Inter-American
Development Bank

Fiscal and Municipal
Management Division

DISCUSSION PAPER

No. IDB-DP-288

Structural Fiscal Balances: Methodological, Conceptual, and Practical Alternatives

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June 2013

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http://www.iadb.org

Abstract*

This paper discusses the merits of alternative definitions of the structural budget in the context of their use in the design and implementation of fiscal rules. To this end, the paper argues that there are three different purposes behind the notion of a structural budget balance: (a) separating permanent from temporary fiscal changes, (b) separating the cyclical from noncyclical components, and (c) separating discretionary from non-discretionary changes. This could lead to the interpretation of the structural budget balance as a permanent balance, a cyclically-adjusted balance, or a discretionary balance, respectively. The paper identifies and measures the items that differentiate the three concepts, and assesses each one on the basis on their analytical soundness, their methodological requirements, their empirical feasibility, and their usefulness as the basis of a fiscal rule.

JEL Codes: E62, H60
Keywords: Fiscal Policy, Fiscal Rules, Structural Budget Balance

* This paper was originally developed with support from CIEPLAN.

1. Introduction

After being mostly wiped out by the global financial crisis of 2008–09, fiscal rules are now back in full swing. According to the IMF more than half of the existing fiscal rules were suspended, abolished, or considered unsustainable at the onset of the international financial crisis (IMF, 2009). Only three years later, the U.S. administration and congress have agreed to put to the vote a proposal to write a balanced budget amendment into the Constitution, while the leaders of France and Germany have proposed that all members of the EMU should adopt a high-ranking golden fiscal rule in the next few months. Spain has been the first country to follow this advice through a bipartisan agreement to amend its constitution, and Italy has committed to the same.

How can one understand this apparent contradiction? The main problem with pre-crisis fiscal rules is that they were not designed for a shock as violent as the financial crisis; they were too rigid or did not have escape clauses that could be invoked when necessary to make room for large stimulus packages. Fiscal rules were rediscovered in 2011 as nations' focus turned to fiscal sustainability and as countries struggled to gain credibility for their policies and recover confidence among investors and the public. But surely they should not be exposed to the same problems as their predecessors; post-crisis fiscal rules must be different from pre-crisis ones.

One consequence of the failure of many fiscal rules at the onset of the financial crisis is the valorization of structural balance rules as compared to rules that targeted the actual headline balance, public debt, or government spending. Particularly evident in Europe, this development has a very concrete foundation: two of the most resilient countries in Europe during the financial crisis—Sweden and Switzerland—have conducted fiscal policy on the basis of a structural fiscal rule for more than 10 years.

The main reason for the growing popularity of structural fiscal rules is that they seem to offer the best balance between medium-term sustainability and short-term flexibility. Structural balances factor out short-term cyclical fluctuations in revenues and some expenditures, allowing automatic stabilizers to operate without affecting compliance with the policy structural target.

But as other potential benefits—such as separating out discretionary fiscal policy, revealing the government's underlying policy, or measuring permanent government

income—have been added to the list, analytical and methodological foundations of structural rules have become more confusing. This diversification of objectives, while strengthening the rules' political appeal, mix different concepts that may produce alternative methodological designs for measuring a structural balance and using it for creating and implementing fiscal policy. Blanchard (1990) outlined these conceptual problems more than 20 years ago.

The differences between various versions of structural balance rules have surfaced from time to time in the practical experience. Larch and Turrini (2009) provide concrete examples of compromises made in estimating cyclically-adjusted budget balances (CABs) for fiscal surveillance under the Stability and Growth Pact (SGP) in Europe, which ultimately limited their ability to provide early warnings of fiscal disequilibria. Likewise, a heated debate emerged in Chile when a decision to discount transitory tax cuts in estimating such balance was questioned by an advisory committee to improve the structural balance rule (Comité Asesor, 2011; Velasco and Arenas, 2010).

This paper discusses the merits of alternative definitions of the structural budget in the context of their use in the design and implementation of fiscal rules. To this end, the paper argues that there are three different purposes behind the notion of a structural budget balance: (a) separating permanent from temporary fiscal changes, (b) separating the cyclical from noncyclical components, and (c) separating discretionary from non-discretionary changes. This could lead to the interpretation of the structural budget balance as a permanent balance, a cyclically-adjusted balance, or a discretionary balance, respectively. The paper identifies and measures the items that differentiate the three concepts, and assesses each one on the basis on their analytical soundness, their methodological requirements, their empirical feasibility, and their usefulness as the basis of a fiscal rule.

2. Conceptual Framework

2.1. Fiscal Indicators and the Assessment of Fiscal Stance

Structural fiscal balances have a long history in economics, dating back to the end of WWII, when attempts were made at measuring what would be the fiscal balance without the war effort and how the government could prevent fiscal policy to deepen a post-war slump (Kaldor, 1944). Similar analyses were applied by E. Cary Brown (1956) to assess fiscal policy during the Great Depression, by Blinder and Solow (1974) to optimize the contribution of fiscal policy to full employment, and by Hansen (1969) to assess fiscal policy

in developed countries. These exercises fell broadly within the realm of economic literature on "fiscal stance indicators," culminating with the use of structural or cyclically adjusted balances in assessing fiscal policy by the IMF and the OECD, respectively, over the last 20 years. The main factor motivating this literature is that the correlation between GDP, fiscal revenues, and some expenditures makes a substantial part of actual fiscal balances endogenous to economic activity, obscuring the interpretation of the direction of fiscal policy decisions.

While fiscal stance indicators were originally used for purely academic and analytical purposes, some countries started considering them as a possible basis for fiscal rules, as the latter became fashionable at the end of the 1990s. The early movers in this direction were Sweden, Switzerland and Chile, which adopted some form of structural balance rule in 1996, 2003, and 2001, respectively. According to a 2009 IMF survey, 11 percent of countries already had structural balance rules at that time, but the list has grown quickly in the last few years and will probably continue growing if EMU countries follow proposals from France and Germany in that direction.[1]

2.2. Objectives of Structural Balances

While there is no precise definition of "structural" in public finance,[2] it is usually defined as the fiscal balance that would hold if the economy was at its potential or trend level. While some authors have attempted to devise methods to directly measure the structural balance, using a bottom-up approach and some support of econometrics (Hagemann, 1999), the most common practice is to obtain it by extracting the "nonstructural" part, which may be easier to measure. Thus structural balances are usually defined not so much by what they are, but by what they exclude. In particular, a structural balance is commonly obtained as:

$$(1)\quad BE = B - NSB$$

Where BE: structural balance, B: actual (headline) balance, and NSB: non-structural component of the budget.

[1] It should be noted that Germany has been applying a structural budget rule since 2009, while France convened a working group, led by Michel Camdessus, that proposed a similar scheme. See Koske (2010), and Groupe de Travail (2010), respectively.

[2] See however, an attempt to provide such definition in the European context in Kremer et al. (2006).

