SHOULD LATIN AMERICAN COUNTRIES ADOPT STRUCTURAL BALANCE-BASED FISCAL RULES?

Teresa Ter-Minassian[*]

1 Introduction and overview

As well documented in the literature,[1] Latin America (henceforth LA) has a long history of pro-cyclical fiscal policies, reflecting the region's exposure to a range of exogenous shocks, tight financial constraints and relatively weak fiscal institutions. Pro-cyclicality declined during the last decade, as most countries saved part of the fiscal dividends of stronger growth and high commodity prices. The resulting improvement in fiscal balances and debt positions allowed most of the region to accommodate the decline in revenues induced by the global financial crisis of 2008-09, and in a number of cases to finance active counter-cyclical fiscal expansions. However, fiscal policies remained largely expansionary in 2010, despite a rapid recovery of output and emerging signs of overheating in some countries.

Against this background, this paper discusses the role that structural balance-based fiscal rules (SFRs) could play in moderating pro-cyclicality, ensuring longer-term debt sustainability, and facilitating the coordination of fiscal with other macro-economic policies in the LA region. It also focuses on the necessary ingredients for a sound design and successful implementation of SFRs. The fact that these conditions are rather demanding, and unlikely to be adequately fulfilled in many LA countries at the present time, suggests that a gradualist approach may be more realistic in these countries, beginning with a systematic and transparent calculation and dissemination by the authorities of structural indicators to assess the fiscal stance and inform budgetary policy, and moving to more formal rules over time as the relevant pre-conditions are put in place.

The paper begins with a discussion of pros and cons for SFRs in the LA context (Section 2); it then discusses various issues in their design (Section 3) and implementation (Section 4), including their applicability at the sub-national level (Section 5). Section 6 reviews the experience of Chile with its SFR; and briefly discusses the recently enacted SFR for Colombia, and whether a SFR would be appropriate for Brazil, where reportedly it is currently under consideration. Section 7 presents some concluding thoughts.

2 Pros and cons of structural fiscal rules in the Latin America context

Pro-cyclical fiscal responses to recurring external shocks – such as sudden stops in capital inflows, and boom and bust cycles in commodity prices, that were so endemic in LA during the "lost decade" of the 1980s and in the1990s – entailed a range of costs for the region:

- they aggravated macro-economic volatility, with adverse effects on employment, business climate, and FDI;
- they frequently included cutbacks in social programs during periods of rising unemployment and poverty;

---

[*] Formerly IMF.

This paper draws in part on a chapter prepared by the author for a forthcoming book by the Inter-American Development Bank (IDB) on the same subject. Helpful comments were received from, among others, S. Clavijo, G. García, M. Marcel and R. Ossowski. The views put forward in it are not necessarily those of the IDB.

[1] Among the many studies that have documented fiscal pro-cyclicality in LA, see, e.g., Perry *et al.* (2008) and Daude *et al.* (2010).

- they also involved cuts or postponements in planned public investments during crises, contributing to persisting large infrastructure gaps; or sprees on inefficient spending ("white elephants" or overmanned civil services) during booms; and finally,
- due to asymmetric responses (stronger expansions than retrenchments) over the cycle, they undermined debt sustainability in some of the countries.

Fiscal pro-cyclicality during those decades reflected a range of factors, in particular the tightness of financing constraints during adverse shocks; and political and social pressures linked to the democratization process, as well as weaknesses in the institutional frameworks for fiscal policy and management, during "good times".

The first decade of the 2000s saw significant progress in fiscal management throughout the region, as most countries took advantage of stronger revenues to reduce the public debt, improve its structure, and/or accumulate assets. As a result, pro-cyclicality was substantially reduced (albeit not eliminated in most countries), and several were able to respond to the global financial crisis of 2008-09 with substantial fiscal stimulus packages.

However, fiscal policy remained expansionary in most countries in 2010, despite the recovery in activity and the emergence of initial signs of overheating and rising inflationary pressures in some of them. Moreover, although public debt levels in LA are on average much lower than in advanced countries, it is unclear how much capital markets' debt tolerance for the region has increased in recent years. Thus, a timely tightening of fiscal policies would contribute to promoting both near term macro-economic stabilization and longer-term fiscal sustainability.

Against this background, the adoption of well designed and effectively implemented fiscal rules targeting a structural balance (adjusted for the cycle and, in countries highly dependent on commodity revenues, for deviation of the relevant commodity prices from their medium term trend) would help LA countries avoid pro-cyclicality and the attendant macroeconomic, efficiency and social costs discussed above. It would also facilitate better coordination of monetary and fiscal policies, reducing the upward pressures on interest rates and exchange rates that are currently evident in many countries of the region (especially Brazil, Chile, Colombia and Mexico).

However, as the subsequent sections of this paper will argue in more detail, a sound design and an effective implementation of SFRs are no easy tasks, and require a number of demanding political, institutional, as well as economic, pre-conditions, which are only partially (and to varying degrees) met in most countries of the region. Moreover, while a SFR is superior to a rule targeting an unadjusted budget balance in preventing fiscal pro-cyclicality, it shares with the latter the risk of hindering active counter-cyclical fiscal responses to a crisis, even when there exists adequate fiscal space for such responses. Even during boom periods, a SFR may constitute a hindrance to a needed fiscal tightening, if it lulls a government into believing that, by meeting the SFR's target, it has done all it needs to do on the fiscal front to stabilize the economy.

There are a number of possible approaches to combining the benefits of constraining discretion through a SFR with those of maintaining an adequate degree of flexibility in macro-fiscal management:

- The SFR may include escape clauses to deal with unpredictable exogenous shocks. Such clauses should specify as clearly as possible the nature and magnitude of the shocks to be accommodated; the length of the period during which the rule would be relaxed or put into abeyance; a path of return to full observance of the rule; and the responsibility for activating the clause and monitoring its implementation. This specification requires careful consideration of country-specific circumstances, such as the type of shocks the country is most exposed to and the sensitivity of the main fiscal aggregates to such shocks; and the foreseeable fiscal space to accommodate them, or to at least spread the adjustment to them over time. In all cases,

credibility can be enhanced by the use of independent "fiscal watchdogs" responsible for assessing the correct use of the clause, or at least by a stipulation that the activation of the clause must be approved by a qualified majority of Parliament. The recent global financial crisis has highlighted the shortcomings of fiscal rules that do not include adequate escape clauses. According to a survey conducted in 2009 by IMF staff, only about half of countries operating under a fiscal rule were able to accommodate a countercyclical policy response within the rule's framework. The others had to either explicitly modify the rule, or put it into temporary abeyance.

