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Fiscal Challenges in Multilayered Unions: An Overview and Case Study

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Academic Editor: Martin J. Bull

Received: 22 April 2015 / Accepted: 15 May 2015 / Published: 19 May 2015

Abstract: This paper reviews recent research dealing with fiscal discipline and revisits the issues of fiscal control in federal systems, focusing on selective case studies covering the 2000s, before and after the global financial crisis (GFC). We start by contrasting the recent fiscal history of California to that of Greece, illustrating the different ways of dealing with fiscal deficiencies in a mature union, U.S., *versus* a young union, Eurozone. We continue with an overview of the fiscal developments in Brazil, illustrating the challenges facing federal systems in emerging markets, and possible ways to move forward in upgrading a country's fiscal institutions. We conclude with the fiscal history of Iceland before and after the financial crisis—a standalone small country, assessed favorably by rating agencies prior to the GFC, and now recovering from a deep financial crisis.

Keywords: fiscal union; fiscal discipline; debt crisis

1. Introduction and Overview

The 2008 global financial crisis brought to the fore the importance of fiscal space and the challenges associated with prudent fiscal management. While the importance of these issues had been well recognized for emerging markets prior to the global financial crisis (GFC), the illusive “Great Moderation” and the consequent drop in the price of risk put fiscal issues on the back burner of the U.S., Eurozone, and other OECD crises in the late 1990s and early 2000s. However, the GFC showed that countries with seemingly strong fiscal positions could turn around overnight (more precisely, over a quarter or two) and place them in a trajectory of fiscal instability and possible ultimate default. Deep financial and banking crises induced the socialization of private losses, rapidly increasing the public debt/GDP from benign levels below 50% into levels approaching and exceeding 100% and rendering the public debt into junk bond status within a year or two. The recent history of Ireland, Iceland, Spain, and other countries provided vivid examples where socializing tail risks destroyed fiscal spaces. The GFC and follow-up Eurozone crisis also illustrated the fragility of the Maastricht criteria of fiscal prudence, as by now all of the Eurozone countries have exceeded the 60% ratio of public debt/GDP and most have exceeded the 3% fiscal deficit/GDP threshold. Consequently, the search for a more enduring and efficient fiscal regime has become an urgent agenda.

Observers and policy makers had hoped that fiscal credibility could be gained by adopting simple rules that would provide efficient guidelines to the public sector and, thereby, enhance fiscal credibility. However, by and large, the quest for such simple fiscal rules failed, probably due to the challenges of dealing with contingent and underfunded fiscal liabilities in the presence of tail risks as well as taxpayers’ expectations of publicly funded bailouts in times of unanticipated large, adverse macro shocks. While simple rules may not work, fiscal credibility may be earned by curbing the forces that lead to such crises. Common fiscal challenges identified by the literature are mitigating the pro-cyclicality biases of fiscal policy [1,2]. While in principle smart rules linking the fiscal stance of current policies to the projected permanency of shocks may help, implementation of these rules may depend critically on the independence of the forecasting agency, the quality of data available to the decision maker, and the qualities of institutional controls and enforcement of rules.

Frankel [3] identified a systematic optimistic bias of official budget forecasts and GDP, which is stronger at longer horizons and in booms, and greater among European governments that are politically subject to the budget rules in the Stability and Growth Pact (SGP). Frankel also found that since 2000, fiscal policy in Chile has been governed by a structural budget rule that has succeeded in implementing counter-cyclical fiscal policy. Two key ingredients accounting for Chile’s success are (1) the official estimates of trend output and (2) the ten-year price of copper. These are both critical components to the decomposition of the country’s budget into structural vs. cyclical components and are made by independent expert panels and thus insulated from the political process. Furthermore, over the last decade, about a third of the developing world has been become countercyclical, and there is a causal link running from stronger institutions to less pro-cyclical or more counter-cyclical fiscal policy [4]. Intriguingly, for industrial countries, contrary to ones priors, it is not always the case that government spending goes up in recessions (*i.e.*, acting counter-cyclically); in almost as many cases, government spending actually

goes down (*i.e.*, acting pro-cyclically) [5]¹. These insightful papers show that overcoming pro-cyclical bias remains a work in progress, challenging both the OECD and emerging markets. They also confirm a more general point: prior to the GFC, the consensus view held that emerging markets are challenged by deficient yet improving institutions while the OECD countries “made it”—their financial institutions are mature and well-functioning. Well, in the topsy-turvy era post-GFC world, all countries are at best emerging, and it is a mistake to take it for granted that OECD countries have reached the bliss point of institutional maturity.

The GFC and the follow-up Eurozone crisis also brought to the fore the complexity of managing fiscal discipline in currency and federal unions—the challenges of curbing the common pool problems associated with multilayered fiscal systems. The manifestation of these issues, which were the focus of earlier research in the 1990s, were weak unions in such places as Argentina, Brazil, and other emerging markets at that time. In weak unions, the center has limited control over the spending patterns of union members, leading to a version of the “tragedy of the commons”, in which the overspending of union members reduces fiscal space. In practice, most unions are characterized by such a structure although differ in the degree to which the center has control of its members’ fiscal behavior and the degree to which members have the ability to roll-over their expenditure to the center.

Frequently, union member overspending is accomplished via financial intermediation. For example, a provincial government may encourage (or overlook) the provision of credit by local banks to questionable local businesses against IOU (I Owe You) notes. Upon the collapse of some of these businesses or the local banks, there is political pressure on the central government to bail out the local banks (and perhaps the local businesses). If the financing of this rescue is done by increasing the public debt, the ultimate risk undertaking and expansionary policy of local provinces (or states) determines the volume of the questionable credit and the resultant public debt. Thereby, the weakness of the center is manifested directly by excessive spending of provincial governments. In developing countries where fiscal authorities are weak, the central bank frequently used seigniorage to finance the bailout, resulting in high inflation as in the cases of Argentina and Brazil in the 1980s [7,8].

The Eurozone has been characterized by similar dynamics in which the access of its members to elastic foreign borrowing during the 2000s has been manifested in runaway private credit provided by the banking system, as well as large current account deficits of the GIIPS (Greece, Ireland, Italy, Portugal and Spain, see Abbreviations for a Glossary of Acronyms used throughout the paper). The GIIPS banking crises induced bailouts of banking systems, socialized private debt, and led to massive increase in public debts. While there has been no clear resolution of the ultimate allocation of the losses among debtors and creditors in the Eurozone, concerns were raised about the use of the Target2 settlement mechanism, a credit/debit arrangement that may magnify the common pool problem, whereby the Bundesbank (and several smaller central banks of Northern Eurozone countries) implicitly co-financed GIIPS current account deficits during 2011–2012 [9].

