Session 1

NATIONAL FISCAL FRAMEWORKS: THE EXPERIENCE

FISCAL RULES, WHAT DOES THE AMERICAN EXPERIENCE TELL US?

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1 Introduction

Large budget deficits and rising public debt levels have led to renewed interest in budget rules and the means of financing public expenditures. The United States with its federal system offers an interesting environment to study the effects of budget rules. In the U.S. setting there are two very different systems. The federal government has no restrictions from constitutional provisions and few emanating from statutory legislation. By contrast, nearly every state government faces constitutional and statutory limitations on their ability to run budget deficits as well as other constitutional or statutory restrictions on budget actions. Our paper endeavors to review and add to the literature on the effectiveness of these rules.

Budget rules can affect budget outcomes in a variety of dimensions. Balanced-budget rules and limits on debt issuance can affect the size of budget surpluses and deficits and the conduct of policy both in a persistent way and over the business cycle. Other budget rules, such as requirements of super majorities for tax provisions, constitutional restrictions on revenues, minimum funding requirements for programs, citizen rights for equal access to education and health, etc., may affect the size and composition of government programs.[1] Here we focus on first type of restrictions, those on borrowing and budget deficits.

A review of debt and deficit data clearly show that "trend" budget outcomes are different at the federal government and state and local government levels and that conduct over the business cycle is different. Figure 1 displays the evolution of federal and state and local debt over the past 50 years. Two features of the data are readily apparent: Federal debt is much higher and is much more variable than state and local debt. Figure 2 shows debt levels across states.[2] The top panel shows that the level of total debt varies significantly across states, but also that there is considerable variability in the composition of debt between state and local and between public debt for private purposes (e.g., industrial development bonds, low income multi-family housing bonds and student loan bonds) and other debt (largely general obligation bonds). Our work will focus on the state budgets and thus state debt. Our results suggest that budget rules are correlated with state debt levels, but that some of the restriction may be offset by behavior at local level.[3] Of course, given its higher debt level, the federal government has run much larger deficits, on average, than at the state and local level (Figure 3).

The smaller deficits at the state and local level are likely the outcome of balanced budget rules. These balanced budget rules typically bind on general fund budgets which are similar to

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The analysis and conclusions set forth are those of the authors and do not indicate concurrence by other members of the research staff or the Board of Governors. We would like to thank the careful research assistance of Paul Eliason and Shoshana Schwartz. We thank Kim Rueben for generously sharing the NASBO data. Participants at the 13th Banca d'Italia Public Finance Workshop provided helpful suggestions.

[1] Some of these may make deficits more likely – such as supermajority restrictions on raising taxes, or restrictions on the kinds of taxes.

[2] State and local governments use debt chiefly for funding capital projects. Their operating budgets face the balanced budget restrictions while their capital budgets do not.

[3] If budget restrictions are just a reflection of the (dis)taste for debt financing, then one would expect to find that state budget restrictions are associated with lower state debt and lower local debt. However, we find that the local debt offsets a portion of the state level effect. (The correlation of state debt to local debt is –.493). This provides some evidence that the rules affect behavior and do not just reflect tastes.

operating budgets, thereby excluding capital budgets and other accounts.[4] These operating accounts most closely correspond to the current account in the national accounts. In Figure 3 the current account surplus of state and local governments is displayed as net saving, which hovers around zero. Balanced budget rules may affect the conduct of fiscal policy over the business cycle in two dimensions. First, it can make policy pro-cyclical if governments react to

Figure 1

Government Debt
(percent of GDP)

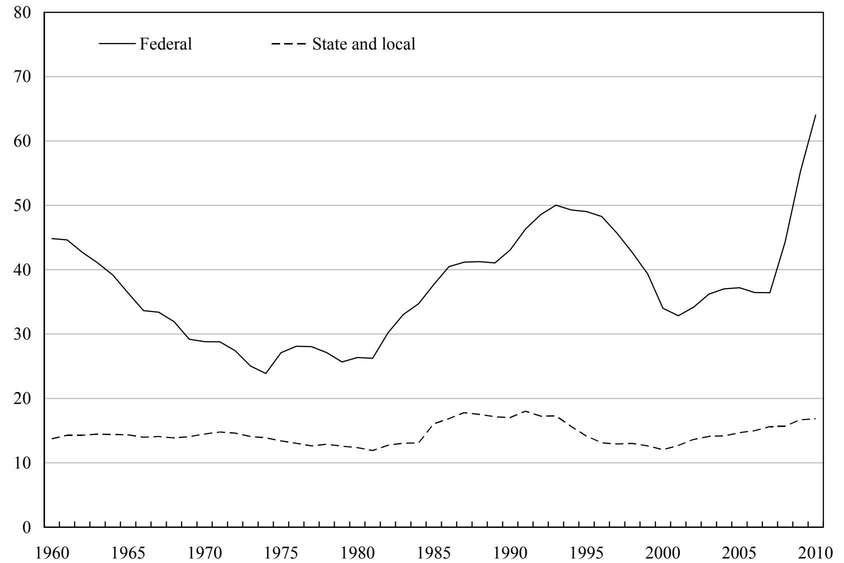
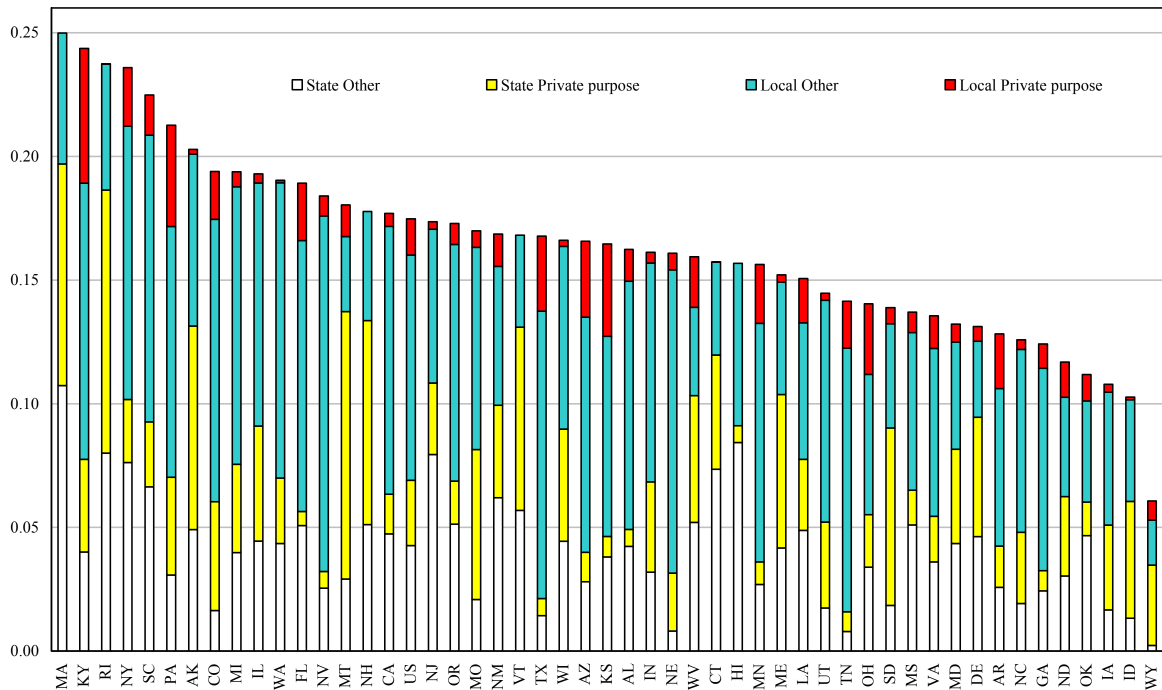


Figure 2

Ratio of State and Local Debt to State GDP



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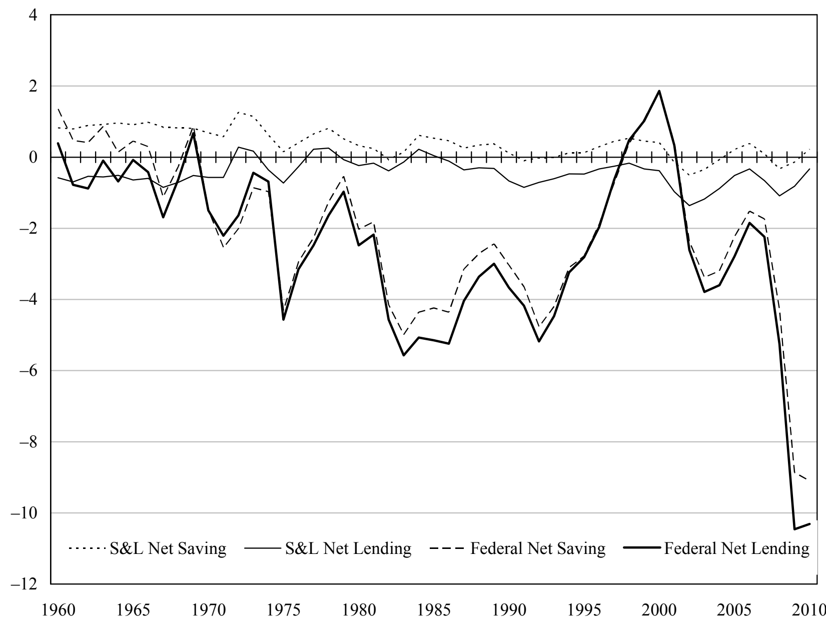
[4] Other accounts that are excluded from the general fund include bond fund accounts, sinking fund accounts, insurance funds and employee pensions fund accounts.

Figure 3

Government Net Saving and Net Lending
(percent of GDP)



falling tax revenues by cutting back on spending or boosting tax rates. Second, these rules will create incentives for governments to seek revenue sources that are less cyclical. Governments can also create a less cyclical policy regime by using rainy day funds. Moreover, states have incentives to create fiscal space to allow counter-cyclical policy. This is true even at the state level, where one might fear that potential leakages would reduce the power of state and local multipliers.[5] A recent body of research on state fiscal multipliers by Clemens and Miron (2009), Shoag (2010), and Suárez Serrato and Wingender (2010) suggest that the multiplier on state and local spending may be in the 1-1/2 to 2 range. Nevertheless, Follette and Lutz (2010) demonstrate that at the aggregate level state and local spending has been pro-cyclical while federal government policy has been counter-cyclical. Those results are updated and shown in Table 1. If state fiscal policy can be an effective counter-cyclical policy tool, but state governments behave pro-cyclically, this probably reflects the restrictions that budget rules place on them that they have not been able to relax through the use of rainy day funds. Follette and Lutz (2010) also show that state and local cyclical budgets are less cyclical than those of the federal government, even after controlling for the size of the sector.[6] This would be a natural reaction to balanced budget requirements.

The remainder of this paper will detail the budget rules at first the federal and then the state level and examine how the rules map into budget outcomes. We conclude that statutory rules at the federal level have not had an effect. Their imposition in the 1980s and 1990s were reflections of policy decisions and did not drive policy in general. Importantly, the shift to a "pro"-deficit policy after 1998 was not hampered by the rules. By contrast, we find that state budget rules are generally binding. The key difference is probably that state rules are typically constitutionally imposed and thus cannot be adjusted easily by the legislature.

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[5] State government actions would have similar effects to small open economies under fixed exchange rates. With fixed monetary policy and exchange rates, fiscal policy would be particularly powerful. But, states have much higher import penetration than the United States as on the whole, and this leakage reduces the multiplier.

[6] For example, in mid-2000s federal revenues were 1-1/2 to 1-3/4 larger than those of the state and local sector (excluding intergovernmental transfers), while the cyclical response of the budget was three times larger (0.35 percentage point change in deficit as a share of GDP to a 1 per cent change in cyclical GDP compared to a 0.1 percentage point change at the state and local level).

Table 1

Fiscal Impetus Around Business Cycles
(percent of GDP)

Peak Year	1969	1973	1980	1990	2000	2007	Average
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Federal Government							
Year before peak	0.02	0.55	0.19	–0.23	0.30	0.31	0.19
Peak	–0.77	–0.16	–0.04	–0.27	0.07	0.23	–0.16
1 year after	–0.01	0.00	–0.31	–0.47	0.48	1.07	0.13
2 years after	–0.20	0.58	0.76	–0.31	0.95	1.20	0.50
3 years after	0.55	0.36	0.95	–0.56	0.90	0.63	0.47
Before	–0.38	0.20	0.07	–0.25	0.19	0.27	0.02
After	0.11	0.31	0.47	–0.44	0.78	0.97	0.37
State and Local Government							
Year before peak	0.89	–0.04	0.31	0.47	0.53	0.06	0.37
Peak	0.50	–0.04	0.17	0.52	0.38	0.27	0.30
1 year after	0.21	0.55	–0.21	0.24	0.55	0.04	0.23
2 years after	0.34	0.48	0.16	0.17	0.35	–0.61	0.15
3 years after	–0.04	–0.05	0.22	0.34	–0.19	–0.47	–0.03
Before	0.69	–0.04	0.24	0.50	0.46	0.16	0.33
After	0.17	0.33	0.06	0.25	0.24	–0.35	0.12
General Government							
Before	0.31	0.16	0.31	0.25	0.65	0.43	0.35
After	0.29	0.64	0.52	–0.19	1.01	0.62	0.48

Fiscal impetus measures discretionary budget actions and is the sum of changes in spending and tax policies weighted by their MPCs. It excludes the effects of automatic stabilizers. See Follette and Lutz (2010).

2 Federal government budgeting

2.1 *Background*

Rules covering federal budgets have evolved significantly over time. Importantly the constitution provides little restriction on the size or structure of government or limits on borrowing.[7] The current budget process was established by the Budget Control and Impoundment

[7] See Congressional Quarterly (1977). For example, there are no constitutional limits on debt, although there is a statutory limit. The commerce and necessary and proper clauses have been interpreted to allow a fairly expansive role for the federal government. Since the passage of the 16th amendment there has been considerable freedom for tax policy. From the establishment of the republic until *(continues)*

Act of 1974. The annual budget process begins in February with the release of the Administration's five-year budget plan. Each house of Congress has a budget committee whose responsibility is to craft a budget resolution in the spring that provides the framework for the overall budget by: outlining the path for policy for the next five years and setting targets for the two types of implementing legislation – appropriations bills and reconciliation bills. The two budget resolutions are melded into one which then controls debate of the implementing legislation. The twelve appropriations bills cover the annual spending needs of the agencies for discretionary programs and must be within the limits set by the joint budget resolution.[8] The reconciliation bills cover spending and tax legislation used to implement the portion of the budget resolution that is not covered by the annual appropriations bills – taxes and most transfers and subsidies (called mandatory spending).[9] Other tax and spending bills may also be considered on an *ad hoc* basis during the year, but if they are inconsistent with the budget resolution then they are subject to parliamentary rules which create additional hurdles, particularly in the Senate.

2.2 Gramm-Rudman-Hollings: 1985-90

The 1974 Budget Act had been enacted owing to a growing unease about budget deficits, as well as owing to conflicts between the executive and legislative branches. In 1985, the budget process was changed radically in an attempt to rein in persistently large deficits that the Budget Act had failed to stem. The Balanced Budget and Emergency Deficit Control Act of 1985, commonly known as Gramm-Rudman-Hollings (GRH), made two changes to the budget process. First, it instituted annual deficit targets that could only be exceeded by a small margin. Second, it created a sequestration mechanism to meet the targets. The Administration would estimate the deficit in mid-October for the fiscal year that had just begun based on enacted legislation and economic and technical assumptions made earlier in the year.[10] If the projected deficit exceeded the target by more than $10 billion (about 0.2 per cent of GDP), then expected outlays of discretionary programs – half from defense and half from nondefense – would be cut so as to meet the target.[11] Notably, compared to many state budget rules, only the projected deficit needed to meet the target. Among the nondefense expenditures, the cuts would be uniform across all programs.

Did GRH work? Clearly, the Gramm-Rudman-Hollings approach did not achieve its stated goal of balancing the budget. Indeed, lack of progress during the first two years led the government to enact revised targets in 1987 in the Balanced Budget and Emergency Deficit Control Reaffirmation Act when the target for fiscal 1988 appeared to be unreachable. In 1989, the automatic sequester was triggered for the first time. (GRH applied to the *ex ante* budget, hence the deviation between the GRH target deficit and actual deficit in the Table 2 reflects overly optimistic budget assumptions). Then in 1990, the initial Congressional Budget Office (CBO) projections

1921 budgeting was largely a piecemeal affair of appropriations and tax bills that were considered individually and dominated by Congress. The Budget and Accounting Act of 1921 established more systematic budgeting by requiring the President to submit a consolidated budget proposal for congressional consideration each year.

8 Typically all the individual appropriations bills are not completed by the beginning of the fiscal year and a combination of short-term funding bills, known as continuing resolutions and omnibus appropriations bills, are enacted to keep the government running.

9 Government expenditures can be divided into discretionary and mandatory. In general, mandatory spending is for programs such as entitlements and interest, where the outlays are not controllable because they are a function of eligibility requirements (e.g., social security) or market forces such as agricultural subsidies. Discretionary outlays are controlled by annual appropriations, which limit the obligations that agencies can incur. Many obligations have multiyear aspects and thus the outlays from the Treasury may occur in more than one fiscal year. Therefore, the appropriations process does not have a fine control over annual expenditures

10 Thus, changes in economic conditions would not initially force budget changes. There are several preliminary snapshots of the deficit that are provided before the sequestration order to allow Congress to pass legislation to correct any impending excess deficit. This paragraph relies on Congressional Quarterly (1989).

11 There were some annually appropriated transfer programs that were shielded from cuts. In addition, a small portion of the sequester applied to mandatory transfer programs, particularly payments to health care providers (Medicare program).

Table 2

Federal Unified Budget Deficit Targets and Results Under GRH
(billions of dollars, fiscal years)

	1986	1987	1988	1989	1990	1991	1992	1993
GRH target,1985	172	144	108	72	36	0		
GRH target, 1987			144	136	100	64	28	0
Actual deficit	221	150	155	153	221	269	290	255
Memo: Deficit *(percent of GDP)*	5.0	3.2	3.1	2.8	3.9	4.5	4.6	3.9

showed the deficits for 1990 and 1991 coming in well above the GRH targets. But, while the Administration's fiscal 1991 budget showed the fiscal 1990 deficit coming in well above the target, its proposed fiscal 1991 deficit was just under the limit, largely owing to overly optimistic economic and technical assumptions. By June, the fiscal situation had deteriorated enough so that the overly optimistic scenario had to be abandoned and President Bush was forced to go back on his "Read my lips, no new taxes" pledge.[12] At that point the GRH framework was abandoned in favor of an alternative framework (see below).

While the GRH rules did not lead to a balanced budget, did these rules restrain policy more than would have been the case without the targets? This we may be able to answer by looking at tax policy, changes to entitlement programs, and discretionary spending. While the sequestration process was directed at discretionary spending, the targets were expected to be met through fiscal consolidation using all budget levers. With respect to taxes, after GRH was passed several small tax bills were enacted, but they were smaller than the ones earlier in the decade (excluding the 1981 Reagan Tax cuts). Thus, these tax policy changes appear, at best, to be a continuation of prior policy of addressing outsized deficits partially through taxes (Figure 4a).

During the 1980s there were some major changes to reduce entitlement spending, including changes to Social Security, Medicare, unemployment benefits, and grants to state and local governments.[13] Some of these cuts were enacted during the GRH period – in particular a reduction in mandatory grants to S&L for general revenue sharing and small cuts to Medicare – but these appear to be a continuation of the prior policy and were no more stringent than those enacted immediately prior to GRH.[14]

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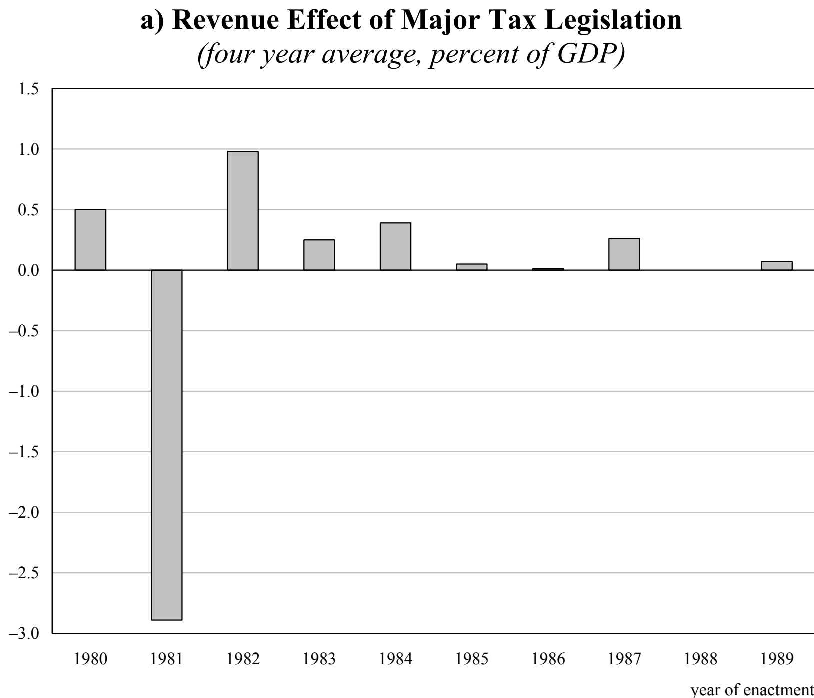
[12] Given the evolution of the business cycle, the tax increases and spending cuts failed to bring the budget into balance. Recall that June 1990 was eventually declared a business cycle peak. The ensuing recession ended in April 1991. 1990 also saw a spike in oil prices following the Iraqi invasion of Kuwait.

[13] Some grants are mandatory and some are discretionary. At that time the key mandatory grants were for state-administered transfer programs such as Medicaid and welfare and for a small revenue sharing program.

[14] Medicare HI cuts were included in TEFRA (1982, 0.5 per cent of payroll on average over 25 years) and DEFRA (1984, 0.3 per cent of payroll) before GRH. The 1983 Social Security Act reduced some benefits and rules regarding unemployment benefits and disability insurance were also tightened in the early 1980s. The GRH law (1985) included cuts of 0.1 per cent of payroll. After GRH passed, Medicare was cut by 0.4 per cent of payroll in 1987 (the GRH2 law and OBRA 1987), but increased by 0.8 per cent of payroll in 1988 and 1989.

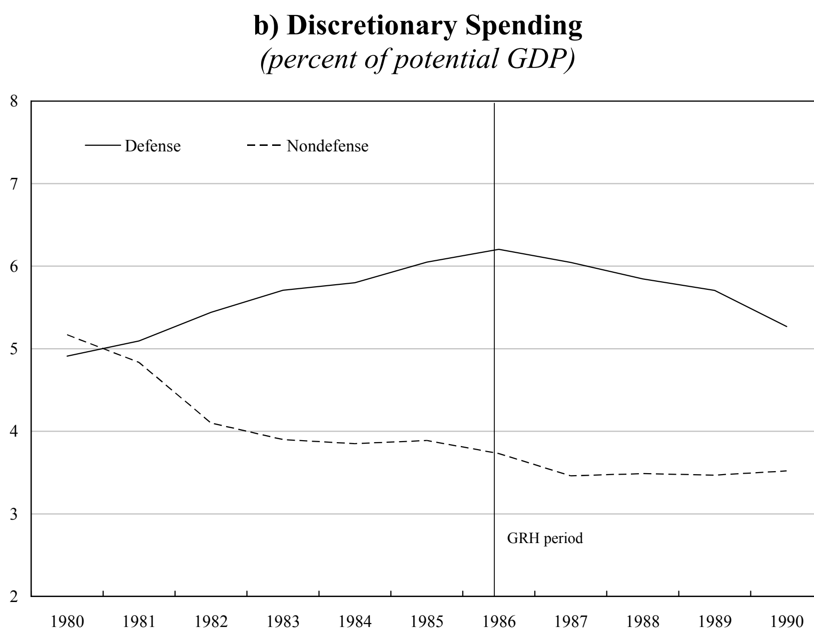
Figure 4

a) Revenue Effect of Major Tax Legislation
(four year average, percent of GDP)



Source: Tempalksi, 2006.

b) Discretionary Spending
(percent of potential GDP)



Source: Tempalksi, 2006.

Discretionary spending during the second half of the 1980s slowed relative to the first half of the decade. During the first half of the decade discretionary spending was relatively constant as a share of potential GDP as increases in defense were offset by declines in nondefense (Figure 4b).[15] During the second half of the decade (after GRH was put in place) discretionary spending fell by 1 per cent of potential GDP, mostly in the defense category. While the decline in defense may reflect the additional pressures from GRH, arguably it may reflect the changing circumstances in foreign affairs. Turning to non-defense, this category of spending fell sharply in 1986 and 1987 and then rose at the pace of potential GDP during the following three years, when the screws from GRH should have been tightening. The initial decline probably owes to the cuts implemented when GRH was instituted and in the following year, but this time pattern gives little support that GRH induced additional cuts over time.

In sum, our reading of the record is

[15] Discretionary spending was 10 per cent of potential GDP in both 1980 and 1985. In 1980 both were 5 per cent of GDP, while by 1985 defense had increased to 6 per cent of potential GDP and nondefense had fallen to 4 per cent. Nondefense spending also fell in real terms over the period, at a 3 per cent annual rate on average.

that there is little clear evidence that GRH resulted in additional budget consolidation efforts. The first time the GRH targets bound significantly in 1988, the targets were revised. When they again bound in 1990, they were abandoned. There is no evidence that policy actions were more restrictive than they had been prior to GRH. Perhaps, the failure to hit the targets in 1990 led to the 1990 budget summit (see below), and those budget cutting actions could be credited to the GRH targets. Alternatively, a change in policy preferences concerning deficits may have led to both the enactment of GRH and the 1990 summit.

Analysis by others is mixed. Reischauer (1990) and Gramlich (1990) find little support for the effectiveness of GRH, while Hahm (1992) and Auerbach (2008) are more supportive. Regression analysis by Hahm and Auerbach show more fiscal consolidation during the GRH period than prior.[16] But, those results probably reflect the changing desires of Congress rather than the change in the rules. Importantly, as stated above, when the targets became binding, Congress relaxed the targets.

2.3 The Budget Enforcement Act (BEA): PAYGO and discretionary caps

Following the recognition that GRH had failed, a new budget regime, the Budget Enforcement Act (BEA), was put in place in 1990 as a part of the Omnibus Budget and Reconciliation Act (OBRA 1990). Under the new structure budget decisions, rather than budget forecasts or budget outcomes, were constrained. OBRA 1990 put in place policies that were expected (but not required) to achieve budget balance by 1995 through a set of tax increases and mandatory spending cuts that were implemented as part of the legislation, as well as restrictions on discretionary spending that would have to be implemented through annual appropriations bills over the following five years. Annual limits for discretionary spending were put in place for the 1991 to 1995 period.[17] A PAYGO rule was established so that the set of tax and mandatory spending laws enacted in a session would not increase the deficit. Enforcement had several components. First, bills that violated the spending caps and PAYGO rules were subject to parliamentary hurdles. Second, excesses in budget authority or projected outlays for discretionary spending would trigger across-the-board sequesters of discretionary spending, similar to the GRH rule. Third, if the changes to taxes and mandatory spending resulted in an increase in the deficit, thereby violating PAYGO, a sequester of mandatory spending was triggered. These restrictions had a relief valve in that spending for "emergency" purposes would be exempt.

The BEA rules proved more durable than the explicit deficit targets used by GRH and were in place when the budget moved from deficit to surplus. But, it is still difficult to discern how much of an independent factor they played, versus being a reflection of the policy environment. After they were put in place 1990, the deficit widened owing to the recession, Gulf War, and the savings and loan bailout (Table 3, lines 3 and 6 show the deterioration). Interestingly, while temporary expansion of unemployment benefits were enacted and not offset (using the emergency designation available to avoid PAYGO), there were no other countercyclical policies (unlike a typical recession, see Follette and Lutz, 2010). Outside of the Gulf War the discretionary caps were maintained. Thus, a case can be made that they worked initially by preventing the typical

[16] For example, Hahm *et al.* use as their counterfactual the evolution of taxes and spending over the previous 23 years, which was a time period of rising deficits in general. They credit the shift from deficit increasing to deficit-reducing policies to GRH. We argue that the prior policy was no longer sustainable and that the shift in policy preferences occurred before GRH was enacted as evidenced by the deficit reducing efforts before GRH. Auerbach (2008) does not test directly whether the rules had effects; he tests whether the coefficients on budget surplus and GDP gap terms are different during the different budget regimes which also cannot separate changes in regimes from other factors particularly when regimes are for a short duration. The question is not whether policy outcomes were different, but did the change in rules *cause* the outcomes to differ.

[17] Initially, there were separate caps for defense and nondefense spending, later the caps were combined.

Table 3

Evolution of the Deficit, 1990-93
(fiscal years, unified budget basis, percent of GDP)

		1990	1991	1992	1993	1994	1995
1	July 1990	3.4	3.9	3.8	3.0	2.1	1.9
2	OBRA 1990	0.0	–0.6	–1.1	–1.4	–1.9	–2.2
3	Other	0.4	1.7	1.8	1.7	2.1	1.1
4	January 1991	3.8	5.0	4.5	3.3	2.3	0.8
5	Policy	0.0	0.1	0.4	0.1	0.1	0.1
6	Other	0.0	–0.5	–0.3	1.3	1.8	3.0
7	January 1993	3.9	4.6	4.6	4.7	4.2	3.9

Evolution of the Deficit, 1993-98
(fiscal years, unified budget basis, percent of GDP)

		1993	1994	1995	1996	1997	1998
8	January 1993	4.7	4.2	3.9	3.7	3.9	4.1
9	OBRA 1993	0.0	–0.5	–0.7	–1.1	–1.4	–1.7
10	Other	–0.7	–0.1	–0.4	–0.2	0.0	–0.2
11	August 1993	4.0	3.6	2.7	2.5	2.4	2.3
12	Policy	0.0	0.1	0.1	–0.1	–0.1	0.0
13	Other	–0.2	–0.8	–0.5	–1.0	–0.9	–0.9
14	January 1997	3.9	2.9	2.2	1.4	1.4	1.4

Evolution of the Deficit, 1993-98
(fiscal years, unified budget basis, percent of GDP)

		1997	1998	1999	2000	2001	2002	2003
15	January 1997	1.4	1.4	1.6	1.8	1.6	1.8	1.8
16	Balanced Budget and Tax Relief Act	0.0	0.2	0.0	–0.2	–0.2	–0.9	–0.7
17	Other	–1.0	–1.0	–1.0	–1.1	–1.1	–1.2	–1.5
18	September 1997	0.4	0.7	0.6	0.5	0.4	–0.3	–0.3
19	Policy	0.0	0.0	0.2	0.6	1.0	1.5	1.6
20	Other	–0.1	–1.5	–2.2	–3.5	–4.1	–4.2	–4.5
21	January 2001	0.3	–0.8	–1.4	–2.4	–2.7	–3.0	–3.3
22	Policy					0.8	1.4	3.3
23	Other					0.7	3.0	3.4
24	January 2004	0.3	–0.8	–1.4	–2.4	–1.2	1.5	3.4

counter-cyclical policy reaction. However, immediately following enactment and over the following two years, economic and "technical" developments greatly worsened the budget outlook, so that by 1993 the budget was in worse shape than it had been before OBRA 1990 and no policies were enacted to offset these poor outcomes (see lines lines 5 and 6 of Table 3).[18] The failure of BEA to require a response to deficits arising from incorrect technical and economic assumptions (as opposed to policy decisions) rendered it ineffective as an anti-deficit device in this period. It is possible that having met the BEA requirements, Congress did not feel the need to react further. It is therefore possible that the BEA actually worsened the deficit position by "turning off" this natural reaction function. In any case, it clearly did not restrain the deficit during the early years.

Following the 1992 elections, President Clinton put forth a new budget plan that called for balancing the budget in five years, with tax increases and mandatory spending cuts – particularly to Medicare, and continued adherence to slightly revised and extended discretionary caps (Omnibus Budget and Reconciliation Act of 1993, Table 3, middle panel, line 9). At the time, the 1990 rules were seen as effective, but insufficient, because deficits had not fallen, rather they had remained near 4 per cent of GDP (line 8). The Clinton plan was not projected to bring balance, but to cut the deficit as a share of GDP in half, to a level where it would lead to a small decline in the debt-to-GDP ratio. Importantly, this budget plan was not required by the 1990 rules and thus cannot be credited to the success of BEA. As with the 1990 caps and PAYGO, these restrictions held through the President's term. No other material policy actions were taken during the remaining years of the first term. That said, the 1995-96 government shutdown (instigated when the new Republican majority tried to cut discretionary spending significantly) and the 1996 welfare reform reduced the deficit a smidgeon. These actions were not required by OBRA 1993 and provide some confirmation of the view that the government – Congress and the administration – was looking for ways to cut the deficit beyond what was required by OBRA. Thus the OBRA rules were not binding during this period.

At the beginning of Clinton's second term the Tax Reduction and Balanced Budget Act was passed in the summer of 1997. The Act extended the discretionary caps through 2002, provided small tax cuts, and made important reductions to Medicare and other entitlements (line 16 of lower panel of Table 3). The Act was projected to balance the budget by 2002 if the discretionary caps held. However, many analysts thought this unlikely because they viewed the caps as too onerous. That spring (line 17) and over the following four years (line 20), though, economic and technical factors pushed the budget far into surplus.

The 1998-2002 period is the key period for judging the efficacy of the BEA framework. The 1990, 1993 and 1997 policy actions were not necessitated by the BEA and consequently the budget restraint provided by them was not due to the caps. Over the 1998-2002 period, budget surpluses became the norm. Initially, it appears that the BEA framework worked to encourage saving the surpluses. Some argue that the surpluses were the result of the surprising pickup in productivity and economic growth over the second half of the 1990s. But budget policy was clearly the reason for the surpluses, because the extra revenues could have been spent with tax cuts and spending increases, like they were in the 1960s and they would be in the 2000s. The question is whether the tight fiscal policy was a result of the rules or of the decisions of the Clinton Administration and Congress. We think that is was the split in control between a Democratic president and a Republican Congress that led to the stalemate on what to do with the surpluses. The BEA edifice began to crumble as the discretionary spending caps were breeched in 1999 and 2000 using emergency designations by the first Congress that was working with a cap that it had not enacted.

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[18] The Congressional Budget Office provides estimates of changes in budget outcomes owing to economic and technical factors. Technical factors include such things as cost overruns in health care, changes in the income distribution that change effective tax rates, and swings in capital gains realizations.

Previously, the caps had been usually set by the same Congress – the exception being the 1995-96 Congress. When President Bush was inaugurated in 2001, control of both branches of government shifted to the Republicans and the budget stalemate ended, and neither the President nor Congress had been a party to enacting the controlling budget framework. The existing budget framework was quickly discarded and an exceptionally large tax cut enacted despite the PAYGO rules. The tax cut was then accompanied by increases in discretionary and mandatory spending. Moreover, there were no efforts to offset the rapid deterioration in the budget.

For us, the 1998-2002 period clearly shows that when the BEA framework of discretionary spending caps and PAYGO restrictions were inconsistent with desired policy, the budget rules were ignored or changed. By contrast, Auerbach (2008) claims some modest success for the BEA framework because he explicitly excludes these years as being part of BEA and he credits the BEA process for the deficit reducing actions (1993 and 1997) that were not required by it. We think this is a mis-reading of the evidence. Recently, PAYGO was reinstated in 2010 and has met the same fate. Although the health reform met the criteria, the tax cuts enacted in the fall did not, despite the shift in budget climate to austerity. Thus, statutory PAYGO has not been able to prevent a majority from enacting significant deficit increasing legislation.

3 State balanced budget rules

3.1 Background

All U.S. states except Vermont have a legal balanced budget requirement.[19] These requirements are sometimes contained in the state constitution, while in other cases they are statutory (*i.e.*, they have been enacted into law by the state's legislature). In some instances, they are based on court rulings pertaining to constitutional-based debt limits.[20]

Although there is considerable variation in how the balanced budget rules are implemented across the states, there are three general types. The first requires that the governor's proposed budget be balanced; the second requires that the budget passed by the legislature be balanced; and the third requires that that the budget be balanced at the end of the fiscal year, often referred to as a no-carryover provision.[21] Regardless of the type, the rules refer only to operating budgets and explicitly exclude capital budgets.

There are several ways in which states can address a deficit to satisfy its balanced budget requirement. In all states the legislature may reduce expenditures (although the legislature will not always be in session when the deficit, or projected deficit, arises). In many states the Governor or an appointed board may reduce outlays if a budget shortfall has emerged. In almost all cases, state legislatures may increase revenues. They can also draw down general fund and rainy day fund balances accrued in previous fiscal years. Some states may engage in short-term borrowing to cover a budget gap, although this must generally be paid back in the following fiscal year. It is quite rare for states to explicitly engage in long-term borrowing to cover an operating deficit, although it does occasionally occur: California borrowed $11 billion in 2004 to address a shortfall

[19] This section draws heavily on National Conference of State Legislatures (1999).

[20] Hou and Smith (2006, 2009) present a political-technical categorization of balanced budget rules as an alternative to the constitutional-statutory categorization used in most of the literature.

[21] State general fund budget accounting is a mixture of flows and stocks. Budget resources for a fiscal year include the flow of taxes plus the general fund balance of the previous year. Accordingly, states carry over budget surpluses (or deficits) by augmenting (or decreasing) the following year's general fund balance. States with a no-carryover rule cannot let the general fund balance fall below zero, while states without such a rule, but with a requirement that the proposed budget be balanced are required to make up any shortfall in the general fund balance in the proposed fiscal year.

in its operating budget.[22] It remains an open question, though, if states engage in long-term borrowing ostensibly for capital expenditures and then use accounting tricks to move the funds into the operating budget. (For example, a state could borrow to finance highway construction and then divert motor fuel tax revenues (that were intended to finance capital spending) from its highway trust fund to the general fund. Many states require a referendum for new long-term debt issuance which may inhibit this type of behavior. Finally, there are a host of short-term maneuvers which may be used to satisfy balanced budget requirements in letter, but not spirit. For instance, states may defer spending scheduled for the end of the fiscal year to the start of the following fiscal year, defer payments owed to vendors, to employees, and to local governments, take a "holiday" from making pension fund contributions, or change the timing of tax payments.

The literature to date has generally concluded that the stringency of balanced budget requirements has a significant effect on state fiscal behavior, with the no-carryover provision being particularly important. Bohn and Inman (1996) conclude that the no-carryover rule is associated with larger state general fund balances. These larger balances accrue due to relatively lower spending, not higher taxes. Similarly, Poterba (1994) finds that more stringent rules, primarily the no-carryover provision, are associated with more rapid adjustment to budget deficits. The margin of adjustment to these shocks is found to be spending, not taxes. Clemens and Miran (2010) and Clemens (2009) extend Poterba's results to a more recent period. (Poterba used data from 1988-1992 and they extend the sample to 2004). These authors confirm Poterba's basic result and also conclude that state spending has a large fiscal multiplier of around 1.7 (Clemens and Miran, 2010) and that public sector union strength predicts which areas of the budget are cut (Clemens, 2009).

3.2 Balanced budget rules and the level of fiscal outcomes

We now turn to examining the relationship between balanced budget rule stringency and various fiscal outcomes. In this section we examine the relationship between balanced budget rules and the *level* of various fiscal outcomes, namely year-end balances, deficits and debt levels. In the next section we examine how balanced budget rules influence the reaction to *shocks* to fiscal conditions. Although the level relationship is likely more important, the evidence we produce is mostly suggestive in nature. In contrast, while the fiscal shock question is narrower in scope, we are able to provide more formal evidence. In both cases, our goal is to establish whether rule stringency is associated with differences in state fiscal behavior.

We quantify budget rule stringency using the index developed in ACIR (1987). The index runs from 0 to 10, with 10 denoting the most stringent balanced budget rules and 0 denoting no rules. The presence of a no-carryover provision is the most important predictor of receiving a high index value.[23] We follow Clemens (2009) and categorize states with an index of 7 or higher as *strong* budget rule states and the remainder as *weak* budget rule states.

State governments typically spend and tax out of many accounts. However, only the general fund – a state's largest account and the one used to fund most broad-based services – is directly constrained by balanced budget rules (Bohn and Inman, 1996). We therefore focus our attention on

[22] California voters approved issuance of up to $15 billion (relative to an annual budget of around $100 billion) of deficit financing bonds as a mechanism to stretch out the adjustment to the operating budget deficits that had accumulated following the 2000 recession and electricity bail-outs. Only $11 billion were issued at that time. These were designed as self-liquidating bonds with proceeds from an increase in the sales tax.

[23] The index first gives a score of 1 through 8 based on a state's strictest rule. Higher scores are awarded for rules based on realization as opposed to enactment. The highest score of 8 is awarded for the no-carryover provision. An additional point is added to the index for states with statutory rules and an additional 2 points are added for constitutional rules. When we divide the states into strong and weak rules all of the strong states have no carryover rules and none of the weak states have them.

general fund expenditures, revenues and year-end balances as measured annually in the National Association of State Budget Officer's (NASBO) *Fiscal Survey of the States*.

Finally, we also examine total debt levels. As noted earlier, while debt is largely taken on for capital expenditures, and also applies to accounts other than the general fund, resources may be fungible across accounts (e.g., the general fund, capital, and pension accounts) and uses (e.g., capital outlays and operating outlays). Additionally, one of the ultimate aims of balanced budget rules is to prevent the accumulation of debt and debt is therefore an important outcome measure in assessing the efficacy of the rules.

3.2.1 Year-end balances and deficits

Total year-end balances, the sum of the year-end balance in a state's general fund and rainy day fund, provide a signal of a state's fiscal position. Large year-end balances indicate the state has adequate resources to buffer negative shocks, while low balances may force difficult choices over taxes and spending in the event of an adverse shock. Although balances in excess of 5 per cent have traditionally been considered adequate, this judgment likely needs to be revised. Record high balances at the end of fiscal 2006 proved woefully insufficient to buffer the subsequent economic downturn.[24]

Panel A of Figure 5 displays average total year-end balances as a per cent of general fund expenditures. Balances are quite cyclical, rising during good economic times and falling as the economy turns downward. At all times, though, strong rule states maintain larger balances than weak rule states. Thus, strong budget rules states persistently maintain a stronger fiscal position than weak rule states.

Panel B examines deficits – years in which the sum of balances in the general fund and rainy day accounts are negative.[25] Deficits are somewhat cyclical, as they are most prevalent in the years immediately following recessions. Over most of the period, weak rule states were substantially more likely to run deficits. Interestingly, though, during the period of severe fiscal stress in 2009 and 2010, strong rules states were slightly more likely to end the year in deficit than weak rule states.

3.2.2 Debt

Simple correlations of the ACIR rating and debt levels suggest that tighter budget restrictions are associated with lower debt levels for the state general obligation bonds (–.357) or total state debt (–.374). The correlations for broader aggregates, such as for total state and local government bonds (which include debt by governments not subject to the rules measured by the ACIR ratings), are somewhat weaker. This suggests that these covenants may be binding and that states do not *fully* circumvent the covenants by shifting borrowing to the local level. There may be some shifting, as there is a negative correlation between state and local debt levels. The positive correlation between local debt and ACIR rating (which only applies to state debt) suggests that the negative relation between state debt and ACIR rating is not solely reflective of a taste for debt whereby areas with a higher tolerance for debt would have looser restrictions and higher debt at both levels of government. If that were the case then it is likely that the local debt levels would also be negatively correlated with the ACIR rating. Finally, the bottom rows of Table 4 indicate that

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[24] Indeed, state governments have traditionally run somewhat pro-cyclical policies despite having year-end balances in excess of 5 per cent at business cycle peaks.

[25] Recall, falling balances indicate that the state is running a deficit on a purely flow basis. The definition of a deficit used here is based on the rules governing state budgets that include general fund balances as part of the resources.

states with tighter restrictions experienced less debt growth over the 2000s, a period of strain for state budgets because of the two recessions.

3.3 *Budget rules and fiscal shocks*

In this section we examine how balanced budget rules influence the response of state governments to adverse fiscal shocks. In particular, we focus on the extent to which states adjust to shocks by making changes to taxes and spending, versus drawing down reserve funds and engaging in various accounting maneuvers.

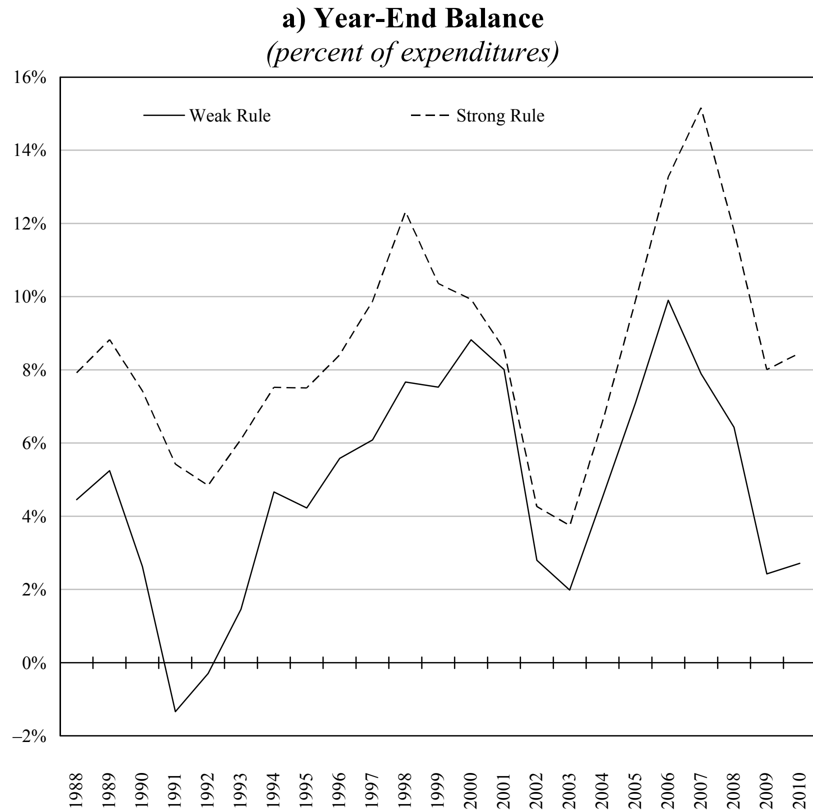
3.3.1 *Measuring fiscal shocks*

Like Clemens and Miran (2010) and Clemens (2009), we utilize the budget shock framework pioneered by Poterba (1994). The budget shock framework utilizes general fund data collected by NASBO on both realized expenditures and revenues and the projections of expenditures and revenues upon which the budget for the fiscal year was based. In a state which requires that the passed budget be balanced, projected expenditures may not exceed projected revenues (including any

Figure 5

a) Year-End Balance

(percent of expenditures)



b) Negative Budget Balances

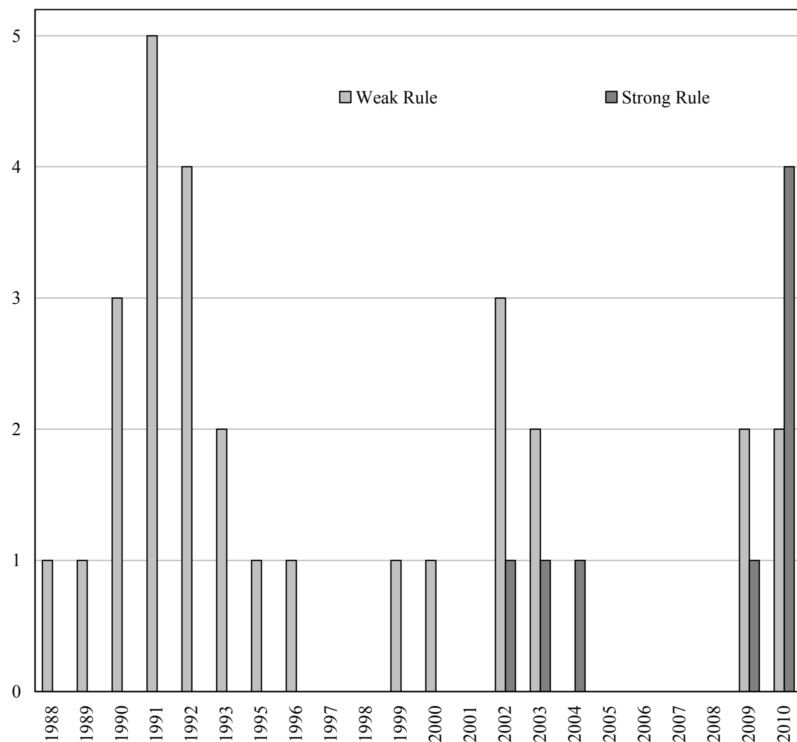


Table 4

Correlation of Debt with Budget Restrictions

Type of Debt	State and Local	State	Local	Memo: Correlation of State Debt with Local Debt
	Level of Debt in 2008			
Total debt	–.311	–.374	.062	–.480
GO debt	–.223	–.357	–.005	–.140
	Change in Debt, 2000-08			
Total debt	.033	–.077	.122	.339
GO debt	.055	–.226	.217	.086

Debt is the ratio of debt to state GDP. Budget restrictions are measure by ACIR rating where a higher number is more restrictive. Source. Census of Governments. GO debt is total debt less public debt for private purposes.

year-end balances from the previous fiscal which are to be used in the current fiscal year). The NASBO data also contains information on expenditure and revenue changes enacted *after* the budget was passed, referred to as mid-year changes, such as spending reductions made to address a deficit. The data is currently available from the 1988 to 2010 fiscal year.

The revenue shock experienced by a state in a given year is the difference between actual revenues and the amount of revenues forecasted at the time the budget was passed, net of any mid-year policy changes:

$$Revshock_{it} = actual\ revenues_{it} - \Delta Tax_{it} - forecast\ revenues_{it} \quad (1)$$

where ΔTax_{it} is the policy induced mid-year change in tax revenues in state i in year t (*i.e.*, changes in tax revenue enacted into law after the budget was passed). Netting out ΔTax_{it} is of crucial importance. In the absence of the ΔTax_{it} term in equation (1), a state which closed an emerging budget shortfall solely through a tax increase would have a measured revenue shock of 0 instead of the shock actual experienced and addressed through the tax increase. Thus, the revenue shock is the difference between what actual revenues would have been in the absence of any change to the state's tax code and the revenues projected at the start of the fiscal year. A negative revenue shock typically arises when tax receipts come in below expectation because economic activity was weaker than forecast by budget officials.

Similarly, the expenditure shock is defined as:

$$Expshock_{it} = actual\ expendture_{it} - \Delta Spend_{it} - forecast\ expenditures \quad (2)$$

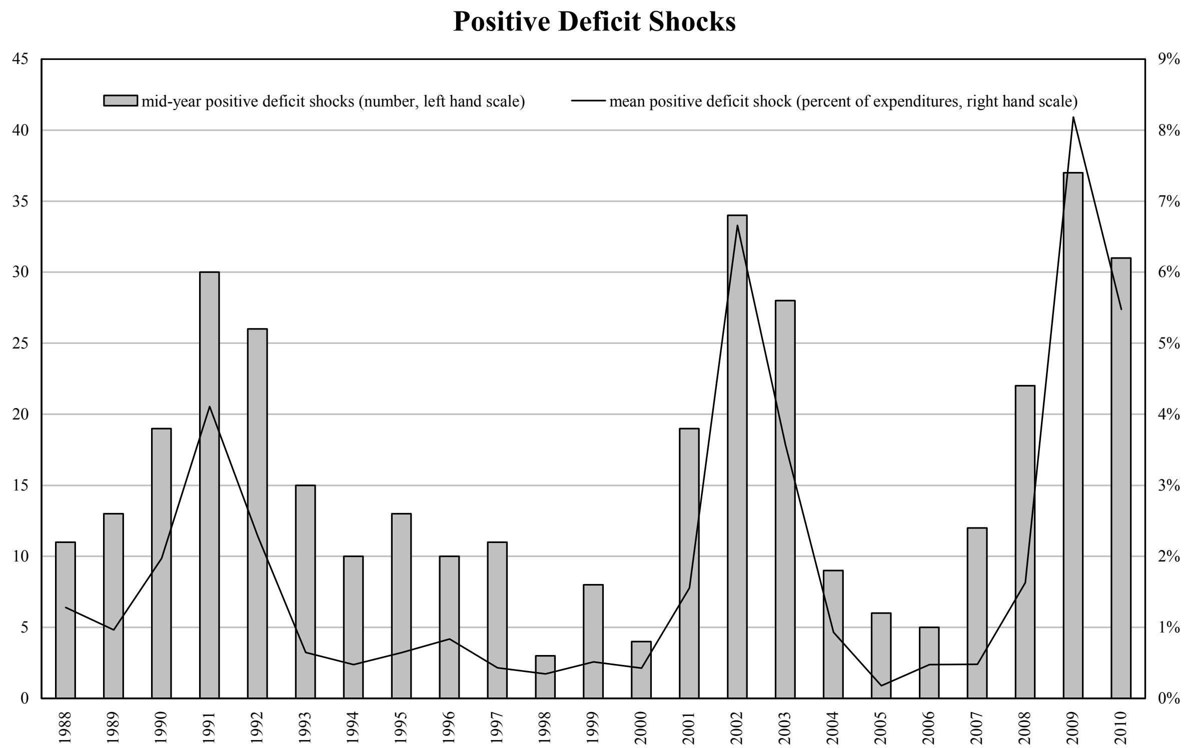
where $\Delta Spend_{it}$ is the mid-year policy change in expenditures (*i.e.*, changes in spending enacted into law after the budget was passed). Positive expenditure shocks occur for a number of different reasons, including when an economic downturn increases demand for transfer programs such as Medicaid.

The deficit shock experienced by a state in a given year is the difference between its expenditure shock and its revenue shock:

$$Defshock_{it} = Expshock_{it} - Revshock_{it} \quad (3)$$

Figure 6

Positive Deficit Shocks



$Defshock_{it}$ quantifies the budget deficit (or suplus) which opens up over the course of a fiscal year. The deficit shock is the sum of the deviation of revenues and expenditures from the level forecasted by state policy makers at the time the budget was being set. It can therefore be thought of as a forecasting error.

The analysis focuses on positive deficit shocks which tend to arise during periods of fiscal stress. (For completeness, we display the results for negative shocks on the tables, but do not discuss them). Figure 6 displays the average positive deficit shock (the average deficit shock conditional on the shock being positive) in all years of our sample. The shocks are highly cyclical, consistent with the notion that they are driven by unexpected fluctuations in economic activity. The magnitude of these shocks, and the number of states experiencing them, are only a bit larger following the recent 2007-09 recession than during much milder 2001 downturn, in part because of relief provided by federal grants.

3.3.2 Outcomes

States have three primary methods for balancing their budget in the face of an adverse deficit shock: mid-year spending cuts, $\Delta Spend_{it}$, mid-year tax changes, ΔTax_{it} , and mid-year drawdown of reserve funds, $\Delta Reserve_{it}$. As already discussed, $\Delta Spend_{it}$ and ΔTax_{it} are changes made to spending and taxes after the budget has been passed, but before the end of the fiscal year.[26] These outcomes are considered in Poterba (1994).

[26] The NASBO data records all mid-year tax changes, but only records mid-year spending *decreases*. Mid-year spending *increases* are unobserved in the data. The mid-year spending change measure can therefore be thought of as a measure of spending recessions. This quirk in the structure of the NASBO data is one reason for the focus on periods of fiscal distress, as mid-year spending *(continues)*

One of the contributions of this paper is to examine a third outcome, the drawdown of reserve funds, as this is one of the chief mechanisms by which states respond to shocks. $\Delta Reserve_{it}$ quantifies the unanticipated change in a state's reserve funds. It is defined as:

$$\Delta Reserve_{it} = actualbalance_{it} - projectedbalance_{it} - \Delta actualbalance_{i,t-1} - deficit_{it} \quad (4)$$

where $\Delta actualbalance_{i,t-1}$ measures the unexpected change in the year t starting total balance.[27] A state typically passes the budget for fiscal year t during the course of fiscal year t–1. In most cases, the ending balance for year t–1, which then becomes the starting balance for year t, is not known with certainty when the year t budget is passed. As a result, the difference between actual, $actualbalance_{it}$, and projected, $projectedbalance_{it}$, year-end balances often partially reflects an adjustment in the resources with which the state starts the year. This adjustment, $\Delta actualbalance_{i,t-1}$, does not represent a drawdown of reserve funds in fiscal year t and is therefore netted out. $deficit_{it}$ measures the extent to which the difference between actual and projected balances, net of change in starting resources, reflects deficit financing. Moving the total balance into negative territory does not drawdown reserve funds; it is in essence a loan against future years' budgets. It therefore must also be netted out.[28]

3.3.3 Empirical model

We estimate the influence of deficits on spending and taxes with the following specification:

$$\Delta Spend_{it} = \alpha + \beta_s \, Defshock_{it} + \varepsilon_{it} \quad (5)$$

$$\Delta Tax_{it} = \alpha + \beta_T \, Defshock_{it} + \varepsilon_{it} \quad (6)$$

$$\Delta Reserve_{it} = \alpha + \beta_R \, Defshock_{it} + \varepsilon_{it} \quad (7)$$

The hypothesis that states must annually balance their budgets yields the prediction that $\beta_s - \beta_T + \beta_R = -1$. The difference between the sum of the coefficients and –1 captures the extent to which states address budget imbalances by approaches such as deficit financing and accounting maneuvers such as transferring funds from outside the general account into the general account. The relative magnitudes of the coefficients shed light on which of the margins of adjustment, taxation, spending or reserves, is most important in closing deficits.[29]

In order to assess how the stringency of balanced budget rules affects the spending response to a deficit we estimate the following (and an analogous equation is used for the other outcomes):

$$\Delta Spend_{it} = \alpha + \beta_s \, Defshock_{it} + \beta_{sw} \, Defshock_{it} * Weak_{it} + \varepsilon_{it} \quad (8)$$

where $Weak_{it}$ is an indicator variable for states with weak budget rules (*i.e.*, an ACIR index below 7). The hypothesis that the stringency of balanced budget rules influences the magnitude of deficit reduction measures corresponds to $\beta_{sw} > 0$. A crucial assumption underlying the budget shock framework is that deficit shocks represent unbiased forecast error.

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increases as relatively unlikely during these periods.

27 Total balances at time t are equal to the ending balance in the general fund at time t–1 plus the state's budget stabilization fund (*i.e.*, rainy day account) at time t. A state's reserve fund equals the state's total balance, unless the total balance is negative in which case the reserve fund is empty and therefore equals 0.

28 Assume a state starts the year with a total balance of \$50 million and has no change in its starting balance (*i.e.*, $\Delta actualbalance_{i,t-1} = 0$). It then addresses a deficit shock equal to \$75 million by adjusting its total year-end balance to –\$25 million. The difference between the actual and projected year-end balance is \$75 million. However, only \$50 million of this sum represents a drawdown of funds on-hand at the start of the fiscal year. The \$25 million of deficit financing must be netted out for $\Delta Reserve_{it}$ to capture only the drawdown of reserve funds.

29 Equations (5) and (6) may appear to suffer from a simultaneity problem. For example, $\Delta Spend$ appears on both the right and left-hand sides of equation (5). As discussed in Poterba 1994 (p. 809), however, this problem is "apparent rather than real". In actuality, failing to subtract out the Δspend term (see equation 2) would introduce a simultaneity problem because the actual expenditureit term already includes $\Delta Spend$.

3.3.4 Sample

We restrict our sample to those states with either an annual budgeting cycle or an annual legislative cycle. States in which the legislative and budgeting cycles are both biennial are excluded as their response to fiscal shocks is likely to play out over a two-year period instead of the one-year framework assumed by the budget shock methodology. Following Clemens (2009), Alaska, Wyoming and Vermont are also excluded from the sample. Vermont is excluded because it has no balanced budget rules. Alaska and Wyoming are excluded because they exhibit very atypical fiscal flows, largely as a result of heavy reliance on the taxation of natural resource extraction (primarily oil). The estimation sample includes 39 states. Figure 7 displays these states and identifies the stringency of their budget rules. Finally, the NASBO data is available from 1988 through 2010. The estimation sample is limited to years of relative fiscal stress: 1988-1994, 2001-04, and 1998-2010, although results are general similar if all years 1988-2010 are included.

Table 5 presents summary statistics for the sample. The mean positive fiscal shock is a bit over $45 per-capita (expressed in 2004 dollars). Importantly, the magnitude and variance of positive deficit shocks (*Defshock* > 0) is nearly equal between weak and strong budget rule states (columns 2 and 3). The budget shock framework relies on the assumption that deficit shocks are true forecasting errors. Alternatively, the shocks could contain systematic bias. For instance, forecasts may be influenced by political pressure – e.g., intentionally optimistic forecasts intended to facilitate spending increases. This scenario becomes particularly problematic if the extent of bias is associated with the stringency of the rules – e.g., states with strong budget rules tend to produce less optimistic forecasts because the costs of overly optimistic forecast errors are increased by the stringency of the rules. In this case, divergence in fiscal behavior between weak and strong rule states might reflect endogenous forecast bias, not the efficacy of the rules. It is therefore encouraging that deficit shocks appear similar in both weak and string rule states. Although negative deficit shocks appear to be somewhat larger in weak rule states, the analysis does not focus on these shocks.