The most common notion of the budget's nonstructural component is the effect of the business cycle on fiscal revenues and some expenditures (ECP). The IMF and the OECD have used this concept to build fiscal stance indicators for developed countries for several decades. The process requires having a measure of the amplitude of business cycle fluctuations and an estimate of how elastic fiscal revenues and expenditures are with respect to such fluctuations. This equation can be expressed as:

$$(2)\ NSB = ECP = \mu\ (Y-Y^*)$$

Where μ is a vector of elasticity of fiscal revenues and expenditure to GDP; Y = actual GDP and Y * = potential or trend GDP.

Advocates of structural budget measures and/or structural balance rules have cited a number of advantages to them. In doing so, they have had to adopt a concrete notion of the budget's nonstructural component. For instance, Hagemann (1999) explains the motivation to estimate structural budget balances to analyze or formulate fiscal policy in the following terms:

> In assessing or formulating fiscal policy, failure to distinguish between temporary and permanent influences on the budget poses the risk that fiscal lever may be over- or under-adjusted in response to budgetary developments that might be reversed automatically over the course of the business cycle. Discretionary policies aimed at offsetting short-term effects may be self-defeating. On the one hand, the eventual reversing of offsetting policies could create uncertainty for economic agents and have a destabilizing impact on financial markets. On the other hand, budget deficits, if unchecked, could lead to an unsustainable accumulation of debt over the medium term. (…) It is therefore important to disentangle temporary from permanent influences on the budget balance in order to gauge the medium-term orientation of fiscal policy.

Similarly, Fiess (2002) in analyzing the Chilean structural balance rule states that:

> The structural balance can be useful in defining a medium-term fiscal target. As the economy and fiscal balances are subject to transitory shocks, reference to the structural balance can help policy makers avoid unnecessary and often procyclical policy adjustments. Transitory shocks to fiscal balances require no adjustments to be made, as they will be reversed over the

> course of the business cycle, while permanent shocks need attention. The structural balance can also be interpreted as an indicator for discretionary fiscal policy. If the business cycle leads to non-discretionary changes in fiscal policy through automatic stabilizers, while the business cycle itself is partially driven by discretionary fiscal policy measures, the structural balance should be a better indicator of shifts in the discretionary fiscal policy stance.

More recently, Larch and Turrini (2009), in explaining the use of a CAB measure to monitor fiscal policy in the European Union argue that:

> The main beauty of the CAB lies with its aspiration to measure, at low costs, the underlying budget balance, that is, the fiscal position net of temporary factors that can be expected to even out over time. The CAB is used for several purposes in the analysis and conduct of fiscal policy: (i) to separate the contribution of discretionary fiscal policy to a given change in the headline deficit from the effect of the economic environment, (ii) to assess fiscal impulse; and (iii) to examine whether a given fiscal policy is sustainable.

In the three quotations above, structural balance measures can be seen as aimed at four objectives:

a) Separating the budget balance between cyclical and noncyclical components
b) Separating the discretionary and nondiscretionary components
c) Distinguishing permanent and transitory components
d) Distinguishing factors that operate in the short-term and long-term

Many years ago Blanchard (1990) noted that the CAB estimated by the OECD was already being used for too many purposes, including estimating the balance at full employment, as a measure of discretionary policy, as a measure of fiscal sustainability, and as a measure of the effects of fiscal policy in aggregate demand and output. He argued that the CAB could not serve all such purposes at the same time and that separate indicators should be used for different purposes instead.

While in the last 20 years distinctions between fiscal impact, fiscal sustainability, and fiscal stance have become more clear-cut, Blanchard's questions remain relevant for

structural balances as fiscal stance indicators.[3] In other words, the question is whether objectives (a) to (d) listed above can be attained by the same indicator. Dos Reis, Manasse, and Panizza (2007) examined this question, concluding that it is not possible for a CAB obtained by subtracting only the effect of the business cycle to serve as a measure of fiscal discretion or of permanent policy change in the presence of stochastic trend shocks and structural breaks.

In more general terms, the notion of a "structural balance" is inevitably ambiguous and the different objectives outlined in (a) to (d) above can be met only by different indicators. In particular, three alternative interpretations are put forward for a structural fiscal balance that have varying underlying concepts so should be measured differently: (i) a cyclically adjusted balance, (ii) a discretionary fiscal policy balance, and (iii) a permanent balance.[4] These are defined in Table 1, below, on the basis of revenue and expenditure items that should be deducted from the actual (headline) budget balance.

[3] It should be noted that part of the response to these questions is to acknowledge that fiscal stance indicators are better at responding to short- to medium-term issues rather than to long-term ones. For instance, fiscal sustainability issues arising from social security reforms are best measured by a different set of fiscal sustainability measures and long-term projections.

[4] The distinction between short- and long-term has not been considered for the reasons given in the footnote above.

Table 1. Alternative Structural Fiscal Measures

	Cyclically adjusted balance	Discretionary policy balance	Permanent balance
Revenues	Effect of the business cycle on fiscal revenues (taxes, social security contributions, surpluses of public enterprises).	Effect of the business cycle on fiscal revenues (taxes, social security contributions, surpluses of public enterprises). Effect of other exogenous economic variables (exchange rate, interest rates, inflation) on fiscal revenues. Effect of exogenous factors on revenues (natural disasters, external conflicts, strikes).	Effect of the business cycle on fiscal revenues (taxes, social security contributions, surpluses of public enterprises). Effect of other exogenous economic variables (exchange rate, interest rates, inflation) on fiscal revenues. Effect of exogenous factors on revenues (natural disasters, external conflicts, strikes). Effect of one-off events on fiscal revenues (licenses, tax amnesties, fines, tax from mergers). Transitory measures affecting fiscal revenue (temporary tax measures).
Expenditures	Effect of the business cycle on government expenditures (unemployment insurance, transfers to the poor).	Effect of the business cycle on government expenditures (unemployment insurance, transfers to the poor). Effect of other exogenous economic variables (exchange rate, interest rates, inflation) on government expenditures. Effect of exogenous factors on government expenditures (natural disasters, external conflicts, strikes).	Effect of the business cycle on government expenditures (unemployment insurance, transfers to the poor). Effect of other exogenous economic variables (exchange rate, interest rates, inflation) on government expenditures. Effect of exogenous factors on government expenditures (natural disasters, external conflicts, strikes). Effect of one-off events on government expenditures (fines, compensations from court rulings, international compensations). Transitory measures affecting government expenditures (temporary programs, subsidies, investments).

Table 1 shows that the CAB is the simplest version of a structural balance, excluding only those temporary or exogenous changes in fiscal revenues and expenditures that can be attributed to the business cycle. An indicator of discretionary policy, in turn, should also exclude the fiscal effect of changes in other macroeconomic variables, such as exchange rates, interest or inflation, and other exogenous influences on the budget, such as natural disasters, while a permanent balance measure should deduct all temporary factors, as well. The latter includes not only the business cycle and other exogenous factors with a temporary effect on revenues and expenditures, but also discretionary measures that have temporary effects, such as one-off operations, temporary tax measures, and spending programs.