¹ An prime example of this result is the U.S. during the GFC: Adding up the positive fiscal stimulus of the federal government during the GFC and the negative fiscal stimulus of the 50 U.S. states that contracted government expenditures due to states’ balanced-budget requirements and fiscal restraints, the net fiscal stimulus of the U.S. during the GFC was practically nil and possibly even negative after the GFC [6].

History suggests that fiscal discipline dealing with the common pool problems in federal unions remains a work in progress. The first pooling of state debt in the U.S. took place in 1791, following Hamilton's vision of debt mutualization [10]. Accordingly, in the aftermath of the War of Independence, the war debt accumulated by the states was assumed by the Federation, and was served by new excises and federally administered customs taxes. The federal pooling of the war-driven state debt was effective in the short-run, reducing the interest rates from about 6% (the average rate which the states funded their debt) to 4%. However, it was not a panacea—tariff disputes turned overtime into constitutional battles, leading to a loss of fiscal discipline in the U.S. In the 1830s, Southern States argued that the Constitution was merely a treaty between states, thereby they could ignore federal laws that they deemed unconstitutional. Indeed, some historians see it as one of the root-causes of the civil war [10,11].

The US fiscal union propagated by Hamilton's debt mutualization also did not deal with future states' borrowing. The deeper internationalization of capital markets in the first decades of the 19th century propagated large borrowing by several booming U.S. states, co-financing their investment in canals and railroads, ending with large defaults of eight states during 1841–1842. One approach to the taming of states' borrowing has been illustrated by the U.S. states—adding built-in fiscal restraints and balanced-budget requirements to state constitutions and relying on the private funding of the states' public debt. Wallis (2005) attributes the success of the U.S. \$ union to institutional changes following the sovereign debt defaults of eight U.S. states, which led to fiscal prudence: "After the fiscal crisis of the early 1840s, states changed their constitutions to eliminate taxless finance in the future" [12]. Specifically, all states' deficits, with the exception of Vermont, are now subject to size constraints and the public debt of several individual states is also subject to constraints [13]. An important ingredient of the fiscal discipline affecting U.S. states has been the balanced-budget requirement [14]. These requirements vary depending on the stage of the budget process to which each state applies, the funds they apply to (general, capital, or special funds), the different roles of external enforcement, and varying compositions of the state supreme courts that serve as supervisory institutions.

A more detailed analysis indicates that the restraints on state financing are not "water tight", allowing states the discretion to maneuver and thereby lead to softness in the implementation of these restraints. No-carryover rules lead to higher surpluses, which is primarily the result of lower public expenditures. In contrast, *ex-ante* requirements, which oblige the governor or the legislature to submit a balanced budget, are less effective or not effective at all. Independence of the monitoring entity contributes to the stringency of the rule [14]. The difference between states with and without a formal debt limit is a higher share of non-guaranteed debt—debt limits are associated with a greater likelihood of having low debt levels and large shares of nonguaranteed debt [15].

By and large, the fiscal discipline self-imposed by state constitutions has appeared to work: since 1934, no U.S. state has defaulted on its debt. The success of this approach was helped by the growing credibility of U.S. government policy of no federal bailouts of state debt, and by the market discipline imposed by private borrowers. States borrowing from the private sector, and the absence of "federal bailer of last resort", imposes a penalty on excessive borrowing and the lack of fiscal discipline in the form of higher sovereign spreads. While these built-in fiscal restrains are imperfect, they have passed the test of time, providing vibrant and deep private financing to the U.S. states.

The purpose of our paper is to revisit the issues of fiscal discipline in federal systems, focusing on selective case studies covering the 2000s, before and after the GFC. We start by contrasting the recent

fiscal history of California to that of Greece, illustrating the different ways of dealing with fiscal deficiencies in a mature union (U.S.) vs. a young union (Eurozone). California's fiscal problems are more extreme than most other states in the U.S. union, but they are shared to varying degrees by all the U.S. states. Similarly, Greece's fiscal problems are deeper than that of other Eurozone members but are indicative of the challenges facing the GIIPS and other Eurozone members. We continue with an overview of the fiscal challenges facing Brazil, illustrating the challenges facing federal systems in emerging markets, and possible ways to move forward in upgrading a country's fiscal institutions. We conclude with the fiscal history of Iceland before and after the financial crisis—a standalone small country, assessed favorably by rating agencies prior to the GFC, and now recovering from a deep financial crisis.

We close the paper with concluding remarks. The three case studies outlined in this paper illustrate that imposing fiscal discipline remains a work in progress that requires building institutional capacities and constant effort in improving the monitoring and enforcement of fiscal discipline. Greater credibility of “no federal bailout of states' level debt” and imposing borrowing constraints linking public debt issuance to a future tax base is helpful but not a panacea. Curbing pro-cyclicality and destabilizing overspending require vigilant monitoring by the private sector through charging appropriate spreads and by rules and penalties mitigating the common pool problems associated with multilayer fiscal funding.

2. The Recent Fiscal History of California and Greece: Was California a Greater Risk than Greece?

The recent histories of California and Greece provide insight regarding the fiscal dynamics of states in a mature monetary and fiscal union—the U.S. vs. states in the Eurozone, a younger monetary union. During the GFC, California received a fair share of negative press, including a negative evaluation by Jamie Dimon, chairman of JP Morgan Chase, in early 2010, warning that *California is a greater risk than Greece*:

“Mr. Dimon told investors at the Wall Street bank's annual meeting that ‘there could be contagion’ if a state the size of California, the biggest of the United States, had problems making debt repayments. ‘Greece itself would not be an issue for this company, nor would any other country’, said Mr Dimon. ‘We don't really foresee the European Union coming apart’. The senior banker said that JP Morgan Chase and other US rivals are largely immune from the European debt crisis, as the risks have largely been hedged. California however poses more of a risk, given the state's \$20bn (£13.1bn) budget deficit.”

“Earlier this week, John Chiang, the state's controller, said that if a workable plan to reduce the deficit and increase cash levels is not reached soon, he will have to return to issuing IOU's, forcing state workers to take additional unpaid leave and potentially freezing spending. Last summer, California issued \$3bn of IOU's to creditors including residents owed tax refunds as a way of staving off a cash crisis. ‘I can't write checks without money; that's against the law. My main goal is to keep the state afloat, but I won't be able to do it without the help of new legislation’, said Mr Chiang.” [16].