The remainder of the table displays the means for the three outcome variables. These mid-year budget adjustments are all quite cyclical, as can be seen in the three panels of Figure 8. $\Delta Spend_{it}$ (Panel A) only reflects spending cuts (see footnote 26). In order to make the panels comparable, ΔTax_{it} (Panel B) and $\Delta Reserve_{it}$ (Panel C) are plotted conditional on being positive and negative, respectively. Thus, the panels display the evolution over time of mid-year spending cuts, tax increases and reserve drawdowns.

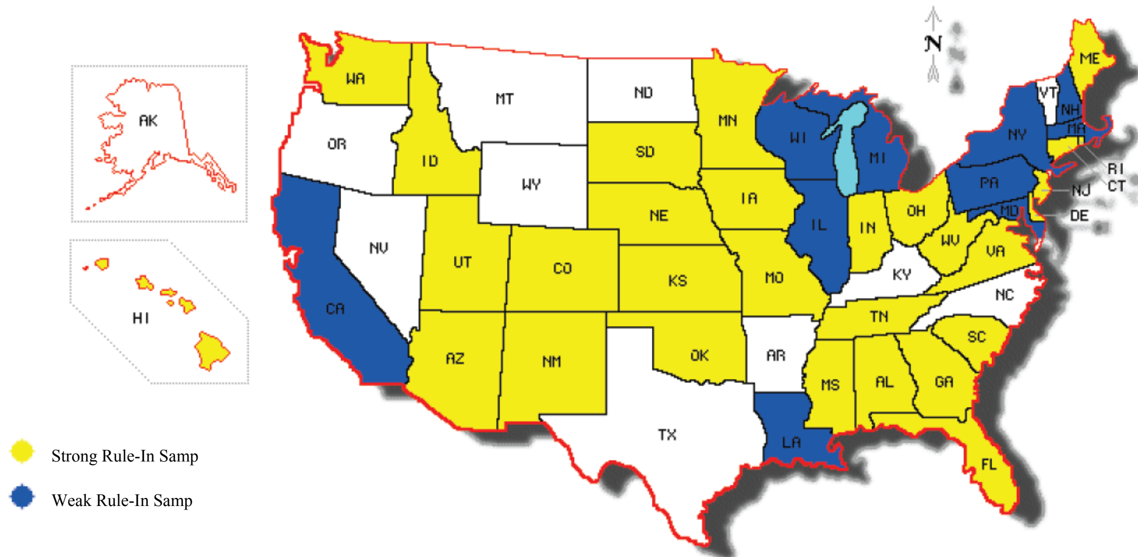
3.3.5 Results

Table 6 displays the results of estimating the budget shock equations. Each dollar of positive deficit shock causes state policy makers to reduce spending by around 50 cents (column 1), with the estimate falling to about 40 cents with the inclusion of year and state fixed-effect terms (column 2). Tax policy plays only a minor role in addressing mid-year deficits, as each dollar of shock induces only 5 cents of tax increases within the fiscal year (columns 3 and 4). Note, though, that tax changes often take time to implement and such frictions may limit the utility of this policy lever for addressing with-in fiscal year budget shortfalls.[30] Reserve funds are used to plug roughly 20 cents of each dollar of deficit shock and thus occupy a middle ground between spending and

[30] Poterba (1994) found tax changes for the following year to be an important lever. Our data currently does not permit us to investigate this.

Figure 7

Strong and Weak Budget Rule States in the Sample



Note: White states are not in the sample (see the text). The blue states (dark) are weak budget rule states in the sample. The yellow states (light) are strong budget rule states in the sample.

Table 5

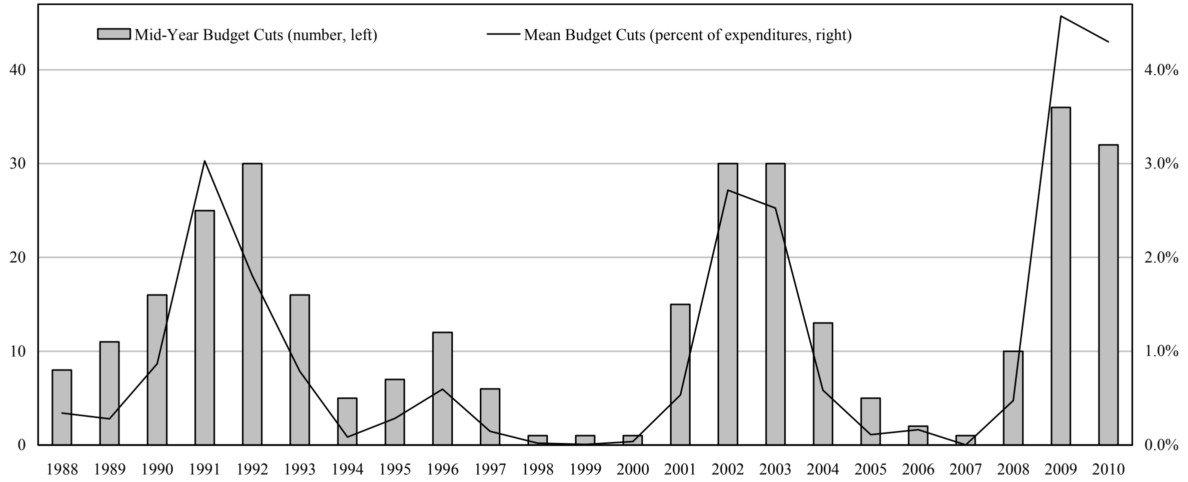
Summary Statistics for NASBO State Government General Fund Data

	Means			*p*-value for Test of Equality of Weak Rule and Strong Rule Means
	All States	Weak Budget Rule States	Strong Budget Rule States	
	(1)	(2)	(3)	(4)
Defshock > 0	47.42	45.92	51.38	0.53
	(90.08)	*(87.05)*	*(97.86)*	
Defshock < 0	–18.42	–20.53	–12.85	0.06
	(41.98)	*(45.80)*	*(29.00)*	
Δ*Spend*	–26.96	–28.93	–21.78	0.17
	(53.83)	*(57.23)*	*(43.43)*	
Δ*Tax*	2.35	1.49	4.51	0.01
	(12.57)	*(8.74)*	*(19.00)*	
Δ*Reserves*	8.66	13.33	–3.22	0.01
	(66.03)	*(57.41)*	*(83.12)*	
Number of Observations	539	391	148	

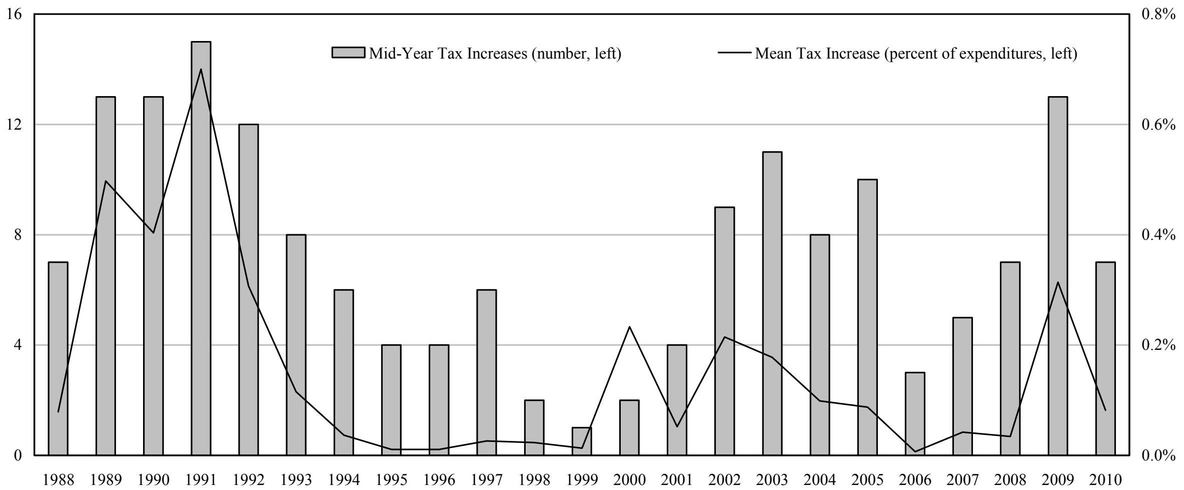
Note: Columns (1)-(3) contains means with standard deviations in paraentheses. Column (4) contains *p*-values from the hypothesis test that the mean in column (2) equals the mean in column (3). The unit of observation is state-year. The sample contains 39 states and the years 1988-94, 2001-04, and 2008-10.

Figure 8

a) Mid-year Budget Cuts



b) Mid-year Tax Increases



c) Mid-year Reserve Fund Drawdowns

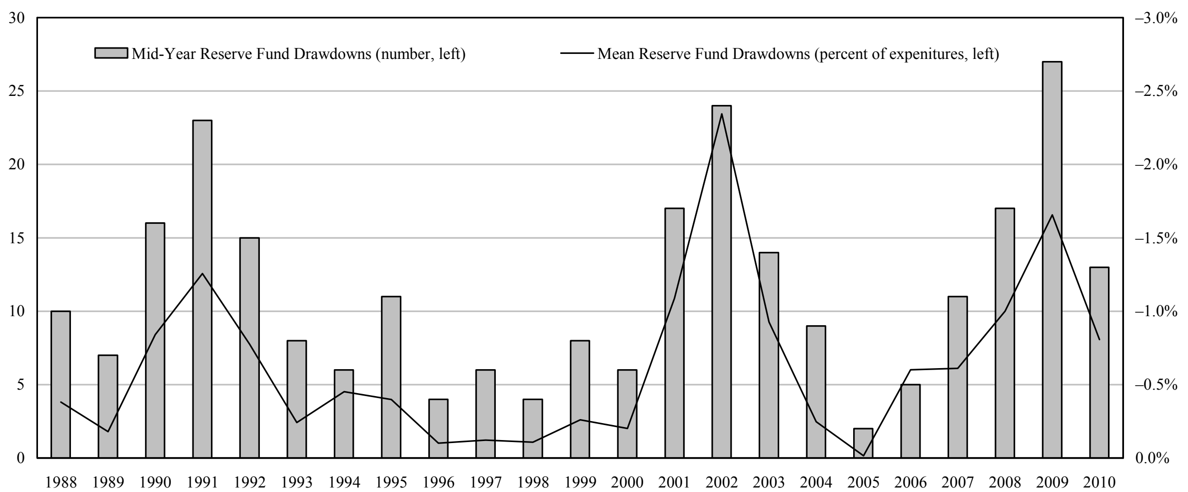


Table 6

State Reaction to Fiscal Shocks

	Δ*Spend*		**Δ*Tax***		**Δ*Reserves***		**Δ*Spend* – Δ*Tax* + Δ*Reserves***	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Defshock > 0	–0.47	–0.38	0.05	0.05	–0.21	–0.21	–0.73	–0.64
	*(0.04)****	*(0.05)****	*(0.02)***	*(0.02)***	*(0.07)****	*(0.07)****		
Defshock < 0	0.01	–0.06	0.02	0.03	–0.78	–0.73	–0.79	–0.82
	–(0.02)	*–(0.04)*	*–(0.02)*	*–(0.02)*	*(0.10)****	*(0.16)****		
Number of observations	539		539		536		N/A	
Year fixed-effects		X		X		X		X
State fixed-effects		X		X		X		X

Note: Standard errors clustered by state in parentheses. The unit of observation is state-year. The sample includes the years 1988-94, 2001-04, and 2008-10. The dependent variable is given in the colum header.

taxes (columns 5 and 6).[31] In total, the three outcomes are used to clear from around 75 cents to 65 cents of each dollar of shock (columns 7 and 8). The residual 25 cents to 35 cents is dealt with through deficit financing or accounting techniques such as transfers from other governmental accounts.

Panel A of Table 7 considers the possibility that the response to deficits may have differed during the 2008-10 period (as compared to the other periods of fiscal stress in the sample, 1988-94 and 2001-04). Examining this period is another contribution of our analysis. Not only were the magnitude of deficits larger in this period (Figure 6), but states also received a large infusion of *temporary* grants from the federal government beginning in fiscal 2009.[32] The infusion of aid, which is reflected in the NASBO data, significantly reduced the magnitude of the mid-year deficit shocks (at least in 2009). However, states were aware that the downturn was likely to be unusually protracted and that the fiscal assistance was temporary. As a result, they may have been reluctant to use all of the fiscal stimulus grants to plug current year budget shortfalls, but instead may have decided to use these funds over several years. Using the funds over a period of several years would

[31] The NASBO data is inconsistent across states in how transfers from the rainy day account to the general fund (and vice versa) are handled. In many cases, these transfers are handled as "adjustments". This is the preferred data construction for the methodology used in this paper. In other cases, the transfers are included in revenues and/or expenditures and cannot be distinguished from other changes in revenues and expenditures. The inconsistency results from the fact that the states choose how to handle the issue when they report to NASBO. When mid-year rainy day fund transfers are *not* handled through adjustments, the magnitude of the deficit shock will be understated by the amount of the transfer (e.g., a positive transfer from the rainy day account into the general fund will increase revenues and therefore decrease the size of a deficit shock). The inconsistency is a clear drawback of the NASBO data. However, when the data is restricted to only state-years in which "adjustments" were made, the results are essentially unchanged. Furthermore, the number of weak and strong budget rule states reporting adjustments is nearly equal and cannot be statistically distinguished.

[32] In the previous episodes the federal government provided relatively little temporary assistance. In 1990-92 the federal government stood by while states gamed the Medicaid rules to boost state aid and in 2003 a small amount of Medicaid grants were issued to states in response to their budget problems.

Table 7

Balanced Budget Rules and State Reaction to Fiscal Shocks

	ΔSpend		***ΔTax***		***ΔReserves***		***ΔSpend – ΔTax + ΔReserves***	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A) Parameters Permited to Differ in 2008-2010 Fiscal Downturn								
Defshock > 0	–0.32	–0.30	0.06	0.06	–0.35	–0.31	–0.73	–0.67
	*(0.05)****	*(0.05)****	*(0.02)****	*(0.02)***	*(0.07)****	*(0.08)****		
Defshock < 0	–0.04	–0.08	0.02	0.04	–0.67	–0.61	–0.73	–0.73
	–(0.02)	*(0.02)****	*–(0.02)*	*(0.02)**	*(0.13)****	*(0.20)****		
Defshock > 0 * Current Downturn	–0.18	–0.11	–0.02	–0.01	0.16	0.15	0.00	0.05
	*(0.06)****	*–(0.07)*	*–(0.02)*	*–(0.04)*	*(0.07)***	*–(0.14)*		
Defshock < 0 * Current Downturn	0.09	0.02	–0.02	–0.03	–0.27	–0.33	–0.16	–0.28
	–(0.05)	*–(0.07)*	*–(0.02)*	*–(0.02)*	*–(0.17)*	*(0.19)**		
B) Parameters Permited to Differ by Strength of Budget Rules								
Defshock > 0	–0.53	–0.43	0.02	0.03	–0.15	–0.17	–0.70	–0.63
	*(0.05)****	*(0.05)****	*–(0.02)*	*–(0.02)*	*(0.03)****	*(0.05)****		
Defshock < 0	0.02	–0.06	0.01	0.03	–0.75	–0.67	–0.74	–0.76
	–(0.02)	*–(0.04)*	*–(0.01)*	*(0.02)***	*(0.10)****	*(0.14)****		
Defshock > 0 * Weak Rules	0.19	0.15	0.07	0.08	–0.18	–0.11	–0.06	–0.04
	*(0.07)***	*(0.09)**	*(0.03)***	*(0.04)***	*–(0.16)*	*–(0.18)*		
Defshock < 0 * Weak Rules	–0.02	0.01	0.05	0.00	–0.26	–0.53	–0.33	–0.52
	–(0.03)	*–(0.08)*	*–(0.04)*	*–(0.06)*	*–(0.20)*	*–(0.37)*		
Number of observations	539		539		536		N/A	
Year Fixed-effects		X		X		X		X
State Fixed-effects		X		X		X		X

Note: Standard errors clustered by state in parentheses. The unit of observation is state-year. The sample includes the years 1988-94, 2001-04, and 2008-10. The dependent variable is given in the colum header.

require a more intense response to the mid-year deficits of 2008-10 than occurred in response to the deficits of earlier periods.

Panel A fails to support the hypothesis of a more intense fiscal response in the 2008-10 period. Although spending and reserves appear to experience a larger adjustment (columns 1 and 5), these results are not robust to the inclusion of year and state fixed-effects (columns 2 and 6). The overall adjustment per dollar of deficit shock achieved through the three fiscal margins appears to have been the same in 2008-10 as in earlier periods (columns 7 and 8). That said, because the shocks ware larger the adjustments were greater.

The ultimate aim of the analysis, assessing the efficacy of balanced budget rules, is addressed in Panel B. The response to deficits is permitted to differ by strong and weak budget rule states (equation 7). The estimates suggest that strong rule states reduce spending mid-year by about 50 cents for every dollar of shock, while weak rule states cut spending by only 30 cents (column 1). However, the result is only weakly precise when the year and state terms are included (column 2). In contrast, the budget rule effect on budget recessions is remarkably robust in Clemens (2009). Turning to taxes, the results are somewhat puzzling as weak rule states increase taxes more in response to deficit shocks than do strong rule states. However, the primary conclusion from Table 6 remains: in both weak and strong rule states only a small fraction of a deficit shock is addressed though mid-year tax increases. Finally, there is no evidence that budget rules influence reserve fund drawdowns (columns 5 and 6).

Table 8 explores the possibility that the efficacy of balanced budget rules changed in the 2008-10 period. The estimating equation interacts the deficit shock measure with both $Weak_{it}$ and $Current_{it}$, where $Current_{it}$ is an indicator for fiscal years 2008-10. A triple interaction of the deficit shock and $Weak_{it}$ and $Current_{it}$ is also included. To ease the interpretation, the marginal effects of a positive deficit shock for differing groups of states, as well as the results of hypothesis testing based on these marginal effects, are presented in the bottom portion of the table.

In contrast with the results on Panel B of Table 7, there is strong evidence of budget rule efficacy on the spending margin (columns 1 and 2; hypothesis test ii). Strong rule states engage in 41 cents of mid-year spending cuts when a budget shortfall opens (marginal effect a), whereas weak rule states make only 18 cents of cuts (marginal effect c). These results are nearly identical to those in Clemens (2009) (unsurprisingly given that these marginal effects are identified from the exact same set of years as used in Clemens). There is some indication, though, that the difference between weak and strong rule states has been reduced in the current period. While there is a fairly large difference in the magnitude of the current period spending response, 39 cents for weak rule states (marginal effect d) versus 55 cents for strong rule states (marginal effect b), the difference is not precise (hypothesis test iv). Furthermore, the estimates suggest that the behavior of weak rule states on the spending margin has changed in the current period relative to the earlier period. Previously these states reduced spending by 18 cents (marginal effect c), but in the current period they cut spending by 39 cents (marginal effect d); the difference is statistically meaningful (hypothesis test iii). Although strong rule states also appear to have increased the intensity of their response (marginal effects a and b), the difference is not precise (hypothesis test i).

The evidence is thus somewhat mixed as to how much the spending response to deficit shocks differs in the current period and the role of budget rules in this difference. Taking a step back, one possibility is that the lack of statistical precision for some of the hypothesis tests may disappear when more data is available from the current crisis. Overall, the point estimates suggest that both weak and strong budget rule states increased the magnitude of their spending response.

On the tax margin there appears to be insufficient power to draw many precise conclusions (columns 3 and 4). However, there is evidence that the more aggressive weak rule state response on

Table 8

Balanced Budget Rules and State Reaction to Fiscal Shocks

	Δ*Spend*		**Δ*Tax***		**Δ*Reserves***	
	(1)	(2)	(3)	(4)	(5)	(6)
Defshock > 0	–0.41	–0.39	0.05	0.05	–0.32	–0.33
	*(0.04)****	*(0.05)****	*(0.03)**	*(0.03)*	*(0.07)****	*(0.10)****
Defshock > 0 * Current Downturn	–0.14	–0.07	–0.03	–0.03	0.20	0.23
	*(0.07)**	*(0.09)*	*(0.02)**	*(0.02)*	*(0.06)****	*(0.11)***
Defshock > 0 * Weak Rules	0.23	0.24	0.03	0.04	–0.07	0.09
	*(0.04)****	*(0.06)****	*(0.03)*	*(0.04)*	*(0.13)*	*(0.11)*
Defshock > 0 * Weak Rules * Current Downturn	–0.07	–0.10	0.06	0.05	–0.14	–0.25
	(0.10)	*(0.10)*	*(0.05)*	*(0.05)*	*(0.21)*	*(0.21)*
Marginal Effects						
(a) Positive Shock	–0.41	–0.39	0.05	0.05	–0.32	–0.33
(b) Positive Shock during Current Crisis	–0.55	–0.46	0.02	0.02	–0.12	–0.11
(c) Positive Shock with Weak Rules	–0.18	–0.15	0.08	0.09	–0.38	–0.24
(d) Positive Shock during Current Crisis with Weak Rules	–0.39	–0.32	0.10	0.11	–0.32	–0.26
Hypothesis Testing (*p*-values)						
(i) Current Crisis Differs from Prior Episodes						
H_0: (a) – (b) = 0	0.07	0.43	0.09	0.18	0.00	0.05
(ii) Weak Rules Differs From Strong Rules						
H_0: (a) – (c) = 0	0.00	0.00	0.40	0.31	0.62	0.38
(iii) Weak Rules in Current Crisis Differ from Weak Rules in Prior Episodes						
H_0: (d) – (c) = 0	0.00	0.03	0.55	0.71	0.76	0.94
(iv) Weak Rules in Current Crisis Differ from Strong Rules in Current Crisis						
H_0: (d) – (b) = 0	0.09	0.18	0.03	0.03	0.33	0.47
Number of observations	539		539		536	
Year and State Fixed-effects		X		X		X

Note: Standard errors clustered by state in parentheses. The unit of observation is state-year. The sample includes the years 1988-94, 2001-04, and 2008-10. The dependent variable is given in the column header. Negative deficit shock main term and interactions are included, but not displayed.

the tax margin, as compared to strong rule states, seen on Table 7 is produced by behavior in the current period (hypothesis test iv). Again, though, the overall size of the tax response is small.

It appears that states have been relatively hesitant to drawdown reserve funds in the current period relatively to their prior behavior (columns 5 and 6; hypothesis test i). States reduced their reserves by around 35 cents in prior episodes (marginal effect a), but reduced reserves by only about 10 cents in 2008-10 (marginal effect b). There is no evidence that budget rules influence the magnitude of this response in any period.

4 Conclusion

Reviewing the American experience we find little evidence that statutory budget rules affect budget decisions. At times they are correlated with better budget outcomes because the change in rules and the change in policy both reflect a change in preferences of policymakers. By contrast, rules that are constitutionally based appear to have teeth. This leads to lower levels of debt, smaller deficits, and more pro-cyclical budget outcomes at the state level than at the federal level. We see this behavior in the aggregate time series data as well as in the cross-section data.

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FISCAL RULES AND FISCAL POLICY IN BRAZIL

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The Brazilian fiscal framework, set from 1997 to 2001, played an important role in the macroeconomic consolidation and allowed the Government to adopt countercyclical measures to tame the financial crisis of 2008. The fiscal framework can be summarized in five steps: i) a large-scale privatization program; ii) recognition of extrabudgetary unrecorded liabilities; ii) subnational debt restructuring program; iv) achievement of public sector high primary surplus targets, in order to redeem net debt in the long term; and v) the institution of fiscal rules by the Fiscal Responsibility Law, which comprises general targets and limits for selected fiscal indicators. In 2003, the central government decided to raise the primary surplus, and therefore when the crisis arrived at the end of 2008, the public sector net debt had already fallen from 60.6 per cent of GDP to 38.4 per cent of GDP. During that time, the decision to expand the allocation in allowances provided to low-income families proved an important cushion when the crisis came. In 2009, the net debt shifted to 42.8 per cent of GDP due to loss of revenues, tax deductions and subsidies to companies through low interest rates loans provided by the national banks. Moreover, mandatory expenditures kept increasing, contributing to boost government dissavings. In the near term, the primary surplus is due to increase again, offsetting the net debt recent rebound. However, important fiscal policy challenges still remain.

1 Introduction

The paper provides an overview of the Brazilian fiscal policy undertaken during the past 16 years, since the launching of the Real stabilization plan in July,1994. It also discusses the active fiscal policy and recent outcomes after the financial crisis in 2008 and the main challenges to be tackled in the near term.

The fiscal framework built throughout the mid-'90s, as a response to the impact of the Real stabilization plan aftermath on fiscal accounts and to the international economic turmoil, provided the background for the favorable fiscal stance after 2003 and was an important means to supporting the fiscal policy undertaken in 2009, aimed to offset the impact of the recent financial crisis. It can be summarized in four steps: i) a large-scale privatization program, aimed to transfer to the private sector the activities unduly undertaken by the public sector, to reduce the public debt and to finance a major part of the external unbalance; ii) recognition of quasi-fiscal or extrabudgetary unrecorded liabilities; iii) subnational debt restructuring program conditioned to fiscal adjustment programs, intended to stop recurrent intra governmental bail-outs; and iv) the institution of fiscal rules by the Fiscal Responsibility Law in 2001, which sets a fiscal framework, ceilings for selected indicators and rules towards governance and transparency. Moreover, other efforts towards administrative, social security and civil servants' pension reforms were gradually addressed. From 1996 to 2002, the net debt soared from 30.7 per cent of GDP to 60.6 per cent GDP, respectively, due to the impact of international crises, high interest rates and the amount of liabilities recognized in the net debt during the period of fiscal adjustment. In 2003, the central government decided to increase the primary surplus, so as when the 2008 financial crisis erupted, shrinking the external credit and putting downward pressure to exchange rate depreciation, the public sector net debt had already

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Special thanks to Francisco Carneiro (World Bank) and Luiz Pereira (Central Bank of Brazil), who provided useful comments on a previous version of the paper. The views and interpretations in this document are those of the author and should not be attributed to the brazilian government.

fallen to 38.4 per cent of GDP. During that time, the decision to increase the allowances provided to low-income families was an important cushion to the economic impact of the recent financial crisis.

Going forward, the paper estimates that the public sector net debt to GDP rate tends to fall in the near term, due to: high primary surplus targets, lower level of interest rates than in the past years and expected economic growth in the following years. High primary surplus will still be necessary to contribute to foster domestic savings and to reduce long term real interest rates. Besides, the government will have to take measures towards the control of current expenditures, in order to allow an increase of the public investment share on total expenditure, and to make a step forward in the fiscal reform agenda.

The paper is divided in four sections: the first presents the main fiscal measures undertaken in the Plano Real aftermath and their impact on net debt; the second addresses the impact of the Fiscal Responsibility Law (FRL) on sub-national goverments' fiscal accounts; the third refers to the management of fiscal policy from 2003 to 2008 and the recent countercyclical measures taken after October, 2008; the last section addresses the near-term challenges. The FRL main features are treated in a specific Annex.

2 Fiscal consolidation background

In spite of the Real Plan success in controlling inflation, the public finances were still to be tackled in 1994. After the price stabilization, the governments were not able to adjust their finances by inflation as before, mainly by adjusting expenditures below the inflation rate. Besides, the public sector had lost the ability to invest, and the SOEs were running high deficits or were inefficient, with mismanagements and political interference.[1]

From 1994 to 1998 the fiscal stance was also affected by the policies aimed to tame inflation and to defend the currency under an exchange rate-based stabilization plan, through the sterilization of liquidity caused by foreign inflows and the increase of the Selic target interest rate, which indexed most part of government's bonds. During this time, the government decided to enhance the privatization process in place since 1990. While the privatization proceeds were meant to redeem public debt, the foreign inflows also helped to delay the Real devaluation until 1999.

The currencies devaluation in Asian developing countries during the financial turmoil in 1997 led to a huge loss of international reserves, putting downward pressure on the Real domestic currency in 1998. The major setback of global credit, particularly into the emerging markets, urged the government to an acceleration of the fiscal adjustment. As a response to the crisis, the government made an US$ 41 billion preventive agreement with the IMF and other multilateral agencies to regain credibility in the international financial markets, which among other measures, settled a fiscal adjustment beginning at the end of that year. Therefore, the government created the Fiscal Stabilization Plan, which set increasing primary surplus targets along with structural measures, with the intention to build a definitive fiscal consolidation.

The Plan encompassed 2 initiatives: i) a Plan of Action 1999-2001, to be tackled in the near term: setlement of fiscal adjustment agreements with the states, sanitation and privatization of state banks and the control of sub-national and SOEs borrowings, along with public sector primary suplus targets of 2.6 per cent of GDP in 1999, 2.8 per cent of GDP in 2000 and 3.0 per cent of GDP in 2000; and ii) a working agenda towards administrative, social security, civil servants' pensions, tax and labor reforms, along with the institution of a fiscal responsibility law.

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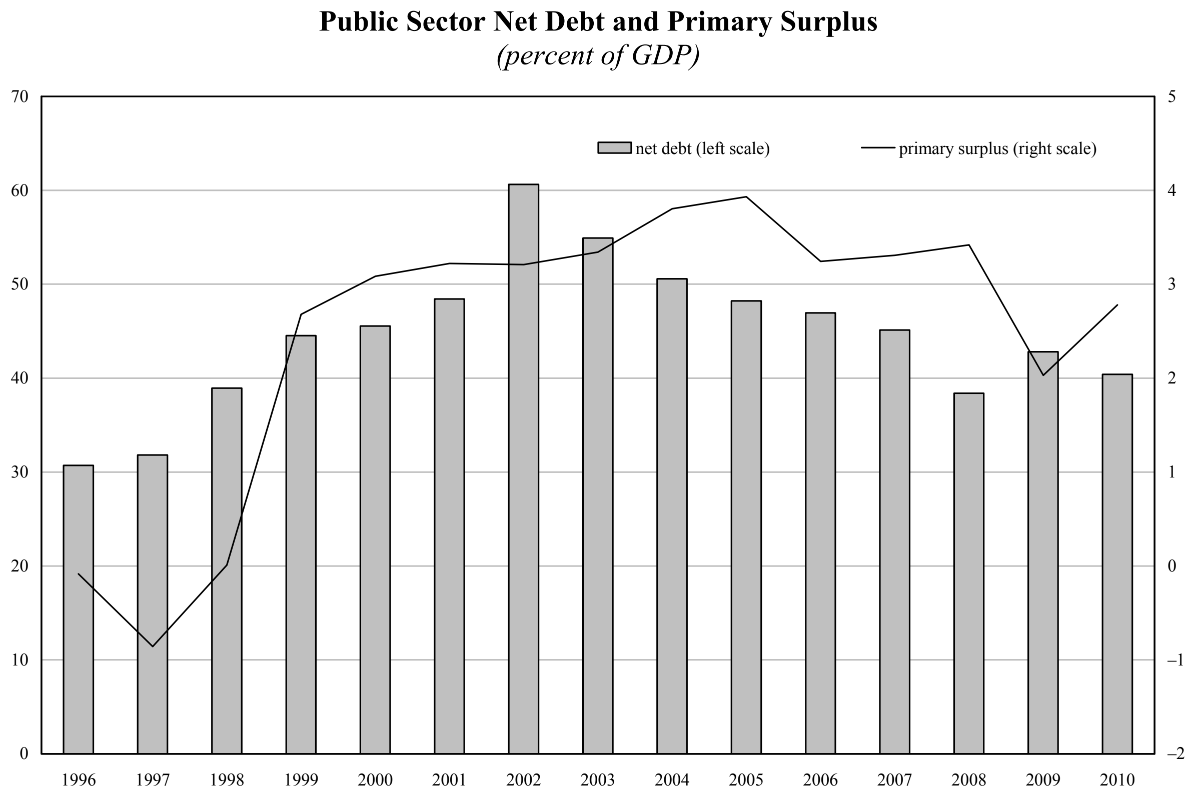
[1] SOEs: state-owned enterprises.

Figure 1

Public Sector Net Debt and Primary Surplus
(percent of GDP)



Source: Central Bank.

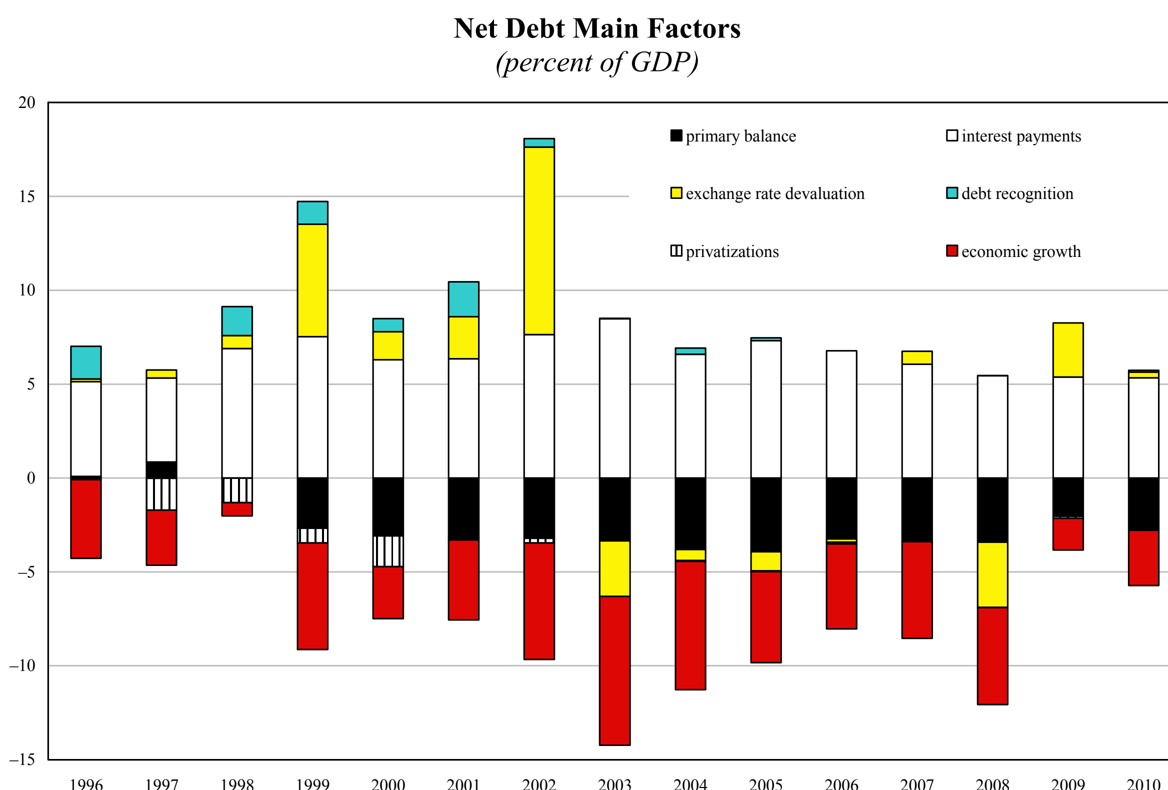
In January 1999, the real was devaluated and the government changed its policy from fixed exchange rate regime to inflation targeting with flexible exchange rate. Hitherto, the large-scale devaluation and continuously high interest rates contributed to boost the net debt, which kept increasing until the electoral year of 2002, after the impact of another crisis of confidence related to Lula's new administration (Figure 1).

Those factors were determinant to slower economic growth throughout the years until 2003. A new stand-by agreement was made in 2002, which included another primary surplus target increase, from 3.35 to 3.75 per cent of GDP, and structural reforms, as the creation of a pension fund for civil servants and a tax reform proposal. Therefore, although the primary surplus contributed to lower the PSBR from 6.8 per cent of GDP in 1998 to 4.4 per cent of GDP in 2002, the net debt rose from 38.9 per cent of GDP to 60.6 per cent of GDP in 2002 in the same period, mainly due to the impact of broad exchange rate devaluations. After 2003, the primary surplus target was raised again to 4.25 per cent of GDP.

The macroeconomic policy, based on inflation targeting with flexible exchange rate regime and fiscal adjustment, was determinant to restablish stability and regain confidence, which allowed the country to benefit from the favorable international environment after 2003, fostering economic growth with lower inflation. As a consequence, the annual target interest rate fell from 19 per cent to 13.75 per cent and the net debt fell from 60.6 per cent of GDP to 38.4 per cent of GDP between 2002 and 2008. It also allowed a more favorable Treasury bonds' maturity and composition, with the gradual decrease of issues linked to overnight interest rates and to exchange rates.

Figure 2

Net Debt Main Factors
(percent of GDP)



In the external sector, all solvency indicators showed a great improvement, led by the international reserves accumulation policy, increasing commodity prices and boosting foreign investment. The government's external net debt became negative and reached 2.1 per cent of GDP in 2005 from a positive 15.7 to GDP rate in 2002, due to joint measures of international reserves accumulation and Treasury repurchases of its external debt. The reversal from current account deficits to surpluses after June, 2003 and the improvement in the other macroeconomic fundamentals resulted in the country risk to reach its lowest level in the international markets and in a virtual cycle of an average economic growth, from 1.9 per cent between 1999 and 2003, to 4.8 per cent between 2004 and 2008.

Although the Fiscal Stabilization Program underlines all the period of policies adjustment towards economic stabilization, from 1994 to 2003, they were not sufficient to overcome the resulting impact of currency devaluations, high interest rates and slower economic growth in the fiscal stance during most of the adjustment period (Figure 2). The impact of the Program may only be seen after 2003 and in a long-term perspective, in terms of the provision of efficiency gains to the fiscal and monetary policies.

2.1 The privatization program

The privatization program undertaken in the 90s was one of the largest in the world: from 1991 to 2002, it transferred the control of 119 firms – being 84 held by the central government – and minority stakes in a number of companies to the private owners. The auctions produced US$ 87.8 billion in revenues, plus the transfer of US$ 18 billion in debt (Table 1). This amount

Table 1

Brazilian Privatization Program
(US$ billion)

Program	Revenues	Debt Transferred	Total Proceeds
Federal level	59.8	11.3	71.1
telecommunication	*29.0*	*2.1*	*31.1*
others	*30.8*	*9.2*	*40.0*
State level	28.0	6.7	34.7
Total	87.8	18.0	105.8

Source: BNDES – National Social and Economic Development Bank.

encompasses US$ 6 billion shares of firms that remained SOEs, US$ 10 billion from new concessions of public services to the private sector, and US$ 1.1 billion in minority stakes in various private companies owned by the National Social and Economic Development Bank – BNDES.

The privatization program had three components: i) the National Program of Privatization (PND) at the central government level, which started in 1991 with the privatization of several industrial companies, ports, railroads, the Vale mining corporation in 1997 and public concessions in the energy and telecommunication sectors; ii) similar programs at the state level, launched in 1996, which had it picks in 2000 with the privatization of Banespa bank, owned by the state of Sao Paulo; and iii) the privatization of the telecom industry, in 1997, which accounted for 30 per cent of the total proceeds.

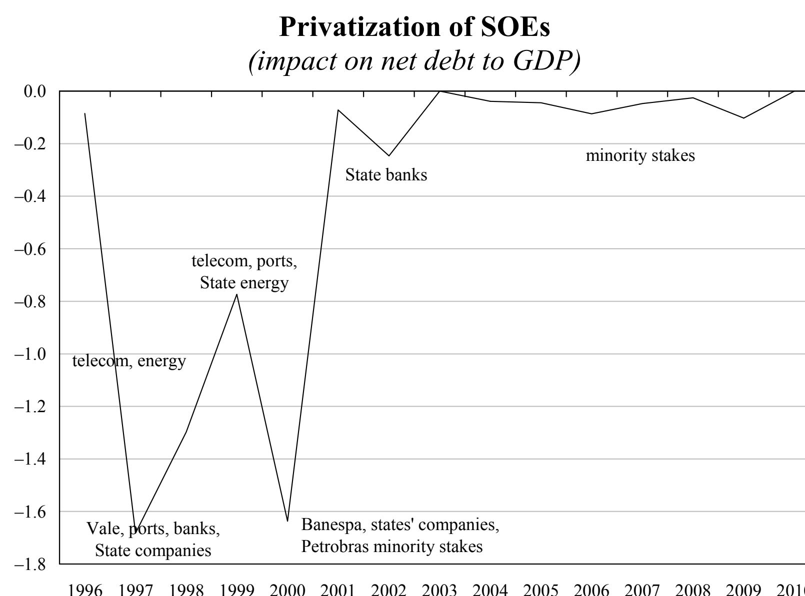
In spite of its positive impact of 6.1 per cent of GDP on fiscal accounts, the Program was not sufficient to compensate the sharp public net debt boost during the period, even when the Program reached its highest levels in 1997 and in 2000 (Figure 3). In fact, it was more effective in attracting foreign direct investment, which helped to maintain the foreign imbalance and to delay devaluation, which came only in early 1999, after the privatization program had slowed down. Therefore, because the program was developed in a context of macroeconomic policies aimed to tackle the inflation and to defend the currency under an exchange rate-based regime, the intended goals of reducing debt in order to open room to lower interest rates in the economy could not be seen hitherto. Other goals, such as stopping SOEs' deficits once and for all and improving economic efficiency were much clearly perceived.

Macedo *et al.* (2003 and 2005) examined the changes in performance of those companies after the privatization, comparing their annual financial statements (balance sheets, income statements and cash flows) years before and after privatization. They found that the results indicate an improvement in profitability and in efficiency.

In the case of the companies owned by the states, 40 were privatized and 15 had their minority stakes sold to the market, in the context of the states' debt restructuring with the federal government. Among them, state banks were privatized with the objective of not only addressing their chronic public debt problems, but reducing the participation of local governments in banking activity. In fact, the two problems were related: state banks were the main purchasers of the local governments' bonds. Debt restructuring packages were offered for those who agreed to applying their banks to the following purposes: a) to liquidate it; ii) to privatize it; c) to transfer it to the

Figure 3

Privatization of SOEs
(impact on net debt to GDP)



central government for future privatization; or iv) to transform it in a development agency.[2] In 1998, the state banks represented over 17.4 per cent of total domestic banking credit and 10.1 per cent of total deposits. The state financial system encompassed 25 commercial and multiple banks, 2 saving banks, 5 development banks and 32 other financial institutions. By 2002, 14 financial institutions had been liquidated, 20 had been privatized by the states, 11 had being transferred to the central government, being 7 privatized, and 10 development agencies had been created. The 4 remaining banks held by the central government were privatized between 2003 and 2005. Nakane and Weintraub (2003) found that in the case of the banking sector the program has had a positive impact on productivity.

2.2 *Recognition of quasi-fiscal or extrabudgetary unrecorded liabilities*

From 1996 to 2001, several off-budget liabilities were registered in the net debt, mainly as a consequence of SOEs' debt transfers to the central government due to the privatization program – most of them related to employees' legal claims – or through the transfer of bad performance loans as part of a large-scale capitalization of state-owned financial institutions. The liabilities also encompass the net fiscal impact of the private banking system restructuring from 1995 to 1997.[3]

From the total of 8 per cent of GDP of liabilities recognized, 51.7 per cent was due to capitalization of state-owned banks at the central government level in 2001. Moreover, the process of sanitation and privatization of state banks and SOEs resulted in the recognition of several asset losses or assumption of debts, which represented 20.9 per cent of the total debt recognition. Finally, 16.9 per cent were interest rates subsidies on housing loans registered in the banks' balance sheets as credit against the central government. Those assets are still being audited by the National Savings Bank (Caixa Economica Federal – CEF), as part of the process of debt recognition, and being exchanged by long-term market tradable government bonds, called Certificate of Wages Variations – CVS. In December, 2010, over R$ 56.1 billion of CVS (1.7 per cent of GDP) were registered in the net debt, from the total liabilities of R$ 150 billion (4.8 per cent of GDP).[4] The

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[2] Those measures were set by the "program of incentives for the reduction of the public sector presence in the financial activity", called PROES, launched in 1996.

[3] PROER – Program of incentives for the restructuring of the national financial system, launched in 1995.

[4] The housing subsidy created in 1967 called Fundo de Compensação de Variações Salariais (FCVS) aimed to guarantee remaining families' debts to the financial system, brought up by government subsidies throughout the years, mainly by adjusting the debt service payment to the wage rate of growth. Those credits were registered in the banks' balance sheets for future payment by the central government.

Figure 4

Liabilities Recognized by the Central Government
(impact on net debt to GDP)

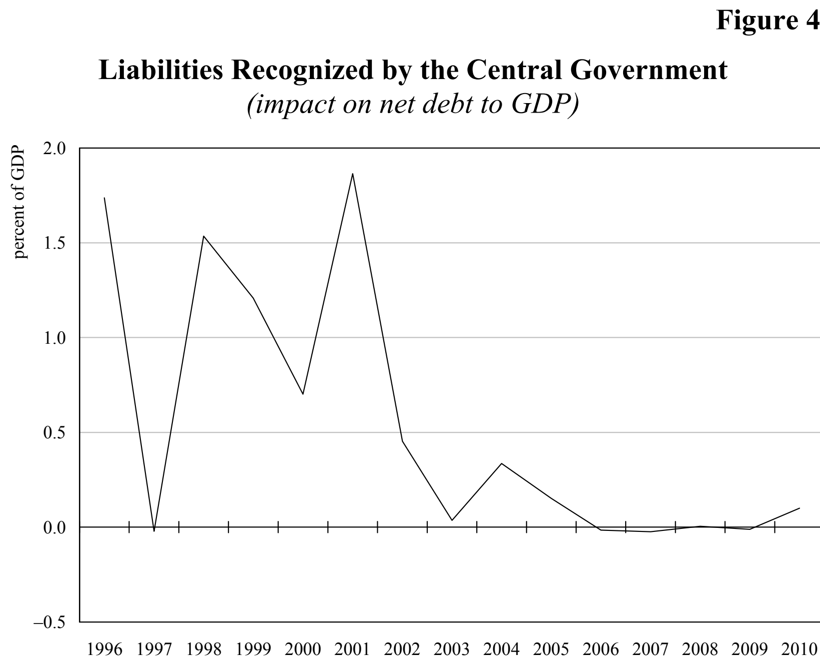


Table 2

Liabilities Recognized by the Treasury from 1996 to 2001

Liabilities	Percent of Total
Privatization and liquidation of public enterprises	20.9
Housing subsidies	16.9
Capitalization of federal financial institutions	51.7
Others	10.4

Source: Ministry of Finance.

remainder is still being recognized, in a slow average yearly pace of 0.02 per cent of GDP. Other liabilities include the net impact of Central Bank loans to private banks under the Proer restructuring program (Table 2).

2.3 Sub-national debt restructuring program

Since the 1988 Constitution, Brazil has gone through a period of remarkable decentralization in both fiscal and political terms. State and local governments have become responsible for the execution of a larger portion of the budget, with correspondingly greater autonomy with respect to fiscal decisions.

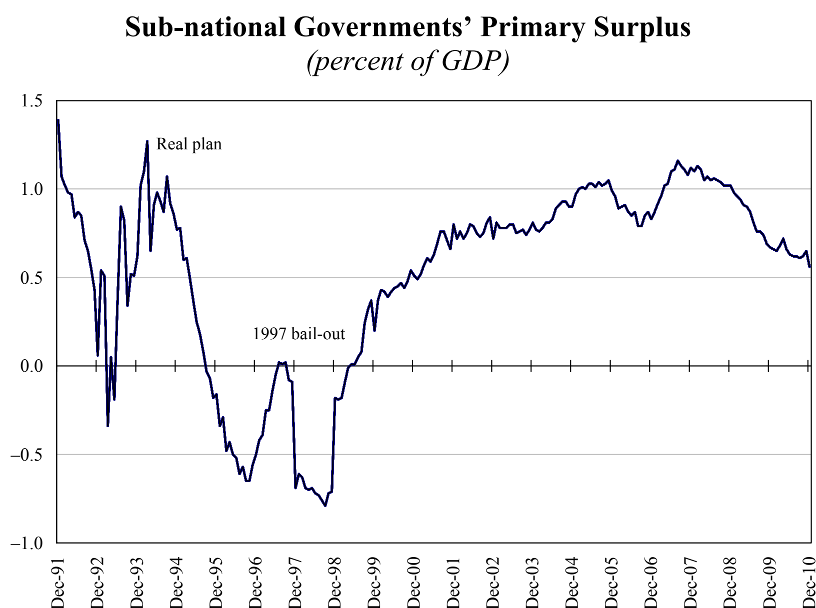
Before the debt restructuring program that took place in 1997, the deterioration of the states fiscal performance was the major factor behind the decline of the public sector primary balance after the introduction of the Real Plan in the mid-1994.

The difficulties faced by the local governments in 1995 can be traced back to the states' sluggishness in adjusting to the new low-inflation environment and to the fact that their finances were severely hit by the very high interest rates maintained in most 1995. From 1994 to November 1997, the subnational governments' net debt increased from 9.9 to 11.1 per cent of GDP. As a result, many of them started to have cash flow problems and had to rely more heavily on short term loans at market interest rates. Throughout 1995, arrears were incurred to suppliers and public employees and on loans to their own banks. At the end of that year, short-term loans were falling due and as salary payments had to be disbursed, a severe fiscal crisis emerged in the states (Figure 5).

In 1996, as a response to the states' financial crisis, the central government undertook debt restructuring plans, in conjunction with fiscal adjustment programs which were eventually consolidated in 1997. In parallel to that, state banks started to have serious difficulties and many of them were put on federal intervention. The central government was forced to refinance the state of Sao Paulo debt to its state bank Banespa to prevent major financial crises. Therefore, while debt negotiations were taking place, the central government decided to create a program to reduce states involvement with banking activities.

Figure 5

Sub-national Governments' Primary Surplus
(percent of GDP)

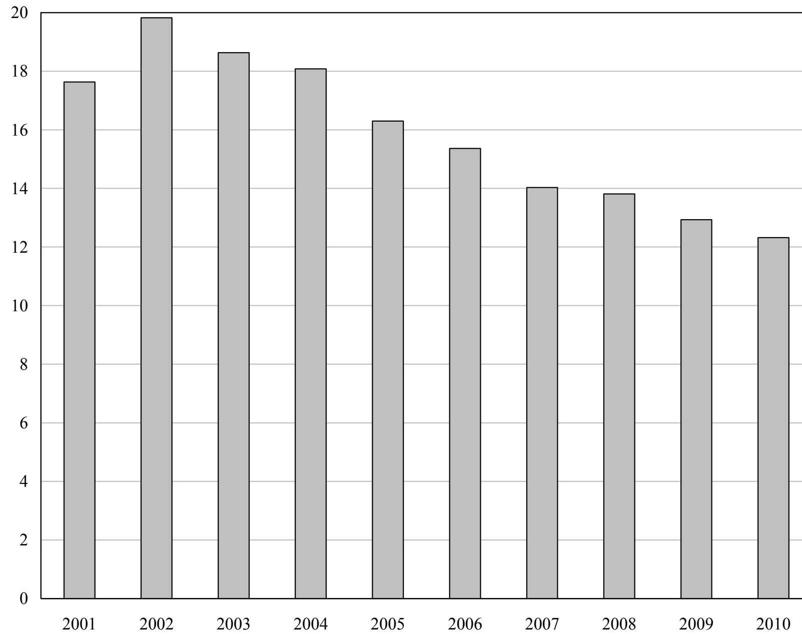


The debt restructuring plans involved a comprehensive restructuring of the local governments' net debt, with both up-front subsidy and interest rate subsidy. In November 1997, the net debt amounted to 12.1 per cent of GDP, 34 per cent of which belonging to the State of São Paulo. Even after the restructuring, the net debt continued to increase until April 2003, when it reached 19.7 per cent of GDP, due to assumptions of SOEs' debt under the privatization program and to the gap between the interest charged and the amount paid off, considering the cap of 13 to 15 of net revenues in debt service payments (Figure 6).

The restructured debt was divided in two parts: i) 20 per cent of it had to be redeemed with the proceeds from the privatization of state assets; and ii) the remaining 80 per cent had maturity up to 30 years and an annual interest rate of 6 per cent, plus monetary correction. Since the 6 per cent real interest rate was lower than the real interest rates at which the federal government was likely to finance its debt during the contract period, the agreements involved a subsidy to the restructured debt. A cap of 13 to 15 per cent of net revenues was established for the annual debt-service ratio and all debt service exceeding this cap was automatically capitalized under the contract. And, finally, as a guarantee to the federal government for the service of the restructured debt, the state government pledged their federal transfers and their own revenues, which could be withheld in the event of non-compliance.

The 1997 bail-out was conceived to be a once and for all measure, in order to stop the fiscal inertia brought by recurrent bail-outs. Therefore, in order to achieve that, the agreements between the central government and the states included: i) fiscal adjustment programs, with primary surplus targets and spending ceilings; ii) payment of services warranted by their current revenues; iii) prohibition to apply for new borrowings until their debt to net revenue equaled one to one; and iv) prohibition of bail-outs among levels of governments, set by the Fiscal Responsibility Law (FRL). Later, the government issued general rules for restructuring also the municipalities' debt on similar conditions as for the states program.

Figure 6



2.4 *The Fiscal Responsibility Law (FRL)*

In 2000, the government enacted the FRL, which comprises the fiscal management framework aiming at the consolidation and the maintenance of macroeconomic stability. It is considered as the final and definitive part of a broader initiative of the Fiscal Stabilization Plan started in the '90s. Instead of fixing fiscal targets, the Law provides the mechanisms that allow the compliance of the fiscal targets proposed by the executive to the legislative, the control of fiscal aggregates, transparency and the stimulus towards fiscal consolidation, in all levels of government.

The Law defines ceilings for payroll and debt to net curret revenue (NCR) ratio for each level of government. Figures 7 and 8 show that, in the case of the state governments, those indicators have declined along the years. The fiscal ajustment programs undertaken by the states under the restructuring plans have paved the way for the law compliance.

Figure 7

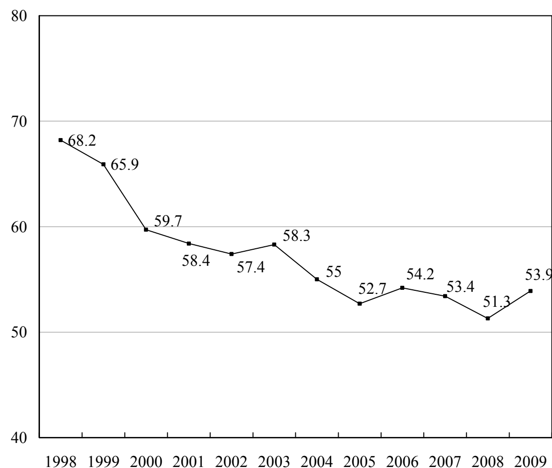
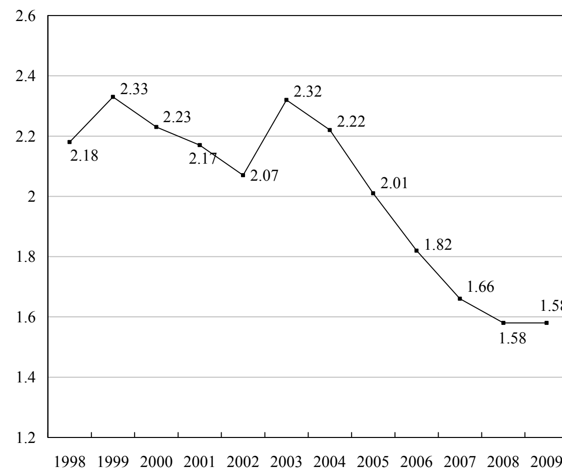


Figure 8



One of the most important drivers of fiscal governance brought by the Law is the prohibition of intra-governmental financing. Before the privatization of state banks and the 1997 bail-out, the states borrowed extensively from their banks and from domestic capital markets through the issue of bonds. Besides, because of the perception of the increased risk, the states used to pay interest rates higher than the ones paid by the federal government, which ended up reflecting higher returns in the context of a low risk investment. The repeated crises and bail-outs before 1997 suggest, at first glance, that the federal government was simply providing a soft-budget constraint to states that increased moral hazard problems and led them repeatedly to fail, and the central government was unwilling to change the incentives. In this sense, the fact that the government had been able to keep this rule unchanged for 10 years helped to build a better perception of the soundness of the states' finances and to lower the political pressures to change the Law.

3 High primary surpluses policy and the response to 2008 crisis

Since 1999, primary balance targets have been raised in response to several crises, aimed to reduce medium term net debt but also as a way to regain market confidence. From 2004 to 2008, primary surpluses have stayed above 3 per cent of GDP, leading the net debt to a persistent fall.[5] The favorable economic environment, which contributed to boost GDP medium real growth rate in 2003 onwards, helped to move the tax burden to a shift of 34.4 per cent of GDP in 2008, from 28.7 per cent in 1999. The central government provided the greatest contribution of 24.1 per cent of GDP in 2008 from 19.9 per cent of GDP in 1999. Therefore, primary surpluses were driven mainly by revenues growth, since spendings increased as well (Figure 9).

In 2008, current expenditures reached 20.9 per cent of GDP, being 10.7 per cent transfers to families, and continued increasing in 2009. Table 3 shows that the government has promoted an active policy of fostering those transfers throughout the years. The policy of adjusting the minimum wage above inflation explains most of the increase on social security and social assistance benefits, which totaled 8.5 per cent of GDP in 2009.[6] The government also expanded the Bolsa Família program – allowances to low-income families, conditioned to their children's vaccination and attendance at school – from 2.6 million families in 2002 to 13,1 million families in 2010.[7] Moreover, it promoted a large-scale restructuring of civil servants' wages by adjusting them above inflation, along with a policy of hiring teachers, doctors, regulatory affairs specialists, engineers and workers as an exchange for the ones hired through temporary contracts. The high pace of retirement flow (one per cent of total civil servants per year), the relatively low average age to qualify for retirement (60 years men and 55 years women) and the adjustment of civil servants' pensions at the same rate of civil servants' wages, as demanded by law, explains the pace of retirement payments throughout the years.

The social indicators released by the Brazilian Institute of Geography and Statistics (IBGE) show that the Bolsa Familia program might have produced an important social cushion to the impact of 2008 crisis, by helping to keep the demand growth in a positive pace. The indicators show that, from 2004 to 2009, real earnings have grown faster in the northeast region, where

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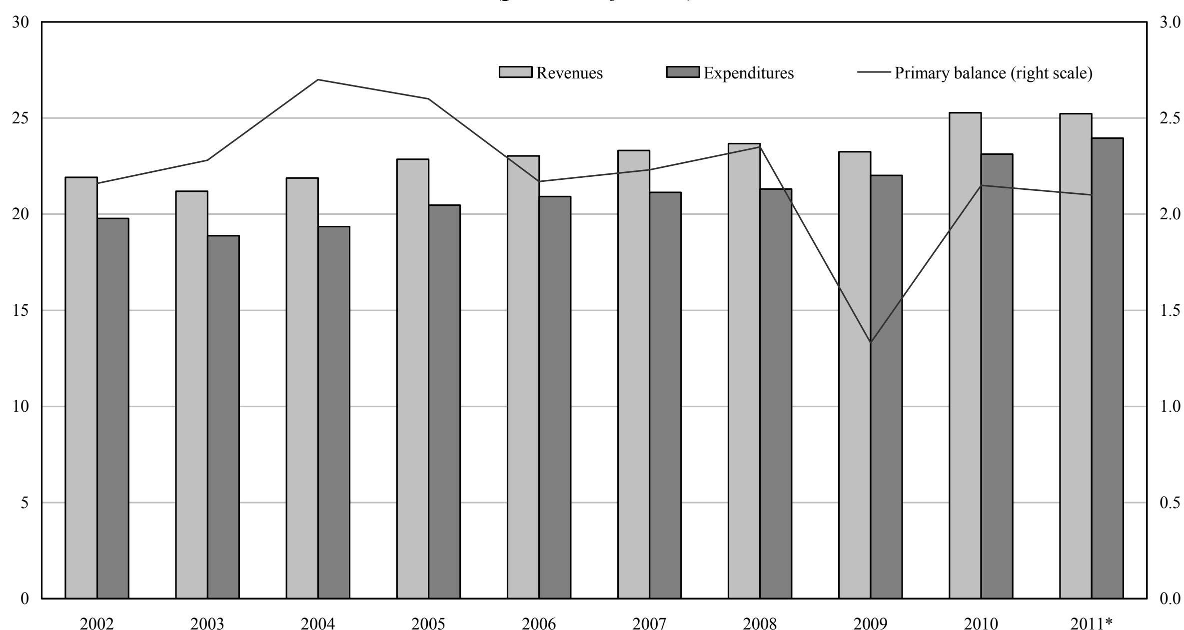
5 After the GDP methodological review by IBGE in 2006, the primary surplus target of 4.25 of GDP set in 2004 was recalculated to 3.8 per cent of GDP.