- While escape clauses are intended to deal with the consequences of large but temporary shocks, more permanent ones would require a lasting revision of the rule's target (or, in some circumstances, even of the rule's basis). There would be, in principle, benefits from incorporating *ex ante* provisions for such revisions in the legislation introducing a fiscal rule, not least to avoid reopening political debates on the whole framework of the rule when the need for such revisions materializes. In practice, however, it may be difficult to anticipate from the outset the range of factors that may require a revision of the rule.
- The target for the rule could be specified as a range, rather than a point value. This should be accompanied by a requirement that deviations from the midpoint of the range, to accommodate a counter-cyclical fiscal response during a given phase of the cycle, be recorded in a notional account and be offset by an equivalent deviation in the opposite direction during the subsequent phase of the cycle. This would avoid the above-mentioned common asymmetry in active counter-cyclical fiscal policies.
- Finally, the target could be specified as a function of the phase of the cycle, possibly with a threshold value:

$$T^t = T^* + a*(b*(Y^p - Y)/Y^p)$$

where T stands for the target at time t; T^* for a pre-specified target in cyclically neutral conditions; a takes a value of 0 if the output gap falls below a pre-specified threshold level, and 1 otherwise; b is a parameter between 0 and 1 indicating the desired strength of allowed countercyclical responses to the output gap; Y^p stands for potential output and Y for actual output.[2]

3 Main issues in the design of structural fiscal rules

Countries considering the adoption of a SFR face a number of issues regarding the choice of the basis of the rule and the level of its target.

3.1 Choosing the basis of a SFR

The main choices regarding the basis of a SFR are as follows:

i) To use a cyclically-adjusted balance (CAB);[3] a growth-based balance (GBB);[4] or a balance over the cycle?[5]

---

[2] This formula is suggested in the recently released report of the Advisory Committee for reform of the Chilean SFR (Corbo, 2011).

[3] A cyclically-adjusted balance (CAB) aims to approximate the budget balance that would prevail if the economy was operating at its full potential, *i.e.*, if the output gap was zero. Therefore, typically it is calculated by excluding from revenues and expenditures those components which are due to a positive or negative output gap.

[4] A variant of the CAB is a growth-based balance (GBB), which excludes from budgetary revenues and expenditures those components that reflect the difference between the actual and the trend growth rate of the economy.

ii) The non-interest (primary) or overall balance?
iii) The current or the overall balance?
iv) To adjust for gaps in absorption, rather than output?
v) To adjust for commodity prices fluctuations?

i) As is well known, obtaining robust estimates of a CAB is not an easy task, as all existing methods of estimation of potential output (HP and other filters; or production functions) suffer from technical problems, especially significant in the presence of structural breaks, limited observations, and/or frequent significant revision in the GDP estimates.[6] The difficulties of obtaining reliable estimates of the output gap in many LA countries may argue for using an (easier to calculate) GBB instead in those countries. However, it should be recognized that a GBB can give misleading signals, e.g., during the early phase of a recovery, when actual GDP may be growing well above trend but still remain below potential.

   Both a CAB and a GBB require reliable estimates of elasticities of tax revenues and certain categories of expenditures to the cycle. The well-established methodologies (by the OECD, IMF, and the EC, among others) to carry out these estimations[7] are relatively demanding in terms of data availability. The alternative approach of targeting a given average budget balance over the cycle, while in principle equivalent to a CAB-based one, in practice can give different results if the length and intensity of the cycle is not correctly anticipated at the outset. It is also more prone to political manipulation by, e.g., overestimating the length of the downturn phase of the cycle, thereby pushing forward in time the required fiscal tightening.

ii) As regards the choice between a primary and an overall balance as basis for SFRs, the advantages of the former are that it is more controllable by the fiscal authorities and it better reflects current, rather than past, decisions. It also avoids possible incentives for the authorities to meet an overall balance target through a loose monetary policy. These considerations are especially relevant in most LA countries, given the structure of their public debt (relatively short average maturities, and high proportions of instruments with variable rates) which implies a quick transmission of volatility in interest rates to the overall budget balance. Indeed, most LA countries that already use fiscal rules formulate them in terms of the (unadjusted) primary balance.

   However, a primary balance-based SFR would need to include a debt feedback mechanism, to ensure longer term fiscal sustainability in the event of sustained shocks to interest rates or to the debt stock. A complementary debt rule would be useful also when targeting the overall balance, to avoid temptations to use below-the-line or quasi-fiscal operations that do not affect the budget balance but increase the public debt. Such operations are quite common in LA countries. Debt-based rules also have the advantage of requiring the fiscal stance to be adjusted in the event of a lasting shock, such as a devaluation, impacting the foreign exchange-denominated component of the debt. However, they need to be formulated carefully, e.g., by including escape clauses that would allow such adjustments to be distributed over an adequate period of time, to avoid either low quality measures or an outright violation of the rule in the event that the shock is unexpected and large.

[5] A further variant of a CAB-based rule is one that targets a given balance (generally expressed as a percentage of GDP) over the cycle. Rules of this type were adopted by Sweden and by the UK during the last decade.

[6] See, e.g., IMF (2009) and EC (2010) for details.

[7] See, e.g., Girouard and André (2005); Larch and Turrini (2009); Fedelino *et al.* (2009); and EC, (2010).

iii) As concerns the choice between the current and the overall balance as basis for a SFR, some have argued in favor of the former, given the large infrastructure gaps prevailing in LA.[8] However, golden-type rules do not seem advisable in the region because:
   - they may be inconsistent with debt sustainability (still an important issue in several countries of the region);
   - they privilege investment in physical over human capital (lack of which is still a major constraint to growth in the region);
   - they do not provide incentives to improve the systems for evaluation and selection of public investment program (that are frequently poor in LA); and
   - they are open to manipulation through misclassification of spending programs (a not uncommon practice in the region).

   Infrastructure spending needs would be better safeguarded through complementing a SFR based on the overall (or primary) balance with expenditure rules and/or the use of medium-term expenditure frameworks.

iv) The EC has recently advocated the use of an alternative fiscal indicator, *i.e.*, a cyclically- and absorption-adjusted budget balance (EC, 2010). Its analysis shows that such an indicator can give significantly different signals about a fiscal stance than the CAB in countries with large current account deficits. Given the high dependence on consumption taxes (more related to absorption than to output) and the volatility of external financing in LA countries, in principle it would be desirable to adjust the fiscal target for cyclical fluctuations in absorption, rather than output. But, the difficulties of estimating and especially monitoring CAABs on a timely basis in most of the region advise against it in practice.

v) Most LA countries are highly dependent on revenues from commodities. The high degree of volatility of commodity (especially energy products) prices makes the overall fiscal balance of resource revenue-dependent countries also very volatile. A rule that would require stabilizing the overall balance at a given level over time would result in large (and often disruptive) swings in public expenditures; moreover, it would be pro-cyclical, as expenditures would rise during boom periods and have to be cut back during commodity price slumps, or during periods of declining external demand that also have adverse repercussions on domestic activity. In contrast, a rule targeting the non-resource component of the fiscal balance (possibly adjusted for the domestic cycle as well) would smooth spending and avoid pro-cyclicality.