Taking a snapshot of the credit default swap (CDS) spreads in 2009 may support Mr. Dimon's warning: California's CDS spreads significantly exceeded those of Greece during 2009, reaching above 300 basis points in mid-year, more than twice Greece's CDS spreads at that time. Looking more closely

reveals the limitation of relying just on CDS spreads. A more fundamental assessment of fiscal fragilities may focus on the GDP adjustment that would stabilize the fiscal outlook, the likelihood of that adjustment taking place, and the degree to which union membership provides buffers or magnifies the state's exposure to volatility. Taking this perspective, California's deficit at the peak of the crisis was about 2% of its GDP, suggesting that a fiscal adjustment leading to primary surplus was minor in comparison to the one in Greece, at that time running fiscal deficits exceeding 10% of its GDP. Furthermore, California's public debt at the state and local governments was about 20% of its GDP in 2009, whereas Greece's public debt/GDP exceeded 100% at that time.

Admittedly, it is difficult making an accurate assessment of the likelihood that the fiscal adjustment aiming at avoiding default would occur. Nevertheless, a much richer and more diversified state, a member of a mature fiscal union (as has been the position of California in comparison to Greece), may find it easier to avoid outright default and embark on fiscal adjustment. Indeed, within less than three years of Dimon's warning, the new Brown administration in California provided short-term patches that rapidly shifted California's fiscal deficit into a growing surplus. In contrast, Greece has yet to recover from its debt restructuring and only time will tell if the country will eventually manage to complete the fiscal adjustment outlined by the Troika.

Looking more closely, there are several other reasons why the problems of California are not comparable to that of Greece and why CDS market determined spreads do not capture the full picture. First, California is a member of a functioning fiscal and monetary union, paying its full share of federal income and state taxes. The federal system in the U.S. also provides a complex tax-cum-transfer system, redistributing public funds among states in ways that provide significant insurance and direct transfers to households (Social Security benefits and the like). In contrast, Greece has been burdened by tax collection and enforcement challenges and is a member in a union that—beyond providing structural help to poorer states—does not function as a fiscal union.

Second, California is part of a mature monetary union. Most banks in California are federally insured and backstopped by the Fed and “by the full faith and credit of the United States government” [17]. Furthermore, the public debt of California is held mostly by households and institutional investors and not by California banks. Thereby, the vitality of California private banks is mostly independent from the fiscal health of the state. In contrast, banks in Greece are not part of a functioning banking union, and are not insured by a federal system backstopped by Eurozone institutions. The high share of public debt on Greek banks' balance sheets is indicative of a common Eurozone problem: the close affinity of private banks and state financing, which implies sovereign-bank interdependence. Consequently, a fiscal crisis of the state triggers a banking crisis, and *vice versa* [18]. The lack of a banking union in the Eurozone and the absence of deposit insurance schemes backstopped by Eurozone institutions may expose Greece and other Eurozone countries to self-fulfilling crises [19].

These considerations suggest that the fiscal crisis of Greece has been more a crisis about solvency than liquidity. To recall, from 1999 to 2009, the honeymoon decade of the Eurozone, the sovereign spreads of Greece relative to Germany collapsed to about 1%, propagating public and private sectors over-borrowing funded by accelerated current account deficits, reaching 15% of the GDP in 2008. The resultant gross external debt and public debt in 2009 (160% and 120%, respectively) implied a solvency crisis and debt restructuring [20]. Recalling that over-borrowing is funded by over-lending, the Greek debt crisis is also a symptom of the immaturity of the Eurozone's institutions. The absence of proper

supervision exposed the core of the Eurozone to growing GIIPS debt overhang and required eventual bailout and restructuring packages implemented by the “troika” institutions—the ECB, the European Commission, and the IMF.

In contrast, California is a rich state with a large tax base, locked in a war of attrition regarding the distribution of the burden of adjustment: higher taxes or/and lower expenditures. The fiscal crisis of California, a vibrant and diversified state, has been rooted in a political crisis in which the voters have tolerated underfunded public services until a resolution of the war of attrition between the feuding parties. The results of the 2011 election enabled Governor Brown to implement a modest fiscal adjustment of about 1.5% GDP (a third of which was funded by higher taxes, the remaining by expenditure cuts). Although these patches do not deal with the fundamental drivers of California’s fiscal instability, they have been sufficient to reverse a projected deficit of 1.5% GDP in 2012 into a modest surplus in 2013.

California’s fiscal history is shared by other states in the U.S. The “no federal bailout of the states’ debt” mantra has been credible, incentivizing the market to charge sovereign spreads that impose—with a lag—enough market pressure to induce the political system to react. While this system does not prevent periodic fiscal crises or guarantee that states adopt robust fiscal rules dealing with longer-run challenges, they work: no state in the U.S. has defaulted on its debt since 1934. The rules also work in the sense that the possible default of a big state (like California or any other state in the U.S. union) does not threaten the stability of the U.S. federal union and its banking system, though it would induce sizable capital losses to private debt holders.

A concise overview of California’s challenges has been provided in a non-partisan task force chaired by Richard Ravitch and Paul Volcker [21]. The report identified several weaknesses that led to the fiscal fragility of California, resulting with a strong pro-cyclicality bias where in years of strong growth, spending was increased and taxes were cut. Adjustment was delayed by external and internal borrowing, avoiding major expenditure cuts or tax increases. The growing costs of social programs (including Medicaid, public sector retirement, and post-employment health benefits) increase the under-funded liabilities. The combination of a narrow and volatile tax base, the heavy reliance on capital gains, an absence of a well-functioning rainy day fund, a pro-cyclical bias of expenditures, and deteriorating unfunded liabilities had put the state on an unsustainable path. The hazard of relying on capital gain taxes in California is clear, the gains fluctuated between 30 billion in “lean years”, reaching 130 billion in “fat years” [22]. Broadening the tax base would reduce but not eliminate the fiscal challenges associated with uncertainty, a common challenge facing all states.