6 The bottom limit for social security and assistance benefits is the minimum wage, defined annually by the congress, after an executive proposal. For several years, the executive had proposed a minimum wage adjusted by previous year's inflation plus per capita GDP growth. From 2010 onwards, the adjustment proposed has changed for previous year's inflation plus GDP real growth from 2 years before that.

7 The amount transferred by Bolsa Família depends on the family income (maximum by US$ 70 a month), and the quantity and age of the children. The benefit varies from US$ 10 to US$ 100 a month per family. In 2008, the children's top age to qualify for the benefit was raised from 15 to 17 years old.

Figure 9

Central Government Primary Balance
(percent of GDP)



* Budget.
Source: Ministry of Planning.

Table 3

Central Government Current Expenditures-to-GDP Ratio

Expenditures Except Interest Payments	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Transfers to other levels of government	**4.6**	**4.9**	**5.3**	**5.0**	**5.0**	**5.7**	**5.6**	**5.7**	**6.1**	**5.9**
Transfers to families	**8.8**	**9.3**	**9.6**	**10.0**	**10.1**	**10.6**	**11.1**	**11.0**	**10.7**	**11.8**
Social security benefits	5.5	5.8	5.9	6.3	6.5	6.8	7.0	6.9	6.6	7.1
Social assistance benefits	0.7	0.8	0.8	0.9	0.9	1.0	1.1	1.2	1.2	1.4
Unemployment insurance	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.9
Civil servants' and military pensions	2.1	2.3	2.2	2.1	2.0	2.0	1.9	1.9	1.9	2.0
Bolsa família and others	0.0	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4
Transfers to companies	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**	**0.3**	**0.3**	**0.3**	**0.3**	**0.2**
Consumption	**4.3**	**4.3**	**4.2**	**3.7**	**3.6**	**3.5**	**3.6**	**3.7**	**3.6**	**4.1**
Payroll	2.4	2.4	2.5	2.2	2.2	2.1	2.2	2.1	2.2	2.4
Others by Executive	1.8	1.8	1.6	1.3	1.3	1.3	1.2	1.4	1.2	1.5
Others by other branches	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Other current expenditures	**0.2**	**0.2**	**0.3**	**0.2**	**0.2**	**0.3**	**0.3**	**0.2**	**0.2**	**0.3**
Total current expenditures	**18.2**	**18.9**	**19.6**	**19.2**	**19.3**	**20.5**	**20.9**	**20.9**	**20.9**	**22.3**

Source: Ministry of Planning.

Table 4

Impact of Growth and Policy Measures on Central Government Fiscal Accounts
(revenues and expenditures increase, percent of GDP)

Contents	2009/2008	2010/2009
I Revenues	**–0.41**	**0.60**
I.1 Taxes	–1.06	0.65
I.2 Social security contribution	0.33	0.26
I.3 Others	0.32	–0.31
I.4 Incentives (–)	0.00	0.00
II Expenditures	**1.15**	**0.43**
II.1 Wages and civil servants' benefits	0.45	–0.12
II.2 Social security benefits	0.48	0.12
II.3 Other mandatory expenditures	0.28	–0.01
II.3.1 Unemployment insurance	*0.17*	*–0.01*
II.3.2 Social assistance benefits	*0.07*	*0.03*
II.3.3 Subsidies to banking loans	*–0.05*	*0.05*
II.3.4 Others	*0.09*	*–0.08*
II.4 Discretionary expenditures	–0.06	0.44
III Net proceeds from oil field sale to Petrobras		**0.97**

Source: Budget Office, Ministry of Planning.

85 per cent of Bolsa Familia allowances are allocated. There is also an improvement in child labor in the northeast region – concentrated within households with per capita income up to around US$ 175 a month – which has dropped deeper than in the rest of the Country.[8]

The restrictive monetary policy in place a few months before the eruption of the financial crisis of September 2008 allowed the monetary policy to be more effective at lowering interest rates and easing in reserve requirements to stimulate the acquisition of assets by big banks from small ones. Also, the public sector net debt had fallen to 38.4 per cent of GDP in 2008, opening fiscal space to ease fiscal policy.

The effect of automatic stabilizers in the 2009 budget is estimated in 0.27 percentage points of GDP in tax loss from the manufacturing production and 0.17 percentage points of GDP in unemployment insurance payments. Moreover, the central government undertook fiscal stimulus of 0.8 percentage points of GDP in tax deductions on production of cars, appliances and building materials. However, wages, social security benefits and other permanent mandatory expenditures were also raised by 1.21 percentage points of GDP in 2009, intensifying the procyclical nature of the 2010 budget. In 2010, the revenues were not able to fund all the expenditures growth, since they didn't follow the economic rebound at its same pace due to tax compensations from companies' losses in 2008 and to the one-year lag collection of corporate income tax. The

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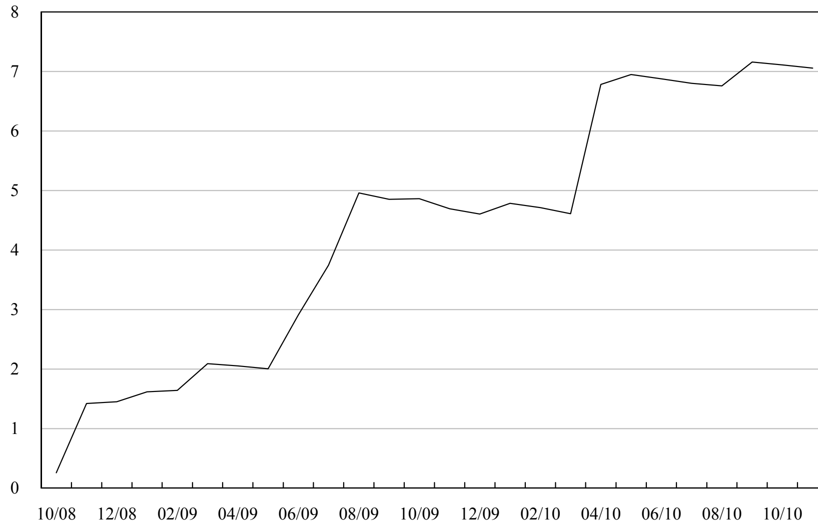
[8] 2009 National Household Sample Survey – PNAD/IBGE.

Figure 10

National Treasury-subsidized Long-term Loans to State Banks
(percent of GDP)



extraordinary net revenue raised by the sale of the amount equivalent to 5 billion barrels from sub-sal oil fields to Petrobras helped the central government achieve a primary surplus of 2.16 per cent of GDP in 2010.[9]

In order to offset the shortage of short term credit to medium and small companies, the government decided to shift the amount of long term subsidized loans to the National Development Bank (BNDES) to expand its lending capacity to the industry (Figure 10). The National Treasury loans to the financial institutions reached 7.1 per cent of GDP in 2010, from 0.3 per cent of GDP in October 2008, leading the budget subsidies to an increase of 0.1 percentage points of GDP.

During the crisis, the federal banks took part of the private banks' share of total loans. Although the policy was efficient in terms of providing liquidity to the productive sector, its continuity in 2010 has caused a distortion in the financial markets, as banks could borrow from BNDES at a much lower long term interest rate, favouring specific sectors against the rest of the economy. The government has recently launched some measures aimed to stimulate the creation of long term financial assets by the private banks and the development of a secondary market of long term private securities, with the intention of gradually reducing the state bank share of total long term domestic loans.

4 Near-term challenges

Considering an economic growth at its potential of 4.5 per cent and a primary surplus target of 3.1 per cent of GDP over the next four years, the baseline scenario to the public sector net debt is a fall from 40.4 per cent of GDP in 2010 to 30.1 per cent of GDP in 2015, over 10 percentage points in 5 years.[10] Figure 11 shows the public sector net debt to GDP projections.

A great part of this tendency is explained by the fall of the Selic target interest rate over the years, along with a declining share of the Treasury bonds indexed by this floating rate. In 1999,

[9] In 2010, although the central government's primary balance was in line with its target, the public sector achieved 2.79 per cent of GDP, below its target of 3.1 per cent of GDP.

[10] In 2009, Petrobras, an oil company, was excluded from the fiscal statistics, raising the net debt by 2 per cent of GDP and reducing the primary surplus target by its contribution of 0.5 per cent of GDP. In 2010, Eletrobras, an electricity company, was also excluded from the target, which represented an additional exclusion of 0.2 per cent of GDP from the primary surplus. Therefore, from 2011 onwards, the estimated primary surplus was reviewed from 3.8 to 3.1 per cent of GDP.

70.8 per cent of the domestic public debt was indexed by the Selic rate; in 2010, it fell to 33 per cent. It is expected that the Selic rate will continue to decrease in the medium term, although at a slower pace.

Even though the fiscal stance shows a favorable scenario in terms of net debt growth pace, issues related to expenditures allocation have also to be taken into account, mainly by allowing a larger share of investment on total expenditure. In this sense, the government launched a large-scale investment program (Growth Acceleration Program – PAC) aimed to foster public investment in logistics (central government's budget and SOEs' budget), energy (SOEs' budget), housing (through CEF savings bank and government subsidies to low and medium income families), and sewerage (budget subsidies and subsidized financing to SOEs). The PAC Program also includes private investments raised through concessions to the private sector: from 2007 to 2010, the government has auctioned two large hydroelectric power plans, several electric transmissions, highways and one Public-Private partnership in the irrigation sector. Although the

Figure 11

Public Sector Primary Surplus and Net Debt

(percent of GDP)

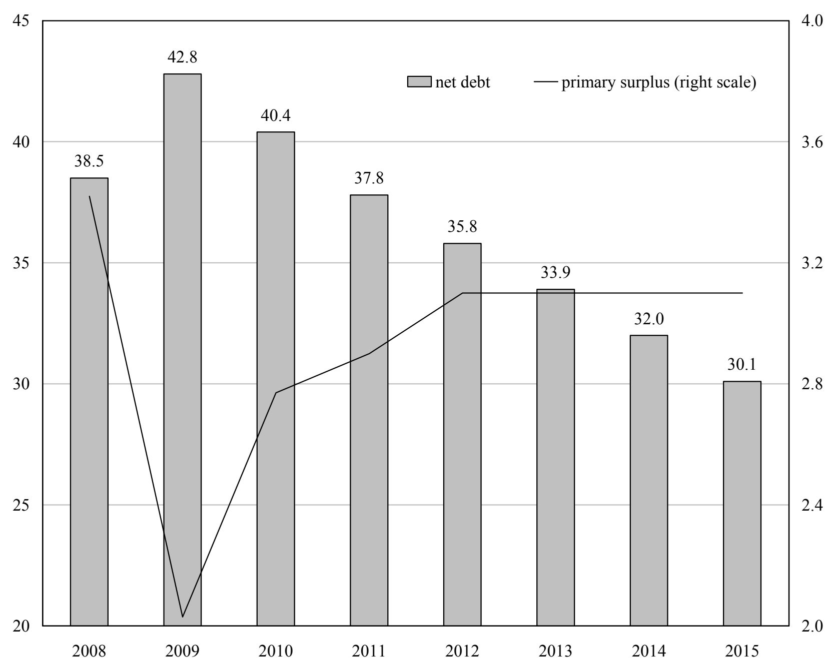


Figure 12

Selic Target Interest Rate

(percent per year)

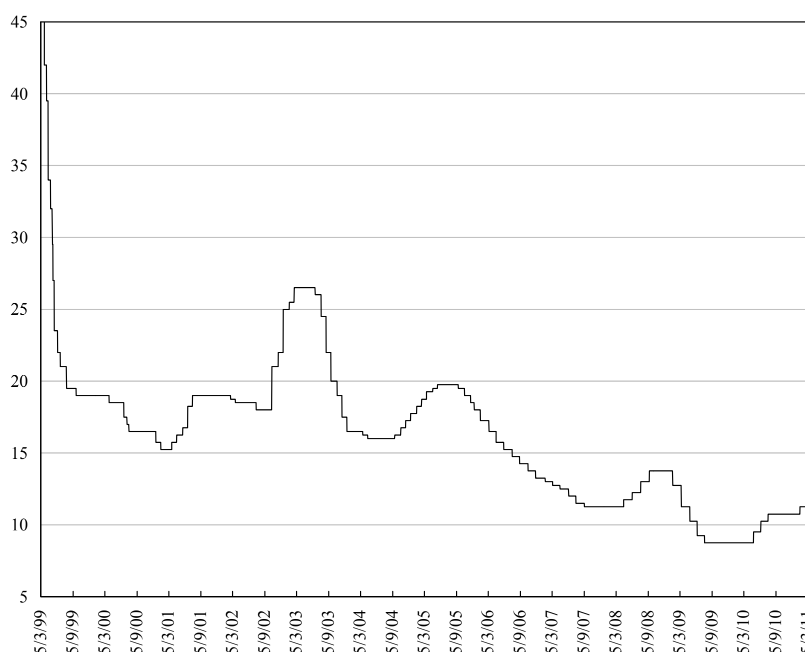
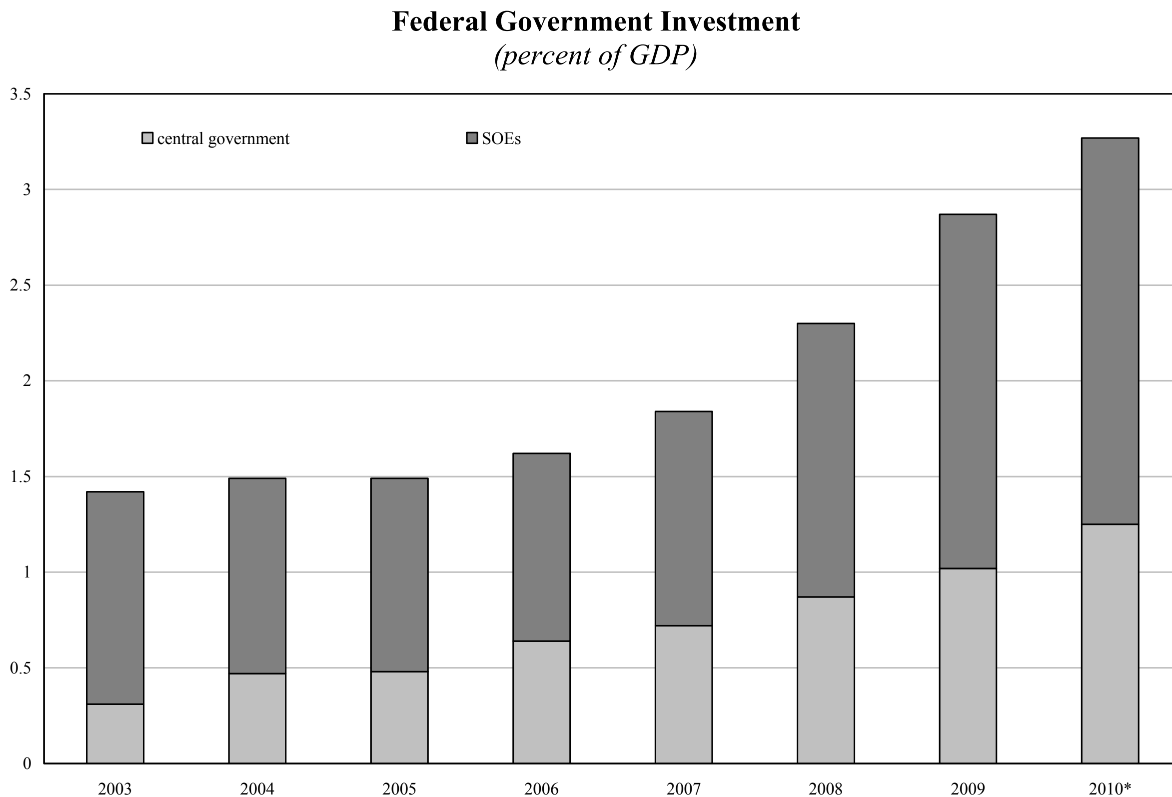


Figure 13

Federal Government Investment
(percent of GDP)



* 2010: 12 months accumulated until August.
Source: PAC Report 2010.

program represented an important effort in terms of increasing the share of public investment on total expenditure, it also exposed the existing red tape to run investments in Brazil by the public sector, related to restrict procurement laws and budget execution bureaucracy (Figure 13).

In 2010, the Brazilian economy faced a great rebound, reaching a real growth of 7.5 per cent, driven by household consumption and by the investment recovery in the first semester. However, the increase of domestic consumption in contrast with the slower growth in the developed economies led to a current account deterioration. The current account deficit, along with a high amount of inflows to the country – due to growth expectations and to interest rates differentials –, is putting up pressure on the Real currency to a huge appreciation, compromising a few manufacturing sectors, while it is also allowing the acquisition of capital goods by the industries. In 2010, the current account deficit reached 2.3 per cent of GDP, from 1.52 per cent of GDP in 2009, and may shoot up to 2.8 per cent of GDP in 2011. Moreover, the investment agenda already set – oil exploration in the sub-salt fields, public investment in logistics, World Cup, Olympics – will demand additional foreign savings and investments, considering that the low domestic savings will not be sufficient to fund the agenda. Since the private sector can do little in a period when it is increasing its own investment, the task of providing domestic savings falls to the public sector, through larger primary surplus, along with a greater share of investment on total expenditure.

Therefore, in the near-term, the fiscal policy is to be calibrated in order to enhance public savings, by conciliating primary surplus targets – which will allow interest rates to fall in the long term, providing room to foster private investment – with a larger share of investment on total

expenditure in the following years. In order to provide fiscal space to increase the share of investment on total expenditures, the central government will have to make an effort towards the control of the growth pace of current expenditures, mainly those related to civil servants' wages, private sector social security and public sector pensions.

Finally, there is also a fiscal reform agenda left to be tackled in the near-term. In relation to the private sector social security system, although the recent increase in the formal labor sector has brought new revenues to the system, the gap between pension obligations and contributions tends to grow in the long run, from 1.18 per cent of GDP in 2010 to 1.67 per cent of GDP in 2030, due to fast demographic changes. People over 60 are projected to increase from 10 per cent of the population in 2010 to 18.7 per cent by 2030, as birth rates are lowering and life expectancy increasing.[11] Besides, the tax burden on formal labor – contributions to the pension system and to the unemployment insurance fund – amounts to over 40 per cent of the salaries, compromising employment and industrial competitiveness.[12] In regard to the civil servants' pension system, the shift from the actual system to the one similar to the private sector's – a basic defined-benefit system and a complementary defined-contribution funded system - is still to be implemented by the central government. Other challenges are related to the inflexibility of the central government budget: because a large amount of revenues is earmarked to specific programs and some mandatory expenditures are automatically adjusted, as in the case of health care and the benefits linked to the minimum wage, less than 15 per cent of the budget apply to spending cuts. Finally, the biggest fiscal challenges are how to aleviate the economy from the tax burden of 35 per cent of GDP and how to simplify the tax system. Over the past eight years, the government has pursued a consensus over a proposal that unifies municipalities', states' and several central government's taxes into a single value-added one. Recently, it took a new approach towards a more simplified version of that.

[11] IBGE estimates.

[12] The total burden is 70 per cent of the salary, if considered 13rd salary and vacation pay.

ANNEX
FISCAL RESPONSIBILITY LAW

The Law can be decomposed in three main dimensions: general fiscal framework, ceilings on personnel and debt; and governance and transparency.

1 General fiscal framework

According to the Brazilian Constitution, the budgetary system is comprised by three important laws proposed by the executive branch to legislative approval: the Multi-Year Budget Framework Law (PPA), which encompasses the main strategies and all the programs related to them, to be tackled over the next four years; the annual Budget Guidelines Law (BGL), which selects the programs out of PPA to be considered as priorities for the fiscal year, and the annual Budget law.

Most part of the LRF general framework was defined through the inclusion of fiscal rules to be complied by those budgetary laws. The main changes are:

a) the inclusion of a Fiscal Policy Annex to the PPA with multi-year fiscal targets, along with the inclusion of Fiscal Targets Annex to the BGL. The fiscal Target Annex reports the fiscal compliance in the previous year and sets the fiscal target for the following 3 years, to be complied with during the budget execution. The governments are to indicate targets for the primary balance, the PSBR and the net debt;
b) the inclusion of a Fiscal Risks Annex in BGL describing the fiscal risks with an assessment of contingent fiscal liabilities, including the likelihood of adverse outcomes in legal dispute and the impact on fiscal aggregates of changes in macroeconomic indicators under which the annual budget is formulated.

During the fiscal year, the law defines that the revenues have to be reestimated every 2 months and, if they are not sufficient to comply with the fiscal targets, the government is to reduce its annual expenditures. Also, the executive is due to attend hearings at Congress on fiscal compliance every 4 months.

Moreover, the law requires that permanent spending mandates not be created without corresponding increases in permanent revenues or cuts in other permanent spending and contains a golden rule provision for capital spending (*i.e.*, annual credit disbursements cannot exceed capital spending).

2 Ceilings on fiscal aggregates

The Law considers that the concept of government comprises not only the executive, but also the legislative and judiciary branches, along with state-owned enterprises which depend on taxes to run their business. This very comprehensive concept creates a coo-responsibility among those entities over the compliance with fiscal targets and the aggregate ceilings.

A concept of Net Current Revenues (NCR) was created, which represents a proxy to the disposable revenue belonging to each level of government. Based on that, the law sets the following limits:

1) as demanded by the FRL, the Senate approved a resolution setting ceilings for sub-national government's debt to their NCR ratio, being 200 per cent for the states and 120 per cent for the

municipalities. In fact, since all the states also have debt targets under their debt restructuring agreements with the National Treasury, both debt targets have to be met;

2) on personnel management, the FRL establishes separate ceilings at each level of government, equivalent to 50 per cent of NCR for the central government and 60 per cent of NCR for the states and municipalities, as well as subceilings for the executive, legislative and judiciary branches.

If those limits are not met, the gaps are to be eliminated within the following eight months. Meanwhile, the state governments are not allowed to engage in new borrowings and sub-national governments are not allowed to receive discretionary transfers or credit guarantees from the central government.

The LRF limits are additional to those defined by the Senate Resolutions related to new domestic and external borrowings at the sub-national government levels and their SOEs, to be approved based on their creditworthiness evaluation.

3 Governance and transparency

In relation to governance, one of the most important rules is the prohibition of intra-govermental financing, which hinders the pressure for recurrent bail-outs by the states.

Parallel to the FRL, penalties for public officials that failed to obey fiscal responsibility by a Fiscal Crimes Law were stablished. Those penalties included administrative, financial, and political penalties and even prison time for violators of fiscal responsibility. Although it seems that the criminal component of the law may hit only municipal or minor officials, it sends a clear message of the seriousness of fiscal control.

Finally, in terms of transparency, the law defines that the each level of government is to release two reports: i) a bi-monthly budget execution; and ii) a comprehensive four-month report on compliance with the various LRF parameters, and on corrective measures if the ceilings are exceeded. Moreover, municipalities are to report to the National Treasury their fiscal balances of the previous year by end-April and the states, by end-May. The National Treasury is to publish a consolidation of the public finances of the previous year by end-June. Also, the Law requires that financial and actuarial assessment reports on the social security regimes of the public and private sectors, managed by the government be sent to congress along with the annual BGL.

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FISCAL CONSOLIDATION AND MACRO ECONOMY: INDIA'S EXPERIENCE WITH RULE-BASED FISCAL POLICY AND POST-CRISIS CHALLENGES

Brajamohan Misra[*]

1 Introduction

Fiscal policy in India has evolved over time. Broadly, during the first 30 years of independence, between 1950 and 1980, the fiscal deficits of both the central and the state governments were not excessive. This was a period of revenue surplus in general. A major black spot in India's fiscal development was 1980s, when Indian public finances were in a state of disarray resulting in persistently large fiscal deficits. There was a structural change in government budgets during the 1980s with emergence of revenue deficit in Centre's budget in 1979-80. Revenue deficit and fiscal deficit continued to enlarge during 1980s raising concerns over rising public debt and interest payments and the consequent constraints on the availability of resources for meeting developmental needs. The large fiscal imbalances of the 1980s spilled over to the external sector resulting in the macroeconomic crisis of India in 1991.

In the aftermath of the macro-economic crisis of 1991, a comprehensive reform programme was launched in India, of which fiscal consolidation constituted a major plank. The fiscal performance during the reform period, however, was characterized by a clear divide in the mid-1990s in the attainment of fiscal targets. There was evidence of the successful fiscal correction during 1991-92 to 1996-97 (except for 1993-94) in terms of a significant reduction in the fiscal deficit indicators. Since then, there was a significant reversal of the trend mostly up to 2002-03. In an effort to renew the process of fiscal consolidation and provide for long-term macroeconomic stability, the Central government enacted the Fiscal Responsibility and Budget Management (FRBM) Legislation in August 2003. At the State level, several State governments enacted a similar legislation on fiscal responsibility.

Recognizing that any deviation from the self imposed targets prescribed in the fiscal legislations would exacerbate the fiscal stress, both Central and State governments responsibly adhered to the legislations up to 2007-08. With global financial crisis of 2008 affecting India's macro-economy, the adherence to rule based policy was paused during the subsequent two years as the governments provided fiscal stimulus to compensate for the fall in private demand. Roll back of expansionary fiscal stance, however, commenced in 2010-11.

Against this backdrop, this paper aims at examining the linkage between fiscal consolidation and macro-economic developments in India with specific emphasis on the rule based fiscal regime. A discussion on thematic theoretical and empirical literature on is provided in Section 2 after the introduction. Section 3 presents stylized facts about the fiscal policy regime in India. Section 4 sets out some analytics and empirical findings based a small structural model on fiscal consolidation and macro-economy in Indian context. The future challenges with regard to fiscal consolidation are deliberated upon in Section 5 followed by colluding observations.

2 Fiscal consolidation and macroeconomic performance: survey of literature

There is a strong body of theoretical literature regarding impact of fiscal consolidation on

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The views expressed in this paper are those of the author and do not reflect those of the organisation he is working for.

macroeconomic performance. In the empirical literature, a host of issues relating to fiscal consolidation have been debated and discussed. The issue became a lively subject of discussion following the recent global financial crisis, which necessitated coordinated monetary-fiscal policy actions by the national authorities with a view to pulling their economies out of recession. The theoretical perspectives and major relevant empirical works in this regard are reviewed in this Section.

2.1 Theoretical perspectives

There is no agreement among economists either on analytical grounds or on the basis of empirical results whether financing government expenditure by incurring a fiscal deficit is good, bad or neutral in terms of its real effects, particularly on investment and growth. There are three main theoretical perspectives with regard to fiscal policy and its impact on macroeconomic conditions namely Neo-classical, Keynesian and Ricardian Equivalence. Depending upon circumstances and the relevant theoretical perspectives, fiscal deficit may be bad, indifferent or good. In the Neo-classical perspective, fiscal deficit will have a detrimental effect on investment and growth owing to lower savings (revenue deficit) and pressure on interest rate resulting in crowding out of private investment. The Neo-classical economists assume that markets clear so that full employment of resources is attained. In contrast the Keynesian view argues, when there are unemployed resources, autonomous increase in government expenditure, whether through investment or consumption, financed through borrowings would cause output to expand through a multiplier process. In terms of Ricardian Equivalence, fiscal deficits are treated as neutral in terms of their impact on growth as deficit in any current period equals the present value of future taxation that is required to pay off the incremental debt resulting from the deficit. While the Neo-classical and Ricardian schools focus on the long run, the Keynesian view emphasises the short run effects.

For the "rational expectations" school or for the "real business school", the implementation of an expansionary fiscal policy, aiming at strengthening growth rates and reducing unemployment, would not achieve objectives. On the contrary, budget deficits, either by money printing or by public borrowing, will increase public debt and interest rates, crowd out private investments, fuel inflation and damage medium-term growth. These cause, in turn, an upward adjustment of nominal wages to the new increased levels of prices, squeezing profits and postponing further corporate investments. Feldstein (1987), an eminent scholar of economic orthodoxy, also insists on arguing against expansionary fiscal policies, especially those resorting to deficit spending. Barro (1974) too, rejecting the idea that monetary and fiscal policies can be complementary policy tools, considers discretionary fiscal policies as particularly ineffective, since economic agents facing or expecting fiscal laxity save their money for future increased tax payments instead of increasing private spending and stimulating demand. Indeed, the idea is that in a situation of easier fiscal policy, monetary policy will have to be tightened later and higher taxes should be imposed for the accumulated government debt to be repaid ("Ricardian equivalence"). In this case, the fiscal multiplier is zero as consumption finally does not change. As far as Barro's assumption is concerned, it should be emphasized that it has never been confirmed by empirical evidence in the real economy, as household savings have sharply fallen over the past two and half decades in most OECD countries, despite fiscal laxity. As empirical support in favour of the Ricardian view is rather weak (Elmendorf and Mankiw, 1998), the two major competing theories are the Neo-classical and Keynesian approaches.

There is another view which emphasised supply-side effects of fiscal policy under the name of New-classical models. The distinctive feature of full-fledged new classical models is that prices clear markets, so that fluctuations in output are the result of supply-side shocks and not of changes in aggregate demand. One implication of New-classical models, first highlighted by Lucas (1975)

and Sargent and Wallace (1981), is that fully anticipated policies affecting aggregate demand (but not aggregate supply) have no effect on growth either in the short term or the longer term. Only unanticipated policies – which reflect either surprises by the government or imperfect information – have an effect, which emerges entirely through the supply side. This does not mean that these models are silent on fiscal policy. However, they focus on the design of optimal fiscal policy, as distinct from the impact of fiscal policy on economic activity (see Lucas and Stokey, 1983; and Chari and Kehoe, 1998).

2.2 Empirical literature

There is a divide in empirical literature on whether fiscal consolidation is positively associated with positive macroeconomic performance or otherwise.

2.3 Fiscal deficits and growth

The link between fiscal deficits and economic growth is one of the most widely debated relationships in the macroeconomic literature.

2.3.1 Negative association of fiscal deficit and growth

Fiscal deficits received much of the blame for the assorted economic ills that beset developing countries in the 1980s, over-indebtedness and the debt crisis, high inflation and poor investment performance and growth (Easterly and Schmidt-Hebbel, 1993). The authors argue that fiscal deficits financed by money creation leads to inflation while debt financing leads to higher real interest rates or increased repression of financial markets, with fiscal gains coming at increasingly unfavourable terms. Fiscal deficit tends to reduce national savings and private sector credit significantly affecting private investment. According to the authors the virtuous circle of growth and good fiscal management is one of the strongest arguments for a policy of low and stable fiscal deficit.

Large fiscal consolidation has been associated with a positive macroeconomic development (Daniel *et al.*, 2006). High quality fiscal adjustment can help mobilize domestic savings, increase the efficiency of resource allocation and boost confidence and expectations. The possibility of expansionary fiscal contraction is confirmed by Gupta *et al.* (2002) for a panel of low-income countries. In a study of transitional countries, Segura-Ubiergo *et al.* (2006) find that fiscal adjustment has been associated with higher growth primarily through two channels: (i) reduced government borrowing requirements, which curtailed the need to monetize budget deficits; and (ii) a credibility effect that signalled a political commitment to long-term fiscal sustainability and macro-economic stability. Further, Baldacci *et al.* (2003) state that the most important transmission mechanism through which fiscal adjustment stimulates growth in low-income countries is factor productivity.

Rangarajan and Subbarao (2007) stated, in a paper, that the fiscal deficits are *per se* not bad. In fact, they may be necessary, even desirable in some situations. The issue, therefore, is not whether or not there should be a fiscal deficit, but its appropriate level. The answer depends on a number of variables, particularly the level of savings and the ratio of revenues to GDP. It is also a function of the existing stock of debt and debt servicing burden, the rate of interest, the external payments situation, the degree of capital controls and importantly the use to which the borrowed resources are put. The advisable fiscal deficit level, therefore, is very contextual and varies from country to country. The authors mentioned the following reasons as to why continued high fiscal deficits are a concern. First, they disempowered the government's fiscal stance by pre-empting a

larger share of public resources for debt servicing thereby leaving that much less for desirable expenditures such as physical infrastructure (e.g., roads, power) and social infrastructure (e.g., education, health). This leads to a declining ratio of capital expenditure in total expenditure. Second, "if we incur fiscal deficits together with revenue deficits, it means we are using up borrowed resources for current consumption which may raise growth in the short term, but of the spurious variety. For sustainable growth, we need to balance our books on the revenue account and use borrowed funds only for investment". Third, to the extent the government pre-empts the available investible resources, it crowds out the private sector. A balance needs to be struck in apportioning the investible resources between the government and the private sector. The crowding out argument has even greater force in an economy with capital controls. Fourth, continued fiscal deficits impact on interest and inflation rates depending on how the deficits are financed. If the government borrows in the domestic market, it puts pressure on the interest rate. If the government finances the deficit by creating high power money, it fuels inflation. In India, since deficits are financed by open market borrowing, *albeit* through a preferential Statutory Liquidity Ratio (SLR) window, the risk is largely of government borrowings leading to higher interest rates. Finally, fiscal deficits are also bad for another little realised, but powerful reason. Fiscal deficits, especially in the face of revenue deficits, exacerbate inter-temporal equity concerns as they give the pleasure of spending to the current generation while passing on the pain of debt servicing to the later generation.

There is overwhelming empirical evidence that low fiscal deficits and growth are self-reinforcing; good fiscal management preserves access to foreign lending and avoids the crowding out of private investment, while growth stabilizes the budget and improves the fiscal position. But there are many dimensions to this issue, including whether government borrowing is financing government consumption or investment in infrastructure, whether the deficit is sustainable and how it is financed.

2.3.2 The contrary view

There are also arguments advocating higher deficit for promoting growth. Evdoridis (2000) on the positive impact of public deficits on economic growth indicates precisely the mechanism of dynamic equilibrium and the potentially positive impact of budget deficits in economic growth. The most interesting aspect of Evdoridis's work is the demonstration that this positive outcome for growth rates is valid not only in recession periods. He argues that for a sustainable high growth rate, an imbalanced budget in favour of expenditures is a necessary prerequisite for growth, along with some combination of monetary easing.

2.3.3 Situation-specific view

According to Perotti (1999) the initial conditions of some key variables can explain why fiscal expansions have a positive effect in "good times" but a negative one in "bad times", where fiscal consolidation are required. Hemming *et al.* (2002) summarised the empirical findings with regard to effectiveness of fiscal policy and size of fiscal multiplier as below:

Fiscal Multiplier will tend to be positive and possibly quite large when:

- there is excess capacity, the economy is either closed or it is open and the exchange rate is fixed and households have limited time horizons or are liquidity constrained;
- increased government spending does not substitute for private spending, it enhances the productivity of labor and capital and lower taxes increase labor supply and/or investment;
- government debt is low and the government does not face financing constraints;

- there is an accompanying monetary expansion with limited inflationary consequences.

Fiscal multipliers are likely to be smaller, and could turn negative, when:

- there is crowding out either directly as government provision substitutes for private provision and through imports, or as interest rates rise and a flexible exchange rate appreciates in response to a fiscal expansion;
- households are Ricardian, in which case a permanent fiscal expansion can reduce consumption;
- there is a debt sustainability problem and risk premium on interest rates are large, in which case a credible fiscal contraction can result in a large fall in interest rates;
- expansionary fiscal policy increases uncertainty which leads to more cautious savings and investment decisions by households and firms.

Researchers have pointed out that the role of fiscal policy appears most clearly when, for one reason rather the other, monetary policy cannot be used (Allsopp, 2005). There is a potential role of the fiscal instruments to be used so as to ensure medium-term price stability and subject to that, to deliver as much stabilization as possible. There are two cases which are of great policy significance. The first is where the nominal interest rate approaches its lower bound of zero – the "liquidity trap case". The second is the case of monetary unions such as EMU, where interest rates cannot be used to offset country-specific shocks (often called asymmetric shocks, to distinguish them from common shocks).

2.3.4 Short-term and long-term effects

There is another line of research which divides the effects of expansionary fiscal policy in the short run and long run (Andrés and Doménech, 2004). According to some research studies, there is a significant and positive short run effects on output of fiscal expansions. These results are in clear contrast with the other stream of literature in which contractionary policies have expansionary effects on output. As regards long run effect of fiscal expansion, the empirical evidence for the United States and EMU indicates that the deterioration of public savings, which is the main cause of larger government deficits, was not compensated by private savings, resulting in lower national saving and investment rate. If private saving compensates for only a fraction of public deficits, then fiscal expansions financed with public debt should increase real interest rates. If deficit spending implies higher interest rates and lower private investment, most growth theories (for example, Mankiw, Romer and Weil, 1992) predicts a lower per capita income or long run growth. Therefore, fiscal deficits have an indirect effect upon growth through capital accumulation. However, a negative direct effect has been directly confirmed empirically by some authors, even after controlling by the investment rates (Fischer and William, 1990; Andrés *et al.*, 1996).

2.3.5 Quality of public expenditure

Following the above research findings, there is a debate about quality of public expenditure. The reform of public expenditure is typically undertaken to reduce government spending. But even when public spending need not shrink, expenditure reform can still improve the productivity of existing spending, free resources to help meet new needs, and improve governance and transparency (Gupta *et al.*, 2005). Reducing expenditure while improving their composition need not undermine growth of social indicators. While the capital expenditure is perceived to be growth inducing, public expenditure also plays a great role, necessarily when targeted at the poor. Thus, public spending should be judged on its impact on growth and investment, as well as on poverty and equity (Daniel *et al.*, 2006).

2.4 Fiscal rules and fiscal consolidation

The experiences on fiscal consolidation process in the 1990s have another noteworthy feature, which was the introduction of a sound fiscal framework supported by institutional reforms (OECD, 2007). Recognising the difficulties associated with discretionary fiscal policies, several advanced countries enacted fiscal responsibility legislations (FRLs) during the 1990s as permanent institutional devices aiming to promote fiscal discipline in a credible, predictable and transparent manner. New Zealand was at the forefront of these reforms, adopting FRL in 1994 followed by Australia, United Kingdom and the European Union. In emerging market economies, adoption of fiscal responsibility has been more recent and limited mainly to Latin America (Argentina, Brazil, Chile and Peru) and Asia (India, Indonesia, Pakistan and Sri Lanka).

In practice, fiscal rules have been adopted for a wide variety of reasons such as: (a) to ensure macroeconomic stability, as in post-war Japan; (b) to enhance the credibility of the Government's fiscal policy and aid in deficit elimination, as in some Canadian provinces; (c) to ensure long-term sustainability of fiscal policy, especially in light of population ageing, as in New Zealand; or (d) to minimize negative externalities within a federation or international arrangement, as in the European Economic and Monetary Union (Kennedy and Robbins, 2001). In the emerging countries, the immediate motivation has been to reverse the building of public debt, to restore fiscal sustainability and more generally, to enhance the credibility of macroeconomic management (Kopits, 2004).

Present fiscal policy rules are fairly diverse in both design and implementation. While Anglo-Saxon countries (Australia, New Zealand, United Kingdom) emphasise procedural rules aiming to enhance transparency, accountability and fiscal management, continental Europe (EMU Stability and Growth Pact) and emerging market economies (Argentina, Brazil, Columbia, India, Pakistan, Peru and Sri Lanka) rely far more on a set of numerical reference values (targets, limits) on performance indicators. There are four main types of numerical fiscal rules: deficit rules (e.g., balanced budget); debt rules (e.g., debt ceilings); borrowings rules (e.g., prohibition of central bank financing) and expenditure rules (e.g., ceilings on some types of public expenditure or public expenditure growth).

It has been documented that countries with fiscal rules achieved better results. Fiscal rules with embedded expenditure targets tended to be associated with larger and longer fiscal adjustments and higher success rates. Furthermore, adoption of a spending rule on top of a budget balance rule helped in the achievement and maintenance of a primary balance that was sufficient to stabilize the debt-to-GDP ratio (OECD, 2007). Since, in most countries FRLs have not been around for more than few years, evidence on their effectiveness is still preliminary. Still, there seems to be broad agreement that the quality of fiscal institutions does matter for fiscal performance. In this sense, FRL holds the potential of improving fiscal management, if supported by strong political management to fiscal prudence and sufficiently developed fiscal institutional framework. A well designed FRL may help contain fiscal deficits and expenditure biases, address issues of time inconsistency, help reduce borrowing costs and output variability and enhance transparency and accountability (Corbacho and Schwartz, 2007).

2.5 The return of activist fiscal policy

Countries all over the world provided fiscal stimulus following the global financial crisis of 2008. The U.S. federal government enacted several rounds of activist fiscal policy. These began early in the recession with temporary tax cuts enacted in February 2008, followed by a tax credit for first-time homebuyers enacted in July 2008. They reached a crescendo in February 2009 with the American Recovery and Reinvestment Tax Act (ARRA): a combination of tax cuts, transfers to individuals and states and government purchases estimated to increase budget deficits by a

cumulative amount equal to 5.5 per cent of one year's GDP. The fiscal stimulus continued thereafter with more targeted measures. Accompanying these fiscal efforts were the Troubled Asset Relief Program, enacted in fall 2008 to address the financial crisis and a continuing array of interventions by the Federal Reserve Board that aimed to stabilize credit markets and stimulate the economy. Around the world, other countries caught in the grip of recession also pursued a variety of active fiscal strategies, ranging from temporary consumption tax rebates (for example, in the United Kingdom) to large public works projects (notably in China). The prevalence of fiscal policy interventions in this period reflects both the severity of the recession and a revealed optimism with regard to the potential effectiveness of activist fiscal policy (Auerbach *et al.*, 2010). Thus, extending fiscal stimulus to contain the impact of the crisis as well as promote growth may be seen as return of the Keynesian doctrine.

According to the IMF Staff Position Note of June 9, 2009, the global financial crisis is having major implications for the public finances of most countries. Fiscal revenues are declining through the operation of automatic stabilizers and because of lower asset and commodity prices. Direct fiscal support is being provided to the financial sector and many countries are undertaking discretionary fiscal stimulus. This is cushioning the global economy from the effects of the crisis. But it implies a fiscal deterioration that is particularly strong for advanced countries, where the increase in both government debt and contingent liabilities is unprecedented in scale and pervasiveness since the end of the Second World War. According to the Note, the fiscal balances of G-20 advanced countries are projected to weaken by 8 percentage points of GDP on average and government debt is projected to rise by 20 percentage points of GDP in 2008-09, with most of the deterioration occurring in 2009. The fiscal balances of G-20 emerging market economies will deteriorate by 5 percentage points of GDP. For advanced economies, the increase in debt mostly reflects support to the financial sector, fiscal stimulus, and revenue losses caused by the crisis. For emerging economies, a relatively large component of the fiscal weakening reflects declining commodity and asset prices. It may mentioned that following large fiscal supports extended by many European countries like Greece, Portugal, Spain and Ireland, their fiscal conditions deteriorated very fast and they were beset with sovereign debt problems, which necessitated support of European Union and IMF.

The IMF Staff Note states that while fiscal balances are expected to improve over the medium term, they will remain weaker than before the crisis. Public debt-to-GDP ratios will continue to increase over the medium term: in 2014 the G-20 advanced country average is projected to exceed the end-2007 average by 36 percentage points of GDP. On current policies, debt ratios will continue to grow over the longer term, reflecting demographic forces. Moreover, for both advanced and emerging economies, the crisis has increased short- and medium-term fiscal risks, with key downside risks arising from the need for possible further support to the financial sector, the intensity and the persistence of the output downturn, and the return from the management and sale of assets acquired during the financial support operations. The somber fiscal outlook raises issues of fiscal solvency and could eventually trigger adverse market reactions. This must be avoided: market confidence in governments' solvency is a key source of stability and a precondition for economic recovery. Therefore, there is an urgent need for governments to clarify their exit strategy to ensure that solvency is not at risk. In formulating such a strategy, four components are particularly important: (1) fiscal stimulus packages, where these are appropriate should not have permanent effects on deficits; (2) medium-term frameworks, buttressed by clearly identified policies and supportive institutional arrangements, should provide a commitment to fiscal correction, once economic conditions improve; (3) structural reforms should be implemented to enhance growth; and (4) countries facing demographic pressures should firmly commit to clear strategies for health and pension reforms.

3 Fiscal regimes in india: some stylized facts

India has a federal fiscal structure constituting of central and 28 state governments.[1] Both the tiers of the governments have gone through cycles of fiscal comfort and stress starting with the period since its independence in 1947. The coverage of this paper will be restricted to a period starting with early 1980s, when fiscal deterioration became noticeable till the present period.

3.1 Federal fiscal structure

As already stated, India has a federal fiscal structure with Central Government at the Centre and 28 State governments at the provincial level. Both the levels of government could impact upon the overall fiscal correction process. As the important tax bases remain with Central government but State governments have large scale spending responsibilities with regard to social sectors such as education, health as well as maintenance of law and order, there exists a system of devolution of taxes and grants from the centre to the provincial governments.[2] While most of the discussions in this paper would be in terms of combined finances of the Centre and the States, specific references would be made to their finances individually, when warranted.

3.2 Fiscal reform regimes

Following unbridled fiscal expansionary phase of 1980s, there was a phase of fiscal consolidation during 1991-92 and 1996-97 as a part of the macroeconomic structural and stabilization programme. As a result of the concerted efforts to restore fiscal balance through tax reforms, expenditure management, institutional reforms and financial sector reforms in the first half of the 1990s, there was significant reduction in the fiscal deficits for both the levels of government, when compared to the earlier period of 1983-84 to 1990-91 (Figure 1 and Table 1). However, during the period 1997-98 to 2002-03, there was a reversal in the trend of fiscal consolidation and the cumulative impact of industrial slow down, fifth pay commission award and a lower than expected revenue buoyancy culminated in fiscal deterioration (Reddy, 2008). The need for a rule based fiscal consolidation, was therefore, felt and debated in India.

3.3 Rule-based fiscal policy

The fiscal responsibility legislation at the Centre had its root in the announcement by the Union Finance Minister in his budget speech for 2000-01 to set up a Committee. Following the submission of the Committee's Report (Chairman: E.A.S. Sarma) and the legislative procedures, the Fiscal Responsibility and Budgetary Management (FRBM) Act, 2003 and the Rules made by the Government under the Act were brought into force on July 05, 2004. The structure and content of the Act go beyond the conventional fiscal legislation, *i.e.*, setting the ceiling on the fiscal

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[1] Through the constitutional amendments (73rd and 74th) in 1992 the rural and urban local bodies were accorded a constitutional status as third-tier of Government. However, due to lack of consistent data on these bodies, coverage of this paper is restricted to the first two tier governments (Centre and 28 State governments).

[2] Constitution provides for setting up a Finance Commission every five years to recommend about the devolution system. The Commission makes recommendations regarding the distribution between the Union and the States of the net proceeds of the taxes, the principles which should govern the grants-in-aids out of the consolidated fund of India to the States, the measures needed to augment the consolidated fund of the State to supplement the resources of the rural and urban local bodies in the State. The Commission also reviewed the state of the finances of the Union and the States and suggest measures for maintaining a stable and sustainable fiscal environment consistent with equitable growth.

Table 1

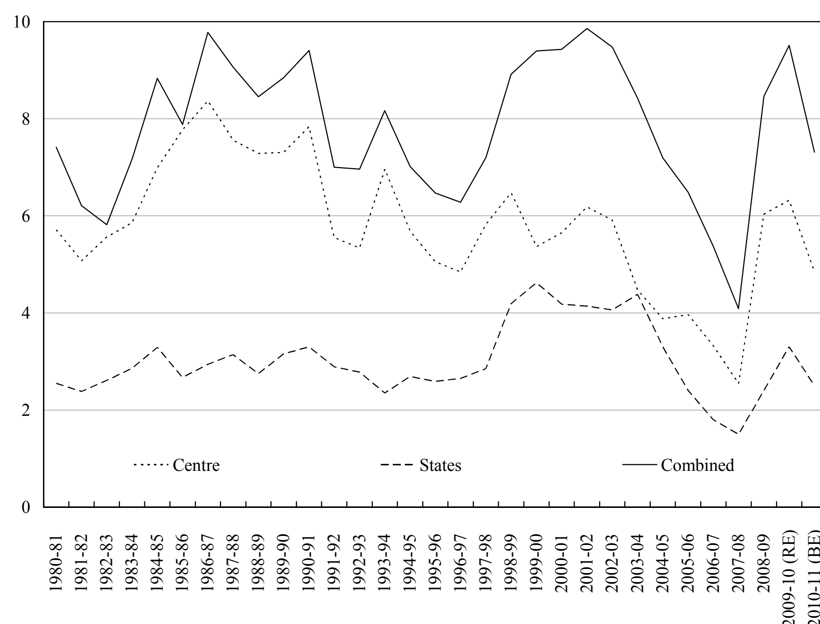
Major Deficit Indicators of the Central, State and General Governments
(percent of GDP)

Year (1)	1983-84 to 1990-91 (2)	1991-92 to 1996-97 (3)	1997-98 to 2002-03 (4)	2003-04 to 2007-08 (5)	2008-09 (6)	2009-10 (RE) (7)	2010-11 (BE) (8)
Central Government							
RD	2.3	2.8	3.9	2.3	4.5	5.0	3.5
GFD	7.4	5.6	5.9	3.6	6.0	6.3	4.8
PD	4.4	1.4	1.3	–0.2	2.6	3.0	1.7
State Governments							
RD	0.3	0.8	2.3	0.5	–0.2	0.7	0.3
GFD	3.0	2.7	4.0	2.7	2.4	3.3	2.5
PD	1.8	0.9	1.6	0.3	0.6	1.5	0.9
Combined General Governments (Centre and States)							
RD	2.6	3.5	6.2	2.7	4.3	5.7	3.8
GFD	8.7	7.0	9.0	6.3	8.5	9.5	7.3
PD	5.2	2.0	3.3	0.6	3.4	4.6	2.7

RD: Revenue Deficit; GFD: Gross Fiscal Deficit; PD: Primary Deficit; BE: Budget Estimates; RE: Revised Estimates; Minus (–) sign indicates surplus in deficit indicators.
Source: RBI, *Handbook of Statistics on Indian Economy* and various issues of RBI, *State Finances: A Study of Budgets*.

Figure 1

GFD-GDP Ratio of Centre, States and Combined



indicators. Obligations of the Government under the FRBM Act, 2003 and FRBM Rules, 2004, as amended through the Finance Act, 2004 are as follows:

- to eliminate the revenue deficit by the financial year 2008-09. The FRBM Rules prescribe a minimum annual reduction in the revenue deficit by 0.5 per cent of GDP;
- to reduce the fiscal deficit by at least 0.3 per cent of the GDP annually, so that fiscal deficit is less than 3 per cent of

GDP by the end of 2008-09;

- to limit Government guarantees to at most 0.5 per cent of the GDP in any financial year;
- to limit additional liabilities (including external debt at current exchange rate) to 9 per cent of GDP in 2004-05, 8 per cent of GDP in 2005-06, 7 per cent of GDP in 2006-07, 6 per cent of GDP in 2007-08;
- not to borrow directly from the Reserve Bank of India w.e.f. April 01, 2006.
- to present three statements before the Parliament along with the annual budget: Macroeconomic Framework Statement, Fiscal Policy Strategy Statement and Medium-term Fiscal Policy Statement incorporating three year rolling targets for prescribed fiscal indicators and underlying assumptions;
- to move towards greater fiscal transparency and start disclosing specified information such as arrears of unrealized revenue, guarantees and assets latest by 2006-07;
- furthermore, the FRBM Act requires that the Finance Minister conduct quarterly review of receipts and expenditure and place the outcome of these reviews before the Parliament. He is obliged to take remedial measures to check deterioration in fiscal position, which may not only include measures to increase revenues but also to curtail expenditures. The Finance Minister is also obliged to make a statement in the Parliament explaining the reasons for any deviations from the obligations cast on the Government under the FRBM Act and remedial measures that are proposed to be taken to rectify the situation.

Thus, the FRBM Act not only mandates minimum quantifiable targets for reducing the growth of debt, deficit and guarantees in a time bound manner but also embeds a series of improvements in the area of fiscal transparency and medium-term fiscal planning to improve budget management and catalyse the process of true democratic control of fiscal policy through informed public opinion on the risks inherent in unabated growth in debt and deficit.

The State Governments also adopted a rule-based framework for fiscal correction and consolidation through progressive enactment of Fiscal Responsibility Legislation (FRL). Karnataka was the first to enact the FRL in September 2002 followed by Kerala and Tamil Nadu in 2003 and Punjab in 2004. Subsequently, twenty-two more States enacted the FRLs. All State Governments barring Sikkim and West Bengal have enacted FRLs so far.[3] These two States enacted FRLs subsequently following the recommendations of the 13th Finance Commission. The enactment of FRLs has provided impetus to the process of attaining fiscal sustainability as reduction in key deficit indicators, viz., revenue deficit (RD) and gross fiscal deficit (GFD), is critical for reducing the mounting level of debts of the States. Although there are variations across States in the choice of target and the time frame for achieving the target, most of the FRLs have stipulated elimination of RD by March 31, 2009 and reduction in GFD as percent of gross State domestic product (GSDP) to 3 per cent by March 31, 2010, in line with the targets prescribed by the TFC. In addition, several States have imposed limits on guarantees and targeted to reduce their liabilities.

3.4 Fiscal consolidation during the rule-based period (2004-05 to 2007-8)

The experience with FRBM Act, 2003 at Centre and the corresponding Acts at State level show that statutory fiscal consolidation targets have a positive effect on macroeconomic management of the economy. Table 2 provides how both the Central and State governments (consolidated) improved their fiscal position in terms of the major deficit indicators during the post-rule based period. Incidentally, the fiscal correction process was faster by the States as

3 A reference may be made to Misra and Khundrakpam (2009) for a detailed discussion on fiscal consolidation of Central and State governments.

Table 2

Major Deficit Indicators of the Central, State and General Governments
(percent of GDP)

Year (1)	2003-04 (2)	2004-05 (3)	2005-06 (4)	2006-07 (5)	2007-08 (6)	2008-09 (7)	2009-10 RE (8)	2010-11 BE (9)
Central Government								
RD	3.6	2.4	2.5	1.9	1.1	4.5	5.0	3.5
GFD	4.5	3.9	4.0	3.3	2.5	6.0	6.3	4.8
PD	–0.03	–0.04	0.4	–0.2	–0.9	2.6	3.0	1.7
State Governments								
RD	2.3	1.2	0.2	–0.6	–0.9	–0.2	0.7	0.3
GFD	4.4	3.3	2.4	1.8	1.5	2.4	3.3	2.5
PD	1.5	0.7	0.2	–0.4	–0.5	0.6	1.5	0.9
Combined General Governments (Centre and States)								
RD	5.9	3.6	2.7	1.3	0.2	4.3	5.7	3.8
GFD	8.4	7.2	6.5	5.4	4.1	8.5	9.5	7.3
PD	2.0	1.3	1.0	0.0	–1.1	3.4	4.6	2.7

RE: Revised Estimates, BE: Budget Estimates, RD: Revenue Deficit, GFD: Gross Fiscal Deficit, PD: Primary Deficit; Negative (–) sign indicates surplus in deficit indicators.
Source: RBI, *Handbook of Statistics on Indian Economy* and various issues of RBI, *State Finances: A Study of Budgets*.

compared with that of the Centre with the States achieving revenue surplus starting with 2006-07. It may be mentioned that the consolidated data might not reveal the variation that existed across the States.[4]

3.5 *Fiscal consolidation: whether led by revenue enhancement or expenditure compression*

As with the Centre and States individually, collectively also a revenue buoyancy and relatively limited growth in expenditure helped in the fiscal consolidation phase in the post-FRBM period up to 2007-08. The GFD was placed at 4 per cent of GDP in 2007-08 and revenue deficit was close to zero. Of the reduction of revenue deficit by 5.7 per cent of GDP of the general government in 2007-08 compared to that of 2003-04, 46.4 per cent was contributed by increase in revenue receipts and. 50.8 per cent by decline in revenue expenditure (Table 3).

In the case of Centre, the correction in the revenue account was revenue receipts led accounting for 52.0 per cent of the correction (Table 4). As a ratio to GDP, gross tax revenue of the Centre rose from a level of 9.2 per cent in 2003-04 to reach a peak level of 11.9 per cent in 2007-08. In contrast, for the States, compression of revenue expenditure accounted for 59.4 per cent of the correction of the revenue account during the above period and of the 40.6 per cent contribution of increase in revenue receipts, a major share came from devolution from the Centre (Table 5). Thus, the own revenue base of the States expanded only by limited extent during the period, with non-tax revenue accounting for the major share.

[4] Making Stata-wise fiscal analysis is beyond the scope of this paper. It may, however, be mentioned that the Twelfth Finance Commission recommended r an uniform fiscal reform path for all the States.

Table 3

Correction in Revenue Account of Central and State Governments

(percent of GDP)

(1)	2003-04 (2)	2007-08 (3)	Correction 4=(3–2) (4)	Contribution (5)
Revenue Receipt	18.6	21.3	2.7	–47.4
Revenue Expenditure	24.4	21.5	–2.9	50.9
Revenue Deficit	5.9	0.2	–5.7	

Table 4

Correction in Revenue Account of Central Governments

(percent of GDP)

(1)	2003-04 (2)	2007-08 (3)	Correction 4=(3-2) (4)	Contribution (5)
Revenue Receipt	9.6	10.9	1.3	–52.0
Revenue Expenditure	13.1	11.9	–1.2	48.0
Revenue Deficit	3.6	1.1	–2.5	

Table 5

Correction in Revenue Account of the State Governments

(percent of GDP)

(1)	2003-04 (2)	2007-08 (3)	Correction 4=(3–2) (4)	Contribution (5)
RD	2.30	–0.86	–3.16	
Revenue Receipts	11.22	12.51	1.28	40.61
Own Revenues	6.94	7.29	0.35	11.08
OTR	5.59	5.75	0.15	4.89
ONTR	1.35	1.55	0.20	6.19
Current Transfers	4.28	5.21	0.93	29.53
SCT	2.44	3.04	0.60	19.00
GRANTS	1.85	2.18	0.33	10.52
RE	13.53	11.65	–1.88	59.39

RD: Revenue Deficit; OTR: Own Tax revenue; ONTR: Own Non-tax Revenue; SCT: Share in Central Taxes; RE: Revenue Expenditure.
Source: RBI, *State Finance Studies*, various issues.

3.6 Global financial crisis and fiscal stimulus

Given the exceptional circumstances of 2008-09 and 2009-10, fiscal consolidation effort was setback on account of economic slowdown following the global crisis. In line with international trend, the government responded with a number of fiscal stimulus measures encompassing both tax cuts and higher expenditure during 2008-09 and 2009-10 to counter the economic slowdown. Therefore, revenue deficit and gross fiscal deficit of the Central government widened substantially and exceeded the pre-FRBM level. In this context, it is important to recognise that unlike in most Advanced G-20 countries where the direct fiscal support to financial institutions averaged 5.7 per cent of GDP (IMF, 2009, "Staff Position Note", September), the Government did not extend any such support in India. The broad nature of the stimulus measures is set out in Table 6.

Table 6

Fiscal Stimulus Measures
(percent of GDP)

	2008-09	2009-10
Tax reductions	0.2	0.4
Expenditure measures	2.2	1.4
of which: Sixth Pay Commission	0.5	0.3
Total	2.4	1.8

Owing to the fiscal stimulus package which envisaged significant reduction in tax rates and rise in expenditure as a part of discretional fiscal policy by the Centre, the fiscal deficit indicators reversed during 2008-09 and 2009-10. Incidentally, the payments on account of Sixth Pay Commission of the Centre coincided with the timing of the stimulus package and acted as stimulus for the economy in view of falling private consumption and investment demand. Gross tax revenue of the Centre as a ratio to GDP declined noticeably to 10.9 per cent in 2008-09 and further to 9.6 per cent in 2009-10 on account of sharp fall in collection of indirect tax collections (customs and excise), particularly excise duties. As a result of the shortfall in revenues and substantial increase in public expenditure, the revenue deficit and fiscal deficit targets mandated under the FRBM Act and Rules were not met in 2008-09 and 2009-10.

The fiscal consolidation process of the States was also disrupted and many of them deviated from the targets stipulated under their FRLs. The State Governments provided fiscal stimulus during 2008-09 and 2009-10 through different measures although there is lack of consistent collated data on fiscal stimulus extended by the States. Roughly, the deviation of fiscal deficit of 2009-10 from 2007-08 would provide some idea about impact of the global fiscal crisis on fiscal position of the Centre and the States as indicated in Table 7. While the deviation of fiscal deficit of the general government for 2009-10 from the level achieved in 2007-08 looks high at 5.4 per cent, it is at least 3.5 per cent higher compared to the FRBM target (3 per cent) of the Centre and targets of FRLs of the States (3 per cent of GSDP for each State).

This section analyses the analytics of fiscal consolidation in Indian context. First, the major empirical analyses have been briefly touched upon. Subsequently, the empirical findings based on the small structural macro model are discussed. The basic characterisation relates to whether fiscal deficit has any impact on macroeconomic performance in terms of growth and inflation.

