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Strengthening Post-Crisis Fiscal Credibility:
Fiscal Councils on the Rise—A New Dataset

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Strengthening Post-Crisis Fiscal Credibility—Fiscal Councils on the Rise. A New Dataset

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Abstract

Institutions aimed at constraining policy discretion to promote sound fiscal policies are once again at the forefront of the policy debate. Interest in "fiscal councils," independent watchdogs active in the public debate, has grown rapidly in recent years. This paper presents the first cross-country dataset summarizing key characteristics of fiscal councils among IMF members. The data documents a surge in the number of fiscal councils since the crisis. It also illustrates that well-designed fiscal councils are associated with stronger fiscal performance and better macroeconomic and budgetary forecasts. Key features of effective fiscal councils include operational independence from politics, the provision or public assessment of budgetary forecasts, a strong presence in the public debate, and the monitoring of compliance with fiscal policy rules.

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"*A dependence on the people is, no doubt, the primary control on the government; but experience has taught mankind the necessity of auxiliary precautions.*" (James Madison, 1788, cited by Acemoglu, Robinson and Torvik, 2013).

I. INTRODUCTION

The fiscal legacy of the 2008-9 economic and financial crisis has shaken the credibility of governments' commitment to sustainable public finances. While the most vulnerable countries have been facing the wrath of bond markets, others navigate at the fringe of "safe haven" territory, piggybacking on record-low borrowing costs allowed by unconventional monetary policies. Three ingredients have fueled the perfect storm threatening public budgets: a legacy of historically high public debts prior to the crisis, stimulus policies that have not yet paid for themselves by triggering a sustained recovery, and large cumulative revenue losses with respect to previously expected fiscal paths, compounding the already unsustainable growth in entitlement spending.

Against that backdrop, the uncertainty about future economic and financial trends puts an additional premium on *present* policymakers' capacity to provide clear directions for *future* fiscal policies. However, the pre-crisis track record of procyclicality in good times and delayed reforms, and the sheer magnitude of current challenges have seriously eroded public confidence.

In fiscal matters, the commitment problem is perennial, but its magnitude is unprecedented. James Madison's suggestion in the preamble quote that democratic accountability alone places insufficient constraints on governments has been echoed in many academic papers over the last three decades. Specifically, the time-inconsistency literature initiated by Kydland and Prescott (1977) explained how short-term gains could trap rational policymakers into a suboptimal course of action. Beyond time-inconsistency, a considerable political-economy literature also showed how the inherently distributive nature of fiscal policy—both across groups and over time—can motivate elected policymakers to opt for deficits and debts in excess of what the population actually wants.[1] The difficulty to coordinate competing demands on a limited pool of public resources and the myopia affecting elected policymakers are two of the most common culprits for excessive debts and deficits.

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[1] For instance, Feld and Kirchgassner (2001) observe that a higher degree of direct democracy seems associated with better fiscal outcomes, suggesting that policymakers' willingness to spend exceeds voters' demand for public goods and services. See Debrun, Hauner and Kumar (2009) for a survey.

The question then becomes: what type of "*auxiliary precautions*" can effectively constrain fiscal discretion?[2] Fiscal policy rules have historically been the institutional response of choice. Rules set explicit quantitative limits on relevant fiscal aggregates. Their effectiveness rests on the fact that budget plans or outcomes inconsistent with these limits entail some cost for the governments: pecuniary sanctions in the case of the EU Stability and Growth Pact, automatic and mandatory adjustments in the case of "debt brakes" (Switzerland and Germany), and reputational or electoral costs of missing a publicly announced target. Despite evidence that fiscal outcomes elaborated under the constraint of a fiscal rule have generally been better (see Debrun and others, 2008), failures are not uncommon.[3] Rules are indeed vulnerable to three interdependent ills: the lack of underlying political commitment, an inadequate design, and weak enforcement.

More recently, proposals to replace "dead rules" by "living bodies," to borrow the language of Fatás and others (2003), have emerged. The underlying idea is to "depoliticize" certain dimensions of fiscal policy in the same way as monetary policy was taken away from elected officials and delegated to independent experts. Many of these proposals revolve around the concept of an independent fiscal authority setting annual deficit or borrowing limits based on a clear mandate to devise a policy stance consistent with long-term debt sustainability and short-term macroeconomic stability (for instance Wyplosz, 2005).

However, strong normative and positive objections to the delegation of fiscal policy prerogatives (Alesina and Tabellini, 2007) drew attention on another class of independent fiscal institutions, labeled as fiscal councils. Unlike independent fiscal authorities, fiscal councils work mainly through influence and persuasion in the public debate. Experience in a handful of advanced economies suggests that these councils can influence the conduct of fiscal policy through independent analysis, assessments, forecasts, and possibly, recommendations. Prominent examples of fiscal councils include the Congressional Budget Office in the United States, the Central Planning Bureau in the Netherlands and the High Council of Finance in Belgium. More recently, fiscal councils have been created in Australia, Canada, France, Italy, South Africa, and the United Kingdom, among others. Unlike the above mentioned proposals of independent fiscal authorities, fiscal councils are not meant to substitute for failed rules; they can actually complement them.[4]

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[2] According to Acemoglu, Robinson, and Torvik (2013), Madison had in mind more fundamental precautions such as the separation of power between the executive and the legislature, and the indirect election of the President through an electoral college. Our recent fiscal history points to the need to think beyond.

[3] The collapse of the first variant of the Stability and Growth Pact in November 2003 is a striking example.

[4] See Debrun and others (2013) for a description of different models for fiscal councils and the rationale for these institutions.

This paper documents the recent surge of fiscal councils among IMF members and gathers some preliminary evidence on their effectiveness. First, the paper describes a new dataset compiling key characteristics and institutional features of existing councils. Second, the paper provides a first empirical pass at the data to explore potential determinants of effective fiscal councils. The results highlight key characteristics of fiscal councils (operational independence, forecasts provision or assessment, media presence, and fiscal rules monitoring) associated with stronger fiscal performance as well as more accurate and less biased macroeconomic and budgetary forecasts.

The rest of the paper is structured as follows. Section II briefly revisits the inherent credibility problem associated with fiscal rules and suggests how fiscal councils can alleviate the problem. Section III presents the new Fiscal Council Dataset and describes the main features of fiscal councils in place as of January 2013. Section IV draws from the new dataset to analyze the role of fiscal councils in fostering fiscal discipline. Section V concludes.

II. Fiscal Councils and the Credibility of Fiscal Rules

Interest in independent fiscal institutions grew out of the accumulating evidence that fiscal rules can fail. This section provides the simplest possible theoretical illustration of the inherent lack of credibility of fiscal policy rules.[5] The discussion of the results suggests that a fiscal council can be used to generate sufficient electoral costs to deter violations of a fiscal rule and make it credible.

A. Fiscal Rule and Partisan Deficit Bias

Assume that identical private agents (voters) maximize a two-period, time-separable utility U which for the sake of the argument only includes public goods:

$$U(q) = E_0\left[\sum_{t=1}^{2} \beta^{t-1} v(q_t)\right],$$ (1)

where q denotes the per-capita consumption of public goods. E_0 symbolizes the expectations operator conditional on information available at the beginning of period 1 (time 0), and β is a subjective discount factor.

The political system is such that elected officials decide on public good provision. They belong to one of two political parties (C or L) indexed by Q. Preferences are identical across political parties and to those of the population, but officials only value public goods when in

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[5] See Debrun (2011).

office (Alesina and Tabellini, 1990). These assumptions avoid the needless complexity of a partisan cycle in the conduct of fiscal policy, leading to a simple and well-defined deficit bias:

$$U_Q(q) = E_0 \left[\sum_{t=1}^{2} \beta^{t-1} \rho^{t-1} v_Q(q_t) \right]; \ Q = C, L \ ; \ 0 \le \rho \le 1 \qquad (2)$$

with $v_C(q_t) = 0$ if party L is in office, and $v_L(q_t) = 0$ if party C is in office. Elections with uncertain outcome take place at the end of period 1, and the parameter ρ^{t-1} captures the probability of the incumbent party to be in office at period t.

The intertemporal budget constraint of the government determines the amount of public goods (per capita) delivered in each period:

$$q_1 = \tau y + b - \delta_1 \ , \qquad (3a)$$
$$q_2 = \tau y - Rb - \delta_2, \qquad (3b)$$

with τ denoting a constant proportional income tax rate, R, the interest factor, and b the overall deficit at the end of period 1 (or equivalently, the principal of the debt to be repaid in period 2). The budget constraints are subject to random shocks affecting government efficiency. At each period $t = 1, 2$, for a given amount of resources (tax revenue and borrowing), a positive realization of δ_t negatively affects public good delivery. Concretely, this could capture resource diversion by corrupt civil servants, the effect of poor administrative capacities, or unforeseeable policy mistakes. Of course, good surprises can also occur (more public goods being delivered with the same budgetary envelope). Hence, the shocks are non-serially correlated with zero mean and finite variance: $\delta_t \sim N(0, \sigma_\delta^2)$.