In Chile, some orders of magnitude for these components can be provided on the basis of information provided by that country's budget office and a commission that recently reviewed its structural fiscal rule. These estimates are complemented with some information from other sources when available (see Table 2 on page 12).

Cyclical component of the budget. The cyclical component of the budget can be measured by variances in fiscal revenues and expenditures that can be attributed to output fluctuations. This measurement can be obtained by using the equation 2 above NSB = ECP = μ (Y-Y*), multiplying the variance of GDP around a long-term trend attributed to the business cycle by the elasticity of revenues and expenditures to GDP. Only revenues and expenditures that have an automatic relationship with the business cycle should be considered in this estimate. On this basis, Chile's Advisory Committee for the Design of a Second-generation Structural Rule ("Advisory Committee") estimated that the country's non-copper cyclical budget component amounted to approximately 0.4 percent of GDP (measured only on the revenue side as no spending item was found to respond automatically to the business cycle). This figure is lower than the average cyclical component of revenues in OECD and European countries—estimated at 0.5 percent and 0.53 percent of GDP, respectively, by Daude, Melguizo, and Neut (2010) and Larch and Turrini (2009). On the expenditure side, according to the same authors, OECD countries add a further 0.75 percent of GDP. Despite the Advisory Committee's conclusions, Marcel, Cabezas, and Piedrabuena (2010) attempted to estimate a "revealed" expenditure response to the business cycle in Chile. By adding up subsidies, compensations, and bonuses that the government provided in response to the financial crisis of 2008–09, these authors estimate a maximum cyclical component of 0.24 percent of GDP, which symmetrically spread over the business cycle would produce an

average deviation of a quarter of that value. This estimate, included in Table 2, suggests a consolidated cyclical impact on non-copper revenues in Chile of 0.46 percent of GDP, a lower figure than the consolidated estimate for the OECD and EU countries of 0.58 percent of GDP.

Effects of other exogenous macro variables. The main macro variables with possible exogenous effects on public finances are exchange rates, interest rates, inflation, and commodity prices. The paper that gave origin to the Chilean fiscal rule explored each of these components, arguing that except for the price of copper, each had a considerably smaller effect on the budget, did not show a stable correlation with the business cycle, and could be easily neutralized by discretionary policy. The Advisory Committee's recent review of the Chilean fiscal rule reached similar conclusions, with the variance in exchange rates and inflation surprises amounting to 0.1 percent and 0.75 percent of GDP, respectively.

As for interest rates, Chilean authorities attempted to neutralize effects on the structural balance of temporary changes in interest earned on sovereign funds in 2009. Such adjustment was dismissed by the Advisory Committee a year later on the grounds that (i) any adjustment should apply symmetrically to interest earnings and expenses, resulting in a negligible effect with nearly zero net financial liabilities; (ii) the main determinant of the cyclical behavior of net interest payments by the government may not be the interest rate so much as the volume on net public debt itself; and (iii) to incorporate interest net payments into the nondiscretionary part of the budget, it would be necessary to assume a "normal" level of interest payments that did not have an obvious value. If the adjustment were made on both revenue and spending sides, and if a long average of interest rates were taken as "structural," the "exogenous" component of interest rates could be estimated at 0.02 percent of GDP. However, the Advisory Committee proposed to formulate and assess fiscal policy on the basis of a primary balance, that is, altogether excluding interest received and paid. This approach, which has been followed by several countries, has been also endorsed by Ter-Minassian (2010).

Finally, commodity price fluctuations—with a few exceptions—may become quite significant in emerging countries but have a much more limited impact on the budgets of developed countries. In the case of Chile, fluctuations in copper prices around a long-term value have an average impact on fiscal revenues of some 1.5 percent of GDP. This impact has been included in the estimate of structural balance as a part of the cyclical component of

the budget, given the historical relationship of economic activity and terms of trade in the country. A similar approach has been recently proposed with respect to hydrocarbons in a new structural fiscal rule for Colombia.[5]

Other exogenous shocks. Other exogenous shocks to government revenues and expenditures may include a vast array of contingencies such as natural disasters, external conflicts, security threats, strikes, and protests. A very conservative estimate could be based on natural disasters, since they are the most common source of external contingencies on public finances across the world. In Chile, the range of estimates for the fiscal impact of natural disasters would be topped with the 8.8 (Richter scale) earthquake of February, 2010, that was estimated to have a generated a direct loss of 17 percent of GDP, albeit mostly concentrated in the private sector (housing and businesses), with reconstruction needs to be funded by the government estimated at 0.8 percent of GDP for the three following years.[6]

A recent paper by Andersen et al. (2010) for the Inter-American Development Bank (IDB) estimates that natural disasters (including hurricanes and volcano eruptions) have been causing increasing damage in Latin America, approaching an annual cost of 0.4 percent of GDP in 2008. In developed countries, the cost of natural disasters may be considerably lower because of better prevention systems and more developed infrastructure. An event such as the 2011 Tohoku region earthquake and tsunami in Japan has been estimated to cost the Japanese government US$300 billion, with reconstruction needs at about 1 percent of GDP to be distributed over several years. Given the extensive damage of that earthquake, the annual average cost of natural disasters in OECD countries has been estimated at a lower figure of 0.1 percent of GDP. Table 2 shows estimated annualized comparative costs of natural disasters from diverse sources in Chile and developed countries.[7]

One-off operations. One-off operations have gained some notoriety in developed countries recently: both the OECD and the EC have considered the possibility of excluding these from CAB estimates. Only some extraordinary transactions such as license sales, pension transfers, and land sales have been approved for discounting from the budget balance despite their

[5] Marcel (2013) argues that fiscal revenues from copper might be treated in a radically different way by either (i) creating a truly intertemporal sovereign wealth fund, (ii) treating copper revenues as a permanent yield on an asset, or (iii) hedging against copper price changes by issuing copper-price related securities.
[6] Estimates provided by the Chilean Ministry of Finance and Central Bank
[7] Natural disaster risks can also be reduced by market mechanisms, such as sovereign parametric insurance or cat-bonds, referred to in Andersen et al. (2010).

equaling a sizeable 1 percent of GDP per annum (Jounard et al., 2008; European Commission, 2004). In the case of developing countries, one-off transactions may be considerably larger, especially in smaller economies, as taxes on some major operations may represent a higher share of total revenue. In some cases, such operations may be sufficiently large to have a more permanent effect on the budget. In the case of Chile, there have been extraordinary events reported in official Budget Office submissions to Congress between 2002 and 2006. During that period, these events equaled an average 1.2 percent of GDP, with a substantial portion comprising taxes on capital gains from international acquisitions of Chilean companies and taxes on inheritance by wealthy individuals.

Transitory discretionary measures. These measures may, in principle, include any policy decision that has a bearing on revenues and expenditures and is applied on a time-bound basis. On the revenue side these may include temporary tax increases, temporary tax cuts, or time-bound tax breaks. In Chile, rather large temporary tax changes have recently been applied. In 2009 a set of temporary tax cuts was adopted as part of a fiscal stimulus package in response to the financial crisis. A little more than a year later, taxes were temporarily raised to fund post-earthquake reconstruction. These tax changes amounted to –2.4 percent and +1 percent of GDP, respectively, but they were part of a much longer list of temporary tax measures. Temporary tax changes are not unusual in developed countries; in fact, many countries have adopted temporary tax reductions or increases as part of different stages of the economic crisis that began in 2007. A 2011 OECD study identified temporary tax hikes integrating consolidation packages in a few countries, including Denmark and Slovakia.