4 Fiscal consolidation and macroeconomic performance: Some analytics and empirical findings in the context of India

4.1 Review of literature in Indian context

Mohan (2008) observed that a high level of fiscal deficit impacts the practice of monetary policy and tends to have a negative impact on real GDP growth through "crowding out" effects and/or rise in interest rates in the economy. The high level of fiscal deficit between1997-98 and 2002-03 was associated with relatively low GDP growth. The reduction in fiscal deficit since 2003-04 has been associated with a phase of high GDP growth. Thus, fiscal correction and consolidation, which is a major ingredient of macroeconomic stability, provide a conducive environment for propelling growth of the economy. Figure 2 presents the movements of GDP growth and combined GFD-GDP ratio showing almost an inverse relationship between the two.

Kochhar (2004) indicated that the main channels through which the fiscal imbalances impact the growth performance of the economy are through the deterioration in the quality of public expenditure, limitations on the room for macroeconomic policy manoeuvre and on the scope for the structural reforms and liberalization. Together this prevents the economy from attaining a sustained high growth path. She indicated a key manifestation of negative consequences of the large fiscal imbalances relates to deterioration in the composition of public spending. In particular, public capital expenditure fails sharply and a growing proportion of revenue was used each year to service public debt. She stated that there was secular decline in the ratio of capital to current spending during the period 1990-91 and 2001-02. Rangarajan and Subbarao (2007) indicated that there was a declining ratio of capital

Table 7

Fiscal Deficit – Impact of Crisis
(percent of GDP)

Fiscal Deficit	2007-08	2009-10	Difference of (1 over 2)
(1)	(2)	(3)	(4)
Centre	2.5	6.3	3.8
States	1.5	3.3	1.8
Combined General Government	4.1	9.5	5.4

Figure 2

Growth Rate of GDP and Combined GFD-GDP Ratio

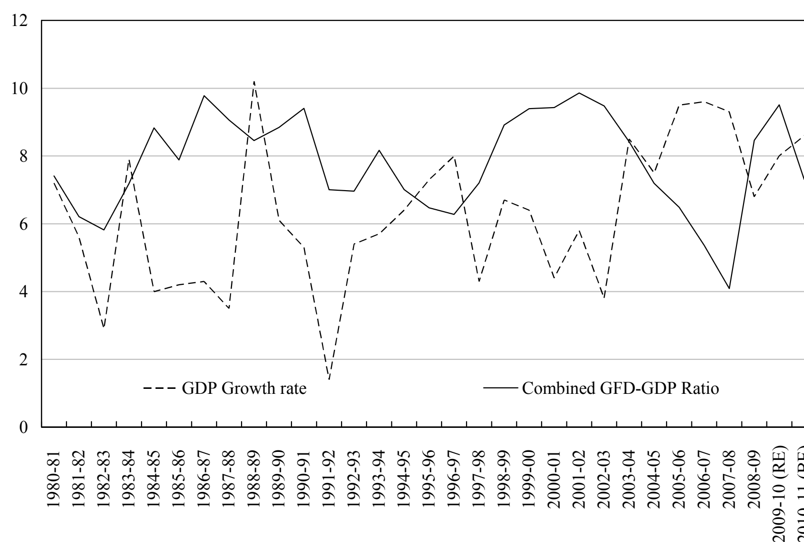
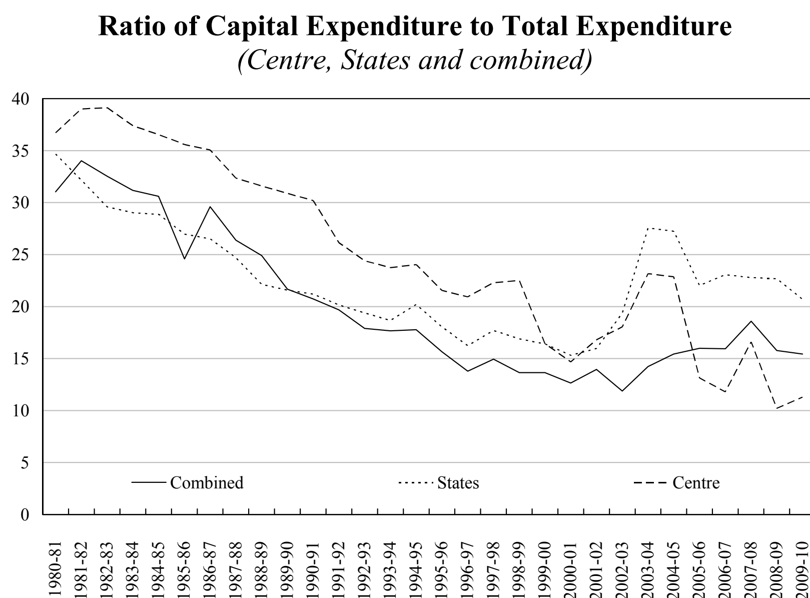


Figure 3

Ratio of Capital Expenditure to Total Expenditure

(Centre, States and combined)



expenditure to total expenditure over the period 1990-91 to 2002-03 accompanied by a rising ratio of interest payments to revenue receipts. Figure 3 provides the ratio of capital expenditure to total expenditure for the Centre, States and the combined general government.

As regards fiscal deficits and its impact on crowding out and crowding in, there are few empirical findings. Chakraborty (2006) using an asymmetric vector autoregressive model analysed the real and financial crowding out in India during 1970-71 to 2002-03 and found no real crowding out between public (in particular, infrastructure) and private investment;rather complementarily was observed between the two. RBI (2002) through the analysis of the fiscal deficit and its impact observed that the response of growth to fiscal stimulus in India depended upon the type of the stimulus:

i) A sustained increase in government consumption expenditure produces demand induced expansion in output, which is however, short-lived lasting for about 3 years. Output declines thereafter with the cumulative loss in output completely offsetting the initial gain. The supply response to the stimulus is only marginal;
ii) Stimulus through government investment in infrastructure has a similar effect on aggregate demand as that of government consumption. However, there is a pronounced and persistent positive impact on aggregate supply; and
iii) Increase in government investment in infrastructure accompanied by an offsetting reduction in government consumption to maintain the level of government deficit leads to increase in aggregate supply in a sustained manner.

4.2 *Empirical analysis based on a small structural macro model*

For empirical analysis, a small size structural macro model as shown in the Annex was estimated for the sample period 1980-81 to 2008-09. The model basically characterizes the interaction between product and money market with implications for banking sector's balance sheet constraint. The impact of fiscal deficit in the model is captured through size, quality and financing of deficit. In the model, aggregate output or income equals aggregate demand (real GDP), which in turn equals the sum of private consumption, investment, government consumption expenditure, and exports less imports. Private consumption depends on permanent income measured as the average of current and previous year's income, real deposit interest rate, *i.e.*, nominal deposit interest rate less the threshold inflation rate, wealth effect captured by broad money supply in real terms, and dependency ratio in line with life cycle hypothesis. Private investment on incremental basis depends upon changes in the real measure of income, government capital expenditure, bank credit,

and interest rate on loans and the change in trade openness. Export demand is characterized with quantum index of exports explained by two variables, the scale variable for external demand measured world exports in real terms and the trade competitiveness captured through real effective exchange rate. Import demand in volume terms depends upon real domestic income. For the government sector, fiscal deficit is exogenous while income and revenue are treated endogenous, depending upon nominal GDP. The budget constraint is thus characterized as government's total expenditure equals to revenue receipts and fiscal deficit. Government's capital expenditure is defined as total expenditure less revenue expenditure. The financing of fiscal deficit is linked to monetary sector. In the monetary sector, banks mobilise deposits which is determined by real income and real interest rate. Given the deposit resources, the level of funds available for lending and investment purposes is derived as deposits less cash reserve requirement by the central bank. From available funds, banks invest government securities as much required by the government through bond financing mode. Thus, supply of credit to private sector is constrained by the level of funds and financing of deficit. The nominal money demand is measured by deposits and currency with the public, the latter accounting for transaction demand for money endogenously determined by nominal GDP. Given the nominal level of broad money, the measure of aggregate price level and its inflation rate are captured through an inverted real money demand equation, which in turn depends upon real income, and money market interest rate. The money market interest rate is determined by liquidity pressure, the proportion of deficit to be financed by banks from the availability of funds. The yield on government bonds, which are liquid and risk free, is determined by money market condition. Loan interest rate is determined by money market interest rate to account for liquidity effect and the spread between the yield on government bonds and deposit interest rate.

In terms of empirical analysis, the model has 12 endogenous equations and various identities including the government budget and banking sector balance sheet. Most of the estimated equations showed reasonably high explanatory performance in terms of coefficient of determination or the adjusted R^2.

The estimated structural equations showed that permanent income has significant positive effect whereas dependency ratio has significant negative effect on private consumption. Wealth has positive effect but with a higher 10 per cent level of significance. Real deposit interest rate has significant positive effect, suggesting inverse consumption smoothing.

In the case of investment or capital formation variable, output, credit and trade openness have significant positive effect. Government's capital expenditure has positive effect with a higher 10 per cent level of significance. Real interest rate has negative but insignificant effect.

In the export demand equation, world income has significant positive effect. The real exchange rate measure of competitiveness has negative effect with a higher level of significance; implying that appreciation of exchange rate or deterioration in competitiveness could affect exports negatively. It is evident from export demand, the short-run elasticity of exports with respect to world demand is 0.58 but long-run elasticity is unity, suggesting that the shift in export share could occur due to competitiveness.

Imports show a significant positive relationship with domestic real GDP with short run and long-run elasticity at 0.96 and 1.75, respectively. On account of government's revenue, total revenue is significantly determined by real output and aggregate price level and the output effect is much stronger than the price effect.

As regards the monetary sector, the growth rate of currency demand by the public could almost move in tandem with nominal GDP Growth in the long-run. In the case of real broad money aggregate, the long-run elasticity with respect to real income is 1.5, in line with the Indian evidence. Interest rate has significant inverse relationship with money demand. As regards the

Table 8

Simulated Effects of Fiscal Deficit on Growth and Inflation

Fiscal Policy Effect	Inflation	Real GDP Growth
1 **Crowding-in Effect** (increased fiscal deficit due to increased capital expenditure to fuel greater private investment)	0.37	0.82
2 **Crowding-out Effect** (increased fiscal deficit due to revenue expenditure leading to a decline in private investment)	–0.31	–0.41
3 **Qualitative Effect** (Fiscal deficit remains unchanged but revenue expenditure declines with similar increase in capital expenditure)	0.28	0.45

interest rate, the liquidity effect has significant impact on money market interest rate, which in turn significantly determines the yield on government bonds and loan interest rates.

The estimated model was simulated for capturing the impact of the fiscal deficit effect on growth and inflation under three alternative scenarios over the period 1993-2008. First, fiscal deficit ratio was increased by a percentage point through an equivalent increase in government's capital expenditure and total expenditure, reflecting the crowding-in effect. In the second scenario, the crowding out effect was characterized by a percentage point increase in fiscal deficit, accompanied by an equivalent increase in revenue expenditure and the consequent decrease in private investment. The third scenario entailed a qualitative shift in government expenditure from revenue to capital expenditure while fiscal deficit did not change, *i.e.*, the decline in revenue expenditure by an amount equivalent to one percentage point fiscal deficit was offset by a similar increase in capital expenditure.

The empirical estimates showed that the crowding-in effect of fiscal deficit could be associated with 0.37 percentage point increase in the average inflation but higher 0.82 percentage point increase in real GDP growth. The crowding-out effect was associated with a decline in inflation and real GDP growth rate by 0.31 and 0.41 percentage points, respectively. On the other hand, the qualitative shift in expenditure showed an increase in inflation and real GDP growth by 0.28 and 0.45 percentage points, respectively (Table 8).

5 Fiscal consolidation in India: the medium-term framework and challenges

There are many challenges for fiscal regime in India to get back to the pre-crisis level. Efforts need to be made to put in place a fiscal reform plan to achieve sustainable level of deficit and debt in the medium term with a calibrated exit of the fiscal stimulus. The expenditure rationalisation and prioritisation needs to be emphasised.

5.1 Exit of fiscal stimulus

The IMF's paper on Global Economic prospects and Policy Challenges circulated at the G-20 Deputy Meeting held on February 27, 2010 at Seoul stated that the policy makers need to

Table 9

Consolidated Fiscal Reform Path of Centre and States
(percent of GDP)

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Revenue Deficit – Centre	4.8	3.2	2.3	1.2	0.0	–0.5
Revenue Deficit – States						0.0*
Fiscal Deficit – Centre	6.8	5.7	4.8	4.2	3.0	3.0
Fiscal Deficit – States	2.8	2.6	2.5	2.5	2.4	2.4
Fiscal Deficit – Consolidated	9.5	8.3	7.3	6.7	5.4	5.4

*It has been indicated by the ThFC that all the States that incurred zero deficits or achieved a revenue surplus in 2007-08, may return to zero revenue deficit by 2011-12. Other States may eliminate the revenue deficit by 2014-15.
Source: Thirteenth Finance Commission 2010-15, December 2009, Government of India.

formulate and begin to implement strategies for exiting from crisis-related intervention policies. The fiscal stimulus measures extended by the governments in India during 2008-09 and 2009-10, to large extent, have achieved the objective of containing the economic slowdown in the short-term. The Indian economy has emerged with remarkable rapidity from the slowdown caused by the global financial crisis of 2007-09. With growth in 2009-10 now estimated at 8.0 per cent by the Quick Estimates released on 31 January 2011 (6.7 per cent in 2008-09) and 8.6 per cent in 2010-11 as per the Advance Estimates of the Central Statistics Office (CSO) released on 7 February 2011, the turnaround has been fast and strong (GoI, 2011).

Without putting at risk the revival process, the Central government decided to undertake measures in a gradual manner to return to the path of fiscal consolidation from 2010-11, but fell short of the FRBM deficit targets. The Central Government in its budget announced on February 28, 2011 has committed to continue with the policy of fiscal consolidation in 2011-12. However, it would still not be possible to meet deficit targets mandated under the FRBM Act and Rules. The Government has proposed to bring in an amendment to the FRBM Act, 2003 during 2011-12. States would be able to get back to their fiscal correction path by 2011-12, allowing for a year of adjustment in 2010-11. The recommendations of the Thirteenth Finance Commission (ThFC) for the period 2010-15 are presently under implementation. The higher levels of devolution of taxes and the inter-se sharing thereof together with higher levels of non-Plan grants under Article 275 of the Constitution which include specific grants like grants for elementary education, outcomes and environment related grants, maintenance grants and state-specific grants are likely to bring the combined deficit of the States down to the targeted levels faster. Thus India is one of first among the emerging market economies to have made calibrated exit of fiscal stimulus, accompanied by exit of easy monetary regime. The exit strategy of the government is so calibrated that it would not hurt the recovery process.

5.2 Medium-term fiscal plan

The 13th FC has given recommendations on the fiscal consolidation roadmap for the period 2010-11 to 2014-15 (Table 9).

The medium-term fiscal policy statement brings out in detail the strategy of the government

to reduce the fiscal deficit closer to the mandated level under the FRBM Act and Rules by 2013-14. The process of fiscal consolidation by the Centre, which resumed in 2010-11 will be continued during 2011-12 after the deviations experienced during 2008-09 and 2009-10. However, the revenue deficit as percentage of GDP is estimated to decline from 5.3 per cent in 2009-10 (inclusive of Securities issued in lieu of subsidies) to 3.4 per cent in RE 2010-11. This correction is largely attributed to higher non tax receipts from 3G and BWA spectrum auction. In absence of this source of revenue in the coming financial year, revenue deficit is estimated to be static at 3.4 per cent of GDP in BE 2011-12. It is further projected to decline to 2.1 per cent of GDP by 2013-14. The revenue deficit and fiscal deficit in RE 2010-2011 are higher than the targets set under the FRBM Act and Rules. The deviation from the mandate under FRBM Act and Rules may be seen in the context of developments during 2008-09 and 2009-10. With the decision of the government to revert back to the path of fiscal consolidation starting from 2010-11, it is estimated to bring down the fiscal deficit from 7.8 per cent (inclusive of oil and fertiliser bonds) in 2008-09 to 4.6 per cent in BE 2011-12. This is better than the target of 4.8 per cent recommended by the ThFC. It is further projected to be brought down to 4.1 per cent of GDP in 2012-13 and 3.5 per cent in 2013-14.

There are, however, difficulties in achieving revenue surplus. This was explained in detail in the Fiscal Policy Strategy Statement of 2010-11. Revenue expenditure of the Central Government also includes releases made to States and other implementing agencies for implementation of Government schemes and programmes. The outcomes of many of these schemes are not in the nature of the outcomes related to revenue expenditure. In most of the cases these schemes are primarily in nature of creating durable assets but these assets are not owned by the Central Government. Therefore, in technical classification of revenue and capital account, the Central Government is not able to show expenditure on these schemes as capital expenditure. Examples of such schemes are Rajiv Gandhi Grameen Vidyutikaran Yojana, Jawaharlal Nehru National Urban Renewal Mission, Pradhan Mantri Gram Sadak Yojana, Accelerated Irrigation Benefit Programme, etc. Over the years, the number of such schemes funded by the Central Government and implemented by States/autonomous bodies has increased significantly. This has resulted in significant increase in funds transfer from Centre to States/autonomous bodies have increased significantly. This has resulted in significant increase in funds transfer from Centre to State/autonomous bodies resulting in higher revenue expenditure. However, these revenue expenditures cannot be treated as unproductive in nature. On the contrary, they contribute to growth in economy. The total expenditure on such items are significant at about 1.6 per cent of GDP. This reflects that half of the government revenue deficit is attributed towards these grants and, therefore, effective revenue deficit of the government is estimated at 1.8 per cent of GDP in 2011-12. It would be the endeavour of the government to eliminate this component of revenue deficit in a time bound manner. With the projected level of expenditure for 2012-13 and 2013-14, along with the assumption that the above mentioned grant will increase in medium term at not less than 10 per cent, the effective revenue deficit is estimated to come down to 0.5 per cent of GDP in 2013-14. Policy initiatives and administrative efficiency can make the target of eliminating effective revenue deficit by 2013-14 achievable.

The fiscal consolidation in the medium term will be attained by the Centre both through rise in revenue and decline in expenditure. Gross tax revenue is estimated to increase from 10.0 per cent of GDP in RE 2010-11 to 10.4 per cent in BE 2011-12 (reflecting growth of 18.5 per cent over RE 2010-11), which is however still lower than 11.9 per cent of GDP achieved during 2007-08. With economy reverting back to the path of trend growth rate, it would be possible to get back to the achieved peak level of tax to GDP ratio. In the medium-term targets, gross tax collection as percentage of GDP is projected at 10.8 per cent in 2012-13 and 11.3 per cent in 2013-14. Introduction of Goods and Services Tax (GST) and Direct Tax Code would have significant bearing on tax mobilisation efforts of the government (Table 10).

Table 10

Fiscal Indicators – Rolling Targets of the Centre
(current market prices, percent of GDP)

	Revised Estimates 2010-11	Budget Estimates 2011-12	Targets for 2012-13	Targets for 2013-14
Revenue Deficit	3.4 *(3.2)*	3.4 *(2.3)*	2.7 *(1.2)*	2.1 *(0.0)*
Fiscal Deficit	5.1 *(5.7)*	4.6 *(4.8)*	4.1 *(4.2)*	3.5 *(3.0)*
Gross Tax Revenue	10.0 *(11.35)*	10.4 *(11.78)*	10.8 *(12.24)*	11.3 *(12.72)*

Figures in brackets relate to those recommended by the ThFC.
Source: Medium Term Fiscal Policy Statement, 2011, Government of India.

The fiscal consolidation roadmap enumerated in the Medium-term Fiscal Statement, is designed with a conscious efforts to bring down total expenditure of the government as percentage of GDP to the pre-crisis level, *i.e.*, of 2007-08. Including issuance of securities in lieu of subsidies and securities issued to nationalised banks, total expenditure of the government during 2007-08 was 15.9 per cent of GDP. This went up to 17.3 per cent in 2008-09 (inclusive of securities issued in lieu of subsidies) and has declined to 15.4 per cent in RE 2010-11. With re-prioritization of expenditure towards developmental side and curtailing the growth in non-developmental expenditure, the total expenditure is estimated to be brought down to 14 per cent of GDP in BE 2011-12. In the medium-term projection, it is estimated to further decline to 13.5 per cent of GDP in 2012-13 and 13.0 per cent in 2013-14.

The stimulus packages of the Central Government as well as those announced by individual States coupled with the increased transfers recommended by the ThFC have implications for the financial position of the States in the medium term.

5.3 Revised architecture of rule-based fiscal policy

In many countries, the fiscal rules also include a debt reduction target. The FRBM Act, 2003 of India provides for deficit target, borrowing rule, and norm for contingent liabilities. As regards debt, the FRBM Rules 2004 of the Centre contain an incremental assumption rule for public debt which states that "the Central Government shall not assume additional liabilities (including external debt at current exchange rate) in excess of 9 per cent of GDP for the financial year 2004-05 and in each subsequent financial year, the limit of 9 per cent of GDP shall be progressively reduced by at least one percentage point of GDP". There is, however, no explicit rule targeting reduction in the overall level of public debt. As a proportion of the GDP, public debt could come down through limiting its growth relative to growth in nominal GDP or through lower assumption of incremental liabilities or retirement of debt. The ThFC had recommended limiting the combined debt of the Centre and States to 69 per cent of the GDP by 2014-15 (44.8 per cent for the centre and 24.3 per cent for the States). The Union Budget for 2010-11 announced the intent of bringing out a

Table 11

Roadmap for General Government Debt and Liabilities

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1. Central Government Debt	50.5 *(54.2)*	50.3 *(53.9)*	49.3 *(52.5)*	47.6 *(50.5)*	45.4 *(47.5)*	43.0 *(44.8)*
2. State Government Debt	24.8 *(27.1)*	24.6 *(26.6)*	24.3 *(26.1)*	23.9 *(25.5)*	23.4 *(24.8)*	23.1 *(24.3)*
3. Outstanding Central Loans to State Governments	2.3 *(2.5)*	2.0 *(2.2)*	1.8 *(2.0)*	1.6 *(1.7)*	1.4 *(1.5)*	1.2 *(1.3)*
4. General Government Debt	73.0 *(78.8)*	72.9 *(78.3)*	71.8 *(76.6)*	69.9 *(74.3)*	67.4 *(70.8)*	64.9 *(67.8)*

The figures in the brackets relate to those recommended by the ThFC.
Source: Government of India (2010), Government Debt: Status and Road Ahead, Ministry of Finance, November.

status paper giving detailed analysis of the situation and a roadmap for curtailing overall public debt within six months. The status paper on debt was presented to the Parliament on November 2010.

In the debt paper, it had been explained that while accounting for Central Government debt and liabilities, the amount not used for financing Central Government deficit should be taken out for truly depicting Government's liability. The component of NSSF which are invested as State Governments' securities has been excluded for the purpose of calculating Central Government's liabilities. Debt raised under Market Stabilisation Scheme (MSS) which are sequestered in a separate account in the Reserve Bank of India, are also not available for financing of fiscal deficit. Hence, MSS balances are adjusted while arriving at the debt and liabilities of the Government. With these adjustments from the liabilities, along with external debt at current exchange rate, the estimated debt-to-GDP ratio for Central Government would be 45.3 per cent in RE 2010-11 and 44.2 per cent in BE 2011-12, respectively. This marked improvement from the earlier reported data on debt has to be seen in the context of revision in GDP data with a new series effective from 2004-05 as well as higher than earlier estimated growth in 2009-10 and 2010-11. With the projected level of fiscal deficit of 4.1 per cent of GDP in 2012-13 and 3.5 per cent of GDP in 2013-14, the estimated debt-to-GDP ratio would be 43.1 per cent and 41.5 per cent, respectively. These estimates show that the debt-to-GDP ratio in 2011-12 itself will be lower than the 13th FC recommended level of 44.8 per cent for the terminal year 2014-15. The road map provided for debt liabilities for the Centre, States and the combined general government in the debt paper *vis-à-vis* the recommendation of the ThFC is set out in Table 11.

It may be seen from the Table 11 that the suggested roadmap shows reduction of 8.1 per cent of GDP in the consolidated debt for the General Government. It may be recalled that during the fiscal consolidation period of 2004-05 to 2007-08, the reduction in debt as percentage of GDP was 10.6 per cent. The debt paper states that in view of the past performance, thus, the suggested roadmap is achievable. In the year 2014-15, the targeted debt is 64.9 per cent of GDP, which is lower than the recommended debt of 68 per cent by the ThFC.

5.4 Expenditure reforms

With regard to expenditure, a number measures have been initiated by the Centre during the recent years. The focus on outcomes has got institutionalized with the practice of select departments being mandated to come up with their "Result Framework (RF) Document". This puts emphasis on tracking on measurable outcomes in the form of Key Performance Indicators (KPIs). Result Frameworks are so drawn up that quarterly monitoring becomes possible. During the year, the RF as well as the achievements against the KPIs are being reviewed by a Committee on Government Performance and the report of such review are being submitted to the Prime Minister through the concerned Minister for further action as deemed necessary. At the end of the year, all Ministries/Departments covered under the RF system review and prepare a report listing the achievements against the agreed goals in form of KPIs and these results are to be placed before the Cabinet for information by 1st June of each year.

Initiatives have also been taken to evenly pace the plan expenditure during the year and also to avoid rush of expenditure at the year end. The practice of restricting the expenditure in the month of March to 15 per cent of budget allocation within the fourth quarter ceiling of 33 per cent is being enforced. The quarterly exchequer control based cash and expenditure management system which inter alia involves preparing a Monthly Expenditure Plan (MEP) continues to be followed in select Demands for Grants. The emphasis is on right pacing plan expenditure by ensuring adequate resources for execution of budgeted schemes.

Central Plan Scheme Monitoring System (CPSMS) is an initiative towards establishing a suitable on-line management information and decision support system. This MIS tracks devolution of funds as well as their utilization through all tiers of implementing agencies and in some cases up to the end beneficiaries. The real time availability of information on status of fund utilization and balances in respective bank accounts will enable better cash management system with timely release of adequate funds and avoidance of parking of funds without actual requirement. While ensuring reduced cost of carrying borrowed fund, it will also bring in accountability as people can access information about a particular scheme in their respective areas.

Non-plan expenditure at 126 per cent of total revenue receipts during 2009-10 has resulted in use of borrowed resources for consumptive expenditure. This brings us back to the issue of structural problems in the composition of expenditure which, if not addressed, will further squeeze out the fiscal space for undertaking developmental works. The government has addressed these issues in right earnest while formulating the strategy for 2011-12. With focus on curtailing growth in non-plan expenditure, the above mentioned percentage is estimated to decline to 103 per cent in BE 2011-12. With further reallocation of resources towards priority sectors, it is projected to decline to 90 per cent of total revenue receipts in 2013-14.

During the period 2004-05 to 2007-08, fiscal consolidation aided with lower interest rate regime had helped the government in bringing down interest payment as percentage of net tax revenue of Central Government to 38.9 per cent in 2007-08 from the high of 56.5 per cent in 2004-05. However, higher fiscal deficit during the crisis period, resulted in higher interest outgo which coupled with moderation in net tax revenue, has increased the interest payment as proportion of net tax revenue to Centre to 47.2 per cent in 2009-10. With resumption of fiscal consolidation path by the Central government, this percentage is estimated to improve to 40.3 per cent in BE 2011-12. This indicates that any slippage on fiscal front even for one or two financial years may lead to serious crowding out of resources for developmental expenditure in future as interest payment will elbow out other expenditures from government's net tax revenue. In the medium-term outlook, this ratio is projected to further improve to 38.4 per cent and 36.1 per cent in 2012-13 and 2013-14, respectively. Interest payment as percentage of GDP is estimated to decline from 3.3 per cent in 2009-10 to 3.0 per cent in BE 2011-12 and 2.9 per cent by 2013-14. The projection

Table 12

One-off Items in the Budget

Item	2009-10 (RE)		2010-11 (BE)	
	Amount (Rs. Crore)	*(percent of GDP)*	Amount (Rs. Crore)	*(percent of GDP)*
Debt Waiver (Revenue Expenditure)	15,000	0.24	12,000	0.17
Pay Arrears (Revenue Expenditure)	16,643	0.27	-	-
Disinvestment (Non-debt Capital Receipts)	25,958	0.42	40,000	0.58
3G Auction (Non-tax Revenue)	-	-	35,000	0.5
Revenue Deficit/GDP				
i) Budgeted		5.3		4.0
ii) Adjusted		4.8		4.3
Gross Fiscal Deficit/GDP				
i) Budget		6.7		5.5
ii) Adjusted		6.6		6.3

made in the debt paper released in November 2010 indicates the interest payment as a ratio to net tax revenue will gradually brought down to the level of 2007-08 in the year 2013-14 (38.8 per cent) and would further come down to 36.5 per cent in 2014-15. This would enable the government to provide larger resources for developmental activities. It is pertinent to emphasise at this point that even though there is minimal risk for India for its refinancing requirement of existing debt, the government is taking efforts to return to the path of fiscal consolidation.

It may be recalled that the expenditure on subsidies for food,fertilisers and petroleum products increased substantially during 2008-09. After including Rs.95,942 crore of Special Securities issued to oil and fertiliser companies in lieu of cash subsidies, total expenditure on subsidies on these three items increased to Rs.2,19,582 crore amounting to about 40 per cent of revenue receipts of the Central government and about 4 per cent of GDP. This level of subsidy payment was certainly not sustainable and the government undertook certain measures like introduction of nutrient based subsidy mechanism for fertilisers, deregulation of petrol pricing, etc. These measures have helped in reducing the expenditure on major subsidies as percentage of GDP to 1.5 per cent in BE 2011-12 and it is projected to decline to 1.3 per cent by 2013-14. Government has firmly established the practice of providing petroleum and fertiliser subsidy in cash instead of securities. This is a major step towards bringing in all subsidy related liabilities into Government's fiscal accounting and overall correction in subsidy outgo may be seen in this context.

5.5 Quality of fiscal adjustment

It may be noted that the fiscal correction envisaged during 2010-11 placed significant reliance on one-off items of expenditures and receipts. Excluding one-off items such as arrears payments and farm debt waiver from the expenditure, and disinvestment and 3-G proceeds from the receipts, RD and GFD will show a correction of 0.5 and 0.3 percentage points of GDP over the previous year, respectively, as against 1.3 and 1.2 percentage point reduction envisaged in the Budget (Table 12).

Furthermore, substantial proportion of the budgeted fiscal correction in 2010-11 is to be realised from the savings on account of lower than expected expenditure in respect of pay and pension arrears and loan waiver scheme. While the Government may succeed in raising receipts,

both from high tax buoyancy and once-off sources, the real measure of fiscal consolidation lies in improving the quality of expenditure. If the Government is able to commit more resources to capital expenditure, it will help deal with some of the bottlenecks that contribute to supply-side inflationary pressures. Durable fiscal consolidation would require measures to augment revenue collection on a sustainable basis and rationalisation of recurring expenditure, with a focus on curtailing non-plan revenue expenditure and enhancing the proportion of capital expenditure.

5.6 Concluding observations

India's fiscal scenario has undergone several phases of ups and downs as discussed in the paper. With significant deterioration in early 2000s, the Central government and the State governments decided to abide by rule-based framework under statutory legislations from 2004-05 (some States even started earlier). The results of this decision was rewarding in terms of low fiscal deficit and high growth for the economy. This process continued smoothly until 2007-08. The fiscal consolidation process, however, paused following the knock-on effect of the recent global financial crisis. Fiscal stimulus measures provided by the government in terms of tax cuts and additional spending resulted in rise in fiscal deficits as a result the Centre and the States could not adhered to the deficit targets under FRBM/FRLs. The Central government has already resumed the process of fiscal consolidation since 2010-11 and has committed to carry forward the process further. The States have been given a year of adjustment during 2010-11 and will commence the fiscal consolidation process starting with 2011-12. The Thirteenth Finance Commission has laid out a medium-term fiscal restructuring plan, both for the Centre and the States. Apart from the deficit targets, the Commission has recommended a target in terms of Debt-GDP/ GSDP for the Centre and the States to be achieved in a calibrated manner by 2014-15. While the Debt Paper of the Government of India has indicated that it would be feasible to reach the targets of debt Debt-GDP/GSDP, the Central government may find it difficult to generate revenue surplus by 2014-15 as stipulated by the Commission. In this connection, the emphasis in the current phase of consolidation should be on the quality of adjustment, while also building adequate fiscal space to deal with future adverse shocks to growth and inflation.

The empirical analysis based on the small structural macro model was in terms of three scenarios. First, if fiscal deficit to be raised, it will have a positive impact on growth accompanied by some inflation when the entire amount of deficit is devoted to capital expenditure. Second, when the fiscal deficit is used for revenue expenditure accompanied by decline in private investment, may lead to lower growth and moderation of inflation. Third, with the level of fiscal deficit remaining unchanged, a qualitative shift in expenditure from revenue to capital expenditure would result in higher growth and a bit of inflation. The findings, especially, the inflation effect of deficit could be moderated with improvement in supply side through a production function in the model, which was experimented by some modelling exercises in the RBI (RCF, 2001-02). Nevertheless, the findings indicate that the government may keep the fiscal deficit under control and raise the proportion of capital expenditure in total expenditure to contribute to growth.

ANNEX
A SMALL STRUCTURAL MACRO MODEL
FOR EVALUATING THE IMPACT OF FISCAL POLICY IN INDIA

1 The model specification

Aggregate Supply=Aggregate Demand

$$Y = C + I + G + X - M$$

Aggregate Demand/Product Market

Consumption Demand

$$C = F\left[Y^P, \frac{BM}{P}, r^d, Age\right]$$

Investment Demand

$$I = F[Y, r^L, \frac{G^k}{P}, \frac{L}{P}, T^O]$$

Government Budget Constraint

$$G = F[G^{RE}]$$

$$G^K = G^T - G$$

$$G^T = G^R + F$$

Export Demand

$$X = F[X^W, E^R]$$

Import Demand

$$M = F[Y]$$

Monetary Sector/Money Market

$$M^D = \frac{BM}{P} = F\left[Y, R^m\right]$$

$$R^M = F[L^G]$$

$$R^L = F[R^M, (R^G - R^D)]$$

$$R^G = F[R^M]$$

$$BM = C^M + D$$

$$D = F[Y, r^D]$$

$$C^M = F[Y^N]$$

Banking Sector Balance Sheet Constraint

$$L = (1 - \theta)D - F$$

Aggregate Price and Inflation

$$P = BM / M^D$$

$$\pi = p - p_{-1}$$

$$Y^N = Y * P$$

Real Interest

$$r = R - \pi$$

$$DFL = (1+\pi)DFL_{-1}$$

The variables are defined as follows:

Y: Real GDP; Y^N: nominal GDP; *C*: Consumption; *I*: investment; *G*: government consumption expenditure; *X*: exports; *M*: imports; G^K: Government capital expenditure; G^T: government total expenditure; *BM*: Broad money; *P*: Price index; C^M: currency demand; *D*: aggregate deposits; *L*: Loans to private sector; *F*: financing of government deficit; R^M: money market interest rate; R^L: nominal loan interest rate, and r^L: real loan interest rate; R^G and r^G: nominal and real yield on Government bonds; R^D and r^D: nominal and real deposit interest rates; L^G: Liquidity pressure due to deficit financing: $F/(1–\theta)D$; *DFL*: GDP Deflator.

2 Estimated equations

1 *Consumption*

$$LnC = 11.85 + 0.46*LnY^p + 0.10*LnBM/P + 0.37*r^d – 1.29*Age$$

(7.02) (4.89) (1.91) (2.34) (5.85)

Adj. R^2: 0.999; DW = 2.18; First order residual correlation LM Test: F(1,24) = 0.86(0.37)

2 *Investment*

$$D(I) = –5346.10 + 0.30*D(Y) – 362.84*r^L + 61.14*d(G^K/P) + 14.72*d(L/P) + 5679.87*T^O –$$

(–0.96) (5.32) (–0.44) (1.74) (2.25) (6.62)

$$– 83295.73D^{2008} – 38826.81*D^{2000}$$

(–10.48) (–8.35)

Adj. R^2: 0.939; DW = 2.67; F(1,24) = 3.25(0.10)

3 *Government revenue expenditure*

$$G = 4557.37 + 0.29*G^R + 0.59*G_{-1} + 24117.59*D^{1998-9}$$

(2.22) (11.40) (12.10) (4.67)

Adj. R^2: 0.999; DW: 1.81; F(1,24) = 0.01(0.93)

4 *Export demand*

$$LnX = 0.36 + 0.58*LnX^w – 0.18*LnE^R + 0.59*LnX_{–1}$$

(0.55) (2.40) (–1.83) (3.63)

Adj. R^2: 0.994; Dw: 1.83; F(1,20) = 0.27(0.61)

5 Import demand

$LnM = -11.27 + 0.96*LnY + 0.41*LnM_{-1} - 0.18D^9$

(–4.56) (4.55) (3.02) (–5.35)

Adj. R^2: 0.992; Dw: 2.05; F(1,24)=0.09(0.76)

6 Real money demand

$LnBM/P = -2.51 + 0.30*LnY - 0.34*R^M + 0.81*LnBM/P_{-1}$

(–1.68) (1.77) (–2.37) (7.44)

Adj. R^2: 0.999, DW: 1.56; F(1,24)=0.21(0.65)

7 Government revenue

$LnG^R = -2.93 + 0.40*LnY + 0.19*LnP + 0.72*LnG^R_{-1}$

–(3.84) (4.29) (2.06) (9.68)

Adj. R^2=0.999, DW=2.07; F(1,24) =0.0.06(0.82)

8 Banks time deposits

$D(TD) = -31023.7 + 0.50 *D(Y) +3923.24 *r^d + 0.82*D(TD)$

(–2.08) (3.10) (1.31) (8.43)

Adj. R^2=0.948 DW=2.17, F(1,24)=3.36(0.10)

9 Bank credit

$D(L) = 235531.0 + 1.18*D(Y) - 9573.49*r^L - 321095.1*L^G - 149058.3D^o$

(3.22) (7.14) (–3.29) (–3.68) (–11.95)

Adj. R^2 0.934; DW:1.54; F(1,24)=1.50(0.20)

10 Banks' loan interest rate

$R^L= 1.50 + 0.12*R^M - 0.11*(R^G-R^D) + 0.83R^L_{-1} - 1.47D^{2008}$

(1.62) (13.01) (–1.82) (12.99) (–11.16)

Adj. R^2 = 0.940 DW = 1.64, F (1,24): 0.96(0.34)

11 Money market interest rate

$R^M = 3.82 + 0.42R^M_{-1} + 0.19*L^{Gap} + 7.11D^{1990-91} + 9.12D^{1995}$

(3.70) (4.11) (2.18) (4.94) (4.92)

Adj. R^2 = 0.800; DW = 2.16; F(1,24) = 1.41(0.25)

12 Government bond yield

$$R^G = 1.25 + 0.78*R^G_{-1} + 0.12*R^m - 1.90*D^{2002\text{-}03}$$

(2.34) (13.63) (3.45) (–4.06)

Adj. R^2 = 0.94; DW = 1.68; F(1,24) = 0.59(0.45)

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WHAT FAILED AND WHAT WORKED IN PAST ATTEMPTS AT FISCAL ADJUSTMENT

Paolo Mauro[*]

A systematic and comprehensive analysis of past adjustment plans and their outcomes provides useful insights for fiscal consolidation going forward: although today's circumstances may be different from the past, history offers lessons in terms of pitfalls to avoid and successes to be replicated. This short paper summarizes the main findings of individual country case studies and a cross-country statistical analysis, and puts forward some implications for the design and implementation of current fiscal adjustment plans.

1 Analytical framework

Previous empirical studies have typically identified fiscal adjustment episodes on the basis of *ex post* outcomes: that is, the largest observed improvements in government debt or fiscal balance.[1] This paper identifies fiscal adjustment plans on the basis of large envisaged reductions in debts and deficits. It thus goes beyond past successes, focusing also on attempts that eventually failed. The analysis tracks *ex post* outcomes compared with *ex ante* plans, looking at deviations from targets in revenues or expenditures and the factors underlying such deviations.

Case studies focused on each of the G7 countries. Specific *ex ante* consolidation attempts in those countries were selected based on the large size of planned adjustment, formal and public commitment to adjust, detailed formulation, and medium-term perspective. Table 1 summarizes the plans analyzed and their main features. The case studies were complemented by a cross-country statistical analysis drawing on the three-year "convergence" or "stability and growth" programs produced by European Union countries during 1991-2007 (covering 66 plans that envisaged a general government balance improvement of at least 1 percent of GDP cumulatively over the three-year period).

2 Key findings

The analysis yields findings in three dimensions: rationale for and design of the envisaged fiscal adjustment; degree of implementation and underlying macroeconomic factors; and political and institutional determinants of the implementation record.

3 Rationale for and design of fiscal adjustment plans

Rationale. Adjustments in the 1970s and early 1980s focused on fiscal deficits to tackle macroeconomic imbalances, such as rising inflation and external current account deficits (e.g., France, Germany, and the United Kingdom). Since the mid-1980s, plans have usually been

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This short paper summarizes work undertaken by IMF staff and coauthors in Mauro (ed.) (2011), *Chipping Away at Public Debt – Sources of Failure and Keys to Success in Fiscal Adjustment*, Wiley.

The opinions expressed herein are those of the author and should not be reported as reflecting the views of the IMF, its Executive Board, or its management.

[1] See, for example, Alesina and Perotti (1995); Alesina and Ardagna (2009); and Giavazzi *et al.* (2000).

Table 1

Main Features of Selected G7 Fiscal Adjustment Plans

Country	Adjustment Plan	Objectives/Design	Comments/Outcome
Canada	1985–91	Reduce overall deficit by 3½ per cent of GDP over six years. Across-the-board cuts and freezes.	Overall deficit objectives met, but not sufficiently ambitious to halt the rise in debt.
	1994–97	Reduce overall deficit by 3 per cent of GDP over three years. Major restructuring of spending, including reforms of unemployment insurance, transfers to provinces, and pensions.	Successfully met objectives and attained long-lasting reversal of debt dynamics.
France	Plan Barre, 1976–77 Virage de la Rigueur, 1982–84	Austerity packages to curb inflation and current account deficit. Not set in multiyear frameworks. Combination of tax hikes and spending curbs. Reforms in 1982–84	Effective in reducing deficits and containing aggregate demand, but impact short-lived.
	1994–97 Plan aimed at meeting the Maastricht criteria	Introduced multiyear framework. Quantitative objectives aimed at meeting Maastricht criteria.	Met Maastricht criteria, partly through last-minute revenue measures. Difficulties in controlling expenditures.
	2003 – 07 Consolidation under the Excessive Deficit Procedure	Fiscal adjustment focused on expenditure control; revenue-to-GDP ratios targeted to remain stable. Legally binding zero real growth rule for central government spending. Health and pension reforms.	Some expenditure slippages, partly offset by one-off revenues.
Germany	1976–79 Plan	Cut deficit by 2¾ per cent of GDP. Back-loaded; focus on expenditures (generalized cuts; cuts in labor market expenditures; wage restraint).	Weak economic growth led government priority to shift from fiscal adjustment to stimulus.
	1981–85 Plan	Cut deficit by 1¼ per cent of GDP. Front-loaded expenditure cuts (reduction in entitlement and wage bills).	Largely successful.
	1991–95 Plan	Cut deficit by 1½ per cent of GDP while minimizing tax increases needed to finance unification. Mainly expenditure-based (defense, social spending); revenue package from 1990 plus VAT rate hike.	Did not meet objectives.
	2003–07 Plan	Cut deficit together with "Agenda 2010" structural reforms (labor market, pensions). Back-loaded. All on expenditure side: reducing unemployment insurance, transfers to pension system, firing benefits, and subsidies.	Largely successful. Higher-than-expected costs of labor market reforms. Increase in VAT made it possible to meet objectives while reducing the tax burden on labor.
Italy	1994 Economic and Financial Program Document (EFPD) for 1994–97	Reduce the debt-to-GDP ratio beginning in 1996. Strong interest in joining EMU. Initial plan did not aim at meeting Maastricht criterion of 3 per cent deficit, but objectives made more ambitious in mid-course.	Attained lasting reduction in debt-to-GDP ratio, albeit at high levels. Maastricht criterion met through last-minute efforts.
	2002 EFPD for 2002–05	Planned limited improvement in fiscal balance (by 1 percent of GDP), together with a 2 per cent of GDP reduction in the revenue ratio, thus implying the need for a 3 per cent of GDP expenditure cut.	Revenue ratio remained unchanged. Large expenditure and fiscal balance overruns.

Japan	1997–Fiscal Structural Reform Act	Reduce deficit to 3 per cent of GDP by FY2003. No revenue-enhancing measures announced. Future policy decisions needed to achieve targets.	Immediately derailed by Asian crisis and domestic banking crisis.
	2002– Medium-Term Fiscal Adjustment Plans. (Two sub-periods: 2002– and 2006–.	Aim for primary surplus by early 2010s. Introduced five-year rolling frameworks. Three-year expenditure ceilings on initial budgets by major policy area introduced in FY2006. No revenue-enhancing measures announced. Future policy decisions needed to achieve targets.	Partially successful in the initial stages. Ultimately derailed by the global crisis.
United Kingdom	Howe's 1980 Medium-Term Financial Strategy (FY1980–83)	Curb government borrowing to rein in the money supply and inflation. Envisaged 5½ per cent of GDP cut in the deficit, through lower spending and an expected rise in oil revenues.	Expenditure overruns in social security, public wages, and support to public enterprises.
	Lawson's 1984 Budget (FY1984–88)	Rebalance the tax burden from direct to indirect taxes and reduce marginal tax rates. Shrink the state (Thatcher government agenda). Reduction in public sector manpower.	Expenditure cuts beyond what was envisaged. Privatization of large public enterprises.
	Clarke's November 1993 Budget (FY1994–98)	Eliminate the 8 per cent of GDP deficit by 1998. Increases in national insurance contribution rate and excises, broadening of the VAT base. Freezes on running costs combined with zero-based budgeting "fundamental expenditure reviews."	Delivered a steady reduction in the fiscal deficit.
	Darling's 2007 Pre-Budget Report and Comprehensive Spending Review (FY2008–12)	Planned modest reduction in the deficit, by reducing the growth of spending.	Derailed by global crisis: revenue underperformance, expenditure overruns, capital injections to banks.
United States	1985 Gramm-Rudman- Hollings (Balanced Budget and Emergency Deficit Control Act)	President to submit budgets consistent with GRH targets each year, and balanced budget by 1991. If legislated policy was projected to result in higher deficits, automatic "sequestration" with spending cuts would apply.	Did not achieve targets but deficit would have been larger in absence of GRH.
	OBRA–1990 (Omnibus Budget reconciliation Act)	Reduce deficit by cumulative US$500 billion (equivalent to 8.5 percent of 1991 GDP) in 1991–95. Introduced discretionary spending caps and pay-as-you-go (PAYGO) mechanism. Included some tax increases.	Unable to restrain the unexpected growth in spending for entitlement programs (notably, Medicare and Medicaid).
	OBRA–1993	Reduce the deficit by 1988 by 1¾ percent of GDP, relative to the no-policy-change baseline. PAYGO continued and discretionary spending caps extended, with five-year nominal spending freeze. Some tax increases and measures to close loopholes.	Deficit reduction well in excess of targets, with stronger-than-expected economic growth and revenues, but also effective spending caps.

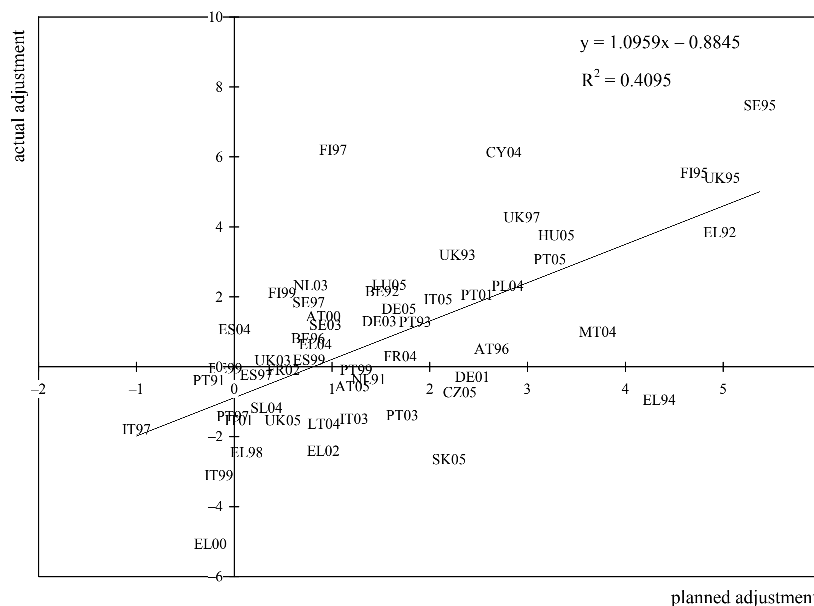
Source: IMF staff compilations.

introduced in response to high or rising public debts. Refinancing concerns have not been a major factor in these countries, but in some cases (e.g., Canada in the 1990s, Italy in the run-up to European Monetary Union, EMU) rising interest costs and spreads relative to neighboring countries were a motivating factor. In Europe, an enhanced focus on fiscal adjustment was driven by the Maastricht criteria, the Stability and Growth Pacts, and the Excessive Deficit Procedure.

Figure 1

European Union: Planned and Actual Adjustments, 1991-2007

(percent of potential GDP)



Source: EU countries' convergence plans and stability and growth plans; European Commission's Annual Macroeconomic Database (AMECO); and IMF staff estimates.
Note: Austria (AT), Belgium (BE), Cyprus (CY), Czech Republic (CZ), Finland (FI), France (FR), Germany (DE), Greece (EL), Hungary (HU), Italy (IT), Lithuania (LT), Luxembourg (LU), Malta (MT), Netherlands (NL), Portugal (PT), Slovak Republic (SK), Slovenia (SL), Sweden (SE), United Kingdom (UK). The two-digit numbers indicate the year when the plan was drawn up.

3.1 *Envisaged composition of fiscal adjustment*

Most plans focused on spending cuts, consistent with the relatively large initial size of government, particularly in Europe. Indeed, only 10 out of the 66 plans in the EU sample envisaged increases in the revenue-to-GDP ratio backed up by revenue measures. Furthermore, several plans envisaged a reduction in the revenue ratio, requiring expenditure cuts larger than the targeted deficit reduction.

3.2 *Macroeconomic assumptions*

Macroeconomic assumptions were mostly in line with those of independent observers (such as *Consensus Forecasts* and the IMF's *World Economic Outlook*). In other words, any surprises in economic growth (see below) and other macroeconomic variables were largely surprises for all observers.

4 Implementation record and underlying macroeconomic factors

Implementation record and degree of ambition. For the 66 plans in the EU sample, the average annual planned improvement in the structural fiscal balance was equivalent to 1.7 per cent of GDP (cumulative over the three years), whereas the outturn was a 0.9 per cent improvement. On

Table 2

Actual versus Planned Structural Fiscal Adjustment, G7

(percent of potential GDP; means reported, except for implementation ratios, which are medians)

	ΔPLAN	ΔACTUAL	Error = ΔACTUAL *minus* ΔPLAN (0 is perfect implementation)	Median Implementation Ratio = ΔACTUAL/ΔPLAN (1 is perfect implementation)
Revenues	0.1	1.0	0.9	0.5
Cyclical	0.2	0.5	0.3	1.2
Structural	–0.1	0.5	0.6	…
Expenditures	–2.3	–1.0	1.3	0.4
Primary	–1.8	–0.3	1.5	0.2
Interest	–0.5	–0.6	–0.1	1.0
Structural Primary Balance	1.7	0.9	–0.8	0.8

Sources: "Convergence" and "Stability and Growth" programs (plans); European Commission's AMECO database (outturns).
Note: ΔPLAN and ΔACTUAL refer to the planned and actual *change* in each item, in percent of potential GDP.

a positive note, actual implementation was not weakened by greater ambition: higher planned adjustment was associated with higher actual adjustment by a factor of one (observations are scattered closely around the 45 degree line in Figure 1). This evidence suggests that it is "OK to plan big" because ambitious plans do tend to produce more adjustment than do more modest ones.

Revenue-expenditure mix in outcomes versus plans. In most of the case studies, expenditure cuts did not materialize to the extent initially envisaged; by contrast, revenues often turned out above expectations, because of favorable cyclical developments in macroeconomic or asset price conditions and/or the introduction of (temporary) revenue measures to offset difficulties in implementing expenditure cuts. The cross-country statistical evidence confirms these findings: while plans envisaged cuts in the ratio of structural primary spending to potential GDP of 1.8 per cent on average, actual cuts amounted to 0.3 per cent. In contrast, revenues overperformed, partially offsetting the expenditure overruns (Table 2).

Role of economic growth. Deviations of economic growth from initial expectations were a key factor underlying success or failure. Some adjustment plans (e.g., Germany in the 1970s, Japan) were derailed, almost immediately, by unexpected economic downturns. Lower growth had a direct negative impact on cyclical revenues (and, to a lesser extent, caused an increase in some expenditure items), thereby worsening the headline fiscal balance. In addition, it had an indirect impact by tilting the authorities' perception of the relative merits of fiscal consolidation versus fiscal stimulus. Conversely, the success of some plans (e.g., in the United States in the 1990s) was facilitated by higher-than-expected growth and asset price developments. In the cross-country analysis, a 1 percentage point improvement in growth compared with expectations resulted, on average, in a ½ per cent of GDP strengthening in the headline fiscal balance.

Structural reforms. The case studies reveal that fiscal adjustment plans were more likely to meet their objectives when they were grounded in structural reforms. This was evident in Germany in the 1980s and 2000s, with structural reforms to the social welfare system; in the United Kingdom with the "Lawson adjustment" of the 1980s, which curbed expenditures as part of Prime Minister Thatcher's redefinition of the role of the state; and in Canada in the 1990s, in the context of a repositioning of the role of the state supported by a comprehensive expenditure review. In contrast, plans in the same countries that eschewed reforms failed to meet their targets.

5 Fiscal institutions and political factors

5.1 Features of fiscal institutions

Several aspects of fiscal institutions influenced the degree of implementation of fiscal adjustment plans:

- *Monitoring of fiscal outturns and policy response to data revisions*. Shortcomings in these areas were important in Italy, where a significant portion of the deviations of outturns from plans reflected upward revisions to the initial deficit and subsequent medium-term plans did not compensate for such revisions. In the cross-country analysis, upward revisions of deficits generally resulted in larger deficits at the end of the period, whereas downward revisions in the deficit were less likely to result in changes to the end-period deficit targets or outcomes.
- *Binding medium-term limits*. Although the presence of medium-term plans was one of the criteria for choosing the case studies reviewed, the extent to which the plans included binding limits on expenditures varied. As medium-term limits were made more legally binding, actual compliance with spending targets improved. This pattern was most noticeable in the US (where constraints on discretionary expenditure allowed a more rapid improvement in the fiscal balance in the context of favorable growth and asset price developments), France, and the UK.
- *Contingency reserves*. Some plans used contingency reserves to build in space to cope with potential adverse shocks, accelerate the adjustment, or create room for reducing the tax burden in the event that no adverse shocks materialized. Contingency reserves played a role in the extent to which fiscal adjustment targets were met in the United Kingdom and, to a lesser extent, Canada.
- *Coordination across levels of government*. Although most adjustment plans were originally devised for the central government, several involved reductions in transfers to sub-national governments or other public entities. The extent to which those entities undertook parallel fiscal consolidations was an important determinant of whether the general government balance improved (as in Canada) or challenges were encountered (France and the United Kingdom).
- *Fiscal rules*. The cross-country statistical analysis found the intensity of national fiscal rules to be positively associated with the extent to which targets were met.

5.2 Political factors and public support for fiscal adjustment

The cross-country evidence yields mixed messages on the role of political factors: lower fractionalization in the legislative body (parliament, congress) and perceptions of greater political stability are to some extent associated with better implementation of plans; on the other hand, implementation of ambitious plans was not associated with more frequent changes in government. What emerges more clearly from the case studies, however, is the importance of public support. For example, opinion polls ahead of the mid-1990s consolidation in Canada showed broad public support for debt reduction. The authorities took advantage of this to put in place a communication

strategy to reinforce support for their adjustment plan. In Germany, a general shift in the economic policymaking paradigm in the 1980s (against active short-term demand management) and a reformist platform of the left-of-center party in the 2000s helped sustain fiscal adjustment.

6 Implications for planned adjustments

These findings have several implications for the design and implementation of fiscal adjustment plans in the years ahead.

Spelling out how policies will respond to shocks. Current fiscal adjustment plans do not sufficiently detail the envisaged policy response to shocks. As seen above, shocks, especially to economic growth, often derail fiscal adjustment. Plans thus need to explicitly incorporate mechanisms to deal with such shocks, permitting some flexibility while credibly preserving the medium-term consolidation objectives. Examples of helpful mechanisms include:

- *Multiyear spending limits*. To anchor the consolidation path, plans should include binding and well-defined ceilings for expenditures and their subcomponents, and would preferably be endorsed not just by the executive but also by the legislature. The ceilings could exclude items that are cyclical (e.g., unemployment benefits), non-discretionary (e.g., interest payments), or fiscally neutral (e.g., EU-funded projects). Many of the current adjustment plans have been framed with multiyear-frameworks, but only a few (e.g., Germany and the United Kingdom) include sufficiently detailed spending ceilings.
- *Cyclically adjusted targets* would let the automatic stabilizers operate in response to cyclical fluctuations. To ensure credibility, the methods used to adjust the fiscal variables for the cycle should be subject to outside scrutiny. Thus far, only the plans for Germany and the United Kingdom include cyclically adjusted targets.
- *Realistic/prudent macroeconomic assumptions* would reduce the risk of missing the fiscal targets. Using more conservative assumptions relative to independent observers could be justified in a context of high uncertainty, but should be relied on sparingly in order not to reduce credibility. In this respect, the November 2010 *Fiscal Monitor* notes that macroeconomic assumptions underlying some countries' current adjustment plans are more optimistic than other publicly-available forecasts.

Monitoring and accountability. Implementation of plans should be supported by reliable and timely information. Targets need to be based on sound information on the initial state of public finances. Any revisions to the initial position should lead to fine-tuning the adjustment path while keeping the medium-term targets unchanged, if possible. Fiscal Councils and peer-monitoring processes can enhance accountability in implementing adjustment plans.[2]

Composition of fiscal adjustment. The revenue-expenditure mix of fiscal consolidation plans needs to reflect country-specific societal preferences and structural fiscal characteristics. As reported in the November 2010 *Fiscal Monitor*, expenditure measures significantly outnumber revenue measures in current consolidation plans. This is consistent with the large size of the state in many advanced economies. Nevertheless, in light of the magnitude of needed adjustments and the implementation record of past plans, where revenue increases partly compensated for expenditure overruns, it would seem desirable to redouble monitoring efforts and enhance institutional mechanisms to ensure that expenditure ceilings are adhered to. It would likewise be prudent to

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[2] For example, in the European Union, the recently introduced European semester (a six-month period every year during which member states' policies will be reviewed to detect any inconsistencies and emerging imbalances) is expected to reinforce coordination while major budgetary decisions are still under preparation.

prepare additional high-quality measures and reforms on the revenue side, to be deployed in the event of expenditure overruns.

Structural reforms. Structural reforms are needed to underpin successful implementation of large fiscal adjustment plans. Several current plans include measures to reduce the size of the public administration and the social welfare system, but few envisage tackling the thorniest sources of spending pressures: those from pension and, especially, health entitlements. Current plans would benefit from a greater emphasis on reforms in these areas.

Building public support. Public support for fiscal adjustment, rather than a comfortable legislative majority, was a key determinant of successful fiscal adjustments. Thus, a priority going forward will be to build public support through communication campaigns. These would aim at educating the public about the rationale and the scale of the needed fiscal challenges, and explaining what can reasonably be achieved through reforms without overburdening taxpayers or unduly curtailing necessary public services.

LAWS FOR FISCAL RESPONSIBILITY FOR SUBNATIONAL DISCIPLINE: INTERNATIONAL EXPERIENCE

Lili Liu[*] *and Steven B. Webb*[*]

Fiscal responsibility laws are institutions with which multiple governments in the same economy – national and subnational – can commit to help avoid irresponsible fiscal behavior that could have short-term advantages to one of them but that would be collectively damaging. Coordination failures with subnational governments in the 1990s contributed to macroeconomic instability and led several countries to adopt fiscal responsibility laws as part of the remedy. The paper analyzes the characteristics and effects of fiscal responsibility laws in seven countries – Argentina, Australia, Brazil, Canada, Colombia, India, and Peru. Fiscal responsibility laws are designed to address the short time horizons of policymakers, free riders among government units, and principal agent problems between the national and subnational governments. The paper describes how the laws differ in the specificity of quantitative targets, the strength of sanctions, the methods for increasing transparency, and the level of government passing the law.

