority (three fifth) in both chambers. An amendment stipulates that any such slippage must be added to the control account, which means that, even if exceptional, bygones shall not be bygones.

The success of the Swiss debt brake (so far) derives from the simplicity of the rule. As previously noted, it remains to be seen what would happen should a negative balance in the control account not be corrected "over the next few years". Presumably, the case could be sent to the Higher Court. That the debt has continued to decline throughout the crisis is surprising since deficits are expected in bad years, even without invoking exceptional circumstances (which would not have applied since the GDP declined by only 2% in 2009). One reason is that Switzerland is a small open economy closely integrated with the European

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[20] It remains to be seen whether it will be as effective in Germany once it is implemented.

Union so that it benefitted from fiscal expansions implemented elsewhere. Another reason is that the debt brake only concerns the federal government, which spends about one third of total public outlays. The rest of the spending is carried by the cantons (about 40% of the total), municipalities and the social security system. Many, but not all cantons have adopted since the early 1980s – and some much earlier – various forms of budget rules. As a result, with one exception,[21] their debt levels are low. Much the same applies to municipalities.

5.1.3.   Chile

Chile is an early fiscal rule adopter. Adoption came at the end of a long period during which the public debt was reduced from 165% in 1985 to 20% of GDP by 2000. The intention was to solidify and codify the emerging fiscal discipline tradition.[22] Maybe because of its pioneering aspect, the rule is technically complex (for non-economists) and not quite complete.[23] Initially introduced informally, the rule has been written into law in 2006 (Fiscal Responsibility Law).

The rule requires that the cyclically adjusted primary budget be in surplus. The target was 1% from 2001 until 2008, when it was reduced to 0.5%, and further to 0% in 2009 to allow for a counter-cyclical response to the global crisis. In practice, the procedure is to estimate cyclically adjusted government revenues and to then derive total maximum spending. There is no escape clause but the target can be changed, as already noted. While the budget must be *ex ante* in conformity with the rule, there is no sanction when the realized budget differs, presumably because underlying assumptions proved to be too optimistic, which happened twice, in 2002 and 2009.

The calculation of the *ex ante* structural revenues is therefore the lynchpin of the rule. Beyond the usual complexity of taking into account cyclical effects, Chile's rule is highly sensitive to copper price fluctuations because tax revenues from copper production can represent a quarter of total public income. Given the volatility of copper prices, it is essential but highly challenging to correct *ex ante* for these fluctuations. This is where an institution is needed to operate the rule. A committee of independent experts is in charge of providing the government with assumptions regarding GDP and the long-run price of copper. It follows that forecast errors concerning the GDP cannot be the result of government's manipulation. It also follows that in any given year the actual price of copper is likely to differ from the long run estimate. It is expected that the independent experts are not biased, so that forecast errors must cancel out over time, thus imparting no bias to the rule.

The surplus rule implies that eventually, the government must be a net creditor, which occurred in 2005, as Figure 4 shows. This was an objective of the rule, in fact. It was recognized that copper resources would eventually disappear and that Chile needed to build up a welfare system. As a result, Chile operates two Sovereign Wealth Funds.

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[21] The exception is the Geneva canton, which has no budget rule.

[22] This is a clear case of reverse causality in the sense of Debrun and Kumar (2009).

[23] Daban (2011) offers a recent review.

Figure 4. Chile's central government (% of GDP)
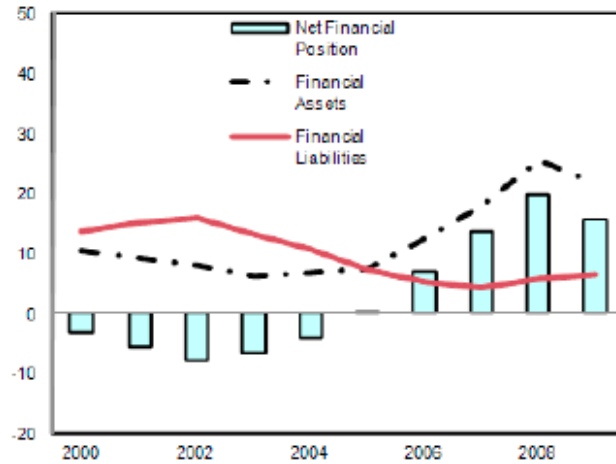
Source: Daban (2011)

The success of the Chilean rule may be surprising giving its incompleteness. There is no limit to the possibility of changing the target, not even any standard procedure to do so, and there is no sanction for not achieving the target. Part of the reason for the success is the existence of an expert group, which is involved in the budgetary process as it produces cyclically adjusted figures, an arrangement that is remindful of the Dutch case. Another reason is the transparency of the process. The calculations of the cyclically adjusted budget, which have been refined over time, are presented and explained in great detail to the broad public. The two recent target changes, for instance, have been carefully and candidly explained.