More recently, almost all of the so-called "peripheral" Euro countries have included some temporary tax increases in their adjustment packages. As for temporary expenditure measures, alternatives are considerably more numerous and include temporary programs and subsidies, policies with sunset clauses, and even public investment. Studies on budget flexibility indicate that the discretionary component of public expenditure may range from a small value in in budgets that are stagnant or excessively rigid to nearly 30 percent in others. If public investment is taken out of the picture, "temporary spending" may still amount to some 3 percent of GDP without a clear distinction between that of developing and developed countries.

Table 2. Estimates of Nonstructural Budget Components *(as a percentage of GDP)*

	Chile	Developed countries
Cyclical component of the budget	0.4	0.50
- **Revenues**	0.06	0.075
- **Expenditures**		
Budgetary impact of other external macro variables		
- **Exchange rates**	0.1	0
- **Interest rates**	0.02	0.6
- **Inflation**	0.76	0.3
- **Commodity prices**	1.5	0.05
Other exogenous shocks		
- **Natural disasters**	0.4	0.1
One-off operations	1.2	1.0
Transitory revenue changes	1.2	n.a.
Transitory spending	2.0	3.5

Sources: Chile: Marcel et al. (2001), Marcel, Cabezas, and Piedrabuena (2010), Central Bank of Chile, and author's estimates on the basis of reports and data from the Budget Office; Developed Countries: Larch and Turrini (2009), Daude, Melguizo, and Neut (2010), and author's estimate based on OECD data.

Considering the data in Table 2, the main conclusion is that differences between cyclically adjusted, discretionary, and permanent budget measures can be quite substantial, especially when the focus is on changes over time. These differences are particularly large for a permanent budget and are capable of reverting to a cyclical adjustment very easily. For these reasons, confusion over the three structural budget measures should be treated very seriously from conceptual, methodological, and empirical point of view.

3. Assessing Alternative Notions of Structural Fiscal Balances

This section attempts to make a systematic comparison of the three alternative interpretations for a structural fiscal balance that are outlined above. Again, these are: (i) a CAB, (ii) a discretionary fiscal policy measure, and (iii) a permanent balance measure (PB). This comparison is made at three levels: analytical soundness, methodological simplicity, and empirical feasibility. While the principles behind each dimension are explained in more detail below, it is possible to summarize the approach herein as trying to identify an indicator that

(i) makes sense from an analytical point of view, (ii) can be readily estimated, and (iii) is not exposed to manipulation from authorities. While such comparisons are made for structural balance as an indicator or measure, the next section revisits the discussion from the perspective of fiscal policy rules.

3.1. Analytical Dimensions

3.1.1. Permanent Balance

The concept of "structural balance" is only quoted in the literature on public finance as a label for some fiscal stance indicators, as described above, so there is no analytically robust definition available for the term. Some authors, notably Buiter and Grafe (2004), have assimilated "structural" to "permanent" balances, suggesting some parallel with the permanent income hypothesis of consumption.[8] The latter, developed initially by Friedman (1957), proposes that consumption decisions of individuals are based not on their current income but on a longer-term view of such income, smoothing out not only random but also cyclical and medium-term fluctuations in income. As permanent income is determined in turn by human capital and wealth, changes in these stocks would have an impact on consumption levels independently of current income flows, an approach that was further developed by Ando and Modigliani (1963) in their life-cycle theory of consumption. Permanent or life-cycle theories of consumption were originally related to public finance only to show that short-term fiscal policy, if perceived as temporary in nature, could have a rather limited impact on demand, with some indirect effects of fiscal policy on individuals' net wealth.

Why not assimilate the permanent income hypothesis of private consumption to public expenditure? Very few authors have attempted to do so, and even fewer have tried to test it empirically, with the exception of Park (1997).[9] The failure to elaborate a parallel approach to fiscal policy can be attributed to three key differences between private

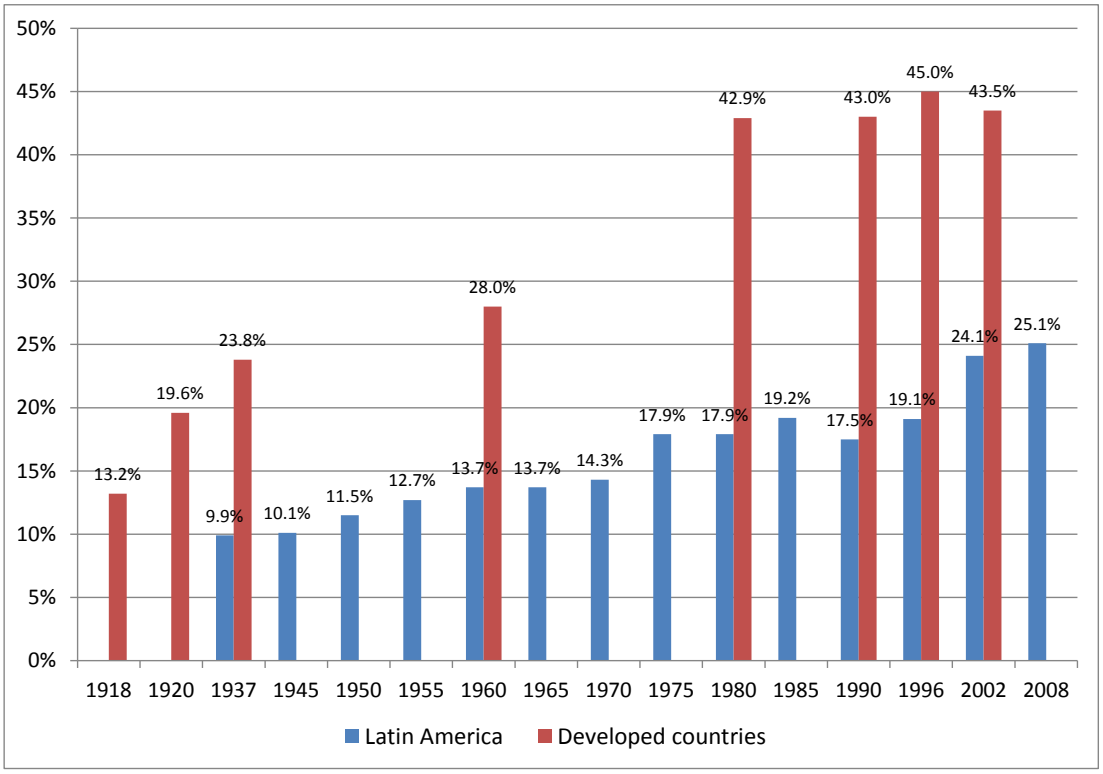
[8] Buiter and Grafe (2004) propose a rule defined on the basis of a PB measure established as "that constant value of the share of taxes in GDP whose present discounted value (over an infinite time horizon) equals the outstanding stock of public debt plus the present discounted value of actual government spending minus government capital income, all taken as shares of GDP."