Evidence shows that fiscal responsibility laws can help coordinate and sustain commitments to fiscal prudence, but they are not a substitute for commitment and should not be viewed as ends in themselves. They can make a positive contribution by adding to the collection of other measures to shore up a coalition of states with the central government in support of fiscal prudence. Policymakers contemplating fiscal responsibility laws may benefit from the systematic review of international practice. One common trait of successful fiscal responsibility laws for subnational governments is the commitment of the central government to its own fiscal prudence, which is usually reinforced by the application of the law at the national as well as the subnational level.

1 Introduction

As subnational governments (SNGs) in developing and developed countries have gained more fiscal autonomy – spending responsibilities, tax bases, revenue transfers from the center, and the capacity to incur debt – their fiscal behavior has become vital to the national interest. Subnational borrowing to finance social and economic infrastructure can generate positive net returns and spread the financing burden fairly across generations. When SNGs follow unsustainable fiscal policy, however, it can jeopardize the services they manage (but for which the central government may have ultimate political responsibility), the safety of the financial system, the country's international creditworthiness, and overall macroeconomic stability. Too often the central government then gets dragged in to provide bailouts, which can disrupt its own fiscal sustainability and reward the populist fiscal tactics of the recipient SNGs. The global financial

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The authors thank Fernando Blanco, Oscar Calvo-Gonzalez, William Dillinger, Norbert Matthias Fiess, Andy Haughwout, Jose R. Lopez-Calix, Mohan Nagarajan, David Rosenblatt, and participants at the 13th Banca d'Italia Public Finance Workshop (Perugia, 2011) for their helpful comments. The authors wish to thank Xiaowei Tian and Ying Li, Economic Policy and Debt Department of the World Bank for their excellent research inputs to this paper and extensive annexes. All errors remain ours. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the International Bank for Reconstruction and Development/World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent.

crisis of 2008-10 has tested the effectiveness of FRLs in maintaining fiscal discipline and has shown some downsides of rigidity in the face of macroeconomic shocks.

Since the 1990s many governments have intensified the search for mechanisms to escape from fiscal populism that had been used as a strategy for winning elections and retaining public office. National governments have tried various ways to avert these problems. One way has been to pass a fiscal responsibility law (FRL) that prescribes proper fiscal behavior for SNGs, provides guidelines for parameters of SNG fiscal legislation, or sets incentives – rewards for success or sanctions for failure in following the rules. Argentina, Brazil, Colombia, India, and Peru have done so. Some SNGs, as in Argentina, Australia, Canada, and India have imposed legal constraints on their own fiscal behavior, to reduce the temptation of state administrations to leave fiscal messes and to improve their creditworthiness in the markets.[1] Although having not formally adopted subnational fiscal responsibility legislation, other countries such as Mexico, Poland, and Turkey have established fiscal rules or debt limitations for SNGs.

In this paper, we focus on FRLs that are called fiscal responsibility laws or that perform the same function. They have frameworks for making the budget process transparent and may include quantitative fiscal targets and enforcement mechanisms. They aim to restrain SNG deficits by preventing them in advance and/or by imposing extra penalties that go into effect more quickly and in addition to the inherent consequences of fiscal imprudence. These include both institutions imposed by the national government on the SNGs and institutions imposed by the SNGs on themselves. FRLs often have the additional effect of restraining the federal or central government from running unsustainable deficits and of mitigating the consequences of subnational fiscal excesses. The paper does not focus on other public finance laws, such as budget laws and debt laws, which contain elements of FRLs, although it does consider such laws when discussing the broader context of fiscal prudence.

This paper analyzes the circumstances and character of FRLs that may make a positive contribution to better SNG fiscal behavior.[2] As FRLs do not operate in isolation, the paper also considers the broader context of other laws and rules aimed at obtaining prudent fiscal behavior by SNGs. The paper includes Brazil, Colombia and Peru, where a unifying FRL applies to all levels of the government including the SNGs. In some other countries such as Argentina, Australia, and India, the FRL framework includes a national FRL, and SNGs may choose their own FRL framework. Provinces in Canada went ahead with their own FRLs within the overall national move toward fiscal consolidation. Although the paper mainly concerns FRLs that apply to SNGs, the paper will include the analysis of the national FRLs to the extent that they affect the parameters and incentives for SNGs.[3]

The structure of the paper is as follows. The next section explains the historical origins of FRLs in the context of political and fiscal decentralization. Section 3 examines the purposes, incentives, and authority behind FRLs – which level of the government passes FRL and to which level of government the FRL applies. Section 4 summarizes the content of FRLs, covering procedural and transparency rules, and fiscal targets as well as sanctions and escape clause associated with the rules. Section 5 analyzes FRLs in broader institutional context for fiscal prudence and channels for strengthening subnational fiscal discipline. Section 6 explores

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1 This list includes countries with FRLs that apply to SNGs. The paper does not include countries with more recent and ongoing efforts (e.g., Nigeria and Pakistan) as the evaluation of the impact of the FRLs focuses on the period prior to the global financial crisis.

2 This paper will not address the issue of whether subnational governments should borrow or not. This issue relates to broader questions of fiscal decentralization, political autonomy of subnational governments, and revenue base that can be used for collateralizing the debt. The paper covers a set of countries where subnational governments have the authority to borrow.

3 See Corbacho and Schwartz (2007) for a review of national level FRLs across countries.

preliminary assessments of the effects of FRLs. Section 7 concludes and points to areas for further research.

2 Historical origins of FRLs

Fiscal rules and legislation for SNGs are less important when a country has centralized political and fiscal institutions, as these centralized institutions can set rules and use political power to enforce discipline of SNGs. Decentralization, often associated with rise of regional powers, has reduced the central administrative control over subnational fiscal behavior.

Since the 1980s, a number of countries, including Argentina, Brazil, Colombia, India, Mexico, Nigeria, and Russia, have decentralized varying degrees of fiscal authority and resources to their SNGs. Often, in the absence of adequate *ex ante* fiscal rules, this contributed to subnational fiscal stress or debt crises; some were triggered by deteriorating macroeconomic environment. In some places that have been fiscally decentralized for a long time, like Australia and Canada, the SNGs also had experienced fiscal challenges. All of these countries have subsequently strengthened their frameworks for SNG fiscal sustainability, and several of them passed fiscal responsibility laws as part of that framework.

In each case, the features of the law, how it was passed, and its implementation reflected the particular political structure of the country and the nature of its fiscal crisis. This section summarizes those particularities, as prologue to the discussion of their FRLs – first the federal countries and then the unitary. The federal countries in our sample – Argentina, Australia, Brazil, Canada, and India – tend to be more fiscally decentralized; the key distinction, however, is that the constitutions of the federal countries give the states or provinces the right to make their own laws in many areas and restrict the range of areas for which the national government can legislate. Shifts in the allocation of taxing powers, for instance, have to be negotiated with the states; the national government cannot decide unilaterally.[4] By contrast, in the unitary countries – here, Colombia and Peru – the constitution gives the national government power to legislate in all areas and to decide unilaterally what powers and fiscal resources it will delegate to the SNGs.

Federalism in **Brazil** in the 1980s revived with the return to democracy from military rule. From 1982 to 1989 there was a sequence of electing governors, then electing mayors, electing a new congress with constitution-making authority, completing the new constitution, and finally holding the first direct election of the president. Thanks to the strong representation of SNGs in the 1986 congress, the 1988 constitution gave states significant authority and resources, including a much broader revenue base for the state-level VAT, but did not specify their spending responsibilities or set rules for fiscal prudence.

From the beginning of Brazil's political opening through mid-1990s, there were two major subnational debt crises. Each initial agreement that tried to resolve a crisis actually made the next crisis more likely, because they reinforced the perception that the federal government would provide debt relief, they provided such relief in the form of rescheduling (allowing the stock of debt to keep growing), set ceilings on debt service and thus on the effective political cost, bought out (without penalty) the foreign and private creditors to the SNGs and left the federal government holding the debt. Thus the state politicians suffered minimal consequences for their imprudence and their creditors suffered almost none, and so until 1997 the *ex ante* constraints written in the rescheduling agreements were usually quickly evaded (Dillinger, 1997; Rodden, 2003).

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[4] The constitution of a country can also set forth the authority of taxation. For example, the India constitution places the main power of taxing the service sector with the federal government.

Then in the late 1990s, this vicious cycle of failure in discipline and cooperation came to a halt, as the deeper political and economic incentives had changed after a national macroeconomic adjustment program ended hyperinflation and stabilized the economy. In 1997-98 the federal government made debt restructuring agreements with 25 states, which was finally effective in making them cease unsustainable borrowing. Three of the four largest debtor states supported the reforms and formed the core of a critical mass of states ready to cooperate in fiscal restraint, making it worthwhile for additional states join at the margin of cooperation. Also, the large scale of the states' non-performing debt to the federal government strengthened the resolve of the federal Congress to enact the FRL. The federal government negotiated agreements with 25 states in 1997 and 1998.[5] These agreements were sanctioned by Law 9496 of September 1997 to reschedule the states' debt conditioned on states undertaking fiscal reforms and compliance with fiscal targets. The FRL in 2000 codified fiscal adjustment programs sanctioned by various resolutions (Alfonso, 2002; Dillinger, 2002). At the time, many observers doubted whether the federal government would successfully enforce the debt restructuring agreement and sustain the stabilization, and this is why the extraordinary measure of the FRL may have been necessary, to reinforce the expectations of stability.

Argentine provinces in the 1980s had no hard budget constraint, borrowed a lot, and effectively could monetize this debt, contributing to hyperinflation. The subsequent stabilization in 1991 centered on the Convertibility Plan, which fixed the Argentine exchange rate to the U.S. dollar. Through the 1990s the national government mainly followed a market-based strategy for coordinating fiscal discipline between levels of government: the central government would enforce hard budget constraints *ex post* and force the provinces to pay their debts (Dillinger and Webb, 1999). By the end of the 1990s, the absence of the *ex ante* fiscal controls had allowed a number of Argentine provinces to over-borrow, party fragmentation had narrowed the scope for fiscal compromises, and the national government had overcommitted itself by setting floors on transfers, even if national revenues fell (Gonzalez, Rosenblatt and Webb, 2004).

At the national level, faced with a deteriorating budget balance and growing debt payments, in 1999 the Congress approved a Fiscal Solvency Law – its first try at an FRL. It aimed to and did inspire a third of the provinces to pass their own FRLs. In 2001, however, the FRLs stopped working because of the extreme mismatch between the national government's fiscal and monetary policies and because the provincial FRLs lacked enforcement power and most of the economically important provinces had not passed them. Only 5 out of 11 provinces that imposed a hard budget constraint actually fulfilled their commitment (Braun and Tommasi, 2004). In 2004, Argentina tried anew with a national FRL that applied to the provinces as well as the national government and capital federal district. It passed Congress hastily (Braun and Gadano, 2007; Laudonia, 2009), and it did not come out of a consensus building process with the provinces nor reflect a solid technical consideration of how the provinces might adjust their finances to meet the legal requirements. Although many provinces complied with some of the law's procedural requirements, almost none were meeting the quantitative targets even before the onset of the global crisis in 2009. After that the quantitative targets were put on hold, which further undermined the credibility of the FRL process in Argentina.

The **Indian** Constitution forbids states from borrowing abroad and requires them to obtain central permission for domestic borrowing. The central government places limits on states' borrowing through the annual discussions with states on financing state development plans. While limiting explosive growth of state debt, the system has not prevented deterioration of fiscal trends as indicated by high levels of debt over GSDP in many states in the late 1990s. Factors contributing to the deteriorating fiscal accounts across Indian states in the 1990s include: rapid increase in

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[5] Only two states (Tocantins and Amapá) did not have any bonded debt, and hence did not participate in the refinancing agreements.

expenditures on salaries, retirement benefits, and pensions and subsidies, increased borrowing to support the growing revenue deficit, and growth in contingent liabilities associated with fiscal support to the public sector units, cooperatives, and the statutory boards.

Since the early 2000s, the fiscal reform has focused on moving towards a more flexible, market-linked borrowing regime within sustainable overall borrowing caps imposed by the central government and self-imposed state-level deficit caps. The federal government enacted Fiscal Responsibility and Budget Management Act in 2003 which applies to the national government only, but some states had also adopted their own FRLs before the enactment of the federal FRL (e.g., Karnataka and Punjab in 2002) and many states have since 2003 adopted FRLs in line with the national law. FRL has become mandatory after the Twelfth Finance Commission (2005) and the federal government has offered a sizeable incentive to states for passing FRL.

The idea of legislating for fiscal responsibility gained considerable attention in the 1990s in **Australia**. At the federal level, the Business Council of Australia called for legislation requiring a surplus budget on average over the business cycle. It reiterated this theme during the 1996 federal election campaign. The adoption of the Charter of Budget Honesty Act in 1998 at the federal level followed years of improvement in fiscal outcomes. In fact, in the mid-1980s, Australia adopted its first set of explicit fiscal rules limiting the growth of expenditure, taxation and budget deficit. Although the recession in the 1990s saw the net debt of the country increased, never went beyond 20 per cent of GDP. The combined state and Commonwealth general government net debt had not exceeded 30 per cent of GDP in the 1990s (Simes, 2003).

Some states had adopted fiscal responsibility legislation prior to the federal government's adoption. New South Wales passed legislation in 1995 to commit itself and future governments to medium- and long-term fiscal responsible targets including the elimination of the net debt. Victoria passed the Financial Management Act in 1994, which was amended in 2000 through the Financial Management (Financial Responsibility) Act, which outlines principles of sound financial management, reporting standards and pre-election budget update. Minister must produce a pre-election budget update 10 days after the issue of a writ for an election. The Act broadly states what the update must contain and the principles upon which it must be based.

In **Canada**, in the 1990s both the federal and provincial governments needed serious fiscal corrections to reverse chronic fiscal deficits and growing debt burden after years of lax fiscal policy.[6] The drive for restoring fiscal health was viewed as means to help accelerate economic growth. The deteriorating sovereign ratings[7] increased the cost of borrowing, and private saving was not sufficient to finance both private investments and chronic fiscal deficits (Traclet, 2004). The federal government undertook legislative reforms during the 1999s: enacting the Federal Spending Control Act (1991) setting limits on spending, and adopting a new framework to meet the medium-term fiscal balance and decrease debt ratio with rolling short-term deficit targets. Such measures succeeded in significantly reducing the national debt (IMF, 2002).

In this context, many provinces in the 1990s also adopted legislation to promote balanced-budgets and debt reduction (Millar, 1997),[8] which may have helped increase the provincial finance ministers' bargaining power to promote unpopular fiscal measures (Kennedy and Robbins, 2003). These legislation set specific fiscal targets such as annual balanced budget and target year for debt elimination (Alberta), prohibited budget deficits in any year (Manitoba), set deadlines for achieving a balanced operating account (New Brunswick), and required net expenditures to decline by a

[6] The fiscal correction was concurrent with monetary policy of inflation targeting. The attainment of announced targets has improved market and public confidence in the central bank's commitment to low and stable inflation (Traclet, 2004).

[7] Rating agencies downgraded the sovereign debt: in foreign currency in 1994 and in local currency in 1995 by Moody's and in foreign currency in 1993.

[8] Alberta, Saskatchewan, Manitoba, Quebec, New Brunswick, Nova Scotia, Northwest Territories, the Yukon from 1993-1996.

certain percentage over a four-year period (Nova Scotia). Three more provinces enacted similar acts in 2000-04.[9] For example, New Brunswick adopted Fiscal Responsibility and Balanced Budget Act in 2006 to cover the entire provincial budget, following the Balanced Budget Act in 1995. The province also enacted the Fiscal Stabilization Act in 2001 to stabilize the fiscal position from year to year and improve long-term fiscal planning and stability.

Colombia has traditionally been centralist, to offset the natural geographic fragmentation and to try to contain the centrifugal forces of strong special-interest groups. Overlying the natural geographic fragmentation, strong non-regional interests dominate the political dialogue – some operate within the legitimate political system, like teachers and producers of coffee, cattle and sugar, while others are outside and challenging it, namely two guerilla movements, the paramilitaries, and drug producers. Decentralization started in Colombia with the 1968 deconcentration of national revenues to subnational administrative units, with revenue sharing set by formula and mostly earmarked for specific sectors (Bird, 1984). The 1991 constitution (which also made the office of governor an elected post) and Law 60 of 1993 expanded the amount of revenues assigned to departments by broadening the base of the existing revenue-sharing system (the *situado fiscal*). The Constitution and Law 60 committed the national government each year to expand revenue sharing with SNGs until it would reach nearly half of all current revenues by 2002.

In the late 1980s and 1990s the trend toward political decentralization was accompanied by more freedom for subnational domestic borrowing, and hence a rise in their debt. To increase the central government's control over subnational debt, the so-called Traffic Light Law of 1997 introduced a rating system for territorial governments, based on the ratios of interest to operational savings and of debt to current revenues. Highly indebted local governments (red light) were prohibited from borrowing, and intermediate cases (yellow light) were required to obtain permission from the Ministry of Finance. The law often did not have the desired effect, however, as some governments with a red-light rating obtained new financing without permission of the Ministry of Finance, and departments often changed from yellow to red, rather than moving from yellow to green, as expected. In a new attempt to implement fiscal rules to stabilize subnational finances, Colombia passed Law 617 in 2000, which functioned in many ways as a Subnational FRL; despite the fiscal crisis at the national level in 2001-02, Law 617 had some success at the subnational level and laid the foundations for subsequent steps. In June 2003 the government passed the Fiscal Responsibility Law, which applied to the national as well as the subnational governments.

Peru is a unitary state, with even more of a centrist tradition than Colombia. Decentralization came relatively late to Peru, as part of a democratic reaction after Fujimori's exit in 2001. The 2002 decentralization law foresaw having half or more of public sector spending managed and to some extent allocated by subnational governments – districts, and municipalities – compared to the previous situation where SNGs managed less than 10 per cent of public spending. In contrast to the experiences of the other Latin American countries discussed here, the behavior of subnational public finances in Peru never deteriorated to the point where it adversely affected the country's financial sector or macroeconomic stability. As they contemplated fiscal decentralization and saw the macroeconomic problems that decentralized countries had had in the 1990s, the authorities passed the FRL and other measures to assure that fiscal decentralization did not lead to fiscal imbalances. As discussed below, the restraint measures in Peru succeeded perhaps too well, preventing effective fiscal devolution.

[9] British Colombia, Ontario, and Newfoundland.

3 FRLs – purpose, incentives, and authority

Before delving into the content of FRLs (Section 4), we need to understand why governments might pass such laws, how they fit in the political context, how they address the timing of borrowing-lending decisions, which level of government passes them, and to which governments the FRL applies.

3.1 Aligning fiscal incentives

In a normative theory of good government, voters want to avoid the effects of a fiscal crisis – inflationary finance, sudden increase of taxes, disruption of service, and increased borrowing costs – so their government would equally want to avoid the crises. In practice, governments may fail to follow sustainable fiscal policies for a variety of reasons discussed in this section (see Alesina, 1994 for a survey and Saeigh and Tommasi, 2000 for applications to federations). Multiple levels of government multiply the possible reasons for failure of fiscal responsibility. To deal with these problems, governments have adopted various institutions to try to restrain themselves, including balanced-budget rules, autonomous central banks, and congressional oversight committees. Since the late 1990s, governments have added FRLs to the potential and actual toolkit.

Governments appear to be interested in FRLs to deal with four problems: i) short time horizons of policymakers; ii) free riders among SGNs; iii) principal agent and moral hazards problems between the national and SN governments; and iv) demonstrating commitments to be creditworthy. The first and fourth problems apply to governments at any level, whereas the second and third are relevant mainly in countries with multilevel government.

Short time-horizons of policymakers. A government may wish to institutionalize its commitment to control its impulses to run excessive deficits, in order to resist temptation in more pressing times that may come in the future. Policymakers often have shorter time-horizons than citizens, because they have shorter terms of office than citizens' life spans and policymakers face the risk of being voted out of office if results are painful in the short term. Also the mobility of citizens and businesses between local jurisdictions means that excess borrowing could drive residents away and leave those remaining with more debt per person than they had anticipated. So legislators can gain voter support by passing a law (e.g., FRL) that provides extra motivation for longer term fiscal sustainability.

Free riders. A group of governments in the same country may wish to make and enforce a mutual agreement that each of them would avoid running excessive deficits. To see the free-rider problem in this context, suppose that multiple governments share the same currency, central bank, domestic credit market, and (at least to some extent) international credit reputation. Then they will share a common interest in sustainable fiscal balances for the country in the aggregate, to maintain stable prices, a healthy financial system, and good access to international credit. Individual governments' interests would diverge from the common interest, however, in that factors such as electoral pressures would motivate them to follow fiscal behavior that is risky or unsustainable. An individual government would bear only part of the cost of its misbehavior, but would still receive all of whatever perceived benefit accrued. They could benefit from this, however, only if (most of) the other governments continued to follow good fiscal behavior. So, there might be prisoners' dilemma – a situation where the equilibrium of isolated individual choices leads to suboptimal outcomes for all.[10] All the governments would, therefore, benefit from having a system of rules – an FRL – to discourage such defection and free-riding.

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[10] Inman (2003) develops the prisoners' dilemma model formally for this situation and shows how restrictive are the conditions under *(continues)*

In a country with multiple governments, the national government already exists for the purpose (among others) of protecting the common interests, has much greater fiscal weight than the others, and typically has special powers, like running the central bank and regulating the financial sector. The national government also provides transfers to the SNGs, which often are the main source of subnational revenue and give the national government additional leverage over them. But this may not be enough. Rules of revenue sharing and other rules of the system (like the constitution) may restrain the national government's power over the SNGs. Political considerations may bias the decisions of the national government away from the optimal; these could be the national political cycle or subnational ones (Braun and Tommasi, 2004). For instance when a state government of the same political party as the national government faces a close election, the national government might be inclined to condone the state's fiscal misbehavior by offering a debt bailout or rescheduling guarantee. Also, under some configurations of political institutions, the national executive might need to purchase blocks of legislative votes through provincial fiscal favors, in ways that also break the inter-temporal Wicksellian connection, by which voters demand fiscal discipline to protect their interest as taxpayers. Thus, the agreement to protect the common interest would not only need to restrain the fiscal behavior of the individual SNGs but also restrain the behavior of the federal government.

Principal-agent and moral hazard problems. When citizens or a higher level of government (the principal) entrusts a subnational government (agent) with resources and the responsibility to carry out a task, then there is the principal-agent problem in assuring that the agent government will maintain the requisite fiscal stability to carry out the task, without default or bailout. Subnational borrowers as agents have an incentive not to repay their lenders as principals because they perceive that they will be bailed-out by the central government in case of default, resulting in moral hazard. This hazard may increase when the central government is also the creditor, since rollover of the debt is often the easy way out when an SNG does not pay what it owes to the central government. The incidence of these agency problems varies considerably depending on the structure of the subnational debt market in each country. For instance, the credibility and prudence of a no-bailout commitment by the national government in the event of subnational default depends partly on whether the creditors to the defaulting SNG are foreign or domestic.

Demonstrating commitment to be creditworthy. Borrowers, including SNGs, have an incentive not to reveal negative characteristics about themselves to lenders, which results in adverse selection – lenders will therefore charge a risk premium above what is directly justified by the revealed information, even for a borrower who is not risky. So the asymmetrical information can lead to mispricing of risks. To improve its terms of borrowing, a government needs to show creditors that it is not like those other government units of lesser credit or that it has given up the fiscally irresponsible ways of its past. It can demonstrate this commitment by constraining itself with a FRL, its own or from the national level. Once one government demonstrates its commitment by passing an FRL, the pressure increases on other governments in the country to follow suit, in order not to stand out as *the* government that is not committed to fiscal responsibility. If the entire country has an FRL framework, then it will be the adherence to the fiscal targets that will become more important.

Fiscal responsibility laws have some downsides as well. Most importantly they tend to make aggregate fiscal policy more pro-cyclical. Although most FRLs have some escape clause for the eventuality of a recession and some call for stabilization funds, it has been difficult to set these up

which the market successfully establishes SN fiscal discipline if the central government takes a hands-off no-bailout approach. The conditions include competitive suppliers of local public services, a stable central government, clear and enforceable accounting standards, a well-managed aggregate economy, and an informed and sophisticated local government bond market. No developing country has these complete conditions, and the international financial crisis of 2008-09 will test whether any advanced economy has them.

in a way that are adequately countercyclical, while still demanding rigorous fiscal responsibility (Melamud, 2010).

3.2 Incentives in the political system for fiscal prudence

The political characteristics of the countries affect both the need for subnational fiscal-control institutions and their effectiveness. Indeed, to some extent the political factors that increase the need for an FRL also make it more difficult to pass one and to enforce it successfully. Several dimensions of political system are relevant: i) a majority party of the executive in legislature versus coalition (parliamentary) or divided government (presidential); ii) strong party identities and unity, including closed-list nominations for legislature, versus weak parties and open lists; iii) autonomy of SNGs constitutionally versus national government power to intervene and otherwise control; and iv) a strong role for the national legislature and strong influence of governors over legislators, versus strong national executive authority (Dillinger and Webb, 1999). To the extent that the constitution and party system lead to more centralized power, the country will have less need for special institutions to coordinate fiscal discipline across governments over time and between states. In some countries in our sample, however, the fiscal decentralization was part of a more general decentralization of power, which was linked with the restoration or establishment of democratic rule (Garman *et al.*, 2001). The party with centralist tendencies and strong public sector dominance may be more interested in pushing a certain development path through state control, central planning and a strong public sector than fiscal management. Subsequent decentralization and market decontrol have led to increasing need for central coordination of policies.

The national and SNGs are not always autonomous agents, as the previous section presumed. For instance they can be manifestations of the same political party. Such arrangements can reduce the free-rider and principal-agent problems described above, because the party aligns the incentives of the national and subnational politicians. The Argentine Justicialista (Peronist) Party in the mid 1990s and the Indian Congress Party in its years of dominance performed similar functions of harmonizing the incentives of policymakers at national and subnational levels. When the single-party dominance in these countries ended or diminished substantially, with the increase of democracy, the absence of the extra-constitutional (but legal) channels for inter-governmental coordination created the need for FRLs or other formal mechanisms for coordination.

Even without a strong party system, a powerful president can enforce subnational fiscal discipline.[11] President Cardoso in Brazil became a strong president in the late 1990s even in a context of weak party loyalties and used his office (and reputation as an inflation fighter, from when he was Minister of Finance) to press successfully for fiscal discipline at the national and subnational levels. The institutionalization of this discipline included the FRL but had already started with some previous measures. President Uribe in Colombia also used his political popularity, without a strong party base, to pass the FRL in 2003. This was in the context since the late 1990s of much weaker loyalties to the two traditionally strong parties, which had fought over many things but had agreed on maintaining macroeconomic stability.

These examples show the importance of the particular political situation in each country – with effects both on whether the country needs an FRL and whether it can gather the consensus to pass one. An FRL seems most likely when there is an intermediate degree of political cohesion – with a high degree of cohesion an FRL may not be needed, and with a low degree one cannot pass or enforce the FRL.

[11] Although a strong president usually creates a party of his followers, if the main unifying factor is the personality of the president, one cannot accurately call this a strong party system.

Table 1

Which Government Passed FRL and To Which Levels Does It Apply?

	National FRL Applies to All Levels, Usually More Strictly to SNGs	National FRL Applies Only to National Level	SNGs with Own FRLs
Federal constitution			
Brazil	X		
India		X	X
Argentina	X 2004	X 1999	X (some in 1999)
Canada[1]			X
Australia		X	X
Unitary constitution			
Colombia	X		
Peru	X		

[1] The national government passed a law controlling federal spending.

3.3 Authority: Which government passes the FRL? To which government does it apply?

The FRLs differ in terms of which government passes it and to which government(s) it applies but the content of the two types is similar. Some FRLs are national laws that apply to all levels of government, or at least to the national and intermediate (state, provincial) levels, as in Argentina (2004), Brazil (2000), Colombia (2003), and Peru (2003). From the SNG point of view, these are top-down systems.[12] In other cases, such as Argentina (1999), Australia, and India, the federal government passes an FRL only for itself, and this sets the framework, incentive, or example for the SNGs to pass their own FRLs voluntarily. In some cases, a SNG would enact its own FRL (e.g., the Indian states of Karnataka and Tamil Nadu and some Australian states) before the enactment of the federal FRL. A few Canadian provinces have passed their own FRLs to sustain fiscal discipline and to improve their credit ratings.[13]

Table 1 summarizes how various countries have handled the issues of which government passes the law and which it applies to. With either type of law, enforcement is an issue. There is difference, however, between a government trying to discipline itself with a law that it has the power to change and a higher-level government disciplines a lower-level government that has some political independence. In the latter type of arrangement, it remains uncertain whether the national government will have the tools and political determination to enforce the law. When the national government passes an FRL law that does not directly prescribe what the SNGs must do, a key question is whether the SNGs follow the federal example and pass and obey their own laws. Given the complex variety of intergovernmental systems, there is no single optimal recipe for which level of the government can or should pass the FRL and to which level of government it should apply.

[12] Ter-Minassian and Craig (1997) argue that such top-down control is necessary for SN fiscal discipline in developing countries. Rodden and Eskeland (2003), with more evidence to consider, see prospects for combining hierarchical control with market discipline, and gradually letting the latter take more weight.

[13] West Bengal and Sikkim are the only two states out of 28 that have not enacted an FRL.

In the US and Canada the political tradition of state and provincial autonomy and independence, along with consistent no-bail policy by the center, has existed from the 19th century and has generally instilled subnational fiscal discipline through *ex post* consequences. The explicit institutional responses have been at the state and provincial level, with their own laws or constitutional amendments to set *ex ante* constraints to keep the subnational governments out of trouble (Inman, 2003; Wallis, Sylla and Grinath, 2004). Neither federal government has an FRL pertaining to the SNGs. No US state has an FRL, although most have more or less strict limits on state borrowing and deficits, with origins back to the 19th century. The federal government does not have enough sway to force an FRL upon them.

Brazil's FRL was passed by the national government for all levels of government; it uses both *ex ante* rules and legal penalties to contribute to the consolidation of a critical mass of consensus for fiscal prudence among powerful governors who had few party loyalties but strong influence over national legislators. Colombia, a unitary country of "autonomous" departments, already had various laws constraining subnational borrowing, and to get more institutional backing for fiscal balance at the national level they passed an explicit FRL in 2003. It adds to the *ex ante* constraints on SNGs and sets up transparency and accountability procedures for encouraging fiscal prudence at the national level.

Peru has had a national-level FRL since 2000, and then in 2002-03 municipal and regional governments got elections and obtained substantial de jure fiscal autonomy, including the right to borrow. Therefore, the government revised the FRL in 2003, with provisions for the SNGs as well as tighter constraints on national fiscal behavior. Argentina has gone through several FRL arrangements without success. The 1999 national government's FRL was only directly for the national government and called for provinces to pass their own FRLs, which some did but some others did not, including the largest province. In the fiscal crisis of 2000-01 and beyond, both the federal and SNGs missed the FRL targets and the laws seemed irrelevant. In 2004, the national government passed an FRL that applied to all levels. The federal government and SNGs were missing the targets even before the 2008-09 world financial crisis, however, and in 2009 the essential provisions of the law were suspended.

4 Content of FRLs

This section analyzes the content of FRLs relating to SNGs in Argentina, Australia, Brazil, Canada, Colombia, India, and Peru. The analysis is organized along three dimensions: procedural rules for transparency and accountability, fiscal targets – quantitative or qualitative, and enforcement and escape clauses. Annex 1 presents a more detailed summary of the content of FRLs along these dimensions.[14] For Brazil, Colombia and Peru, the analysis is on the unified FRL that applies to the SNGs. For Argentina, Australia, Canada, and India, subnational FRLs are presented.

In general, there is greater convergence among countries on the procedural rules and fiscal targets, and more variability on the escape clause and enforcement. All FRLs call for the processes of budget formulation and execution that increase transparency and rationality. Many FRLs require medium-term fiscal frameworks. Almost all FRLs have explicit fiscal targets – fiscal deficit, debt, or both, or other variables such as operating budget balance. In some FRLs, additional variables are targeted, such as expenditure growth and composition.

[14] Argentina, Australia, Canada, and India are the countries with subnational FRLs. Most Argentine provinces have adopted the FRL, which was drafted jointly with the Federal Government, except 3 out of 24 which have their own provincial one. Canada has 13 provinces. The discussion in the paper and Annex 1 covers 9 provinces, which account for over 99 per cent of population. Australia has six states and two major mainland territories. India has 28 states. As the content of FRL is broadly similar across 26 states that have enacted FRL, Annex 1 summarizes the content of FRL in eight states.

4.1 Procedural rules for transparency and accountability

All FRLs in the countries discussed call for processes that increase the transparency and rationality of formulating and executing the budget. Typically the FRL requires annual publication and legislative discussion of a fiscal plan and budget, and often this is for multiple years on a rolling basis. The presentation may have to include full costing of any new spending programs or tax changes. Fiscal transparency includes having an audit of subnational financial accounts, making periodic public disclosures of key fiscal data, or exposing hidden liabilities. The FRLs also vary in the extent to which they control arrears and the deficits of off-budget entities, like companies owned wholly or largely by SNGs.

The requirements for a medium-term fiscal framework and a transparent budgetary process aim to ensure that fiscal accounts move within a sustainable debt path and that fiscal adjustment takes a medium-term approach to better respond to shocks and differing trajectories for key macroeconomic variables that affect subnational finance. The transparent budgetary process affords debates by executive and legislative branches on spending priorities, funding sources, and required fiscal adjustments.

To a large degree the effectiveness of these requirements depends on how diligently the legislature and the press monitor these publications and compliance with them. The discipline and sanctions from the political pressures and the access to information about commitments and subsequent compliance can help enforce FRLs. Credit markets can also help with discipline by imposing risk premiums and raising the cost of borrowing if there is fiscal misbehavior. The countries with FRLs under discussion are all democracies, but they vary in how well their institutions function to achieve accountability.

Brazil's FRL sets minimum standards for state budgeting, personnel management, and debt management. The annual budget prepared by each SNG has to be consistent with its multiyear budget plan and with the federal fiscal and monetary program. The FRL systematizes and reinforces the restrictions on personnel spending, deficits and debt that were in the state debt rescheduling agreements and other earlier measures (Law 9496 and the Senate resolutions). The accrual accounting method for all levels of the government eliminates an important source of hidden liabilities: arrears. It also contains specific limits on spending commitments by governments in their final year in office.

In Brazil, moreover, article 48 of Brazil's Fiscal Responsibility Law (2000) enshrines fiscal transparency as a key component of the new framework. Proposals, laws, and accounts are to be widely distributed, including through the use of electronic media (all reports are on the government website). Article 54 requires that all levels of governments publish a quarterly fiscal management report that contains the major fiscal variables and indicates compliance with fiscal targets. Pursuant to article 57, this report is to be certified by the audit courts.

In **Colombia**, the FRL specifies the process for setting budget targets and linking them to target ranges for debts and deficits. Regulations for the law institutionalized the practice at the national level and in some SNGs of publishing quarterly fiscal results, defining deficits on the basis of cash revenue and accrual of spending obligations, and defining debt to include floating debt. The FRL set a target to eliminate *reservas presupuestales* (pre-committed expenditures) in two years, which was done. The other part of floating debt, accounts payable, were counted as regular debt and thus controlled by the fiscal/financial plan. To help with fiscal discipline at all levels, the FRL prohibits the national government from lending to an SNG or guaranteeing its debt if it is in violation of Law 617 of 2000 or Law 357 of 1997, or if it is in arrears on any debt service to the national government. Indeed, a subnational government with those fiscal violations may not legally borrow from anyone. To discourage electoral cycles in fiscal policy, the FRL prohibits any government from committing spending in future years or increasing personnel spending in an

election year. Departmental and municipal central administrations are not allowed to make transfers to their public entities. Strict limits apply to creation of new municipalities, and municipalities proven non-viable have to merge.

In **Peru** the 2003 FRL built upon the 2000 FRL (Fiscal Prudence Law), extending it to SNGs. It required that the annual fiscal deficit of the non-financial public sector not exceed the limit in the multi-annual fiscal framework and in any case would not exceed specific targets (discussed below). Each regional government must prepare and publish an annual development plan that is consistent with the national fiscal framework (including the size of total public sector deficit). Quarterly monitoring of the fiscal performance is required and, in case of revenue shortfall, adequate remedies to revenues and/or expenditures must start in the next quarter. Although the subnational fiscal frameworks have to fit within the national one – whereas in some other countries the SNGs fiscal frameworks merely have to be internally consistent and are not directly subordinated to the national government's fiscal framework – this has not usually been a binding constraint in Peru, as the national government and the overall general government have not hit the limit and ran surpluses in 2006, 2007 and 2008.

Argentina's Fiscal Solvency Law in September 1999 called for limits in the growth of expenditures, the adoption of multi-year budgeting, creation of a Countercyclical Fiscal Fund, and various transparency measures regarding public finances – the features favored by the recent literature on fiscal rules. The new FRL in 2004 applies to the provincial as well as national levels and has similar procedural requirements – rolling 3-year budget plan with projection of revenue and spending by destination, functional and economic categories. An intergovernmental commission coordinates the definitions of budget categories and evaluates budget proposals. The multiannual fiscal plans and results need to be published on the governments' web pages (Melamud, 2010). The law does not spell out coordination on some key items, like the national government's specification of salary increases for teachers, which provinces have to pay and which set the standard of pay demands by the rest of provincial workers. These unfunded mandates effectively derailed provincial spending plans, leaving provincial governments largely unable to control their fiscal situations. Discretionary transfers from the national government have allowed them to meet their payment obligations and kept made them more politically dependent.

In **India**, FRLs passed by states typically require the state government present its medium-term fiscal plan with annual budget to the state legislature. The fiscal plan should set forth multi-year rolling targets for key fiscal indicators. Some FRLs require that the state at the time of budget presentation disclose contingent liabilities created by guarantees provided to public sector undertakings, and some FRLs require the disclosure of borrowing from the Reserve Bank of India and liabilities on the state government for any separate legal entities. Most FRLs require disclosure of significant changes in the accounting policies.

In **Australia**, the procedural rules and transparency are expressed in varied terms across FRLs of states; this is in contrast to India where FRLs enacted by states have strikingly similar content. But the over-archiving content of the FRLs across states in Australia centers on sound fiscal management, transparency in disclosing fiscal policy and accounts, and tabling of fiscal budgets to state legislature for oversight. For example, the Fiscal Responsibility Act (2005) of New South Wales lays out the fiscal principles and targets for the state. In application of fiscal principles, the government should report in annual budget papers: an assessment of past and prospective long-term average revenue growth; an assessment of the impact of budget measures in respect of expenses and revenue on long-term fiscal gaps; measures taken to reflect the fiscal principles; and the estimated impact of proposed tax policy changes. These principles are supported by the Public Finance and Audit Act 1983 that requires the treasurer to: release publicly monthly statement and half year review setting out projections and year-to-date balances for the budget;

table the annual budget in the Legislative Assembly; and present audited financial statements to the Legislative Assembly.

FRLs of provincial governments in **Canada** place responsibility and accountability with the provincial finance minister. The finance minister must present a budget plan and annual report to the legislature of the provincial government and make these available to the public, within prescribed deadlines. Variations exist about the exact nature of disclosure, for example, the public disclosure in Ontario includes mid-year review of fiscal plan, updated information about revenues and expenses, long-range assessment of fiscal environment two years after provincial election, and pre-election reports under certain regulation. In New Brunswick, each year the minister shall provide details as to how the public may participate in pre-budget consultations and shall make public a pre-budget consultation document that sets out the key fiscal issues for consideration.

4.2 Fiscal targets

In addition to procedural rules and transparency, most FRLs reviewed here spell out fiscal targets for SNGs with the most common target being the deficit, and there are differences in the degree of specificity about other targets such as debt stock, spending and guarantees.

Table 2 summarizes fiscal targets in the FRLs for SNGs in Argentina, Brazil, Colombia, India, and Peru. As can be seen, fiscal targets are uniform for SNGs in Brazil, Colombia and Peru; this is not surprising as these countries each has a unified FRL applied to all levels of government.

As can be seen from the table (and Annex 1), fiscal targets differ across countries, and in some countries differ across SNGs. There are two challenges in setting fiscal targets. First, how these targets relate to the threshold for fiscal and debt sustainability? To date, there are no agreed empirical thresholds for SNGs. Second, how can uniform adjustment targets be compatible with horizontal equity if SNGs are starting off from different levels of development and with a large mandate (and backlog) of expenditures? This question will need to be related to the system of fiscal transfers with the intent to reduce horizontal inequality in service delivery.

In the absence of market discipline, for national or SNGs to do this for themselves – passing a law stating what budget they have to pass – has the inherent weakness that the same legislative body that would pass an unbalanced budget (in violation of the law) could also vote to change the law. If the national FRL specifies fiscal ratios for the SNGs, however, this has more inherent strength, since it provides a legal basis for the higher level of government (and typically a source for fiscal transfers) to impose limits on the SNGs. These limits are typically about deficits, borrowing, debt stock, and/or debt service to fiscal revenue or GSDP. Revenue is likely to be a more effective basis, since it is known sooner and with more precision than GSDP.

Since the point of an FRL is to prevent the fiscal slippage from deterioration to insolvency, focus on ratios where the subnational government has more control over the denominator as well as the numerator (e.g., wage bill as a share of total spending) is more likely to have the desired effect than relying only on ratios, like debt service or debt stock to GSDP. These ratios are substantially influenced by exogenous factors (interest and exchange rate) and often go over the limit only after problems have gotten out of hand.

In **Brazil**, the debt restructuring agreements between the federal government and the states in 1997 established a comprehensive list of fiscal targets – debt-to-revenue ratio, primary balance, personnel spending as share of total spending, own-source revenue growth, and investment ceilings – as well as a list of state-owned enterprises or banks to be privatized or concessioned. The annual budget of each SNG has to be consistent with its multiyear budget plan and with the federal fiscal and monetary program. The FRL mandates Senate resolutions to set the specific targets for SNG

Table 2

Fiscal Responsibility Laws – Fiscal Targets for SNGs

Country	Fiscal Targets
Federal Constitution	
Argentina (2004)	• Primary spending growth at or below the growth rate of national GDP • Budget balances of provinces sufficient to bring debt service below 15 per cent of current revenue, net of municipal transfers
Brazil	• Personnel spending 60 per cent or less of net fiscal revenue for states and municipalities, with ceilings for each branch of government • Compliance with targets in mandatory limits set by the Senate
India (states)	• Annual reduction of revenue deficit • Elimination of revenue deficit by certain date • Annual reduction of fiscal deficit • Fiscal deficit/GSDP <= 3 per cent of GSDP • Limits on guarantees • Total liabilities <= 25-28 per cent of GSDP
Unitary Constitution	
Colombia	• Interest payment/operational savings • Debt/current revenue
Peru	• Fiscal deficit of total non-financial public sector including SNGs no more than 1 per cent of GDP • Real growth of public sector spending including SNGs no more than 3 per cent per year • Stock of debt for each SNG may not exceed 100 per cent of the current revenue, and the debt service (interest and amortization) may not exceed 25 per cent of the current revenue • The average primary balance of each SNG for the last 3 years may not be negative

Note: Revenue deficit in India is the difference between total revenue and current expenditure.
Sources: see Annex 1.

debt and fiscal balances. The FRL systematizes and reinforces the restrictions on fiscal variables such as personnel spending as a share of SNG net revenue and on borrowing (Annex A1). It also contains specific provisions for authorities in their final year in office. These restrictions on the borrowers' side were complemented by restrictions on the supply of credit from banks and international lenders.

In **Colombia**, the Fiscal Transparency and Responsibility Law (2003) in combination with a modified version of the Traffic-Light Law (Law 358 of 1997) rates SNGs according to the ratios of debt to payment capacity, and SNGs rated in the red-light zone are prohibited from borrowing, and those in the green-light zone are permitted to borrow up to limits based on debt sustainability

calculations. Departments and large municipalities must get satisfactory credit ratings from international rating agencies before they borrow (following the idea from a regulation in Mexico since 2000).

In **Peru**, the FRL limits the deficit of the total public sector 1 per cent of GDP (or the amount in the national fiscal framework, whichever is less), except in congressionally authorized cases of national emergency or international crisis, when the deficit could go to 2.5 per cent.[15] In addition, each SNG has to keep a non-negative primary balance on average for the last 3 years, and they may not have debt service over 25 per cent of current revenue or debt stock over 100 per cent. In election years, the governments may not spend more than 60 per cent of the annual spending allocation in the first 7 months and may not use more than 40 per cent of the annual limit on the deficit in the first half of fiscal year.[16] The FRL sets some *ex ante* procedural constraints for subnational borrowing, and SNGs can only borrow internationally with the guarantee of the national government. The guarantee for any loan requires compliance with the Annual Debt Law and demonstration of the capacity to pay, which provisions give the national government the authority to veto SNG borrowing.[17]

Fiscal targets adopted by **Indian** states are remarkably similar to each other with respect to fiscal and revenue deficits. Some states FRLs also place limits on guarantees. Basically, in the early 2000s, some states went ahead of the federal government in enacting Fiscal Responsibility and Financial Management Act (e.g., Karnataka in 2002). The federal act in 2003 has similar fiscal targets as those in these early reforming states. Subsequently, the 12th Finance Commission mandated fiscal responsibility legislation for all states, with revenue deficit (total revenue minus current expenditures) to be eliminated and the fiscal deficit to be reduced to 3 per cent of GSDP by fiscal year 2009. Some states issued additional legislation on fiscal targets, for example the Kerala Ceiling on Government Guarantee Act (2003) that was enacted the same year as its FRL. According to the guarantee act, the guarantee outstanding for any fiscal year shall not exceed rupees fourteen thousand crores,[18] no government guarantee shall be given to private entity, and the Guarantee Redemption Fund shall be established.

In contrast to India where fiscal targets with respect to revenue and fiscal deficits are similar across states, states in **Australia** do not have similar fiscal targets. The fiscal targets in New South Wales differ from those in Queensland. The Fiscal Responsibility Act of 2005 in New South Wales sets forth the following targets: Reduce general government net financial liabilities to <= 7.5 per cent of GSDP by June 30, 2010; and to <= 6 per cent by June 30, 2015; maintain general government net debt <= 0.8 per cent of GSDP, and eliminate total state sector unfunded superannuation liabilities by June 30, 2020. The Charter of Fiscal Responsibility of 2009 in Queensland sets forth a quite different set of fiscal targets: the General Government sector meets all operating expenses from operating revenue; growth in own-purpose expenses in the General Government sector to not exceed real per capital growth; achieve a General Government net operating surplus no later than 2015-16; stabilize net financial liabilities as a proportion of revenue

15 The 2000 (pre-decentralization) version of the FRL had such a restriction on general government fiscal balances, implicitly including SNGs; the 2003 FRL made the application to SNGs explicit.

16 Subsequent legislation has made minor modifications to these limits, but not undermined their intent. For instance, in 2007 and 2008 (Law Nos. 29035 and 29144) the restriction on the growth of the non-financial expenditure was changed to "annual real growth of the consumption expenditure of the central government", which may not exceed 4 per cent, using the inflationary target from the central bank.

17 SNGs are not prohibited from getting domestic credit without the guarantee, but this must come within the overall public sector deficit constraint. Thus, the national government could use the requirements for getting credit with the guarantee and other means to force SNGs to report their non- guaranteed borrowing and to keep it within the total deficit constraint. With multiple channels of control at their disposal, the national Ministry of Economics and Finance has keep SNG borrowing under tight control.

18 This amounts to about US$3 billion assuming exchange rate 46.7.

in the Non-financial Public Sector; and target full funding of long-term liabilities such as superannuation in accordance with actuarial advice.

FRLs in the Australian states of Western Australia and Northern Territory have only one fiscal target stipulating that funding for current services to be provided by the current revenue generation. The states of Victoria and Tasmania do not have fiscal targets, but their FRLs have established financial management principles including: prudent management of financial risks; spending and taxing policies to be formulated to maintain a reasonable degree of stability and predictability; and ensuring that policy decisions have regard to their financial effects on future generations. These principles are also established by the states of Western Australia and Northern Territory.

Fiscal targets vary across **Canadian** provinces, as shown in Annex 2. Most provinces require a balanced budget. British Colombia requires only the balance budget rule while Quebec allows fiscal deficit but no more than the accumulated fiscal surplus in previous years. Other provinces such as Alberta, Ontario and New Brunswick also require additional fiscal targets relating to debt ratio, net assets, or contingency allowance.

In **Argentina** the FRL (2004) says that budgets for primary spending (current and capital, net of interest cost) may not grow faster than the rate of growth of the national GDP, as foreseen in the national macroeconomic framework (also called for in the FRL, as mentioned above). If GDP growth is negative, then the primary spending may not grow, but does not have to shrink. The limitation on primary spending is weakened by important exceptions: namely, any investment spending for basic social infrastructure, spending financed by international organization, and spending paid with unused revenue from previous years. Borrowing does have an aggregate limit in that debt service (projected) may not exceed 15 per cent of revenue (net of participation transfers earmarked for the municipalities). Nonetheless, the outcomes have been mixed and often less favorable than in the possibly optimistic projections, putting some provinces over the 15 per cent limit. Furthermore, as a result of the recession that accompanied the global downturn in 2009, Congress derogated key fiscal targets for 2010 and 2011; and in particular those setting ceilings on current primary spending growth, the overall primary fiscal balance, and new borrowing (Law 26,530). Such a temporary suspension reflects first the need to consider escape clauses in FRLs that would provide more flexibility to public spending when facing adverse external or domestic shocks; and second, the need to save in the counter-cyclical fund when the provincial economies are in expansion, which did not happen. This legal initiative was also accompanied by another *Programa Federal de Desendeudamiento* (Decree No.60/2010) that allows restructuring of eligible provincial debts, affected by the deterioration of their fiscal balances. Up to the end of August 2010, about eighteen provinces had benefitted from such programs.

4.3 Enforcement and escape clause

Rules are only as good as their enforcement, and FRLs vary in terms of the strength of enforcement called for in the law and in terms of how well the governments implement the law in practice. On the enforcement and escape clauses, there is great variability across countries, and within country in the case of Canada.

The enforcement ranges from no specific enforcement clause in the case of states FRLs in Australia and most provinces in Canada to strict enforcement in the case of Brazil, Colombia, Peru and three provinces in Canada. Indian states broadly follows the sanction clause in the national FRL that whenever there is a breaching of intra-year targets of revenues and expenditures, the state government should take appropriate measures for increasing revenues and/or reducing

expenditures, including curtailment of the sums authorized to be paid and applied from out of the Consolidated Fund of the state. However there is no specific timeframe for meeting the targets.

More strict sanctions on the SNGs can be found in Brazil, Colombia, Peru and three provinces in Canada. In **Brazil**, the FRL reiterates from earlier laws the requirement that if an SNG's debt is over the legal limit it may not borrow (except for refinancing) and would no longer receive "voluntary" transfers from the federal government (transfers not from tax-sharing participations). Debt and labor contracts in violation of the FRL are not legally valid, which would be a negative *ex post* consequence for any lender who thus would lose its money. The Fiscal Crimes Law (LCF), a companion law to the FRL specifies criminal penalties – fines and even jail – for officials who violate the rules. The LCF applies to public officials of all branches of government at all levels. Among other provisions, the LCF provides for detention of up to four years for a public official who engages in credit operations without prior legislative authorization, incurs unauthorized expenditure commitments (including any in the last two quarters in office that cannot be repaid during the present term of office), extends loan guarantees without collateral of equal or higher value, increases personnel expenditures during the final 180 days of the term of office, or issues unregistered public debt (IMF, 2001).

The **Colombia** unified FRL imposes strict sanctions on SNGs for their non-compliance with FRL. When SNGs do not comply with the limits imposed by the FRL, they will be prohibited from borrowing. They also have to adopt a fiscal-rescue program to regain viability within the next two years. The governments must make across the board spending cuts whenever actual non-earmarked current revenues are come in lower than in the budget estimates. Sanctions are also imposed on lenders. The law tightens the regulations on the supply side. It prohibits lending by the national government to a subnational entity or guaranteeing its debt if the subnational is in violation of Law 617 or Law 358 or if it has debt service arrears to the national government. Furthermore, lending to subnationals by financial institutions and territorial development institutions must meet the conditions and limits of various regulations such as law 358, law 617, and law 817. Otherwise the credit contract is invalid and borrowed funds must be restituted promptly without interest or any other charges (FRL, Art. 21).

In **Peru**, violation of the FRL targets or some other legal targets by SNGs will cause the temporary disruption of transfers from participatory funds, such as FONCOR, FONCOMUN, and FIDE, which are block grants to regional and communal governments and are set by a formula that favors localities with a higher share of low-income population.

The two **Canadian** provinces that have sanctions are British Colombia and Manitoba. In British Columbia, the members of the executive council are subject to a 20 per cent pay cut when fiscal targets are not met. The cut can be partially or fully restored when fiscal targets are met. In Manitoba, if fiscal balance at the end of year is negative, ministerial salaries are cut by 20 per cent in the first year and 40 per cent in the second year if the deficit continues. Ontario has similar sanctions of cutting the salary of Executive Council members when deficit target is missed.

In **Argentina**, the FRL (2004) does not have strong sanctions on the SNGs or their lenders. Furthermore, it allows the Federal Council of Fiscal Responsibility discretion to decide which of the possible sanctions to apply (Art. 32). If an SNG's debt service exceeds the limit, then it may not borrow except to rollover existing debt on more favorable terms and as part of a fiscal adjustment program, perhaps with a multilateral international lender. Provincial governments that miss the fiscal targets in their macro frameworks have faced little political fallout; it has been easy to shift blame to the overall macro situation and to unfunded mandates from the national government. As has been the case all along in Argentina, creditors can make a prior claim on the participation transfers to get the debt service due, which leaves them with little concern as to whether or not their provincial client is within the bounds of the FRL.

With regard to escape clauses, none of the Australian states contain it. Brazil and Peru FRLs and FRLs by Indian states have escape clause to relax fiscal targets and debt ceilings in the event of calamity and less than 1 per cent economic growth for the last four quarters (Brazil), negative growth and national emergency (Peru, Article 5), national security or natural calamity or exceptional grounds (Indian states). Escape clause differs across Canadian provinces, with some provinces do not have one, while some provinces has escape clause in the event of major disaster or extraordinary circumstances. Colombia's FRL does not have an explicit escape clause. Nor does Argentina's FRL, although the congress did suspend key provisions of the FRL during the 2008-09 global financial crisis.

Rules also need to take into account exogenous shocks – like a global recession – and allow some accommodation, without undermining the fiscal discipline. The ongoing global economic crisis has pressured sovereign and sub-sovereign finance, which has led some countries to apply the escape clause. The extent of the full response will need to be reviewed. A key question during a macroeconomic crisis, such as the 2008-09 global crisis, is whether it is more appropriate for the central government to do all of the fiscal stimulus or loosen the fiscal constraints for subnational governments. For example, the Thirteenth Finance Commission in India recommended that the central government be the one bearing the cost of the crisis and the states should receive assistance from the centre for providing the stimulus.

5 FRLs in broader institutional context for fiscal prudence

FRLs do not operate alone, nor are FRLs sufficient to enforce fiscal discipline. To understand the role of FRLs in enforcing fiscal discipline, it helps to know the range of institutional tools available for this purpose and to know what other institutions for fiscal discipline exist, including the overall incentive structure and enforcement capabilities for subnational and national governments and their creditors.

5.1 Lender-borrower nexus and timing of controls and sanctions

Deficits and debt arise from the joint decision of governments and their creditors (including suppliers allowing extended payments). These decisions are made in light of not only the rules governing issuance of the debt, but also the *ex ante* expectations about what will happen to the debtor and the creditors if payment difficulties arise – who will lose money or who will be forced into painful adjustment. The decisions of that lending moment become a *fait accompli* conditioning the subsequent decisions. This points to two important dimensions of control of government borrowing. First the type or timing – *ex ante* controls or *ex post* consequences; and second whether the *ex ante* controls and *ex post* consequences act on borrowers or lenders. Together these make a matrix with four cells, as in Table 3 overleaf.

Traditionally the fiscal discipline literature has focused on the first column – constraints and incentives of borrowers. *Ex ante* constraints on subnational borrowers include debt and deficit ceilings, restrictions on international borrowing, and regulation of SNGs' borrowing based on fiscal-capacity criteria. Typically an FRL includes these, but also includes more such as the public finance process and procedural rules that may lead to debt.

To complement the *ex ante* constraints and to make them credible, there need to be *ex post* consequences for failures in fiscal prudence. Practices to impose *ex post* consequences on SNGs include limits or prohibitions on central bank financing, no bailouts (from central government or from international community) or debt workouts without adequate conditionality, requirements to

Table 3

Lender-Borrower Nexus and Timing of Controls and Sanctions
Channels for Control of Deficits and Debt

	For Borrowers (typically part of FRL)	For Lenders
Ex ante **Controls**	**All governments** • Debt and deficit ceilings • Restrictions on international borrowing • Publication of detailed fiscal results **SNGs only** • Regulation of SNGs' borrowing, based on fiscal-capacity criteria (regulations by central government or SNG itself, central bank, or other institution)	**All governments** • No direct central bank financing • Regulations by central bank or other financial supervision agency **SNGs only** • Cap on total borrowing by SNGs • Increased capital requirements for lending to risky SNGs
Ex post **Consequences**	**All governments** • Limits on central bank financing • No bailouts (from central government or from international community) and no debt workout without adequate conditionality • Publication of detailed fiscal results **SNGs only** • Central government does not accept SNG debt • Debt service withheld from transfers to SNGs • Insolvency system	**All governments** • Strong supervision of banks **SNGs only** • Regulations require capital write-offs for losses from SNG debt • No central bank bailouts • Well-functioning financial market can increase risk premium for uncreditworthy borrowers

publish detailed fiscal results, refusal by the central government to accept SNG debt, and withholding debt service from transfers to SNGs.

Some countries have also a formal insolvency system for SNGs (Canuto and Liu, 2010, Liu and Waibel 2009). The experience of Brazil in the 1990s shows that *ex ante* constraints, which abounded, were not sufficient by themselves. Borrowers and lenders colluded extravagantly to evade the rules as long as *ex post* bailouts were forthcoming. The 1997 debt restructuring agreement between the federal government and 25 states had the federal government took over the states' debt but requiring states carry out far-reaching fiscal reforms and in compliance with the fiscal targets. In Argentina in the 1990s, on the other hand, there were few *ex ante* constraints, and the experience with pulling provinces into line in the fiscal crisis of the mid-1990s by use of *ex post* consequences – mainly withholding debt service from transfers – seemed to validate the government's choice to focus on *ex post* rather than *ex ante* measure. By the end of the 1990s, however, many provinces built up such debts and off-budget obligations that in the 2000s the government started opting for conditional bailouts, rather than pay the political cost of imposing hard consequences (Dillinger and Webb, 1999; Rodden, 2003; Webb, 2003).

Without lenders there is no borrowing or debt, so their constraints and incentives deserve equal attention. Lenders are not always automatically prudent enough, as many episodes reveal, including the financial crisis events unfolding in 2008. Banking regulations can restrain lenders behavior, but lenders would view government borrowers as riskless if the central government or central bank ultimately guarantees the debt, and passing the risk to others – taxpayers or nominal asset holders (subject to the inflation tax). In the case of Brazil, in addition to FRL, decisive factors include the debt renegotiation contracts and the constraints to the credit supply by banks and especially by public banks to SNGs.

Regulations as listed in the top right box attempt to constrain such moral hazards *ex ante*: no direct central bank financing, restrictions on international borrowing, increased capital requirements for lending to risky SNGs, and borrowing cap for lending to SNGs. Rules and practices can also punish risky lender behavior *ex post*, such as by having strong supervision of banks, raising capital ratios for loan from entities with poor capital ratings, requiring capital write-offs for losses from SNG debt, and providing no bailouts from the national treasury or central bank. Relying on constraints only on borrowers means that lenders still have incentives to push loans and may find reckless or desperate politicians willing to borrow despite the rules. This happened in the 1990s in Colombia, when laws aimed to constrain subnational borrowing, but financial sector regulation loosened for some years, and then some departments got excessive lending. In the 2000s, the government addressed the problem by tightening both the financial sector regulation and the legal controls on the SNGs, with the 2003 FRL and other measures.

Ex ante regulation may not be purely on the borrower side. To improve fiscal transparency, Mexico introduced a credit rating system for SNGs. Although subnational participation in the credit rating is voluntary, the requirements of the capital-risk weighting of bank loans introduced in 2000 and of loss provisions introduced in 2004 aim at imposing subnational fiscal discipline through the market pricing of subnational credit. In Colombia, the Fiscal Transparency and Responsibility Law (2003) also tightened the regulations on the supply side. Lending to SNGs by financial institutions and territorial development institutions must meet the conditions and limits of various regulations, such as Law 617 and Law 817. Otherwise, the credit contract is invalid and borrowed funds must be restituted promptly without interest or any other charges.