Equally important is the relationship between government and parliament. The power to set the budget is entirely in the hands of the President. The parliament is not allowed to reduce taxes or raise pending. This fits well with the delegation model of Hallerberg et al. (2009) since the presidential system delivers *de facto* a single party majority-.

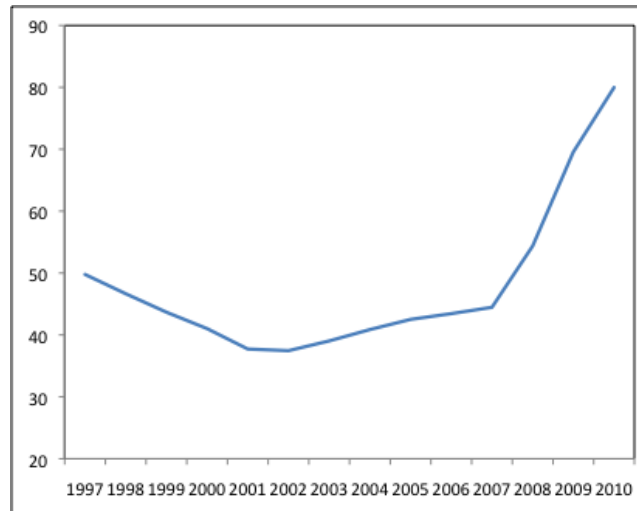### 5.1.4. Britain's Office for Budget Responsbility

In 1997, the British Chancellor of the Exchequer adopted two fiscal rules: 1) the budget deficit may only finance public investment (a golden rule); 2) the debt to GDP ratio may not exceed 40%. The rule was to be monitored by the Chancellor himself, based on forecasts by HM Treasury. The Treasury was also requested to produce long-run forecasts (40 years) to gauge long-run sustainability. As Figure 5 shows, the rule was met for a few years but then slippage set in after 2002. The idea that a public commitment with no enforcement mechanism would work was disproved. This has led the newly elected British government to pass in 2011 the Budget Responsibility and National Audit Act.

The new act combines a set of rules and an independent fiscal policy committee.[24] The rules are similar to the previous ones: the cyclically-adjusted budget must be balanced – or in

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[24] For details, see Wren-Lewis (2011b). This arrangement bears similarity to the Swedish independent council, described in Calmfors (2010).

surplus – over the following five years, the debt to GDP ratio must be declining by the end of the legislature and long run forecasts must show that public finances are sustainable. The main difference is the replacement of the golden rule – a shaky concept since deciding what is public investment is open to manipulation – by the balance requirement over a rolling 5-year horizon, which is essentially calling for balanced budgets on average over time.

Figure 5 Public debt in Great Britain

Source: AMECO, European Commission

The real innovation is the creation of the Office for Budget Responsibility (OBR). This independent body takes over the forecasting tasks so far carried out by the Treasury. This arrangement is a clear response to the fact many of the slippages over the 2000s were predicted by optimistic forecasts regarding both macroeconomic variables and the budget figures. A Budgetary Responsibility Committee that includes five members runs the OBR. The first Committee includes widely respected economists. The staff is small (15 persons), under the assumption that the OBR has full access to the Treasury resources.

Much like the US CBO, the OBR is restricted to produce forecasts only on the basis of government policy. This implies that the OBR cannot look at "what if" questions, i.e. to make policy suggestions. On the other hand, it has the monopoly of official forecasts and policy evaluations. Importantly, the OBR has only an advisory role in the sense that the Chancellor can carry out any policy that he wishes, but under the constraint that he cannot challenge the OBR's macroeconomic and budgetary implications since the Treasury has given up the possible to use its technical expertise to that effect. Since the Chancellor is also bound by the rules, the room for undisciplined behavior is narrow, but it still exists.