   An alternative approach would be to target the overall balance adjusted not only for the output cycle, but also for deviations of the prices of main resource revenues from their long-term trend, as is done in the Chilean SFR. In contrast to the one targeting the non resource-balance, this approach does not correct for cyclical changes in external demand for the relevant commodities, except to the extent that they are reflected in the commodity price swings. It also requires a transparent and analytically sound methodology for assessing long-term trends in such prices, an especially difficult undertaking in the case of fuel prices, which many experts view as akin to a random walk.[9]

3.2 Choosing an SFR's target

The choice of the target level under a SFR should be guided by a number of considerations:

i) the country's initial fiscal conditions and its expected medium-term public debt dynamics;

---

8 See, e.g., Perry *et al.* (2008).

9 See Barnett and Vivanco (2003), for a discussion of statistical properties of oil prices.

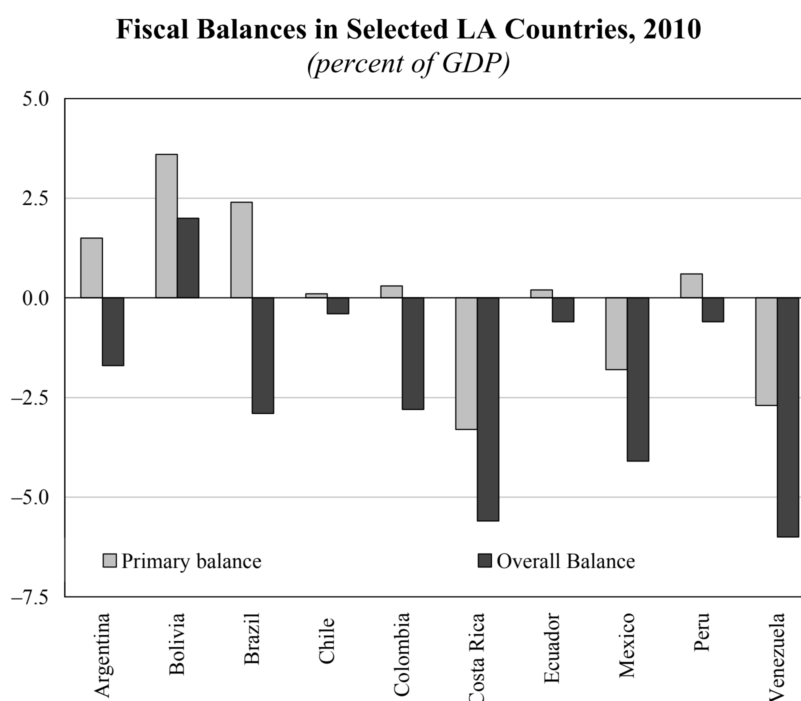
ii) any long-term savings needs; and
iii) whether the target is fixed or variable over time.

i) In principle, a fixed target for the SB should be set at a level that is expected to be consistent with a desired (declining or stationary) path of the public debt, under a prudent set of baseline assumptions for the relevant macro-economic variables (the growth of trend or potential real GDP, inflation, interest rates, exchange rates, and the probability of realization of contingent liabilities). The choice of the baseline assumptions should be based on a comprehensive sensitivity analysis, and be more cautious the worse the fiscal conditions of the country (higher deficit and debt levels) are at the time of introduction of the rule. Particular focus should be placed on analyzing whether actual (as opposed to structural) deficits may occur during the application of the rule that could not be financed (or could be only at very high interest rates). This analysis requires a careful assessment of the likely amplitude of the cycle in the country in question. It also requires reliable information on the country's public and external debt structure, and its vulnerability to changes in market sentiment (in particular the likelihood of sudden stops in capital flows).

As Figure 1 shows, initial conditions vary widely within the LA region, both as concerns budget balances and public debt. Financing constraints have eased in most countries, but could tighten again in an adverse external scenario. Also, the factors influencing the debt dynamics, in particular growth and interest rates vary significantly across the region.[10] In many countries, however, the average real cost of the public debt tends to exceed the growth rate, pointing to a need to target structural primary surpluses.

Figure 1

Fiscal Balances in Selected LA Countries, 2010
(percent of GDP)



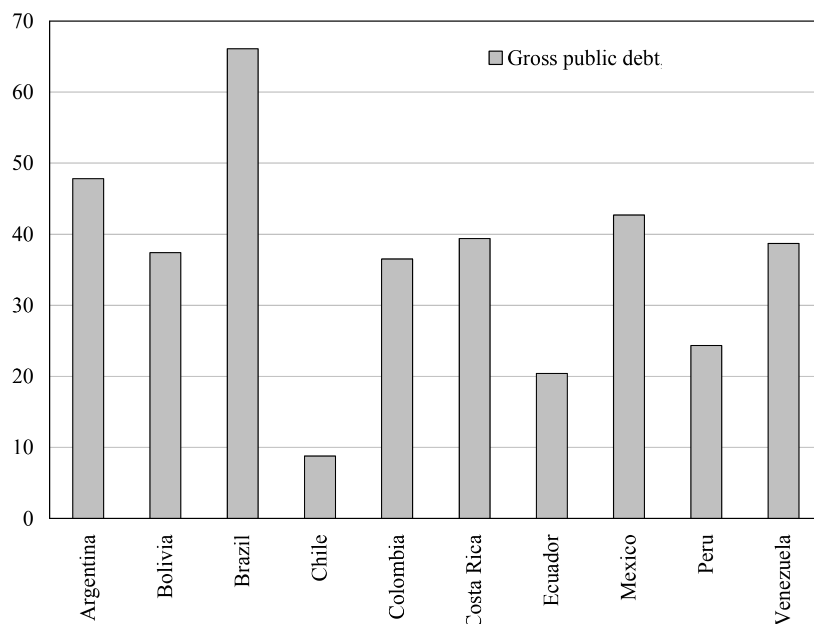
Source: IMF, Western Hemisphere Regional Outlook, April 2011.

ii) Long-term savings needs in the majority of LA countries are less related to population aging than is typically the case in advanced countries. Most countries in the region have still relatively young populations, although some

[10] Estimated growth rates in 2010 ranged between –1.3 per cent in Venezuela to over 8 per cent in Paraguay, Peru and Uruguay (IMF WHD REO, October 2010).

Figure 2

Gross Public Debt in Selected LA Countries, 2010
(percent of GDP)



Source: IMF, Western Hemisphere Regional Outlook, April 2011.