Ideally, any lending should be subject to at least some constraints in all four quadrants. Relying only on *ex ante* constraints, without *ex post* consequences, gives irresponsible borrowers and lenders a big incentive to get around the *ex ante* rules and do transactions that will latter get bailed out, as happened in Brazil prior to the late 1990s. Relying only on *ex post* consequences allows irresponsible (and large) entities to build up such large debts that the national government will not have the political will to enforce the consequences, as it happened in Argentina in the late 1990s. *Ex ante* constraints are important in economies where banks and financial institutions are owned by governments or financial markets do not respond appropriately to indicators of risk. Under such conditions, credit-allocation decisions are driven more by considerations of political expediency than of fiscal prudence. The events of 2008 also showed the importance of *ex ante* constraints (or the cost of their absence) even with private and liberalized capital markets.

It must be emphasized that the purpose of *ex ante* and *ex post* controls is not to minimize the debt financing, instead they should be developed with the objective of promoting sustainable debt financing through a competitive and diversified subnational credit system. Such a system can help ensure the lowest cost and sustainable supply of credits. Debt financing is extremely important for infrastructure development where the maturity of assets often cannot be matched by the current terms of taxation and transfers.

5.2 *Broader public finance legislation*

In so far as FRL as a fiscal legislation, it is not the only legal framework that imposes fiscal discipline on SNGs. There are broader public finance laws such as a balanced budget law which various countries have adopted to the same effect.

As a federal country, each state in the United States sets limits for itself and for its local governments. Legal frameworks, laws, and regulations vary by state. Some of the common elements include: debt financing must be for a public (not private) purpose; debt limits are specified in laws/state constitutions to avoid excessive borrowing; debt limits may not apply to bonds payable from a "special fund", but the issuance of such bonds follow a separate set of regulations; governmental accounting standards (GAAP) are established by the Governmental Accounting Standards Board (www.gasb.org) with each state determining what accounting standards they and their local governments will use; and all meetings of a majority of the members of a governing body of an issuer must be open to the public.[19] In the United States, markets play a vital role in fiscal surveillance.

Another example is Poland, where the Public Finance Law (2005) specifies that: SNG debt as percentage of its total revenues no more than 60 per cent; SNG debt service as per cent of its total revenue no more than 15 per cent; if SNG debt as percent of revenue reaches 55 per cent, then the debt service as percent of revenues cannot be more than 12 per cent; and debt service needs to include guarantee payments for a given budget year even if the guarantees are not recalled.

The South African Municipal Finance Management Act, enacted in 2003, contains a new framework for municipal finance and borrowing. Chapter 13 of the Act spells out detailed criteria for interventions and recovery plans, specifies the role of national and provincial governments and courts in the insolvency mechanism, and outlines the fiscal and debt adjustment process. The act defines one set of fiscal indicators for "serious financial problems", and another for "persistent material breach of financial commitments." If the first set of triggers is met, the provincial government may intervene. Under the second set of triggers, provincial intervention is mandatory. Unsuccessful provincial intervention calls for national government intervention. Interwoven with these interventions, the municipal government can apply to the High Court to stay all legal proceedings against the municipal government, and to relieve, suspend or discharge financial obligations. Only courts can stay debt payments and discharge debt obligations.

From the experience of Australia, Brazil, Canada, and India, FRLs become an important institution as the previous existing public finance or other legislation had not been able to contain the fiscal risks including those of SNGs. FRLs become a vehicle of political debates in these countries where the broader macroeconomic environment and fiscal crises had made FRLs a more focused instrument for fiscal reforms. In the case of Colombia, various laws (e.g., 358, 617) were developed dealing with different aspects of fiscal frameworks, and later FRL (2003) became a unifying framework to include not only key elements of the previous laws but also new elements. In Peru, the beginning of the decentralization in the early 2000s incorporated the lessons in Argentina and Brazil, and the FRL was enacted with a key objective of preventing fiscal risks of decentralization. Argentina has tried to follow the South American trend in passing FRLs, but it has not developed the same national consensus in favor of fiscal sustainability.

[19] Haines (2009).

6 Effects from an FRL

Since countries passed FRLs (some in the mid- to late 1990s and some in the 2000s), some evidence has accumulated on their effectiveness. Although political consensus for fiscal prudence is clearly a necessary condition to launch a successful FRL, the test of its effective implementation comes when another party comes to power or when the consensus otherwise breaks down, and then one sees whether the institution works to help the remaining stabilization champions restrain the fiscal excesses that the populists might want. The evidence at most allows us to see whether there is an association of FRLs and fiscal outcome, to see the extent to which FRLs have institutionalized commitments (often pre-existing) to fiscal responsibility, and to see some patterns in the relationship between national and subnational fiscal rules. Of course the fiscal outcomes depend on many factors besides the FRL – GDP growth, international interest rates, etc. – which this analysis does not reflect. There are not enough observations and degrees of freedom to use regression analysis to take account of these factors.

6.1 FRL and fiscal outcomes

Given the lender-borrower nexus and various channels that would influence government fiscal deficits and indebtedness, it would be difficult to precisely separate and measure the effects of FRL. Nonetheless, to the extent that FRL intends to improve government finance and avoid over-indebtedness, it is worthwhile to ascertain if the FRL has been associated with improved fiscal outcomes.[20]

Here we choose the growth of public debt before and after the passing of subnational FRL in Australia, Brazil, Canada, Colombia, and India, as shown in Annex 3.[21] As each SNG may have passed its FRL in different year, the measurement of the fiscal improvement/deterioration needs to be normalized. T represents the year when the FRL is passed. Dt represents total subnational (state or province) gross debt outstanding over gross subnational domestic product (GSDP) in year t. The growth of debt/GSDP in the pre-FRL period is measured as the difference between the debt/GSDP in year $t–1$ and the debt/GSDP in year $t–5$, before the passing of the FRL in year t. Similarly the growth of debt/GSDP in the post-FRL period is measured as the difference between the debt/GSDP in year $t+5$ and the debt in the year t when the FRL is passed. To leave out the impact of the global financial crisis of 2008-09, the post-FRL data will cover up to end 2007.[22]

In **Australia**, the growth of debt/GSDP is negative for all the states in the sample in the pre-FRL five-year period as well as in the post-FRL period (Table 12). The debt/GSDP of Western Australia and Northern Territory continued to decline at faster pace and that for Victoria, Queensland and New South Wales continued to decline, although at a slower pace in the post-FRL period. The states in the table passed FRLs from 2000-05, but fiscal consolidation started in the 1990s (e.g., South Wales committing to long-term fiscal targets in 1994, and Victoria's Financial Management Act in 1994). As noted before, the combined state and Commonwealth general government net debt had not exceeded 30 per cent of GDP in the 1990s (Simes, 2003).

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[20] Corbacho and Schwartz (2007) discuss the problems of determining the direction of causality. Their study compared national fiscal deficits in countries with and without FRLs, and found that the former had smaller deficits. Data on subnational deficits for such cross-country comparisons, however, are not readily available.

[21] We are not evaluating the impact of FRL on Peru, as the country enacted the 2003 FRL that applies to SNGs at the same time as the decentralization. In the case of Argentina, extreme macroeconomic instability and changes in the price level make it difficult to use the debt ratio as an indicator of fiscal performance.

[22] For a country with its fiscal year ending during the calendar year, the debt data will cover up to June 2008.

In **Brazil**, although the growth of debt/GDP for SNGs was positive for both the pre and post-FRL periods, the growth slowed down from 5.0 to 1.3 per cent (Table 13). The slowdown also happened to the federal government.

In **Canada**, all the provinces had declining debt as share of GSDP after the passing of the FRLs (Table 14). In British Colombia and Nova Scotia, this decline reversed the trend of rising debt as share of GSDP in the pre-FRL period, with British Colombia experienced the largest turnaround. The other three provinces already had declining debt share of GSDP for the FRL. The debt/GSDP of Newfoundland and Labrador continued to decline in the post-FRL period at a faster speed, and of Alberta, Ontario and New Brunswick continued the reduction but at a slower pace.

In **Colombia**, the debt/GSDP ratio rose from 2 per cent in 1996 (the year before the traffic light Law 358) to 3.5 per cent in 2001. The ratio steadily declined to 1.5 per cent by 2006 and stayed at this level since (Table 15, Figure 4).

In **Indian** states, the growth of debt /GSDP was slower in the post-FRL period than the pre-FRL period for 24 out of 26 states. Twenty one out of these 24 states had reversed the trend of increasing debt/GSDP in the pre-FRL period (Table 16).

From the above, FRL *per se* was not the pivotal moment for the turnaround of fiscal deterioration in Australia and Canada. In fact, legislating and regulating subnational debt was well underway before the enactment of various subnational FRLs. As noted before, the fiscal consolidation grew out of policy debates in Australia in the 1990s, before various states passing FRLs from 2000-06. In Canada, many SNGs adopted balanced-budget and/or debt reduction legislation in the 1990s (Millar 1997).[23] The entire country was seriously undertaking fiscal corrections after rating downgrades. In some provinces, FRLs later consolidated various prior laws (e.g., New Brunswick). In Australia, some states also enacted various public finance laws in the 1990s.

One common trait of successful FRLs for subnational governments is the commitment of the central government to its own fiscal prudence, which is usually reinforced by the application of the FRL to the national as well as subnational level. As shown in Annex 4, government debt as share of GDP declined, before the onset of the global financial crisis in 2008, for both the central and subnational governments as a whole since the early 2000 in Brazil and Colombia, since the late 1990s in Canada, and since the mid-1990s in Australia. Although important factors such as solid economic growth and prudent monetary policies contributed to the good macroeconomic performance in general, the commitment to FRLs is positively associated with the declining debt ratio. Similarly in India, the debt over GDP declined since the early 2000s to 2008, and the central government debt over GDP stabilized.

6.2 FRL as a device to institutionalize fiscal responsibility

As shown above, the post-FRL period has usually been marked by a positive turnaround in subnational fiscal performance (Brazil, Colombia, and India), or continuing improvement in fiscal consolidation (Australia and Canada). The FRL could serve as a device to institutionalize the commitment to fiscal reforms in order to have it persist over time and through changes of government and parties.

In Brazil, the FRL was passed in 2000 by a right-center national government with a strong commitment to fiscal stability for itself and with a need to push a similar commitment for SNGs. A key test has come and was passed when a Labor government subsequently came to power in 2002

[23] Alberta, Saskatchewan, Manitoba, Quebec, New Brunswick, Nova Scotia, Northwest Territories, the Yukon from 1993-96.

and maintained that commitment, both for the national government and for enforcing the FRL for SNGs. In 2009 Brazil achieved an investment-grade credit rating. The fiscal reform and consolidation in Brazilian states are embedded in both the annual Programs of Fiscal Adjustment (PAF) between the federal government and the states since 1998 and the FRL since 2000. In 2001, the debt of most major municipalities was restructured in an identical fashion to the 1997 state debt restructuring. The debt restructurings of 1997 and 2001 were successful in improving the fiscal balances of states and municipalities. Within 18 months the states' negative primary balances turned positive, averaging one per cent of GDP in recent years, thereby contributing to the improved macroeconomic conditions in Brazil. One state, Minas Gerais, challenged the FRL rules in 1999, provoking a crisis, but the national government carried out the prescribed sanctions and the state got back into line. Implementation of the PAFs and FRL played a vital role in maintaining macroeconomic stability and avoiding a systemic financial crisis in Brazil (World Bank, 2008).

In India, introducing FRLs at the state and central government levels is associated with fiscal adjustment since early to mid 2000s.[24] While institutional reforms such as the introduction of FRLs cannot substitute for the policies needed to realize fiscal adjustment, they can help catalyze and complement fiscal adjustment. The implementation of FRL at the center ushered in an era of rule-based management of public finances. The enactment of FRLs by states, through the federal incentives, brought an element of discipline into budget-making by the states. These reforms, together with higher economic growth, introduction of VAT, and increase in the states' share in net central taxes, contributed to the improvement in the finance of the center and states from 2004-05 to 2007-08 (India Thirteenth Finance Commission, 2009).

In Colombia, three periods are relevant: the period before the traffic-light law of 1997, the period with the traffic-light law but not the FRL, and the period after the passage of the FRL in 2003. The traffic-light law was passed in a moment of enthusiasm for better fiscal policy at local levels, but the enthusiasm did not last and subnational debt problems recurred, along with national level fiscal problems. The FRL in 2003 reflected a reinvigorated commitment to fiscal responsibility and institutionalized it. The president elected in 2010 is from the same party, and observers expect the new administration to continue the fiscal policy commitments of its predecessor.

In Peru a centrist government passed the FRL in 2003 in order to make sure that the new decentralization program did not lead to macro fiscal problems. The next government in 2006, headed by the president and left-leaning party that had led the country into hyper inflation in the late 1980s, but they have continued the same responsible fiscal policy that the FRL had started to institutionalize during the previous administration. Peru's sovereign foreign currency rating was upgraded to investment grade first by Fitch and Standard and Poor's in 2008 and then by Moody's in 2009, reflecting the strong growth performance, prudent fiscal and liability management, and the resulting improvement in solvency indicators.

In Argentina the 1999 FRL (and the provincial FRLs) stopped working in 2001 because of the extreme mismatch between the national government's fiscal and monetary policies in the context of a fixed exchange rate. Although the federal government's FRL lacked enforcement power, the more fundamental problem was the government's many legally inflexible spending obligations, most notably debt service and provincial transfers. The provincial FRLs also had shortcomings that would have been problematic even if the collapse at the top had not come first. They lacked enforcement power and a critical mass of states had not passed them. The 2004 FRL, while more comprehensive than its predecessor, again did not reflect a national consensus that fiscal prudence was worth political sacrifice. Compliance was incomplete from the start, sanctions

[24] Howes and Jha (2004) argued for FRLs with this rationale.

were weak, and the binding features of the law were suspended when an economic slowdown came in 2008-09.

Since an effective FRL is a means to institutionalize a consensus in favor of fiscal responsibility, it helps to have it grow out of a consensus-building process. Brazil did this explicitly through discussions with the states and because the President who put through the law came to office on the basis of his success in taming deficits and inflation while he was Minister of Finance. In India the Finance Commission played a key role in building consensus on the fiscal policy agenda. In Brazil, Colombia, and Peru the painful memories of past fiscal excesses gave impetus for a political mandate to assure fiscal responsibility in the future. It is unclear why this did not happen in Argentina, with its many painful macroeconomic failures, but the pro-stability consensus of the early 1990s had largely dissipated by the late 1990s and since.

The global financial crisis of 2008-09 will provide an important test on the long-term commitment to fiscal sustainability. Governments throughout the world have loosened the fiscal rules as part of counter-cyclical packages. For example, in Brazil, The three-year Programs of Fiscal Adjustments between the National Treasury and the 25 states adjusted the primary balances and indebtedness targets and broadened the fiscal space for new borrowing. Through its development bank, the federal government created a credit line for SNGs that had suffered loss of federal transfers. Given that some states were not in compliance with the requirements of fiscal responsibility legislation, this operation is considered to be exceptional and allows all states to access the line of credit. In India, the central government allowed the states to raise additional market borrowings, thus increasing the limit of gross fiscal deficit to 3.5 per cent of gross state domestic product in fiscal 2008/09, and to 4.0 per cent in fiscal 2009/10, exceeding the FRL targets.[25] The challenge will be to manage the exit from fiscal stimulus and to resume a commitment to fiscal sustainability.

Some FRLs were enacted more to guide a fiscal adjustment process than to set a framework for fiscal policy for long-term. The global financial crisis of 2008-09 brought to the fore the issues of fiscal policy over the economic cycles and the coordination of counter-cyclical fiscal policies across the different institutions of the government. It is not clear, however, the extent to which FRLs are suited to serve as the main legal basis for long-term fiscal management or are only one part of the overall institutional framework for long-term fiscal prudence.

6.3 Subnational FRL in the context of national reform

Macroeconomic developments and nationwide reforms can provide an overall impetus. Consistency with other parts of the macro-fiscal system, subnational fiscal reform often unfolds in the broader macroeconomic context. In Canada, macroeconomic deterioration in the 1980s to early 1990s led to major changes in monetary and fiscal policy. After suffering from a lack of credibility, the Bank of Canada since the early 1990s committed to low and stable inflation. The attainment of inflation targeting overtime improved market and public confidence (Perrier and Armano, 2000; Paulin, 2000; OECD, 2001). On the fiscal front, in the early 1990s, the importance of restoring sound public finances became increasingly clear at both the federal and provincial level. The fiscal framework adopted by the federal government and legislation by provinces were part of the move toward more sustainable public finances (Traclet, 2004).

Establishing an FRL or other institution to constrain SNG debt and deficits works only if the governments in question start from or are brought to a position where they do not have extreme debt overhang. In other words, if the service on existing debt is already too large to pay realistically

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[25] Government websites and World Bank country teams.

in the political economic situation, this attenuates greatly the incentive from an FRL to behave with fiscal responsibility. Consequently, a set of SNG fiscal adjustment and debt rescheduling programs often must complement or precede the implementation of an FRL. To work, the programs must strike a balance between being sufficient to eliminate the debt overhang and being so generous as to seem to reward fiscal irresponsibility of the past (or to fiscally hamstring the national government). Brazil, Colombia, and India undertook SNG debt restructuring, separate from or preceding the FRL.

The dynamics of subnational-central government interaction provides political momentum and stimulates discussion of fiscal reforms. Given the growing share of subnational finance in the consolidated public finance and the growing influence of political forces at the subnational level, often a subnational government can lead the fiscal reform which serves as demonstration effect on the national reform. In India, following the state fiscal crisis in the late 1990s to the early 2000s, the states of Karnataka and Punjab each enacted its own fiscal responsibility law in 2002, first in the country. The federal FRL followed in 2003, and other states soon after from 2003-07. In Australia, some states went ahead with fiscal reforms and enacted legislation committing to balanced budget or debt targets, prior to the federal enactment of Charter of Budget Honesty in 1998.

A national government can pass the FRL for itself and encourage SNGs to pass their own FRLs. In India, following the recommendation of the Twelfth Finance Commission in 2004, debt relief to a state offered by the Debt Consolidation and Relief Facility was based on a condition for the state to enact the FRL. The FRL should, at the minimum, provide for elimination of revenue deficit[26] by 2008/09 and reduction of fiscal deficit to 3 per cent of GSDP. 21 states put in place FRL beginning 2005/06. Five states already had enacted FRLs even before this condition was imposed by the Twelfth Finance Commission.[27] The framework intended to promote growth-expansionary fiscal consolidation by providing fiscal incentives for SNGs to eliminate their revenue deficits, thereby ensuring that net public borrowing is directed exclusively towards growth-enhancing public investment (India Thirteenth Finance Commission, 2009).

Since fiscal responsibility with multiple players (national and subnational governments) is a coordination problem with multiple possible equilibria (Braun and Tommasi 2004), it depends on having a critical mass of states that voluntarily obey the rules and politically support the national government when it applies sanctions to enforce the rules. Thus the fiscal sanction of Minas Gerais in 2000 assured that no other states would challenge the law and thus was a critical step in the success of Brazil's FRL.

7 Conclusions

Given the difficulties of determining causality of FRLs and fiscal outcomes, it will be difficult to say whether FRLs are necessary or sufficient for achieving fiscal prudence at multiple levels of government. Country examples reviewed in this paper show that FRLs can help coordinate and sustain commitments to fiscal prudence, but they are not a substitute for commitment and should not be viewed as ends in themselves. FRLs can make a positive contribution by adding to the collection of other measures to shore up a coalition of states with the central government in support of fiscal prudence. Although political consensus for fiscal prudence

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[26] In India, revenue deficit is current expenditure net of all revenues.

[27] The Debt Consolidation and The Debt Consolidation and Relief Facility (DCRF) comprised consolidation of central loans contracted till March 2004 and outstanding on 31 March 2005, along with debt write-offs, linked to reduction of the revenue deficits of states and containment of fiscal deficit at the 2004-05 level. The five states are: Karnataka, Kerala, Tamil Nadu, Punjab and Uttar Pradesh. Thirteenth Finance Commission (2009), p. 49.

is clearly a necessary condition to launch a successful FRL, the test of its effective implementation comes when the consensus breaks down, and then one sees whether the institution works to help the remaining stabilization champions restrain the fiscal excesses that the populists might want.

In designing an FRL, defining fiscal targets poses a special challenge. Many factors that influence the fiscal accounts of the SNGs are exogenous to the SNGs, such as interest and exchange rates. The national governments also mandate expenditure items and the intergovernmental fiscal frameworks may limit the taxation power of SNGs. Focusing on ratios where the SNGs have control over the denominator as well as the numerator (e.g., wage bill as a share of total spending) is more likely to have the desired effect than relying on ratios that are substantially influenced by exogenous factors.

An important lesson is that a set of SNG fiscal adjustment and debt rescheduling programs often must complement or precede the implementation of an FRL. It is not realistic to expect SNGs with large debt overhang to comply with sustainable fiscal targets. On the other hand, in order for FRLs to provide credible incentives for fiscal prudence, the terms of restructuring cannot signal potential future bailouts. Therefore, there needs to be a balance between avoiding moral hazard and proving sufficient financial relief to ensure that the SNGs can realistically comply with FRLs.

Even when FRLs are effective, they cannot do the job alone. The potential contribution depends on how well it complements the rest of the institutional framework for SNG fiscal restraint – making labor and pension laws more flexible, giving subnational governments more taxing power, using rules for debt renegotiations to reduce the salary bill as a share of revenue, using financial sector regulation to restrain lending to SNGs, and commitment to hard budget constraints on SNGs. The experience shows the need to have both *ex ante* constraints on borrowing and *ex post* sanctions for over borrowing. Even beyond the network of specific fiscal rules, the deeper institutions and expectations need to motivate respect and enforcement of the rules, otherwise they do little good (Braun and Tommasi 2004).

SNG borrowing for financing social and economic infrastructure can generate positive net social returns. FRL framework is not meant to eliminate credit market access by SNGs. The challenge is to design fiscal rules and framework that will achieve the dual objectives of expanding market access by SNG for financing economic growth and containing the risks of excessive borrowing.

Future research might want to pursue the following questions: How to set subnational along with national fiscal targets, either in FRLs or other public finance laws? How these targets relate to the threshold for fiscal and debt sustainability? How to construct escape clauses that will not become convenient evasion clauses in case of severe global or regional downturns? What kind of enforcement mechanism would ensure fiscal discipline, particularly in the absence of effective market systems? Over the longer periods of business and political cycles, can the effect of fiscal legislation be more accurately measured? How can one design institutions for fiscal discipline – FRLs, etc. – so that they do not make fiscal policy excessively pro-cyclical?

ANNEX 1
FISCAL RESPONSIBILITY LAWS

Table 4

Argentina

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
National FRL – "Fiscal Solvency Law" – only for national government; intended as model for provinces	1999	Multiannual budgets; prohibition of extra budgetary funds; penalties for spending units if they spend over budget	Deficit limits in 1999-2002; balance budget thereafter; primary spending growth rate no higher than real GDP growth rate	None; Law called for stabilization fund, with inflow from sale of SOEs and 1-2 per cent of tax revenues	Penalties for national spending units if they spend over budget
National – "Zero Deficit Law"	2001		Zero deficit by 2002		
National "FRL" – applying to provincial as well as national governments. 21/24 provinces and City of Buenos Aires agreed to comply	2004	3-year multiannual budgets; Debt management needs to ensure (move toward) debt service less than 15 per cent of net revenue; new borrowing or guarantees need Min of Econ approval; no non-peso domestic bonds from SNGs; SNGs publish fiscal accounts and all debt related transactions in a standard format Established a Federal Council for Fiscal Responsibility, with membership from the national and all provincial ministries of finance	Nominal growth rate of primary spending by each government must be lower than projected national GDP growth; for SNG governments with debt less than 15 per cent of current revenue the restriction applies only to current spending. The national government budget must have an overall primary fiscal balance after, excluding five categories of spending (spending with loans from International Financial Institutions, capital spending for social infrastructure, subnational spending financed by non-automatic transfers, extra spending due to Education Financial Law, and payments on court rulings). SNGs have to budget primary surpluses adequate to bring their debt service gradually below 15 per cent of current revenues (net of transfers to municipalities) and may not do new borrowing if their debt service is over the ceiling	National and provincial governments must put money into stabilization funds. In 2004-05, Mendoza and Santa Fe started funds, but no data available on performance. In 2009, key fiscal targets in the law were suspended by Congress for 2009 and 2010…	

Source: Government legislation (Ley 25,152; Ley 25,453; Ley 25,917).

Table 5

Australia

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
New South Wales	1983 1995 2005	**Public Finance and Audit Act 1983:** • The treasurer is charged to publicly release monthly statement and half year review setting out projections and year-to-date budget balances. The Budget Papers for a budget year are to be tabled in the Legislative Assembly before the end of the prior financial year • No later than 31 October after concluding a fiscal year, the Treasurer is to present the consolidated financial statements and general government sector financial statements as audited by the Auditor-General, and the opinions of the Auditor-General on those statements, to the Legislative Assembly **General Government Debt Elimination Act 1995 (repealed in 2005):** • Within 3 months of the enactment of this act, the Treasurer is to table in Parliament a comprehensive financial management framework • The progress reports of budget papers should include: Measures taken to fund employer superannuation liabilities, to maintain assets of the state and prudently manage the risks; The projected growth in net cost of services and expenses for a budget year and each year of the forward estimates period; impact of proposed tax policy changes **Fiscal Responsibility Act 2005:** • The act lays out the fiscal principles and targets for the state. In application of fiscal principles, the government should report in annual budget papers: - an assessment of past and prospective long-term average revenue growth - an assessment of the impact of budget measures in respect of expenses and revenue on long-term fiscal gaps - measures taken to reflect the fiscal principles. These measures include: measures taken to maintain or increase general government worth; measures taken to fund employer superannuation liabilities; measures taken to align physical asset management of government agencies with their service delivery priorities and strategies; measures taken to manage risks prudently • The estimated impact of proposed tax policy changes	**General Government Debt Elimination Act 1995 (repealed in 2005):** • To achieve a sustainable surplus budget for the general government sector within 3 years after enactment of the Act • To reduce, by 30 June 2005, the level of public net debt to a sustainable level, which are defined as a level at which the budget can absorb the economic cyclical impact without need for significant corrective action on the revenue and expenditure side • To eliminate net debt of federal government sector by 30 June 2020 and eliminate the unfunded superannuation liabilities by 30 June 2030 **Fiscal Responsibility Act 2005:** In the medium term: - reduce the level of general government net financial liabilities to <= 7.5 per cent of gross state product by 30 June 2010 - maintain the level of general government net debt <= 0.8 per cent of gross state product (the level at 30 June 2005), unless an increase is required in net debt to reduce one or more components of general government net financial liabilities In the long term: - reduce the level of general government net financial liabilities to <= 6 per cent of gross state product by 30 June 2015 - maintain the level of general government net debt <= 0.8 per cent of gross state product (the level at 30 June 2005), unless an increase is required in net debt to reduce one or more components of general government net financial liabilities - eliminate the total state sector unfunded superannuation liabilities by 30 June 2030	N/A	• Reputational

Table 5 (continued)

Australia

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
Northern Territory	1995 2001	**Financial Management Act 1995:** • The Treasurer is to publish quarterly financial statements in the Gazette and audited annual reports which include the original estimates of budget, results in respect of the major Government Finance Statistics statements as reported by the Australian Bureau of Statistics, and explanation of significant deviations. The audited annual reports should be tabled in the Legislative Assembly **Fiscal Integrity and Transparency Act 2001:** • The Treasurer must publicly release and table the first and each subsequent fiscal strategy statements for a particular Government at or before the specific time. Changes can be made by public release of a new fiscal strategy statement. Such a statement should: (a) specify medium-term fiscal objectives (b) explain the broad strategic priorities on which the budget is or will be based (c) specify the key fiscal indicators against which fiscal policy will be set and assessed (d) specify, for the budget year and the following 3 financial years: (i) the Government's fiscal objectives and targets; and (ii) the expected outcomes for the specified key fiscal indicators; and (e) explain how the fiscal objectives and strategic priorities relate to the principles of sound fiscal management • The Treasurer must publicly release and table a fiscal outlook report at the time of each budget, mid-year outlook report and fiscal results report. The contents of these reports are specified in the Act • The Under Treasurer must publicly release a pre-election fiscal outlook report within 10 days after the issue of the writ for an election	**Fiscal Integrity and Transparency Act 2001:** No specific numerical rules and targets. The principles of sound financial management are: - To formulate and apply spending and taxing policies with consideration of the effect on employment, the economic prosperity and development of the Territory and giving rise to a reasonable degree of stability and predictability - To ensure that funding for current services is to be provided by the current generation - To manage financial risks faced by the Territory prudently (having regard to economic circumstances), and maintain Territory debt at prudent levels	N/A	• Reputational

Table 5 (continued)

Australia

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
Queensland	1999 2009	**The 1999 amendment of Financial Administration and Audit Act (repealed in 2009):** • The Treasurer should prepare a charter of social and fiscal responsibility for the State and table it in the Legislative Assembly. The charter is to state the broad social and fiscal objectives of the Government and establish a framework for assessing the Government's performance in achieving the objectives • The charter must be based on the principles of: (a) Transparency and accountability in developing, implementing and reporting on the Government's social and fiscal objectives (b) Efficient and effective allocation and use of resources (c) Equity relating to the raising of revenue, delivery of government services, and between present and future generations (d) Prudent management of risk **Financial Accountability Act 2009:** • The act lays out principles, rules and procedures for fiscal management. The government should publish regular, informative reports on the outcomes of the activities, against previously announced objectives and release annual report on the efficiency and effectiveness of its activities in meeting the Government's objectives for the community. Specifically: (a) The premier must present to the Legislative Assembly on government's community objectives as well as fiscal objectives and outcomes regularly; (b) The Premier must table each half year report and full year report of ministerial offices expenses in the Legislative Assembly within specific timelines. Full year report should be audited by auditor-general • The Act requires from time to time, the Treasurer prepare and table in the Legislative Assembly a charter of fiscal responsibility giving details of the government's fiscal objectives and fiscal principles that support those fiscal objectives. The treasurer must report regularly to the Legislative Assembly on the outcomes the government has achieved against the objectives stated in the charter	**Charter of Fiscal Responsibility 2009:** The fiscal principles are set out broadly to maintain fiscal sustainability and a competitive tax regime, and manage the State's balance sheet. The principles are: • In the General Government sector, meet all operating expenses from operating revenue • Growth in own-purpose expenses in the General Government sector to not exceed real per capital growth • Achieve a General Government net operating surplus as soon as possible, but no later than 2015-16 • Maintain a competitive tax environment for business • Stabilize net financial liabilities as a proportion of revenue in the Non-financial Public Sector • Target full funding of long-term liabilities such as superannuation in accordance with actuarial advice	N/A	• Reputational

Table 5 (continued)

Australia

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
Tasmania	1990 2007	**Financial Management and Audit Act 1990:** • The Treasurer is to publish in the Gazette a report, the half-yearly report, and an audited annual report which include the original estimates of budget, results in respect of the major Government Finance Statistics statements as reported by the Australian Bureau of Statistics, and explanation of significant deviations. The annual report should be laid before each House of Parliament and copies should be available to the public **Charter of Budget Responsibility Act 2007:** • The Treasurer is to publicly announce and table the first fiscal strategy statement for a particular Government at or before the time of the Government's first budget. It may be changed at any time by announcing and tabling a new fiscal strategy statement. Such strategy should establish a benchmark for evaluating the Government's fiscal performance by specifying: (1) the long-term objectives within which budgets will be framed (2) the key fiscal measures against which fiscal policy will be set and assessed (3) the fiscal objectives and targets for the budget year and the following 3 financial years (4) How the fiscal objectives and strategic priorities relate to the principles of sound fiscal management • The Leader of an Opposition party is to publicly announce a fiscal strategy statement, and provide a copy of the statement to the Secretary, within 15 days of the issue of a writ for an election for the House of Assembly • Pre-election financial outlook report should be prepared	**Charter of Budget Responsibility Act 2007:** • No specific numerical rules and targets. The principles of sound financial management are to: (a) ensure transparency and accountability in developing, implementing and reporting on fiscal objectives (b) ensure the efficient and effective allocation and sustainable use of resources in achieving objectives (c) ensure that policy decisions have regard to their financial effects on future generations (d) formulate spending and taxation policies that ensure a reasonable degree of equity, stability and predictability (e) manage financial risks prudently	N/A	• Reputational
Victoria	2000	**Financial Management Act 1994, amended in 2000:** • The act establishes a budgeting and reporting framework for sound public financial management. It specifies the purposes and contents of each government documents including the financial policy objectives and strategies statements, quarterly financial reports, mid-year reports, audited annual financial reports and budget update and requires the documents to be transmitted to or laid before each house of the Parliament on or before pre-specified date. The financial policy objectives statement should specify the financial objectives and targets of current year as well as those of three following years	**Financial Management Act 1994, amended in 2000:** • No specific numerical rules and targets. The principles are laid out to ensure sound financial management including prudent management of financial risks faced by the State, having regard to economic circumstances; pursuing spending and taxing policies that can maintain a reasonable degree of stability and predictability in the tax burden level; maintaining the integrity of the Victorian tax system; taking into account the impact of policy decisions on future generations; and providing full, accurate and timely disclosure of financial information relating to the Government and its agencies	N/A	• Reputational

Table 5 (continued)

Australia

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
Western Australia	2000	**Government Financial Responsibility Act 2000:** The act sets out a framework for public financial planning incorporating a set of principles and rules • The Treasurer must release a Government Financial Strategy Statement at least once in each calendar year which sets out government's medium term fiscal strategy. Any significant change to fiscal strategies should be released as soon as possible • The Treasurer should release a Government Financial Projections Statement which includes projection for the budget year and next 3 years when the appropriation Bills and budget papers for a budget or supplementary budget are tabled in the Legislative Assembly • The Treasurer must release a Government Mid-year Financial Projections Statement and an audited annual report on state finance within prescribed date • The Under Treasurer should release a Pre-election Financial Projections Statement within 10 days after the Legislative Assembly is dissolved or expires • The Treasurer should release a Quarterly Financial Results Report for each quarter	**Government Financial Responsibility Act 2000:** • There are no specific numerical rules and targets. However the financial management principles require current services to be funded by the current generation; spending and taxing policies to be formulated and applied so as to give rise to a reasonable degree of stability and predictability; financial risks to be managed prudently; spending and taxing policies are to be formulated and applied with consideration to the effects of these policies on employment and the economic prosperity of the State	N/A	• Reputational
Australia (National)	1997 1998	**Financial Management and Accountability Act 1997:** • Finance Minister must publish monthly financial statements. Charter of Budget Honesty Act 1998: • Annual reports must be audited by Auditor - General. The government strategy should reflect sound financial management principles. The government should release and present to the parliament the following reports regularly based on prescribed timelines: the government's fiscal strategy statement, budget and mid-year economic and fiscal outlook reports, final fiscal outcomes reports and intergenerational reports. A pre-election fiscal and economic outlook report should be released if a general election is called, as well as policy costing upon request	**Charter of Budget Honesty Act 1998:** No specific numerical rules and targets. The principles of sound financial management are set out: • prudent management of financial risks of the government by maintaining general government debt at prudent levels • to ensure that fiscal policies are to achieve adequate national saving and to moderate cyclical fluctuations in economic activity • consistent spending and taxing policies to ensure stability and predictability • the integrity of the tax system • Policy decisions to have regard to their financial effects on future generations	N/A	• Reputational

Source: Various fiscal responsibility laws from websites of Australian state legislatures.

Table 6

Brazil

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clause	Sanction
National FRL applies to all tiers of government	2000	• The law sets minimum standards for state budgeting, personnel management, and debt management • The annual budget of each SNG has to be consistent with its multiyear budget plan and with the federal fiscal and monetary program • The law explicitly prohibits debt refinancing operations between different levels of government Strengthened transparency rules for all levels of government: • Proposals, laws and accounts must be widely distributed, including through electronic media • Forecasts, objectives as well as targets and results need to be periodically published • The Executive Branch of each Municipal Government must consolidate its accounts and send to the central government. The central government complies the accounts for entire federation • A bi-monthly budget execution report should be published, containing budgetary balance sheet as well as summary of expenditures and revenues • The heads of government branches must issue a Fiscal Management Report every 4 months and make it widely available to the public	**Article 12**: The estimated revenue for credit operation must not exceed the capital expenditures in the Annual Draft Budget law **Article 19**: For states and municipalities, Wage and salary cost may not exceed 60 per cent of current revenue **Article 20:** with the following minimums for each branch of government: • State: 3 per cent Legislative, 6 per cent Judiciary, 49 per cent executive, 1 per cent state prosecutor • Municipal: 6 per cent legislative, 54 per cent executive **Article 23:** If personnel expenditures exceed these limits, the excess percentages must be reduced within the next two 4-month periods, with at least one-third of the reduction coming in the first 4-month period **Article 30:** Requires the Federal Senate to set overall limits for federal and subnational debt	• Public calamities acknowledged by both houses of national Congress, including state of defense, siege and a low growth rate, defined as less than 1 per cent in last four quarters	• If total personnel expenditures exceed 95 per cent of the ceiling, new hiring, wage increases and contracting overtime work are suspended • Officials who violate the rules will be subject to criminal penalties, fines and perhaps even jail, according to the law of Fiscal Crimes • If the debt targets are not achieved, SNGs will be prohibited from: receiving voluntary transfers, obtaining guarantees from Federal government or other states and contracting credit operations unless used as refinancing securities debt and reducing personnel expenditures

Source: Government website.

Table 7

Canada

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
Alberta	1993 1995 1999	**Government Accountability Act 1995:** • The Minister of Finance should have consolidated fiscal plans, annual reports and ministry reports laid before the Legislature and available to general public within prescribed deadlines. The consolidated fiscal plan including the government business plan and capital plan among others should be for the fiscal year and the subsequent 2 fiscal years. The Minister of Finance must report publicly to the Lieutenant Governor in Council on the accuracy of the consolidated fiscal plan with respect to the first 3, 6, and 9 months of each fiscal year within prescribed dates. The contents of each report are specified	**Deficit Elimination Act 1993 (repealed in1995):** • To achieve a deficit target of $2.5 billion in 1993-94 and a balanced budget in 1996-97 Balanced Budget and Debt Retirement Act 1995 (repealed in1999): • Annual balanced budgets and conservative revenue forecasts are required • Establishing a schedule to repay net debt by the end of 2012-22, or a 25 years limit **Fiscal Responsibility Act 1999:** • Deficits and opening debt are not allowed; • Actual expenses for a fiscal year must not be more than actual revenue for that year • The Capital Account is established as an account within the General Revenue Fund, net assets of this account may not be reduced to an amount less than zero • The consolidated fiscal plan must include a contingency allowance for each fiscal year set out in the plan equal to at least 1 per cent of revenue for fiscal policy purposes	**Fiscal Responsibility Act 1999:** • Alberta Sustainability Fund is established from which fund could be transferred to achieve balanced budget in the re-sponse to emergen-cies or special spending commit-ments	• Reputational
British Columbia	1991 2000 2001	**The Budget Transparency and Accountability Act 2000:** • Regular disclosure of fiscal information by finance minister • The minister must make public a budget consultation paper and present the main estimates for a fiscal year to the Legislative Assembly with the budget for that fiscal year as well as economic and fiscal forecasts and major capital investment information each year • Make public any significant change to the estimates as soon as practicable, the public accounts for the previous fiscal year and quarterly report on or before prescribed date	**Taxpayer Protection Act 1991 (repealed in 1992):** • A five-year balanced budget plan was created; a tax freeze and prevention of new taxes; limitations on expenditure growth; a Debt Reduction Plan and an annual progress report **Balanced Budget Act 2000 (repealed in 2001):** • Setting up progressively lower deficit targets between 2000-01 to 2003-04 and requiring balanced budget beginning in 2004-05 **Balanced Budget and Ministerial Accountability Act 2001:** • The main estimates must not contain a forecast of deficit for a fiscal year, but it does not apply to 2009-10 and 2010-11 fiscal year	**Balanced Budget Act 2000 (repealed in 2001):** • The maximum deficits could only be exceeded in emer-gency and/or unexpected circum-stances or for significant revenue declines **Balanced Budget and Ministerial Accountability Act 2001:** • 2009-10 and 2010-11 fiscal year	**Balanced Budget Act 2000 (repealed in 2001):** • The members of the Executive Council were subject to a 20 per cent pay cut when targets are not met; The reduction could be partially or fully restored when certain targets are met **Balanced Budget and Ministerial Accountability Act 2001:** • 20 per cent of salary of each Executive Council member is held back. The reduction can be partially or fully restored when collective and/or individual responsibility has been achieved

Table 7 (continued)

Canada

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
Manitoba	1989 1995 2008	**Fiscal Stabilization Fund Act 1989:** • To establish a fiscal stabilization fund with the purpose of stabilizing the fiscal position from year to year and improving long-term fiscal planning **Balanced Budget, Debt Repayment and Taxpayer Accountability Act 1995:** • Major tax rate increases will be decided by Province-wide referendum • A debt repayment plan is set up for general-purpose debt and unfunded pension liabilities • Public hearings must be held before the Act can be amended or repealed and the Act prevents changes in accounting policy to meet balanced budget targets **The Balanced Budget, Fiscal Management and Taxpayer Accountability Act 2008:** • At the time of tabling the budget, the minister must table in the Legislative Assembly a statement of the government's financial management strategy describing the government's objectives for measurable outcomes and containing a summary of core expenditure and revenue estimates • After each fiscal year, the minister should table in the Legislative Assembly a report comparing the results to the financial management strategy laid before the fiscal year, while tabling the public accounts	**Balanced Budget, Debt Repayment and Taxpayer Accountability Act 1995:** • Balanced budgets are required from 1995-96 and onward **The Balanced Budget, Fiscal Management and Taxpayer Accountability Act 2008:** • For each fiscal year, the budget for the government reporting entity laid before the Legislative Assembly must project a positive balance as at the end of that year. The balance as at the end of a fiscal year is determined as the average of the net results for the fiscal years within the four-year period ending at that time	**Balanced Budget, Debt Repayment and Taxpayer Accountability Act 1995:** • Deficits are permitted in the face of a natural disaster, war, or revenue reduction of 5 per cent or more that is not due to a change in tax laws **The Balanced Budget, Fiscal Management and Taxpayer Accountability Act 2008:** • The net income or loss for a fiscal year may be adjusted by excluding a revenue shortfall or increase in expenses for the fiscal year that occurred because of (a) an unanticipated natural or other disaster (b) Canada being at war or under the apprehension of war (c) unusual weather or climate conditions not anticipated in the budget; or (d) a decision of another level of government or of a regulatory body that took effect after the budget for the fiscal year was tabled in the Legislative Assembly or within 30 days before it was tabled, the fiscal impact of which was not anticipated in the budget	**Balanced Budget, Debt Repayment and Taxpayer Accountability Act 1995:** • If a deficit occurs, it must be offset in the next fiscal year; in this case, penalties will be imposed in second year. Ministerial salaries are cut by 20 per cent in the first year of a deficit and by 40 per cent in the second year **The Balanced Budget, Fiscal Management and Taxpayer Accountability Act 2008:** • If the balance as at the end of a fiscal year is negative, Ministerial salaries are cut by 20 per cent in the first year of a deficit and by 40 per cent in the second year • If after the general election the party forming the government changes, the reduction would not apply to the new minister appointed by the new government

Table 7 (continued)

Canada

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
New Brunswick	1993 2001 2003 2006	**Fiscal Stabilization Fund Act 2001:** • A fiscal stabilization fund was created with the purpose of stabilizing the fiscal position and improving long-term fiscal planning **Taxpayer Protection Act 2003:** • Referendum approval is required for new taxes or increases of tax rates for certain taxes **Fiscal Responsibility and Balanced Budget Act 2006:** • The Minister must lay before the Legislative Assembly the main estimates and capital estimates for the next fiscal year in each year. And each year the Minister shall provide details as to how the public may participate in pre-budget consultations and shall make public a pre-budget consultation document that sets out the key fiscal issues for consideration by the public	**Balanced Budget Act 1993:** • It is required that the cumulative ordinary balance for the three-year period up to 1995-96 and cumulative budgets for four-year periods thereafter be in balance **Fiscal Responsibility and Balanced Budget Act 2006:** • Balanced budget: the total amount of the expenses should not exceed the total amount of revenue for each fiscal year • Reduction in net debt ratio: the ratio of net debt to GDP at the end of each year should be less than at the end of the previous fiscal period	N/A	• Reputational
Newfound-land and Labrador	2004	**Transparency and Accountability Act 2004:** • All government entities are categorized as either category 1, 2 or 3 government entities and are required to prepare strategic plans, business plans or activity plans respectively. These plans will set out goals and objectives of the government entity and objective performance measures for the period covered by the plan. The plans should also include a statement that the responsible minister or the governing body is accountable for the preparation of the plan • A government entity shall each year prepare an annual report for the preceding fiscal year. The annual report of category 1 or 2 government entities shall compare the actual results with the projected results of its strategic plan or business plan and provide an explanation of any variance. The report of category 3 government entity shall represent information on the activities of the entity carried out during the preceding fiscal year. Annual report shall include a statement that the responsible minister or chairperson is accountable for the actual results reported • The minister of Finance shall publish a 3 year fiscal forecast and shall, semi-annually, report on the economic and fiscal position of the province • The Minister of Finance shall publish a 3 year forecast respecting the impact of government policies and economic development on the fiscal performance of the government and the performance of the province's economy • When the requirement of reports and plans set out by the Act is not meet, the responsible minister shall make public a written statement giving reasons for the non-compliance	N/A	N/A	• Reputational

Table 7 (continued)

Canada

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
Nova Scotia	1993 1996 2000	**Financial Measures Act 1996, amended in 2000:** • The government should release four-year fiscal projections with major economic assumptions and their impact on government finances • Until the proportion of public debt denominated in foreign currencies is equal to or less than 20 per cent of total public debt, financial transactions that increase foreign currency exposure are prohibited and refinancing of foreign currency debt must eliminate the foreign currency exposure • New programs and services should be financed through existing budgets **Provincial Finance Act 1989, amended in 2000:** • The minister should table a consolidated fiscal plan while tabling the estimates for a fiscal year in the House of Assembly. A consolidated fiscal plan shall include fiscal projections for the four-year period and underlying economic assumptions and a summary of government business plan for the fiscal year. The annual report on outcomes against business plan for the fiscal year should be submitted to the House of Assembly within prescribed date	**Expenditure Control Act 1993:** • Reducing net operating expenditures by 10 per cent and net capital expenditures by 20 per cent from 1994-95 to 1997-98 **Expenditure Control Act 1993, amended in 1996:** • Requiring annual balanced budgets starting in 1996-97, with surpluses aimed at reducing the public debt and/or taxes • Overspending in a fiscal year should not be more than 1 per cent of the appropriated expenditures from the House **Financial Measures Act 1996, amended in 2000:** • Balanced budgets are required by 2002-03 **Provincial Finance Act 1989, amended in 2000:** • Commencing 2002-03 fiscal year, no budget deficit can be proposed. When deficit occurs, it should be recovered by the end of next fiscal year	**Financial Measures Act 1996, amended in 2000:** • Deficits must be recovered in the next fiscal year, unless a deficit results from a natural or other disaster; losses associated with a sale, dissolution, closure or other restructuring of a government service organizations; or expenditure incurred by an unforeseen increase in debt service costs **Provincial Finance Act 1989, amended in 2000:** • The deficit is not required to be recovered if it is the result of a natural or other disaster, losses associated with a sale, dissolution, closure or other restructuring of a governmental unit or government business enterprise that are not anticipated to have financial impact on future fiscal years or an expense incurred with respect to debt servicing costs that exceeds the amount budgeted for the fiscal year	• Reputational

Table 7 (continued)

Canada

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
Ontario	1999 2004	**Taxpayer Protection Act 1999:** • Requirement of voter's approval for tax increases **Fiscal Transparency and Accountability Act 2004:** • The Budget Paper should be laid before the Legislation Assembly each year which addresses the fiscal plan for the fiscal year budgeted and the following two fiscal years • Among others, the minster is responsible to have the following reports released within prescribed dates: mid-year review of fiscal plan, updated information about revenues and expenses, long-range assessment of fiscal environment two years after provincial election, and pre-election reports under certain regulation	**Taxpayer Protection Act 1999:** • Requirement of balanced budgets beginning with the 2001-02 fiscal year • Expenditures must not exceed revenues in a given fiscal year plus the net accumulated surplus from the previous three fiscal years **Fiscal Transparency and Accountability Act 2004:** • Maintain a prudent ratio of provincial debt to gross domestic product; • For each fiscal year, the Executive Council should plan a balanced budget except extraordinary circumstances. If a deficit is planned, the Executive Council should also develop a recovery plan for achieving a balanced budget in the future. The recovery plan should specify the period within which a balanced budget will be achieved	**Taxpayer Protection Act 1999:** • Deficits are only permitted in very limited circumstances: such as a natural or other disasters, war or apprehension of war, or a revenue decline of at least 5 per cent for a reason other than a tax rate reduction • A deficit of less than 1 per cent of revenue is permitted, but must be offset in the following year • Voter approval is not required if the new or increased tax is 1) not designed to increase revenues, 2) a response to a change in federal tax laws or a restructuring of intergovernmental tax authority, or 3) required as a result of a reorganization or restructuring of a Crown agency **Fiscal Transparency and Accountability Act 2004:** Extraordinary circumstances which are not specified	**Taxpayer Protection Act 1999:** • If a deficit is greater than 1 per cent of revenue or if a deficit less than 1 per cent is not offset in the following year, the salary paid to the members of the Executive Council is reduced by 25 per cent. If a deficit is incurred after either one of the two previous scenarios, salaries are reduced by 50 per cent for this and subsequent deficits
Quebec	1996 2001 2002	**Balanced Budget Act 2002:** • The Minister of Finance is held responsible for the fiscal targets established in the Act. The Minister must report to the National Assembly in the Budget Speech on the fiscal objectives, on the achievement of those objectives and on the variance recorded, if any. The Minister must report annually to the National Assembly on the impact of accounting policy changes upon the financial results of the Government	**Act Respecting the Elimination of the Deficit and a Balanced Budget 1996** (It was renamed as "**Balanced Budget Act**" in 2002): • Elimination of the deficit by 1999-2000 and maintenance of a balanced budget thereafter **Balanced Budget Act 2002:** • The government may not incur a budgetary deficit. If an overrun of less than $1 billion is recorded for a fiscal year, the Government must achieve an equivalent surplus in the next fiscal year. • If the Government achieves a surplus in a fiscal year, it may incur overruns in subsequent fiscal years up to the amount of that surplus. In case that overruns are more than $1 bn under special circumstances, the overrun should be offset by the Government with a maximum of 5 years	**An Act to Establish a Budgetary Surplus Reserve Fund 2001:** • Allow the reserve fund to be used to maintain a balanced budget under the circumstances of disaster, degradation of economic conditions or a reduction of federal transfer **Balanced Budget Act 2002:** • The government may incur overruns more than $1 billion in case of a disaster having a major impact on revenue or expenditure, a significant deterioration of economic conditions or a change in federal programs of transfer payments to the provinces that would substantially reduce transfer payments to the Government. However the overruns should be offset within 5 years	• Reputational

Table 7 (continued)

Canada

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
Saskatchewan	1995 2000 2008	**Balanced Budget Act 1995:** • The government must prepare a four-year financial plan and a debt management plan following each general election **Fiscal Stabilization Fund Act 2000:** • A fiscal stabilization fund was established in order to fulfill long-term objectives by stabilizing the fiscal position from year to year **The Growth and Financial Security Act 2008:** • The minister should, each year present the four-year financial plan and four-year public debt management plan to the Legislative Assembly at the same time that the minister presents the estimates for the first fiscal year • The minister should present interim report containing revised forecast of revenues and expenses and setting out difference to the Lieutenant Governor in Council. The interim report of revised forecast of revenues and expenses should be laid before the Legislative Assembly before or on specific date	**Balanced Budget Act 1995:** • The government has to achieve a balanced budget over a four-year period. The sale of a Crown corporation and a change in accounting policies cannot be used to fulfill the balanced budget objectives. Budgetary surpluses must be used to repay debt **The Growth and Financial Security Act 2008:** • Balanced budget or budget with surplus should be achieved • Actual balance of revenue and expenses or surplus of revenues over expenses each year • If a deficit results for a fiscal year from an special event described in the Act, the Government of Saskatchewan is required to achieve at least an offsetting surplus in the following fiscal year	**Balanced Budget Act 1995:** • Unanticipated and identifiable events that have a direct impact on expenses or revenues **The Growth and Financial Security Act, 2008:** • The expense or revenue reduction may be excluded if it arises from a natural or other disaster of because Canada is under war or under apprehension of war as determined by the Lieutenant Governor in Council	• Reputational
Canada (National level)	1992	**Spending Control Act 1992:** • The minister should not present a budget with the spending exceeding spending limits. If a certificate is issued to increase spending by the President of Treasury, it should be published with the main estimates or supplementary estimates for the year. The Public Accounts for each controlled fiscal year shall contain a statement by the Minister respecting compliance in that year	**Spending Control Act 1992:** • Sets the specific spending limits for each fiscal year from 1991-1992 to 1995-1996 which are subject to certain adjustments • The minister may propose the spending of a particular year exceeding the limit. The spending in excess of the limit may be allocated to the two next years and the spending limits of the next two years should be reduced by the same amount	N/A	• Reputational

Sources: 1) Various Fiscal Responsibility Laws from a) LexisNexis, www.lexisnexis.com and b) CanLII, www.canlii.org. 2) Kennedy and Robbins (2003), The Role of Fiscal Rules in Determining Fiscal Performance.

Table 8

Colombia

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clause	Sanction
National FRL applies to all tiers of government	1997 2000 2003	• The central administration and SNGs need to present a consistent 10-year macroeconomic framework each year. Both the central and decentralized budgets must also be in full compliance with the medium-term fiscal framework • Any contingent liabilities associated with concessions, sovereign debt guarantees, and legal cases are to be reported annually to Congress as part of a medium-term fiscal framework	• The governments are classified as in: 1) critically indebted (red light zone) if interest payment over operational saving more than 40 per cent of and debt stock over current revenues greater than 80 per cent, or 2) Not over-indebted (green light zone) if interest over operational savings less than 40 per cent and debt stock over current revenue is less than 80 per cent. Only SNGs in the green light are allowed to borrow • Primary surplus has to be at least 100 per cent of debt service, implying no borrowing except to repay principal • The ratio of discretionary current expenditure over non-earmarked current revenue are set by law and varies across different categories of subnational entities	N/A	• Subnational government in red light zone is prohibited from borrowing • Governments have to make across the board cuts whenever effective non-earmarked current revenue are under the budgeted amount • Subnational governments that have excess debt must adopt a fiscal-rescue program in order to regain fiscal viability in two years

Note: 1997 fiscal legislation established fiscal targets of liquidity ratio and debt payment capacity ratio, which were subsequently incorporated into FRL in 2003.
Source: Government legislation.

Table 9

India

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
Goa	2006	• The Government shall lay in each financial year a medium term fiscal plan before the Legislative Assembly along with the budget. The medium term fiscal policy statement should set forth multi-year rolling targets for fiscal indicators • The government should disclose a statement at the time of budget presentation including the significant changes in accounting policies and their effects and the contingent liabilities created by guarantees • The Finance Minister should review the budget implementation and remedial measures taken to achieve the targets every half-year and explain any deviation as well as proposing remedial measures before legislature • Any measure proposed which may lead to an increase in revenue deficit should be accompanied by remedial measures, which will neutralize such increase or loss and such measures shall be clearly mentioned • In case the revenue deficit and fiscal deficit exceed because of unforeseen demands, the Government should identify the net fiscal cost arising due to natural calamity and such cost would provide ceiling for extent of non-compliance to the specified limits	• Eliminate revenue deficit by 31st March 2009; annual reduction of the ratio of revenue deficit to the total revenue receipt should be 1.5 per cent beginning on 1st day of April 2006 • Reduce the ratio of fiscal deficit to GSDP to no more than 3 per cent by 31st March, 2009; annual reduction of the ratio should be 0.5 per cent beginning on 1st day of April 2006 • Control the total outstanding guarantee within the specified limit by Goa State Guarantees Act, 1993; No fresh guarantee shall be given if outstanding risk weighted guarantees exceed the limits • Ensure that the total liabilities do not exceed 30 per cent of GSDP by 31st March 2009 • Ensure that the ratio of interest payment to total revenue receipt does not exceed 20 per cent by 31st March 2009	• On the grounds of unforeseen demand on public finance due to national security, natural calamities or other exceptional grounds specified by the government	N/A
Haryana	2005	• The government should in each year lay before the legislature Macroeconomic Framework Statement, the Medium Term Fiscal Policy Statement and the Fiscal Policy Strategy Statement. Medium Term Fiscal Plan should set forth three-year rolling targets for key fiscal indicators • The government should disclose a statement at the time of budget presentation including significant changes in accounting policies and the corresponding impact, details of borrowings from the Reserve Bank of India and liabilities on the State Government for any separate legal entity • The Minister of Finance should review the trend of revenue and expenditure half-yearly to ensure compliance and should lay results before legislature • Whenever there is a breaching of intra-year targets of revenue or expenditure, the State Government should take appropriate measures for increasing revenue and/or for reducing the expenditure	• Annual reduction of revenue deficit from 2005-06 FY, so as to bring it down to zero by 2008-09 and maintain revenue surplus thereafter • Annual reduction in fiscal deficit from 2005-06 FY, so as to bring it down to 3 per cent of GSDP by 2008-09 • Ensure within a period of five years, beginning from the financial year 2005-06 and ending on 31st March, 2010, that the outstanding total debt including contingent liabilities do not exceed 28 per cent of the estimated GSDP of that year	• On the grounds of unforeseen demand on public finance due to internal disturbance, natural calamities or other exceptional grounds	N/A

Table 9 (continued)

India

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
Himachal Pradesh	2005	• The Government shall lay in every financial year before the Legislative Assembly a medium term fiscal plan along with the annual budget. The medium term fiscal policy statement should set forth four-year rolling targets for fiscal indicators and assess the sustainability • The government should disclose a statement at the time of budget presentation including significant changes in accounting policies, the contingent liabilities created by guarantees, actual liabilities and the number of employees of the public sector • The Finance Minister should review revenue and expenditure trend every 6 months and lay outcomes before legislature • Prior taking policy decision which potentially leads to breach of pre-specified fiscal targets, the State Government shall take measures to fully offset the fiscal impact for the current and future years by curtailing the sums authorized to be paid and applied from and out of the Consolidated Fund of the State	• Eliminate revenue deficit by March 2009 and maintain surplus thereafter • Progressively reduce fiscal deficit to 3 per cent of GSDP • Progressively reduce outstanding guarantees on long term debt, until it can cap outstanding risk weighted guarantees at 80 per cent of total revenue receipts in the preceding financial year	• On the grounds of the unforeseen demand of public finance due to national security, natural calamities or other exceptional grounds specified by the government	N/A
Kerala	2003	• The Government shall lay in every financial year before the Legislative Assembly along with the annual budget, a medium term fiscal policy statement and a fiscal policy strategy statement. The medium term fiscal policy statement should set forth three year rolling target for fiscal indicators and assess the sustainability • The government should make disclosure at the time of budget presentation on the contingent liabilities, significant changes in accounting policies and the corresponding impact, and matters which have potential impacts on budget • The government should specify the corrective measures to control deficit level beyond the target in annual budget. The Finance Minister should make a statement in the legislative Assembly explaining any deviation from the Act, assessing the potential impact and stating the remedial measures • Whenever there is either shortfall in revenue or excess of expenditure over specified levels during the course of the year, the Government shall take steps either to make proportionate reduction in the voted expenditure or to increase the revenue	• Reduce the ratio of fiscal deficit to 2 per cent of GSDP within a four-year period commencing from 1st April, 2003 and ending on 31st March 2007	N/A	N/A

Table 9 (continued)

India

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
Maharashtra	2005	• In each financial year, State Government should lay before both houses of the legislature the Medium-term Fiscal Statement and the Fiscal Policy Strategy Statement. Medium-term Fiscal Plan should set forth three year rolling targets for key fiscal indicators • The Finance Minister should make quarterly review of compliance and lay the outcomes before both houses of the state legislature • Whenever there is a breach of pre-specified level of expenditure or revenue during any period in a year, the government should take appropriate measures to offset the impacts, including curtailing the sum authorized to be paid or applied from and out of the Consolidated Fund of State	• Eliminate the revenue deficit by 31st March 2009 and maintain revenue surplus thereafter at the end of each year • The State Government shall by rules specify the targets for reduction of fiscal deficit (which are not specified in this act)	• On the grounds of natural calamities or such other exceptional grounds the State Government may specify	N/A
Tamil Nadu	2003	• The Government shall lay a medium term fiscal plan before the Legislative Assembly along with the budget. The medium term fiscal policy statement should set forth multi-year rolling target for fiscal indicators • The government should disclose a statement at the time of budget presentation including significant changes in accounting policies and their effects and the contingent liabilities created by guarantees • The Finance Minister should review the budget implementation and remedial measures taken to achieve the targets every half-year and explain any deviation as well as proposing remedial measures before legislature • Any measure proposed in the course of the financial year, which may lead to an increase in revenue deficit should be accompanied by remedial measures, which will neutralize such increase	• Reduce the ratio of revenue deficit to revenue receipt every year by 3 to 5 per cent, depending on the economic situation, so as to bring it down to below 5 per cent by 31st March 2008; adhere to it thereafter • Reduce the ratio of fiscal deficit to GSDP beginning from 2002-03 financial year to not more than 3 per cent by 31st March, 2008 • Cap the total outstanding guarantees to 100 per cent of the total revenue receipt in the preceding year, or at 10 per cent of GSDP; Cap the risk weighted guarantees to 75 per cent of the total revenue receipt in the preceding year, or at 7.5 per cent of GSDP	• On the grounds of the unforeseen demand of public finance due to national security, natural calamities or other exceptional grounds specified by the government	N/A

Table 9 (continued)

India

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
Tripura	2005	• The government should in each financial year lay before the legislature Macroeconomic Framework Statement, the Medium Term Fiscal Policy Statement and the Fiscal Policy Strategy Statement along with budget. Medium Term Fiscal Plan should set forth three-year rolling targets for key fiscal indicators and underlying assumptions • The government should disclose a statement at the time of budget presentation including the contingent liabilities created by guarantees, significant changes in accounting policies and the corresponding impact • The Minister of Finance should review the trend of revenue and expenditure every quarter to ensure compliance and should lay outcomes before legislature. Any deviation from the targets should be disclosed • Whenever there is a breaching of intra-year targets of revenue or expenditure, the State Government should take measures for increasing revenue and/or reducing the expenditure • Any proposed measure which leads to increase of revenue deficit should be offset by remedial measures. Such statement should seek approval for Revised estimates from the legislature	• Strive to remain revenue surplus • Strive to reduce the fiscal deficit to 3 per cent by March 2010 • Within a 5-years period, from 1st April 2005 to 31st March 2010, the total debt stock do not exceed 40 per cent of the estimated GSDP for that year • Limit annual incremental risk weighted guarantees to 1 per cent of the GSDP of that year	• On the grounds of the unfore-seen demand of public fi-nance due to internal distur-bance, natural calamities or the excep-tional grounds the State Gov-ernment may specify	N/A
India (National FRL)	2003	• The government should in each year lay before the legislature Macroeconomic Framework Statement, the Medium Term Fiscal Policy Statement and the Fiscal Policy Strategy Statement and report quarterly on fiscal development. Medium Term Fiscal Plan should set forth there-year rolling targets for key fiscal parameters • Whenever there is a breaching of intra-year targets of revenue or expenditure, the State Government should take appropriate measures for increasing revenue and/or for reducing the expenditure	• To eliminate revenue deficit by March 2009; the annual reduction in revenue deficit must be at least 0.5 per cent of GDP and in the fiscal deficit at least 0.3 per cent of GDP • Caps on the level of guarantees and total liabilities • Prohibit the government from borrowing from the Reserve Bank after 2006	• On the grounds of the unfore-seen demand of public fi-nance due to national secu-rity or natural calamities	N/A

Source: Various Fiscal Responsibility Laws from internet.