It will obviously take time to evaluate whether this arrangement is effective. It rests on delegation of fiscal discipline to the Chancellor; Hallerberg et al. (2009) argue that this is the correct arrangement for single-majority governments, which often occurs in the UK but not currently. Delegation also characterized the 1997 arrangement, when a single-majority government was in place, but it failed when the Chancellor single-handedly decided to

overlook his self-imposed rule. The new arrangement combines a reasonable set of rules with an institution that is intended to act as a whistle-blower. This is in line with the view by Jonung and Larch (2006), which considers that delegating forecasting to an independent agency is a key ingredient to achieve fiscal discipline. Interestingly, in the Autumn of 2011, the OBR has warned that the fiscal retrenchment efforts were too strong at a time when a recession is likely. The Chancellor promptly announced a set of expansionary policies.[25]

5.2. Sub-central government rules and institutions

The additional common pool problem that arises in federal states requires special treatment to avoid that sub-central government indiscipline undermines adequate policies carried out at the central level. A textbook example of this problem is Argentina in the late 1990s.

5.2.1. Belgium

In the late 1980s, following years of internal strife and rapidly rising public debt, Belgium shifted from a centralized to a federal state. It created a complex overlapping system of regions and communities to which many central functions were transferred. By the mid-1990s, it set up an arrangement designed to establish overall budget discipline. The key characteristic was the adoption of institutions, without any numerical rule. The main element was a reform of the High Finance Council (HFC), entrusting this body with the task of monitoring regional governments and of suggesting budget balances for the various levels of government, with the objective of achieving debt sustainability. These suggestions shape formal agreements (called budgetary conventions) between the federal and the sub-central governments. These agreements are coherent with the Stability and Growth Pact's stability programs.[26]

The HFC is composed of high-level experts from ministries, the National Bank, the Federal Planning Bureau and academia. It is therefore not an independent body, rather a coalition of the willing whose task is to find acceptable proposals in a system that is not politically harmonious.

The arrangement has worked well as total public debt went down from 140% of GDP in 1993 to 88% in 2007. Since the crisis started, however, deficits have grown again and the overall debt is expected to reach 104% in 2011. Figure 6 shows that the relapse is mostly occurring at the federal level, even though slippages occur across the board. This reflects the working of the automatic stabilizers but also the need for the federal authorities to recapitalize banks to the tune of 6% of GDP. More worrisome is the recent deterioration. It may be the consequence of an on going and protracted political crisis that has left the country for months running with interim governments. It may also be a consequence of the common pool inherent to the overlapping of the federal system. This system gives rise to a severe vertical imbalance, whereby spending powers are extensively devolved, whereas tax policy and collection remain in federal hands. This leads to massive implicit transfers to the Walloon and undermines accountability at the regional level.

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[25] A similar situation arose in Sweden earlier in the year.

[26] Macroeconomic forecasts are proposed by the National Accounts Institute which pools resources from various institutions.

Figure 6. Budget balances of various Belgian authorities (€mn.)
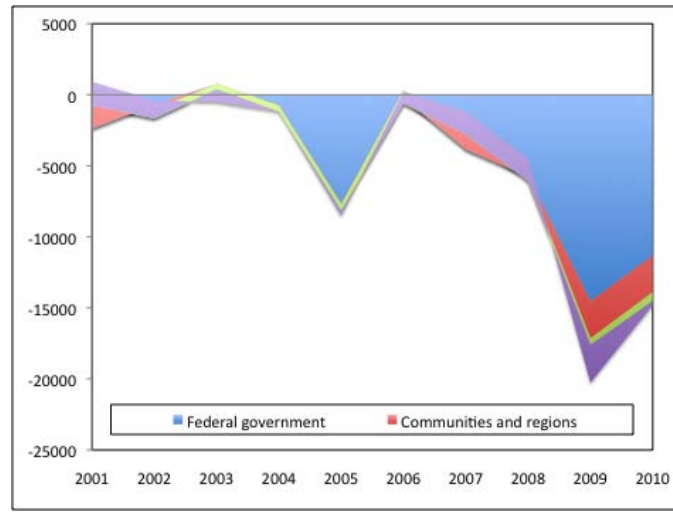
Source: Belgostat