The socially-optimal solution results from direct maximization of the representative citizen's utility (1) by a benevolent "social planner." To economize on notation, we set $\beta = R = 1$ (discount and real interest rates are equal to zero) and assume quadratic utility functions $v(x) = -(x - \tilde{x})^2$. Decision-makers dislike deviations from pre-determined objectives denoted by a tilde. The Euler equation under the social planner thus yields a balanced budget:

$$q_1^* = q_2^* \Rightarrow b^* = 0. \qquad (4)$$

However, the political equilibrium will feature a "partisan" *deficit bias*[6] if elected officials are uncertain about re-election. Indeed, any $\rho < 1$ causes policymakers' myopia in the sense

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[6] The term deficit bias means that a utility-maximizing policymaker delivers a fiscal balance that is systematically weaker than if a representative agent was directly in charge of fiscal policy.

that they discount future outcomes at a higher rate than the representative agent. In a population of identical individuals, electoral uncertainty can be rationalized by assuming informational asymetries between voters and policymakers. Specifically, one could think about voters unable to observe whether a given policy slippage δ reflects an intrinsic lack of competence of the elected policymaker or an exogenous event outside her control. The shocks affecting public good delivery can thus lead voters to punish competent officials or re-elect (reward) undeserving individuals, hence the uncertainty facing the politician.

Formally, the optimal budget deficit in the political equilibrium, denoted by a ** superscript is expressed as:[7]

$$b^{**} = \left[\frac{1-\rho}{1+\rho} \right] \tilde{b} \text{ , with } \tilde{b} = \tilde{q} - \tau y \text{ .} \tag{5}$$

Certainty about election outcomes defines two boundary cases. Certain re-election ($\rho = 1$) eliminates myopia, leading party C officials to opt for a balanced budget: $b^{**}\big|_{\rho=1} = 0 = b^{*}$. By contrast, certain defeat leads to blindness so that party C is not bound by the intertemporal budget constraint and chooses a level of public spending consistent with the expected delivery of $\tilde{q}$ in period 1. The corresponding budget deficit is $b^{**}\big|_{\rho=0} = \tilde{b}$. All other solutions fall in the $[0, \tilde{b}]$ interval. Myopic policymakers generate a deficit bias only if $\tilde{b} > 0$, which requires that the appetite for delivering public goods (parametrized by $\tilde{q}$) exceeds available tax money. This condition simply embodies the *common pool* problem inherent to budgetary decisions so that $b^{**} > b^{*}$.

A seemingly straightforward solution to the deficit bias could be a balanced-budget rule. Of course, a government will only comply with that rule if the supporting institutional arrangements make violations costly in utility terms. The costs can be merely reputational or result from a formal enforcement procedure with explicit sanctions (see Beetsma and Debrun, 2007). Under a fiscal rule, the "constrained" utility of the elected official would be:

$$V_C = U_C - f(b - b^{*}) \text{ .} \tag{6}$$

where *f* is a constant marginal cost of deviations from the deficit limit. The effectiveness of the fiscal rule arises form the fact that the policymaker now has to maximize V_C instead of

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[7] The sequence of moves implicit to the equilibrium is the following. First, "Nature" draws the governing party (C by assumption here). Then party C officials prepare a budget setting the deficit for period 1, and by extension, the expected time path of public consumption over the two periods. Third, an efficiency shock materializes during period 1, and finally, elections take place. In period 2, the world ends after all debts have been paid off, and a new shock occurred. Applying backward-induction excludes time inconsistency.

U_C. It is easy to show that setting $f^* = (1-\rho)\tilde{b}$ implements b^* in the political equilibrium ($b^{**} = b^*$). That socially optimal rule suggests that countries where political instability and the appetite for public spending are higher require legal provisions that ensure higher costs for non-compliance.

A natural question is whether an elected government can realistically establish such a rule in the first place.[8] Indeed, absent delegation to an independent fiscal authority, the fiscal rule is essentially a contract of the government with itself. In fact, it is straightforward to establish that the rule (f^*, b^*) is not incentive-compatible for politicians as $E_0 V_C(q^*) < E_0 U_C(q^{**})$. Hence, even if policymakers were to inherit the rule from benevolent founding fathers, they would have an incentive to flout it. Thus the rule itself lacks credibility, which explains in part why these arrangements periodically fail.

B. Introducing a Fiscal Council

The main lesson from the above illustration is that any mechanism aimed at directly constraining fiscal discretion is bound to be resisted by policymakers and therefore, at a high risk of being weakened or dismantled as soon as the opportunity arises. So how could a fiscal council change this game?

In our simple story of deficit bias, the only credible way a fiscal council could help is by alleviating informational asymmetries at the root of the deficit bias.[9] Specifically, by providing an objective analysis of fiscal performance, the council could help voters assess whether observable outcomes—in terms of public good delivery—are the result of either pure luck or competent policy making. Making that distinction would allow voters to adequately re-elect competent incumbents and send incompetent ones home. If the adherence to the fiscal rule is broadly perceived as the optimal policy (and the rule (f^*, b^*) is socially optimal), the objective assessment of compliance by a fiscal council can eliminate electoral uncertainty. With compliance being rewarded by certain re-election, the socially optimal policy would become incentive-compatible for the politican.

In sum, a well-functioning fiscal council should become the main source of information on the underlying quality of fiscal policy, allowing voters to reward good policies. Placing such a considerable amount of trust in a fiscal council would require important features to be in

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[8] This argument is analogous to McCallum's (1995) second fallacy of central bank independence, stating that if governments have the discretion to set up an independent central bank with the right incentives, they also have the discretion to revert to a dependent central bank with inadequate incentives. Jensen (1997) formally demonstrates in the Barro-Gordon-Rogoff framework that delegation does not matter if the no-renegotiation assumption is lifted.

[9] See Debrun (2011).

place to facilitate its work. These features include guarantees of independence from partisan influence, an active presence in the public debate on fiscal issues, technical contributions in the implementation of fiscal policy such as the provision or assessment of official forecasts, the monitoring of fiscal policy rules, or the costing of policy measures, and a clear definition of the policy objectives under the council's scrutiny (e.g. fiscal sustainability).

III. FISCAL COUNCILS ON THE RISE

A. The Fiscal Council Dataset

The lack of empirical evidence on the effectiveness of fiscal councils reflects both the small size of the population and the absence of comparative datasets beyond European Union member states. This paper addresses the second issue by collecting data on the most relevant dimensions of fiscal councils among IMF members.

The following definition has been used to identify fiscal councils (Debrun et al, 2013). *A fiscal council is a permanent agency with a statutory or executive mandate to assess publicly and independently from partisan influence government's fiscal policies, plans and performance against macroeconomic objectives related to the long-term sustainability of public finances, short-medium-term macroeconomic stability, and other official objectives. In addition, a fiscal council can also: (i) contribute to the use of unbiased macroeconomic and budgetary forecasts in budget preparation, (ii) facilitate the implementation of fiscal policy rules, (iii) cost new policy initiatives, and (iv) identify sensible fiscal policy options, and possibly, formulate recommendations.*

The Fiscal Council Dataset covers existing fiscal councils as well as councils for which the primary legislative texts had been adopted as of end-January 2013. The dataset used a variety of sources, including fiscal responsibility laws, fiscal councils' websites, IMF country papers, and in some cases, country authorities. The dataset also benefited from inputs by IMF desk economists. For EU and OECD member states, the dataset drew from the European Commission database on independent fiscal institutions, and the background country notes used by the OECD to prepare their draft Principles for independent fiscal institutions. Table 1 lists the fiscal councils covered by the dataset.

Table 1. List of Fiscal Councils in the Dataset

Country	Fiscal Council	Start of activity
Australia	Parliamentary Budget Office	2012
Austria	Government Debt Committee	2002
Belgium	High Council of Finance - Section "Public Sector Borrowing Requirement"	1989
Belgium	Federal Planning Bureau	1994
Canada	Parliamentary Budget Office	2008
Croatia	Fiscal Policy Council	2013
Denmark	Danish Economic Council	1962
Finland	National Audit Office of Finland	2013
France	High Council of Public Finance	2013
Georgia	Parliamentary Budget Office	1997
Germany	German Council of Economic Experts	1963
Hungary	Fiscal Council	2009
Ireland	Irish Fiscal Advisory Council	2011
Italy[1]	Parliamentary Budget Office	2014
Japan	Fiscal System Council	1950
Kenya	Parliamentary Budget Office	2009
Mexico	Center for Public Finance Studies	1999
Netherlands	Netherlands Bureau for Economic Policy Analysis	1945
Portugal	Portuguese Public Finance Council	2012
Romania	Fiscal Council	2010
Serbia	Fiscal Council	2011
Slovak Republic	Council for Budget Responsibility	2011
Slovenia	Institute of Macroeconomic Analysis and Development	1991
Slovenia[2]	Fiscal Council	2009
South Africa[1]	Parliamentary Budget Office	2014
South Korea	National Assembly Budget Office	2003
Sweden	Swedish Fiscal Policy Council	2007
United Kingdom	Office for Budget Responsibility	2010
United States	Congressional Budget Office	1974

[1] The South African and Italian PBOs are being established and expected to be fully operational by the end of 2014.