(e.g., Brazil and Uruguay) are aging at a faster rate than many industrial countries. In LA countries, the main spending needs relate to investment in physical (infrastructure) and human capital (education and training) and to improvements in the coverage of social safety nets (health, pensions and social assistance). Some countries have also sizable contingent liabilities.

In countries heavily dependent on revenues from non renewable natural resources, the choice of medium-term fiscal targets should be guided by the goal of accumulating sufficient wealth to smooth income and consumption across generations before and after the exhaustion of the resources. However, the translation of this broad principle into operational guidelines is far from simple, and different authors have argued for different rules.[11] One conceptually appealing such rule call for stabilizing the non-resource primary balance (as percent of non-resource GDP) at a level that ensures sufficient assets accumulation by the time the resource wealth is exhausted to allow the same balance to be financed subsequently through the return on the assets (Ossowski and Barnett, 2003). The translation of this principle into an operational rule requires a number of difficult predictions of such variables as the size and speed of depletion of the natural resources, the long-term outlook for their prices, and the rate of return on the financial wealth being accumulated.[12]

Countries may prefer to specify a time-variant path for their SFR target if they need to establish market credibility with a stronger up-front adjustment, or if they can credibly project "structural breaks" (related, e.g., to the coming on stream of substantial natural resource revenues) in their public debt dynamics. In general, however, a rising time path for the SFR target would not be advisable, as it is likely to be seen by markets as a political expedient to postpone adjustment.

Finally, countries facing relatively high uncertainty about the relevant macro-economic factors may choose to limit the time horizon for the specification of the target (to, say, 3 to 5 years), or

[11] For example, (i) the permanent income model (PIM) calls for equalization of per capita consumption across generations, taking into account both resource and non-resource revenues; (ii) the permanent resource income model (PRIM) argues for redistribution of only the resource wealth across generations; (iii) the so called bird-in-hand rule requires government to limit its non-resource deficit to the annual stream of revenues from accumulated financial assets (See Maliszewski, 2009, for a comparison of such rules).

[12] See Villafuerte *et al.* (2010) for a discussion of fiscal rules and fiscal policies in LA oil-producing countries.

to give it a rolling character (as is the case, e.g., in Brazil).[13] Of course, the disciplining and signaling effect of a rule based on rolling targets would depend very much on the demonstrated commitment of the government to avoid large year-to-year changes in the targets, and to transparently and convincingly motivate them, when unavoidable.

4 Implementing SFRs in the Latin America context

Countries considering the adoption of a SFR face a range of issues in the implementation of the rule, in particular regarding:

i) the timing of introduction of the rule;
ii) its legal basis; and
iii) its public financial management (PFM) requirements.

i) As regards timing, SFRs (like all rules) are unlikely to work if introduced in periods of unusual political and economic uncertainty/turmoil. This is not the case currently in LA. A further consideration in favor of the adoption of SFRs in LA at the present time is the current phase of the cycle. Clearly, the credibility of a SFR tends to be greater if it is adopted during a cyclical expansion. Financial markets and other economic agents may view its adoption during a downturn as dictated by political expediency (as a SFR would allow a higher level of spending than an overall deficit target), and question its sustainability under favorable cyclical circumstances. But, as Chile's experience suggests, a country with adequate fiscal space (low debt and low probability of emergence of financing constraints) could more easily gain market acceptance of its accommodation of the automatic stabilizers during a downturn, if at the same time it was committing to allowing them to operate during future expansions.

ii) A strong legislative basis is not necessarily a pre-condition for the introduction of a fiscal rule. A government can in principle announce its commitment to the achievement of certain values for the targeted fiscal variables for an extended period ahead, without seeking to enshrine it into a law. The credibility of such an announcement would be of course greater the longer the expected life of the government, the stronger the role of the executive in the budget process, and (at least in a democratic regime) the broader the perceived political and social consensus on the rule.

That said, a robust legal foundation for a fiscal rule can significantly enhance the prospects for its effective and sustained observance, because it raises the cost of its non-enforcement or abandonment, thereby enhancing its credibility. The question is: how robust should that foundation be? The higher the level of the law establishing the rule, the more difficult it is to change it. There is thus a trade-off between the objective of strengthening the commitment to the rule, on the one hand, and that of preserving an adequate degree of flexibility, on the other hand. While the appropriate balance of these objectives should reflect the specific political, institutional, and economic circumstances of each country, in practice in most countries fiscal rules are established through legal instruments stronger than ordinary laws that could be modified by a subsequent budget law. The experience in this respect with existing fiscal rules varies across LA. Some countries (e.g., Brazil and, since 2006, Chile) have enshrined their fiscal rule in a higher-level Fiscal Responsibility Laws. Others use ordinary laws.

[13] The Fiscal Responsibility Law in Brazil mandates fixed ceilings for the public debt and for government payroll in relation to net revenues, but requires the government to set in the annual Law on Budget Directives three-year rolling targets (compulsory for the first year and indicative for the subsequent two) for the (unadjusted) primary balance.

iii) As is well known, sound PFM institutions[14] are important for an effective conduct of fiscal policy, whether rules-based or not. These requirements are made more stringent by a country's adoption of numerical fiscal rules, because of the reputational and possible other costs entailed by a violation of the rule. Moreover, as mentioned above, the adoption of a SFR poses special statistical and computational requirements. At the same time, however, the adoption of a rule often provides impetus for implementing needed reforms in the PFM system, as the experience of Chile demonstrates (see Section 6 below). Thus, the decision of whether to introduce a fiscal rule requires a careful assessment (necessarily country-specific) of whether the existing PFM system conforms to the minimum requirements for an effective implementation of that rule.

Specifically, the preparation of a budget under a SFR requires robust estimates of: potential output; the medium-term trend of relevant commodity prices; and the elasticities of main revenues and selected spending to the cycle and to commodity prices. Several countries in LA have sufficiently developed statistical bases and adequate technical capacity to undertake such estimates. Transparency in the methodology and assumptions used to calculate structural balances is essential for credibility. Delegating the calculations to an independent fiscal watchdog could also strengthen credibility and social acceptance of the rule.

Although the adoption of a SFR does not per se require the elaboration of a full-fledged medium-term fiscal framework (MTFF), lengthening the time horizon of the budget formulation process can be very helpful in promoting effective observance of the rule, particularly by highlighting trends that, in the absence of corrective action, would threaten the achievement of the fiscal targets. At the same time, the existence of a rule can facilitate the formulation of a MTFF by providing more certainty about the medium- term budget balance target. A comprehensive and realistic MTFF can also facilitate a more strategic approach to priority setting among competing demands for budgetary resources, and allow line ministries to plan sectoral policies (and especially investment projects) over a longer horizon, with potentially significant gains in efficiency. In LA, a number of governments are currently working on developing or strengthening MTFFs, although in most cases significant progress remains to be made in this area.