In a country with multiple and partly overlapping layers of governments, each one itself a coalition, the arrangement has emphasized contracts among parties and among governments. The HFC is generally credited for having played an important role, outlining consensus solutions that respect fiscal discipline.[27] However, Coene and Langenus (2011) argue that the HCF had influence when government's preferences and HCF's mandate were well aligned, yet another case of reverse causality. The absence of any numerical rule did not seem to have hampered the arrangement. Similarly, the fact that the HFC is not independent but, instead, brings together the traditional "culprits" of the deficit bias, points to the advantage of well-structured negotiations. In brief, the Belgian experience conforms to the view, developed by Hallerberg et al. (2009) that arrangements well-adapted to the political situation may deliver fiscal discipline, in contrast to the view, presented here, that favors combining numerical rules and independent bodies.

5.2.2.   Canada and the US

Both countries share the absence of any constraining rule imposed by the federal on to sub-federal entities, compensated by the adoption by most sub-federal governments of self-imposed rules. In both countries, federal spending about matches in size sub-central spending with significant transfers from the federal level, some of which are conditional on policies in place.

In Canada, a spending limit was adopted at the federal level from 1992 to 1996. During this period six provinces adopted balanced budget rules that remain in effect. These rules differ from one province to the other, see Tellier and Imbeau (2004). Figure 7 shows that these changes came at a time when fiscal discipline was seriously under threat. The figure also shows that, since then, both levels of governments have stabilized their debts. The overall public debt level peaked at 102% of GDP in 1996 and declined to 67% in 2007. Not all

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[27] For a recent appraisal, see Aneja et a. (2011).

provinces, however, have been fiscally disciplined: the aggregate performance conceals the combination of large surpluses in resource-rich provinces and sizeable deficits elsewhere, notably in Ontario, the largest province.

In the US too, all states but one have adopted various forms of balanced budget rules. These rules started in the middle of the 19th century and have been evolving since.[28] The federal government is subject to a nominal debt ceiling that is regularly raised by Congress, a procedure that can be conflictual when the President and the Congress majority are from different parties. In 1985, Congress passed the Gramm-Rudman-Hollings Act, which introduced the notion of budget balance paths, aiming at a balance in 1991. The Act was modified – including after being declared unconstitutional by the Supreme Court – until it was abandoned in 1990, replaced by the Budget Enforcement Act, which introduced a rule of unchanged deficits at the margin. As Figure 7 shows, this act did not prevent a serious deterioration of the federal budget until it was left to expire in 2002. This is a good example of a rule that failed, because it was too tight and because the polity did not support it.

Figure 7 also shows that the federal budget has been strongly countercyclical while state budgets were so very moderately. This observation confirms that the state-level rules are binding while the federal arrangements are not. It is likely that state governments have little incentive to deviate from their rules because the fiscal multiplier is bound to be low given the integration of the US markets, while the federal government can expect its own fiscal policy to be more effective. Countercyclical transfers from the central level also reduce the pressure on state governments.

Figure 7. Federal and sub-federal budget balances in Canada and the US (% of GDP)
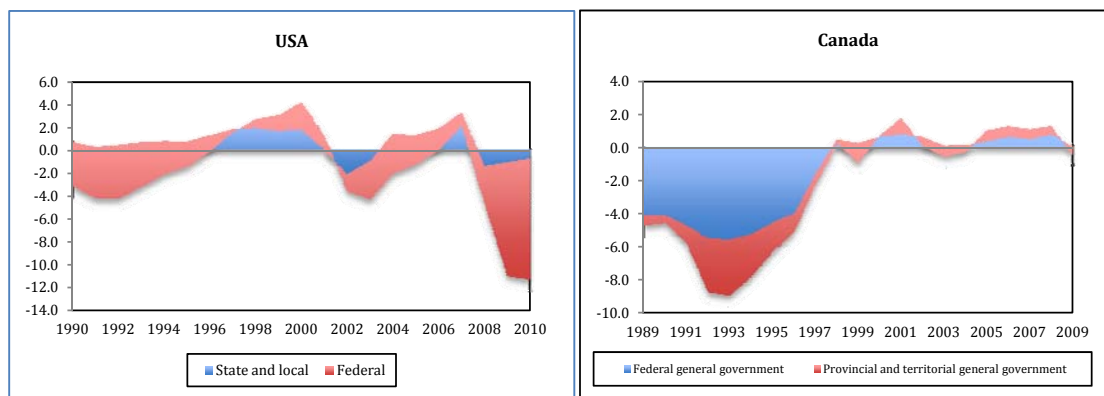
Sources: Office of Management and Budget and Statistics Canada