[2] The fiscal council in Slovenia has been formally established but it is not yet fully operational.

Chile has established a Fiscal Advisory Council in April 2013.

The fiscal council dataset includes general information such as the names and acronyms of the council and its date of creation. It also includes key institutional characteristics such as the existence of formal guarantees of independence, accountability requirements, and human and financial resources. Fiscal councils' remit, their specific tasks and the instruments at their disposal to influence the conduct of fiscal policy are also present in the dataset. Most variables in the dataset are binary (Box 1).

Box 1. Fiscal Council Dataset: Variables Description

Independence and governance:

Legal independence: The council's independence from political interference is guaranteed by law or treaty (Yes: 1, No: 0).

Safeguards on budget: Safeguards on the council's budget are deemed to exist if the budget is (i) set by the central bank, (ii) part of the overall budget of the legislative branch (i.e. protected from executive decisions), (iii) guaranteed by budget appropriations with separate line item in the budget, or (iv) subject to any other guarantee commonly granted to independent institutions, such as regulators.

Composition, appointment, and term of high-level staff: Various variables indicate whether or not (Yes: 1, No: 0) the high level staff of the council includes (i) non citizens, (ii) academics, (iii) policy experts, and (iv) civil servants. Three variables also indicate whether or not (Yes: 1, No: 0) the council high-level staff is appointed by (i) the government, (ii) the parliament, or other institutions (head of state or other independent institution). An additional variable captures the length of council members' terms (in years).

Size of the council: Number of technical and administrative staff; number of management and high level staff.

Staff commensurate to tasks: Assessment of the ability to fulfill the tasks specified in the mandate qualitatively and quantitatively (Yes: 1, No: 0).

Remit of fiscal councils:

Forecasts provision/assessment: The council is mandated to provide or assess macroeconomic forecasts used for budgetary projections (Yes: 1, No: 0).

Monitoring of Fiscal rules: The council is mandated to monitor compliance with numerical fiscal rules (Yes: 1, No: 0).

Costing of measures: The council is mandated to provide costing of measures and reforms affecting public finances (Yes: 1, No: 0).

Long-term sustainability analysis: The council evaluates long-term sustainability issues (Yes: 1, No: 0).

Positive analysis: The council performs positive analyses (Yes: 1, No: 0).

Normative analysis or recommendations: The council performs normative analysis or provides recommendations (Yes: 1, No: 0).

Box 1. Fiscal Council Dataset: Variables Description

(concluded)

Tasks and Channels of Influence

Public reports: The council prepares public reports on its activities (Yes: 1, No: 0).

High media impact: This variable reflects IMF staff assessment based in the number of publications, media references to these reports, and in the case of EU members, the authorities own assessment reflected in the Fiscal Institutions Database (Yes: 1, No: 0).

Binding forecasts: The council provides binding forecasts for the budget (Yes: 1, No: 0).

Formal consultation or hearings: Formal obligation of the government to consult and/or of the parliament to audition the fiscal council during the budget process (Yes: 1, No: 0).

Stall the budget process: The council has the legal mandate to stall the budget process (Yes: 1, No: 0).

Comply or explain: Legal or constitutional obligation to use the forecasts of the fiscal council, or the freedom of the government to use its own forecasts with the obligation to justify deviations from the forecasts of the fiscal council publicly (Yes: 1, No: 0).

B. Fiscal Councils: Main Trends and Features

The number of fiscal councils has increased rapidly. From only one in 1960—the Netherlands Bureau for Economic Policy Analysis, also known as the Central Planning Bureau—the number of councils has surged since the 2008-09 crisis, reaching 29 by the end of January 2013 (Figure 1).[10] New fiscal councils include the Parliamentary Budget Office in Canada and South Africa, the Office for Budget Responsibility in the United Kingdom, and the High Council of Public Finance in France. Although most of established fiscal councils are in advanced economies, particularly in Europe, there is growing interest in emerging markets and developing economies.[11] This increasing interest in fiscal councils is likely to continue, particularly in Europe, where new legal requirements mandate most European Union member states to establish national independent bodies to monitor compliance with fiscal rules and produce or at least assess or validate macroeconomic and budgetary forecasts.

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[10] The Spanish Congress approved on October 10, 2013 the draft bill of the Constitutional Law creating the Independent Fiscal Responsibility Authority along with amendments to this law on October 30.

[11] Chile has formally established a new fiscal council in June 2013.

Figure 1. Number of Fiscal Councils
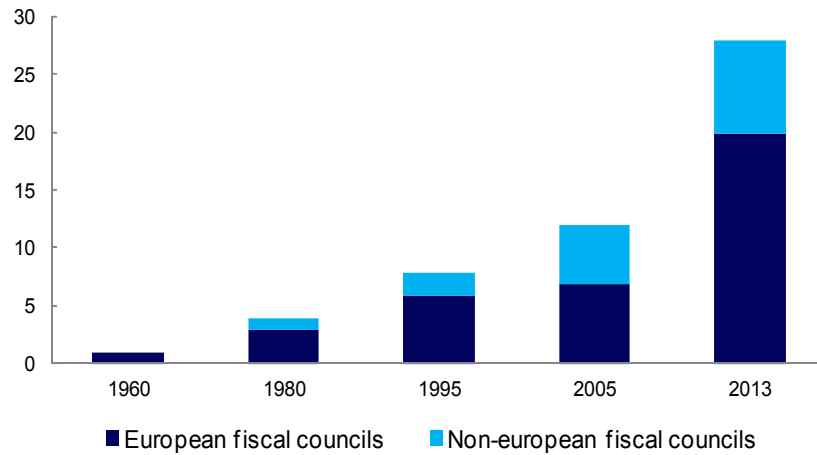
Source: IMF Fiscal Council Dataset.

The design of each council ultimately reflects country-specific characteristics, such as available human and financial capacities, political traditions, and the causes for excessive deficits and debts. Fiscal councils therefore vary in terms of institutional models, remits, and tasks although all of them share the ultimate objective of promoting sound fiscal policies through independent oversight.

The dataset shows the considerable diversity of institutional models. Most of these institutions (90 percent) are attached to the legislature (parliamentary budget office), the executive, or set-up as stand-alone bodies (Figure 2). Parliamentary budget offices have historically emerged in presidential political systems (United States and Korea), but have more recently spread to a great variety of advanced and developing countries (Australia, Canada, Italy, Georgia, Kenya, Mexico, and South Africa). Similar variety can be observed for fiscal councils attached to the executive (in Belgium, Croatia, Denmark, Japan, Netherlands, Slovenia, and the United Kingdom). Stand-alone fiscal councils are the closest to the model suggested in the academic literature and are also present a wide variety of countries (Germany, Hungary, Ireland, Portugal, Romania, Serbia, Slovak Republic, and Sweden). Only two countries (France and Finland) have their fiscal councils attached to the supreme audit institution.[12]

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[12] The audit office actually performs the task of the council in Finland.

Figure 2. Institutional Models of Fiscal Councils
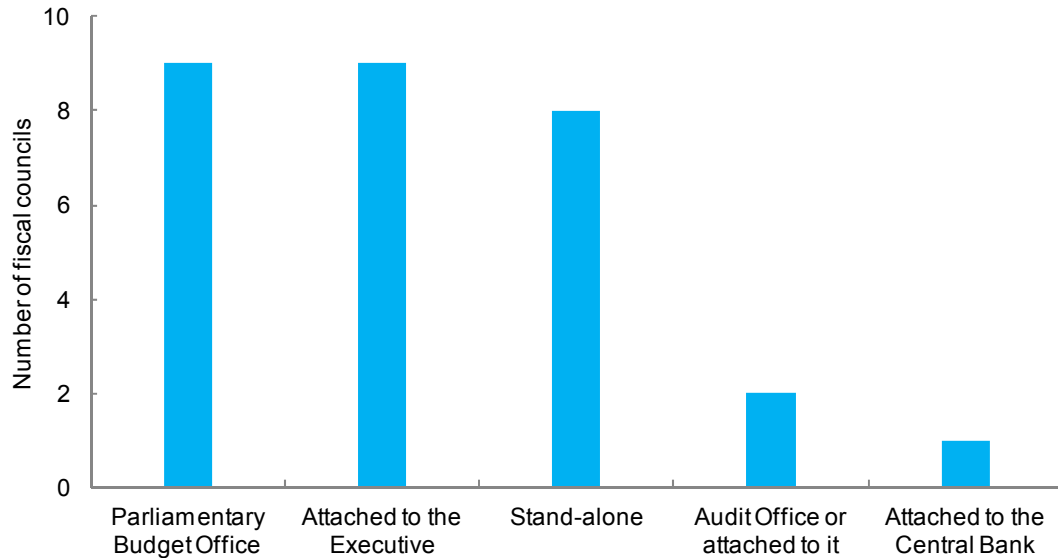
Source: IMF Fiscal Council Dataset.

