A Comparative Perspective on the European Fiscal Governance Framework[1]

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<u>DRAFT, DO NOT QUOTE</u>

This paper takes a fresh look at the European fiscal governance framework by conducting a comparative analysis of fiscal constraints in a sample of 13 federations. For these federations, we assess the design, usefulness, and effectiveness of the restrictions on subnational governments' fiscal authority, with a view to drawing lessons and exploring available options for Europe.

Keywords: fiscal federalism, fiscal policy, fiscal rules, state and local government

JEL classification: H1, H3, H6, H7

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I. Introduction

In federations, the general government's fiscal outcomes are highly dependent on the behavior of local and regional entities. Federal countries tend to be highly decentralized countries, with larger and more autonomous subnational governments than in unitary countries. Therefore, maintaining fiscal discipline and strengthening fiscal accounts cannot be achieved without the full participation of subcentral government units. This participation cannot be taken for granted. Subnational finances are often more difficult to control, in part because the vertical structure of the government creates moral hazard problems and bailout expectations. Thus, the fiscal authority of subnational entities is always limited by a wide range of mechanisms, which are either self-imposed or imposed by the federal level.

This paper assesses the usefulness, design, and effectiveness of the constraints on subnational governments' fiscal policy in a sample of 13 federations, including some relatively decentralized ones like Canada, Switzerland and the United States, whose experience is probably the most relevant for Europe.[2] Our comparative analysis aims at drawing lessons from federal experiences, and shedding new light on the European fiscal governance framework.

Broadly speaking, constraints on fiscal policy can be divided into two categories. The first type of constraints bears on *fiscal targets*, and is the main focus of this paper.[3] For instance, spending caps limit the amount of subnational expenditure that can be authorized within a year. The second type of constraints is imposed on *procedures* governing the budget process. Subnational governments may, for instance, be required to commit to a multi-year fiscal strategy, and publish fiscal outcomes on a regular and timely basis. These "procedural constraints", aiming at improving fiscal management, are not analyzed here.

The paper is organized as follows. Section II analyzes the motivations for restricting the fiscal authority of subnational governments in federations. Section III proposes a typology of subnational constraints, and, based on this classification, reviews the arrangements present in the 13 federations. Section IV analyzes some key features of current control mechanisms. Section V compares the EU supranational governance framework to the constraints existing in the 13 federal countries. Section VI draws some lessons from federations' experiences. Finally, Section VII concludes.

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[2] The federations were chosen in the list published by the Forum of Federations. Those include Argentina, Australia, Austria, Belgium, Brazil, Canada, Germany, India, Mexico, South Africa, Spain, Switzerland, and United States.

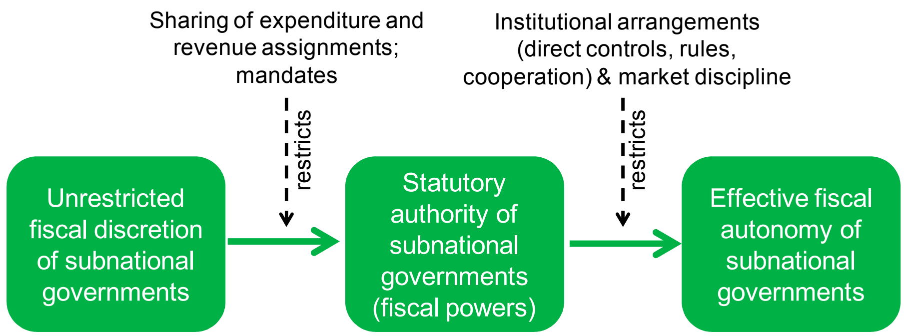
[3] "Fiscal targets" refer to quantitative targets on revenue, expenditure, and financing aggregates that capture a large share of public finances. Governments control and adjust fiscal targets with a view to meeting "final objectives" of fiscal policy, such as fiscal sustainability, or allocative efficiency (Sutherland and others, 2005).

II. Why Do Federations Contain the Fiscal Discretion of Subnational Governments?

1. From Statutory to Effective Fiscal Autonomy

The fiscal authority of subnational governments is restricted at two different stages (Figure 1). First, it is restricted by the fiscal federalism framework, which assigns revenue and spending responsibilities across government levels through constitutional, legal, and informal rules. For instance, subnational governments may not have access to certain tax bases, or may be limited in their capacity to raise tax rates. Second, within the limits of their statutory authority, subnational governments' fiscal policies are further constrained by additional control mechanisms, such as fiscal institutions and market oversight. For instance, subnational governments may be subject to expenditure ceilings or budget balance rules.[4]

Figure 1. Restrictions on Subnational Fiscal Autonomy



Source: Authors.

These additional controls are critical in federations, because subnational governments have greater fiscal powers in federal than in unitary countries: they account for a larger share of the general government revenue and spending, and have greater control over them (Box 1). Subnational autonomy is indeed at the very heart of the "federal contract," as explained by Rodden (2002). For instance, the U.S. Constitution assigns to the states all "residual powers" that is, all responsibilities not explicitly vested with the federation. In unitary countries, it is often the opposite: reforms proceed by assigning new responsibilities to lower levels of government under the decentralization model.

[4] The two forms of restrictions differ in their underlying motivations. The assignment of revenue and spending responsibilities is driven by several considerations, including enhancing allocative efficiency, achieving regional equilization, providing risk sharing opportunities, and exploiting economies of scale. The second type of constraints is primarily motivated by the willingness to enforce fiscal discipline and strengthen fiscal coordination (see below). This distinction is not always clear-cut. For instance, changes in the tax and spending assignments may enhance fiscal discipline (Eyraud, and Lusinyan, 2011). On the other hand, fiscal rules may have efficiency or equity purposes.

Box 1: The Statutory Authority of Subnational Governments in Federations

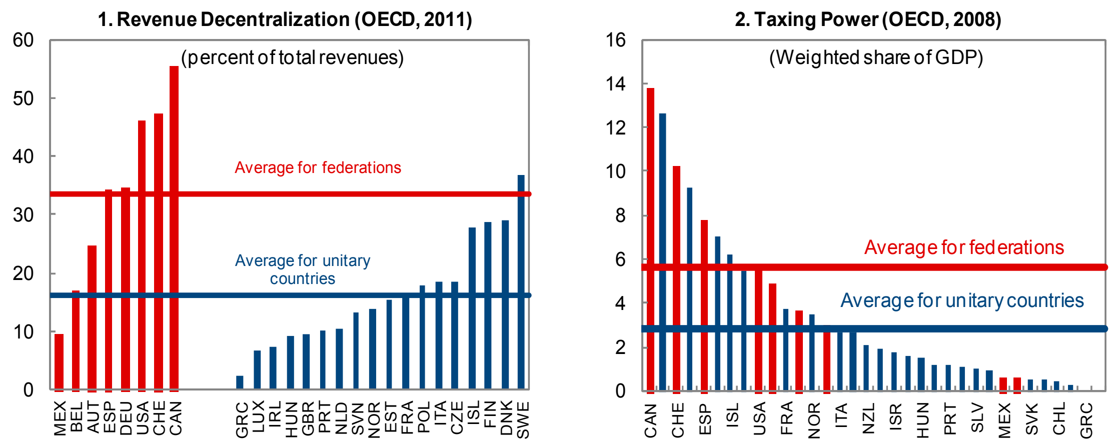
A comparative analysis shows that subnational governments enjoy greater fiscal authority in federations than in unitary countries:

- ***Revenue authority.*** A larger share of taxes and fees is devolved to subnational governments in federations (Figure 1). In addition, subnational governments have more capacity to adjust their assigned revenues, as illustrated by a taxing power indicator based on qualitative information from the OECD (Figure 2).[5] The tax autonomy variable from the Regional Authority Index Database (Hooghe and others, 2010) gives a similar picture (Figure 3).[6]

- ***Spending authority***. Subnational governments have broader expenditure responsibilities in federations (Figure 4). Spending autonomy, defined as the extent of control subnational governments exert over their expenditure, is more difficult to measure than tax autonomy. Based on a sample of six countries (of which two are federal), an OECD pilot study concludes that federal countries tend to grant more spending power to subnational governments than unitary countries (Bach and others, 2009).

- ***Overall fiscal authority.*** Very few indicators are available to measure the overall level of subnational authority (mix of spending and revenue autonomy). However, a dummy variable from the World Bank Database on Political Institutions (World Bank, 2010) suggests that subnational governments enjoy more fiscal autonomy in federations (Figure 5).

Figure 1. Fiscal Autonomy in Sub-national Governments: Different Metrics



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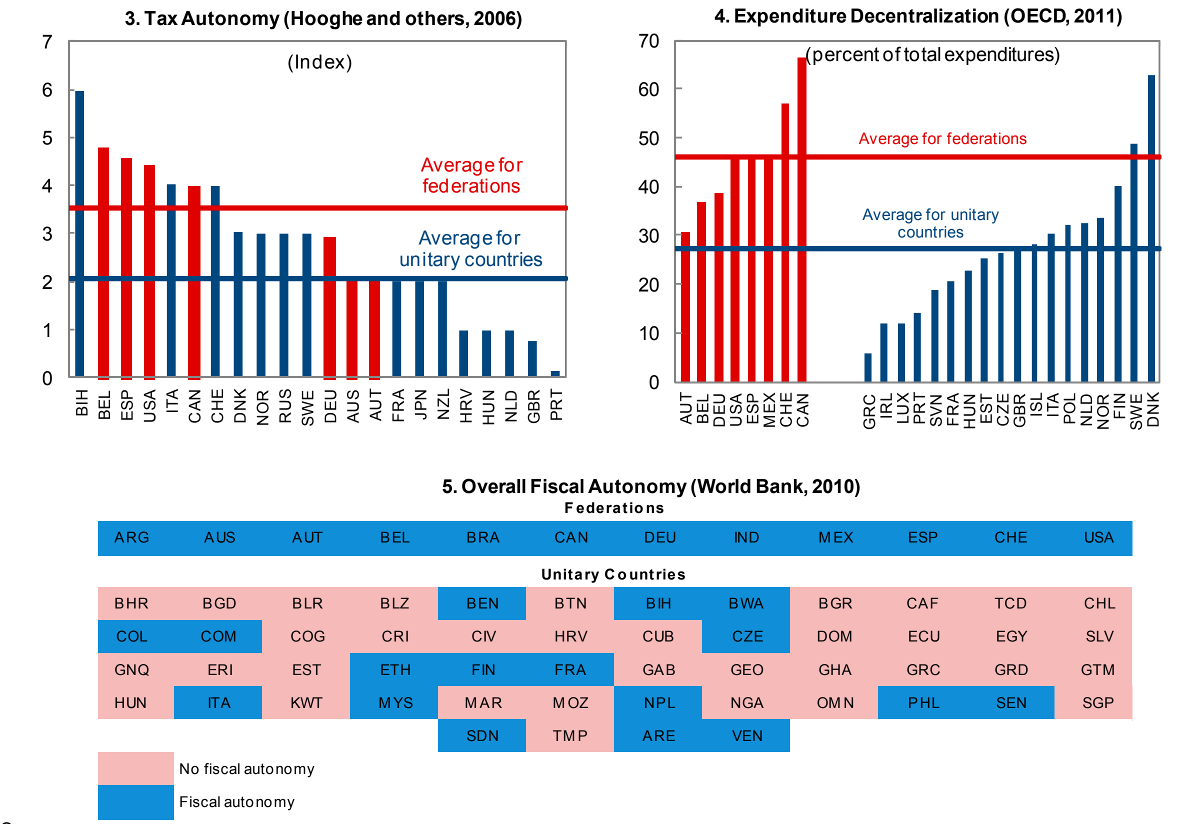
[5] This indicator is calculated as the product of the subnational tax-to-GDP ratio by a coefficient measuring the effective control of subnational governments over their tax revenues (OECD, 2011). This coefficient ranges from 0.1 to 1, with 0.1 denoting the lowest degree of subnational tax autonomy (rates and reliefs are set by the central government) and 1 denoting full autonomy (sub-central governments have full discretion on rates and reliefs).

