# FISCAL RULES AND THE PROCYCLALITY OF FISCAL POLICY IN THE DEVELOPING WORLD

Elva Bova, Nathalie Carcenac and Martine Guerguil<sup>1</sup>

IMF-World Bank Conference on Fiscal Policy, Equity and Long-Term Growth in Developing Countries Washington, DC, April 21-22, 2013

> DRAFT This version: April 19, 2013

<sup>&</sup>lt;sup>1</sup> Elva Bova (<u>ebova@imf.org</u>), Nathalie Carcenac (<u>ncarcenac@imf.org</u>) and Martine Guerguil (<u>mguerguil@imf.org</u>).

#### I. INTRODUCTION

# This study documents the spread and impact of fiscal rules in the developing world.

While formerly a quasi-exclusive element of fiscal policy in advanced economies, fiscal rules have been embraced by a rapidly growing number of emerging market and developing economies (EMDEs) over the past 15 years. The database constructed by Schaechter and others (2012) allows us to map the landscape of fiscal rules in the developing world—who adopted what, when and why.

This paper also explores the relation between fiscal rules and procyclical fiscal policy in EMDEs. Fiscal policy in these economies has been notoriously procyclical, with adverse, destabilizing effects on growth and welfare. However, this procyclical bias has tended to decrease over the past decade or so, at the same time as the use of fiscal rules was spreading. It is thus worth exploring whether there could be a relation between these two trends.

The relationship between fiscal rules and procyclicality is conceptually ambiguous. By imposing strict constraints on fiscal management, rules could prevent the authorities to react to the business cycle. But by enhancing credibility and accountability, they could increase the scope for countercyclical action. Empirical studies on this topic are scarce, and largely limited to advanced economies. This paper thus tries to fill a gap in our understanding of fiscal rules in EMDEs.

We rely on simple methodologies to explore possible regularities, rather than causality, in this relationship. To fully untangle the linkages between institutions and policy outcomes is an impossible task, given likely reverse causality and the abundance of unobservable (or unmeasurable) factors. Rather, we look at simple correlations to explore whether the presence of fiscal rules has been associated with changes in procyclicality, and whether specific features of the rules could have accentuated the trend.

# The main findings are as follows:

- Since the early 2000s, EDMEs outnumber advanced economies as users of fiscal rules. 47 of them had a fiscal rule in place in 2012, compared with 28 advanced economies.
- In addition to becoming part of the standard toolkit of currency unions around the world, fiscal rules have been often used in EMDEs to strengthen fiscal frameworks during and after large stabilization and policy reform episodes.
- The greater use of fiscal rules has not shielded EDMEs from procyclicality. In fact, unlike in advanced economies, procyclicality has tended to increase in EMDEs following the adoption of a fiscal rule.

• While it is impossible to establish causality, there is some partial evidence that some features of "second generation" rules, such as the use of cyclically-adjusted targets, well-defined escape clauses, together with stronger legal and enforcement arrangements, may be associated with less prociclycality.

The remainder of the paper is structured as follows. Section II documents the increasing use of fiscal rules in EMDEs since the late 1990s; Section III briefly reviews the literature on fiscal rules and procyclicality; Section IV investigates the relation between spending procyclicality and fiscal rules, and Section V discusses possible factors that may underlie the association of fiscal rules with higher spending procyclicality in EMDEs; Section VI concludes.

# II. FISCAL RULES IN EMDES

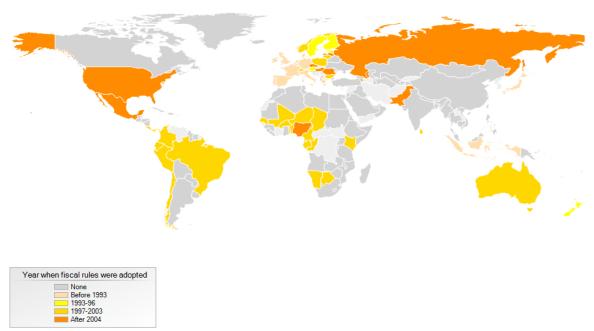
The number of EMDEs using fiscal rules as a fiscal policy device has increased rapidly since the mid 1990s. The database of fiscal rules constructed by the IMF Fiscal Affairs Department (Schaechter and others, 2012) shows that while fiscal rules were initially confined to advanced economies, their use has rapidly gained momentum in the developing world (Figure 1).<sup>2</sup> As a result, EMDEs now largely outnumber advanced economies among fiscal rule users (Figure 2). As of end 2012, out of a total of 75 countries with one or more fiscal rules in place, 28 were advanced economies and 47 EMDEs.