With respect to their remits, all existing councils perform positive analyses while the vast majority of them evaluates long-term sustainability issues and provides or assesses macroeconomic forecasts (Table 2). Less common but growing responsibilities among recently established council include the monitoring of compliance with fiscal policy rules and the costing of policy measures. Councils established in Romania (2010), Ireland (2011), Serbia (2011), Slovak Republic (2011), and Italy (2014) are explicitly tasked to monitor compliance with numerical rules and cost new policy initiatives.

The majority of fiscal councils benefit from legal protections against partisanship when fulfilling their mandate (Table 3). However, less than half of the councils have their budget protected from arbitrary cuts that could undermine their ability to fulfill their mandates. Safeguards on budget are more common among older councils such as the Danish Economic Council, the German Council of Economic Expert, the Mexican Center for Public Finance Studies, and the Congressional Budget Office in the US. Guarantees on the fiscal council's resources range from having a separate budget line subject to vote in Parliament, to multi-year appropriations.

Unlike central banks, fiscal councils do not directly control policy instruments. They influence the conduct of fiscal policy mostly indirectly through the public debate, and only rarely through direct action in the budget process. All fiscal councils prepare public reports that often have a significant media impact (Table 3). This is an essential vehicle for the reputational impact that their work is expected to have on policymakers. Direct involvement in the form of providing forecasts that are either binding or linked to a "comply or explain" clause is rare. However, a sizeable number of new fiscal councils hold formal consultations

with the government or hearings in Parliament on a regular basis, which gives them more direct access to decision makers. This is the case in countries such as Finland, France, Georgia, Italy, Romania, and Serbia.

Fiscal councils' size can vary greatly depending on their remits, the complexity of the government system, and the availability of human and financial resources. The dataset suggests that small councils tend to have narrower remits than larger ones (Figure 3 and Table 4), although there remains significant heterogeneity in size even among institutions with similar mandates. Small fiscal councils (less than 10 full-time professionals) are often tasked with the assessment of fiscal policy (e.g. Finland, Ireland, and Slovenia) while much larger councils usually combine different functions including forecast preparation, long-term sustainability analyses, and the costing of policy measures (e.g. Netherland, South Korea, and the United States). Most of councils' staffs are academics, policy experts, and civil servants but a growing share of councils are welcoming foreign experts in their senior management, increasing the perception of independence from local politics and allowing access a greater pool of talents.

Figure 3. Remits and Number of Technical Staff (FTE) in Fiscal Councils

•Policy costing

•Long-term sustainability

20+

•Preparing forecasts

•Assessing Forecasts

<10

•Fiscal Policy assessment
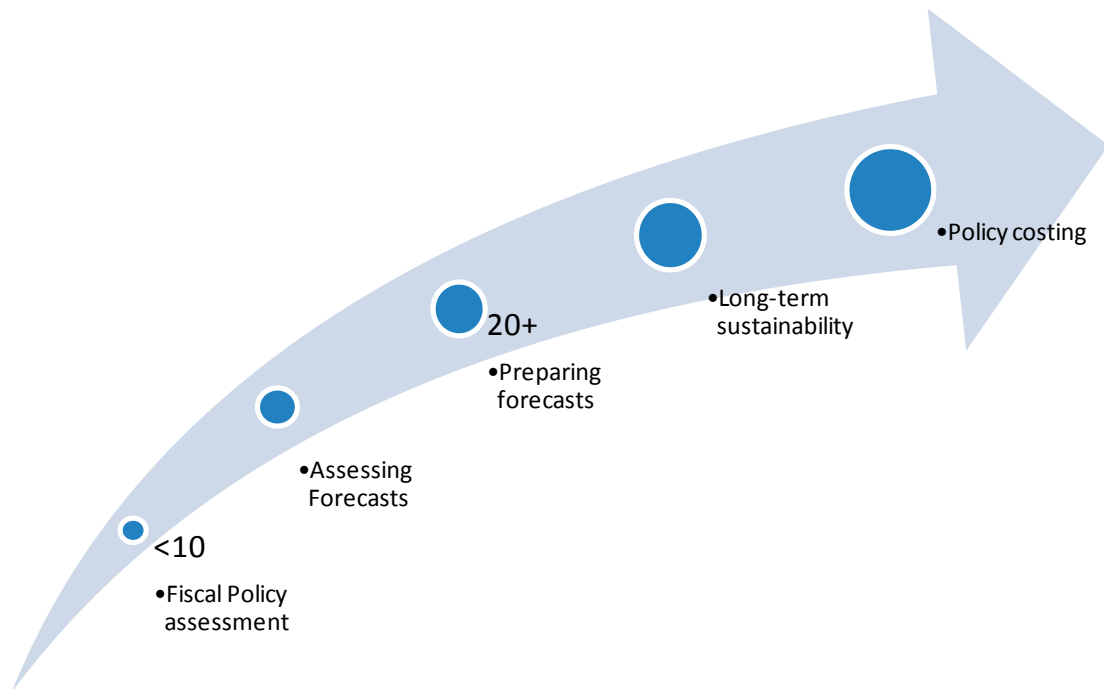
Source: IMF Fiscal Council Dataset.

Table 2. Fiscal Councils' Remits

Country	Fiscal Council	Positive analysis	Long-term Sustainability	Forecast preparation or assessment	Normative analysis or recommendations	Monitoring of Fiscal Rules	Costing of measures
Australia	Parliamentary Budget Office	X	X	X			X
Austria	Government Debt Committee	X	X		X	X	
Belgium	High Council of Finance	X	X		X	X	
Belgium	Federal Planning Bureau	X	X	X			
Canada	Parliamentary Budget Office	X	X	X	X		X
Croatia	Fiscal Policy Council	X	X	X		X	
Denmark	Danish Economic Council	X	X	X	X	X	
Finland	National Audit Office of Finland	X	X	X	X	X	
France	High Council of Public Finance	X		X	X	X	
Georgia	Parliamentary Budget Office	X		X	X		
Germany	German Council of Economic Experts	X	X	X	X		
Hungary	Fiscal Council	X		X		X	
Ireland	Irish Fiscal Advisory Council	X	X	X	X	X	X
Italy[1]	Parliamentary Budget Office	X	X	X	X	X	X
Japan	Fiscal System Council	X			X		
Kenya	Parliamentary Budget Office	X		X			
Mexico	Center for Public Finance Studies	X		X			X
Netherlands	Netherlands Bureau for Economic Policy Analysis	X	X	X		X	X
Portugal	Portuguese Public Finance Council	X	X	X	X	X	
Romania	Fiscal Council	X	X	X	X	X	X
Serbia	Fiscal Council	X	X	X	X	X	X
Slovak Republic	Council for Budget Responsibility	X	X			X	X
Slovenia	Institute of Macroeconomic Analysis and Development	X	X	X			
Slovenia	Fiscal Council	X	X			X	
South Africa[1]	Parliamentary Budget Office	X			X		X
South Korea	National Assembly Budget Office	X	X	X			X
Sweden	Swedish Fiscal Policy Council	X	X		X	X	
United Kingdom	Office for Budget Responsibility	X	X	X		X	X
United States	Congressional Budget Office	X	X	X			X

Source: IMF Fiscal Council Dataset. Coverage varies with data availability.