California and other states may benefit by studying Chile’s experience with improving fiscal performance [3]. After all, the volatility of tax revenue in commodity-exporting countries is even greater than the one facing California’s tax revenue. A way forward is to put the most volatile tax revenues in a rainy day fund, and to allow the government to spend a fraction of it each year. This fraction may be constant, as is the case with most university endowments and in several sovereign wealth funds (including the Norwegian Sovereign Wealth Fund). Alternatively, the spending fraction may be contingent on the perceived permanency of the shocks, as estimated by an independent expert board. Similarly, tax rates may be linked by a transparency rule to the perceived stock of liabilities, as estimated by an independent expert board, and the tax base may be broadened. Observers noted that Governor Brown’s latest patches have been effective in eliminating present deficits yet fall short of dealing with the fundamental fiscal deficiencies of California.

The above discussion suggests that the fiscal challenges of Greece are deeper and not comparable to that of the U.S. states. First, deepening the collection and enforcement of existing tax laws may help. Next, reforms dealing with the Eurozone's structural incompleteness, would stabilize the fiscal outlook of all the GIIPS countries [18]. These reforms may include breaking the banking-sovereign links, moving toward banking union and euro-wide deposit insurance supported by a credible backstopping mechanism, and the like. Time will tell if and how fast the Eurozone could progress on these challenges. The concerns about Greece's insolvency remain an obstacle and may require further "debt-forgiveness" and deeper labor and product market reforms aimed at improving the country's growth prospects.

3. Brazil's Fiscal Reform Efforts: A Work in Progress

The absence of built-in fiscal restraints supported by a market-determined sovereign spread may induce overtime fiscal fragility, excessive borrowing by states and provincial governments, and eventually lead to macro instability. These trends have been illustrated by Argentina, Brazil, and other countries. A way to move forward requires fiscal reform efforts aimed at tightening federal control of the states and adding built-in penalties curbing opportunistic overspending. These penalties may be in the form of reducing future transfers by the federal government to a state that is defaulting on its debt obligations, dismissing and prosecuting opportunistic behavior of states' policy makers, and the like. Brazil's fiscal restructuring during the 1990s is a vivid example of such a reform. Dillinger and Webb ([7], p. 33) concisely summarized these reform effects:

"First, the central bank has tightened limits on the domestic financial system's aggregate exposure to subnational debt. It has also taken steps to limit lending by federal financial intermediaries to subnational governments...Second, the agreements of 1998 are written in a way that allows and requires the federal government to withhold debt service from transfers."

"Some underlying causes of the states' fiscal problems have also been addressed. In 1998, the Brazilian Congress approved a Constitutional amendment that will allow states to dismiss staff, provided their personnel spending exceeds a threshold percentage of state revenues."

A key step in the reform was to design an explicit intertemporal-penalty structure in which a state's current opportunistic spending would reduce future transfers. A necessary condition for this structure to work effectively is inducing the states to disclose their spending and local finance to the federal center. Improving the data disclosure of sub-national governments in Brazil remains a work in progress [22]. Another necessary condition is sufficiently large dependence of the states on transfers from the fiscal center, such that the penalty of withholding future transfers is credible and effective. The Brazilian experience confirms the usefulness of these intertemporal penalties in facilitating fiscal discipline. Intriguingly, the Brazilian model may provide a precedent that the EU could emulate [23]:

"Lower levels of government that continue to exceed the caps are denied federal transfers in the following year if they do not correct them. Note that Brazilian states have a revenue structure that is almost ideal for this type of rule. They receive close to two-thirds of their revenue from their own taxes. This means that pressure on them from the central government to deal with their own problems is credible. At the same time, they receive about 20% of

their revenues from central government grants. This means that the threat to cut off grants is painful—governors realize that they will have to make significant cuts in spending if they violate the fiscal responsibility law and receive the law’s punishment.”

Indeed, the fiscal reform efforts in Brazil, which continued during the 1990s and 2000s, substantially improved states’ fiscal performance [24]:

“In 2000, Brazil implemented a hard-budget constraint legislation—the Fiscal Responsibility Law—which was applicable to all levels of government regardless of their prior economic conditions. In its relations with the state governments, a powerful president and a strong finance minister have managed to recentralize fiscal authority in the country, curbing state level fiscal autonomy. Brazil’s executive branch was able to implement its preferences because of its institutional prerogatives and because there were gains-from-trade in federal-state relations.” “Since 2002, when the GDP/debt ratio peaked at 55 percent, there has been a reduction in net debt as measured by percent of GDP, which is estimated to be below 36 percent in 2008.”

However, similar to earlier findings on the effectiveness of fiscal restraints in the U.S. [14], the Brazilian state governors have retained some ability to undertake fiscal window-dressing and creative accounting in response to fiscal stress. This is a common feature of most systems, as monitoring is costly and rarely immune to political pressure. Thus, fiscal responsibility laws are only part of the fiscal reform. Audit activism and political independence seem to mitigate opportunistic fiscal behavior thereby enhancing the governance; thus autonomy of sub-national audit institutions may be the key for long-term sustainability of fiscal policy in Brazil [24].

4. Iceland: Towards Greater Fiscal Discipline

If one were to identify the main characteristic of Iceland’s fiscal policy then it would be that it has been pro-cyclical for an extended period of time. One indication of that is the significant positive correlation between the contribution of public consumption and public investment to GDP growth and the output gap from 1990 to 2013². This is caused not only by direct discretionary policy measures but also by weaknesses in the fiscal framework.

Prior to the financial crisis in October 2008 it was recognized that the budget framework had a deficit bias. Low government debt level and record surpluses created by unexpectedly strong growth in tax revenues and revenues from privatization program³ caused politicians to turn a blind eye to the call to rectify the budget framework. The Icelandic National Audit Office (INAO) time and again reported on

² A regression model of calculated contribution of public consumption and public investment on a constant and the output gap and AR(1) shows that the output gap is highly significant at the 5% significance level. Contribution is calculated as: $100 \times (G/G(-1) - 1) \times GN(-1)/GDPN(-1) + 100 \times (IG/IG(-1) - 1) \times IGN(-1)/GDPN(-1)$ where G and GN are real and nominal public consumption and IG and IGN are real and nominal public investment. GDPN is nominal GDP.

Contribution = 0.954 C + 0.146 GAP - 0.152 AR(1); R-squared is 0.35.