Table 10

Peru

Political Units	Date	Procedural Rules and Transparency Requirements	Numerical Targets	Escape Clauses	Sanctions
National FRL applies to all tiers of government	1999 2003	• It is not allowed to enact legal or administrative rules interfering with fiscal rules • The MEF should produce and publish Multiannual Macroeconomic Framework (MMF) every year, and approved by the council of ministers and the Congress. Regional development plan must be consistent with the MMF at national level • All external debt operation by regional governments should be approved by the national government, and the proceeds should be used only for infrastructure • A Fiscal Stabilization Fund was established from the NFPS fiscal surplus, privatizations and concession proceeds, and royalty of exploitation of national natural resources • If the quarterly revenue is below the projected figure more than 1.5 per cent, expenditures of following quarters should be reduced by the same amount	**For governments at all levels:** • Fiscal deficit of the NFPS including SNGs cannot exceed 1 per cent of GDP • Real growth of NFPS spending including SNGs no more than 3 per cent per year • The total debt of the NFPS cannot exceed its fiscal deficit • In electoral years, the non-financial expenditure executed in the first seven months of a year cannot exceed 60 per cent of the budgeted amount for the year; and, the fiscal deficit of the NFPS in the first half of the fiscal year cannot exceed 40 per cent of the projected deficit for the whole year **For each SNG:** • The stock of debt may not exceed 100 per cent of the current revenue, and the debt service (interest and amortization) may not exceed 25 per cent of the current revenue • The average primary balance for the last 3 years cannot be negative	• In the case of national emergency and international crisis with substantial impact, upon request of the executive, the Congress can suspend the application of fiscal rules • If GDP is declining, the ceiling for NFPS deficit could (with proper authorization) rise to 2.5 per cent of GDP for a maximum of 3 years	• Violation of the targets by SNG will cause the disruption of transfers from participatory funds such as FONCOR, FONCOMUN and FIDE • The national government may intervene in the operations of a regional government in the case of a breach of the fiscal targets set in the national MMF or any fiscal rule of the fiscal responsibility law

MEF: Ministry of Economy and Finance; NFPS: Non-Financial Public Sector.
Source: Government legislation.

ANNEX 2

PROVINCIAL FISCAL RESPONSIBILITY LAWS IN CANADA: FISCAL TARGETS

Table 11

Provinces	Key Fiscal Targets
British Colombia	• Main budget estimates must not contain a forecast of deficit
Alberta	• Deficits and opening debt are not allowed • Net assets of Sustainability Fund may not be reduced to less than zero • Net assets of Capital Account is may not be reduced to less than zero • Contingency allowance => 1 per cent of revenue p.a. for fiscal policy purposes
Quebec	• No budgetary deficit. For an overrun of less than $1 billion, an equivalent surplus must be achieved in the next fiscal year • If surplus is achieved in a fiscal year, overruns can occur in subsequent fiscal years up to the amount of that surplus • With overruns more than $1 bn, it should be offset with a maximum of 5 years
Ontario	• Maintain a prudent ratio of provincial debt to gross domestic product • Plan a balanced budget except extraordinary circumstances • If a deficit is planned, the Executive Council should also develop a recovery plan for achieving a balanced budget within specified period
New Brunswick	• Balanced budget: the total amount of the expenses should not exceed the total amount of revenue for that fiscal year • Reduction of debt: Ratio of net debt to GSDP at the end of each year should be less than at the end of the previous fiscal period
Nova Scotia	• No budget deficit (from FY2002/03 onward) • When deficit occurs, it should be recovered by the end of next fiscal year
Saskatchewan	• Balanced budget or budget with surplus with 4-year financial plan • Actual balance of revenue and expenses or surplus of revenues over expenses each year • If a deficit results for a fiscal year, an offsetting surplus must be achieved the following fiscal year
Manitoba	• Presented budget must project a positive balance as at the end of that year • The balance as at the end of a fiscal year is determined as the average of the net results for the fiscal years within the four-year period ending at that time

Sources: 1) Various Fiscal Responsibility Laws from LexisNexis, www.lexisnexis.com and CanLII, www.canlii.org. 2) Kennedy and Robbins (2003).

ANNEX 3

GROWTH OF GROSS DEBT AS SHARE OF GSDP/ GDP IN THE PRE- AND POST-FRL PERIODS

Table 12

Australia

State	Date	Pre-FRL *(Dt–1)/GSDP – (Dt–5)/GSDP*	Post-FRL *(Dt+5)/GSDP – (Dt)/GSDP*
Western Australia	2000	–2.20%	–2.48%
Victoria	2000	–9.93%	–0.87%
Queensland	1999	–2.50%	–1.40%
Northern Territory	2001	–4.69%	–5.39%
New South Wales	2005	–1.69%	–0.32%

Note: To eliminate the impact of the recent financial crisis on our data set, our data stop at the first half of 2008.
Source: Australia Bureau of Statistics.

Table 13

Brazil

	Date	Pre-FRL *(Dt–1)/GDP – (Dt–5)/GDP*	Post-FRL *(Dt+5)/GDP – (Dt)/GDP*
Sovereign Debt	2000	15.13%	2.39%
Subsovereign Debt		4.99%	1.31%

Source: Instituto de Pesquisa Econômica Aplicada (IPEA).

Table 14

Canada

Provinces	Date	Pre-FRL *(Dt–1)/GSDP – (Dt–5)/GSDP*	Post-FRL *(Dt+5)/GDP – (Dt)/GSDP*
Alberta	1999	–13.16%	–10.65%
British Columbia	2000	12.82%	–5.04%
Nova Scotia	2000	2.41%	–12.48%
Ontario	2004	–3.97%	–2.74%
Newfoundland and Labrador	2004	–23.81%	–26.54%
New Brunswick	2006	–6.04%	–0.26%

Notes: 1) Pre-FRL data of Alberta only date back 4 years before the enactment of FRL. 2) To eliminate the impact of the recent financial crisis on our data set, our data stop at first half of 2008.
Source: Statistics Canada.

Table 15

Colombia

	Date	Pre-FRL *(Dt–1)/GDP – (Dt–5)/GDP*	Post-FRL *(Dt+5)/GDP – (Dt)/GDP*
Subsovereign Debt	2003	0.58%	–1.07%

Source: Ministry of Finance and Public Credit.

Table 16

India

State	Date	Pre-FRL *(Dt–1)/GSDP – (Dt–5)/GSDP*	Post-FRL *(Dt+5)/GSDP – (Dt)/GSDP*
Karnataka	2002	3.80%	1.10%
Kerala	2003	8.70%	–3.50%
Punjab	2003	8.10%	–8.50%
Tamil Nadu	2003	7.40%	–3.90%
Uttar Pradesh	2004	12.90%	–3.90%
Andhra Pradesh	2005	7.30%	–4.50%
Chhattisgarh	2005	0.90%	–7.30%
Gujarat	2005	6.00%	–8.00%
Haryana	2005	0.20%	–7.70%
Madhya Pradesh	2005	4.50%	–2.70%
Maharashtra	2005	7.70%	–6.20%
Orissa	2005	7.10%	–15.90%
Rajasthan	2005	9.30%	–8.00%
Assam	2005	8.30%	–3.00%
Himachal Pradesh	2005	13.80%	–17.30%
Manipur	2005	11.90%	4.90%
Nagaland	2005	–2.20%	1.30%
Tripura	2005	12.70%	–20.90%
Uttarakhand	2005	12.20%	–2.90%
Bihar	2006	6.30%	–12.60%
Goa	2006	–3.30%	–2.80%
Arunachal Pradesh	2006	31.10%	–9.60%
Jammu and Kashmir	2006	10.90%	–0.60%
Meghalaya	2006	6.50%	0.50%
Mizoram	2006	39.80%	–2.80%
Jharkhand	2007	2.30%	0.00%

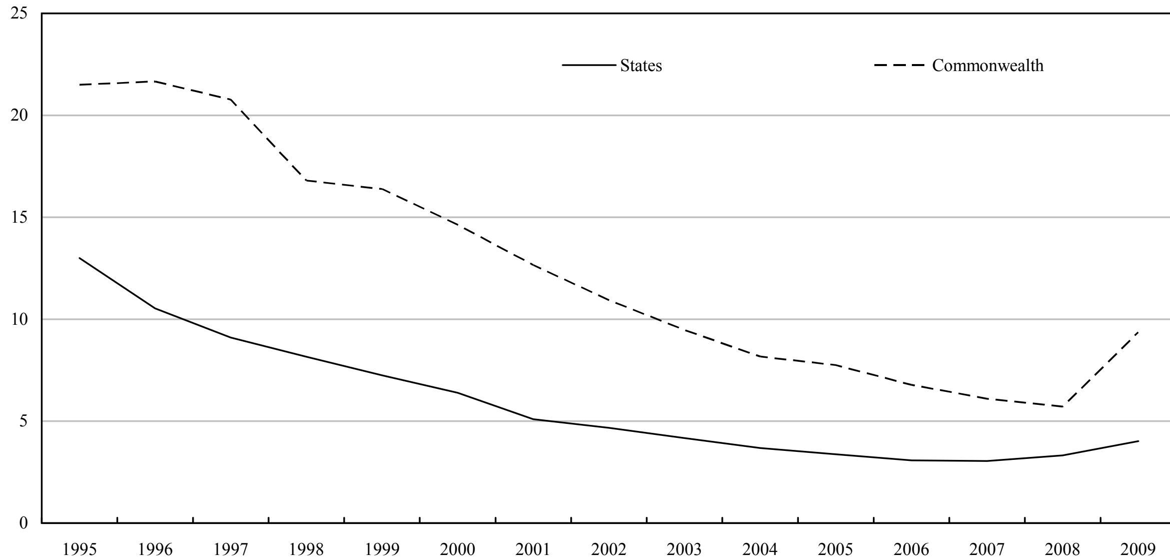
Notes: 1) 2009 data are budget estimates and 2010 data are revised estimates; 2) Due to limited data, Pre-FRL data of Chhattisgarh and Uttarakhand only date back 4 years before enactment of FRLs.
Source: Reserve Bank of India.

ANNEX 4

GOVERNMENT DEBT AS SHARE OF GDP

Figure 1

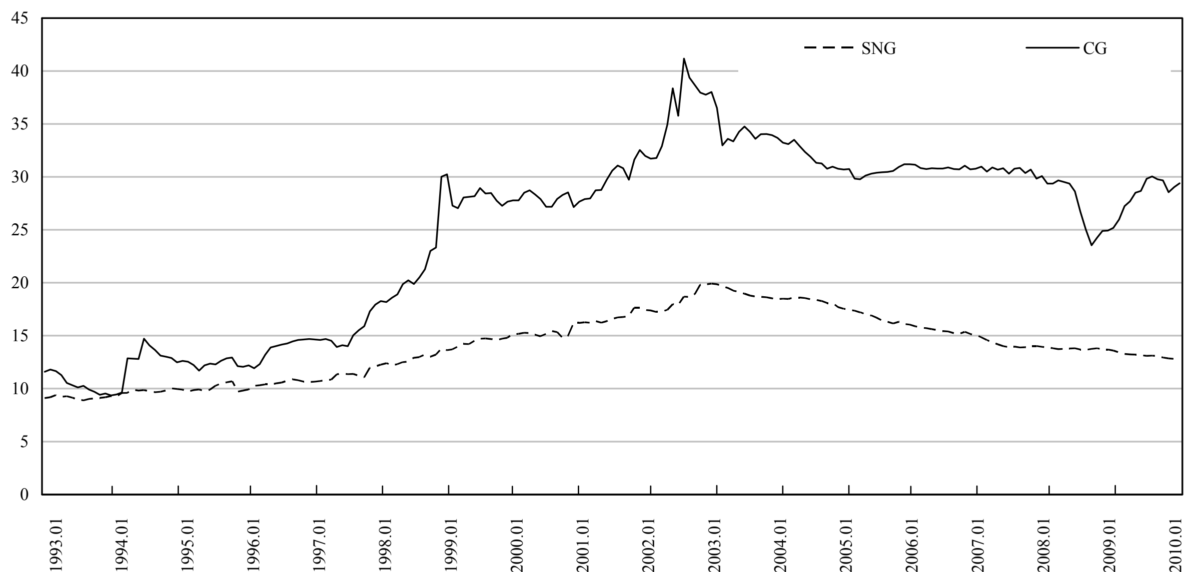
Australia – Gross Government Debt
(percent of GDP)



Source: Australian Bureau of Statistics.

Figure 2

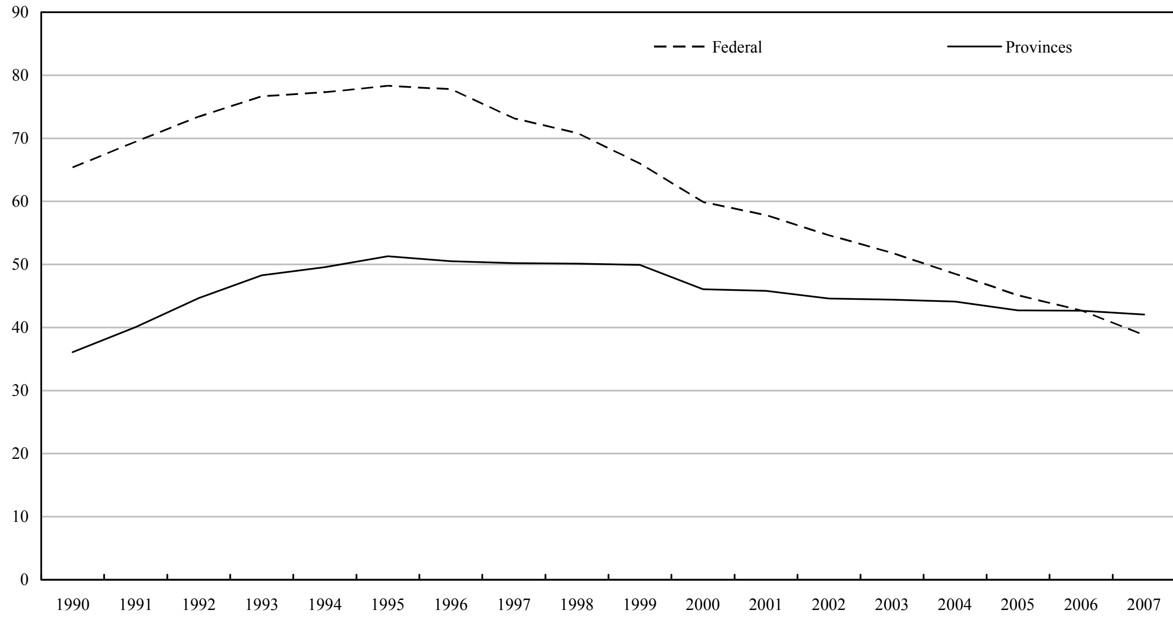
Brazil – Net Government Debt
(percent of GDP)



Note: SNG=Subnational Government, CG=Central Government.
Source: Instituto de Pesquisa Econômica Aplicada (IPEA).

Figure 3

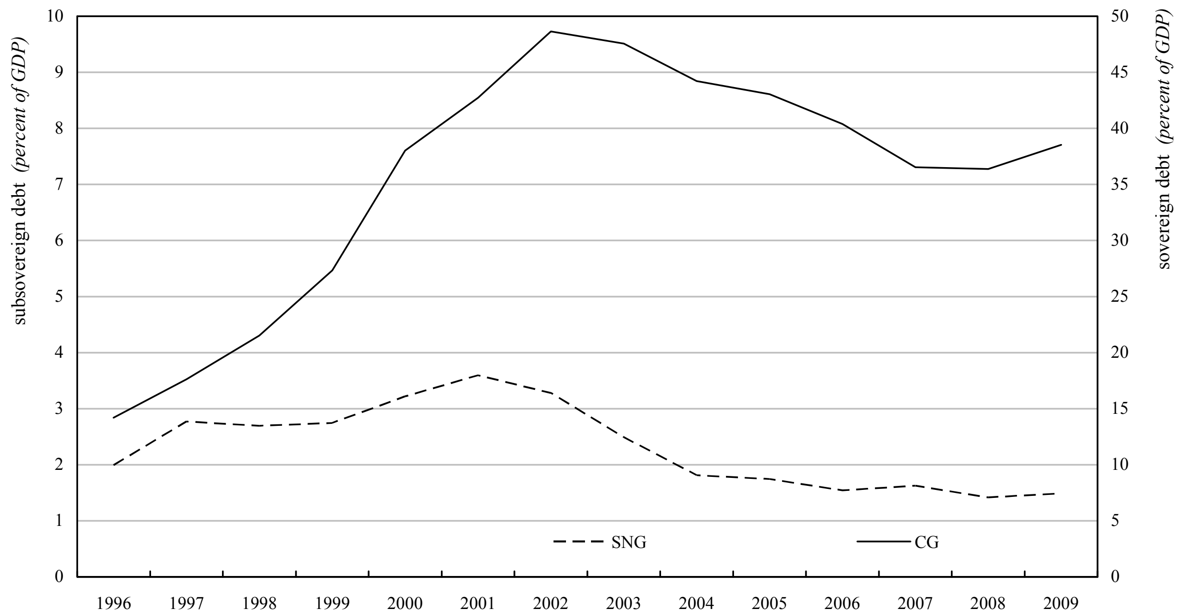
Canada – Net Government Debt
(percent of GDP)



Sources: Statistics Canada and IMF GFS.

Figure 4

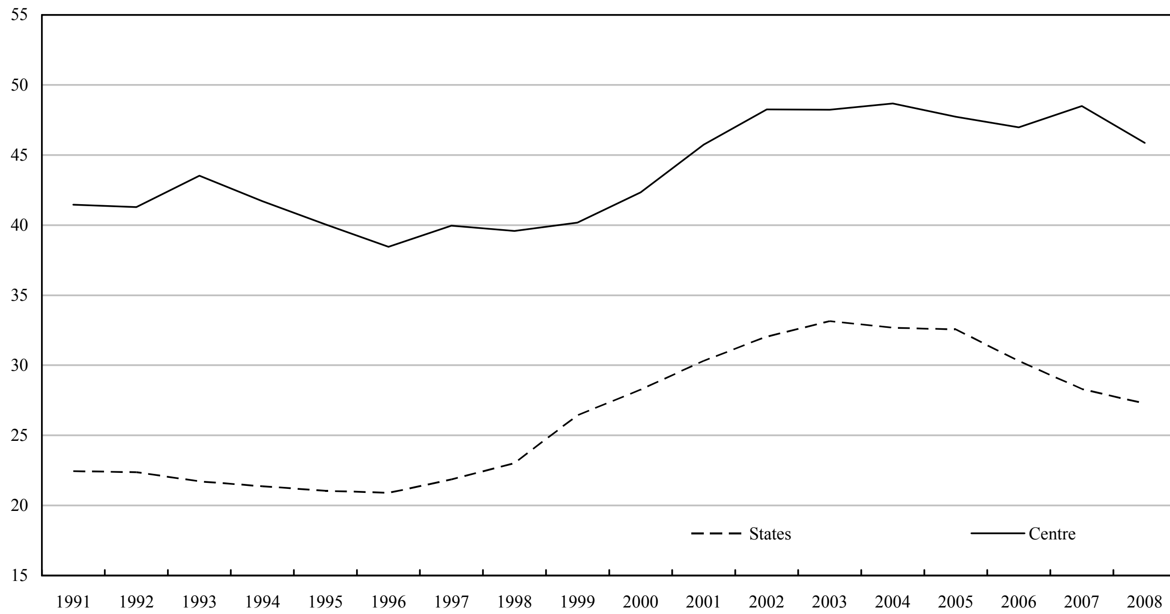
Colombia – Gross Government Debt
(percent of GDP)



Note: SNG=Subnational Government, CG=Central Government.
Source: Ministry of Finance and Public Credit.

Figure 5

India – Gross Government Debt
(percent of GDP)



Note: The amount of onlending from centre to states is netted out from the data of centre.
Source: Reserve Bank of India.

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TOWARDS (MORE) APPROPRIATE FISCAL POLICY IN SLOVENIA

Slaven Mićković[*]

1 Introduction (Challenges of the fiscal policy in the wake of the financial and economic crisis)

If the fiscal policy in Slovenia was trying to strike a balance between achieving macroeconomic stability and supporting long-term growth in 2009, there is no longer such a dilemma in 2010: the current fiscal situation requires immediate consolidation of public finance! The key issue faced by fiscal policy is whether debt will be stabilised on the level it reached at the end of 2010 or whether debt should be decreased to a lower ("more manageable") level.

Slovenian economy has been hit hard by the international financial crisis and the collapse of external demand. The economy is estimated to have shrunk by 8.1 per cent in 2009, one of the highest negative real GDP growth rates in the euro area. Going forward (2011-13), a modest economic recovery is envisaged associated with a weak and uncertain international environment and the pace of normalization of financial conditions.

Such a sharp decrease in economic activity has long-term consequences for the fiscal capacity of revenues which is determined by the potential economic growth. The latest estimates of potential economic growth or production gaps (according to the latest estimates, potential growth in the following period will be between 1.3 and 2 per cent) show that a positive balance at the end of 2007 was not the result of an appropriate fiscal policy but a consequence of the expansion of the economy (cyclically adjusted or structural government deficit amounted to approximately 2.3 per cent of GDP in 2007). Slovenia thus reported a cyclically adjusted deficit in all previous years, irrespective of which part of the cycle the economy was in. An especially worrying fact is that, according to the latest estimates, the contribution of the total factor productivity to potential economic growth has been decreasing since 2005. Figures 1 and 2 show the inadequacy of the fiscal situation in Slovenia.

The latest crisis has put anti-cyclical fiscal policy back in the foreground and boosted the positive attitude towards discretionary measures. In the past, Slovenia had a relatively low government debt, which enabled the fiscal policy to introduce fiscal incentives for mitigating the consequences of the crisis. The result of such a policy was a rapid growth of the general government debt, which increased from 21.9 per cent of GDP at the end of 2008 to 38 per cent of GDP at the end of 2010. This is why the fiscal exit strategy must set a relative amount of debt as its central target, whereby the required adjustment must be based on suitable economic/structural policies. The key to ensuring sustainability of the general government debt is decreasing the primary budgetary deficit, while the burden of consolidation will be primarily on the expenditure side of the budget.

It is recognized that success of public finance consolidation strategies heavily depends on adequate domestic fiscal framework. The key elements of new Slovenian fiscal framework are: a) expenditure/policy reaction rule supplemented by budget-balance rule, b) medium-term expenditure framework constructed by various government programs and upgraded with General Equilibrium Analysis, and c) Fiscal Council established recently with the purpose of *ex post* assessment of fiscal policy.

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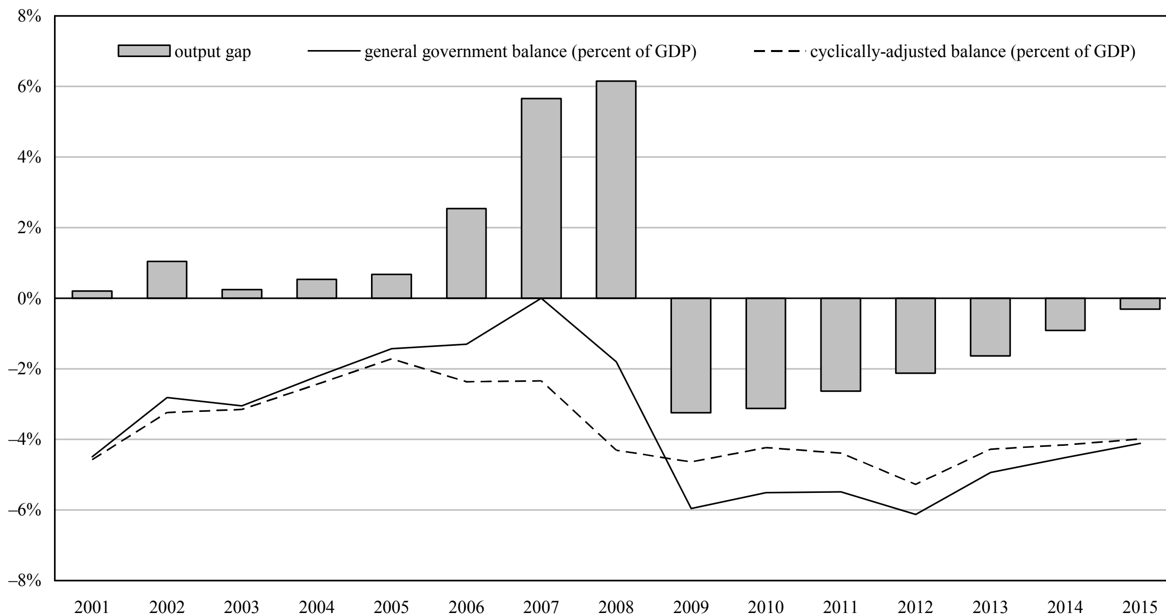
Figure 1

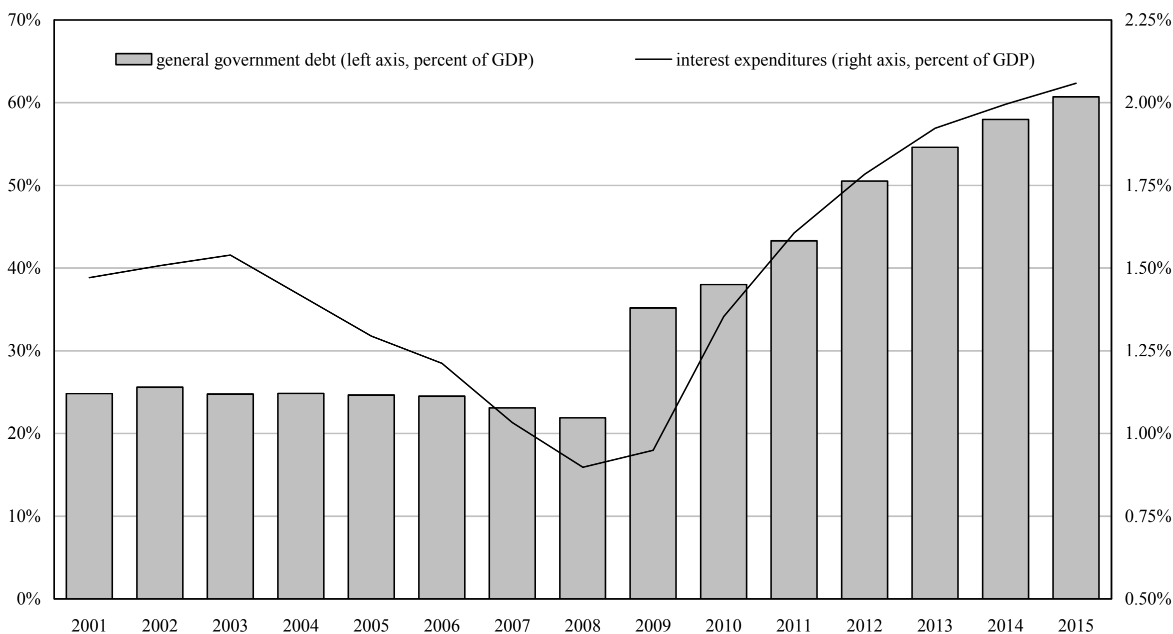
General Government Balance
Following the Spontaneous (No Reform) Scenario, 2011-15



Source: Ministry of Finance; Evaluation methodology: ESA95.

Figure 2

General Government Debt and Interest Payments
Following the Spontaneous Scenario, 2011-15



Source: Ministry of Finance; Evaluation methodology: ESA95.

Special attention was devoted to the limits of convergence of fiscal consolidation (MTO – medium-term objective). Besides general government primary balance, a part of MTO is also general government debt (both expressed as a share of GDP). In addition to ageing costs, in designing MTO we took into consideration also budgetary restrictions and economic reality in Slovenia.

To derive expenditure limits we use Medium-term Fiscal Sustainability model (MtFS model) designed on the idea of Hiebert and Rostagno model but restructured so that primary influence of cyclical economic activity is transferred on revenue side, while fiscal consolidation and restructuring is reflected on the expenditure side.

Our expenditure reaction rule consists of a preventive and a corrective part. According to the preventive part, expenditures are supposed to follow trend growth of economy. Crisis resolution requires expenditure corrections: growth of expenditures is adjusted by a given percentage (u) of the difference between the debt ratio recorded one period ago and the steady state debt target, and a given percentage (v) of the difference between the primary surplus ratio one period ago and its target ratio in the long run. Actually the number of expenditure equations in MtFS model corresponds to the number of government programs. In such a way control parameters $[u, v]$ are introduced for each category/program of expenditures for which the measures of fiscal adjustment are carried out.

The above described disaggregation of expenditure side enables actual (re)prioritization of government programs. Medium-term expenditure framework supported with General Equilibrium Analysis helps us identify and also incorporate the transmission channels through which fiscal policy influences long-term growth. We call this "budgeting with impact".

Section 2 provides assessment of fiscal policy in Slovenia. The impact of business cycle on fiscal stance and long-term sustainability is especially elaborated upon. Section 3 presents recently adopted fiscal framework with emphasize on medium-term budgetary framework including design of our expenditure reaction rule and the process of MTO determination. The following Section 4 presents the fiscal consolidation strategy. Finally, Section 5 concludes.

2 Assessment of fiscal policy in Slovenia

2.1 General government sector deficit and debt developments

Over the period 2004-07, the Slovenian economy exhibited a strong economic performance. Such a development facilitated fiscal consolidation on the one hand and enabled the government to carry out and finance important changes in the tax structure. Over that period Slovenia kept running fiscal deficit with the exception of 2007 when it recorded marginal surplus (Figure 4). Between 2004 and 2007 relatively expressed government balance was decreasing permanently due to decreasing share of expenditures till 2007. This decrease was slowed down in 2006 and 2007 by lower tax rates and introduced tax allowances. This development took place also on the back of conservative fiscal planning with budget outlays planned based on GDP forecast figures that were lower than actual (see Figure 3).

The debt dynamics was driven primarily by the central government (Figure 5). The indebtedness capacity of local government is constrained by the Law on Municipalities financing which limits the total amount of borrowing in a given year to a maximum of 20 per cent of realized revenues in previous year. The debt service (interest and principal) is also subject to a maximum of 5 per cent of realized revenues in the previous year. Before described deficit developments over the period 2004-07 lead to a decreasing general government consolidated debt: from 24.9 per cent of GDP in 2004 debt decreased to 21.3 per cent of GDP in 2007.

Figure 3

Real GDP Growth Rates Used in Budget Formulation and Outturn

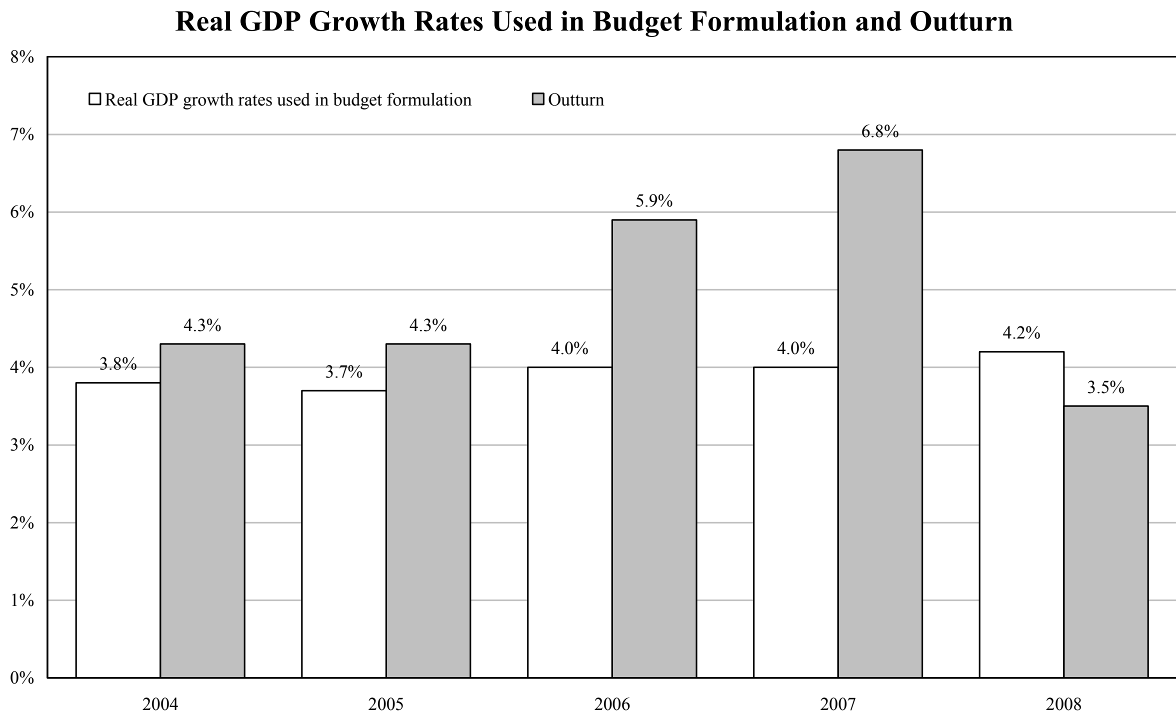
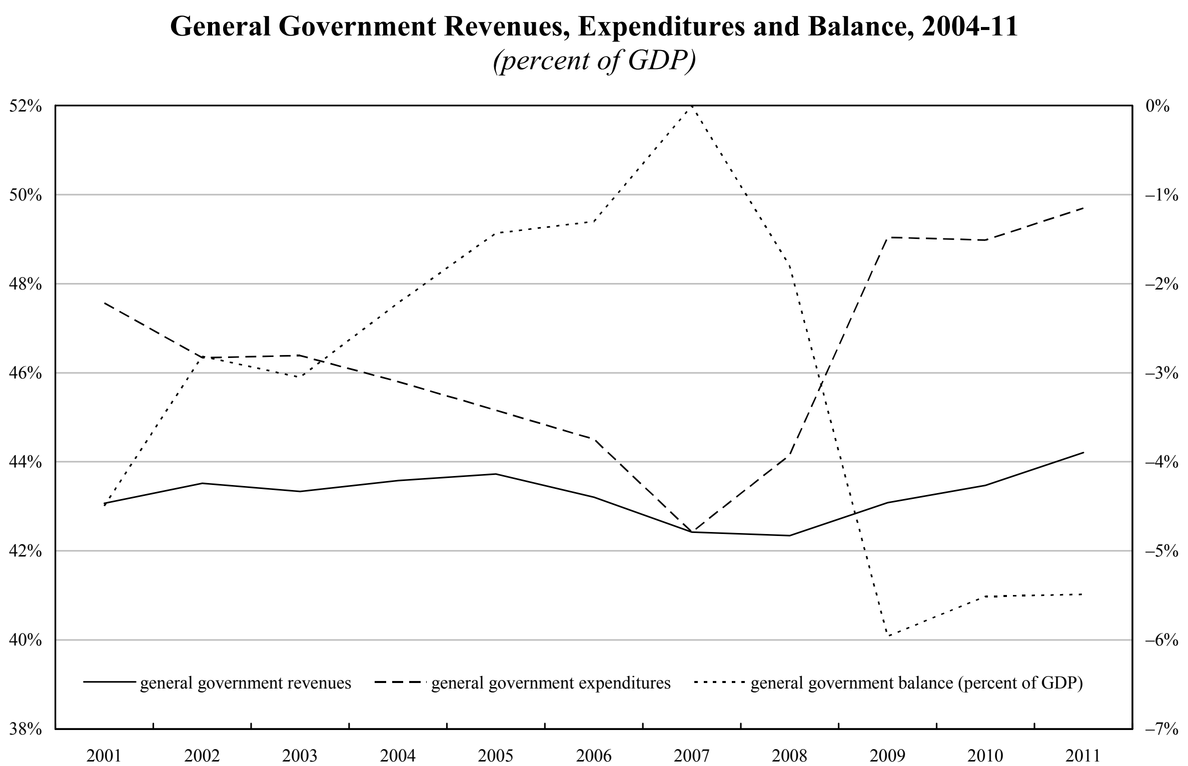


Figure 4

General Government Revenues, Expenditures and Balance, 2004-11

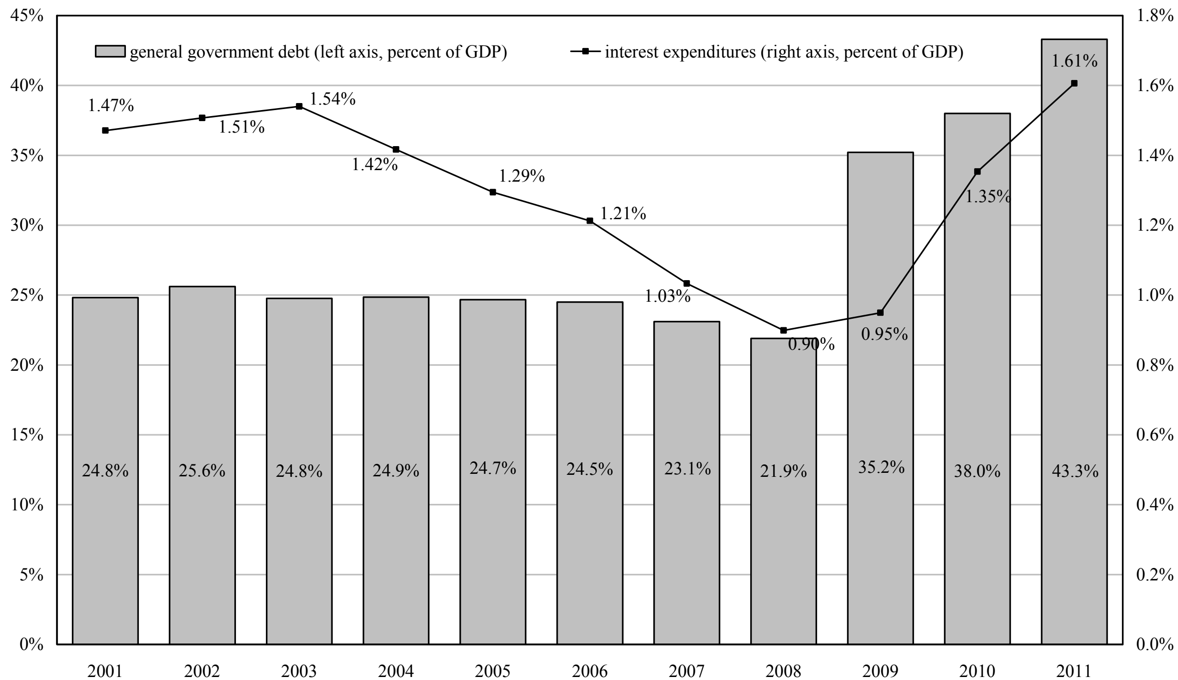
(percent of GDP)



Source: Ministry of Finance; Evaluation methodology: ESA95.

Figure 5

General Government Consolidated Debt and Interest Payments, 2004-11
(percent of GDP)



Source: Ministry of Finance; Evaluation methodology: ESA95.

In 2008 the economy stared to deteriorate and the government balance changed to a deficit of 1.8 per cent of GDP. This was mainly due to: a) delayed implementation of the Law that corrected wage disparities in the public sector and b) granting of additional social transfers in the dawn of the upcoming 2008 elections.

Coping with the crisis has required a policy response targeted to the financial system and to the real sector taking into account the degree of financial integration to the Economic and Monetary Union, the effectiveness of policy response in a small open economy and the relative low level of government debt at the end of 2008 (21.9 per cent of GDP). As a result of the crisis and policy response the government deficit widened in 2009 to almost 6 per cent of GDP. Due to heavily decreased GDP (–8.1 per cent in real terms) the relatively expressed government revenues increased in 2009 by 0.7 per cent of GDP, while the general government expenditures increased by 4.9 percentage points of GDP. Government expenditure policy in 2009 and 2010 followed broader economic policy guidelines agreed among EU Member States to alleviate the impact of the crisis on employment and potential growth. In line with the subsequent EU guidelines, the government in 2010 started to gradually withdraw the fiscal stimulus measures.

The debt-to-GDP ratio increased substantially in 2009 due to a high deficit and pre-financing of the 2010 borrowing requirement, the proceeds of which were used to enhance liquidity conditions of the domestic banking system. The outstanding amount of general government consolidated debt is estimated at 12,449 million euros (35.2 per cent of GDP) at the end of 2009.

The government was faced in 2010 with an additional shortfall in revenues from direct taxes, mainly from corporate income tax. In order to secure the targeted deficit for 2010, the government

Table 1

The 2005-09 General Government Balance by Government Level

Government Level	2005	2006	2007	2008	2009	2010	2011
Government budget	–1.3%	–0.7%	0.1%	0.2%	–4.9%	–4.8%	–4.6%
Municipal budgets	0.2%	–0.1%	0.0%	–0.5%	–0.4%	–0.3%	–0.2%
PDII (ZPIZ)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
HIIS (ZZZS)	0.1%	0.0%	0.2%	0.0%	–0.2%	–0.1%	0.0%
General Government Balance	–1.0%	–0.8%	0.3%	–0.3%	–5.5%	–5.2%	–4.8%

Source: Ministry of Finance; Evaluation methodology: cash flow principle.

prepared a supplementary budget and presented it to the Parliament. The adopted supplementary budget reduced government expenditures by the amount that more than off-set the shortfall in revenues. The outstanding amount of general government consolidated debt is estimated at 13,704 million euros at the end of 2010 or 38 per cent of GDP.

General government balance broken down by government levels is presented in Table 1. It is evident that the 2009 deficit was mainly generated at the state budget level. The fact that the financial situation in municipalities was heavily aggravated in the considered period (income tax data to be added) is a cause of concern: at the end of 2005, the municipalities' budgets recorded a 0.2 per cent GDP surplus, while the end of 2009 saw a deficit of 0.5 per cent GDP.

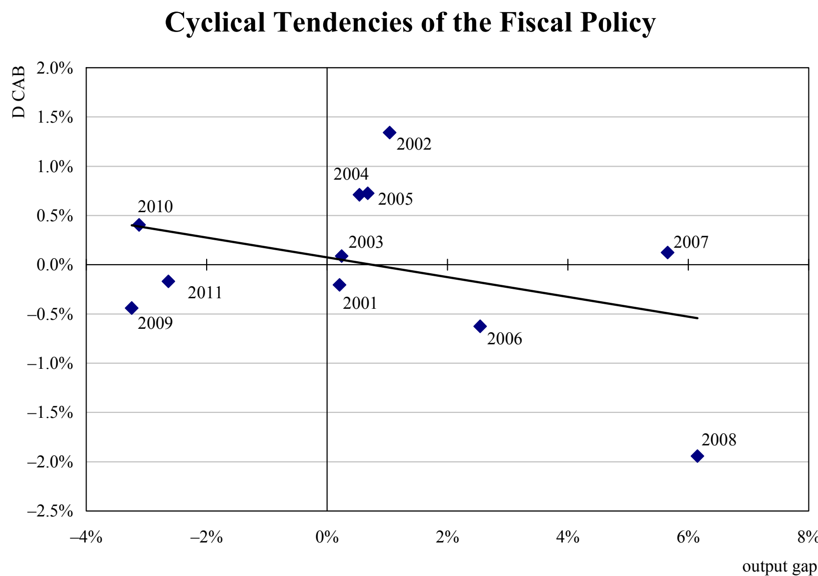
2.2 Fiscal policy and business cycle

An analysis of the influence of economic activity on public finances is very important for the understanding of the current position of the public finances. The analysis of the instabilities created points to the unsuitable interpretation or inconsideration of indicators such as output gaps, and the cyclical and cyclically-adjusted balance.

Based on the changes occurring in the cyclically-adjusted balance (fiscal impulse) in between the specific years, we can make conclusions regarding the tendencies of the fiscal policy – the increase of the cyclically-adjusted balance points to the restrictive tendencies of the fiscal policy, and vice versa, the decrease of the cyclically-adjusted balance points to the expansive tendency of the fiscal policy. Comparison of the dynamics in the cyclically-adjusted balance and the output gap points to the (counter-) cyclical tendency of the fiscal policy. In Figure 6, we can determine the four quadrants setting forth the fiscal situation in terms of changes occurring in the fiscal impulse and the output gap. If the combination of both parameters lies in the first or third quadrant, the fiscal policy is counter-cyclical. In this case, the fiscal policy is responding expansively when the actual GDP is lower than its potential, and restrictively when the actual GDP surpasses its potential. If the combination of both parameters lies in the second or fourth quadrant, the fiscal policy is cyclical. In this case, the fiscal policy is responding restrictively when the actual GDP is lower than its potential, and expansively when the actual GDP surpasses its potential. Cyclical tendency means that the fiscal policy does not allow the functioning of automatic stabilisers due to which, for example, expenditures change in line with the changes in economic growth and not as planned within the budget. This means that, in the event of economic growth

Figure 6

Cyclical Tendencies of the Fiscal Policy



Source: Ministry of Finance.

being higher than that originally planned, the cyclical part of the budget revenue is used to finance the lowering of taxes and/or increase of expenditures, and not to decrease the deficit.

It is evident from the graph below that the fiscal policy exhibited cyclical tendencies throughout the 2005-08 period. Thus the changes of the tax system, especially the abolition of the payroll tax and changes in the income tax system, were not accompanied by corresponding changes on the expenditure side. Instead of saving during that time, the state "adjusted" consumption to surplus revenues. The average annual increase of investments expenditure during the 2005-08 period, therefore, amounted to nearly 22 per cent, while the average annual GDP growth in the same period *concurrently* amounted to less than 10 per cent. Such great growth of investment expenditures only added fuel to the fire of the already overheated economy. To conclude, tax cuts were at the *heart of pro-cyclical* fiscal policy with expenditure retrenchment facilitated by cyclical upturns.

Cyclical behaviours of fiscal outcomes such as primary balance, tax revenue and fiscal variables as a percent of GDP, that are endogenous variables, can be ambiguous. For that reason we analyse cyclical tendencies of the fiscal policy also in terms of government spending – that is, a policy instrument. To obtain a measure of cyclicality of fiscal policy, we estimate the following regression:

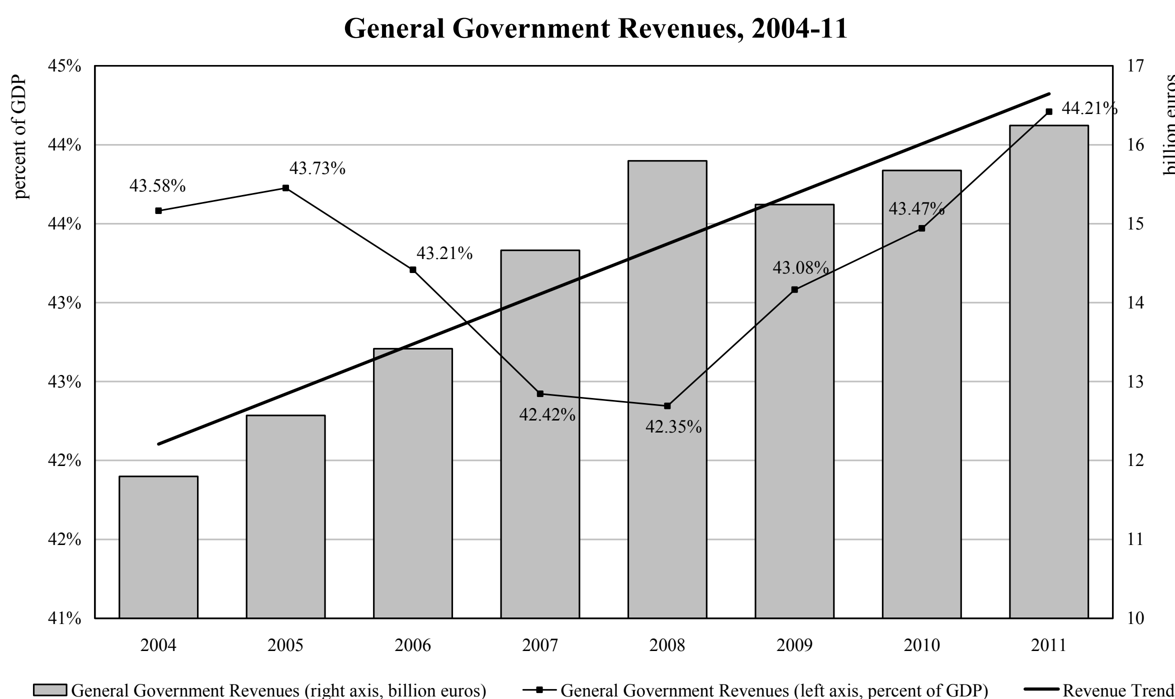
$$\Delta \log G_t = const. + \beta \Delta \log GDP_t + \gamma t + \varepsilon_t$$

where G_t is the general government spending, and GDP_t is the gross domestic product, t denotes the year, and ε is an error term. A time trend t is also added. We can interpret the coefficient β as the response of government spending to an idiosyncratic (percent) change in GDP: it measures the elasticity of government spending with respect to output growth. A positive value of β indicates pro-cyclicality of fiscal policy, whereas a negative value implies counter-cyclical behaviour. A value greater than one implies that general government spending rises (falls) more than proportionally in response to a positive (negative) shock to output. The value of coefficient β for Slovenia is 0.3, which indicates pro-cyclical fiscal policy in previous period.

It is evident from the figure below that the influence of economic activity on the general government revenues was positive during the conjuncture period, especially in 2008, as the cyclical revenue component amounted to more than €900 million (this is the amount by which revenues were higher due to high economic growth). The dramatic nominal revenue decline of 2009 was

Figure 7

General Government Revenues, 2004-11



Source: Ministry of Finance.

hidden because of the sharp decline in output activity. Real picture can be obtained if we compare cyclical part of revenues in 2008 and 2009: cyclical revenue component in 2008 was estimated at 920 million euros while the same component in 2009 was –460 million euros; the difference between the two in 2009 GDP terms was 3.9 per cent.

Table 2 presents the general government aggregates in the period from 2004 to 2015 following the spontaneous scenario.[1] It is evident from the table that the actual GDP will not catch up with its potential by the end of 2015 (the output gap for 2015 is negative and amounts to –0.31 per cent of potential GDP). Nevertheless, the public deficit will increase in the absence of structural reforms and surpass 7 per cent of GDP already in 2011, which will affect the debt growth (we estimate that the general government debt will reach 60.7 per cent GDP by the end of 2015). Such debt growth is accompanied by increasingly high interest payments, which will increase by more than 1.1 per cent of GDP in the period from 2009 to 2015. It is evident from the table that the aggravation of the budgetary performance in 2009 was mainly due to the growth of expenditures on salaries and current transfers.

The inadequacy of the mid-term fiscal situation is also shown by the primary public balance which has been negative since 2008. This means that the budget is unable to cover even the expenditures incurred in the current year (the primary balance shows the budgetary performance without the interest payments). In addition, high debt will reduce the scope for counter-cyclical response.

[1] Assessment of the government budgetary performance or a "spontaneous scenario" is calculated on the basis of IMAD's (Institute of Macroeconomic Analysis and Development) Spring forecasts which do not take into account the effects of structural reforms on the expenditure side.

Table 2

General Government Aggregates Following a Spontaneous Scenario, 2004-15

(percent of GDP)

Fiscal Indicators	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
General Government Revenues	43.58	43.73	43.21	42.42	42.35	43.08	43.47	43.89	43.08	42.61	41.32	40.12
- Personal Income Tax	5.88	5.53	5.76	5.56	5.84	5.83	5.65	5.63	5.50	5.35	5.19	5.03
- Corporate Income Tax	1.93	2.76	2.96	3.23	2.50	1.84	1.82	1.77	1.69	1.98	1.49	1.40
- Social Contributions	14.46	14.45	14.26	13.93	14.28	15.23	15.24	14.78	14.09	13.56	13.03	12.52
- Indirect Taxes	15.67	15.47	15.00	14.51	14.01	14.12	14.04	14.14	14.14	13.95	13.78	13.70
- Other Revenues	5.64	5.51	5.22	5.20	5.72	6.07	6.72	7.57	7.65	7.78	7.83	7.47
General Government Expenditures	45.80	45.16	44.51	42.43	44.15	49.04	48.98	49.82	49.20	47.55	45.84	44.23
- Compensation of employees	11.59	11.49	11.21	10.53	11.02	12.43	12.36	12.07	11.60	11.01	10.41	9.84
- Social Paymentas	17.87	17.67	17.31	16.28	16.60	18.75	19.13	19.29	19.15	18.77	18.34	17.91
- Intermediate Consumption	6.10	6.19	6.23	5.61	6.02	6.53	6.46	6.57	6.59	6.52	6.43	6.34
- Interest Expenditures	1.42	1.29	1.21	1.03	0.90	0.95	1.35	1.61	1.78	1.92	2.00	2.06
- Subsidies	1.74	1.57	1.58	1.56	1.56	1.67	1.78	1.72	1.63	1.50	1.37	1.26
- Gross Fixed Capital Formation	3.46	3.17	3.68	4.16	4.16	4.19	4.00	4.28	4.40	4.17	3.95	3.75
- Other Expenditures	3.62	3.76	3.29	3.26	3.88	4.52	3.91	4.29	4.05	3.67	3.35	3.07
General Government Balance	–2.22	–1.43	–1.30	0.00	–1.80	–5.96	–5.51	–5.92	–6.13	–4.94	–4.52	–4.11
Primary General Government Balance	–0.80	–0.14	–0.09	1.03	–0.91	–5.01	–4.16	–4.32	–4.34	–3.02	–2.52	–2.05
Output Gap	0.54	0.67	2.54	5.66	6.15	–3.25	–3.13	–2.64	–2.12	–1.64	–0.91	–0.31
Cyclically Adjusted Balance	–2.44	–1.72	–2.37	–2.34	–4.31	–4.64	–4.24	–4.86	–5.28	–4.28	–4.16	–3.99
General Government Debt	24.9	24.7	24.5	21.3	22.3	35.2	38.2	45.0	50.5	54.6	58.0	60.7

Source: Ministry of Finance; Evaluation methodology: ESA95.

Table 3

Age-related Expenditures Following a Spontaneous Scenario

Expenditures	2010	2015	2020	2030	2040	2050	2060	2060-2010
Pension	11.20	11.80	11.76	13.63	16.43	18.46	18.75	**7.6**
Health Care	4.33	4.53	4.76	5.43	6.16	6.72	6.96	**2.6**
Long-term	1.02	1.16	1.29	1.65	2.20	2.66	2.97	**1.9**
Unemployment Benefits	0.51	0.52	0.53	0.53	0.52	0.51	0.51	**0.0**
Education	4.57	4.45	4.60	4.90	4.76	5.03	5.36	**0.8**
TOTAL	**21.63**	**22.47**	**22.94**	**26.14**	**30.08**	**33.38**	**34.54**	**12.9**

Source: Ministry of Finance; Evaluation methodology: cash flow principle.

It is clear from the above-referenced facts that the preservation of the existing public deficit policy is leading to an unbearable fiscal situation. Adding to this the resulting aggravation of Slovenia's credit rating, it is clear that fiscal consolidation must be carried out immediately. With each year missed, the fiscal efforts necessary for consolidation will only grow and become more stressful.

2.3 Long-term sustainability of public finances

The problem caused by the ageing population in the light of current economic situation is becoming more alarming by the day. The first reason for this is the fact that the trend of decreasing debt-to-GDP ratio is turning around, which means the debt level will increase substantially by the end of the programming period. Moreover, the crisis has adversely affected the higher employment level that was achieved in previous years.

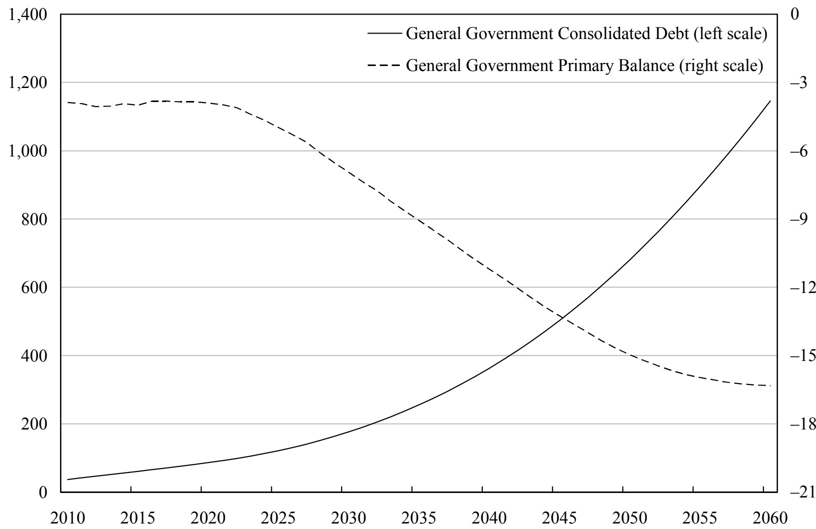
Table 3 presents the forecasts for age-related expenditures in the event the pension reform is not introduced. The table clearly shows that general government expenditures for pensions will increase by 7.6 per cent of GDP by 2060, health care expenditures by 2.6 per cent of GDP and the expenditures for long-term care by almost 2 per cent of GDP. The total increase of expenditures between 2010 and 2060 associated with population ageing thus amounts to almost 13 per cent of GDP. Sustainability indicator is estimated at 10.6. The main driver of pension expenditures is dependency ratio (population 55+ / population 15-64).