Pertaining to a currency union has been an important, but not the sole, driver behind the adoption of fiscal rules among EMDEs. On the footsteps of the euro area, members of the Eastern Caribbean Currency Union (ECCU), of the West African Economic and Monetary Union (WAEMU) and of the Central African Economic and Monetary Community (CEMAC) adopted fiscal rules in 1998, 2000 and 2002, respectively. The main purpose was to facilitate fiscal policy convergence within the currency union. Overall, members of currency unions represent slightly less than half of EMDEs with fiscal rules. The share increases to about 55 percent if emerging market economies members of the European Union (also prospective members of the euro area) are included. Among advanced economies, the share is about 60 percent (Figure 3).

\_

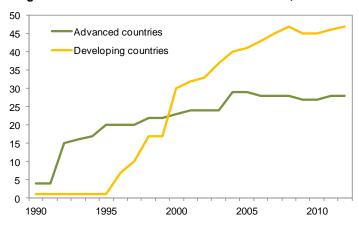
<sup>&</sup>lt;sup>2</sup> Following Schaechter and others (2012), the database incudes all rules with specific numerical targets fixed in legislation, as well as arrangements for which the targets can be revised but are binding for a minimum of three years. This excludes medium-term budgetary frameworks or expenditure ceilings that provide multi-year projections but can be changed annually. The database only includes *de jure* arrangements and does not take into account the *de facto* compliance to the rule. Rules are classified as debt rules, budget balance rules, expenditure rules, or revenue rules according to the aggregate targeted. *Debt rules* set an explicit limit or target for public debt in percent of GDP. *Budget balance rules* set a limit on the either the overall balance (including or net of capital expenditures), the structural or cyclically-adjusted balance, or the balance "over the cycle". *Expenditure rules* set limits on total, primary, or current spending while *revenue rules* set ceilings on revenues.

Figure 1: Adoption of Fiscal Rules



Source: IMF Fiscal rules database (2012)

Figure 2: Number of Countries with Fiscal Rules, 1990-2012



Source: IMF Fiscal rules database (2012)

Figure 3: Fiscal Rules per Country Groups, 2012 (Number of country with fiscal rules)



Source: IMF Fiscal rules database (2012)

Excluding members and prospective members of currency unions, fiscal rules have been adopted in EMDEs either to address increasing debt levels and financing costs, or to cement previous liberalization reforms. In about half of the cases (mostly in Latin America and South Asia), fiscal rules were adopted at a time of fiscal crisis, or even debt distress. Fiscal rules were part of ambitious, far-reaching fiscal stabilization plans, often including the adoption of fiscal responsibility laws (Berganza 2012, Blöndal and others 2009). In a second group of countries, mostly in Eastern Europe and Africa, fiscal rules were introduced in the context of "second wave" programs of economic liberalization aimed at strengthening the basis of earlier fiscal consolidation. In those cases, fiscal rules were often associated with the introduction of medium-term expenditure frameworks (Barbone et al. 2010). In about half of the EMDEs in the sample, rules were introduced during an IMF program (Table 1).

Table 1: National rules and IMF programs

Country	IMF program	Country	IMF program	Country	IMF program
Argentina	Yes	Hungary	Yes	Namibia	No
Armenia	Yes	India	No	Nigeria	No
Botswana	No	Indonesia	Yes	Pakistan	No
Brazil	Yes	Jamaica	Yes	Panama**	Yes
Bulgaria	Yes	Kenya	Yes	Peru	Yes
Cape Verde	Yes	Kosovo	Yes	Poland	Yes
Chile	No	Latvia	No	Romania	Yes
Colombia*	Yes	Lithuania	No	Russia	No
Costa Rica	No	Mauritius	No	Russia	No
Ecuador	Yes	Mexico	No	Serbia	Yes

<sup>\*</sup>For Colombia the IMF program was in place only for the 2002 ER

Source: IMF fiscal rules database (2012)

<sup>\*\*</sup>For Panama the IMF program was in place only for 2003-09 BBR and DR

EMDEs tend to use a lower number of fiscal rules than advanced economies. Most EMDEs use two fiscal rules, but about one third use only one, and only prospective members of the euro area use more than two. In contrast, a large number of advanced economies, including but not only in the euro area, use three or four rules simultaneously. Relatedly, fiscal rule frameworks have been modified less frequently in EMDEs than in advanced economies. About one half of advanced economies with fiscal rules have either introduced a new rule, or dropped one, after the establishment of the initial rule, compared to less than one third of EMDEs.

Balanced budget rules and debt rules are most commonly used, both in EMDEs and in advanced economies (Figure 4). In both groups of countries, and particularly among members of currency unions, these two rules are usually combined. Among EMDEs however, the use of expenditure rules or of a budget balance rule alone is nearly as frequent. In EMDEs as well as in advanced economies, revenue rules are rather rare. In contrast with the practice among advanced economies, most rules in EMDEs only cover the central government, often reflecting data availability limitations (Figure 5).