Table 3. Fiscal Councils' Independence and Tasks

Country	Fiscal Council	Legal independence	Safeguards on budget	Public reports	High media impact	Binding forecasts	Comply or explain	Formal consultation or hearings
Australia	Parliamentary Budget Office	X		X				
Austria	Government Debt Committee	X	X	X	X			
Belgium	High Council of Finance			X			X	
Belgium	Federal Planning Bureau	X		X	X	X		
Canada	Parliamentary Budget Office	X	X	X	X			
Croatia	Fiscal Policy Council	X		X				
Denmark	Danish Economic Council	X	X	X	X			
Finland	National Audit Office of Finland	X		X				X
France	High Council of Public Finance	X		X				X
Georgia	Parliamentary Budget Office		X	X				X
Germany	German Council of Economic Experts	X	X	X	X		X	
Hungary	Fiscal Council	X		X	X			X
Ireland	Irish Fiscal Advisory Council	X		X	X			
Italy[1]	Parliamentary Budget Office	X		X				X
Japan	Fiscal System Council			X				
Kenya	Parliamentary Budget Office			X	X			
Mexico	Center for Public Finance Studies		X	X	X			X
Netherlands	Netherlands Bureau for Economic Policy Analysis			X	X	X		
Portugal	Portuguese Public Finance Council	X	X	X	X			X
Romania	Fiscal Council	X	X	X	X			X
Serbia	Fiscal Council	X		X	X			X
Slovak Republic	Council for Budget Responsibility	X	X	X	X			
Slovenia	Institute of Macroeconomic Analysis and Development	X		X	X	X		
Slovenia	Fiscal Council	X		X				
South Africa[1]	Parliamentary Budget Office		X	X				
South Korea	National Assembly Budget Office	X	X	X	X			
Sweden	Swedish Fiscal Policy Council	X		X	X			
United Kingdom	Office for Budget Responsibility	X		X	X		X	X
United States	Congressional Budget Office	X	X	X	X			

Source: IMF Fiscal Council Dataset. Coverage varies with data availability.

Table 4. Fiscal Councils' Size and Composition

Country	Fiscal Council	Size		Length of Contract in Years (management)	Possibility of Non-Citizenship (management)	Composition			
		Management	Technical and administrative			Academics	Policy Experts	Politicians	Civil Servants
Australia	Parliamentary Budget Office	1	1	5	X		X		X
Austria	Government Debt Committee	15	3	6		X	X		X
Belgium	High Council of Finance	27	14	5		X			X
Belgium	Federal Planning Bureau	2	90	9			X		
Canada	Parliamentary Budget Office	1	15	5			X		X
Croatia	Fiscal Policy Council	7	0	5		X	X		X
Denmark	Danish Economic Council	25	30	6	X	X			
Finland	National Audit Office of Finland	7				X	X		
France	High Council of Public Finance	11		5			X		X
Georgia	Parliamentary Budget Office	10	1						X
Germany	German Council of Economic Experts	5	20	5	X	X			
Hungary	Fiscal Council	3	4	6		X	X		
Ireland	Irish Fiscal Advisory Council	5	3	4	X	X	X		
Italy[1]	Parliamentary Budget Office	5		6					X
Japan	Fiscal System Council			2	X	X	X		
Kenya	Parliamentary Budget Office								
Mexico	Center for Public Finance Studies	6	32			X	X		X
Netherlands	Netherlands Bureau for Economic Policy Analysis	3	117	7	X	X	X		X
Portugal	Portuguese Public Finance Council	7	15	7	X	X	X		X
Romania	Fiscal Council	5	6	9		X	X		
Serbia	Fiscal Council	3	4	6		X	X		
Slovak Republic	Council for Budget Responsibility	3	18	7	X	X	X		X
Slovenia	Institute of Macroeconomic Analysis and Development	3	65	5	X		X		X
Slovenia	Fiscal Council	7	0	5	X	X	X		
South Africa[1]	Parliamentary Budget Office	12							
South Korea	National Assembly Budget Office	1	125	2	X	X	X		X
Sweden	Swedish Fiscal Policy Council	6	6	3	X	X	X		
United Kingdom	Office for Budget Responsibility	4	17	5	X	X	X		
United States	Congressional Budget Office	1	250	4		X	X		X

Source: IMF Fiscal Council Dataset. Coverage varies with data availability.

IV.   THE EFFECTIVENESS OF FISCAL INSTITUTIONS: NEW EVIDENCE FROM NOVEL DATASETS

This section reassesses and expands the empirical evidence on the effectiveness of fiscal institutions in light of the information collected in the new dataset. As the number of observations remains limited, this exercise should be seen as a first pass aimed at unveiling broad trends and significant correlations. Since fiscal councils and fiscal rules often coexist (Debrun and others, 2013), it is important to explore their impact jointly. For that purpose, we will use the IMF dataset on fiscal rules, which also covers the entire IMF membership (Schaechter and others, 2012).

A.   What Do We Know?

Attempts to analyze the impact of fiscal institutions on fiscal performance have mostly concerned fiscal rules only and been limited to specific regions (Europe, Latin America) or subnational entities within federations (United States, Switzerland).[13] Recently, the most comprehensive studies have focused on national fiscal rules in European Union member states (Debrun and Kumar, 2007; Debrun and others, 2008; Deroose, Moulin, and Wierts, 2006; European Commission, 2006). These studies use information on national fiscal rules compiled by the European Commission and summarized in fiscal rule indexes to highlight that national fiscal rules have been generally associated with improved fiscal performance.

Empirical evidence on the impact of fiscal councils on fiscal performance is very limited. Hagemann (2011) surveyed a few country-specific case studies (Belgium, Chile, Hungary, and United Kingdom) that compare fiscal performance indicators before and after the establishment of a fiscal council. Some of these analyses suggest that fiscal councils contributed to improve fiscal performance (Lebrun, 2006; Coene, 2010). The European Commission (2006) illustrates the effectiveness of fiscal councils on fiscal performance by combining answers to its questionnaire with a literature survey and descriptive statistics. Only Debrun and Kumar (2007) provide cross-country evidence on the impact of fiscal councils fiscal discipline in mature EU countries (EU-15 excluding Luxembourg). They used survey data from the EC to assess the impact of fiscal institutions (fiscal rules and fiscal councils) on fiscal performance. They found that fiscal rules were associated with stronger fiscal performance and that fiscal councils could impact fiscal outcomes through the operation of numerical rules.

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[13] See for instance Alesina and Bayoumi (1996) for the United States, Alesina and Perotti (1999) for the OECD, and Schmidt-Hebbel (2012) for resource-rich countries.

B. Institutions and Fiscal Discipline: New Evidence

To analyze the potential impact of fiscal institutions on fiscal discipline, we will rely on two indicators to capture fiscal discipline: fiscal performance measured by the primary balance, and the quality of budgetary forecasts.

Fiscal Institutions and Fiscal Performance

The empirical analysis builds on a cross-country panel data covering 58 advanced and emerging countries over the period 1990-2011. About half of the countries in the sample established a council during the period of analysis. The estimated model is the standard fiscal "reaction function" proposed by Bohn (1998). It explains the primary balance (PB) by its own lagged value (to allow for persistence), the lagged gross debt (to capture long-term solvency constraint), and control variables (X_k) including the output gap (to control for the cyclicality of fiscal policy).

For the purpose of our exercise, the basic regression model is augmented with a fiscal rule index (FR) that captures the comprehensiveness of numerical fiscal rules and a dummy variable indicating the existence of a fiscal council (FC).[14] The dummy for fiscal council is subsequently replaced by specific characteristics of the councils such as independence, forecast assessment, etc. The empirical results focus on statistically significant characteristics of fiscal councils, which were also identified as critical in the theoretical discussion (Section II.B).

$$PB_{i,t} = \gamma PB_{i,t-1} + \sum_k \beta_k X_{k,i,t} + \theta DEBT_{i,t-1} + \vartheta FR_{i,t} + \varphi FC_{i,t} + \mu_i + \delta_t + \varepsilon_{i,t} \qquad (7)$$

Where i and t represent countries and years respectively. μ_i represents country fixed effects, δ_t are time dummies, and $\varepsilon_{i,t}$ is the error term. Because the number of observations (N) is large and the time dimension (T) is finite in our dynamic specification, standard estimation techniques such as least squares dummy variable estimators are not consistent. The bias-corrected Least Square Dummy Variable (LSDVC) dynamic panel estimator suggested by Bruno (2005) is therefore preferred as it approximates the bias inherent to dynamic unbalanced panels and constructs a consistent estimator.

The results show that countries with better designed fiscal rules exhibit stronger fiscal performance (Table 5). This result is consistent with Debrun and others (2008) who found a statistically significant, robust, and causal relationship between their fiscal rule index and the

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[14] The fiscal rule index captures the comprehensiveness of numerical rules by aggregating the average number of rules and their key features of such as coverage, legal basis, and formal enforcement procedure. See Schaechter and others (2012) for details on the methodology to construct the fiscal rules index.

cyclically-adjusted primary balance using a much smaller sample of European Union countries.

The results also suggest that the mere existence of fiscal councils is not by itself conducive to stronger fiscal balances. Interestingly, it is only by focusing on certain characteristics of fiscal councils that a significantly positive association arises (Table 5). This comes in addition to the positive relation between fiscal rules and fiscal performance. This suggests that fiscal councils exhibiting certain features could complement and add to the discipline-enhancing role of numerical fiscal rules. Important features of effective fiscal councils are:

Independence: Countries with independent fiscal councils, either with legal guarantees through legislations or with operational guarantees through adequate human resources, have on average better fiscal outcomes.