[9] The only exception to this is the literature on the management of the fiscal rent from natural resources. Several authors, notably Sachs (2007), have proposed that given the relative size of these revenues in some developing countries and the exhaustible nature of such resources, governments should adopt mechanisms, such as sovereign funds to distribute their rents over a longer period of time, possibly extending over several generations. In other words, current spending decisions should be made on the basis of permanent income rather than current revenues from natural resources. This has indeed some resemblance to life-cycle theory spreading through several generations; however, only in a handful of countries do fiscal revenues from exhaustible natural resources account for more than half of fiscal revenues, making these proposals more an exception than a rule.

consumption and public expenditure: (i) the main factor that determines government revenues is not capital or wealth, but the ability to collect taxes, which is based on political decisions; (ii) unlike human beings, governments can be seen as having either an extremely short time span (the length of an administration in the political cycle) or an almost unlimited one (as institutions); and (iii) as a result of factors (i) and (ii), the tax burden may shift considerably over time and across countries, making measurement of forward-looking permanent income particularly difficult.

Figure 1, below, depicts the evolution of government expenditure as a share of GDP in developed countries and Latin American countries from 1918 to 2008. According to these figures, government spending and its corresponding financing roughly doubled in the now developed world between 1918 and 1935 and doubled again, to more than 40 percent of GDP, over the following 50 years. In Latin America, government resources grew at a slower but still sizeable rate—from 10 percent of GDP in 1935 to 25 percent by the end of the period—and they remained basically at half the level of developed countries throughout the last 50 years. If the size of government spending and financing has been so dynamic through the years, how is it possible to estimate or predict its "permanent" level to assess fiscal policy or to formulate it? In the words of Buiter and Grafe (2004), "observance of the Permanent Balance Rule would force governments to make explicit their assumptions about the long-run paths of public consumption, transfer payments and investment."

Figure 1. Long-run Trajectory of the Size of Public Spending in Developed Countries and Latin America, 1918–2008 *(general government expenditure as a percentage of GDP)*



Sources: Developed countries: Tanzi (2005), on the basis of figures of Tanzi and Schuknecht (2000); Latin America; author's estimates on the basis of data from OXLAD and IMF.

Thus, while intuitively attractive, the notion of permanent income in public finance is considerably less developed than in theories about private consumption, which are well documented in the literature. As a reflection, permanent income has so far been applied to a rather restrictive set of cases in public finance, namely to deal with revenues from exhaustible natural resources.

3.1.2. Measures of Fiscal Discretion

Separating the effects of discretionary policy decisions from those deriving from the fiscal budget has perhaps been the most frequently sought objective by indicators proposed in the literature on public finance. This goal could also be termed an attempt to separate "endogenous" effects (arising from policy decisions) from "exogenous" effects on revenues and expenditures (those not under government control).

Measuring fiscal discretion may be needed for a number of reasons, but in particular it seems indispensable when discussing the effectiveness of fiscal policy to modify aggregate demand; this conclusion is clear from literature on rules versus discretion in macroeconomic policy that derives from the seminal work on monetary policy of Friedman (1957), later extended to fiscal policy and intertemporal consistency by Kydland and Prescott (1977). It has been argued that discretionary fiscal policy may be rendered ineffective either by consumer response when such decisions are believed to be transitory or unsustainable (Ricardian equivalence), or in the case of a substantial time lag in applying the policies so that their effects are felt when the policies are no longer needed.

However, some authors have criticized the implication that discretionary fiscal policy is reflected only by active measures aimed at modifying public revenues or expenditures. Dos Reis, Manasse, and Panizza (2007) argue that fiscal policy also acts by omission—that is by consciously deciding not to take action; such omission, of course, is not captured by indicators that only subtract exogenous factors from the budget balance. This view is somewhat connected with the argument of Marcel et al. (2001) for the Chilean case in the sense that the fiscal impact of exogenous changes in macro variables—which differ from the GDP cycle and changes in the price of copper—are small enough to be neutralized by authorities; in that case, if the government does not neutralize small budgetary changes generated by exchange rate or inflation surprises, it may be that agencies have made a conscious decision not to do so—and that that should be interpreted as discretionary policy in itself. Despite these conceptual disputes, measures of discretionary fiscal policy seem to be deeply rooted, not only in the empirical literature on fiscal stance indicators, but also in the theoretical debate on the effectiveness of fiscal policy.

3.1.3. Cyclically Adjusted Balance

A cyclically adjusted balance is better defined by what it excludes than by what it directly measures. How the business cycle affects the budget through changes in tax revenues and unemployment insurance expenditures is a subject that has been widely researched and is an essential part of any macro financial model. Subtracting such changes from the overall balance for the purpose of designing, implementing, and measuring fiscal policy thus appears to be a natural way of letting automatic fiscal stabilizers operate.

Automatic stabilizers have been addressed by the economic literature at least since Keynes, with additional conceptualization and modeling by some of his followers. In the classical Keynesian model, the automatic response to output fluctuations by tax revenues and some expenditures stabilize aggregate demand by reducing the multiplier, changing disposable income in a countercyclical fashion. Keiser (1956) surveyed the early literature on the subject, proposing that an automatic stabilizer be defined by the following conditions: (i) it is permanently installed, (ii) it is endowed with very well-defined purposes and stipulations, and (iii) it is closely connected to indices sensible to the economic cycle, that is, the mechanism starts to act anticyclically as soon as this index shows the need for action.

The simple Keynesian model came under question in the 1970s by the Barro (1974) critique and Ricardian equivalence of rational expectations and no liquidity constraints. Later, however, fiscal automatic stabilizers were vindicated on the grounds of one or more of these assumptions not holding in actual practice (Blanchard, 2000) or of consumers facing uncertain income prospects (Christiano, 1984). Practitioners of fiscal policy have also underscored two advantages that automatic stabilizers have over discretionary fiscal policy: they operate with little time lags—they do not require legislation nor special implementation arrangements—and they are symmetrical over the business cycle, so that deficits arising during a recession are reduced or turned into a surplus once the economy recovers.

On the other hand, in a fiscal system where tax revenues and expenditures are subject to not only cyclical fluctuations but also random, idiosyncratic, and supply-side changes, a CAB measure will be able to purge only the first ones, retaining all the other elements. This will make a CAB measure more volatile than permanent income and discretionary policy alternatives and will make changes in the CAB more difficult to interpret and respond to. These shortcomings, however, can be weighed against the increased simplicity of estimation and can be mitigated by authorities, provided that they are duly aware of the "noise" that the CAB will carry and have maintained enough flexibility in the budget to absorb part of such noise.