Prob.: (0.000) (0.006) (0.544)

³ Privatization revenue was in the amount of approximately 15 per cent of 2009 GDP.

spending overruns relative to budgeted values ⁴. Despite existing regulations and with few repercussions, ministries and agencies frequently overspent their budgets. Counter-cyclicality of fiscal policy, however, is dependent on firm execution of the budget while allowing automatic stabilizers to play their role. The full effect of automatic stabilization was not realized, as tax rates were lowered in the presence of a large positive output gap without sufficient counter measures. There is nothing wrong with lowering tax rates *per se*, it can even be said that it is to be expected of any right-wing Government of the day. However, if tax rates are lowered when there is a large positive output gap then it is a pro-cyclical policy measure unless there is a commensurate cut in expenditures. There is no evidence of expenditures cuts as real public consumption growth at the time was close to 4%, double the numerical fiscal rule growth limit, and public investment as a share of GDP was at record levels even though the economy was booming. Despite tax cuts and spending overruns, however, budget surpluses were larger than ever, complicating the debate on the overall fiscal policy stance.

This is not specific to the Government at the time. The same goes for any left-wing Government of the day. If it wants to increase expenditure when there is a positive output gap it has to provide for commensurate increase in tax revenues to make the policy measure acyclical. While one may expect different policy measures in line with different policy agendas of various political parties, avoiding pro-cyclicality requires a consensus on sticking to the rules of the fiscal framework. The aim of a rule-based fiscal framework is not to depoliticize fiscal appropriations but rather to subject politicians to fiscal discipline when they are deciding on expenditures and prioritizing appropriations according to their political agenda. Such a framework may strike a balance between achieving broad political representation and maintaining fiscal discipline.

The weaknesses with regard to expenditure growth were clear to most, but there were also latent fundamental weaknesses on the revenue side. The appreciation of asset prices in Iceland was sizable. House prices rose by 75% from 2004 to 2008, and stock prices rose by 150%. The asset price-driven real growth, fuelled by massive credit expansion, led to a consumption boom. The revenue buoyancy was mostly the product of positive balance sheet effects. Tax revenue elasticity was pro-cyclical. The pro-cyclical response of tax revenues to the change in real activity as measured by the output gap was greater than could be expected unless revenue elasticity changed in a pro-cyclical manner at the same time. A simple regression shows that there was a much stronger relationship between the private consumption ratio of potential output and total tax revenues than between the output gap and total tax revenues ⁵.

⁴ A number of INAO reports touch on this subject: most recently, for example, Implementation of the 2007 Government Budget and Annual Plan for 2008, INAO May 2008. See also [25].

⁵ A regression model of differenced total tax revenue (Δtax) on a constant, the differenced consumption ratio of potential output ($\Delta\text{c_ratio}$) and the output gap (gap) shows that the c_ratio is highly significant, while the gap is not, at the 10 percent significance level.

$$\Delta\text{tax} = 0.019 + 0.512 \Delta\text{c_ratio} - 0.186 \text{gap}; \text{R-squared is } 0.59.$$

$$\text{t-stat: } (4.21) \quad (8.74) \quad (-1.44);$$

$$\text{Prob.: } (0.000) \quad (0.000) \quad (0.1547);$$

Thus, because the change in consumption ratio of potential output was greater than the change in output gap, tax revenue elasticity turned highly pro-cyclical with respect to the output gap. The elasticity of tax revenues relative to the output gap thus jumped in a highly pro-cyclical fashion.

Underestimation of the elasticity resulted in an overestimation of the structural balance, as the cyclical component was underestimated. When asset prices tanked so did tax revenues ⁶.

The massive credit expansion that fuelled the asset price-driven real economic growth came to a full stop in the first week of October 2008, when Iceland's three major banks, representing 90% of Iceland's banking system in terms of total assets, collapsed. The banks' large foreign currency balance sheets ⁷, maturity mismatch and their size relative to their home base proved a key vulnerability that contributed to their downfall. Following the banks' collapse, the depreciation of the króna continued until capital controls were introduced at the end of November. In total, the króna depreciated by roughly 50% in 2008 against the euro.

Foreign creditors, Central Bank of Iceland and the Treasury incurred massive losses on their collapse. In addition to financial losses, tax revenues dropped at the same time as expenditures rose. The sustainability of government finances immediately came into question. The budget balance reversal of the central government amounted to 17% of GDP in one year. The rating agencies were quick to downgrade Icelandic government bonds down to one grade above junk grade.

Currency reserves had to be increased substantially to stabilize the currency but new foreign funding was not available at reasonable rates in the credit markets. At the end of October 2008, the Icelandic government reached an agreement with the International Monetary Fund (IMF) on an economic stabilization program, under a two-year Stand-By Arrangement (SBA) supported by a loan of 2.1 billion U.S. dollars. The SBA gave the economic program increased credibility.

From 2007 to 2011, general government gross debt rose from 28% of GDP to a peak of 100% but is projected to be close to 80% in 2016. The increase, however, was due not only to losses on financial assets and deficit spending; it is also attributed to acquisition of assets, mainly currency reserves and bank equity amounting to 55% of GDP, leaving net debt to increase by only 44% of GDP.

The SBA required, in the first review, the implementation of large fiscal consolidation in excess of 16% of GDP. The debt position was uncertain in 2009 and was estimated at 126% of GDP. But as the SBA progressed the debt position turned out to be more favorable and the required consolidation came down to 10 percent of GDP. Still the debt level turned out to be lower than what was originally aimed for in the first review. A critical component of the SBA was a reform of the fiscal framework to ensure successful implementation of the consolidation effort.

4.1. The Pre-Crisis Fiscal Framework

In 1992, in line with fiscal framework reforms in other Nordic countries, a frame-budgeting approach was introduced. A top-down orientation to fiscal policy was adopted which served the purpose of emphasizing the policy-making role of the government and increasing overall fiscal discipline. The frame budgeting was initially only set for the next fiscal year and thus failed to curb the tendency towards expenditure drift. Each year in the spring expenditure frames for the following year were to be set for each ministry by a special cabinet committee, led by the prime minister. Each minister was then responsible

⁶ Strong asset price effects on revenue elasticity were found in Europe; more specifically a 10 percent increase in asset prices added half a percent of GDP to revenues [26]. In a European context, the cyclical responsiveness of the budget balance doubles in asset price-driven economic cycles [27].

⁷ Their balance sheets had expanded to almost 11 times GDP, with the foreign currency part being almost 7 times GDP.

for appropriating the allocated funds to the ministry's agencies and projects. Each October, the budget is presented to Parliament for amendment and approval.