[6] This variable is defined as the extent to which a regional government can independently tax its population.

Box 1: The Statutory Authority of Subnational Governments in Federations (continued)

Figure 1. Fiscal Autonomy in Subnational Governments: Different Metrics (continued)



Sources:
1/ OECD Fiscal Decentralization database (2013). Revenue decentralization is the share of subnational in general government revenue.
2/ OECD Fiscal Decentralization database (2013) and authors' estimates. The tax autonomy indicator is constructed from OECD survey (see text).
3/ Hoogh and others (2010). Tax autonomy indicator is defined as the extent to which a regional government can independently tax its population.
4/ OECD Fiscal Decentralization database (2013). Expenditure decentralization is the share of subnational in general government expenditure.
5/ World Bank Database of Political Institutions (2013). Fiscal autonomy is defined as the sates/provinces authority over taxing and spending.

2. Macrofiscal Pitfalls of Fiscal Federalism

Although fiscal decentralization may generate efficiency gains,[7] the vertical structure of the government has also some drawbacks highlighted by the more recent empirical and theoretical literature (Oates, 2006):

[7] Subnational governments have more information and hence can better match policies with citizens' preferences (Oates 1972). Competition among jurisdictions limits the local tax burden and encourages cost-efficient provision of local public goods (Brennan and Buchanan, 1980). Finally, decentralization is likely to increase accountability and transparency in the delivery of public goods and services.

- ***Deficit bias.*** Fiscal decentralization may undermine fiscal discipline. An abundant literature shows that subnational governments do not fully internalize the cost of public expenditure and thus have an incentive to undertax and overspend. Local authorities may expect bailouts from the center ("soft budget constraint") and/or partly finance their marginal expenditure with central transfers that are paid by taxpayers in other jurisdictions ("common pool problem"). In addition, the lack of discipline of an individual subnational entity may have spillover effects on the general government's fiscal position (Box 2).

- ***Coordination Failure.*** In a decentralized system, subnational and national governments' policies are not necessarily consistent, even when local authorities are fiscally responsible. It is not uncommon that subnational authorities steer fiscal policy in the opposite direction of the center. Analyzing seven federations, Rodden and Wibbels (2010) show that subnational governments generally pursue procyclical policies, which undermine the stabilization efforts of the center. For instance, during the 2008 crisis, the fiscal stimulus carried out by the federal government was partly offset by tax increases and expenditure cuts at the state level in the United States (Jonas, 2012).

Box 2. Vertical and Horizontal Externalities in Federations

Vertical spillovers. The central government's position may be affected by fiscal problems originating at the subnational level (IMF, 2009a). Subnational governments that have borrowed too much and accumulate arrears may receive bailout transfers from the center. Vertical spillovers can also take more subtle forms, for instance, when high subnational borrowing or difficulties in implementing consolidation plans in a decentralized framework result in higher risk premia on sovereign issuances.

Horizontal spillovers. If an individual entity is fiscally irresponsible, its behavior may negatively affect the fiscal position of other subnational governments for several reasons (Inman, 1996; Landon, 2003): (i) An implicit or explicit guarantee by the other members of the federation could directly raise their credit risk premium; (ii) An implicit or explicit guarantee by the central government may also negatively affect other subnational entities, through the higher risk of inflation (if the guaranteed debt is monetized), or through tax increases borne by the whole federation; (iii) The investors' perception of similarities among subnational governments may be sufficient to trigger spillover effects, for instance when problems in a particular state signal that similar problems are more likely in other states; (iv) Real linkages (regional trade) or financial linkages (solvency of the financial sector) may also transmit the externality.

The deficit bias and lack of coordination are, to different degrees, present in all decentralized systems. The second problem is however more acute in federations than in unitary countries, as states enjoy more autonomy and account for a larger share of the general government. Whether the deficit bias is more prevalent in federations is an open question. As states generally enjoy higher fiscal autonomy, the tax-benefit link is tighter in federations. This may enhance fiscal responsibility and accountability. On the other hand, the risk of moral hazard is also higher. The econometric literature does not provide evidence of a systematic relationship between the governmental structure (federal versus unitary countries) and the fiscal position of subnational governments, other factors being equal (see for instance, Rodden 2002).

3. Rationale for Subnational Constraints

In order to address these problems, federations resort to institutional arrangements whose aim is to reduce the fiscal discretion of subnational governments with two main objectives:[8]

- ***Enforce and signal fiscal discipline***. Constraints imposed by the center often seek to improve the fiscal governance of subnational governments, and prevent possible misuse of fiscal discretion (Poterba, 1996). For instance, budget balance rules reduce the likelihood of budget overruns, because they constitute benchmarks against which local authorities may be evaluated by voters. In 2012, the Spanish government passed by decree expenditure ceilings for regional and local governments as a mechanism to contain spending and signal fiscal responsibility. When constraints are self-imposed by subnational governments, their rationale could be different. Fiscally-prudent states may find it in their own interest to signal their creditworthiness to investors through the imposition of credible rules that less prudent states cannot replicate (Inman, 1996).

- ***Strengthen coordination***. Fiscal institutions are also used to align the fiscal objectives of subnational governments with those of the national government. In Australia, the National Loan Council is in charge of analyzing and approving financing requirements of each state and the Commonwealth as a whole, as well as monitoring the execution of the decisions. In South Africa, the Budget Council and several technical committees oversee budgetary and financial co-operation between national, provincial and local government. In India, the Finance Commission makes recommendations on tax revenue sharing between the federal government and the states. Strengthening coordination is particularly important when supranational commitments have to be respected. In Europe, Austria, Belgium, Germany, and Spain have introduced domestic stability pacts to better coordinate fiscal outcomes of the different levels of government, with a view to complying with the Stability and

[8] Other motivations include reducing inter-jurisdiction competition, preventing tax exporting, and limiting distortions in allocation decisions (Carlsen 1998; Sutherland and others, 2005).

Growth Pact (SGP) rules. As such, these pacts pursue both the objectives of coordination and fiscal discipline.

III. Which Subnational Constraints Are Most Prevalent in Federations?

1. Typology of Constraints

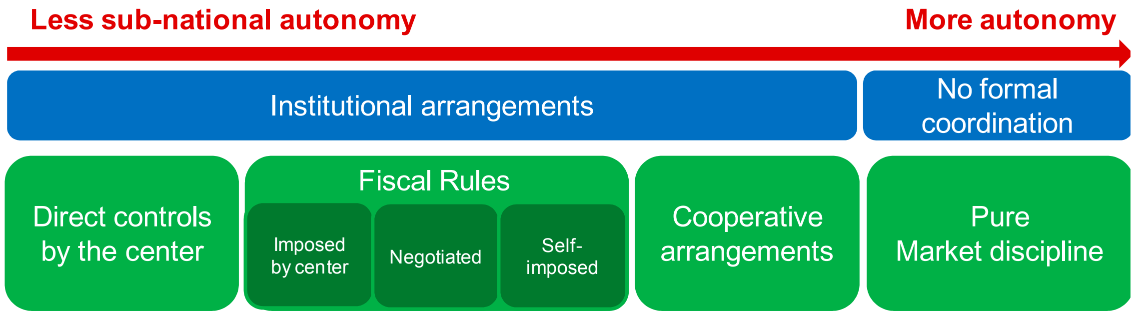
Constraints can be classified according to the degree of "fiscal autonomy" (FA) they leave to subnational governments.[9] FA is a general concept referring to the authority for decision-making and management, in all areas of the budget—expenditure, revenue, and financing. In this paper, we adopt a more narrow definition and refer to FA as the capacity of subnational governments to set their own fiscal targets.

Figure 2 depicts the FA axis, ranking institutional arrangements according to the autonomy left to subnational governments. On the left hand side, direct (administrative) controls by the central government are associated with the lowest degree of FA. For instance, central government may set and revise every year subnational debt ceilings. Fiscal rules come next.[10] Although rules impose stringent restrictions on fiscal discretion, they are less binding than direct controls, because rules preclude the central government from micromanaging subnational fiscal policy, and because their design often preserves some policy flexibility (for instance, deficit ceilings constitute an asymmetric constraint). In addition, subnational governments have generally margins to comply with rules. Rules themselves can be ranked, depending on whether they are imposed by the center, negotiated or self-imposed. Cooperative approaches ensure the highest degree of subnational FA among institutional arrangements. Unlike fiscal rules, they allow subnational governments to renegotiate their fiscal targets on a regular basis. Finally, constraints may be imposed by investors, enforcing market discipline. In this case, subnational governments are free to set their own targets, as long as their fiscal policy does not impair market confidence.

[9] This typology draws on and extends the classification proposed by Ter-Minassian and Craig (1997) in the context of subnational borrowing controls.

[10] Fiscal rules are defined as constraints that cannot be frequently changed (IMF, 2009b; Schaechter and others, 2012). The "permanent" nature of fiscal rules is what distinguishes them from annual budget targets, and from multiyear targets subject to regular revisions such as medium-term budget frameworks (Debrun, 2008).

Figure 2. Arrangements to Constrain Subnational Fiscal Policy



Source: Authors.

This typology is not without its shortcomings. There is no clear-cut separation between different arrangements. In particular, fiscal rules are not always distinguishable from direct controls and cooperative approaches (Appendix 1). In addition, federations resort to multiple arrangements. State and local governments are often constrained by distinct mechanisms. Finally, in several respects, market discipline is qualitatively different from institutional constraints (see Section III.3).

2. Institutional Arrangements Prevalent in Federations

Appendix Table 1 provides details about the constraints imposed on subnational fiscal policy in the sample of 13 federations reviewed by this paper. Fiscal rules are by far the most common form of institutional constraint in federations, accounting for almost 90 percent of the constraints; the rest is somewhat evenly distributed between cooperative approach, and direct controls (Table 1).

Fiscal rules are present in all 13 federations. On average, subnational governments are subject to 3 different rules. Some countries, like Spain, have a larger number of subnational constraints, covering all the main fiscal aggregates, including the debt stock, debt service, expenditure, and fiscal balance. In our sample, it seems that fiscal rule and cooperative approaches are substitutes, in the sense that the number of rules is, on average, smaller in countries with a tradition of negotiation. Interestingly, about half of the subnational rules in federations tend to be self-imposed or negotiated rather than imposed by the central government (Figure 3). For instance, in Canada and the United States, provinces and states set their own balanced budget rules and other types of fiscal rules. In Australia, rules are also self-imposed and differ from state to state. The same occurs at the canton level in Switzerland. This differentiates federations from unitary countries, where most rules are imposed by the center (Joumard and Kongsrud, 2003; Sutherland and others, 2005).