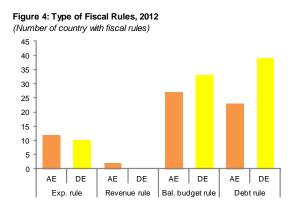


Figure 5: Coverage of Rules (General vs. Central), 2012 (Number of fiscal rules)

60

Advanced economies

Developing countries

10

General Government

Central Government

Source: IMF Fiscal rules database (2012)

Source: IMF Fiscal rules database (2012)

#### III. FISCAL RULES AND PROCYCLICALITY: A BRIEF LITERATURE REVIEW

A large body of empirical studies conclude that fiscal policy tends to be more procyclical in EMDEs. Perotti and Gavin (1997) find fiscal policy to be highly procyclical in Latin America, and Kaminsky et al. (2004) indicate that fiscal policy is generally more procyclical in developing countries than in advanced economies; a result recently confirmed by Alesina et al. (2008), Ilzetzki and Vegh (2008), and, on Sub-Saharan Africa, by Lledó et al. (2011).<sup>3</sup>

Procyclicality in EMDEs is usually ascribed to financial, political and administrative constraints. Because of their limited access to financial markets, governments in EMDCs have no choice but to cut spending and raise revenues in bad times, while in good times, inadequate political and fiscal institutions make it difficult to resist pressures to increase expenditure and lower taxes, which may induce higher fiscal profligacy and rent-seeking activities during booms. Weak implementation capacities, including difficulties in forecasting cycles, add to these constraints.

A few recent studies have found, however, a reduction in EMDEs' procyclical bias over the past decade, mostly thanks to improved institutions. Frankel and others (2011) conclude that over the 2000s, about a third of developing economies have implemented countercyclical fiscal policies. Lledó, Yackovlev, and Gadenne (2011) find that procyclicality has declined in Africa since 2000. IMF (2010a) reports preliminary data suggesting that two thirds of economies in sub-Saharan Africa were able to implement a countercyclical response to the crisis in 2009. Looking for causes of this shift, Frankel and others (2011) find that the cyclicality of a country's fiscal policy is inversely related to its institutional quality measured by indicators on law and order, bureaucracy quality and corruption. Dabla-Norris and others (2010) consider how fiscal policy changes in relation to the quality of budget institutions in low-income countries and conclude that countries with stronger fiscal institutions, measured through the quality of the various stages on the budget process as well as the number of checks and balances in place, are in a better position to conduct countercyclical policies.

The impact of fiscal rules on procyclicality is ambiguous. Fiscal rules are generally established as part of a broad reform of the fiscal framework that seeks to support fiscal credibility and discipline. In that context, fiscal rules aim at containing pressures to overspend, especially in good times (IMF 2009; Kopits and Symansky 1998). But they also tend to limit the ability of fiscal authorities to react to business cycle fluctuations, thus potentially exacerbating volatility. At the same time, fiscal rules narrow the scope for discretionary action, improve transparency and reduce the opportunities for rent-seeking

<sup>&</sup>lt;sup>3</sup> See also Catão and Sutton (2002), Akitoby and others (2004), Kaminsky, Reinhart and Vegh (2004), Talvi and Vegh (2005), Manasse (2005), and Perotti (2007).

behavior—all factors usually associated with higher procyclicality. Manasse (2005) claims that fiscal rules involve a trade-off between the benefits of reducing the average deficit bias resulting from discretionary fiscal policy and the costs of foregone stabilization. He finds that countercyclical policies are implemented only in very good times (when the fiscal constraint is not binding) or in very bad times (when it is violated since abiding would be too costly in a recession).

Empirical studies of the impact of fiscal rules on fiscal outcomes are scarce, and largely limited to advanced economies. Fatàs and Mihov (2004) find that U.S. states with stricter constraints on fiscal policy have a more procyclical fiscal stance. Similarly, Levinson (1998) shows that in many U.S. states explicit constraints on the budget lead to more volatile business cycles. Debrun and others (2008) find that fiscal rules tend to encourage higher cyclically-adjusted primary balances in the European Union and may reduce procyclicality as long as they are designed in a way that avoids or reduces conflicts with the stabilization objective.