Effective controls of the budget execution process are crucial for the successful implementation of fiscal rules. So are well-developed, transparent and firmly enforced budgetary accounting and reporting rules.

Under a SFR, during budget execution, budget managers need timely and reliable information on all phases of the expenditure process, and on developments affecting the estimates of structural revenues, to identify and appropriately react to risks to the observance of the structural balance target. They also need, however, to monitor developments in actual revenues, to avoid the emergence of financing constraints. Most countries in LA have already developed reasonably effective controls of the budget execution, supported by modern financial management information systems (FMIS), at least at the central government level.

The importance of sound accounting systems cannot be over-emphasized. A number of accounting risks can threaten the effective operation of fiscal rules. Some are common to all types of rules, and basically relate to the boundaries between the parts of the public sector covered and not covered by the rule, and between the public and the private sector.[15] Some of

[14] These include, among others: a strong role of the ministry of finance in the preparation and implementation of the budget; adequate capacity in the ministry to forecast revenues and endogenous components of expenditures; a transparent and comprehensive documentation of proposed budgets; a parliamentary budget approval process that limits the scope for amendments inconsistent with the overall budget stance proposed by the government; effective expenditure control mechanisms during the budget execution; comprehensive and firmly enforced accounting and reporting requirements, capable of generating timely and reliable fiscal statistics; and sound internal and external auditing procedures.

[15] They include extra-budgetary operations; quasi-fiscal operations; provision of guarantees in lieu of explicit subsidies or capital transfers to public or private enterprises; unfunded mandates for sub-national governments, if the coverage of the fiscal rule is

(continues)

these risks can be mitigated if a country's fiscal responsibility law or organic budget law require that various types of contingent liabilities be disclosed, quantified to the extent possible, and adequately provisioned for in the budget. Other accounting risks are more specific to certain types of rules, e.g., the overestimation of potential GDP growth under a SFR; the above-mentioned misclassification of current expenditures as capital ones under a golden rule; resort to tax expenditures, in lieu of subsidies and transfers, under an expenditure rule; and the accumulation of liabilities (e.g., to suppliers) not recorded in the debt statistics, under a debt rule. Effectively containing these risks is a difficult task, requiring not only the enactment and enforcement of comprehensive and detailed accounting regulations, with appropriate penalties for non compliance for the responsible officials, but also adequate external scrutiny through an independent Audit Court, or an external watchdog/fiscal council.

Finally, a transparent and timely reporting of the accounting information is also important for the effective implementation of fiscal rules. This is needed to facilitate both corrective action by the government, when needed, and the external scrutiny mentioned above. The reporting should be sufficiently detailed to allow interested outside observers to assess not only past compliance with the rule, but also the risks of future non-compliance.

The quality of accounting and reporting systems has improved significantly in recent decades in LA, often with the assistance of international organizations and MDBs. Nevertheless, some of the accounting risks mentioned above remain quite pervasive, and there has been some regress in the more recent years towards non transparent or heterodox accounting practices in several countries, including some like Brazil that had been previously viewed as models of sound budgetary accounting. The effectiveness of a newly introduced SFR in these countries would hinge crucially on eschewing such practices in the future.

5 Structural fiscal rules for sub-national governments in Latin America?

The extent of fiscal decentralization and its potential impact on macro-economic management vary significantly across LA. Specifically:

- In a number of unitary countries (e.g., Chile, Uruguay, and the Central American countries) decentralization is still limited, and does not pose significant macro-economic risks. In Bolivia, Mexico, and Peru, growing decentralization has not significantly affected fiscal sustainability so far, due to relatively tight limits on sub-national borrowing. In Brazil and Colombia, substantial progress has been made since the mid-1990s in tightening controls on sub-national debt and reducing it. Progress has also been made in reducing sub-national debt in Argentina, mainly as a result of bailouts by the federal government, as well as of the buoyancy of the provinces' own and shared revenues.
- In most countries, however, sub-national fiscal responses to shocks have tended to be pro-cyclical, albeit less so in the more recent years. Pro-cyclicality has reflected (to different degrees in different countries) a mix of factors:
  - fiscal rules or other borrowing controls with targets unrelated to the cycle; and even in the absence of such rules, pro-cyclical fluctuations in the availability of financing for most sub-national governments (SNGs) throughout the region;
  - the lack of significant sub-national revenue-raising autonomy in most countries (with the exceptions of Brazil, and to a lesser extent, Argentina) especially at the state/regional level, which has severely constrained the scope to sustain sub-national spending during recessions;

limited to the central government; and engagement in public-private partnerships (PPPs) not justified by efficiency considerations.

- the (full or partial) assignment to SNGs of some highly cyclical revenues, especially from non-renewable resources, in some countries (e.g., Bolivia, Ecuador and Peru);
- inter-governmental transfer systems based on revenue-sharing formulas invariant over the cycle, which propagate quickly to the sub-national finances cyclical fluctuations in the central government's (CG) revenues (Colombia being an exception in this respect);[16] and finally
- pervasive rigidities (including earmarking of revenues and/ or transfers to certain categories of expenditure) which reduce the scope for reassignment of sub-national resources to changing expenditure needs/priorities over the cycle.

These considerations point to a number of possible options for reforms in the inter-governmental systems of the region that could facilitate less pro-cyclical sub-national fiscal policies, while safeguarding debt sustainability, in the future.

In particular, specifying sub-national rules in terms of cyclically-adjusted budget balances should in principle help avoid pro-cyclicality, while safeguarding fiscal sustainability (provided of course that the rules' targets are chosen on the basis of appropriately cautious debt dynamics scenarios). There are, however, a number of factors that would limit the effectiveness of such an approach in practice, and even advise against its adoption in some circumstances:

- First, the difficulties of estimating cyclically-adjusted fiscal aggregates are even more significant at the sub-national than at the national level. Most countries do not have reliable and timely estimates of regional or local output, even less of output gaps. Using national indicators of the cycle as a proxy can be appropriate when the cyclical shocks are evenly distributed across the national territory, but, as evidenced by the recent global financial crisis, this is not always the case.

  An alternative approach might be to use changes in labor market indicators (such as the unemployment rate, for which timely sub-national-level measures are generally available) as triggers for allowing deviations from the fiscal rule's target up to a pre-specified limit. However, this approach is clearly more suitable for advanced countries, characterized by high degrees of labor market formality, than for the LA countries, where labor market adjustments to cyclical shocks mainly occur in the informal sector and therefore are inadequately captured by changes in the official unemployment statistics.