In 1997, the Financial Reporting Act (FRA) and State Guarantee Acts (SGA) came into force with the aim of improving the quality of information by shifting from traditional cash to modified accrual budgeting, accounting, and reporting. In 2003, the frame budgeting framework was extended to include medium-term plans, setting four-year revenue and expenditure projections and frames for expenditure growth in real terms. By design the projections carried little weight in the pre-crisis years. These projections were not binding cabinet-approved four-year expenditure frames voted on in Parliament. Also adopted in 2003 was a numerical fiscal rule that stipulated that central government public consumption may not grow by more than 2% per year in real terms and that real transfers may not grow by more than 2.5%.

Perhaps the best evidence of the weakness of the pre-crisis fiscal budget framework is the way in which the numerical fiscal consumption rule adopted in 2003 was honored. It came close in 2004, the first year the rule was in effect, when it grew by 2.1%, but after that the growth rate kept increasing each year until, in 2008, it was completely off the mark, reaching 3.7 percent. The lack of discipline on the expenditure side was mostly driven by fundamentals explained by political economy factors. An upward drift in expenditure was caused by a combination of spending overruns, in-year discretionary initiatives, and excessive reliance on supplementary budgets.

In the years prior to the financial crisis, both the IMF and OECD missions to Iceland had called for a fiscal reform. Here, strength encompasses factors, such as (1) the statutory base of fiscal rules, procedures and controls; (2–3) the nature of the bodies charged with monitoring and enforcing the rules; (4) enforcement mechanisms; and (5) media visibility of the rules. However, the necessary political constituency required to implement the reforms recommended had not been formed. But the financial crisis of 2008 opened most politicians' eyes for the benefits of reforming the fiscal framework. On the five-parameter strength list, the framework of the consumption rule scores almost no points. The rule had no statutory foundation and no one outside of the Ministry of Finance (MoF) was in charge of monitoring and enforcing it. There was no formal reporting requirement to Parliament if the rule was violated, and no extra enforcement or control mechanism was available. Last but not least, media visibility of the rule was virtually non-existent. Educating the public and the media about the merits and purpose of the rule was not a priority when the rule was adopted, and consequently, it actually functioned more like an internal rule of the MoF. As a result, violations of this firm numerical fiscal rule received little or no media attention. The political opposition in Parliament did not make a serious attempt to enforce the rule. It may not have been to their benefit to play the role of the enforcer of the rule. Many members of the opposition even proposed stepping up spending. Additionally, real growth of public consumption is not the best target to follow. National accounts public consumption is not a line item in the budget itself. Statistics Iceland publishes it with a time lag. Notwithstanding this time lag the link between public consumption and corresponding items in the budget itself was not clear. Politicians working with the budget and the media were used to dealing with nominal amounts rather than real.

There were also weaknesses at the local government level. Municipalities had a high degree of autonomy regarding their spending. In the years leading to the crisis, many municipalities let their spending rise with buoyant revenues. In 2004 to 2008, their public consumption grew 60% faster than that of the central government. With local government expenditure being nearly one-third of general government expenditure, this had a noticeable effect on the overall fiscal stance.

The Local Government Act (LGA) from 1998 contained a weakly phrased balanced budget requirement stipulating that municipalities' revenues aim at matching expenditure as far as possible. Phrasing the restriction so loosely rendered it ineffective. When fiscal discipline was found lacking, few sanctions for non-compliance were available short of a takeover by the central government in the case of a municipality's imminent default on debt. Municipal finances would be subjected to closer scrutiny from an independent external body.

4.2. The Post-Crisis Reforms

The fiscal impact of the financial crisis and the size of the necessary fiscal consolidation that followed helped to build the political constituency required to implement reforms to the fiscal framework. The IMF's Fiscal Affairs Department (FAD) played a key role in the process by providing numerous recommendations in four reports prepared by technical advisory missions. The aim of the reports was to put the Icelandic fiscal framework at the forefront of international budget practice. The first report came in the context of the Stand-By Arrangement in January 2009⁸. Although being a very thorough report that proposed a reform schedule that emphasized reforming the budget framework, follow up reports would move the reforms still further. Comprehensive overhaul of Acts pertaining to the fiscal framework may help so that the end result would be a set of progressive fiscal responsibility laws (FRLs).

In the context of the SBA and the first FAD report the MoF took some steps to tighten controls on the execution of the 2010 budget and presented the 2011 budget within a more binding medium-term framework. That included an introduction of a fixed two-year nominal ceiling that covered $\frac{3}{4}$ of expenditure and a contingency reserve of approximately 1% of expenditure. Wage negotiations in 2011, however, resulted in generous wage increases of up to 5%. The budget had allowed for almost no wage increases so the ceiling was breached only a few months after being set. The contingency reserve was not sufficiently large to cover the increase in wage costs. The nominal ceiling rule has not been considered again after that. The MoF has also moved from annual to quarterly forecasting of cash requirements which improved both expenditure control and liquidity management. Finally, a new chapter on fiscal risks in the debt management report was introduced and monitoring of sources of risk has been stepped up, such as Landsvirkjun and the Housing Financing Fund. Change to the Procedural Law of Parliament nr. 55/1991 was made in 2011 to the effect that the Minister of Finance and Economic Affairs shall introduce a Statement to Parliament before April 1 each year to provide for a spring budget orientation debate in Parliament to allow for legislative scrutiny and endorsement of the medium-term fiscal strategy. In the Statement to Parliament projected expenditures and revenues for the next year and the three years thereafter shall be presented and voted on. Despite it being a mandatory obligation by law the Statement has not been presented for the last two years out of three. Elections in spring 2013 complicated things and this year, 2015, the Statement had been prepared but the opposition declared that they did not have time for the debate as it deemed other matters more important. Further steps were taken but the overhaul of the Acts pertaining to the fiscal framework came later.

⁸ A technical assistance mission from the IMF's Fiscal Affairs Department visited Iceland in January 2009 in the context of the IMF-supported Stand-By Arrangement. The mission comprised Messrs. Cangiano (head), Hughes (both FAD), Balassone, and Molander (both experts from the FAD panel).

4.3. First Came the Overhaul of the LGA

A second FAD report was presented in October 2010 that focused on strengthening the local government fiscal framework. In the aftermath of the crisis both central and local governments recognized that the fiscal framework for municipalities would benefit by a comprehensive reform that would restrict them to a rule-based fiscal policy. In comparison to their OECD counterparts, local governments in Iceland were a large element of general government, with a high degree of fiscal autonomy, but a volatile revenue base. At the same time, the framework for coordination, monitoring and control was among the weakest in the OECD.