Fiscal rule monitoring: Fiscal councils evolving within a clear fiscal framework, with a numerical fiscal rule that they monitor, are associated with higher fiscal performance. This result illustrates the potential impact of fiscal councils when the fiscal framework, particularly fiscal targets and objectives, are clearly defined through numerical rules. The existence of numerical fiscal rules could indeed facilitate the task of the fiscal council by providing a simple and transparent benchmark to assess fiscal performance. More broadly, this points a complementarity between rules and councils.

Forecasts production/assessment: More technical contributions from fiscal councils such as the assessment of official forecasts or the costing of governments' measures are also associated with better fiscal outcomes. These inputs to the budget process could be instrumental in reducing the deficit and procyclicality biases that often impact discretionary fiscal policy. This result is arguably linked to the previous one, as overoptimistic forecasts are often a way for governments to escape from the constraints imposed by numerical fiscal rules (Frankel and Schreger, 2012). Although this only increases ex-ante compliance with the numerical targets, the cost of non-compliance ex-post is generally low given the weak enforcement mechanism characterizing many fiscal rules.

Media impact: As fiscal councils do not directly impact fiscal policy, their influence hinges importantly on the reputational and electoral impact of their analysis for policymakers. The results indicate that countries where the fiscal councils have a higher media impact tend to exhibit better fiscal outcomes.

Of course, these results should be interpreted with caution for three main reasons. First, more than half of existing fiscal councils have been created after 2005. The limited time span for a good number of fiscal councils could potentially affect the empirical results. Reassessing the issue in the future as longer time series become available would be sensible. Second, the econometric analysis itself is subject to limitations. As in any empirical study of the impact of institutions on policies, the model may not identify a causal relation because the

institutions we measure could potentially reflect deeper unobserved preferences that would be the true cause of strong outcomes. Third, the key characteristics of fiscal councils are highly correlated (Table A.1). This complicates the assessment of their combined impact on fiscal performance. Because of these limitations, the empirical results should be seen as robust conditional correlations.

A formal test of complementarity between fiscal rules and fiscal councils would be to assess whether the marginal impact of our fiscal rule index differs in countries with fiscal councils as opposed to countries without such a council. This would illustrate that in addition to promoting fiscal discipline individually, fiscal rules and fiscal councils could be stronger when used together. Introducing an interaction term between the fiscal council variable (or its main characteristics) and the fiscal rule index did not unveil any statistically significant effect. This is likely due to the limited variation between the two variables since most countries with fiscal councils also subject their fiscal policy to a numerical rule (Figure 4).

Figure 4. Fiscal Councils and Fiscal Rules

Countries with fiscal councils often have fiscal rules

- National rule only
- Supranational rules only
- National and Supranational rules
- No rules
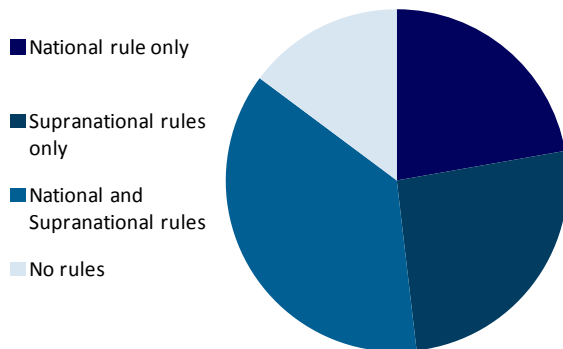
…and the councils in these countries often monitor compliance with fiscal rules.

- National rule only
- Supranational rule only
- National and supranational rules
- No monitoring of rules
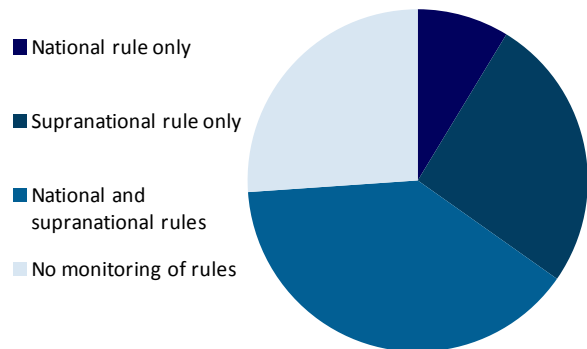
Sources: IMF Fiscal Council Dataset, and staff calculations.

Table 5. Fiscal Councils and Fiscal Performance
Bias Corrected LSDV Dynamic Panel Model

	Dependent Variable: Primary Balance in percent of GDP							
Primary Balance (t-1)	0.823 (27.07)***	0.824 (26.84)***	0.821 (26.53)***	0.821 (24.03)***	0.826 (26.96)***	0.826 (27.49)***	0.826 (28.07)***	0.824 (27.13)***
Debt (t-1)	0.015 (2.92)***	0.017 (3.37)***	0.016 (3.24)***	0.023 (3.69)***	0.016 (3.24)***	0.016 (3.14)***	0.016 (3.31)***	0.017 (3.40)***
Output Gap (t-1)	-0.095 (3.05)***	-0.094 (3.03)***	-0.096 (3.09)***	-0.091 (2.40)**	-0.098 (3.17)***	-0.095 (3.06)***	-0.092 (2.98)***	-0.093 (2.99)***
Fiscal Rules Index (FRI)	0.277 (2.62)***	0.275 (2.59)***	0.283 (2.66)***	0.249 (2.26)**	0.232 (2.27)**	0.289 (2.73)***	0.295 (2.79)***	0.280 (2.65)***
Fiscal Council	0.543 (1.42)							
Legal indep.		0.930 (2.38)**						
Safeg. on budget			0.386 (0.71)					
Staff number (High level)				0.296 (2.34)**				
Fiscal rule monitoring					1.524 (2.80)***			
Costing of measures						1.355 (2.57)**		
Forecast Assessment							1.293 (2.78)***	
High media Impact								0.904 (2.32)**
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	901	901	901	890	901	901	901	901
Countries	58	58	58	58	58	58	58	58

Absolute bootstrapped t-statistics in parentheses.
* significant at 10%; ** significant at 5%; *** significant at 1%.

Fiscal Institutions and the Quality of Budgetary Forecasts

The presence of a council could discourage governments to fool voters about compliance with the rule. One common manifestation of such attempts is to produce optimistic macroeconomic and revenue forecasts to ensure ex-ante compliance with the rule and justify ex-post deviations with "unexpected" revenue shortfalls. A straightforward empirical test of this hypothesis is to look into the quality of official forecasts and assess whether the presence of a fiscal council makes a difference for the better.[15]

The existing literature on the potential impact of fiscal institutions on official forecasts focuses on European countries. Jonung and Larch (2006) show that forecast bias in the EU may be politically motivated and that forecast by an independent authority such as a fiscal council would be preferable to forecast provided by the Ministry of Finance.[16] Frankel and Schreger (2012) find that official budget forecasts are over-optimistic, particularly in Euro area countries. The authors also show that real GDP forecasts are over-optimistic during booms. They find that independent fiscal institutions producing budget forecasts reduce the over-optimistic bias when countries do not comply with the 3 percent cap on budget deficits.
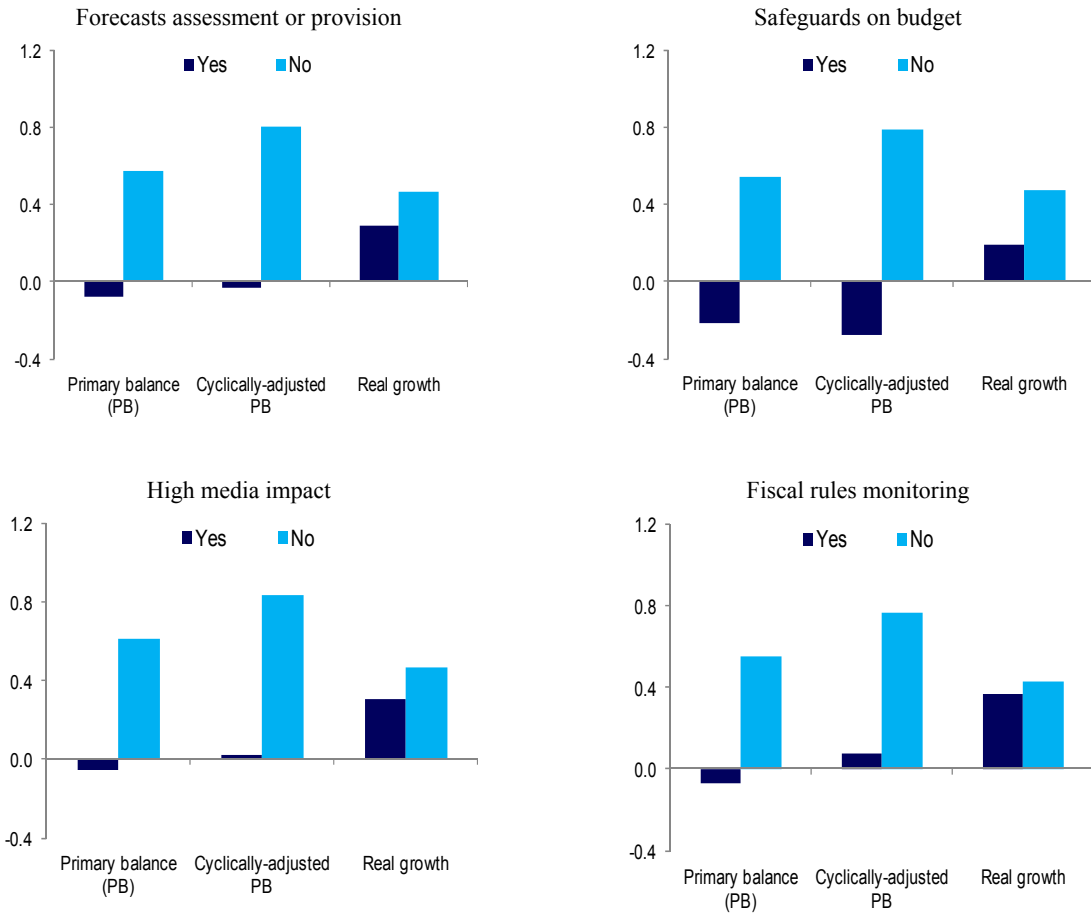
This paper measures the quality of official forecasts for 3 key variables: the primary balance, the cyclically-adjusted primary balance, and real GDP growth. Official forecasts are assessed on the basis of their accuracy as well as their bias. The forecast error is defined as the difference between the forecast of the aggregate for t made in t-1 and the outcome, which is the estimate for t made in t+1. The mean forecast error thus captures the extent of forecasting bias in official projections. The mean of the absolute value of forecast errors assesses forecasts accuracy.