Table 1. Institutional Constraints on Subnational Governments: Types and Number 1/

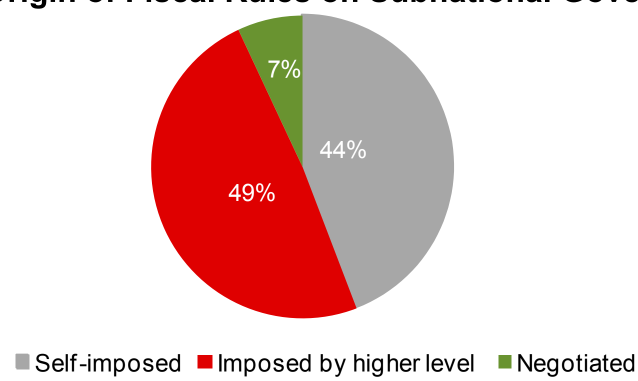
	Fiscal rule	Direct control	Cooperative approach
Argentina 2/	3	...	...
Australia	3	...	1
Austria	1	...	1
Belgium	1	...	1
Brazil	3	...	...
Canada	3	1	...
Germany	3	...	...
India	4	1	...
Mexico	2	...	...
South Africa	2	...	...
Spain	6	...	...
Switzerland	5	...	...
United States	5	...	...

Source: Authors.

1/ The Table only compares institutional constraints. Market discipline is not considered. The classification is based on the information collected in Appendix Table 1, with one line representing one constraint.

2/ In Argentina, fiscal rules have been suspended since 2009.

Figure 3. Origin of Fiscal Rules on Subnational Governments



Source: Authors.

Note: The shares are based on the rules reported in Appendix Table 1. Rules on Argentinean provinces are also included.

Cooperative approaches exist in a few countries. For example, in Austria, annual fiscal targets are negotiated by federal, regional, and local governments via the Austrian Stability Program. A similar negotiation process occurs in Belgium through cooperation between the federal and regional levels and the High Finance Council, a supervisory authority that proposes annual ceilings on borrowing requirements consistent with EU commitments. In Australia, cooperation occurs via the Loan Council, a federal-state body which coordinates the financial borrowing arrangements of the federal and regional governments. Although it is difficult to draw general lessons from a small sample of countries, there is anecdotal evidence suggesting that cooperative approaches are progressively abandoned in favor of fiscal rules. For instance, Germany has had a tradition of coordination and negotiation of fiscal targets, with the Financial Planning Council monitoring fiscal developments and making recommendations on the budget and financial planning of the Federation and the Länder (Joumard and Kongsrud, 2003; Lübke, 2005).[11] In 2009, a new rule-based approach called "debt brake" was introduced, which will submit the federal and the Länders' budgets to structural balance targets after a transition period.

Direct controls from the central government are rare in federations, by contrast with unitary countries (Ter-Minassian and Craig, 1997).[12] They generally appear in the form of borrowing controls at the regional and local government levels. In India, states have to require permission to raise loans if they are indebted to the central government or have taken guarantees from it. The center has to assess the debt sustainability of the state and its ability to repay. In Canada, municipalities need authorization from provinces to borrow on the domestic market. Although direct controls are rare under normal circumstances, they are still commonly used in case of breach of fiscal targets, as discussed below.

3. Market Discipline

Financial markets constrain subnational fiscal policy by imposing higher borrowing costs for imprudent fiscal policy. In several respects, market discipline is somewhat different from the institutional constraints reviewed above. First, market discipline is difficult to quantify. It does not rely on explicit numerical targets, contrary to fiscal rules or cooperative approaches. Also, its strength and effectiveness cannot easily be measured outside crisis episodes. By contrast, it is relatively simple to monitor the compliance with institutional constraints. Second, market constraints have generally a broader scope, imposing restrictions on the overall policy rather than on a specific fiscal aggregate. Third, market discipline comes on top of existing institutional mechanisms. As soon as subnational governments have market access, some degree of market discipline exists. By contrast, institutional arrangements are often substitutes. For instance, the overall balance cannot be, at the same time, negotiated, and subject to direct controls.

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[11] The golden rule in effect until 2009 was not enforced.

[12] The secondary role of direct controls reflects the balance of powers between the central government and subnational entities in federal systems. Direct controls may also be less warranted in federations than in unitary countries, because subnational governments are less likely to expect bailouts from the center (Von Hagen and Eichengreen, 1996). This is because states have sufficient own resources and tax authority to cope with unexpected shocks that affect their economy. By contrast, subnational governments in unitary countries are generally more dependent on transfers and may enter into a fiscal crisis when faced with even small adverse shocks.

No country relies on pure market discipline; institutional arrangements are still present in all the federations reviewed in this paper. Interestingly, the countries where the market discipline is the strongest, such as Australia, Canada, and the United States, are those where subnational rules are self-imposed. One reason could be that subnational governments establish these rules to signal to the market their commitment to fiscal discipline (see Section VI).

Purely market-based discipline remains atypical because conditions for its effectiveness are seldom met (Ter-Minassian and Craig, 1997; Ter-Minassian, 2007). First, sub-national authorities should not have privileged access to borrowing. For instance, loans should not be obtained from publicly owned credit institutions with administratively-decided interest rates, and should not be guaranteed by higher levels of government. Second, adequate information on the borrower's existing liabilities and repayment capacity should be readily available, so that potential lenders can correctly discriminate between borrowers. Third, the borrower should have the capacity and willingness to respond to market signals. This may not be the case if electoral cycles foster a short-sighted conduct of fiscal policy, or if subnational authorities have little authority over their revenue and expenditure.

The coexistence of market discipline and institutional controls is becoming more widespread, and is not limited to advanced economies. In Mexico, the new regulatory framework for domestic borrowing introduced in 2000 stipulates that the federal government does not guarantee subnational debt, and relinquishes some of its power over discretionary transfers (to avoid possible bailouts). Subnational debt is subject to normal credit exposure ceilings, and bank's capital risk weighting of subnational loans is based on international credit ratings (Braun and Tommasi, 2002; Webb, 2004). In 2003, South Africa also introduced a regulatory framework for municipal borrowing in order to fill the regulatory gap that emerged from the elimination of the central underwriting and guarantee of municipal debt. Article 139 stipulates that in case of financial difficulties the provincial government has to seek "solutions to resolve the financial problem in a way that would be sustainable and would build the municipality's capacity to manage its own financial affairs."

IV. What Are the Main Features of Subnational Constraints in Federations?

1. Fiscal Aggregate

In the sample of 13 federations, constraints are primarily imposed on the fiscal balance of subnational governments. Borrowing constraints and debt rules are also widespread, followed by expenditure rules.[13] Revenue rules are rare at the sub-national level (Table 2). The

[13] Borrowing constraints apply to gross borrowing flows. Hence, they differ from debt ceilings (stock concept), and fiscal balance targets (net concept).

prevalence of fiscal balance constraints is not specific to federations, as Sutherland and others (2005) find the same result in the OECD country sample.

Table 2. Fiscal Indicator Targeted by the Institutional Constraint 1/

	Fiscal Balance			Borrowing 2/	Debt		Expenditure		Revenue
	Overall balance	Golden rule	Structural balance		Debt stock	Debt service	Aggregate	Subcomponent	Tax ceiling
Argentina 3/		x				x	x		
Australia	x			▲	x		x		
Austria	▲	x							
Belgium	▲/x								
Brazil				x	x			x	
Canada	x			o	x		x		
Germany 4/	x		x	x					
India	x			o	x	x			
Mexico				x					
South Africa	x			x					
Spain	x		x		x	x	x		
Switzerland	x	x	x				x		
United States		x		x	x	x	x		x

Source: Authors.

1/ All the fiscal aggregates pertain to subnational governments. x denotes a fiscal rule, o denotes a direct control from a higher government level, and ▲ denotes a cooperative arrangement.

2/ For India and Mexico, there are distinct restrictions on domestic and foreign borrowing.

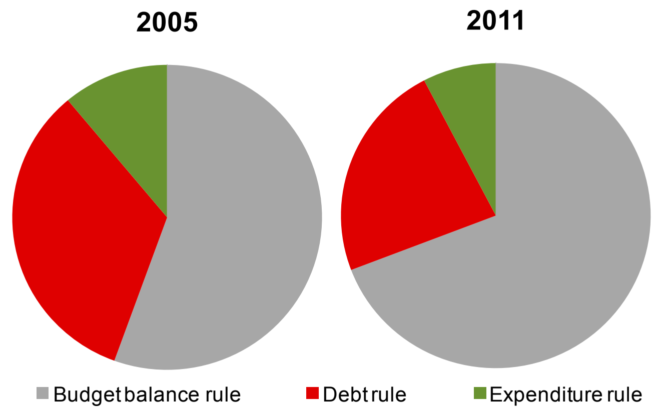
3/ In Argentina, fiscal rules have been suspended since 2009.

4/ In Germany, the Länder have the option to follow an overall balance rule (instead of a structural balance rule), although the debt brake targets are set in structural terms. At the time of the drafting of this paper, most Länder were still in the process of designing their rules.

Two main evolutions have been particularly noticeable in recent years. First, the trend towards balanced budget rules seems to have gained momentum with the recent crisis. Using data from the European Commission Fiscal Rules database, we compare the evolution of the fiscal rule framework in the subset of European federations. The share of balanced budget rules has increased significantly between 2005 and 2011 (Figure 4), and this increase has been more pronounced than in unitary countries. In the context of the crisis, budget balance rules may have been perceived by federations as critical to supporting the credibility of fiscal consolidation plans, and putting public finances on a sustainable path.

Second, the adoption of cyclically-adjusted balance rules at the subnational level has provided some flexibility to accommodate output shocks. These rules take different forms. In Germany, the Länder budgets must be balanced in structural terms as of 2020. Implementation at state level is the sole responsibility of the Länder, which are free to specify the legal basis and implementation provisions, including the choice with regard to applying this objective via a nominal or structural rule, the methodology for cyclical adjustment, and whether to use a control account.[14] In Spain, the annual fiscal balance target depends on the cyclical position, net of exceptional and temporary measures. In Switzerland, cantons set their own balanced budget rules; for instance, in Graubünden, Lucerne and Valais, the government's deficit must be balanced over the business cycle (Stalder and Röhrs, 2005).

Figure 4. Distribution of Subnational Fiscal Rules in EU Federations



Source: European Commission Fiscal Rules Database (2011); Authors.

Note: 2005 is the first year available in the EC Fiscal Rule Database with sufficient rules to make a relevant comparison. Federal countries include Austria, Belgium, Germany, and Spain. There was no revenue rule in 2005 and 2011 in the sample of federations.

Another way to introduce flexibility is through the creation of "rainy day" funds (RDF), whose purpose is to smooth public spending. RDFs are budget stabilization funds used by subnational governments when the deterioration in economic conditions produces an unexpected drop in revenues or an increase in expenditure. In the absence of RDFs, states, which are often compelled to run balanced budgets[15], would have to conduct pro-cyclical fiscal policies (Balassone and others, 2007; Ter-Minassian, 2007). Empirical evidence on the US shows that RDFs have been effective to cushion the impact of the recent crisis on states' expenditures (McNichol and Boadi, 2011).