3.2. Methodological and Empirical Challenges

If fiscal indicators are to assist in formulating, implementing, or assessing fiscal policy, they need to fulfill a few conditions. Methodologies should be (i) viable and should rely on accurate and accessible data, (ii) transparent and replicable, (iii) as objective as possible and

protected from manipulation by authorities, and (iv) fiscally neutral without inducing systematic bias in fiscal policymaking. The following assesses the three alternative structural budget balance measures on the basis of this criteria.

3.2.1. CAB

Estimating the CAB involves measuring the cyclical component of revenues and expenditures and usually requires three steps (Girouard and Andre, 2005):[10] (i) measuring output cyclical fluctuations, (ii) estimating elasticity of the response of revenues and expenditures to such fluctuations, and (iii) combining both of these and adding across revenue and spending categories to obtain an estimate of the cyclical component of the budget.

The most crucial issue in measuring cyclical fluctuations is to estimate a benchmark potential or trend GDP to compare with actual GDP. A first choice for a fiscal indicator—especially if it is going to be used in a normative way—is to aim for a trend GDP that prevents systematic buildup of deficits and debt. Trend GDP can be conventionally estimated by smoothing out actual fluctuations in output through available statistical filters and extending the series into the future to eliminate time lags. The latter is usually done by estimating a production function and entering expected future values for factor of production and total factor productivity (TFP). In other words, measuring the business cycle requires a sound and transparent methodology, substantial statistical work, and some exogenous assumptions. Experience in the field of public finance, as well as in monitoring and formulating monetary policy is helpful. In addition, many errors in off-sample assumptions may be corrected as assumptions are replaced by actual data over time.[11]

As for elasticities, practitioners of fiscal stance indicators have produced two estimation methods. The first is to obtain a direct estimate using econometrics, which usually

[10] This can be assimilated to automatic stabilizers. Several papers have recently provided comparative estimates of the size of fiscal stabilizers. See Cohen and Follette (2000), Di Bella (2002), and Baunsgaard and Symansky (2009).

[11] Still, it should be noted that trend GDP as defined above is more of a statistical device than an analytical concept. The closer to the latter is "potential GDP," referred to in different strands of the economic literature, from growth theory to unemployment. Potential GDP is considered more of a forward-looking concept, depending not only on the supply of capital and labor but on many other factors affecting efficiency and intensity. Some authors have criticized structural balance indicators for taking trend GDP as a stable, exogenous variable. However, if understood as potential GDP, it may be influenced by many factors other than capital and labor supply, including technological innovations, changes in market efficiency, natural disasters, or public policies at the macro and micro level. These issues may undermine the soundness not only of a CAB structural balance measure but of any other measure that separates out the effect of the business cycle on the budget in a similar fashion.

requires introducing dummy variables or other methods to factor out tax and benefits policy changes. The second method involves making the estimate in two stages: (i) computing the elasticity of each tax to its base by means of a formula that reflects its rules, and (ii) determining econometrically the elasticity of each tax base to GDP. Given that the composition of the tax base is likely to change with the business cycle, experiencing long-run structural shifts, under either of the two methods, it seem desirable to estimate disaggregate rather than aggregate tax elasticities.

In sum, methodologies to estimate the cyclical components of the budget are fairly standard; they rely on accessible data and potential risks and biases are sufficiently known and can be reasonably well mitigated. The better analysts and the public know these risks, the more difficult it is for authorities to manipulate them, as well.

3.2.2. Measures of Fiscal Discretionality

Measuring fiscal discretionality introduces the need to estimate the fiscal impact of exogenous macro variables other than GDP, along with other exogenous shocks to revenues and/or expenditures. While measuring the impact of changes in variables such as exchange rate, inflation, and interest rates is not particularly difficult, the problem lies in providing a "structural" or "long-run" benchmark to use in estimating a fiscal indicator. In other words, the key question is when would a change in any of these variables be considered nondiscretionary or exogenous, and would it have to be deducted from the actual balance? This question has no straightforward answer. While there has been extensive research on the theory and practice of business cycles, there is no such equivalent—no "trend," "structural," "potential," or "natural" value—for these types of price variables. Historical averages are not very helpful either, as these variables would tend to adjust over time according to changes in macroeconomic fundamentals and market developments. Assuming macro assumptions in the budget formulation to be the benchmark for these variables is not a good alternative, as it would increase incentives to authorities to be overoptimistic in order to gain fiscal leeway or praise. Of course, it would be always possible to obtain structural estimates for these variables from a macro model, but that would make the fiscal indicator model-dependent, with no evident advantage over full-fledged macro modeling of public finances.

A possible exception is commodity prices: they are particularly difficult to predict, and their evolution is generally characterized as a "random walk" or it is subject to very long

cycles. In such a case, an appropriate benchmark might be prices in futures' markets, a moving average of past prices, or a survey of forward estimates by experts. Since these approaches are being used in some countries in design of commodity stabilization funds, they could easily be extended to estimating structural fiscal balances.

In the case of other exogenous shocks or contingencies, it has been argued herein that the fiscal impact of natural disasters is easiest to consider; estimating such costs is a natural responsibility of governments in managing the emergency and its aftermath. Some international organizations, such as the World Bank and UN-ECLAC in Latin America, have developed relatively standard methodologies to assess disaster impacts that support the work of governments and donors. However, two dimensions of these assessments may require further elaboration to be considered as a structural balance indicator: (i) the impact of natural disasters in potential or trend GDP, that is, the supply-side effect of the event, and (ii) the cost of reconstruction, as the degree of support to households and businesses is largely a policy decision.

The real difficulty with exogenous shocks appears when these are man-made, such as internal unrest, strikes, court rulings, or international conflicts. The border between endogenous and exogenous shocks may be very disputable in these cases, and cost estimates may be subject to political manipulation—especially when the government is an interested party. Perhaps the only feasible compromise is to overlook these shocks altogether because fiscal responses may be decided and assessed on a different basis than a structural budget measure.

3.2.3. Permanent Balance

To build a permanent balance indicator, it is essential not only to remove exogenous temporary changes in revenues and expenditures, but also to acknowledge that such changes are the product of time-bound policy decisions. On the revenue side, temporary tax measures may include: (i) temporary changes in tax rates, tax bases, or rebates that are programmed to expire and return to previous levels with an irreversible loss in revenues; (ii) tax amnesties, which remove some pending taxpayer obligations in exchange for a small payment, a move that can have an effect on future tax compliance; and (iii) reprogramming of tax payments, devolutions, or rebates, changes that affect only the timing of cash movements, not tax obligations or compliance.

Governments adopt temporary changes in taxation for a number of reasons, including short-term demand management, temporary incentives, political commitments, and funding of temporary spending programs. Given this list of reasons, temporary tax changes are fairly frequent. For example, Marcel, Cabezas, and Piedrabuena (2010) reported 36 temporary tax changes in Chile between 2001 and 2009. As previously suggested, temporary tax measures can be quite substantial.