One interpretation of the contrasted experiences of Canada and the US is that the common pool problem among sub-central governments is relatively weak. This may be due to the small multipliers, which matches Musgrave's view that countercyclical policy is better contracted out to the central government. Still, it remains to understand why the common pool problem has been relatively benign at the sub-federal level (California being a

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[28] Interestingly, Terejo (2007) notes that these rules originated when US states faced sudden debt increases following bailouts of private banks. For a recent description of the situation, see NCSL (2010).

counterexample). The existence of rules is one interpretation. Yet another one is the role of market-imposed discipline. The evidence is that financial markets impose risk premia on government bonds that is related to debt size and also to budgetary arrangements.[29] This provides both a gauge and an incentive for state governments to be fiscally disciplined.

5.2.3.   The euro area

The euro area is a very special case that combines national sovereignty, as far as fiscal policy is concerned, with some elements of federalism, the common currency. Further complicating the situation is the Stability and Growth Pact, which is designed to influence national fiscal policies but cannot override national sovereignty. The sovereign debt crisis has further erased the separation between a common currency and independent fiscal policies after the *de facto* abandonment of a treaty-level no-bailout rule that prevented governments and the central bank from helping out countries unable to borrow to serve their debts and pay for their deficits.

The European Commission can be seen as the equivalent of a central government but its budget, about 1% of the EU GDP, is far too small to play any macroeconomic role. In contrast to real federations, any countercyclical policy must therefore rest with the "sub-federal" member states. In addition the Commission's budget must be *ex ante* in equilibrium. Furthermore, both the size and the use of the Commission budget must be approved by the European Council that brings together the Heads of State and Government. In a nutshell, the Commission budget is subject to a rigorous equilibrium rule and is under the control of member states.

The Stability and Growth Pact can be seen as a "federal" rule inasmuch as it commits – in theory – the member countries. In practice, however, the pact has not been effective. Over the first 13 years of existence of the euro, the 12 initial member countries together have satisfied the 3% budget deficit limit only 60% of the time. The number of years when the limit has been exceeded is shown for each of these countries in Table 3. Even if the rule may have had a moderating influence, the frequency of its violation is so high that its credibility is low, at best.[30]

On the other hand, the member countries have adopted a variety of budgetary arrangements, which are presented in European Commission (2006), although this tally is now partly outdated. The number of these arrangements is impressive but the devil hides in the details and most of these arrangements are effectively soft. Furthermore, few of them are directly tied to the Stability and Growth Pact, a discrepancy that is to be reduced with the adoption in 2011 of the "European Semester". This new procedure aims at tightening the macroeconomic assumptions to be used subsequently in national budget laws by allowing the Commission to evaluate them early on. Yet, as with the Stability and Growth Pact, final authority rests with national authorities so that the effectiveness of this new procedure remains to be seen.

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[29] For the US, see Poterba and Ruben (1999) and for Canada see Both et al. (2007). For the role of budgetary institutions, see Schuknecht et al. (2008).

[30] An escape clause allows the limit to be exceeded, but an escape clause must be exceptional for the rule to be meaningful.

Table 3. Number of years with budget deficit in excess of 3% of GDP – 1999-2011

Austria	Belgium	Finland	France
4	3	0	7

Germany	Greece	Ireland	Italy
5	13	4	8

Luxembourg	Netherlands	Portugal	Spain
0	4	10	4

Source: AMECO, European Commission

The lack of discipline at the national level – with notable exceptions, see Table 1 – and the inherent inability of the center to promote debt sustainability has been well-known for some time. The sovereign debt crisis illustrates the dangers of this situation. The loss of the no-bailout rule (see Section 3.4) has considerably weakened an already feeble arrangement. Current efforts focus on strengthening and widening the Stability and Growth Pact, which has repeatedly failed.