In the United States, RDFs were introduced in the aftermath of the recession of the early 1980s. Today, almost all US States have RDFs, although their sizes differ significantly. Prior to the crisis, some states had very small amounts set aside (for example, Wisconsin or Michigan), while mineral-rich states such as Wyoming and Alaska had reserves equivalent to more than one third of their annual expenditure. Outside of the US, RDFs are not common. For instance, in Canada, Alberta has a stabilization fund established "to offset the cost of

[14] At the time of the drafting of this paper, not all Länder have defined and adopted a rule, although the debt brake principle has been enshrined in the Constitution since 2009.

[15] Balanced budget rules are exclusive of accumulation, or withdrawals from the RDFs.

emergencies, disasters, natural gas rebates, settlements with First Nations and unexpected declines in budget revenue."

2. Sanctions and Corrective Actions

Institutional constraints generally include a number of provisions dealing with non-compliance and meant to strengthen enforcement. In particular, subnational governments failing to abide by the rules may be subject to sanctions and/or corrective actions. Appendix Table 2 provides a non-exhaustive overview of some of the measures provided for by national and subnational legislations in the 13 federations.[16]

From the start, it should be noted that the distinction between sanction and corrective actions is not always clear-cut. In this paper, we define corrective actions as a set of measures intended to put local finances back on a sound footing, and which entail some temporary loss of autonomy for subnational entities. Sanctions are financial and administrative penalties imposed on the subnational government or its officials; contrary to corrective actions, they only have a disciplinary function and do not contribute to restore fiscal soundness (on the contrary, financial sanctions may aggravate fiscal stress).

A breach of a subnational fiscal target does not immediately lead to sanctions and corrective actions, when there are escape clauses in case of predetermined events. These clauses exist in several federations, although they are not as common as at the national level (Appendix Table 2). The list of exceptional circumstances seems quite standard, including large macroeconomic shocks, emergency situations, and natural disasters.

Noncompliance with fiscal targets may occasionally result in financial or administrative sanctions. In some federations, individual officials are held liable for the fiscal slippages. In the province of British Columbia in Canada, there is a withholding of ministerial salaries, which are only paid when the targets are met. In Brazil, officials who violate the rules may be subject to fines and criminal penalties. In other cases, sanctions apply to subnational governments, not to individuals. In Germany, consolidation payments may be suspended if Länders under consolidation programs miss their targets. In Austria, interest-bearing deposits are converted into fines in case of noncompliance with the domestic stability pact targets. In Spain, regions may incur fines if they cause the country to breach EU rules. Interestingly, financial sanctions are quite widespread despite their lack of credibility.[17]

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[16]This section focuses on controls introduced in case of breach. We do not examine ad hoc controls related to the resolution of an episode of protracted fiscal stress or insolvency.

[17] Subnational governments in difficult situation are more likely to receive additional support than to pay fines (Joumard and Kongsrud, 2003).

Corrective actions can be ranked according to the loss of autonomy undergone by subnational governments. A minimal requirement is for officials to justify the breach of the target, like in Australia. They may also have to produce a plan for rectifying the situation. Corrective actions are more demanding when the center imposes direct controls on subnational policies. These controls range from borrowing restrictions (like in Argentina, India or Belgium), to a mandatory agreement on rebalancing plans (Germany), and to a temporary loss of authority on fiscal matters (Switzerland). One of the most advanced frameworks can be found in Spain, which combines several layers of correction mechanisms. Regions having missed their budget balance targets are required to present an annual rebalancing plan and are subject to quarterly monitoring by the central government. This plan involves limitations on long-term borrowing, and the possibility of taking the region under central administration.

V. A Comparative Perspective on the European Union Supranational Rule Framework

In previous sections, we presented a general analysis of subnational constraints in the sample of 13 federations. Based on these findings, we now examine the European Union (EU) supranational rule framework with a view to drawing some parallels and identifying differences.[18]

The comparison clearly has its limits. The EU is not a federation, and the links between the "center" (EU institutions) and the member states are looser and at times ambiguous. Thus, some design features of the EU rules may in fact compensate for a weaker enforcement capacity and greater reliance on peer pressure. Similarly, the absence of a fiscal union in the EU may require a larger number of constraints with a view to ensuring enforcement for a wide range of circumstances.

1. Number and Type of Constraints

The EU fiscal governance framework has four main supranational rules—the 3 percent deficit rule, the 60 percent debt rule, an expenditure benchmark, and medium-term budgetary objectives (MTO) defined in structural terms. It also requires countries to enshrine a structural balance rule in national legislation.[19] Appendix 2 provides detailed information on those five requirements. There is also a cycle of economic policy coordination at the EU level called the European Semester.

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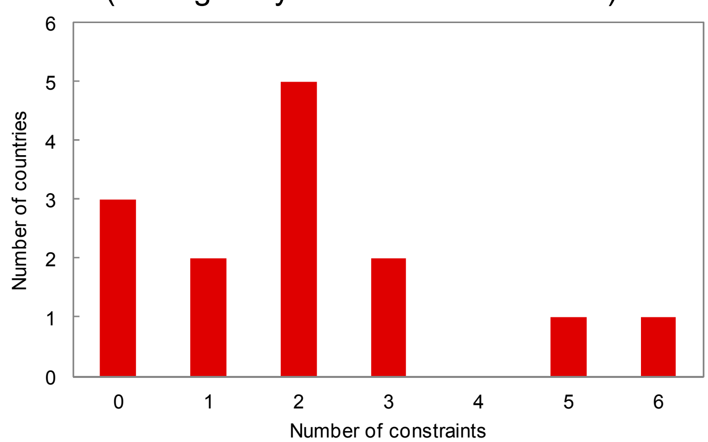
[18] Compared to the previous ones, this section does not take into consideration self-imposed subnational constraints or constraints imposed by the states/regions on local governments. The comparison is limited to constraints imposed by the supranational/federal level.

[19] Although the MTO and the structural balance rule are closely related, they constitute distinct constraints.

Successive reform packages introduced since Maastricht have led many to argue that the current system of EU rules is over-determined. Although rules are mutually consistent and tied by well-defined relationships, successive legislative changes make their monitoring, communication, and fiscal planning complex, as countries need to ensure that they comply with the most stringent of all requirements. Compared to the European Union, most federations tend to impose a smaller set of constraints on subnational governments, except Spain which adopted an extensive fiscal rule framework during the crisis. On average, each federation imposes about two constraints (Figure 5). In the Canada, United States, and Switzerland, there is no federal restriction on subnational fiscal targets.

Figure 5. Number of Countries with Federal Constraints on Subnational Governments

(Arranged by number of constraints)



Source: Authors.

Note: The sample includes the 13 federations, as well as the European Union, which has 5 different rules (Appendix 2). The constraints in the chart include negotiated and imposed fiscal rules, direct controls by the center, and cooperative arrangements. Constraints that are self-imposed by subnational governments are, by definition, not included, which explains the difference with the results from Section III.

Several factors may explain the higher number of rules in the EU. First, the Maastricht Treaty initially included only three supranational rules, of which only one was really binding.[20] Later on, the fiscal crisis and the unsuccessful experience with a small set of constraints prompted the adoption of additional rules. Second, the growing complexity of the system also reflects the relative paucity of self-imposed national rules in the EU, particularly in the initial years. By contrast, in federations, about half of constraints on subnational governments are self-imposed (Section III). Third, in the absence of a full-fledged fiscal union in the EU, a larger number of constraints ensures enforcement for a wide range of

[20] The initial rules were the 60 percent debt cap, the 3 percent deficit ceiling, and the requirement that medium-term budget positions should be "close to balance or in surplus."

circumstances. For instance, structural balance rules and expenditure benchmarks are used to prevent lax policies in good times.

As explained above, institutional constraints can take three different forms: fiscal rules, direct controls, or cooperative arrangements. The EU fiscal governance framework rests almost exclusively on fiscal rules. Although some policy coordination exists among European countries (in particular through the European Semester), this exercise cannot be described as a full-fledged cooperative approach, primarily because fiscal plans are examined rather than negotiated between Brussels and Member States.[21] The EU framework does not resort either to direct controls from the center.[22] The predominance of fiscal rules is not EU-specific. In the sample of federations, rules are also the most common type of constraint, although cooperative approaches prevail in Australia, Austria, and Belgium (see above).

Some differences also exist regarding fiscal targets. By comparison with existing federations, borrowing controls are absent from the EU fiscal framework.[23] Another difference is that budget balance rules are relatively strong requirements in the EU (at least "on the paper"), while they seem less stringent in the sample of federations.[24]

2. Design Features

Three features distinguish EU rules from usual federal constraints. First, most EU rules include restrictions on both the level and the first difference of fiscal targets, the second restriction being conditioned on the breach of the first one. Fiscal rules are, thus, implemented by stages (Figure 6). For instance, when countries do not comply with the 60 percent debt ceiling, a constraint on debt changes—the $1/20^{th}$ rule—applies. Similarly, if a member state's structural deficit is higher than its MTO, it has to improve its fiscal position by at least 0.5 percent of GDP per year in structural terms. Corrective actions and sanctions are also progressive, becoming more stringent when the target in level is breached *and* efforts to correct the imbalance are deemed insufficient. This multi-step approach is probably

[21] During the "European semester" in the spring, EU countries receive feedback from other member states on their medium-term fiscal plans (peer review). The Commission assesses stability and convergence programs, and proposes country-specific recommendations in July. The two-pack regulations also require that euro area Member States submit their draft budgets to the Commission in the Fall.

[22] Even when EU rules are breached and corrective actions/sanctions are triggered, Brussels does not get direct authority over member states' budgets (see below).

[23] Subnational borrowing is indirectly constrained by budget balance rules.

[24] In Australia, Austria, and Belgium, budget balance targets are negotiated with rather than imposed by the center. In India, budget balance rules at the state level are only recommended by the national fiscal responsibility law.

warranted by the lack of credible enforcement tools, and the desire to make peer pressure more effective.

Figure 6. Multi-step Approach with EU Fiscal Rules1/

	Stage 1	Stage 2		Stage 3	
	(Main rule)	(If noncompliance with main rule)		(If insufficient effort to correct the breach)	
		Sanctions 2/	Corrective Actions	Sanctions 2/	Corrective Actions
Balanced budget rule	Overall deficit of the general government below 3% of GDP	Non-interest bearing deposit	EDP with annual fiscal effort of at least 0.5 percent of GDP in structural terms	Fines	
Medium-Term Objective	Country specific MTO in structural terms		Annual efforts of at least 0.5 percent of GDP to reach MTO	Interest-bearing deposit if significant deviation	
Expenditure benchmark	Annual growth of general government primary expenditure below potential GDP growth	Interest-bearing deposit if significant deviation			
Debt rule	Financial debt of the general government below 60% of GDP		$1/20^{th}$ debt rule (starting 3 years after EDP)	Interest-bearing deposit	An EDP can be opened

Source: EC, and Authors.

1/ The figure provides a simplified overview of the EU fiscal governance framework. More detailed information can be found on the European Commission website.

2/ Sanctions (deposits and fines) apply only to euro-area countries.

Another peculiarity of the EU fiscal framework is that it increasingly requires supranational requirements to be enshrined in national legislation in order to strengthen enforcement. For instance, the adoption of national structural balance rules should ensure that MTOs are achieved. This may create inconsistencies if a specific fiscal target is constrained by both national and supranational rules with slightly different definitions. To our knowledge, there is no similar case of duplication in federations.[25]

Third, in accordance with the "subsidiarity principle," EU rules apply to the general government, with countries being responsible to distribute the target internally among government units. By contrast, in federations, central constraints generally apply separately to different government levels, and states/regions are not held responsible for the achievement of lower–tier targets. For instance, there are distinct rules for Länder and local governments in Germany. In Belgium, regions and communities' fiscal balance targets are negotiated, while local governments are subject to a budget balance rule. The fact that the EU governance framework remains silent on the "internal working" of supranational objectives creates practical difficulties, especially when targets are set in structural terms.[26] In addition,

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[25] In India, the national FRL recommends that states adopt their own FRLs with self-imposed rules, but the national FRL does not impose subnational constraints.