Local government reforms turned out to be quite extensive. First, two numerical fiscal rules were adopted which provide a long-term anchor and a medium-term fiscal path that is quantified in a required multi-year budget. Second, municipalities are subjected to a three-tiered approach to external financial monitoring based on the principle of earned autonomy. Third, there are sanctions, ranging from mild to severe, for violating the fiscal rules. Fourth, there is an independent external body, the Municipal Fiscal Oversight Committee (MFOC), which has the authority to sanction municipalities that are in breach of the rules and to make recommendation to the Minister of Local Governments to have the fiscal powers of a municipality suspended and vested in a financial management board. Thus, in one step, the budget framework of local governments went from being one of the laxest in Europe to one of the more stringent ones. These reforms are the product of joint work done by representatives from central and local governments and are therefore not forced upon them.

The two fiscal rules are clear and simple, a balanced budget rule and a debt ceiling rule that both extend to A and B sections⁹ of the budget. The first rule is that municipalities are prohibited from running operating deficits within a rolling period of three years. That is, total expenditures must be at least equal to total regular revenues. This means that the next year's budget balance is a function of both the current and the previous year's budget outcomes. The second rule is that municipalities are subject to a maximum debt-to-revenue ratio of 150%. The definition of debt is very broad. It includes all liabilities and obligations on the balance sheet and the operating-lease liabilities that were previously off balance sheet but are now recognized on it. Municipalities whose debt-to-revenue ratio already exceeds 150% are only allowed to borrow in local currency. Municipalities whose debt-to-revenue ratio exceeds 250% are only allowed to refinance and are subject to further controls that may include administration by the central government or merger with another municipality.

The MFOC is to monitor finances, including accounting practices and budget proposals, and compare them to the criteria in the LGA and any regulations deriving therefrom. It can initiate an inquiry into the finances and operations of a municipality and then require that the elected council remedy any identified deficiencies in the financial administration of the municipality within a certain time limit. The MFOC subjects municipalities to a three-tier monitoring where municipalities are classified into one of three categories based on whether, and by how much, they are in breach of the rules. Both the autonomy and the degree of external monitoring to which a municipality is subjected vary depending on its category. A municipality that is not in breach of either rule is in Category 1; it has full autonomy within the limits

⁹ In the A section are activities operated directly through the Treasury or Municipal account while in the B section are the operations of government owned companies.

of the rules and is subject to minimum monitoring. A municipality that is in breach of either of the rules is in Category 2. It loses autonomy in that a five- to ten-year fiscal adjustment path must be quantified in a MFOC-approved multi-year budget that maps out the return to compliance. The minister and the elected council of that municipality can, on the basis of a well-founded recommendation from the MFOC, come to an agreement on the municipality's finances. A municipality with a debt-to-revenue ratio in excess of 250 percent is placed in Category 3. The same restrictions apply to Category 3 municipalities as to those in Category 2, but are subject to even stricter oversight, the MFOC can require that the municipality report every month on its financial position. MFOC can report on them if non-compliant in public reports, require that the municipality seeks the advice or services of outside accountants or auditors at the municipality's expense, *etc.* They can even go as far as withholding payments from the Municipal Equalization Fund (MEF). The municipality has then to a great extent lost its fiscal autonomy.

The MFOC reviewed the accounts of all municipalities in 2012; right after the new LGA entered into force on 1 January 2012, and found that 39 out of 76 municipalities were in Category 2 or 3, whereas 37 municipalities were in Category 1 and thus not in breach of either of the fiscal rules. The MFOC wrote a letter to each of the 39 municipalities in Category 2 or 3, instructing them to prepare a budget for a maximum of 10 years, showing how they could move into Category 1. All aim to comply in 2016–2019. The new LGA rule-based framework has been credited with a very positive effect on operations, cash from operations as a share of revenues and debt ratios.

4.4. *And then Came the Overhaul of the Financial Reporting Act (FRA)*

There are many features of the 1997 FRA that will be preserved in the 2014 FRA. Many processes and best practice guidelines will be elevated to a statutory base. In FAD's third report, requested by the MoF, there were 46 very specific recommendations made. In the new bill on FRA legislation that now lies before Parliament most of the recommendations have been incorporated into the bill, some with variations. It draws on the lessons learnt in recent decades, both in Iceland and in other countries. It is a vast improvement over the current legislation and addresses the gaps, loopholes, and inconsistencies in the current legal framework that helped contribute to fiscal indiscipline before the crisis. Ministerial responsibilities are increased considerably at the same time as the number of appropriations goes down drastically.

The new bill of legislation is divided into six chapters. In the discussion that follows major reforms in each chapter are highlighted.

4.4.1. Chapter 1: Objectives, Coverage and Definitions

The main objective of the new legislation is to provide for sound macro-fiscal policy based on comprehensive medium term budgeting and reporting. The new medium term fiscal framework is designed to address gaps in the current legal framework from budget formulation to execution. International evidence shows that, to a large extent, strong fiscal frameworks are effective in controlling the common pool problem and introducing fiscal discipline [28]. The main goal of strong fiscal frameworks is to improve the processes and controls of the budget framework so that the common pool externality can be internalized. The coverage of the Act is increased to include all sections of the central and local government's budgets and all public corporations. In line with common practice in other European

countries the Minister of Finance shall prepare a long-term forecast for fiscal policy. The forecast is meant to take into account likely demographic changes when extrapolating the fiscal position, in terms of fiscal balance and liabilities, few decades into the future. The minister shall prepare such a forecast at least every three years.

4.4.2. Chapter 2: Fiscal Policy Strategy Reviewed by an Independent Fiscal Council

The medium term fiscal framework (MTFF) set up is the cornerstone of the new Act. Its purpose is to set up a transparent and credible MTFF that serves the purpose of mapping the macroeconomic and fiscal policymaking. The new bill of legislation establishes a procedural fiscal rule that maps out a five year general government fiscal path. The fiscal path conditions are set with the following three fiscal rules:

1. The overall result over a five-year period must always be positive, and the annual deficit may not exceed 2.5% of GDP ¹⁰.
2. Total debt, excluding pension obligations and accounts payable, but including cash balances and deposits, may not exceed 45% of GDP ¹¹.
3. If the net debt ratio rises above 45%, the excess portion must decline by an average of at least 5% (1/20) per year in each three-year period.