The euro area experience shows that numerical rules – the deficit and debt limits of the Stability and Growth Pact – that are neither supported by hard legislation nor endorsed by the political system are not sufficient to deliver fiscal discipline. One could see the European Commission as a sort of advisory fiscal council dedicated to establishing discipline. The lesson here is that, in a politically heterogeneous situation – in contrast with the Dutch case – the council must be politically independent, which the Commission is not as its members are known to receive "informal" instructions from their governments and as the Commission has its own vast and complex agenda. Alternatively, following the Belgian example, the council must be *ad hoc*, with a narrow fiscal discipline agenda, and include policymakers and non-policymakers with the explicit objective of seeking agreements along the contract principle of Hallerberg et al. (2009).

5.3. When do rules actually work?

Fiscal rules are rather brutal instruments and they suffer from time inconsistency. When they bind, policymakers are likely to try and evade them. Policymakers can look for loopholes, they can just ignore the rule or they can change them. Rules can be made less brutal through the adoption of escape clauses, but then they are unlikely to be effective. The nature of the common pool problem is that policymakers often find it politically rewarding not to be fiscally disciplined. As long as the political costs of ignoring the requirements of fiscal discipline outweigh the political benefits of letting the public debt grow, a government will choose the latter over the former. Rules are useful if they significantly raise the political costs of fiscal indiscipline. The implication is that rules must be embedded in institutional arrangements.

The range of possible institutional arrangements is vast. They must be well adapted to each country's political system. Electoral laws shape the type of government: single-party, coalition or minority. As argued by von Hagen and Harden (1994), single party governments

make it possible to delegate power while the other forms of governance rely instead on contracts. Ethnic or ideological diversity results in worse common pool effects and calls for "wise men" arrangements whereby independent bodies can achieve a reputation for truth telling. In all cases, transparencies, not just concerning accounting accuracy but also about the budgetary assumptions and their implications, are required to maintain the integrity of the rules.

Many countries operate several rules such as deficit and debt ceilings, spending ceilings and tax floors. The multiplicity of rules offers opportunities for the government to escape them: rule arbitrage allows a government to argue that it meets some rules and cannot possibly meet all of them, and to pick those that are less constraining at any moment of time. Likewise, complex rules are a source of opacity that makes them understandable only to a small group of experts, chiefly government officials and interest groups that can capture them.

Because deficits and debts are endogenous – to cyclical conditions, to occasional financial turmoil and other one-off events – the rules can never be completely simple and mechanical. If the goal is to achieve sustained deficit reduction, then judgment cannot be dispensed with and independent bodies such as fiscal councils can play an important role. These bodies appear to be most effective in reducing deficit bias when they validate the adequacy of budget assumptions and the ensuing calculations, and when they are given a formal and transparent advisory role.

6. Conclusions

In many developed countries, the financial crisis has merely added a layer of public debt to already impressive stockpiles. In these countries, fiscal policy has lacked discipline for several decades, for well-known reasons. The power of interest groups in most democracies creates externalities that lead to a deficit bias. The current public debt crisis in several nations has led to calls to reverse the long-standing deficit bias, which seems unlikely to occur without a change in the budgetary process, specifically designed to reduce the bias.

Fiscal rules have attracted increasing attention and many countries have adopted some rules. Evidence is now being accumulated on what rules can, and cannot do. In line with these results, the present paper argues that rules are neither necessary nor sufficient to achieve fiscal discipline. Yet they can and do help. The paper argues that rules can usually be dismissed all too easily when they clash with broad political objectives: discipline is pushed back to tomorrow just when it is needed most. This means that lasting rules cannot be too tight, but they become useless if they are too soft. The fine line between tight and soft is extremely hard to determine and may change as circumstances change. This difficulty can be alleviated through the setting-up of institutions that support the rule.

In a symmetric fashion, fiscal institutions are neither necessary nor sufficient to achieve fiscal discipline, but they help. Here again we face a delicate balance. Institutions must bind the policymakers without violating the democratic requirement that elected officials have the power to decide on budgets. This argues against assigning wide discretionary powers to fiscal institutions but it is fully compatible with giving them either the authority to apply legal rules or to act as official watchdogs.

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