Figure 5 shows that well-designed fiscal councils contribute to unbiased or slightly conservative forecasts for primary balances in countries where they operate, while other countries have overoptimistic projections on average. Interestingly, real growth forecasts remain overoptimistic, although one should note that the smallest bias is observed in countries with formally independent councils. This may reflect the fact that manipulations of basic macroeconomic forecasts tend to be more easily detected given the many alternative sources providing similar forecasts. By contrast, estimating the budgetary impact of economic activity is technically more involved and may offer more opportunities for manipulation.

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[15] Strauch and others. (2004) find that political economy factors can explain more optimistic forecasts by some governments.

[16] However, Abbas and others (2012) show that fiscal councils per se cannot assure better (less optimistic) forecasts than other forecasters when there is inherent uncertainty around near-term GDP and fiscal variables.

Figure 5. Mean Forecast Error and Fiscal Councils' Characteristics

Forecasts assessment or provision

Safeguards on budget

High media impact

Fiscal rules monitoring

Source: IMF staff estimates.
Note: The forecast error is defined as the forecast minus the actual value so that a positive number for the mean error indicates an optimistic forecast.

In addition to the statistical evidence, simple regressions confirm that fiscal councils and their key characteristics are associated with lower forecast errors. The paper relies on pooled regressions controlling for the output gap (GAP) and the fiscal rules index (FR) to evaluate the impact of fiscal councils and their key characteristics (FC) on forecasting errors. The dependent variable, forecasting errors (Error), is firstly defined to capture forecasting bias and secondly to measure forecasts accuracy. We estimate the following equation:

$$Error_{i,t} = \gamma GAP_{i,t-1} + \vartheta FR_{i,t} + \varphi FC_{i,t} + \mu_i + \delta_t + \varepsilon_{i,t} \tag{8}$$

The analysis uses a sample of 26 advanced and emerging European countries over the period 1998-2010 to show that countries with fiscal councils have less biased and more accurate budgetary forecasts. Specifically, countries where fiscal councils are independent, have a high media impact, provide or assess macroeconomic forecasts, and monitor fiscal rules have

lower bias in their official forecasts of the budget balance (Tables 6). The countries also have a better accuracy when forecasting the budget balance (Appendix Table 2). Independent fiscal councils could therefore contribute to the implementation of fiscal rules by, for instance, preventing overoptimistic forecasts that would hinder the implementation of fiscal rules and the compliance with the defined targets.

Table 6. Fiscal Councils Characteristics and Primary Balance Forecast Error

	Dependent Variable: Forecast Error (Primary Balance)					
Output gap	0.059	0.060	0.067	0.059	0.064	0.059
	(0.63)	(0.65)	(0.72)	(0.63)	(0.69)	(0.63)
Fiscal rules index	-0.215	-0.252	-0.213	-0.215	-0.261	-0.193
	(1.70)*	(1.95)*	(1.58)	(1.70)*	(1.98)**	(1.43)
Fiscal council	-0.783					
	(3.32)***					
Legal independence		-0.911				
		(3.76)***				
Safeguards on budget			-0.821			
			(3.14)***			
High media impact				-0.783		
				(3.32)***		
Forecasts provision /assess					-0.863	
					(3.35)***	
Fiscal rules monitoring						-0.653
						(2.28)**
Constant	-0.107	-0.001	-0.378	-0.107	-0.004	-0.406
	(0.16)	(0.00)	(0.68)	(0.16)	(0.01)	(0.76)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.32	0.33	0.32	0.32	0.32	0.31
Observations	225	225	225	225	225	225
N. of countries	26	26	26	26	26	26

Robust t-statistics in parentheses.
* significant at 10%; ** significant at 5%; *** significant at 1%.

Table 7. Fiscal Councils Characteristics and Real Growth Forecast Error

	Dependent Variable: Forecast Error (Primary Balance)					
Output gap	0.377 (4.48)***	0.377 (4.49)*	0.380 (4.51)***	0.377 (4.48)***	0.378 (4.49)***	0.377 (4.46)***
Fiscal rules index	0.140 (1.56)	0.126 (1.42)	0.151 (1.66)*	0.140 (1.56)	0.123 (1.37)	0.155 (1.57)
Fiscal council	-0.285 (1.28)					
Legal independence		-0.297 (1.27)				
Safeguards on budget			-0.456 (1.73)*			
High media impact				-0.285 (1.28)		
Forecasts Provision/assess					-0.192 (0.75)	
Fiscal rules monitoring						-0.300 (1.07)
Constant	-1.707 (1.45)	-1.679 (1.41)	-1.824 (1.65)	-1.707 (1.45)	-1.708 (1.47)	-1.827 (1.66)*
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.60	0.60	0.60	0.60	0.60	0.60
Observations	225	225	225	225	225	225
N. of countries	26	26	26	26	26	26

Robust t-statistics in parentheses.
* significant at 10%; ** significant at 5%; *** significant at 1%.

Similarly to Frankel and Schreger (2012), our results illustrate that real growth forecasts tend to be over-optimistic during booms (Table 7). Only independent fiscal councils seem to be associated with lower bias of real output forecasts. Fiscal councils and their key characteristics (independence, provision or assessment of macroeconomic forecast, and high media impact) are also associated with better accuracy of real output forecasts (Appendix Table 3). Real GDP forecasts also tend to be less accurate during booms.

V. CONCLUSION AND POLICY IMPLICATIONS

This paper compiles a unique dataset summarizing key characteristics of existing fiscal councils across the IMF membership and draws from this new dataset to investigate the role of fiscal councils in fostering fiscal discipline. The dataset illustrate that the number of fiscal councils has surged since the crisis. Existing fiscal councils cover a wide variety of possible institutional forms and differ greatly in terms of remits and tasks. Ultimately the design of effective councils should reflect country-specific characteristics, such as available human and financial resources, political traditions, and the specific causes for excessive deficits and debts.

The empirical analysis suggests that only well-designed fiscal councils are associated with stronger fiscal performance as well as more accurate and less biased forecasts. Key features for effective fiscal councils include an operational independence from politics, the provision or public assessment of budgetary forecasts, a strong presence in the public debate, and an explicit role in monitoring fiscal policy rules. The paper also adds to the existing evidence about the discipline enhancing role of fiscal rules, using a much broader sample of countries than previous studies, and suggests that fiscal councils could complement rules in promoting sound policies.

Fiscal rules and fiscal councils represent institutional solutions to countries' quest for more credible fiscal policy following the crisis. In particular, fiscal councils could help address the inherent inflexibility that tends to undermine the credibility of fiscal rules. Fiscal councils can encourage greater fiscal discipline by fostering fiscal transparency and stimulating a productive public debate on fiscal issues.