Many such changes however, are renewed or made permanent before they expire. In some cases, a measure is adopted with a rather experimental purpose and includes the possibility of becoming permanent if successful. In other cases, extending temporary tax measures is forced by a government's fiscal inertia or by the political economy of taxation. One example in the United States is the George W. Bush tax cuts that were extended through an agreement between the administration of President Obama and lawmakers. In Chile, a temporary increase in VAT adopted in the tax reform of 1990 was extended three times and was made permanent in 2006. Renewal of temporary tax changes poses a major methodological challenge to a permanent balance measure: if such changes are deducted from the fiscal balance on the basis of temporality, how to proceed when they are extended or made permanent? Should the adjustment be reversed from that point on or retroactively? This question led the European Commission to abandon the proposals of Buiter and Grafe (2004) for a PB measure, arguing that:

> (…) the issues of recognition of whether current deviations are temporary or permanent, and of the irreversibility of spending decisions should not be underestimated. Assuming that a temporary deviation from the permanent value is indeed originally conceived to remain temporary, the political economy factor could not exclude the irreversibility of decisions taken. Therefore, if a "temporary" programme becomes over time "permanent", a deficit higher than what could have been allowed would have been maintained for a number of years. At that moment, in order to bring the debt down to its initial level, taxes may have to be increased.

Temporary tax changes may be used either to reduce or to increase tax revenues. In Chile, for instance, a temporary corporate income tax increase was adopted to fund reconstruction after the 2010 earthquake. But discounting such changes from the budget balance can run contrary to its original purpose if they were created to fund a temporary spending program. If a temporary tax deduction or surcharge is created for microeconomic reasons such as to cause a

given change in the behavior of economic agents (e.g., buying houses in stock), is it appropriate to force a compensatory spending change by deducting it from structural tax revenues?

Perhaps the only case of temporary tax measures where interpretation and adjustment is straightforward is when such measures change only short-term cash flows without compromising tax obligations or compliance. These cases originate mostly to handle the lag between tax payments and the transactions or earnings that motivate them. Many tax systems establish withholding mechanisms to advance payments before the obligation is definitely determined. Lags, withholdings, and reimbursements may change from time to time either as a result of technical adjustments—in which case they have a one-off effect—or for policy reasons aimed at managing liquidity in the economy. Tax amnesties may result, however, and while it may be debatable whether such amnesties improve tax collection in the short term, they are very likely to erode incentives for tax compliance if taxpayers believe that future amnesties are possible. In such cases, an intended temporary tax measure may have a permanent effect on tax revenues.

If temporary tax changes are difficult to interpret and may distort estimation of structural balances because of their size and frequency, temporary expenditure changes may be even worse. An even larger catalogue of expenditure items are temporary in nature for several reasons: they might include one-off investments in fixed assets, fund temporary or experimental programs, or have their continuity legally limited by the horizon of public budgets. For instance, in the United States all spending that is not mandated by permanent legislation is labeled as "discretionary spending" and is the only category that may be reviewed and voted upon each fiscal year. While the annuality of budgets does not mean that all spending programs can disappear at the end of the year, their parameters may be substantially modified. But surely a fiscal indicator would not be expected to deduct 20 to 30 percent of spending on the hypothetical grounds that a legislature may fail to approve a new budget or may significantly modify non-entitlement programs.

Measuring and deducting temporary fiscal items to estimate a permanent fiscal balance thus poses a monumental challenge, as dozens of tax measures and perhaps hundreds of spending items would need to be analyzed and classified every year. If this work is done by the government, whose fiscal performance will be judged by such indicators, opportunities for manipulation and discretion are enormous. But this task may be insurmountable even for autonomous or independent bodies, owing not only to the large number of items involved,

but also to the reinterpretation of tax and spending changes that may modify their temporal profile at any point.

For this reason, adjustments for temporary factors in practice have been limited to one-off operations. To limit these cases, the OECD has proposed a rather restrictive definition that only includes transactions that (i) have a substantial impact on government revenues, (ii) are nonrecurrent in nature, and (iii) do not increase room to spend by improving the CAB.[12] However, adjusting only for these one-off operations does not result in a proper permanent balance and may be interpreted as eliminating short-term random errors or "noise" in a CAB or discretionary fiscal policy measure.

3.3. Preliminary Conclusions

Fiscal indicators are practical devices used in analyzing, formulating, and implementing fiscal policy. Structural balances are estimated on the expectation that they will provide a better guide than the current headline balance for such analysis. However, they do so at the cost of losing transparency, as they have to be estimated rather than directly observed. Still, structural balances are a synthetic index and not a macro model, and therefore are limited in their analytical capacity.

The trade-off between analytical depth and the simplicity required in an indicator is clearly exposed by reviewing analytical foundations and methodological challenges of alternative structural budget measures. While a permanent balance measure may initially appear as intuitively appealing, it has an overwhelming number of methodological and practical challenges. The cost of addressing these challenges may be too high to justify the benefits of measuring a concept that may be less relevant for fiscal policy than it is for household's consumption. While the contrast with the methodological simplicity of a CAB may be stark, final judgment about structural balance rules should be postponed until their implications in developing fiscal rules are assessed in the next section.

4. Structural Balance and Fiscal Rules

Fiscal rules are normative; they are numerical constraints that continuously bind fiscal policy decisions into the future. Their main purpose is to limit the discretionality of national

[12] This category explicitly excludes temporary tax cuts from adjusting the actual balance.

authorities in conducting fiscal policy (Kopits, 2001). Fiscal rules are more than fiscal programs agreed upon by troubled countries and international financial institutions or creditors; they are sovereign decisions adopted with a medium-term perspective to operate on a continuing—rather than one-off—basis. A fiscal rule may be adopted to provide a political signal of fiscal responsibility, to reassure markets and reap the benefits of fiscal discipline, or to enhance international macroeconomic coordination.

The following four elements can be used to analyze these complex rules and explore alternative design options (Marcel, 2010): (i) a fiscal aggregate that provides the basis for the rule, (ii) a numerical target for that aggregate, (iii) an enforcement mechanism to secure compliance, and (iv) the exceptions to the rule. The discussion herein of the merits of three alternative measures for a structural balance only refers to the first of these elements. It is important to avoid trying to resolve structural balance measure problems that belong to other components.

Fiscal aggregates are essential for applying and complying with a fiscal rule. The earlier literature on the subject distinguished between "deficit," "spending," or "debt" rules.[13] Anderson and Minarik (2005), for instance, argue in favor of spending rules, which are expected to have more transparency and simplicity. In particular, it was argued that fiscal rules avoid excessive dependence on revenue estimates that can be easily manipulated. This discussion highlighted two key institutional features: the accounting framework behind fiscal aggregates and their ex-ante or ex-post formulation. To make a rule difficult to evade, fiscal accounting must be consistent and transparent; compliance should be verified by some autonomous body, thus preventing politicians or policymakers from manipulating the rule. Similarly, a fiscal rule can be abused if applied on an ex-ante basis when ample room exists for modification during budget execution. Thus, the assessment herein of structural balance rules considers three desirable features of fiscal aggregates as the basis for a fiscal rule: transparency and simplicity, risk of manipulation, and advantages over alternative nonstructural rules.