#### IV. FISCAL RULES AND PROCYCLICALITY IN EDMES: SOME PRELIMINARY EVIDENCE

We extend the analysis in Frankel and others (2011) to explore possible associations between fiscal rules and the cyclicality of public spending. Like other recent studies, we look at the procyclicality of public spending vis-à-vis output, and not at the procyclicality of the budget. This is because tax receipts are endogenous with respect to the business cycle, and expenditure better reflects discretionary fiscal policy (Frankel and others 2011, Kaminsky and others 2004; Dabla-Norris and others 2010). Our methodology follows that in Frankel and others (2011) to calculate correlation coefficients of the cyclical components of real spending and real GDP. Data on general government spending and GDP are from the IMF's WEO database and the cyclical components are obtained through the Hodrick-Prescott filter. We conduct the analysis on an unbalanced panel of 146 countries (32 advanced economies and 114 developing countries).

We confirm that on average, public expenditure is procyclical in developing economies and acyclical in advanced economies. Table 2 reports simple correlation coefficients between the cyclical components of real spending and real GDP for the period 1995-2012. A positive correlation indicates that government spending is procyclical, while a negative correlation indicates that it is countercyclical. Correlation for the whole sample is about 0.25, with a coefficient of almost 0.3 for developing countries and a negative coefficient of 0.03 for advanced economies. This is in line with the results of most other recent studies. Figure 6 provides country-specific information on the correlation coefficients. 39 countries exhibit countercyclical fiscal policies, while 114 have procyclical fiscal policies. Out of the 39 countercyclical countries, 14 are advanced economies, and 25 EMDEs. In contrast, the distribution among the 117 procyclical countries is largely skewed toward EMDEs: of that group, only 18 are advanced economies.

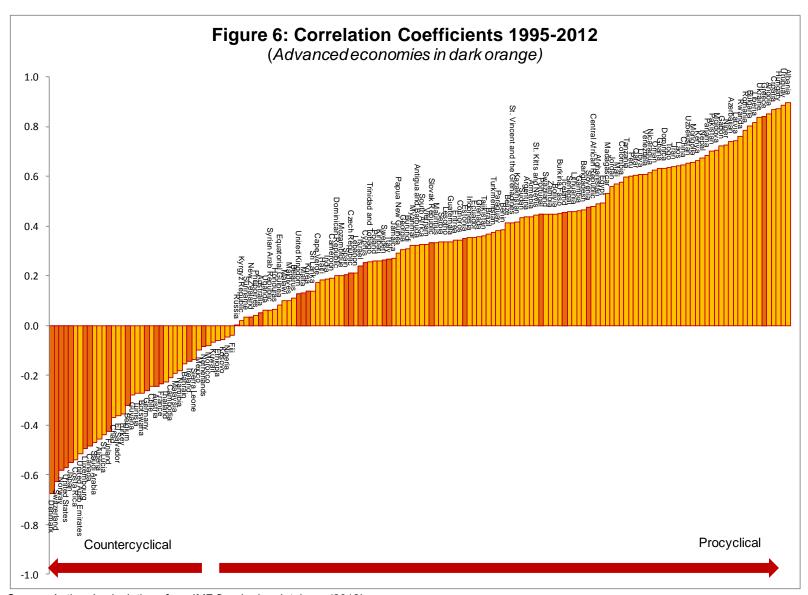


Table 2: Correlation Coefficients between Cyclical Components of Real Spending and Real GDP, 1995-2012

					Latin		Middle
Total	Advanced	Developing	Africa	Asia	America	Europe	East
0.240	-0.028	0.294	0.296	0.261	0.264	0.467	0.181

In EMDCs, having a fiscal rule does not shield a country from procyclicality, while results for advanced economies are mixed. The correlation coefficient for advanced economies suggests that on average, the fiscal stance becomes somewhat more acyclical with a rule, while for EMDEs, it remains procyclical when rules are in place; although with differences across regions, as a rule is associated with somewhat lower procyclicality in Africa and Latin America, but higher procyclicality in Asia and Europe (Table 3). Figure 7 shows that fiscal rules are distributed across levels of procyclicality in advanced economies as well as EMDEs, but about one half of advanced economies with fiscal rules show a negative coefficient, compared to less than one fourth of EMDEs with fiscal rules—with some of the latter bunched at relatively high levels. The left panel of Figure 8 confirms that procyclical fiscal stances are more frequent across the three main types of rules (debt, budget balance and expenditure) over the whole sample; but the difference is much smaller when a rule is in place (compared to countries with no rule). For EMDEs (right panel), however, the presence of a rule does not make a sizeable difference, suggesting that advanced economies drive the results for the whole sample.