  Moreover, such an approach would be more effective in avoiding a pro-cyclical fiscal tightening during a large negative output shock, than in avoiding a pro-cyclical fiscal expansion by resource-rich regions during a commodity price boom. For the latter, an alternative approach would be to require adjustments of the target balance for deviations in commodity prices from their medium-term trend. Given, however, the above-mentioned difficulties of obtaining reliable estimates of the medium term trend of commodity (especially oil) prices, it may be preferable to utilize sub-national rules that target the budget balance excluding resource revenues.
- Second, financing constraints tend to be tighter at the sub-national than at the national level, as market access is typically lower and more expensive for SNGs than for their corresponding CG. This suggests that the use of a sub-national fiscal rule allowing cycle-related deviations from a balanced-budget (or other sustainable balance) target should be accompanied by a requirement that SNGs use their budget surpluses during booms to accumulate liquid assets to be drawn down during downturns. This is for example the case in the US, where a number of state constitutions require the accumulation of so-called rainy day funds (Balassone et al., 2006). It is crucial that arrangements for the governance of such funds be very transparent, and that their use be guided by clear criteria, specified in advance of the crisis, leaving little room for

[16] A transfer reform in Colombia in 2001 stipulated that CG transfers to SNGs would grow at a fixed annual real rate until 2016.

discretion, for example in the decision to start drawing on the fund, and the speed of its rundown.

- Third, consideration should be given to increased use of expenditure rules at the sub-national level. Such rules, while not necessarily avoiding pro-cyclicality during downturns (since they set ceilings, not floors, for public expenditures) help moderate it during upswings and, by promoting sub-national savings and asset accumulation during such periods, can help cushion the impact of subsequent recessions on spending.
- Fourth, broader reforms are likely to be needed in the system of inter-governmental fiscal arrangements, to effectively reduce the risk of pro-cyclicality at the sub-national level. In particular, one criterion for the choice of revenues to be assigned to SNGs should be a low elasticity to cyclical developments. This (as well as equity considerations) argues against the assignment of revenues from natural resources and from company taxes to the sub-national level, as well as against a derivation-based revenue sharing mechanism for such revenues. As regards other shared revenues, it may be desirable to use a sharing formula based on moving averages, rather than current values, of CG revenues, to help smooth cyclical fluctuations of SNGs' resources. Consideration could also be given to the use of automatic triggers for pre-specified changes in sharing formulas (symmetric over the cycle) when cyclical indicators reach certain threshold values. Finally, it would be preferable not to devolve to the sub-national level certain expenditures (such as unemployment benefits) that are both cyclically and socially sensitive (or at least their funding).
- More generally, CGs that want to ensure that their own (passive or active) counter-cyclical fiscal policies are not frustrated by pro-cyclical policies of their SNGs should endeavor to: strengthen the institutional arrangements for policy coordination with the latter; provide incentives (sticks and carrots) to them to build up adequate financial cushions during boom periods to withstand subsequent downturns; and help them improve their capacity to implement CG-funded stimulus measures (whether in the social or the infrastructure area) when needed.

6 Selected country experiences

6.1 Chile

Chile's 10 year experience with a structural budget balance-based rule provides a useful illustration of both the advantages of such a rule, and the relatively demanding pre-conditions for its successful design and implementation.

The rule was adopted in May 2000, at the outset of a new presidential mandate. It called for the achievement of an annual surplus equivalent to 1 per cent of GDP in the budget, adjusted for the effects of both the cycle and deviations of the price of copper from its long-term trend on revenues. All the variables and parameters used in the calculation of the structural balance were initially estimated by the Ministry of Finance, but within a year or so, with a view to strengthening the credibility of the estimates, the government appointed panels of independent experts to vet them.

The methodology of calculation of the structural balance was revised on several occasions in the subsequent years. Some of the changes represented useful refinements (e.g., the exclusion of deviations of actual from trend prices of molybdenum, a significant and volatile source of revenue for the state-owned mining company, CODELCO; a disaggregation of total revenues into main categories, and the estimation of the related elasticities; a separate treatment of tax revenues from private copper mining enterprises; and the exclusion of expenditures of a newly created unemployment fund). However, other changes (such as the inclusion in revenues "above the line" of valuation changes in the financial assets of the Pension and Economic and Social Stabilization

Funds; and the classification "below the line" of some expenditures to support certain public enterprises) were less defensible.

The choice of the initial target (a 1 per cent of GDP structural surplus), despite a low level of the public debt, was justified by a number of considerations, related in particular to: the existence of a significant quasi-fiscal deficit of the Central Bank; the desire to accumulate financial assets, as counterpart to the ongoing gradual depletion of copper resources; and concern about various known or contingent future liabilities. In 2008, the government decided to revise downward the target (to 0.5 per cent of GDP), in line with the recommendations of a panel of experts which had highlighted the significant improvement in the fiscal position since the introduction of the rule, following the recapitalization of the Central Bank and a decline in contingent liabilities. This revision was effected in a transparent and well explained manner, with no adverse repercussions on the credibility of the fiscal management of the country. In contrast, neither the rationale for, nor the planned duration of, a subsequent reduction of the structural surplus target to 0 in early 2009 – in conjunction with the announcement of a substantial (around 4 per cent of GDP) fiscal stimulus package – were spelled out by the government, raising some concern about the future of the rule.

The adoption of the structural rule in Chile gave impulse to a number of institutional reforms, which have improved the statistical base to monitor government operations (with the adoption in 2004 of the GFS 2001 Manual, and of accrual accounting), as well as the quality of the budget process. In particular, the commitment to a multi-year budget target facilitated a more top-down approach to the definition of overall and ministry-by-ministry spending ceilings, in combination with increased freedom and responsibility of budget managers in the allocation of the resources allotted to them. These changes are in line with modern best practices in budgeting and an essential pre-condition for a more performance-oriented public financial management. Various analyses have found evidence that the rule also contributed significantly to reducing spending volatility in Chile, and had beneficial macroeconomic effects, in terms of reduced output volatility and sovereign risk.

In view of Chile's success in the implementation of its SFR, an obvious question is what were the main factors responsible for the success, and to what extent they can be replicated in other countries considering a Chilean-type rule. Clearly, Chile had a number of conditions in place at the outset of the rule that boded well for its success:

- a fairly diversified productive base, and substantial trade openness;
- relatively flexible monetary and exchange rate policies, and a financial sector that had already undergone substantial restructuring and consolidation;
- an extended record of sound macro-fiscal management, as evidenced by the very low level of its public debt;
- a modern and broad-based tax system and a strong tax administration. Revenues from natural resources accounted for less than 10 per cent of total;
- a long tradition of top-down, disciplined budget management, and a relatively centralized system of intergovernmental fiscal relations; and
- a well-developed statistical base that facilitated the preparation of credible estimates of the structural budget balance, the timely monitoring of their realization, and a transparent dissemination of the relevant information.