As for transparency and simplicity, it should come as no surprise that the CAB offers the most advantages. The alternative measures have been ordered according to the number of items to be discounted from the actual balance to obtain the structural measure, starting with the CAB. The detailed analysis herein shows, however, that increasing complexity of indicators is not linear; additional items to subtract become more difficult to

[13] For a summary of these concepts and their actual use by countries, see IMF (2009)

obtain in an expedited and unambiguous form. Achieving permanent balance requires discounting many more items from actual balance, and such items are increasingly open to interpretation and are more difficult to estimate.

If fiscal rules constrain the discretion of government authorities, a more rigid rule provides increasing incentives for authorities to manipulate the associated accounting and compliance. The European experience under the Maastricht criteria generated a substantial literature on fiscal gimmickry and creative accounting, even under relatively loose rules (Milesi-Ferretti, 2000; Koen and van den Noord, 2004), but many other countries offer good examples of attempting to circumvent rules through data manipulation or regulatory loopholes. Such incentives, however, should be compared with the possibilities for manipulation inherent in the fiscal measures themselves. Thus, while the CAB offers the greatest degree of flexibility with regard to public spending (at the cost of higher volatility), the itemized analysis above indicates that the items providing greater opportunities for discretion in measurement by the authorities are: (i) exogenous macro effects other than cyclical fluctuations in GDP, and (ii) transitory changes, both in taxes and expenditure.

Finally, in comparing alternative fiscal aggregates as the basis for a fiscal rule, one should consider that the closest competitor for the structural balance is not necessarily the actual balance but a spending rule, given that both would reduce the procyclicality of public finances and reduce the volatility of public spending (Anderson and Minarik, 2005). Under a spending rule, a limit to growth in expenditure over a multi-year period is set, with the limit's numerical value established perhaps by means of a long-run sustainability analysis or by setting a size limit on the public sector. The PB measure is possibly most at risk from this comparison: it would be expected to produce a more stable intertemporal path (possibly with some adjustment to factor in legal changes in taxes and entitlements), but it would require a difficult measurement exercise. In other words, the advantage of having to undergo a very complex process of estimating cyclical, exogenous, and temporary budget effects is not clear, compared to defining a maximum rate of growth of public spending over several years and correcting it periodically on the basis of cumulative structural changes.

Despite these comparisons, it should be clear that all structural balance measures seem exposed to manipulation and interpretation, given their somewhat hidden nature. For this reason, any such measure probably needs an enhanced institutional framework to increase transparency and minimize opportunities for manipulation.

5. Concluding Remarks

In designing a fiscal rule, policymakers face difficult choices, with evident trade-offs between reduction in fiscal discretionality and flexibility to respond to changing circumstances. Structural balances clearly offer a more flexible framework at the risk of manipulation by drawing on counterfactual estimates.

This paper has shown that these trade-offs also exist for different structural balance measures and has added a few more trade-offs to the list. The most notable is between transparency/simplicity and volatility, especially when applied on an ex-post basis. Compared to actual balance rules, structural balance rules are expected to reduce volatility, but this reduction may entail more complex estimates that require judgment and assumptions that impair public scrutiny of the estimates. While the analysis herein shows that the CAB has evident advantages in the first dimension, it requires more short-term adjustments and fine tuning (as well as caution) in its analytical interpretation. In particular, the CAB may let automatic stabilizers operate, but it is not a measure of fiscal discretionality, endogenous policy decisions, or the permanent structure of public finances; in fact, it includes more exogenous and temporary effects that increase short-term fluctuations. Thus, if a CAB is a preferred alternative, the choice should be made consciously and with a good understanding of the limitations. In initial design of the rule in Chile, this awareness seems to have been the case (Marcel et al., 2001).

> (…) it should be noted that while the structural balance is often presented as an indicator of discretionary fiscal policy this interpretation needs to be treated with caution (…) The structural balance for Chile has been obtained by eliminating the effect of cyclical fluctuations in economic activity and the price of copper on fiscal aggregates, which represent exogenous factors that are not under the control of the authority. However, once these cyclical effects are removed, the remainder will be determined by both policy decisions and by other exogenous factors that are not adjusted. This is the case of the evolution of fiscal aggregates determined by the inertia of some budget items, such as old-age pensions or investment commitments made years ago that do not necessarily reflect policy decisions of the current authorities. The same could be said of the effect on debt service of changes in interest rates (…) or fiscal shocks determined by contingencies, as the application of court rulings or natural disasters (…) Obtaining a "pure" discretionary measure would require estimating all the exogenous factors that affect fiscal aggregates, which is beyond our means

> and probably the comprehension of the general public (…) Therefore, when building structural balance indicator for Chile we have taken the more pragmatic course followed by other countries, of subtracting only the exogenous elements with a greater impact on the fiscal accounts. In doing so, we must acknowledge that the evolution of this indicator does not only respond to autonomous decisions of the authority, but reflects all other fiscal balance fluctuations given by factors other than [GDP and the price of copper]. In other words, this is more of a cyclically adjusted balance that a "structural" balance. However, we have retained this name to make its connection with a known methodology that has been developed under this label.

Ten years later, labeling has been corrected by Chile's Advisory Committee on the structural balance rule; the proposed new name is "Cyclically-Adjusted Balance" (Comité Asesor, 2011). Similar remarks have been made on a more general basis by Hagemann (1999) in the discussion of CAB-type structural balances, who has warned that:

> As is true of any constructed indicator of fiscal policy, interpretation of the structural budget balance requires a degree of caution; its use as an indicator of the medium term orientation of fiscal policy rests on several, mostly implicit assumptions. First, latent pressures on spending and/or revenues are assumed to be absent or offsetting over time (…) Second, it is assumed that the budgetary elasticities used in the calculation of the SBB will continue to be appropriate over the medium-term (…) Third, the SBB captures the direct budgetary effects of changes in the interest rate, changes which normally are not under the immediate control of fiscal authorities . . . . Fourth, the effects of inflation are ignored.

Hagemann (1999) makes a further point that is worth noting. He warns that the Structural Balance should not be interpreted as an indicator of effects of fiscal policy on the economy, a point that was also underscored earlier by Blanchard (1990). When designing a structural indicator, policymakers should be aware that items that are excluded from actual balance are not adjusted because they have no effect on aggregate demand or output, but because they are originated in a different way. The notion of "automatic stabilizers" in a CAB and the other versions of structural balances are involved here. The counterpart of this argument is that automatic stabilizers do not equal countercyclical fiscal policy. This type of policy may require changes in the numerical targets of structural balances and/or the use of escape clauses in cases of rather extreme shocks.

A final question remains. Do policymakers really need to choose among alternative structural balance measures or should they just adopt an eclectic attitude and try to combine the best or the most feasible adjustments for each measure? The answer is that hybrid solutions face certain risks: conceptual confusion and policy drifting over time, which may bring criticism from observers or accommodating adjustments by policymakers. Any measure of structural balance is already a methodological compromise to be subject to further compromises by introducing elements of other measures. Given that fiscal indicators are only one component of fiscal rules, it might be better to deal with changing external conditions by adjusting any of the other components, rather than by adapting methodology on an ad-hoc basis.

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