APPENDIX I: CORRELATIONS AMONG FISCAL COUNCILS' FEATURES

Table A.1. Correlation Matrix

	Legal independence	Independent budget	Fiscal rule monitoring	Forecast assessment	High media impact
Legal independence	1				
Safeguards on budget	0.75*	1			
Fiscal rule monitoring	0.43*	0.39*	1		
Forecast assessment	0.80*	0.65*	0.32*	1	
High media impact	0.89*	0.77*	0.61*	0.81*	1

* significant at 1%

APPENDIX II. FISCAL INSTITUTIONS AND THE ACCURACY OF FORECASTS

Table A.2. Fiscal Councils Characteristics and Primary Balance Absolute Forecast Error

	Dependent Variable: Forecast Error (Primary Balance)					
Output gap	0.000 (0.00)	0.002 (0.03)	0.007 (0.08)	0.000 (0.00)	0.006 (0.07)	0.002 (0.02)
Fiscal rules index	-0.082 (0.74)	-0.122 (1.07)	-0.098 (0.83)	-0.082 (0.74)	-0.131 (1.13)	-0.074 (0.63)
Fiscal council	-0.813 (4.11)***					
Legal independence		-0.857 (4.13)***				
Safeguards on budget			-0.576 (2.70)***			
High media impact				-0.813 (4.11)***		
Forecasts provision /assess					-0.770 (3.41)***	
Fiscal rules monitoring						-0.549 (2.31)**
Constant	1.105 (2.88)***	1.187 (3.01)***	0.857 (2.64)***	1.105 (2.88)***	1.171 (3.04)***	0.819 (2.45)**
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.21	0.22	0.19	0.21	0.20	0.19
Observations	225	225	225	225	225	225
N. of countries	26	26	26	26	26	26

Robust t-statistics in parentheses.
* significant at 10%; ** significant at 5%; *** significant at 1%.

Table A.3. Fiscal Councils Characteristics and Absolute Real Growth Forecast Error

	Dependent Variable: Forecast Error (Primary Balance)					
Output gap	0.266	0.267	0.271	0.266	0.270	0.267
	(3.01)***	(3.00)***	(3.03)***	(3.01)***	(3.04)***	(2.97)***
Fiscal rules index	-0.004	-0.031	-0.002	-0.004	-0.034	0.003
	(0.05)	(0.36)	(0.02)	(0.05)	(0.40)	(0.03)
Fiscal council	-0.512					
	(2.48)**					
Legal independence		-0.441				
		(2.02)**				
Safeguards on budget			-0.555			
			(2.52)**			
High media impact				-0.512		
				(2.48)**		
Forecasts Provision/assess					-0.635	
					(2.88)***	
Fiscal rules monitoring						-0.364
						(1.35)
Constant	1.649	1.671	1.470	1.649	1.739	1.466
	(4.38)***	(4.48)***	(3.21)***	(4.38)***	(5.04)***	(3.14)***
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.48	0.48	0.48	0.48	0.48	0.48
Observations	225	225	225	225	225	225
N. of countries	26	26	26	26	26	26

Robust t-statistics in parentheses.
* significant at 10%; ** significant at 5%; *** significant at 1%.

REFERENCES

Acemoglu, D., J. Robinson, and R. Torvik, 2013, "Why Do Voters Dismantle Checks and Balances?" unpublished, MIT.

Alesina, A., and T. Bayoumi, 1996, "The Costs and Benefits of Fiscal Rules: Evidence from U.S. States," NBER Working Papers 5614, National Bureau of Economic Research, Inc.

Alesina, A., and R. Perotti, 1999, "Budget Deficits and Budget Institutions," NBER Chapters, in Fiscal Institutions and Fiscal Performance, pp. 13-36, National Bureau of Economic Research, Inc.

Alesina, A., and G. Tabellini, 1990, "A Positive Theory of Fiscal Deficits and Government Debt," *Review of Economic Studies* 57(3): 403–414.

Alesina, A., and G. Tabellini, 2007, "Bureaucrats or Politicians? Part I: A Single Policy Task," *American Economic Review* 97(1): 169–179.

Beetsma, R., and X. Debrun, 2007, "The New Stability and Growth Pact: a First Assessment," *European Economic Review* 51(2): 453–477.

Bohn, H., 1998, "The Behavior of US Public Debt and Deficits," *Quarterly Journal of Economics* 113(3): 949–963.

Bruno, G., 2005, "Approximating the Bias of the LSDV Estimator for Dynamic Unbalanced Panel Data Models," *Economics Letters* 87(3): 361–366.

Castellani, F., and X. Debrun, 2005, "Designing Macroeconomic Frameworks: a Positive Analysis of Monetary and Fiscal Delegation," *International Finance* 8(1): 87–117.

Coene, C., 2010, "Lessons from Belgium", Paper presented at the Conference on Independent Fiscal Institutions, Budapest, 18-19 March.

Cukierman, A., and A. Meltzer, 1986, "A Theory of Ambiguity, Credibility, and Inflation under Discretion and Asymmetric Information," *Econometrica* 54(5): 1099–1128.

Debrun, X., 2011, "Democratic Accountability, Deficit Bias, and Independent Fiscal Agencies," IMF Working Paper 11/173 (Washington, DC: International Monetary Fund).

Debrun, X., D. Hauner, and M. S. Kumar, 2009, "Independent Fiscal Agencies," *Journal of Economic Surveys* 23(1): 44-81.

Debrun, X., L. Moulin, A. Turrini, J. Ayuso-i-Casals and M. S. Kumar, 2008, "Tied to the Mast? National Fiscal Rules in the European Union," *Economic Policy* 23(4): 299–362.

Debrun, X., and M. S. Kumar, 2007, "Fiscal Rules, Fiscal Councils and All That: Commitment Devices, Signaling Tools or Smokescreens?" in: Banca d'Italia (eds.) Fiscal Policy: Current Issues and Challenges, Papers presented at the Banca d'Italia workshop held in Perugia, 29–31 March 2007, pp. 479–512.

Debrun X., T. Kinda, T. Curristine, L. Eyraud, J. Harris, and J. Seiwald, 2013, "The Functions and Impact of Fiscal Councils," IMF Policy Paper; July 16, 2013 (Washington, DC: International Monetary Fund).

Deroose, S., L. Moulin, and P. Wierts, 2006, "National Expenditure Rules and Expenditure Outcomes: Empirical Evidence for EU Member States," *Wirtschaftspolitische Blaetter*, 1: 27–42.

Eichengreen, B., R. Hausmann, and J. von Hagen, 1999, "Reforming Budgetary Institutions in Latin America: The Case for a National Fiscal Council," *Open Economies Review* 10(4): 415–442.

European Commission, 2006, Public Finance Report in EMU: National Numerical Fiscal Rules and Institutions for Sound Public Finances, European Economy No. 3, (Brussels: European Commission).

Fatás, A., J. von Hagen, A. H. Hallett, R. Strauch, and A. Sibert, 2003, "Stability and Growth in Europe: Towards a Better Pact," *Monitoring European Integration* 13, (London: Center for Economic Policy Research).

Feld, L. P., and G. Kirchgassner, 2001, "Does Direct Democracy Reduce Public Debt? Evidence from Swiss Municipalities," *Public Choice*, 109(3-4): 347–70.

Frankel, J. A., and Schreger J., 2012, "Over-optimistic Official Forecasts in the Eurozone and Fiscal Rules," NBER Working Paper 18283, National Bureau of Economic Research, Inc.

Hagemann, R., 2011, "How Can Fiscal Councils Strengthen Fiscal Performance?" *OECD Journal: Economic Studies*, Vol. 2011/1.

Jensen, H., 1997, "Credibility of Optimal Monetary Delegation," *American Economic Review* 87(5): 911–920.

Kydland, F., and E. Prescott, 1977, "Rules Rather Than Discretion: The Inconsistency of Optimal Plans," *Journal of Political Economy* 85(3): 473–492.

Jonung, L., and M. Larch, 2006, "Improving fiscal policy in the EU: the case for independent forecasts," *Economic Policy* 21(47): 491–534.

Lebrun, I., 2006, "Fiscal Councils, Independent Forecasts, and the Budgetary Process: Lessons from the Belgian Case", in Ayuso-i-Casals and others, Policy Instruments for Sound Fiscal Policy, Palgrave-MacMillan.

McCallum, B., 1995, "Two Fallacies Concerning Central bank Independence," *American Economic Review* 85(2): 207–211.

Rogoff, K., and A. Sibert, 1988, "Elections and Macroeconomic Policy Cycles," *Review of Economic Studies* 55(1): 1–16.

Schaechter, A., T. Kinda, N. Budina, and A. Weber, 2012, "Fiscal Rules in Response to the Crisis—Toward the 'Next-Generation' Rules: A New Dataset," IMF Working Paper 12/187 (Washington: International Monetary Fund).

Schmidt-Hebbel K., 2012, "Fiscal Institutions in Resource-Rich Economies: Lessons from Chile and Norway," Documentos de Trabajo 416, Instituto de Economia. Pontificia Universidad Católica de Chile.

Wyplosz, C. 2005, "Fiscal Policy: Institutions versus Rules," *National Institute Economic Review* 191(1): 64–78.