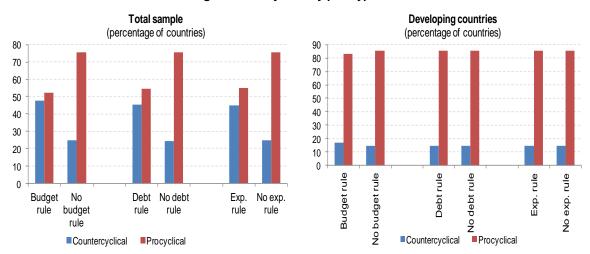
Table 3: Correlation Coefficients under Fiscal Rules

	Total	Advanced	Developing	Africa	Asia	Latin America	Europe	Middle East
No fiscal								
rules	0.213	-0.144	0.285	0.309	0.244	0.271	0.419	0.181
Fiscal rules	0.283	-0.011	0.356	0.266	0.370	0.192	0.595	

2004-2012 (Countries with fiscal rules in blue, Advanced economies in light blue) 1.0 8.0 0.6 0.4 0.2 0.0 -0.4 -0.6 -0.8 Procyclical Countercyclical

-1.0 -0.1-

Figure 8: Procyclicality per Type of Rule

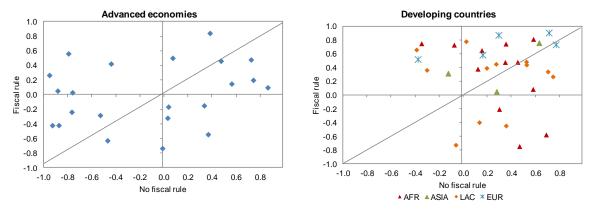


Note: the same country can be included when a rule is present and when a rule is not in place according to the time period considered.

Source: Authors' calculations from IMF fiscal rules database (2012)

The fiscal stance tends to turn more procyclical after the adoption of a fiscal rule in EMDEs. Figure 9 shows the changes in the correlation coefficients between the periods before and after the introduction of a rule. For advanced economies, the changes are broadly equally distributed on both sides of the diagonal (between increases and decreases in procyclicality). But a large share of the dots fall in the bottom quadrants, suggesting that policies remained mostly countercyclical, even if by a smaller magnitude. In contrast, among EMDEs, most dots fall in the upper right quadrant (policy was and remained procyclical), with the larger share falling in fact over the diagonal (policy became even more procyclical).

Figure 9: Correlation Coefficients with and without a Fiscal Rule



#### V. DESIGN OF FISCAL RULES AND PROCYCLICALITY

Many factors can lead to procyclical fiscal policy in EMDEs. The previous section showed correlation, but not causality. Even with a positive coefficient, correlation could be coincidental, if for example procyclicality arises from exogenous factors like the size or frequency of external shocks. Nevertheless, some elements in the design or the framework underlying fiscal rules in EMDEs may well be associated with higher procyclicality than in advanced economies.

Simplicity in the design of a fiscal rule can fuel a procyclical stance of spending in EMDEs. Partly reflecting technical and administrative constraints, most rules in developing countries lack mechanisms that could make them more flexible across the cycle or in the face of shocks. In contrast, many advanced economies target cyclically adjusted balances rather than headline balances, thus leaving space to react to business cycle fluctuations. Only four developing countries have incorporated such cyclically adjusted targets in their rules, three of them only very recently: Chile in 2001, Colombia in 2011, Panama first in 2002/03 and then in 2009, and Serbia in 2009. Targeting a cyclically adjusted balance as opposed to the headline balance tends to improve the stabilizing properties of the rule (Figure 10). Table 4 shows that for five out of nine advanced economies, the introduction of a cyclically-adjusted balance as the target for the rule has been associated with less procyclical public spending. For Chile, procyclicality is lower following the adoption of the structural balance rule only if we do not account for the years of the financial crisis.

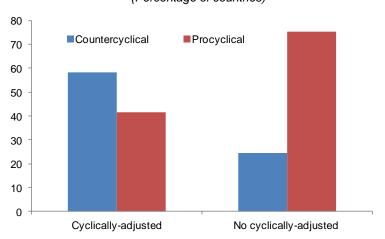


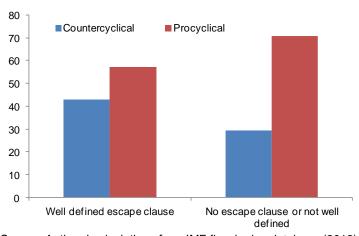
Figure 10: Cyclically-Adjusted Balance Budget Rules (Percentage of countries)

Table 4: Correlation Coefficients before and after the Introduction of Cyclically-Adjusted Balance Rules

	Year of introduction	Before introduction	Introduction-2012	Introduction-2009
Australia	1998	0.55	-0.07	-0.22
Denmark	1992	0.34	-0.25	-0.50
Estonia	2007	0.16	0.47	
Finland	1995	-0.95	-0.49	-0.42
Norway	2001	-0.24	-0.34	-0.69
Spain	2003	-0.19	-0.03	-0.26
Sweden	2003	-0.52	0.45	0.55
Switzerland	2003	-0.54	-0.77	-0.78
United Kingdom	1997	0.04	0.15	0.28
Chile	2001	-0.09	0.17	-0.55