[26] The $1/20^{th}$ debt reduction benchmark will also require a cyclical adjustment.

subnational governments may not be fully involved in the achievement of supranational targets, undermining accountability and compliance. Some European countries have tried to address these issues with internal stability pacts, but their performance has been at best mixed.

3. Enforcement

Although enforcement mechanisms are notoriously weak in some federations, this is especially the case in the EU framework for three main reasons (Appendix Table 2). First, sanctions only apply to euro-area Member States. For instance, countries under the EDP that are not part of the euro area are neither required to hold a deposit at the EU, nor liable to a fine in case of insufficient progress. By contrast, in federations, central constraints usually bear on *all* subnational governments in a nondiscriminatory way.

Second, sanctions seem to be relatively mild in the EU. They usually consist in opportunity costs from financial deposits. The conditions to convert these deposits into outright fines are very strict, and have, so far, never been applied. In addition, the EU framework does not provide for administrative sanctions, while they exist in several federations. For instance, in Spain, officials may incur penalties if the regional budget is not balanced in structural terms. In Brazil, officials who violate rules may be subject to criminal charges.

Third, corrective actions required in case of noncompliance are also relatively weak, in part because Brussels does not have the ability to impose direct controls on national budgets. For instance, borrowing restrictions imposed by the federal level do not exist in the EU, while they are quite widespread in federations. In Belgium, the federal level can impose borrowing limits on regions if they breach the annual balance targets. In Brazil, new hiring, wage increases and overtime contracting are suspended if personnel spending exceeds the ceiling. In Spain, the center has the authority to take control of subnational budgets in case of protracted mismanagement of public funds.[27]

VI. Are Constraints Effective in Reducing the Fiscal Discretion of Subnational Governments?

The experience of federations with subnational control mechanisms casts some light on their possible role in enhancing fiscal responsibility and sustainability. Some lessons for Europe can be drawn from these experiences.

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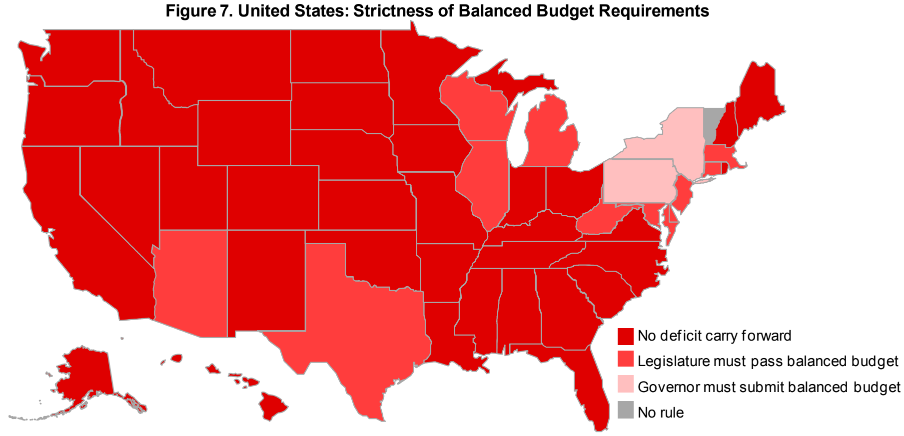
[27] Recent reforms of the EU fiscal governance have strengthened enforcement mechanisms. Sanctions for euro-area countries should now be more automatic, as they are adopted by the "reverse qualified majority" procedure. Automatic correction mechanisms should also be introduced.

Lesson 1: Institutional constraints on subnational fiscal targets do have a disciplinary effect.

While standard public finance theory holds fiscal institutions as simple veils, the empirical literature shows that they can affect the behavior of subnational governments (Poterba, 1996b; Strauch, and Von Hagen, 2001). Existing studies have examined the effects of subnational constraints on a wide range of fiscal outcomes, including subnational deficits, debt, tax, and expenditure.

Evidence from the U.S. states. Most of the empirical papers on subnational fiscal institutions focus on the U.S. states.[28] Von Hagen (1991) provides evidence that debt limits and budget balance rules reduce per capita state debt and state debt-income ratios. According to Poterba (1994), a $100 state deficit overrun leads, on average, to a $17 expenditure cut in states with weak budget balance rules, while the cut is much larger ($44) in states with strict anti-deficit rules.[29] Also, states with tax limitation rules enact smaller tax increases in response to unexpected deficits than do states without such limits. Rueben (1995) shows that tax and expenditure limits lower state spending. Bohn and Inman (1995) find that budget-balance rules that restrict end-year budget deficits reduce state deficits. Clemens and Miran (2010) and Lutz and Follette (2012) extend Poterba's results to the most recent period and confirm that strong-rule states adjust spending more significantly than states with weaker rules following an unexpected deficit.

Figure 7. United States: Strictness of Balanced Budget Requirements



Source: National Conference of State Legislatures (2010).

These studies also suggest that not only the choice but also the design of fiscal institutions matter (Inman, 1996; and Bohn and Inman, 1996). First, the stringency of state rules affects

[28] The U.S. federation presents three characteristics that facilitate the econometric analysis: constraints vary across states; many rules have been in effect for a long period of time; and control variables are available (Inman, 1996).

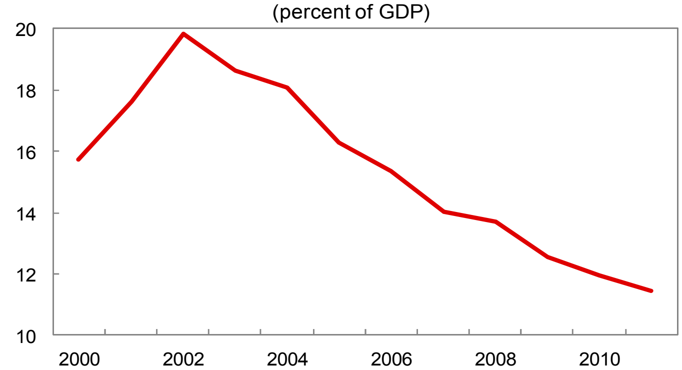
[29] Poterba (1994) uses the strength indicator developed by the Advisory Commission on Intergovernmental Relations (1987), which catalogs state balanced-budget provisions and assigns a score between 1 and 10 to the stringency of these rules.

their disciplinary effect. Although most U.S. states have budget balance rules, these differ in terms of strictness (Figure 7). Budget balance rules with a no-carryover provision requiring an ex post, end-of-the-year balanced position are found to reduce state deficits. By contrast, ex ante rules requiring only a beginning-of-the-year balanced budget are not effective. Second, enforcement mechanisms are also important. State rules which are constitutionally-based requiring two thirds of the citizens to overturn are found to be more effective than rules which are statutorily-based needing only a simple majority of the legislature to suspend or overrule.[30] Finally, the independence of the monitoring entity matters. Rules which are enforced by directly elected, and presumably more independent, supreme courts are more effective than rules which are enforced by politically appointed courts.

Overall, available evidence suggests that constraints on U.S. states have been effective. It is not clear whether these results are entirely relevant for other federations, as the effect of institutional constraints is probably reinforced by market discipline in the United States (see lesson 4).[31]

Evidence from other federations.[32] Outside of the United States, the empirical evidence of the effect of subnational constraints is more limited. Brazil's success with fiscal rules has been particularly remarkable in the last decade. Brazil passed a Fiscal Responsibility Law (FRL) in 2000, which systematized and reinforced the expenditure, debt, and balance rules present in the previous years' debt rescheduling agreements. The implementation of the FRL played a major role in the improvement of the subnational governments' fiscal performance, although it is difficult to disentangle the effect of the new fiscal framework from that of debt restructuring arrangements (Webb, 2004; Liu, and Webb, 2011). India is also an example of country where

Figure 8. Brazil: Subnational Net Debt
(percent of GDP)



Source: Central Bank of Brazil.
Note: No official data from central bank prior to 2000.

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[30] In the United States, each state has its own constitution.

[31] In addition, the correlation between fiscal institutions and fiscal outcomes is difficult to interpret. It is possible that this correlation reflect the effect of an omitted third variable, the voters' preference for fiscal restraint.

[32] The cross-country empirical literature is less conclusive, as well as less relevant to our analysis, as existing studies do not specifically consider the sub-sample of federations, and generally limit their analysis to borrowing constraints.

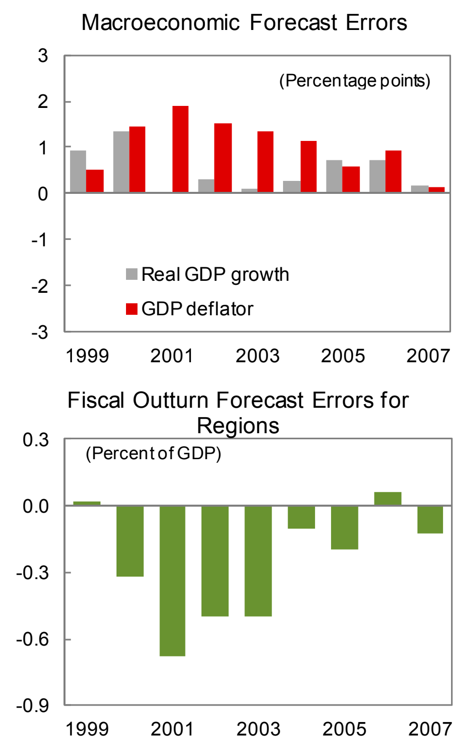
the introduction of FRLs at the state level has catalyzed fiscal consolidation, by bringing elements of discipline in the state budgeting process (Kishore, and Prasad, 2007). The effectiveness of the fiscal rule framework also partly explains the high degree of subnational fiscal discipline in Switzerland (IMF, 2012). Most cantons have fiscal rules, which vary with respect to their target, operational implementation, exemption clauses, and sanction mechanisms. In Spain, Cabases and others (2007) shows that municipal borrowing restrictions had a significant effect on the indebtedness of local governments during the 1990s.

Lesson 2: Subnational constraints cannot substitute for a properly designed system of intergovernmental fiscal relations.

While subnational constraints may instill some fiscal discipline, they are not a panacea. They can improve fiscal outcomes where there are coordination and control failures. They are less effective if the mismanagement of subnational fiscal accounts is due to flaws inherent in the decentralization framework (e.g., ill-designed transfer system, unclear expenditure assignments, mismatch between revenue and spending responsibilities) or to central government policies (e.g., unfunded mandates, pork-barrel politics, procyclical provision of transfers).