Nevertheless, as indicated above, the authorities took a number of steps to strengthen the institutional base of the rule, while selecting an initial structural target that was probably more ambitious than would have been required to ensure both short-term macro stability and medium term debt sustainability. This prudent course of action contributed significantly to the success of an

approach which, while already common in a number of advanced countries, had few precedents among emerging markets, and none at all in LA.

The SFR came under some stress during the global financial crisis of 2008-09 that hit Chile quite hard. Given the absence of an escape clause in the rule, the government's decision to support the economy through a large (4 per cent of GDP) fiscal stimulus package (well justified, given Chile's strong fiscal sustainability indicators) inevitably required a violation of the rule in both 2009 and 2010. The new government that took office in 2010 decided to appoint a Commission of experts to carry out a comprehensive review of the rule and recommend any needed revision. The Commission's report was released in June 2011. Its main recommendations include:

- improvements in the methodology of estimation of some of the rule's parameters;
- relating the choice of the target to the cyclical position;
- inclusion of escape clauses; and
- the creation of a fiscal watchdog.

The government has not yet reacted officially to the Committee's recommendations.

6.2 Colombia

Among LA countries where the introduction of a SFR is currently under consideration, Colombia has made the most progress to date, by formulating a new fiscal responsibility law that includes a SFR, approved by the Congress in June 2011.

The law establishes the framework for the rule, leaving significant details to future regulations. Specifically, it establishes a ceiling of 1.5 per cent of GDP for the overall structural deficit of the central government[17]. The budget balance is adjusted for the output gap and for a (not further specified) transitory component of revenues from non-renewable resources. A transition period to 2015 is proposed for convergence of the structural deficit to the target.

The law allows for a temporary deviation from the structural target in case of a shortfall of actual from potential growth, to accommodate active fiscal stimulus of up to 25 per cent of the gap. Excesses over the target have to be corrected within two years, but there are no penalties for non-observance of the rule. The law includes (rather broadly defined) escape clauses, giving to the Government the power to invoke them. It also proposes various changes in the budget process, to facilitate implementation of the rule. Among them is the creation of a Saving and Stabilization Fund and of a mechanism (*Bolsa Concursable para el Gasto Nuevo*) to allocate the "fiscal space" available under the rule for new spending programs. This is modeled on a similar mechanism used in Chile. The law does not envisage the creation of a fiscal watchdog, but it requires the setting up of an independent expert panel to provide inputs into the estimation of the structural balance.

6.3 Brazil

Following decades during which endemic weaknesses and inadequate control of the public finances contributed importantly to macro-economic instability in Brazil, the country embarked in the late 1990s on a sustained fiscal adjustment, marked by high and rising primary surpluses of the consolidated public sector. The adjustment reflected strengthened policies; institutional improvements; and, especially since the mid-2000s, the beneficial effects on the public finances of a favorable external environment (strong external demand, high commodity prices and low

[17] As mentioned in Section 5 above, sub-national governments in Colombia are subject to relatively strict (not cyclically adjusted) borrowing limits.

international interest rates) and of increased domestic policy credibility. The resulting moderation in the public debt and the improvement in its structure allowed a strongly countercyclical response to the downturn in activity in the wake of the global financial crisis of 2008-09, in sharp contrast with the typically pro-cyclical fiscal responses to crises in the 1980s and 1990s. As a result, the Brazilian economy emerged from the downturn with remarkable speed and relatively small economic and social costs.

Fiscal policy has remained, however, strongly expansionary during the subsequent cyclical upswing, fueling an unsustainable pace of domestic demand growth, a pick-up of inflationary pressures and a significant deterioration of the external current account in 2010. Arresting and ultimately reversing these trends has become an important short-term imperative for macroeconomic, and in particular fiscal policy in Brazil. The adoption of a SFR could contribute to a more cyclically neutral (and ultimately more sustainable) conduct of fiscal policies in the future.

Brazil meets in principle the main pre-conditions for establishment of a SFR, at least for the federal government:

- no significant short-term financing constraints, and sustainable debt dynamics under a range of plausible scenarios;
- flexible exchange rate and monetary policy frameworks;
- a relatively strong budget framework (albeit marred recently by increasing resort to quasi-fiscal operations)[18] and sound PFM systems;
- a well-developed statistical base, and strong technical capacity within and outside the government.

The adoption of a numerical rule, as opposed to the current rolling three year fiscal framework, would strengthen fiscal discipline and increase pressures to address major structural fiscal reform needs in Brazil. But, to be effective, such a rule would require strong political support, the existence of which is unclear at present. Therefore, it may be preferable for the authorities to begin by systematically calculating and reporting cyclically-adjusted fiscal indicators, to inform the choice of the primary balance targets over the cycle.

This approach could be complemented by a number of other institutional reforms to strengthen fiscal management in the years ahead:

- the announcement by the government of its commitment to declining target paths for both the gross and the net public debt over the medium term, and to primary surplus targets consistent *ex ante* with such paths, with a simultaneous commitment to revisit each year (and adjust as needed) the primary surplus targets to ensure compliance with the debt targets. This would represent a strong signal of commitment to medium-term fiscal sustainability;
- a clarification in the budget document of the nature and amount of quasi-fiscal operations (such as funding of financial and non financial public enterprises not included in the budget; and private-public partnerships), with a systematic and transparent analysis of their future costs and risks for the public finances;
- refraining from (or at a minimum transparently disclosing) one-off revenues and/or anticipations of receipts and delays in expenditures that distort the assessment of the budget stance;
- the early passage of the proposed new organic budget law (*Lei de Responsabilidade Orçamentária*) which has been pending in Congress for over two years, and which would

[18] In recent years, the coverage of the target variable (the primary surplus of the consolidated public sector) has been reduced through the exclusion of some key public enterprises and of a progressively expanding set of budgetary investments. Also, the meaningfulness of the primary balance as an indicator of the fiscal policy stance has been weakened by a significant use of one-off revenues and quasi-fiscal operations.

significantly strengthen and modernize the budget process; and

- the creation of an independent fiscal council/watchdog responsible for vetting budgetary projections and publicly reporting on a timely basis on the consistency of budgetary developments with the fiscal targets.

7 Conclusions

This paper has argued that, given LA's historical tendency towards pro-cyclical fiscal policies, the adoption of well designed and firmly implemented SFRs could in principle help reduce fiscal pro-cyclicality and promote sustainability in the region. This is supported by the fact that an important determinant of past pro-cyclicality (the emergence of tight financing constraints during adverse external shocks) has been significantly reduced (although probably not eliminated). Chile's broadly successful experience with a SFR witnesses to the benefits of such an approach.