Embedding an escape clause in a rule may also reduce procyclicality, as long as the clause is well specified. Escape clauses allow to relax the rule in case of rare events such as recessions, natural disasters or other large shocks. There is evidence that, in those countries that have adopted fiscal rules, procyclicality is more frequent when an escape clause is either not included or badly designed (Figure 11). This conclusion still holds when the sample is limited to EMDEs (Figure 12). As of end 2012, sixteen EMDEs (including the eight members of the WAEMU) had included an escape clause in their fiscal rules. Given the notoriously higher volatility of output in EMDEs, escape clauses seem warranted; but specification is key. For the escape clause to be effective, it must come with clear guidelines on the determination of qualifying events (including voting rules) and include an explicit path back to the rule. Among EMDEs, only Brazil has defined a voting mechanism to activate the escape clause, and only Panama, Peru and Romania have laid out a transition path back to the rule. In WAEMU countries, in contrast, the escape clause allows a relaxation of the rule during large and temporary negative shocks to real GDP and revenues but does not specify transition path back to the rule.

Figure 11: Well Defined Escape Clauses (Percentage of countries)



(Percentage of countries) 90 Countercyclical ■ Procyclical 80 70 60 50 40 30 20 10 0

Figure 12: Escape Clauses in Developing Countries

No escape clause or not well defined

Well defined escape clause

Fiscal rules in EMDEs seem to be embedded in weaker legal and administrative environments than in advanced economies, which could contribute to higher procyclicality. The fiscal rule index formulated by Schaechter and others (2012) measures the quality of the different elements that support implementation of fiscal rules, such as its legal basis, its coverage and enforcement procedures, and other complementary arrangements such as fiscal responsibility laws or fiscal councils. Such elements can increase the credibility and legitimacy of the rule, and more broadly of the fiscal policy framework, thus opening space for countercyclical action when needed. Despite an improvement in the quality of rules, the index is still significantly lower in EMDEs than in advanced economies (Figure 13). This reflects a combination of factors, such as narrower coverage (leaving a large part of public activities outside the reach of the rule), weaker enforcement procedures, and the absence of monitoring bodies. Interestingly, after shrinking through the mid 2000s, the gap between the two groups of countries has tended to widen in recent years, largely because of efforts to raise rule quality in advanced economies, while action in this area has been more subdued in EMDEs.

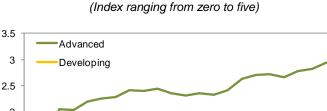


Figure 13: Overall Fiscal Rule Index, 1990-2012

2.5 2 1.5 1 0.5 0 2000 2005

In addition to aspects related to the design of rules themselves, high procyclicality may result from the weak quality of fiscal institutions at large. In Figures 14 and 15, we use the index of quality of budget institutions for developing countries constructed by Dabla-Norris and others (2010). Although weak, the relationship between the correlation coefficients and the quality of fiscal institutions is negative, confirming that better institutions could be associated with lesser procyclicality. No clear difference emerges, however, when we split the sample between countries with fiscal rule and countries without fiscal rule. This rules out the hypothesis of a selection bias, whereby countries with weaker institutions would adopt rules as a way to boost governance. But it also suggests there is scope to improve the design of fiscal rules to make them more active instruments in reducing procyclicality, and more generally improving fiscal capacity in EDMEs.

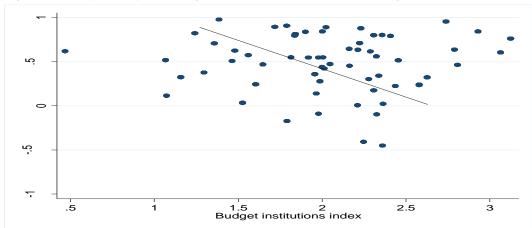


Figure 14: Procyclicality and Budget Institutions Index for Developing Countries, 1995-2012

Source: Authors' calculations from IMF fiscal rules database (2012)

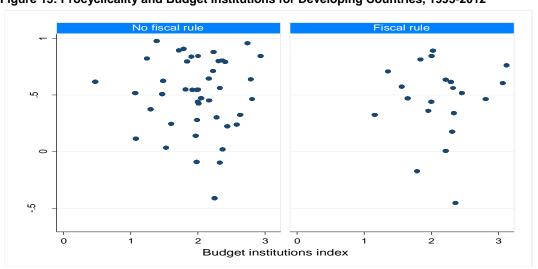


Figure 15: Procyclicality and Budget Institutions for Developing Countries, 1995-2012

# VI. CONCLUSIONS

Improved institutions, particularly in the fiscal area, are often credited for the reduction in procyclicality observed in many EMDEs over the past decade or so. This paper has shown that the use of fiscal rules has indeed increased rapidly over that period in the developing world. However, this does not seem to have been a factor behind the reduction in the procyclicality bias. In fact, the paper finds that in contrast with advanced economies, the adoption of fiscal rules has generally been associated with an increase in procyclicality in EMDEs.