Such a rise of expenditures associated with the ageing of population means that the potential time of responding to a change in the pension system has, in comparison with the one we estimated prior to the crisis, been profoundly shortened! The trend in general government expenditures for pensions and pension contributions, as well as the public debt in the 2010-25 period that is presented in this chapter only further confirms this situation.

In order to have a relevant view on the sustainability of public finances in the long-run it is necessary to include estimates of adequacy. Pensions are decreasing from year to year, which is, in part, due to the less favourable valuation of the pension qualifying period (from 85 per cent for 40/38 years of the pension qualifying period in 2000 to 72.5 per cent in 2024) and partly due to the harmonisation of pensions with the adjustment of pensions provided for the retired and new retirees

Figure 8

Hypothetical General Government Debt and Primary Balance Following a Spontaneous Scenario



Source: Ministry of Finance; Evaluation methodology: cash flow principle.

(current Article 151 of the Pension and Disability Insurance Act – ZPIZ-1). If the decrease in the value of pensions is not curtailed, the income replacement ratio (the ratio between the last salary and the first pension received) will drop from the current 61 to 56 per cent by 2024 (when the reform dating in 2000 is complete).

In order to curtail the further fall of pensions, it is urgent to adjust the pension assessment for the new beneficiaries by setting the income replacement ratio at not less than 60 per cent net for the 40/38 years of the pension qualifying period, so that we can achieve a situation where the new beneficiaries' pensions are assessed based only on the salaries received, and not one where the pensions are additionally adjusted for all beneficiaries who are already receiving them. This means that only the individual's salaries would count when it comes to pension assessment, and the pension rating base would not be revalued based on the pensions and salaries of all retirees. This means that the new beneficiaries would face much more severe conditions for retirement and pension assessment (the current suggestion is an extension to 27 consecutive years of service as the pension rating base – by one year for each year of work), but there would be no adjustments during the assessment process. Pensions assessed in this way would then be adjusted/indexed for all retirees equally (old and new) in accordance with the modified Swiss formula.

3 The (new) elements of Slovenian fiscal framework

One of the consequences of the recent economic and financial crisis is that the European Commission is going to govern and supervise economic policies and budget preparations more rigorously. With the aim of escalating economic and budgetary surveillance, the Commission gives special attention to the national budgetary frameworks, *i.e.*, the country-specific institutional policy setting that shapes fiscal policy-making at national level. On 29 September 2010 the Commission adopted a set of proposals in connection with public accounting systems, statistics, forecasting practices, numerical fiscal rules, budgetary procedures including medium-term budgetary frameworks for fiscal planning. Accordingly, the Commission proposals include a draft Directive on national fiscal frameworks setting out a number of minimum requirements that budgetary frameworks in Member States should respect in order to ensure consistency between national fiscal governance and the Stability and Growth Pact (SGP) provisions.

The preventive part of the SGP mainly focuses on the measures that are necessary to avoid an excess in public deficit. There are several elements that are important here: i) avoidance of

pro-cyclic policies (a consent is applied in the EU, which shows that "good times" must be used to consolidate public finances which would prevent the states from exceeding the reference deficit limit of 3 per cent GDP during recession); ii) definition of a medium-term budgetary objectives (by the currently applicable rules, the MTO reflects the circumstances in a particular Member State and should ensure general government debt sustainability which, in practice, would mean a level of debt under 60 per cent GDP); iii) adapting to the MTO (states which have not achieved their medium-term objective yet must, on average, consolidate their public finances by 0.5 per cent GDP annually); iv) structural reforms (implementation of certain reforms, e.g. pension reform, can incur considerable costs in the short term, while also contributing to the long-term sustainability of public finance which should be taken into account when treating the Maastricht criteria).

In pursuing its objective of adjusting the economy in the wake of the crisis, the Government of the Republic of Slovenia adopted the Slovenian Exit Strategy 2010-13 in February of 2010. The Strategy is designed as a combination of economic policy measures and structural changes, which – alongside the assurance of fiscal sustainability – will improve the social status of the weakest members of society as well as boost the economy's competitiveness and create new jobs. In this way the Strategy places the consolidation of public finances in the foreground, which will be achieved through the programmed reduction of expenditures rather than an increase of tax burdens. This is conditional upon defining the scope of public spending by a fiscal rule as well as the structure of public spending on the basis of national development priorities by using target-oriented budgeting.

This paper provides detailed description of a) the definition of a medium-term budgetary objectives and b) the framework for determining government expenditure ceilings.

3.1 Definition of medium-term budgetary objectives (MTO's)

In line with the rules of the Stability and Growth Pact amended in 2005, each Member State must set their own medium-term public finance-related target in the form of a cyclically-adjusted balance. At the moment, Slovenia has a target of structural deficit in the amount of 1 per cent of GDP. Based on the decisions made upon agreeing on the reform of the Stability and Growth Pact in 2005, the corresponding Council working groups (especially the Economic Policy Committee and the Committee on Economic and Monetary Affairs) have developed a methodology which also considers the implicit obligations arising from the ageing of the population in relation to the definition of a medium-term fiscal target. The then amended Code of Conduct states that "the criteria and modalities of including implicit obligations in the MTO definition will be decided upon by the Council [of ministers]".

According to the Commission's proposal, the new medium-term target consists of three parts:

$$MTO = \underbrace{Balance_{debt\ stabilizing\ at\ 60\%\ GDP}}_{(i)} + \underbrace{\alpha * Ageing\ Costs}_{(ii)} + \underbrace{Effort_{debt\text{-}reduction}}_{(iii)}$$

where:

(i) General government balance, which provides long-term stabilisation of the level of debt at 60 per cent of GDP;

(ii) Adjustments necessary due to the population ageing (long-term costs of population ageing are translated into the current value, and part of the long-term costs must be covered within the public finance target);

(iii) Additional requirements for the states whose debts already exceed 60 per cent of GDP.

The medium-term target calculation methodology in the second part (adjustments necessary due to population ageing) is based either on i) inclusion of 33 per cent of all costs related to population ageing up to 2060 into today's medium-term target, or ii) public finance sustainability until 2040. According to the first proposal, Slovenia must set a structural surplus of 0.7 per cent as its medium-term target. Compared to the existing medium-term target, the new target is more challenging, especially due to the non-implemented pension reform.

Slovenia maintains reservations to the above described algorithm, most specifically due to:

- *The MTOs must be country-specific and must exhibit ownership*. These are our public finance policy targets and can thus not be a result of a simple mechanical exercise or formula. What we have currently on the table are two figures that come out of a formula – as the Commission note sets out, we have to make a binding choice between two parameters (either 33 per cent prefunding or coverage until 2040). This is not ownership and we strongly oppose an approach like this.
- *Explicit liabilities are treated asymmetrically in favour of contingent not yet existing liabilities*. The MTOs need a proper balance between explicit and implicit liabilities (it implies discounting explicit and implicit liabilities with the same rate).
- *The algorithm does not take into account adequacy of pensions*. Reforms in the long run do not ensure a minimal decent living standards (adequacy) and thus do not eliminate the contingent liability! If we want a comprehensive measure of implicit liabilities, adequacy of pensions (as measures by replacement ratios) must be included.
- *Uncertainty regarding estimates of aging related expenditures is very high*.

In the process of definition of medium-term budgetary objectives, we expose the following basic principles MTOs should be built on:

- The MTOs must be country-specific and should ensure credibility and ownership!
- The MTO must not depend on time horizon for which ageing related expenditures are calculated.
- Fiscal policy cannot be expected to cope with the full structural effects of demographic ageing.
- Fiscal policy surveillance in the context of SGP should aim at fostering that countries respect the safety margin of not breaching the 3 per cent deficit threshold (*i.e.*, lowering debt): this concern should be the driving contribution of fiscal policy to sustainability of public finances.
- The MTOs need a proper balance between explicit and implicit liabilities.
- The MTO algorithms have to take into account adequacy of pensions.

Similarly to credit ratings, the approach to fiscal sustainability should be gradual:

- The contingent liabilities and the period over which are measures when taken into account to be included in the MTOs should be shorter, for example over next 10 years and not over next 50 years.
- The resulting MTOs should be updated every 4 years for the next 10 years on a rolling basis.
- The MTOs should ensure that the safety margin of not overcoming the 3 per cent deficit as percentage of GDP should not be breached.

Gradual approach of including contingent liabilities provides more weight to the current fiscal stance within a period where there is more certainty as to the likelihood that contingent liabilities will turn into explicit liabilities.

Table 4 presents MTO calculation according to Slovenian proposal with the exception of first row which shows Commission's proposal calculation. Debt stabilizing deficit is calculated for the 45 per cent of GDP upper ceiling for debt. Costs of ageing (column 5) are calculated as present

Table 4

MTO Using Gradual Approach

Period	**Average Nominal GDP Growth (2010-60)** *(percent)*	**Minimum Benchmark**	**Euro Area and ERM2**	**Debt Stabilizing Balance at 45% (5) =–45* (1)/ (1+(1))** *(percent of GDP)*	**Cost of Ageing** *(percent of GDP)*	**(6) = (4) + α * (5)** *(percent of GDP)*		**MTO**	
						(percent of total CoA)		*(percent of total CoA)*	
						33%	**100%**	**33%**	**100%**
	1	2	3	4	5	6	6		
MTO (2011-60)[1]	3.4	–1.6	–1	–1.3	6.2	0.7	4.9	**0.7**	**4.9**
2011-20	5.2	–1.6	–1	–2.2	–0.7	–2.4	–2.9	**–1.0**	**–1.0**
2021-30	3.6	–1.6	–1	–1.6	1.3	–1.1	–0.2	**–1.0**	**–0.2**
2031-40	2.8	–1.6	–1	–1.2	1.8	–0.6	0.6	**–0.6**	**0.6**
2041-50	2.7	–1.6	–1	–1.2	1.3	–0.8	0.1	**–0.8**	**0.1**
2051-60	3.0	–1.6	–1	–1.3	0.5	–1.1	–0.8	**–1.0**	**–0.8**
2060-∞	3.1	–1.6	–1	–1.4	1.9	–0.7	0.5	**–0.7**	**0.5**

[1] Commission proposal; infinite horizon.
All calculations were performed using Commission's methodology for MTO.
Source: Ministry of Finance.

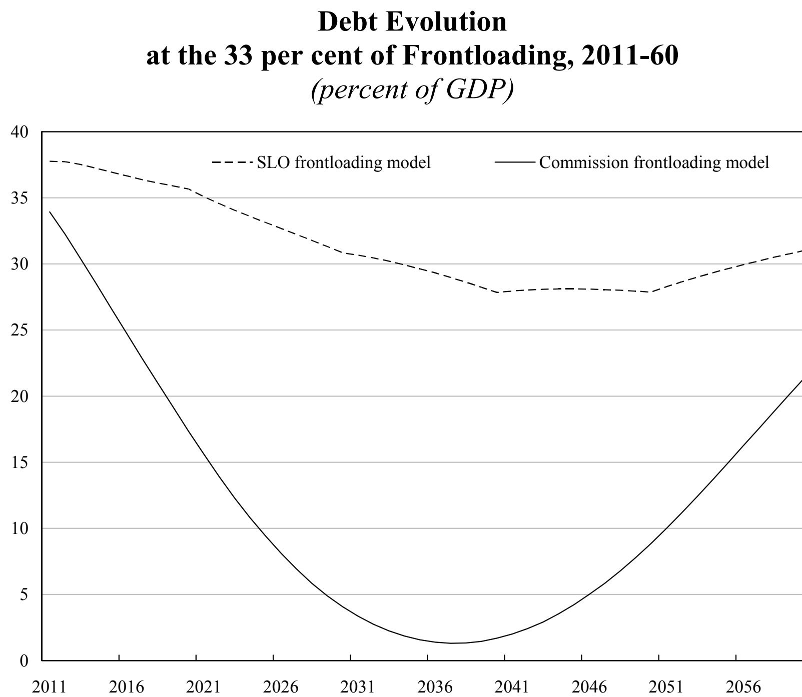
value of changes in the ageing costs in year t compared with the base year. According to the Commission's proposal MTO is calculated using ageing costs for the infinite horizon (6.2 per cent of GDP in the case of Slovenia) which must lead to an ambitious MTO: with 33 per cent frontloading MTO is set to 0.7 per cent of GDP surplus in structural terms and with 100 per cent frontloading of ageing costs MTO is set to be 4.9 per cent of GDP in structural terms. It can be seen from table that even in the case of 100 per cent frontloading MTO calculated gradually does not exceed 0.6 per cent of GDP surplus while in the case of 33 per cent of GDP frontloading MTO is between –1 and –0.5 per cent of GDP deficit.

The fact that Slovenia does not need such a demanding MTO as proposed by the Commission can also be seen if we compare the debt or frontloading evolution using the Commission and Slovenian proposal. According to the Commission proposal, the government debt will be almost diminished in late 30's and will then reach 21 per cent of GDP by the end of 2060 (Figure 9). Debt evolution curve using the Slovenian proposal, never falling below 27 per cent of GDP, is much smoother. We believe that there is no need for such a reduction of debt as proposed by the Commission. On the contrary, such a reduction can negatively influence long-term growth. The same conclusion is obvious if we compare frontloading evolution (Figure 10). So the long-term sustainability can be achieved with on average small deficit (less than 1 per cent of GDP) during 2011-60.

In the case of Slovenia, sustainability gap indicators approach provides limited guidance on what is the appropriate budget target which Member States should aim at in light of the expected costs of ageing populations. Frontloading ageing costs accumulated between 2011 and 2060 does not make sense! This is clear if we analyse deficit and debt dynamics in that period (Appendix 1):

Figure 9

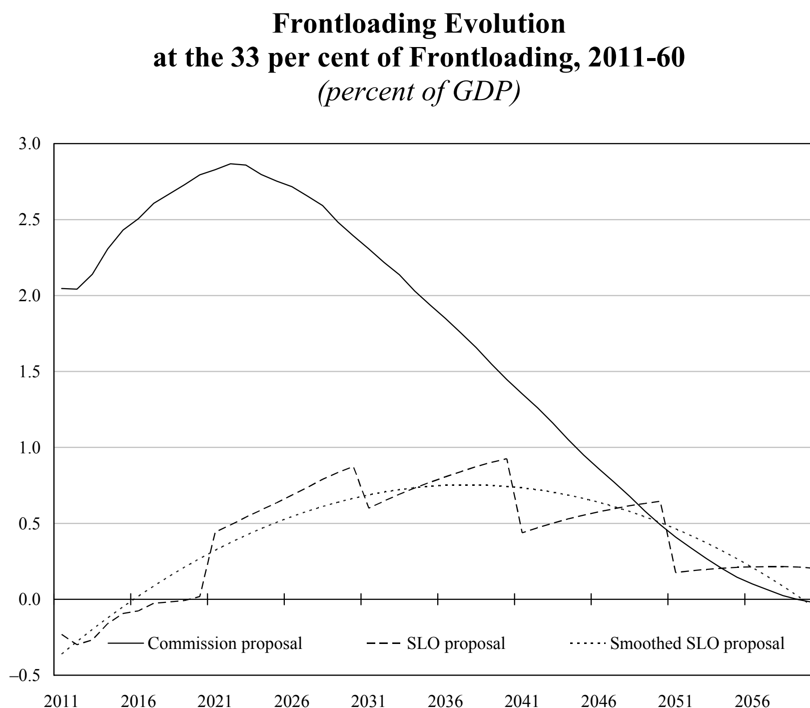
Debt Evolution at the 33 per cent of Frontloading, 2011-60
(percent of GDP)



Source: Ministry of Finance.

Figure 10

Frontloading Evolution at the 33 per cent of Frontloading, 2011-60
(percent of GDP)



Source: Ministry of Finance.

from 2040 on Slovenia will (according to this calculation) run budget deficits higher than 10 per cent of GDP and its debt will reach level of more than 1000 per cent of GDP! No country can maintain such a position for so many years – rating agencies will downgrade the country and it will default under the debt burden much sooner than this extreme situation becomes possible!

The "closing of the sustainability gap" approach it too simplistic and therefore fails to take into account various other economic factors. Sustainability indicator should be considered as a benchmark and not necessarily a policy recommendation nor a measure of the adjustment needed in any particular year. For this reason, and also simply because an ambitious policy adjustment can be considered to be politically unrealistic, in the process of defining of medium-term budgetary objectives we consider also:

- budgetary constraints,
- economic reality.

Reforms of pension and health care systems to curtail the impact of ageing on expenditure growth and reforms to reduce the level of non-age related

primary spending requires a number of years to be implemented – a newly appointed medium-term objective should (only) be based on the revised expenditure projections and its achievement has to be put in an appropriate /realistic time frame! It was agreed that the length of one business cycle (6 to 8 years) is an appropriate time horizon needed to consolidate public finances.

The Stability and Growth Pact (SGP) emphasizes two criteria in relation to achieving a long-term manageable fiscal situation:

- *stability*: once the fiscal target is achieved as the final point in the consolidation process, this target must be such as to enable its own sustainability as an average GDP percentage throughout the following economic cycles;
- *safety*: the fiscal target expressed as a GDP percentage must be such as to protect the economy with an acceptable level of trust from fiscal shortage deemed as excessive according to the rules of the Treaty on the European Union.

We use simple equations (1) and (2) to calculate country-specific debt and primary surplus objectives which can guarantee both stability and safety taking into account the average potential growth and the average effective interest rate:

$$b^* = \left(\frac{1+g}{g}\right)(0.03 - m) \quad (1)$$

$$s^* = \left(\frac{r-g}{g}\right)(0.03 - m) \quad (2)$$

where g is the average potential growth rate, r is the average effective interest rate and m is the safety margin. We find that it is most realistic that:

$$g \in [3.2\%, 3.6\%]$$

$$r \in [4\%, 5\%]$$

Using these assumptions upper ceiling for debt is set at 45 per cent of GDP with primary surplus of 0.5 per cent of GDP.

Taking into consideration all factors mentioned above, Slovenian public finance medium-term objectives (MTOs) are defined as:

- target level for cyclically-adjusted budget balance is 0 per cent of GDP, *i.e.*, balanced position;
- target level for general government debt is 40 per cent of GDP.

Targeting deficit and debt at the same time allows for the reconciliation of multiple policy targets, such as safety, speed and quality of convergence, whereas deficit benchmark identifies a convergence path only by focusing on one of the above criteria, namely safety.

The resulting MTOs will be consistent with the following objectives:

- providing sufficient margin for not breaching the 3 per cent deficit-to-GDP ratio;
- keeping the debt below 60 per cent of GDP;
- ensuring long-term fiscal sustainability;
- avoiding a distortive allocation of funds in the medium-term based on high degree of uncertain liabilities.

BOX 1
INCORPORATING IMPLICIT LIABILITIES INTO THE MEDIUM-TERM BUDGETARY OBJECTIVES (MTOS)

European Commission proposed the following methodology for the calculation of the MTO:

$$MTO = \max\,(MTO^{ILD}, MTO^{MB}, MTO^{Euro/ERM2})$$

A. MTO^{ILD} = rule incorporating implicit and explicit liabilities
B. MTO^{MB} = MTO defined by the minimum benchmark (as agreed by the EFC)
C. $MTO^{Euro/ERM2}$ = Treaty obligation for Euro and ERM2-Member States to have an MTO not lower than –1 per cent of GDP

A. The first element (MTO^{ILD}) was formulated as follows:

$$MTO = \underbrace{Balance_{debt\ stabilizing\ at\ 60\%\ GDP}}_{(i)} + \underbrace{\alpha * Ageing\ Costs}_{(ii)} + \underbrace{Effort_{debt\text{-}reduction}}_{(iii)}$$

i) budgetary balance that would stabilise the debt ratio at 60 per cent of GDP
$b^* = -60\% \bullet G/(1+G)$ where G is nominal GDP growth (if the overall balance is set at the constant level b^*, the actual debt ratio will asymptotically converge to 60 per cent from any initial level (if $G > 0$))

ii) the budgetary adjustment that would cover a fraction of the present value of the increase in the cost of ageing, where α is the size of this fraction (the cost of ageing corresponds to the present value of the increase in total age related spending as of 2010):

$$Ageing\ costs = \frac{\sum_{t-1}^{50} \frac{\Delta PB_t}{(1+\lambda)^t} + \frac{\Delta PB_{50} + (1+\lambda)^{50}}{(long-term\ differential)}}{\sum_{t-1}^{50} \frac{1}{(1+\lambda)^t} + \frac{(1+\lambda)^{50}}{(long-term\ differential)}}$$

where:
long-term differential = $\frac{(1+3\%)}{(1+\lambda)^{50}} - 1$; $\lambda = (i - \gamma)/(1 + \gamma)$

γ = nominal GDP growth rate
i = nominal interest rate
ΔPB_t = changes in the ageing costs in year t compared with the base year

To calculate ageing costs, it is assumed that the change in ageing costs as a share of GDP, the interest rate and the growth rate remain constant after 2060, implying that no further budgetary impact of ageing is assumed after that date!

iii) a supplementary debt-reduction effort, specific to countries with gross debt above 60 per cent of GDP had been set as a step-wise function in the 2008 Commission proposal, mounting to 1.0 per cent of GDP for gross debt between 60 and 70 per cent of GDP, to 1.1 per cent of GDP for debt at 70-80 per cent of GDP, and etc. up to 1.4 per cent of GDP for debt above 100 per cent of GDP.

3.2 Framework for determining government expenditure ceilings

The need to ensure convergence to medium-term budgetary objectives (sustainable fiscal position) is in the core of every stabilizing fiscal policy. Having defined the MTOs (targets of fiscal convergence), the analytical problem is reduced to determining a policy rule which can ensure convergence of the debt and deficit ratio from its initial value to its target (steady state) level within a given period of time and avoiding at the same time distortive allocation of funds.

Last year, the government of the Republic of Slovenia introduced a fiscal rule by means of which it can derive the general government expenditure ceiling. The expenditure rule, which is based on the potential GDP growth, enables the determination of the speed of adjustments to the fiscal target. Within the goal of greater stabilisation of the public finance effectiveness or adjustment to the starting position of public finance, the fiscal rule is also formally defined in the *Decree on the documents of development planning bases and procedures for the preparation of the central and local government budgets* (Official Gazette of the Republic of Slovenia, No. 54/2010). This rule cannot be considered as a fiscal rule in the sense commonly understood of being a permanent constraint on fiscal aggregates in terms of numerical limits. It can be conceived more as an expenditure reaction rule to derive expenditure ceilings based on medium-term budgetary objectives.

The expenditure reaction rule sets upper limit of general government expenditures and is determined by means of the following formula:

$$G_{t+1} = G_t \times (1 + g^*)$$

The nominal growth of general government expenditures (g^*) is determined as follows:

$$g^* = \underbrace{g^{\text{trend}}}_{\substack{\text{“preventive”} \\ \text{part of the rule}}} \underbrace{- u \times (b_t - b^*) - v \times (f_t - f^*)}_{\substack{\text{“corrective”} \\ \text{part of the rule}}}$$

where:

G_{t+1} general government expenditures forecast for the next year *(euros)*

G_t general government expenditures estimate for the current year *(euros)*

g^{trend} arithmetic average of the past three years, the current year and forecasts for the following three years for the nominal growth of the potential gross domestic product *(percent)*

b_t estimate of the consolidated gross general government debt for the current year *(percent of GDP)*

b^* target level of the consolidated gross general government debt *(percent of GDP)*

f_t estimate of the general government primary balance for the current year *(percent of GDP)*

f^* target level of the primary general government balance *(percent of GDP)*

u speed of reaching the target level of the consolidated gross general government debt with a value between 0 and 1

v speed of reaching the target level of the general government primary balance with a value between 0 and 1.

The potential gross domestic product is estimated by following the production function method, which is also the official method used by the EU Commission in calculating potential gross domestic product.

The b^*, f^*, u and v parameters are determined for a two-year period. If fiscal consolidation must be carried out due to aggravated macroeconomic indicators and the consequently lower

potential gross domestic product, the Government of the Republic of Slovenia can change the fiscal rule parameters and the resulting upper limit of the general government expenditures.

The above-defined expenditure reaction rule enables a controlled growth of general government expenditures and, consequently, the medium-term achievement of a stabilised general government balance independent of the cyclically conditioned movement of general government revenues.

When the fiscal situation is either balanced or is on the surplus side, the maintaining of the fiscal stance ensures the growth of expenditures in line with the trend of economic growth ("preventive" part of the rule). If consolidation of the fiscal situation is needed, the second, "corrective" part of the framework is activated, which ensures that the growth of expenditures is decreased in proportion to the difference between the current primary balance and the target level of the general government primary balance, as well as the difference between the current level of the general government debt and the target level of the consolidated gross general government debt. The fiscal policy reaction parameters u and v do not depend on the b^* and f^* targets, but rather only on the difference between the effective interest rate and the trend growth of the economy.

The above-defined expenditure reaction rule in the process of derivation of expenditure ceilings is *flexible*. It enables harmonisation of several fiscal policy criteria such as consolidation safety, speed and quality. The rule distinguishes clearly between the *fiscal policy's target stance* (b^*, f^*) and the *transition* to the target stance by defining the g^* reaction formula which best suits (to) each fiscal consolidation level.

In addition, the above-defined expenditure reaction rule reveals the fundamental fiscal policy trade-off between the fiscal target's ambition and the fiscal balance cycle amplitude: The closer the average deficit to the lower limit (3 per cent of GDP), the more closed/narrower its allowed deviations become. The rule enables the achievement of an "optimum" balance between the severity of structural reforms and the exposure to the economic cycle.

Greater transparency is also an important characteristic of the above-defined expenditure reaction rule, which leads to it being less subject to political manipulations. The corrective part of the rule does not contain the "non-measurable" components such as output gaps or cyclically-adjusted balance: the necessary decrease of general government expenditures within the fiscal consolidation targets is unambiguously calculable by application of the corrective part of the rule.

The above-defined expenditure reaction rule itself is part of a broader fiscal procedural framework to derive general government revenues and expenditures in mid-term. This framework is designed on the idea of Hiebert and Rostagno model but restructured so that primary influence of cyclical economic activity is transferred on revenue side, while fiscal consolidation and restructuring is reflected on the expenditure side. This modelling strategy is justified by the fact that countercyclical fiscal policy would lead to a budget that is balanced on average. The expenditure reaction formula is explicitly devised to guarantee stability but also is enough manageable to strike a balanced compromise between the safety requirement and the authorities' need to retain as much control as possible over fiscal policy throughout the transition and beyond.

3.3 Fiscal consolidation strategy

Having defined the MTOs and expenditure reaction rule, *i.e.*, fiscal procedural framework, government of the Republic of Slovenia derived public finance framework according to which:

- general government deficit should be below 3 per cent of GDP by the end of 2013;

Table 5

Public Finance Framework, 2011-15

Year	Preventive growth (g^{TREND})	Growth Correction	Primary Expenditure Growth	General Government Expenditure Growth	General Government Expenditure Ceilings *(million euros)*
2011	4.0%	–1.0%	3.0%	3.4%	**18,260.8**
2012	3.6%	–4.2%	–0.7%	0.0%	**18,251.6**
2013	3.5%	–2.6%	0.8%	1.4%	**18,501.8**
2014	3.7%	–2.8%	0.9%	1.3%	**18,742.9**
2015	4.0%	–2.8%	1.1%	1.4%	**19,007.4**

Year	General Government Revenues *(million euros)*	CAB *(percent of GDP)*	General Government Primary Expenditure *(percent of GDP)*	General Government Balance *(percent of GDP)*	General Government Debt *(percent of GDP)*
2010	15,636.3	–4.4	–4.0	–5.6	38.1
2011	16,244.2	–4.4	–3.7	–5.5	43.3
2012	16,761.8	–3.0	–1.9	–3.9	45.2
2013	17,324.3	–2.3	–0.8	–2.9	46.1
2014	17,880.9	–1.7	0.2	–2.0	46.0
2015	18,529.5	–1.0	1.2	–1.1	44.8

Source: Ministry of Finance; Evaluation methodology: ESA95.

- cyclically-adjusted general government deficit should be no greater than 1 per cent of GDP by the end of 2015;
- balanced cyclically-adjusted fiscal stance should be reached by the end of 2016.

Table 5 presents general government expenditure ceilings in nominal terms as well as general government revenues, balance and debt. Amount of correction of preventive growth needed to ensure consolidation is also presented. It is important to notice that forecasts of general government revenues and expenditures are derived in cash terms and then converted to ESA95 numbers.

Having in mind that revenue forecasts are conservative, the above presented framework should be resistant to the usual economic activity fluctuations. Only extreme changes in macroeconomic environment should be the reason for the adjustments in the public finance framework.

4 Conclusions

Slovenian economy has been hit hard by the international financial crisis and the collapse of external demand. The economy is estimated to have shrunk by 8.1 per cent in 2009, one of the

highest negative real GDP growth rates in the euro area. Going forward (2010-13), a modest economic recovery is envisaged associated with a weak and uncertain international environment and the pace of normalization of financial conditions. The most notorious effect of the drop of economic activity in 2009 and envisaged slow economic recovery in the program period (2009-13) on the public finances is a downward shift in the government revenue trend level of around 2 per cent of GDP which is not reverted in the program period. With much more uncertainty about economies than before crisis, it was recognized that success of "crisis resolution" and "crisis prevention" strategies heavily depend on adequate domestic fiscal framework – a clear fiscal framework is needed more than ever. The key elements of the new Slovenian fiscal framework are: a) medium-term budgetary objectives, and b) framework for determining government expenditure ceilings.

We understand that medium-term objectives for the government budgets build the link between the current fiscal stance and the medium-term and long-term developments in public finances. For that reason, in the process of defining the medium-term budgetary objectives, we looked carefully into the economic rationale for setting MTOs and considered:

- implicit obligations arising from the ageing of the population,
- budgetary constrains,
- economic reality in Slovenia.

Taking into consideration all these factors public finance medium-term objectives (MTOs) are defined as:

- the target level for cyclically-adjusted budget balance is 0 per cent of GDP, *i.e.*, a balanced position,
- the target level for general government debt is 40 per cent of GDP.

We incorporate expenditure reaction rule as a part of a broader fiscal procedural framework to derive expenditure ceilings based on medium-term budgetary objectives. The expenditure reaction rule enables a controlled growth of general government expenditures and, consequently, the medium-term achievement of a stabilised general government balance independent of the cyclically conditioned movement of general government revenues. The respect of the expenditure ceilings will play the major role in the assessment of the credibility of the Slovenian fiscal policy.

Targeting deficit and debt at the same time allows for the reconciliation of multiple policy targets, such as safety, speed and quality of convergence. The derived MTOs will ensure a long-term fiscal sustainability and at the same time prevent a distorting allocation of funds in the medium-term based on high degree of uncertain liabilities.

APPENDIX 1

Table 6

Long-term Sustainability of Public Finance
(percent of GDP)

Item	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Total Revenue	41.01	41.56	41.93	42.07	41.99	41.87	41.72	41.48	41.24	41.09	41.03
Total Expenditure	46.24	48.01	49.38	52.07	56.24	61.54	68.06	75.82	84.87	94.92	105.99
Pensions	11.20	11.55	11.17	11.47	12.48	13.55	14.49	15.19	15.56	15.51	15.16
- old age	7.55	8.20	8.18	8.59	9.53	10.47	11.28	11.88	12.20	12.17	11.89
- disability	1.40	1.34	1.21	1.10	1.04	1.02	1.01	1.01	0.98	0.93	0.89
- familiy	0.79	0.73	0.69	0.73	0.81	0.89	0.96	1.01	1.05	1.07	1.08
- state	0.09	0.10	0.10	0.11	0.12	0.13	0.13	0.14	0.15	0.15	0.14
- other	1.37	1.18	0.99	0.94	0.98	1.05	1.11	1.16	1.19	1.19	1.17
Healthcare	4.33	4.53	4.76	5.07	5.43	5.80	6.16	6.47	6.72	6.89	6.96
Long-term care	1.02	1.16	1.29	1.45	1.65	1.93	2.20	2.45	2.66	2.82	2.97
Education	4.57	4.45	4.60	4.80	4.90	4.82	4.76	4.83	5.03	5.25	5.36
Unemployment benefits	0.51	0.52	0.53	0.53	0.53	0.53	0.52	0.51	0.51	0.51	0.51
Interest payments	1.35	2.45	3.54	5.02	7.30	10.61	15.13	21.08	28.66	37.86	48.65
General Government Deficit	–5.23	–6.45	–7.45	–10.00	–14.25	–19.67	–26.34	–34.34	–43.63	–53.83	–64.96
General Government Debt	37.12	60.99	86.22	121.51	176.44	255.44	362.61	502.82	680.45	895.20	1146.02

Source: Ministry of Finance; Evaluation methodology: Cash flow.

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COMMENTS ON SESSION 1
NATIONAL FISCAL FRAMEWORKS: THE EXPERIENCE

Andrew Haughwout[*]

Discussion of "Laws for Fiscal Responsibility for Subnational Discipline: International Experience" by Lili Liu and Steven B. Webb and of "Towards (More) Appropriate Fiscal Policy in Slovenia" by Slaven Mićković

The two papers presented here offer different, complementary, perspectives on fiscal rules and institutions. Liu and Webb offer an analysis of tools that governments adopt to keep themselves from the brink of "excess," by which I meant unsustainable, or otherwise undesirable, levels of public indebtedness. An important part of this exercise is a cross-national examination of restrictions placed on the liabilities of subnational governments. Rules of the sort that Liu and Webb discuss are *ex ante* commitment devices, restricting the public sector's ability to expand public debt, thus avoiding rapid, unplanned changes in fiscal policy. Mićković's analysis discusses a particular form of this kind of rule, primarily in the context of the Slovenian central government. This, at least, is a partial interpretation of the concept of Budgeting with Impact (BwI). BwI, with its emphasis on the interaction between fiscal decisions and macroeconomic outcomes, chooses meeting macroeconomic targets as an *ex ante* way of guiding fiscal choices and ensuring that they remain consistent with public objectives.

Mićković also explores the more dire situation faced periodically by governments, and many today, wherein existing *ex ante* restrictions have failed to restrain deficits sufficiently, and a fiscal crisis, or at least outcomes incompatible with broader fiscal stability, loom. Medium-term Objective setting (MtO) is intended to bring public budgets into alignment with fiscal rules imposed from higher-level authorities, in this case those imposed by the EU's Stability and Growth Pact.

Before discussing the effectiveness of the particular kinds of rules presented here, it is worth putting them in the broader context the need for and mechanisms for achieving fiscal discipline. Both papers start from the premise that fiscal rules are necessary – that is, we cannot rely on the voluntary actions of policy makers – either individually or collectively – to restrain spending sufficiently to achieve socially optimal outcomes. In the current context, with governments around the world and especially in Europe experiencing the costs of excessive deficits, this seems natural. But in evaluating the effectiveness of various kinds of fiscal rules, it is useful to remind ourselves of the features of public budgeting that make such rules necessary. For we do not insist on specific rules for private companies' actions with respect to their borrowing, rather we insist on transparency as to what debts are, and the mechanisms by which they are to be repaid. Why, then, do we single out the public sector for especially strict regulation?

Three principal differences between public and private sector borrowing strike me as relevant. First, public sector decision makers are short-lived relative to their private sector counterparts, and thus face incentives to reap the benefits of excellent public services (*i.e.*, high spending) today, while leaving the bills to be paid by the next generation of officials (through debt finance paid for by compulsory taxes levied on future generations). This *time inconsistency* problem is disciplined in the private sector by the fact that the long run value of the firm will

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The views presented here are those of the author and do not necessarily reflect those of the Federal Reserve Bank of New York, or the Federal Reserve System.

incorporate the decisions made by today's decision makers, meaning that today's shareholders face incentives to ensure that the firm's borrowing does not result in reductions in firm value. The concept of public sector ownership is much more diffuse, and for many governments there is no analogue to this concept of ownership, since it is far less easy to exit "ownership" of a particular government than it is a particular private sector firm. Indeed, the latter requires a call to one's stock broker, while the former requires establishing residence in a different country. (In the case of subnational governments, of course, things are less obvious, and I return to this setting shortly.)

A second important difference between the two sectors has to do with their objectives. In the private sector, owners agree that maximization of profits – and thus the value of the firm – is the principal goal of the enterprise, and all decisions may be judged against that rubric. In the public sector, objectives are almost as numerous as constituents, and, even in a democracy, the government in power may not share the objectives of a significant part of its citizenry. This means that some decisions that lead, for example, to a reduction in long run economic growth may be chosen because they have distributional consequences deemed favourable by the ruling party. The difficulties of collective decision making are well known, and while by no means absent in the private sector, are likely more likely to cause difficulties in the public sector.

A final important difference between public and private sectors is the sheer complexity and magnitude of the budgets involved. Governments provide a multiplicity of services, often financed with earmarked taxes or fees. Sometimes these fees are intended to exactly cover the costs that the government incurs in providing the service, but other times they intentionally fall short, producing an implicit subsidy, or provide a surplus that can diverted to other uses. General-purpose revenues come in many different forms – excise taxes, income taxes, value-aded taxes – and may fund a very wide variety of public services ranging from ones that arguably increase future incomes (and tax bases) like education and infrastructure investment, to ones that likely increase consumption in the near term, like transfer payments to needy individuals. In addition, many of today's fiscal decisions create contingent liabilities of uncertain value, like public pension plans. Keeping track of the details of all these funding sources and expenditure objects and their implications for the future is extremely difficult when reporting is well-designed and transparent. When it is not, the ability of ordinary citizens to effectively monitor public sector liabilities is non-existent.

Each of these three features of public finances creates problems for ensuring that budgets remain consistent with a country's long-term economic objectives. Can the private market overcome these obstacles? One natural mechanism to consider is the bond market. Don't bond investors – or bond rating agencies – have an incentive to ensure the sustainability of public finances and the means to invest in gathering the required information? Yes, but only to a limited degree. Like many other constituencies, bond investors care about only one part of the total problem faced by the citizenry – in this case, whether debts will be repaid in a timely manner. This is, of course, a matter of substantial importance, but does not provide citizens with the comprehensive view of budget impacts that they require. As recent activity in Greece indicates, sovereigns typically place a high priority on debt repayment, even when avoiding default requires wrenching macroeconomic adjustments that citizens would much prefer to avoid.

At the subnational level, a substantial literature implies that a well-informed citizenry may face exit costs that are low enough to discipline fiscal policy making. In this case, we would expect to observe negative capitalization of subnational debts (net of assets) into local asset values – particularly land and housing – without the need for strict regulation. The key problem here is, however, the information requirement. Calculating the net present value of *all* subnational governments' fiscal positions is necessary for asset values to accurately reflect the relevant variation, and there is little consistent evidence in the literature that capitalization goes much beyond current tax rates and school quality. Full, consistent, transparent reporting of fiscal positions might allow the combination of mobility and capitalization to send the appropriate market

signals to citizens and their governments, but we are a long way from that situation at present. In addition, the potential for central government bailouts of wayward subnational governments further undermines the ability of mobility and capitalization to provide needed discipline.

We are thus left with the need to regulate, even at the subnational level, and the real substance of these two works. Mićković's discussion of BwI may initially seem an uncomfortable fit for a volume on fiscal rules, since it is focused on what has become known in the US as "dynamic scoring". In essence, the idea is for policymakers to evaluate the long run impact of macroeconomic outcomes on fiscal variables – this part oi standard – and vice versa – and this part is much more controversial. Budget forecasts are often made, and the costs of policy changes are evaluated, in a static framework. For example, a permanent one hundred basis point cut in income taxes would be calculated as 1 per cent of baseline income each year. Advocates of dynamic scoring, however, might argue that reducing taxes in this way will stimulate income growth by increasing capital investment and labor supply, and the final cost will be much less than static scoring would imply – income growth induced by the change in tax policy will offset much, or perhaps all, of the effect of rate reductions.

But how is this debate over scoring policy changes related to fiscal rules? At the heart of the Mićković concept of BwI, in my view, is to make determinations about various macroeconomic targets – the level of aggregate income in the previous example – and design fiscal policy in such a way as to come as close as possible to these targets, with "close" defined in a reasonably rigorous way. The particular form of targeting proposed here is to minimize the sum of squared deviations of realizations from targets. A couple of issues arise, some minor, some major. On the minor side, it is important to make the units consistent so that two objectives may be balanced on an equal basis – otherwise Euro-denominated GDP deviations would swamp unemployment deviations. Also, what is the correct timeframe for this analysis? Shorter timeframes raise the problem of time consistency described above, while longer ones lead to the introduction of considerable uncertainty.

More major issues are related: what macro outcomes are to be included in the list, and how are they to be weighted? Who is to provide the estimates of the general equilibrium model that is required? How are exogenous, non-fiscal, shocks to be accommodated? In the US, questions like these have made the concept of dynamic scoring difficult to implement even as a way of evaluating the impacts of a particular policy initiative. Making hard and fast *rules* on such a basis makes the stakes even higher, and may lead to significant controversy along all of these dimensions and likely many others I have not mentioned. Thus while the feedbacks between fiscal decisions and private macroeconomic outcomes are extremely important, and are in some sense the fundamental driver of fiscal rules, formalizing them is complex, and requires many necessarily subjective elements.

Many of the fiscal rules summarized in the very fine international compendium provided by Liu and Webb share the intent of BwI: ensuring that fiscal choices are compatible with desired macroeconomic outcomes. But most of the rules actually in place require much less information than BwI, and may be thought of as shorthand, readily implementable versions of that concept. As noted above, the subnational governments are more complex in some ways than their national counterparts, since citizens at the regional level have additional mechanisms by which they can externalize their debts: by defaulting (shifting the cost to bondholders), by emigrating (shifting the cost to future residents) or by receiving a central government bailout (shifting the cost onto residents of other regions). Given the difficulties of other forms of discipline, described above, strict regulation may be useful in these cases.

Liu and Webb describe the effectiveness of the rules they catalog in constraining the borrowing of these governments. If this is the full purpose of these rules, then the discussion is complete, although as the authors note it is difficult to convincingly identify the partial effect of the rules themselves. But as Mićković notes, we want to hold fiscal policy to a much higher standard

than low debt. Rather, we want rules that encourage fiscal policies that foster good outcomes in the private economy. Consider the fact that some borrowing by regional governments is likely a good thing – borrowing to finance long-lived capital projects, for example, is a good way to ensure that benefits are paid for by those that receive them. So in my view, a more complete analysis of these rules and their benefits would take a broader view. Do they provide for better economic outcomes? Do they protect against significant disruptions in public service delivery, or variability in tax rates? Do they reduce the probability of central government bailouts and reductions in national economic well-being?

The juxtaposition of these two works provides insight into the difficulty in designing welfare-enhancing fiscal rules. The ideal approach is reflected in a generalized version of Mićković: set fiscal rules that foster achievement of the desired level of key macroeconomic outcomes. But implementable rules are quite a bit simpler than this, and are frequently evaluated against a much more restrictive set of criteria. In the end, rules may help, but we cannot completely rely on them to achieve the outcomes we desire.

COMMENTS ON SESSION 1
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David Heald[*]

My allocated task is to discuss two papers: the paper on India, by Brajamohan Misra, and the one on the IMF study on the G7 countries by Paolo Mauro. If I discipline myself in terms of time, I will also discuss the OECD study by Colin Forthun, which has no allocated discussant.

On the India paper, it is excellent that we are broadening the countries to be discussed. The OECD and G7 countries get a lot more attention about fiscal matters than the emerging economies, so it is interesting to have such a paper. The presenter covered the substance of the paper very clearly. I will pick up some issues which I consider important. The first is that, in the 30 years following independence, India did not have a significant problem with fiscal deficits. The problem started from about 1980, and an attempt was made through fiscal responsibility laws from 2004-05 to deal with this problem by means of fiscal rules.

That is the context. One of the questions that comes out in this and other papers is whether the 2008 global fiscal crisis has or has not shifted views about discretionary fiscal policy. There seemed to be a substantial consensus that one used automatic stabilisers but not discretionary fiscal policy. It is not clear from this or other papers whether that view has been substantially changed, or whether it is only the enormity of what happened in 2008 that creates a special case.

Returning specifically to the paper about India, it talks about central government and the 28 State Governments. It would be interesting to know more about variation between the State Governments, because the data in the paper are aggregated. The paper does not deal with local government, because there are no consistent data. That provokes the question about how important local government is in India. In the published version of the paper, it would be helpful if that information was provided.

There are also issues where, given my lack of detailed knowledge about the institutional structure in India, it would be very helpful to have more description about, for example, the Sixth Pay Commission and the Thirteenth Finance Commission, and the substance of their proposals and their impact.

One item discussed briefly in the paper, and even more briefly in the presentation, is the structure of the small macro-model. If the model is to appear in the published paper, I suggest that it appears earlier, with a discussion on why it is a credible model relevant to the Indian economy, because it focuses on central issues about crowding-in and crowding-out.

Two final points about India. It would be very good for most of our countries to have had GDP growth of 8 per cent in 2009-10. That strikes a very cheerful note: obviously, there is a huge boost to public finances when growth rates are on that scale. There is also a mention towards the end of the paper of something I will come back to, which is off-budget and one-off items. The specific issues here are about pay arrears, which sounds alarming, and capital receipts from auctions.

Turning now to the Mauro paper on the IMF Fiscal Adjustment Study, I must declare an interest here, because I was at a very interesting conference in Washington DC in December 2010 when the papers for the forthcoming book were presented, and I was the discussant on the United Kingdom case study. That provoked in me a lot of thought about what the criteria for “success” are

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and the timescale over which one can judge whether a fiscal consolidation has been successful. For example, I was more sympathetic to the Geoffrey Howe (1980) consolidation than the authors of the case study, and much less sympathetic to the so-called success of the Nigel Lawson (1984) fiscal consolidation. It obviously matters whether you look only at the period to which the consolidation applies, or whether you look at the longer period. For instance, if you neglect infrastructure, or you neglect something like health and education, you then get a period later when that neglect creates problems, and there is an attempt at a very fast catch-up which proves very expensive.

There is an issue that I will return to, in relation to the OECD study. The IMF study does recognise the point that it is very dangerous for international bodies to blur the issue about the size and role of the state with that about deficits and debt. One wishes to build a political consensus for dealing with deficits and debt, but that will be undermined if it appears that the agenda is really about how to reduce the size and role of the state, which in my view should be a political choice in democratic countries. There are wide differences in measured public debt-to-GDP ratios, but the reality might be less different because of how spending under particular institutional structures is scored.

There are three points that come out from Mauro's summary. First, data quality and timeliness are essential: without them we do not know where the economy is at present. This has clear links to the broader fiscal transparency agenda. There is no point in talking about fiscal transparency without good data. Second is the way that one thinks about automatic stabilisers. In the first UK consolidation mentioned, automatic stabilisers were explicitly suppressed, but that does not now seem to be something that people argue for. The final point about the IMF presentation relates to the sentence at the end: "Thus a priority going forward will be to build public support through communication campaigns". This makes me shudder a little, because the United Kingdom has had a long period of "spin". What exactly is spin and what is communication is something that people should think about. Substantive transparency is more important than communication. If communication means presentation, that emphasis is somewhat dangerous. I look forward to seeing the book (Mauro, 2011) when it is published.

I have managed my time sufficiently well to say something about the OECD presentation. First, I am to give a presentation in the United States in May 2011 about fiscal transparency, and it is very useful to have the broad summary of positions in different countries. It is almost impossible for an individual academic to pull these things together, and it is helpful to have this kind of summarised presentation. There is an issue not stressed in the presentation as much as it was in the document, namely that these are self-reported data, so the question is whether countries tell the truth to international bodies. This raises questions about classification and about off-balance sheet and off-budget items.

Before I go on to some points of detail, I would make three general points. I worry about some of the language that is used. "Dire fiscal problems" are often talked about. Forthun mentions having a picture of the Titanic. I get quite worried because international organisations want to claim the credit for rescuing the world economy in 2008. It is obvious that, if you have a very big fiscal stimulus, this is going to have an effect on country debt numbers. This ought to be no surprise to people. It does not help the public debate if language gets out of control. Linked to that, one has to think about what the medium-term exit is from that 2008 fiscal stimulus. To give an example, the OECD was created as part of the Marshall Plan in 1945: would one have recommended that post-war Europe go back to 1939 debt-to-GDP ratios when much of the European infrastructure had been destroyed? That point is important because, if one wants to stabilise and reduce debt, building public consent is fundamentally important.

Also relevant to building public consent is my third point: too much discussion of fiscal consolidation, to my taste, proceeds on the basis that the sacrificed public output has zero value, so that health and welfare spending can be cut without economic or social cost. The OECD study contains a number of asides about the effect of certain measures on efficiency and growth, but one of the things that worries me, and I would have thought would worry Ministers in democratic countries, is the lack of discussion about distribution and equity. One of the problems many of our economies have is that the pre-tax distribution of income has become much more dispersed. How governments react to this is an important issue. For example, when talking about consumption taxes versus income taxes, it may well be true that the preference for increasing consumption taxes rather than income taxes is the correct policy choice, but the issues need to be acknowledged more openly.

I will make two final comments. I recognise that international organisations have to be careful about how they voice certain things. What struck me about the comparisons is that political cycles matter. The United Kingdom had an election in 2010; France is to have one in 2012 and Germany in 2013. The way that governments present narratives about the past depends on how long that government has been in office. Finally, I welcome the discussion in the OECD document about various fiscal wheezes and tricks. This is going to be a very significant issue in the future. One of my research interests is Public-Private Partnerships (PPP) (Heald and Georgiou, 2010). When you talk to people in many different countries, you will be told that PPPs are preferred because they are more efficient than traditional procurement. If you then ask about the budget scoring, people smile!

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COMMENTS ON SESSION 1
NATIONAL FISCAL FRAMEWORKS: THE EXPERIENCE

Ernesto Rezk[*]

Comments to the paper "Fiscal Rules, What Does the American Experience Tell Us?" by Byron Lutz and Glenn Follette

What stems from Lutz and Follette's paper is, in the first place, some dissatisfaction with fiscal rules' performance in the United States, basically at the federal level of government, and also question marks on whether the situation may worsen.

From the policy performance side, the concern for large budget deficits and rising public debt levels clearly boosted interest and concentrated efforts in studying:

- the effectiveness of budgetary rules;
- balanced budget rules for operating budgets;
- the limits on borrowing;
- the way public expenditures are financed.

In considering that fiscal policy in the United States is carried out in a federal setting, the fiscal scenario falls short of being homogenous given to:

- the asymmetric situation of federal and subnational governments with respect to constitutional and statutory restrictions related to fiscal discipline;
- a federal debt being proportionally higher and more variable than those of state and local governments, which in turn renders proportionally larger deficits, even though debt levels vary significantly across states.

For that, and owing to constitutional or statutory balanced budget rules, fiscal responsibility performs better at the state than at the federal government level, in spite that a trade-off is seen to arise between government levels' fiscal responsibility and countercyclical behaviour.

The above mentioned asymmetries have in turn consequences as:

- balanced budget rules affect the conduct of fiscal policy over the cycle, for what countercyclical policies are mostly performed by the federal government and the pattern of states' fiscal policy becomes more pro-cyclical;
- incentives emerge for seeking less cyclical revenue sources or for setting stabilization funds.

In sum, the message so far conveyed by the authors that states' constitutional budget rules are binding, that they impose restrictions on the fiscal conduct of state governments and increase in turn pro-cyclicality seems prima facie true, although one may wonder whether creative accounting and overly optimistic projections may not be actual ways to sidestepping balanced budget rules.

In suggesting that statutory budget rules proved to be ineffective, or at least insufficient, at the federal level, the authors carried out an interesting and rich review of diverse stabilization acts, enacted as of 1974.

The point is stressed that the 1974 Budget Control and Impoundment Act (BCIA):

- responded not only to the concern with increasing deficits but also with conflicts between the executive and legislative branches;

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- for what the Houses' budget committees had the task of outlining the policy path for the coming 5 years and of setting targets for appropriations and reconciliation bills.

Nevertheless, and in spite of expectations, this Act fell short of curbing exploding deficits.

Following the failure of the BCIA, the 1985 Balance Budget and Emergency Deficit Control Act (also called the Gramm-Rudman-Hollings Act) amounted to a new attempt to checking deficits by:

- instituting annually projected deficit targets; and
- creating a sequestration mechanism whereby outlays would be cut in order to meet the targets.

Despite all, the budget process based on the GRH rule could not overcome the distortion caused by overly optimistic economic and technical assumptions and called for new instruments to be designed.

Coming next, the 1990 Budget Enforcement Act (BEA) changed the focus common to preceding acts since now:

- efforts were directed to restraining budget decisions rather than budget outcomes;
- the PAYGO rule was resorted to; that is, the set of used taxes and mandatory spending laws would not permit the deficit to increase;
- annual limits were imposed to discretionary spending;
- tax increases and mandatory spending cuts would be conducive to reaching budget balance.

Enforcement mechanisms were implemented in order that the BEA could satisfactorily meet its objectives:

- bills violating PAYGO rules or spending caps were subject to parliamentary obstacles;
- excesses in budget authority or projected discretionary spending immediately triggered sequesters, as well as changes in taxes and mandatory spending that increased deficit.

An evaluation of the Budget Enforcement Act's performance showed that:

- despite BEA rules proved to be more durable than the explicit deficit targets (GRH), its effectiveness was not at all clear and its results were deemed insufficient;
- more serious a drawback, BEA's difficulties to dealing with deficits arising from technical and economic assumptions placed it validity at stake.

President Clinton's plan to balance the budget in five years, based on tax increases and mandatory spending cuts (MEDICARE), and the continued adherence to revised and extended discretionary caps, were reflected in turn in the 1993 Omnibus Budget and Reconciliation Act. This Act was complemented by the 1997 Tax Reduction and Balanced Budget Act whereby:

- president Clinton implemented his second term fiscal plan, aimed at reaching budget balance by 2002 by extending discretionary caps and carrying out severe reductions in MEDICARE and other entitlements.

Two important matters are worth quoting here, the first one concerning the importance of elucidating whether surpluses in the period (tight fiscal policy) stemmed from budget rules, or from the executive and Congress' decisions, and the second one is that the American experience rendered scarce evidence of statutory budget rules' effectiveness while it did not rule out in change the influence of policymakers' preferences.

In ascertaining the manner in which states' budget rules contribute to fiscal consolidations, it must be noticed that:

- constitutional and statutory balanced budget rules add to court rulings on borrowing limits at the states' government level;

- variants include governors proposing balanced operating budgets, legislatures passing balanced operating budgets and budgets balanced at the end of the fiscal year with no possibility of carryovers;
- in order to meet balanced budget rules, legislatures may reduce expenditure or increase revenues and governors may reduce outlays or resort to short term borrowing which bridges the budget gap;
- however, and as mentioned above, main challenges stem from manoeuvres usually known as creative accounting practices.

As the questions can be raised of whether balanced budget rules are associated with differences in state fiscal behaviour, or to what extent states' debt levels are sound when assessing the efficacy of fiscal rules, it is quoted that:

- correlations between usual ratings and debt levels suggest that tighter budget restrictions are associated with lower debt levels, for what one may assume that covenants are binding at the state level;
- states with strong rule states maintain larger balances than those with weak rule; in consequence, it can be deduced that the former exhibit stronger fiscal positions than the latter;
- finally, despite constitutional rules are seen to be more effective in getting lower debt levels and smaller deficits, the cost in terms of an increase of states' budget outcome pro-cyclicity should not be totally ignored.

Comments to the paper "Fiscal Rules and Fiscal Policy in Brazil" by Ana Teresa Holanda de Albuquerque

As amply analyzed by the author, as of the nineties Brazil resorted to varied policies, whose targets and instruments sought to get the country's fiscal consolidation; among these, the following four are particularly worth mentioning:

First, programmes aimed at carrying out large scale privatizations, taking place mainly from 1991 through 2002 and focused on:

- the central government level: industrial and mining firms, ports, railroads and state owned firms from energy and telecommunication sectors;
- subnational privatization programmes including many state owned banks.

In valuing the performance, let it be pointed out that the attraction of foreign direct investment, devaluation of *real* delayed until 1999 and state owned enterprises' deficits no longer impacting upon public budgets may be counted as some of the programmes' main achievements.

Second, the recognition of extra budgetary unrecorded liabilities, occurring in the period1996-2000, whereby:

- state owned firms employees' legal claims were transferred to the central government, as well as bad performance loans of states' financial institutions and the fiscal impact of the private banking system restructuring;
- interest rate subsidies were introduced on housing loans.

Third, the 1997 Subnational Debt Restructuring Programme by which it was intended to meet:

- the problems large scale decentralization caused to states by bringing about the reduction of the public sector primary balance and the consequent deterioration of states' fiscal performance;

- the situation originated in states' sluggishness to adjust to the new low inflation scenario and in theirs resorting to high interest loans for solving cash flow difficulties.

In response to states' fiscal crisis the central government mounted a comprehensive debt restructuring plan that included up front and interest rate subsidies and the banning of future bailouts among government levels. Nevertheless, the once and for all bailout was conditioned to states performing adjustments including primary surplus targets and spending ceilings; limits for future borrowing were also set as well as states' current revenues as a guarantee for service payments.

Fourth, the Fiscal Responsibility Law (FRL) enacted in 2000 stood itself, without any doubt, as the cornerstone of the Brazilian Fiscal Consolidation Plan (following the 1994 Macroeconomic Stabilization Plan) in so far as its mechanisms aimed at ensuring compliance of proposed fiscal targets, control of fiscal aggregates and enhancement of transparency and fiscal consolidation stimulus in all three government levels.

- The FRL, Instead of fixing fiscal targets, set ceilings for debt levels and expenditures in personnel, in terms of the government level's net current revenues.
- The FRL mandated, seeking to enhance transparency, that compliance reports of previous year's fiscal targets (primary balance, PSBR and net debt) and fiscal targets for the coming three years be annexed to pluriannual budget and annual budget guidelines laws; a risk report with an assessment of contingent fiscal liabilities had also be added to the latter.
- Concerning fiscal rules to be met by budgetary laws, it was particularly worth mentioning the requirement that new permanent spending had to be accompanied by increases in permanent revenues or by permanent spending cuts.
- Strict compliance and governance provisions mainly accounted for the success of the FRL. In this connection, when limits were not met, or gaps not done away, state governments were neither permitted to issue new debt nor entitled to receive discretionary transfers or credit guarantees from the central government.
- Likewise, apart from the bailout prohibition among government levels, administrative, financial, political penalties and even prison could applied to public officials failing to obey the FRL ruling.
- Transparency was additionally enhanced by obliging government levels to release bi-monthly reports on budget execution and four month reports on compliance of the FRL parameters.
- Actuarial reports on the social security system of the public and private sectors had also be sent to the Congress together with the annual budget guidelines.

Notwithstanding the fact that the programmes and instruments resorted to by the government, in particular the Fiscal Responsibility Law, marked and inflection point in Brazilian fiscal and budget rules, the question arises of whether the improvement of the situation will be enduring or, as feared by some public sector specialists, there are still red lights in the Brazilian fiscal horizon.

Those analysts in charge of following the Brazilian macroeconomic performance do not hesitate in pointing out that:

- the accelerated economic growth, as of 2003, helped in maintaining an average primary surplus of 3 percentage points of GDP in the period 2004-08, based mainly on increases in the revenue side;
- in proof of that, it is stressed that the tax burden rose from 28.7 per cent of GDP, in 1999, to 34.7 per cent in 2008. At the same time, public spending (wages, social programmes and pension payments) also kept a rising pace during the period;

- current public spending amounted to 20.9 per cent of GDP in 2008, the main component being transfers to families (*i.e.*, the Bolsa Familia programme). Increases in civil servants' wages above the inflation rate and growing pension payments, owing to the early retirement age, also explained the growth of public spending;
- in 2010, central government's revenues fell short of spending requirements, for what revenues from oil sales (PETROBRAS) had to be transferred to the Treasury in order to exhibit a primary surplus of 2.16 per cent of GDP.

In the light of the above mentioned features, it seems clear that the main challenges in the Brazilian fiscal front may be summarized as the need of:

- reducing the present debt level/GDP ratio;
- improving the expenditure allocation by enhancing public savings (share and quality of public investment);
- placing a limit to the growing gap between pension payments and contributions;
- revising the inflexibility of the central government budget, as an important part of revenues are earmarked to specific programmes and mandatory expenditure;
- simplifying the tax system and alleviating the tax burden upon taxpayers.

Finally, and given the level of integration of the country's economy to the world economy, it seems important to highlight Brazilian's fiscal responses to 2007 and 2008 international crises; in particular, the performance of built-in flexibility and the response of active fiscal policies:

- in the first case, the effect of automatic stabilizers was not very important, reaching in the 2009 budget 0.27 p.p. of GDP due to tax losses from manufacturing and 0.17 percentage points of GDP due to more unemployment insurance payments;
- the discretionary fiscal policy did not either play an outstanding role as tax deductions only amounted to 0.8 percentage points of GDP whereas mandatory spending was raised by 1.21 percentage points of GDP. Nevertheless, this sufficed to explain why 2010 revenues could not meet expenditure requirements.