Spain provides an example of how efforts to tighten the rules could not overcome underlying flaws. The 2001 Budget Stability Law distributed the general government deficit target between different levels. The law was amended in 2006 to take into account the procyclical nature of the rule and to target a fiscal balance over the cycle. To further strengthen the control of the regions, additional conditions were introduced to obtain debt authorization and increase transparency by providing the information in a more timely manner. These new rules did not prevent the build-up of fiscal imbalances in the run-up to the crisis. Despite favorable outlook surprises until 2007, the regions' fiscal deficit was almost systematically higher than initially budgeted (Figure 9). In part, this reflected a widening gap between their spending responsibilities and revenue raising powers. This mismatch intensified during the crisis. The regions' revenues became more uncertain, reflecting a significant erosion in the tax base (housing market) and higher unemployment. In contrast, their expenditure was of structural nature (health and education), with pressures arising from population aging (IMF, 2010).

Figure 9. Spain: Pre-Crisis Forecast Errors, 1999-2007

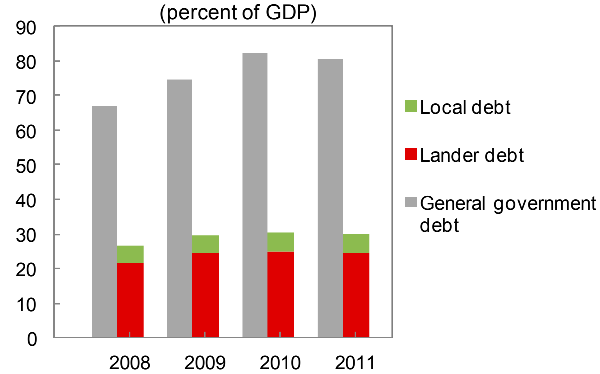


Source: IMF (2010).

Argentina is another example. The Fiscal Solvency Law approved in 1999 did not include provisions for subnational governments but invited the provinces to pass similar laws, which several did. These laws differed across provinces, although most included limits on the deficit and debt. However, in 2001, it was the incapacity of the federal government to meet its legally-binding spending obligations, most notably intergovernmental transfers, that pushed the provinces into a fiscal crisis. Even with strong enforcement procedures, the FRLs could not have addressed this problem (Webb, 2004).

Lesson 3: Cooperative approaches require strong enforcement and coordination mechanisms.

Figure 10. Germany: Public debt
(percent of GDP)

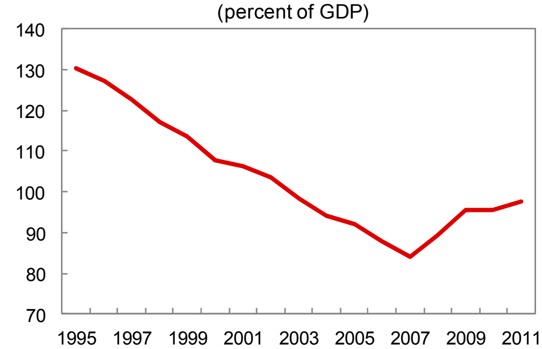


Note: Local and state debts are not consolidated.
Source: Eurostat.

Cooperative approaches present some clear advantages. They promote dialogue and exchange of information, and provide a political platform for discussions on important fiscal issues. In addition, consensus, peer review, and public awareness may strengthen political commitment and enhance accountability. However, the record of effectiveness of cooperative approaches is mixed (IMF, 2009a). The cooperative federalism model has faced two main hurdles.[33]

First, as cooperative arrangements rely mainly on informal peer pressure, enforcement and monitoring may be weak. In Germany, for instance, Internal Stability Pacts do not include sanctions for non complying bodies, and monitoring has been criticized for being insufficiently transparent (Ambrosanio and Bordignon, 2007). Subnational debt has reached high levels, accounting for over one third of general government debt (Figure 10).

Figure 11. Belgium: General Government Debt
(percent of GDP)



Source: Eurostat.

Second, coordination is strengthened by independent institutions that enhance the effectiveness of the negotiation process. Belgium is considered as a successful example of cooperative federalism, with its 40 percent decline in the debt-to-GDP ratio between 1993

[33] Other problems include: the excessive bargaining power of large states/regions in federations with regional disparities; inconsistencies and loopholes resulting from political compromises; the lack of stability, transparency and predictability of the fiscal framework; unclear and overlapping assignments; and the greater scope for free riding.

and 2007 (Figure 11). The High Fiscal Council of Finance (HFCF), a fiscal agency established to actively support and monitor cooperative agreements, has played a key role in achieving this result (EC, 2012b). It is tasked with making recommendations on the fiscal targets of each government level. The HFCF also monitors the fiscal outcomes of subnational governments, and evaluates the implementation of stability programs.

Lesson 4: Well-designed institutional arrangements have a positive impact on the market's perception of subnational policy.

In federations where market discipline plays an important role such as Canada and the United States, states have voluntarily adopted fiscal rules. U.S. states impose budget balance rules in different forms. For instance, 41 of the 48 U.S. states require the legislature to enact a balanced budget; and 38 states cannot carry forward a deficit into the next fiscal period (National Conference of State Legislatures, 2010). Switzerland is another example of successful combination of effective fiscal rules and market discipline (IMF, 2012). As mentioned earlier, other federations, such as Mexico and South Africa, have also tried to combine both approaches.

Fiscal institutions are used by subnational governments to improve their credit rating and reduce borrowing costs (Joumard and Kongsrud, 2003). Financial market participants, who monitor and assess states' fiscal performance, seem to consider their presence as relevant elements to evaluate fiscal positions. This may reflect the perception that these institutions are effective mechanisms to enforce fiscal discipline. But it is also possible that fiscal institutions have purely a signaling effect of the subnational governments' commitment to fiscal prudence.

Several empirical studies have explored the link between fiscal institutions and market discipline at the subnational level. Although some evidence exists for other federations (Feld and others, 2011 for the Swiss cantons), the literature is mostly specific to the U.S. States (Eichengreen, 1992; Goldstein and Woglom, 1992; Bayoumi, Goldstein, and Woglom, 1995; Lowry and Alt, 1997; and Poterba and Rueben, 1999, 2001). Two main results confirm that institutional arrangements affect the bond market's perception of subnational governments. First, a state/region with more restrictive fiscal rules faces, on average, lower interest rates. Second, the bond market reaction to a state deficit is smaller if states have budget balance rules. This may suggest that market discipline and fiscal institutions are, to some extent, substitutes.

Lesson 5: Constraints on subnational fiscal policy necessitate a clear commitment of the central government to enforce them.

Constraints are not binding if subnational governments know that they can appeal to the center for additional resources.[34] On the contrary, local authorities face a hard budget constraint when the central government can commit to a no-bailout policy. Somewhat paradoxically, subnational constraints are thus more stringent and credible if the central government's discretion is also restricted.

A strong central government's commitment is key to ensuring that institutional arrangements such as fiscal rules are enforced. Such a commitment is also necessary to preserve the effectiveness of market mechanisms. If lenders believe that the central government provides an implicit guarantee to subnational governments, the disciplinary effect of markets is undermined. Rodden and others (2003) argue that subnational fiscal rules and market oversight have been broadly effective in the United States, partly because the discretionary use of federal powers is limited by the American Constitution. By contrast, the lack of fiscal discipline of the German länder is often attributed to the bailout expectations created by the implicit federal guarantee of subnational debts in the German equalization system, and confirmed by the federal bailouts of Bremen and Saarland in the early 1990s.[35]

History shows that eliminating bailout expectations is not easy task. A sustained history of no bailouts may be a necessary condition to build the central government's credibility. In the United States, the federal government has resisted pressures to provide financial assistance to subnational governments under financial stress since the 19th century.[36]

In the last 20 years, some federations have endeavored to contain bailout expectations, with some success. In Switzerland, several cantons were in dire financial straits in the 1990s due to their guarantees to cantonal banks, but did not receive bailouts. At the municipal level, the Swiss the Supreme Court decided in 2003 that that the canton Valais was not responsible for

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[34] The term "soft budget constraint" describes a situation in which subnational governments do not face a fixed envelope of resources. This may happen in several contexts. Local authorities may receive bailout transfers from the center; get subsidized loans from public banks or state-owned enterprises; run arrears to their suppliers or creditors; or underfund public sector pensions.

[35] In 1992, the Federal Constitutional Court decided that the constitution required the Bund to make extra transfers to Bremen and Saarland in order to reduce public debt without severe expenditure cuts (Seitz, 1998).

[36] Other factors can contribute to harden the subnational budget constraint: the political system should not over-represent local interests in the central legislature; spending and revenue assignments should be clearly defined and duplication minimized; transfer dependency should be reduced to give local governments more autonomy in the face of economic shocks; and some key sensitive expenditure responsibilities should remain central government responsibility, especially in the presence of mandates and standards.

the liabilities of a highly indebted municipality (Feld and others, 2011). In Mexico, the government passed legislation establishing market-based mechanisms in 2000, following several episodes of subnational bailouts in the aftermath of the 1995 financial crisis. At the same time, the administration signaled that it would no longer provide bailouts. In particular, the president relinquished his power over discretionary transfers to states, thus limiting the ability of subnational governments to "manipulate" federal funds. In addition, the central government gave up its role in securing debt with payments from the revenue sharing arrangement. This left the states and their creditors assume the insolvency risk.

VII. Conclusion

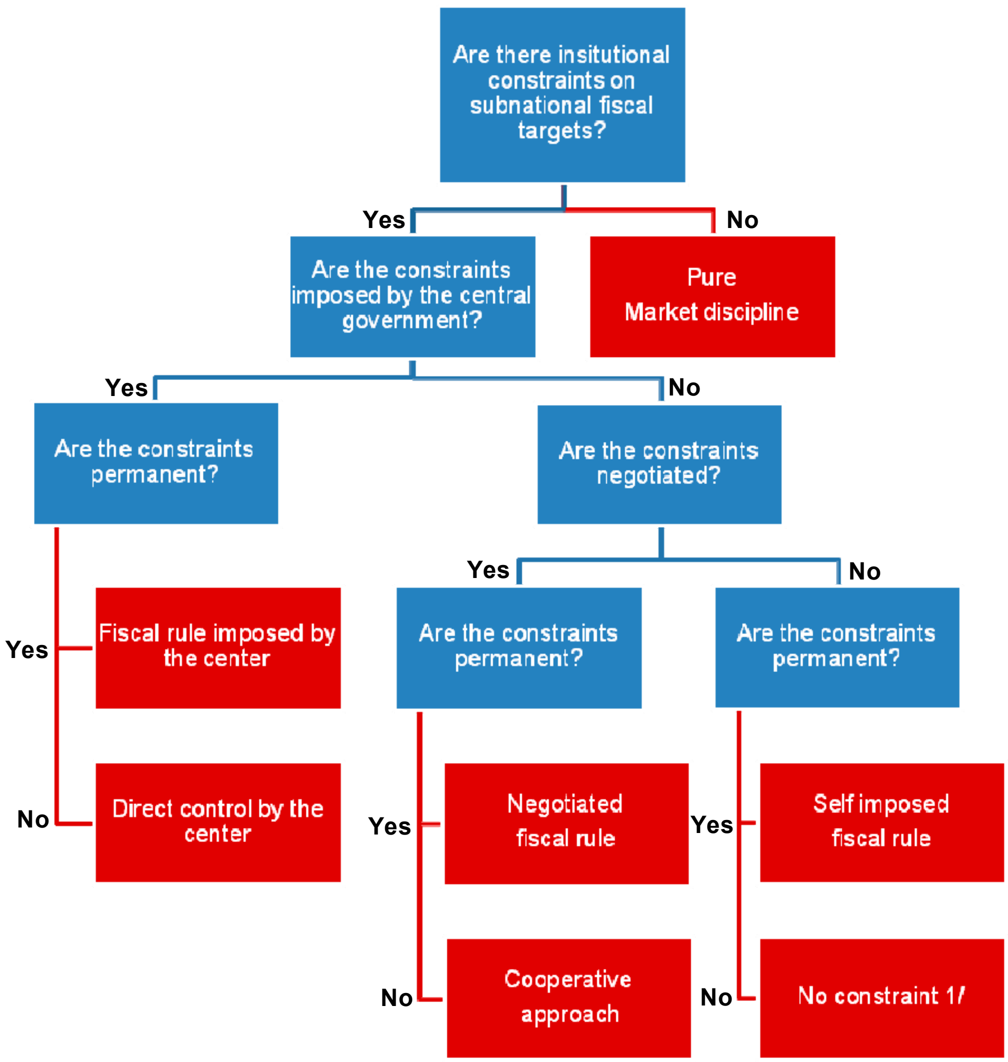
Although subnational governments have generally more fiscal authority in federations than in unitary countries, their fiscal powers are constrained by a broad range of arrangements, whose purpose is to contain the deficit bias, and strengthen fiscal coordination. The most prevalent form of constraint is fiscal rules, which are often self-imposed by subnational governments. Market discipline has also become more widespread. Empirical evidence shows that subnational constraints do have a disciplinary effect on the behavior of subcentral authorities, and they affect financial markets' reactions. However, they cannot substitute for a properly designed system of intergovernmental fiscal relations, and they necessitate a clear commitment of the central government to enforce them.