More flexible rules and more supportive institutional arrangements could help reduce the procyclical bias associated with rules. Without looking for causality, elements in the design of fiscal rules in EMDEs may be associated with a more procyclical fiscal stance than in advanced economies. Cyclically adjusted targets and escape clauses are relatively uncommon in EMDE rules, although they could play a stabilizing role. Improving the quality of the rule (its legal basis and supporting arrangements) could also help.

Fiscal rules alone are unlikely to reduce the procyclical bias in EMDEs, let alone enhance their fiscal capacity. Reaching these ends will require improvements along the whole gamut of the fiscal framework, from the selection of macrofiscal goals to the orderly management of budgetary accounts. However, crafting rules that maximize flexibility within the technical and political constraints facing EMDEs can still help tilt this larger effort in the right direction.

Annex I

Fiscal rules by country, type and year of adoption:

	Expendi	Expenditure rule		Revenue rule		Budget balance rule		Debt rule	
	Start	End	Start	End	Start		Start	End	
	period	period	period	period	period	End period	period	period	
Antigua and Barbuda					1998		1998	2012	
Argentina	2000	2008			2000	2008			
Armenia							2008	2012	
Australia	1985	1988	1985	1988	1985	1988			
Australia	2009	2012	1998	2012	1998	2012	1998	2012	
Austria					1995	2012	1995	2012	
Belgium	1993	1998	1992	1999	1992	2012	1992	2012	
Benin					2000	2012	2000	2012	
Botswana	2003	2012							
Brazil	2000	2012					2000	2012	
Bulgaria	2006	2009							
Bulgaria	2012	2012			2006	2012	2003	2012	
Burkina Faso					2000		2000	2012	
Cameroon					2002		2002	2012	
Canada	1998	2005			1998		1998	2005	
Cape Verde					1998		1998	2012	
Central African Republic					2002		2002	2012	
Chad					2002		2002	2012	
Chile					2001	2012			
Colombia	2000	2012			2011	2012			
Congo					2002		2002	2012	
Costa Rica					2001	2012			
Cote d'Ivoire					2000		2000	2012	
Cyprus					2004		2004	2012	
Czech Republic					2004		2004	2012	
Denmark	1994	2012	2001	2011	1992		1992	2012	
Dominica					1998		1998	2012	
Ecuador	2010	2012			2003		2003	2009	
Equatorial Guinea					2002		2002	2012	
Estonia					1993		2004	2012	
Finland	2003	2012			1995		1995	2012	
France	1998	2012	2006	2012	1992		1992	2012	
Gabon	1000	2012	2000	2012	2002		2002	2012	
Germany	1985	2012			2002	2012	1992	2012	
Greece	1300	2012			1992		1992	2012	
Grenada					1998		1998	2012	
Guinea Bissau					2000		2000	2012	
Hong Kong SAR					1997		2000	2012	
Hungary	2010	2011			2004		2004	2012	
Iceland	2010	2008			2004	2012	2004	2012	
India	2004	2006			2004	2008			
Indonesia					1985		2004	2012	
Ireland					1985		1992	2012	

	Expenditure rule		Revenue rule		Budget b	alance rule	Debt rule	
	Start	End	Start	End	Start		Start	End
	period	period	period	period	period	End period	period	period
Israel	2005	2012			1992	2012		
Italy					1992	2012	1992	2012
Jamaica					2010		2010	2012
Japan	2006	2008						
Japan	2010	2012			1985	2012		
Kenya			1997	2012			1997	2012
Kosovo	2006	2008					2010	2012
Latvia					2004	2012	2004	2012
Lithuania	2008	2012	2008	2012	2004	2012	1997	2012
Luxembourg	1990	2012			1992	2012	1990	2012
Mali					2000	2012	2000	2012
Malta					2004	2012	2004	2012
Mauritius							2008	2012
Mexico					2006	2012		
Namibia	2010	2012					2001	2012
Netherlands	1994	2012	1994	2012	1992	2012	1992	2012
New Zealand				-	1994	2012	1994	2012
Niger					2000	2012	2000	2012
Nigeria					2007	2012		
Norway					2001	2012		
Pakistan					2005	2012	2005	2012
Panama					2002	2003	2002	2003
Panama					2009	2012	2009	2012
Peru	2000	2012			2000	2012		
Poland	2011	2012			2004	2012	1999	2012
Portugal					1992	2012	1992	2012
Romania	2010	2012			2007	2012	2007	2012
Russia	2012	2012			2007	2008		
Senegal					2000	2012	2000	2012
Serbia					2011	2012	2011	2012
Slovak Republic					2004	2012	2004	2012
Slovenia					2004	2012	2000	2012
Spain	2011	2012			1992	2012	1992	2012
Sri Lanka					2003	2012	2003	2012
St. Kitts and Nevis					1998	2005	1998	2012
St. Lucia					1998	2005	1998	2012
St. Vincent and the Grenadines					1998	2005	1998	2012
Sweden	1997	2012			1995	2012	1995	2012
Switzerland					2003	2012		
Togo					2000	2012	2000	2012
United Kingdom					1992	2012	1992	2012
United States	1990	2002			1986	1989		
United States	2011	2012						