Every new Government is obligated to formulate and submit to Parliament a Statement of Fiscal Policy, as a proposed parliamentary resolution, setting out the five year fiscal path according to the procedural fiscal rule. After the five-year plan has been voted on, then, throughout the tenure of the Government the Minister of Finance shall present, each year, a fiscal plan or a medium-term fiscal strategy (MTFS) to Parliament at the spring legislative session in the form of a Parliamentary resolution. The Government will be subjected to independent scrutiny to review all this increased reporting on fiscal performance. It is considered important to engage independent experts to conduct an impartial assessment of fiscal policy implementation. As a result, it is proposed that an independent fiscal council assess whether the fiscal policy and fiscal plan are in line with the fundamental values and fiscal rules in the bill of legislation.

4.4.3. Chapter 3: The Budget Proposal and Appropriations

Parliament will authorize budgetary allocations to various fields and functions, plus a contribution to a general precautionary fund, instead of a large number of agencies. This will reduce budget items from approximately 900 items to 150–210. The appropriations powers of Ministers are thus increased.

¹⁰ This fiscal rule may be too stringent. If the overall result over a five-year period is always be positive the debt level will eventually go to zero and then become negative. It may somehow be conditioned on the debt level. Also, fiscal policy objectives and requirements shall only be revised under extraordinary circumstances, such as a national catastrophe or a severe economic shock.

¹¹ This definition of debt is an approximation of the conventional definition of net debt, where all monetary assets are deducted from liabilities. Here, however, only cash and readily disposable monetary assets are deducted. This definition is used in part because the Treasury has taken account of loans taken, for example, to expand the Central Bank's foreign exchange reserves. Those funds have not been used for operations and are available for repayment of the loans taken. This definition gives a clearer picture of how much debt must be paid down with cash from operations.

The Ministers are to formulate and present their policy for the next five years for each field and function. These changes in whole aim at allowing for the debates and votes on the budget proposal to follow a top-down sequence.

4.4.4. Chapter 4: Budget Execution

Budget discipline has improved since the crisis. Overspending still takes place. Most of the slippage happened in the election year in 2013. The 2009–2013 fiscal consolidation thus only amounted to 8% of GDP instead of the 10% aimed for. The new FRA would abolish the carryover of overspends to future appropriations. Carryover of underspends is also restricted and is limited to 3% of appropriations and only if the underspend is because of economic reasons. The Minister reallocates the underspending. When the fiscal budget is implemented, each minister must report to the Government and the Parliamentary Budget Committee on the implementation of the budget and the financial performance of the Treasury and compare it to the Budget at least quarterly. The Parliamentary Budget Committee—and other committees—may request information from each minister concerning budget implementation within the scope of the minister's field.

4.4.5. Chapter 5: Accounting and Fiscal Reporting

Fiscal reporting is an important part of progressive FRLs. It shows whether the government is in compliance with the budget law, is meeting its fiscal objectives and whether the policy is sustainable. The scope of reporting is increased significantly and reports on budget outcome are moved forward so that last year's outcome is available well in advance of the April 1 Statement of Fiscal Plan. It will be monitored externally by an independent fiscal council.

4.5. *Closing Remarks*

The authorities' intentions seem genuine—they want to move towards increased fiscal discipline. That can be seen from the effect the 2011 LGA has had on local government finances. The reform intent goes across party lines as the reforms are the product of both the current right-wing Government and the previous left-wing Government.

The FAD has played an important role in guiding the reforms forward. They had broad-based expertise and international experience of the topic. A mission from Sweden also provided valuable counsel. It was the Swedish counsel that recommended the establishment of the fiscal council, the FAD was against that. But the vast majority of the recommendations the Government received they adopted into the reforms of the 1998 LGA and 1997 FRA. If the intent at the ministerial level was not genuine they would not have complied with them to the extent they did. Maybe Iceland will move to a new fiscal era like Sweden has accomplished.

5. Conclusions

A necessary condition for the fiscal stability of a federal union of states is imposing proper discipline on union members. A common denominator of the case studies in this paper is the drive to monitor and penalize the spending biases associated with “short-termism” and overspending biases in good times.

Gathering information and providing quality supervision on the spending and revenue patterns of union members is essential. In centralized systems with sizable tax-cub-transfer services provided by the federal system, discipline may be provided by reducing future transfers to states that overspend or default today. The credibility of the federal union is enhanced by preventing bailouts of states' overspending, thereby preventing opportunistic expenditures or gambling for future resurrections via federal handouts. Consequently, stable federal unions benefit by fiscal discipline applied across all layers of decision making. Market-based mechanisms may supplement fiscal discipline by charging higher spreads in response to larger fiscal deficits and under taxation. The credibility of such a system requires reventing the build-up of large vulnerabilities that may tempt a bailout by the federal system due to systemic risk concerns.

In closing the paper we note that a chain is no stronger than its weakest link. Imposing fiscal discipline on union members would help little if the federal center refrains from adhering to clear and transparent fiscal discipline. The history of federal systems provides ample evidence that imposing fiscal discipline on sub national levels is only half of the job—the federal center may use off-budget subsidies and “creative accounting” to promote its agenda in ways that may ultimately reduce the fiscal space at the federal level, increasing union's susceptibility to funding crises.

Acknowledgements

The comments of two anonymous referees are thankfully acknowledged. Joshua Aizenman is grateful for the support provided by the Dockson Chair in Economics and International Relations, USC. Gunnar Gunnarsson is grateful for assistance form A. Danielsson, H. Gardarsson and Th. G. Petursson. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research and Central Bank of Iceland.

Author Contributions

Both authors contributed equally to this work.

Abbreviations

FAD: The IMF's Fiscal Affairs Department;

FRL: Fiscal Responsibility Law;

FRA: The Financial Reporting Act;

GDP: Gross Domestic Product;

GIIPS: Greece, Ireland, Italy, Portugal, Spain;

GFC: Global Financial Crisis;

INAO: The Icelandic National Audit Office;

IMF: International Monetary Fund;

IPSAS: International Public Sector Accounting Standards;

MEF: The Municipal Equalization Fund;

MFOC: The Municipal Fiscal Oversight Committee;

MoF: Ministry of Finance;

OECD: Organisation for Economic Co-Operation and Development;

LGA: The Local Government Act;
 MTF: The Medium Term Fiscal Framework;
 MTFS: Medium Term Fiscal Strategy;
 SBA: Stand-By Arrangement;
 SGA: State Guarantee Acts.

Conflicts of Interest

The authors declare no conflict of interest.

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