How do the federal experiences reviewed in this paper compare with the current situation in Europe? There are similarities. Like most federations, the EU fiscal governance framework relies on fiscal rules, rather than on cooperative arrangements and direct controls. Although there are various forms of fiscal policy coordination in Europe (in particular through the European Semester), they cannot be described as a full-fledged cooperative approach. The EU framework does not resort to direct controls from the center either, despite proposals in that direction for countries in breach of the rules.

There are also important differences between the EU fiscal framework and constraints imposed in the 13 federations. First, the EU rules apply to the general government, with countries being responsible to distribute the target internally among government units. By contrast, in federations, central constraints generally apply separately to different government levels, and states are not responsible for the achievement of lower–level targets. Second, most federations tend to impose a smaller set of constraints than the EU, except Spain which adopted extensive fiscal rule frameworks during the crisis. Third, by comparison to federations, sanctions for noncompliance with European rules are relatively mild: they usually consist in opportunity costs from financial deposits. The conditions to convert these deposits into outright fines are strict, and have, so far, never been applied. In addition, the EU framework does not provide for administrative sanctions, which exist in several federations.

Appendix 1: Methodology Underlying the Typology of Constraints

In order to categorize subnational constraints, three main criteria are taken into account: (i) Is the constraint institutional or market-based? (ii) Is the constraint permanent or ad hoc/frequently revised? (iii) Is the constraint negotiated or imposed? The combination of these three criteria results in nine types of arrangements, presented in the following tree.



Source: Authors.
1/ Restrictions imposed by subnational governments upon themselves on an ad-hoc basis are not treated as constraints.

In some cases, it may be difficult to distinguish between fiscal rules and other institutional arrangements:

- ***Fiscal rule imposed by the center vs. direct control.*** As pointed out by Joumard and Kongsrud (2003), there is no clear separation between fiscal rules imposed by the center and direct controls. The main difference is that fiscal rules are "permanent" constraints, whereas direct controls are imposed on a ad hoc basis. More generally, fiscal rules leave more autonomy to subnational governments for four main reasons: (i) rules preclude the micro-management of subnational budgets by the center; (ii) direct controls entail more frequent interventions of the center, while rules are a more permanent and stable form of constraint; (iii) rules are generally less prescriptive as to how the constraint should be met, leaving subnational governments some margins to achieve the objective as they see fit (for instance, expenditure cuts or revenue increases to comply with a budget balance rule); and (iv) targets may be relaxed under specific pre-determined circumstances (escape clauses).

- ***Negotiated fiscal rule vs. cooperative approach.*** Subnational fiscal rules may be self-imposed, imposed by the center, or negotiated (Sutherland and others, 2005). It may be difficult to draw a clear line between negotiated rules and cooperative arrangements. In this paper, the criterion to distinguish between them is that targets set by cooperative approach are revised on a regular basis (at each renegotiation), while fiscal rule targets are not, or less frequently, revised. As argued by Balassone and others (2002), "rules can also be the outcome of negotiations but once defined they avoid the need for consensus."

Table A1. Institutional Arrangements

	Negotiated	**Not negotiated**
Permanent	Negotiated rule	Rule imposed by the center or self-imposed
Revised regularly	Cooperative approach	Direct control from the center

Source: Authors.

Appendix 2. The EU Fiscal Rule Framework[37]

The EU fiscal rule framework comprises five main rules:

3 Percent Budget Balance Rule

Rule. The nominal deficit of member states should remain below 3 percent of GDP.

Corrective action and sanctions. An excessive deficit procedure (EDP) is generally opened if the deficit exceeds 3 percent of GDP, except when the deviation is both temporary and small. There is some flexibility for countries with a debt-to-GDP ratio below 60 percent.

- Sanctions resulting from the EDP only apply to euro area members.[38] They are imposed in a gradual way. The initial sanction is a non-interest-bearing deposit of 0.2 percent of GDP with the EU.

- Corrective action: The ECOFIN Council sets a timeframe with the annual fiscal effort to be at least 0.5 percent of GDP in structural terms. Deadlines for the correction of the excessive deficit can be extended in case of adverse economic developments. The Council monitors implementation of its recommendations and abrogates the EDP when the excessive deficit is corrected.

Insufficient effort. For euro area members, no effective action can lead to closer surveillance and fines. Failure to comply with the Council recommendations to correct the excessive deficit results in a fine of 0.2 percent of GDP. The fine can rise up to 0.5 percent of GDP per year depending on the persistence of the violation.

Medium Term Objectives (MTO) in structural terms

Rule. MTOs are fiscal balance targets in structural terms. MTOs are country-specific, but should be set below 0.5 percent of GDP (1 percent for countries with a debt ratio significantly below 60 percent of GDP). The MTO rule is part of the “preventive arm” of the governance framework, and applies only to countries outside the EDP. Its main purpose is to avoid that countries comply with the previous rule by constantly running deficits close to 3 percent of GDP.

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[37] This Appendix proposes a simplified overview of the EU fiscal governance framework. More detailed information can be found on the European Commission website.

[38] EU Member States that are not part of the euro area do not face sanctions in the form of a financial deposit or a fine. But for beneficiaries of the Cohesion Fund (some of which are non-euro area countries), failure to comply may lead to the suspension of Cohesion Fund commitments.

Corrective action and sanctions. Member states should make annual efforts of at least 0.5 percent of GDP in structural terms to reach their MTO.

Insufficient effort. Lack of action to correct a significant deviation from the MTO (corresponding to at least 0.5 percent of GDP in one year or 0.25 percent on average per year in two consecutive years) can lead to the imposition on an interest-bearing deposit of 0.2 percent of GDP for euro area member states. Assessment is partly based on the expenditure rule (see below).

Structural balance rule (National rule but supranational requirement)

Rule. The Fiscal Compact requires Member States to enshrine the country-specific MTOs in national binding laws by 2014. The structural balance rule is thus a national rule imposed by supranational legislation. It does not supersede the MTO; in fact the MTO and the structural balance rule can have slightly different definitions. More specifically, the Fiscal Compact requires that (i) the structural budget rule be implemented through provisions of "binding force and permanent character, preferably constitutional;" (ii) automatic correction mechanisms (such as debt break) be established to ensure automatic action in case of deviation from the structural target or the adjustment path towards it, with escape clauses for exceptional circumstances; (iii) and compliance be monitored by independent institutions.

Corrective action and sanctions. Compliance and enforcement should be carried out at the national level.

Expenditure Benchmark

Rule. The annual growth of primary expenditure—excluding unemployment benefits and subtracting revenue discretionary increases—should not exceed potential nominal GDP growth. This benchmark applies only when a country is not under EDP and is thus part of assessing adequate progress toward the MTO.

Corrective action and sanctions. No EDP can be opened when the rule is violated but sanctions can be applied to euro area member states. In particular, in case of significant deviation, a 0.2 percent of GDP interest-bearing deposit may be imposed.

60 Percent Debt Rule

Rule. General government debt should remain below 60 percent of GDP.

Corrective action and sanctions. With the November 2011 governance reform, a required annual pace of debt reduction was introduced (based on a benchmark of 1/20th of the distance between the actual debt ratio and the 60 percent threshold), starting three years after a country has left the EDP. The 1/20th rule is complex, and takes into account the cyclical position, as well as the debt prospects 2 years ahead.

Insufficient effort. If progress in debt reduction is insufficient, an EDP can be opened, and a 0.2 percent of GDP interest-bearing deposit may be imposed (for euro area members).

Appendix Table 1. Institutional Constraints on Subnational Governments (2012) 1/

Country	Type of constraint	Sector	Enforcement	Fiscal aggregate	Description
Argentina	FR	RG	Negotiated	Expenditure growth	**This rule was suspended by Congress in 2009.** Rules are imposed in states' FRLs which were negotiated with the center. Nominal growth rate of primary spending must be lower than GDP growth; in provinces with debt below 15 percent of current revenue, the restriction applies only to current spending.
Argentina	FR	RG	Negotiated	Debt service	**This rule was suspended by Congress in 2009.** Rules are imposed in states' FRLs which were negotiated with the center. Regions must keep their debt service below 15 percent of current revenue (net of transfers to municipalities).
Argentina	FR	RG	Negotiated	Golden rule	**This rule was suspended by Congress in 2009.** Rules are imposed in states' FRLs which were negotiated with the center. Balanced budget is net of captial expenditure, interests on debt and spending on loans from international organizations.
Australia	FR	RG	Self-imposed	Debt stock	New South Wales and Queensland have a debt rule.
Australia	FR	RG	Self-imposed	Nominal fiscal balance	Queensland has a balanced budget rule.
Australia	FR	RG	Self-imposed	Expenditure	Queensland has an expenditure rule.
Australia	CA	RG	Negotiated	Domestic and foreign borrowing	The Loan Council, composed of the Prime Minister, each State Premier and the Commonwealth Treasurer, is in charge of analyzing and approving financing requirements of each state and the Commonwealth as a whole, as well as monitoring the execution of the decisions.
Austria	CA	RG, LG	Negotiated	Nominal fiscal balance	The Austrian Stability Programme allocates annual deficit/surplus targets to the federal, regional and local governments.
Austria	FR	LG	Imposed	Borrowing	As a general rule, municipalities are only allowed to take loans in order to cover extraordinary expenditure. Each Land has a different set of criteria for debt requiring higher-level approval, and different borrowing limits.
Belgium	CA	RG	Negotiated	Nominal fiscal balance	The High Finance Council sets yearly guidelines for the deficit level of federal government, regions, and communities.
Belgium	FR	LG	Imposed	Nominal fiscal balance	Obligation for local governments to balance their budget.
Brazil	FR	RG, LG	Imposed	Wages	In states and municipalities, wage and salary cost may not exceed 60 percent of current revenue.
Brazil	FR	RG, LG	Imposed	Borrowing	Authorization required from the federal government for subnational access to credit. FRL also prohibits governors and mayors from contracting obligations to pay within the last 6 months of their administrations, unless these can be paid off in the reminder of their term in office.
Brazil	FR	RG, LG	Imposed	Debt stock	The Federal Senate sets overall limits for the debt of each level of government (in percent of revenue).
Canada	FR	RG	Self-imposed	Nominal fiscal balance	The four biggest provinces require balanced budget on annual basis.
Canada	FR	RG	Self-imposed	Debt stock	In New Brunswick. Debt ratio to GDP at end year should be lower than at the end of the previous year.
Canada	FR	RG	Self-imposed	Expenditure	Many provinces have expenditure rules.
Canada	DC	LG	Imposed	Domestic borrowing	Strict limits on local borrowing, including prior approval by the provincial government or restrictions to specific purposes, like capital spending.
Germany	FR	RG	Imposed	Structural fiscal balance	Transition toward the debt break rule by 2020, implemented either via structural or nominal budget balance rule.
Germany	FR	LG	Imposed	Nominal fiscal balance	Municipal budget law obliges municipalities to balance their administrative account budget unless they have a deficit in their capital account and/or must make redemption payments. In the latter case, the budget of the administrative account has to be in surplus by this amount.
Germany	FR	RG	Self-imposed	Borrowing	Some Lander have self-imposed borrowing constraints.