However, the paper has also argued that there are several important prerequisites for the effective adoption and implementation of SFRs:

- first and foremost, a strong political commitment to the observance of the rule;
- a reasonably stable macro-economic environment, especially at the outset of the rule;
- a minimum set of PFM requirements, in terms of capacity to: formulate reliable budgetary projections; monitor the execution of the approved budget and respond on a timely bases to developments threatening the achievement of the rule's target; and appropriately account, and transparently report on the budget execution;
- reliable and timely fiscal statistics, and the capacity to obtain robust estimates of the relevant variables (potential output; trend commodity prices; and budgetary elasticities);
- adequate external scrutiny, not only *ex post* (through the traditional audit institutions), but preferably also throughout the budgetary process, through independent fiscal watchdogs; and
- appropriate enforcement mechanisms, including requirements of timely correction of deviations of budget outcomes from the target.

While several LA countries already broadly meet the main technical requirements for the adoption of a SFR, it is unclear at this time how many of them have the necessary political commitment to make a SFR (or for that matter any numerical fiscal rule) work effectively. It is encouraging that Colombia has recently adopted a fiscal responsibility law including a SFR, although with a number of important details still to be fleshed out; and that reportedly countries like Brazil, Peru and Uruguay are actively considering the adoption of a SFR. In these and other countries of the region, it may be appropriate for the authorities to begin calculating and utilizing systematically structural fiscal balances as indicators of the fiscal stance, to inform the choice of the annual or medium-term budget targets, before moving to enshrine them in a fiscal rule. Some countries could also benefit from shadowing a SFR before adopting it formally (as Chile did during part of the 1990s). This would allow refining the technical aspects of the approach and strengthening the relevant institutions, before committing the credibility of fiscal policies to the observance of a formal rule's target.

REFERENCES

Alesina, A., R. Hausmann, R. Hommes and E. Stein (1996), "Budget Institutions and Fiscal Performance in Latin America", IADB, Working Paper, No. 394.

Balassone, F. and M.S. Kumar (2007a), "Cyclicality of Fiscal Policy", in T. Ter-Minassian and M.S. Kumar (eds.), *Promoting Fiscal Discipline*, pp. 19-35, International Monetary Fund, Washington (D.C.).

Barnett, S. and R. Ossowski (2003), "Operational Aspects of Fiscal Policy in Oil-producing Countries", in J.M. Davis, R. Ossowski and A. Fedelino (eds.), *Fiscal Policy Formulation and Implementation in Oil-producing Countries*, International Monetary Fund, Washington (D.C.).

Barnett, S. and A. Vivanco (2003), "Statistical Properties of Oil Prices: Implications for Calculating Oil Wealth", in J.M. Davis, R. Ossowski and A. Fedelino (eds.), *Fiscal Policy Formulation and Implementation in Oil-producing Countries*, International Monetary Fund, Washington (D.C.).

Corbo, V., R. Caballero, M. Marcel, F. Rosende, K. Schmidt-Hebbel, R. Vergara and J. Vial (2011), *Propuestas para Perfeccionar la Regla Fiscal*, Informe Final del Comité Asesor para el Diseño de una Política Fiscal de Balance Estructural de Segunda Generación para Chile, Santiago (Chile).

Daude, C., A. Melguizo and A. Neut (2010), "Fiscal Policy in Latin America: Counter-cyclical and Sustainable at Last?", OECD, Development Center, Working Paper, No. 291, Paris (France).

Debrun, X., D. Hauner and M.S. Kumar (2009), "Independent Fiscal Agencies", *Journal of Economic Surveys*, Vol. 23, No. 1, pp. 44-81.

DIPRES (2005), "Informe de Finanzas Publicas. Proyecto de Ley de Presupuestos del Sector Publico para el Año 2006", available at: http:www.dipres.cl/572/articles-37447doc pdf.pdf

European Commission (2010), "Public Finance Report in EMU 2010", *European Economy*, No. 4/2010.

Fedelino, A., A. Ivanova and M. Horton (2009), "Computing Cyclically Adjusted Balances and Automatic Stabilizers", IMF, Technical Note, published on the IMF.org website.

Girouard, N. and C. André (2005), "Measuring Cyclically-adjusted Budget Balances for OECD Countries", OECD, Economics Department, Working Paper, No. 434.

Hagemann, R. (2010), "Improving Fiscal Performance through Fiscal Councils", OECD, ECO Working Paper, No. 829, Paris (France).

Kopits, G. (2004), "Overview of Fiscal Policy Rules in Emerging Markets", in G. Kopits (ed.), *Rules-based Fiscal Policy in Emerging Markets. Background, Analysis, and Prospects*, pp. 1-11, Palgrave.

"Low-Income Countries", IMF, Working Paper, WP/05/24.

Larch, M. and A. Turrini (2009), "The Cyclically-adjusted Budget Balance in EU Fiscal Policy Making: A Love at First Sight Turned into a Mature Relationship", *European Economy – Economic Papers*, No. 374.

Larrain, F. (2008), "Chile Menos Volátil?", *El Trimestre Económico*, No. 299, July-Sept.

Lefort, G. (2006), “Política Fiscal con Meta Estructural en Experiencia Chilena”, Powerpoint presentation offered at the Second Annual Meeting of the LAC Debt Group in Cartagena, Colombia.

Maliszewski, W. (2009), “Fiscal Policy Rules for Oil-producing Countries: A Welfare-based Assessment”, IMF, Working Paper, No. WP/09/126.

Marcel, M. (2009), “La Regla de Balance Estructural en Chile: Diez Años, Diez Lecciones”, mimeo.

Perry, G., L. Serven and R. Suescun (2008), “Fiscal Policy, Stabilization and Growth”, Washington (D.C.), The World Bank.

Stein, E., E. Talvi and A. Grisanti (1998), “Institutional Arrangements and Fiscal Performance: The Latin American Experience”, NBER, Working Paper, No. 6358, Cambridge (MA), NBER.

Sutherland, D., R. Price and I. Joumard (2005), “Fiscal Rules for Sub-central Levels of Government: Design and Impact”, OECD, Economics Department, Working Paper, No. 465.

Ter-Minassian, T. (2011), “Main Fiscal Challenges for Brazil”, in *CESifo Economic Forum*, No. 1, Munich, Germany.

Ter-Minassian, T. and A. Fedelino (2010), “Impact of the Global Crisis on Sub-national Governments’ Finances”, in IEB (ed.), *Fiscal Federalism Report*, Barcelona (Spain).

Villafuerte, M., P. Lopez-Murphy and R. Ossowski (2010), “Riding the Roller Coaster: Fiscal Policies of Non-renewable Resource Exporters in Latin America and the Caribbean”, IMF, Working Paper, No. 10/251, Washington (D.C.).