Appendix Table 1. Constraints Imposed on Subnational Governments (2012, concluded) 1/

Country	Type of constraint	Sector	Enforcement	Fiscal aggregate	Description
India	FR	RG	Imposed	Foreign borrowing	Indian constitution prohibits states from borrowing abroad.
India	DC	RG	Imposed	Domestic borrowing	Indian constitution requires states to obtain central permission for domestic borrowing if they are indebted to the central government or have taken guarantees from the Center. However, there is no limitation regarding borrowing from private entities.
India	FR	RG	Self-imposed	Nominal fiscal balance	Rules are self-imposed and vary by state, but national FRL recommends adoption of state FRLs. In general, states have a fiscal deficit target below 3 percent of gross subnational domestic product.
India	FR	RG	Self-imposed	Debt service	Rules are self-imposed and vary by state, but national FRL recommends adoption of state FRLs. Some states have debt service rules.
India	FR	RG	Self-imposed	Debt stock	Rules are self-imposed and vary by state, but national FRL recommends adoption of state FRLs. Some states have debt stock rules.
Mexico	FR	RG	Imposed	Domestic borrowing	The constitution prohibits domestic borrowing, except for the construction of works intended to produce directly an increase in their revenues.
Mexico	FR	RG	Imposed	Foreign borrowing	Borrowing overseas is not allowed by constitutional amendment.
South Africa	FR	RG	Imposed	Nominal fiscal balance	Balanced budget rule.
South Africa	FR	LG	Imposed	Borrowing	The South African constitution prohibits borrowing for consumption expenditure.
Spain	FR	RG	Imposed	Structural fiscal balance	The annual fiscal balance target depends on cyclical position.
Spain	FR	RG, LG	Imposed	Debt stock	Debt ceiling in percent of GDP. (13 percent of own GDP for regions, 3 percent of own GDP for local governments).
Spain	FR	RG, LG	Imposed	Debt service	Debt service rule.
Spain	FR	RG, LG	Imposed	Expenditure level	Expenditure ceiling.
Spain	FR	RG, LG	Imposed	Expenditure growth	The annual growth of the eligible expenditure cannot exceed the average medium-term growth rate of GDP, in nominal terms.
Spain	FR	LG	Imposed	Nominal fiscal balance	Balanced budget.
Switzerland	FR	RG	Self-imposed	Structural fiscal balance	Most cantons have self-imposed budget balance rules, for instance, on the over-the-cycle balance.
Switzerland	FR	RG	Self-imposed	Nominal fiscal balance	Most cantons have self-imposed budget balance rules, for instance, on the annual overall balance (golden rule in some cases).
Switzerland	FR	LG	Imposed	Nominal fiscal balance	Some cantons can set fiscal rules to control the communes.
Switzerland	FR	RG	Self-imposed	Expenditure level	Fiscal referendum: If the outlays for some project exceed a certain limit, the citizens are asked whether they agree on the spending project.
Switzerland	FR	RG	Self-imposed	Expenditure growth	Expenditure growth below economic growth in some cantons.
United States	FR	RG, LG	Self-imposed	Nominal fiscal balance	In many states, golden rule.
United States	FR	RG, LG	Self-imposed	Expenditure growth	In many states, expenditure growth cap.
United States	FR	RG, LG	Self-imposed	Tax growth	In many states, tax growth cap.
United States	FR	RG, LG	Self-imposed	Debt service and stock	Debt and debt service limits in some states.
United States	FR	RG, LG	Self-imposed	Borrowing	Debt issuance restrictions in some states.

Source: IMF staff.

1/ Acronyms stand for: FR: fiscal rule; CA: cooperative approach; DC: direct control; RG: regional level; LG: local level.

Appendix Table 2. Non-Exhaustive Overview of Measures in Case of Breach (2012) 1/

Country	Type of constraint	Sector	Fiscal aggregate	Breach	Description
Argentina[2]	FR	RG	Debt service, Expenditure growth, golden rule.	*Conditions for breach*	Non-compliance with any of the 3 rules.
				Escape clause	
				Sanction	Limits to guarantees and transfers provided by the central government.
				Corrective actions	Regions cannot do new borrowing. Provincial governments must put money into stabilization funds.
Australia	CA	RG	Domestic and foreign borrowing	*Conditions for breach*	If non-financial operating receipts exceed by more than 2 percent in either direction.
				Escape clause	
				Sanction	
				Corrective actions	States are obliged to provide an explanation to the Loan Council, which will be made public.
Austria	CA	RG, LG	Nominal fiscal balance	*Conditions for breach*	Non-compliance with targets.
				Escape clause	In case of exceptional burden (serevere economic downturn), revised deficit targets can be negotiated among the government levels.
				Sanction	Once the domestic stability pact is ratified, it fixes the amount of the financial sanctions, which take the form of an interest-bearing deposit. If, in the following year, the respective target is not reached, the deposit is supposed to be transferred to those governments that are in compliance. However, if the target is achieved, the deposit is reimbursed.
				Corrective actions	
Belgium	CA	RG	Nominal fiscal balance	*Conditions for breach*	Non-compliance with targets.
				Escape clause	
				Sanction	
				Corrective actions	Federal level can impose borrowing limits.
Belgium	FR	LG	Nominal fiscal balance	*Conditions for breach*	Non-compliance with targets.
				Escape clause	
				Sanction	
				Corrective actions	Regions are automatically responsible for correcting any slippage. The regional level is responsible for monitoring municipalities and can enforce expenditure cuts or tax increases if necessary.
Brazil	FR	RG, LG	Public wages	*Conditions for breach*	When total personnel expenditures exceed 95% of the ceiling.
				Escape clause	Public calamities including state of defense, and low growth rate.
				Sanction	Officials who violate the rules may be subject to criminal penalties and fines.
				Corrective actions	New hiring, wage increases and contracting overtime work are suspended.
Brazil	FR	RG, LG	Borrowing	*Conditions for breach*	Non-compliance with rule.
				Escape clause	Public calamities including state of defense, and low growth rate.
				Sanction	Officials who violate the rules may be subject to criminal penalties, and fines.
				Corrective actions	Any borrowing that has taken place above the threshold ceilings established by the senate is required to be repaid in full, not including interest, which is a penalty to lenders as well as borrowers. In the interim, governments are ineligible for discretionary transfers or federal guarantees and are prohibited from contracting new debt.
Brazil	FR	RG, LG	Debt stock	*Conditions for breach*	Non-compliance with rule.
				Escape clause	Debt limits are established by the federal senate, though they may be revised in the context of the annual budget and adjusted to macroeconomic conditions.
				Sanction	Officials who violate the rules may be subject to criminal penalties and fines.
				Corrective actions	

Appendix Table 2. Non-Exhaustive Overview of Measures in Case of Breach (2012, concluded) 1/

Country	Type of constraint	Sector	Fiscal aggregate	Breach	Description
Canada	FR	RG	Nominal fiscal balance	*Conditions for breach*	Non-compliance with targets.
				Escape clause	In many provinces, legislation builds in exemptions for special events, such as natural disasters, unusual weather conditions, war, or revenue shortfalls.
				Sanction	In four provinces, executive council members and ministries are subject to potential cuts in wages. For example, In British Columbia, withholding of 20 per cent of ministerial salaries, is only paid when certain targets are met (British Columbia, Manitoba, Ontario).
				Corrective actions	
Germany	FR	RG	Structural fiscal balance	*Conditions for breach*	Non-compliance with rule.
				Escape clause	Natural disasters and emergency situations outside of government control.
				Sanction	Suspension of consolidation payments for those states under consolidation assistance program.
				Corrective actions	If risk for budgetary crisis is established, the Stability Council agrees a consolidation program with the state.
Germany	FR	LG	Nominal fiscal balance	*Conditions for breach*	Non-compliance with rule.
				Escape clause	
				Sanction	
				Corrective actions	The communal supervisory agencies of the Lander can refuse to authorize the communal budgets. Communes with financial difficulties can be obliged to implement consolidation programs. In some cases, the supervisory agencies can also temporarily take over the administration of the commune.
India	DC	RG	Domestic borrowing	*Conditions for breach*	Debt service ratio exceeding 20 percent.
				Escape clause	Exceptional cirumstances (natural disaster, national security) specified by state.
				Sanction	
				Corrective actions	Central government's close monitoring of new borrowing by the state.
Spain	FR	RG, LG	Structural fiscal balance, debt stock, nominal fiscal balance[3], debt service, expenditure ceiling, and expenditure rule.	*Conditions for breach*	When debt is above 95 percent of the established limits and/or non-compliance with any of the 6 rules.
				Escape clause	
				Sanction	A failure to present or get approval of a rebalancing plan can lead to fines. In extreme cases, officials may incurr penalties if responsible for Spain not achieving European objectives.
				Corrective actions	Breaches must be justified. The first layer in the corrective action mechanism is to require central authorization for long-term borrowing and limit transfers. Regions in non-compliance have to provide annual rebalancing plans and will undergo quarterly monitoring by the central government. In some severe ocassions of disregard for corrective action mechanism, there is a possibility to take region into central administration,
Switzerland	FR	RG	Structural fiscal balance	*Conditions for breach*	Non-compliance with targets.
				Escape clause	Several cantons define escape clauses, for instance in case of economic slump, or natural catastrophe.
				Sanction	
				Corrective actions	In some cantons, automatic adjustment of cantonal tax rates, or automatic spending cuts.
Switzerland	FR	LG	Nominal fiscal balance	*Conditions for breach*	Non-compliance with targets.
				Escape clause	
				Sanction	
				Corrective actions	In some communes, cantonal supervisory body controls compliance with targets and if the commune does not comply, the canton can take decisions on its behalf.
United States	FR	RG	Debt service and stock	*Conditions for breach*	Non-compliance with rules.
				Escape clause	
				Sanction	
				Corrective actions	Constitutional amendments or other special votes may be needed to issue new debt.

Source: IMF staff.

1/ Acronyms stand for: FR: fiscal rule; CA: cooperative approach; DC: direct control; RG: regional level; LG: local level.

2/ In Argentina, fiscal rules have been suspended since 2009.

3/ Only applies to local government level.

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