#### References

Akitoby, B., D. Ghura, A. Tahari and E. B. Aka, 2004, "Sources of Growth in Sub-Saharan Africa," IMF Working Paper 04/76 (Washington: International Monetary Fund).

Alesina, A., F. Campante and G. Tabellini, 2008, "Why is Fiscal Policy often Procyclical," Journal of the European Economic Association, vol. 6, issue 5, pages 1006-1036.

Barbone, L., I. Roumeen, and L.A. Sanchez, 2010, "The great crisis and Fiscal Institutions in Eastern and Central European and Central Asia," World Bank Policy Research Working Paper 5453.

Berganza, J. C., 2012, "Fiscal Rules in Latin America: A Survey," Bank of Spain Occasional Paper 1028.

Budina, N., T. Kinda, A. Schaechter and A. Weber, 2012, "Fiscal Rules at a Glance: Country Details from a New Dataset," IMF Working Paper 12/273 (Washington: International Monetary Fund).

Blöndal, S and S. Dougherty, 2009, "Priorities for Growth in OECD economies," OECD Book: "Innovation and Growth: Chasing a Moving Frontier," Chapter 4.

Catão, L. and B. Sutton, 2002, "Sovereign Defaults: The Role of Volatility," IMF Working Papers 02/149 (Washington: International Monetary Fund).

Dabla-Norris, E., R. Allen, L. Zanna, T. Prakash, E. Kvintradze, V. Lledo, I. Yackovlev and S. Gollwitzer, 2010, "Budget Institutions and Fiscal Performance in Low-Income Countries," IMF Working Paper 10/80 (Washington: International Monetary Fund).

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

Fatàs, A. and I. Mihov, 2004, "The Macroeconomic Effects of Fiscal Rules in the US States," Journal of Public Economics 90, 101–117.

Frankel, J. A., C. A. Végh and G. Vuletin, 2011, "On Graduation from Fiscal Procyclicality," National Bureau of Economic Research Working Papers 17169, National Bureau of Economic Research, Inc.

Ilzetzki, E. and C. A. Végh, 2008, "Procyclical Fiscal Policy in Developing Countries: Truth or Fiction," National Bureau of Economic Research Working Papers 14191, National Bureau of Economic Research, Inc.

International Monetary Fund, 2009, "Fiscal Rules—Anchoring Expectations for Sustainable Public Finances," Prepared by the Fiscal Affairs Department (Washington: International Monetary Fund).

Kaminsky, G. L., C. M. Reinhart and C. A. Végh, 2004, "When It Rains, It Pours: Procyclical Capital Flows and Macroeconomic Policies," National Bureau of Economic Research Working Papers 10780, National Bureau of Economic Research, Inc.

Kopits, G. and S. Symansky, 1998, "Fiscal Policy Rules," IMF Occasional Paper 162 (Washington: International Monetary Fund).

Levinson, A., 1998, "Balanced Budgets and Business Cycles: Evidence from the States," University of Wisconsin—Madison.

Lledó, V. D., I. Yackovlev and L. Gadenne, 2011, "A Tale of Cyclicality, Aid Flows and Debt: Government Spending in Sub-Saharan Africa," Journal of African Economies, Vol. 20, number 5, pp. 823–849.

Manasse, P., 2005, "Deficit Limits, Budget Rules and Fiscal Policy," IMF Working Papers 05/230 (Washington: International Monetary Fund).

Perotti, R., 2007, "In Search of the Transmission Mechanism of Fiscal Policy," National Bureau of Economic Research Working Papers 13143, National Bureau of Economic Research, Inc.

Perotti, R. and Gavin M., 1997, "Fiscal Policy in Latin America," National Bureau of Economic Research Chapters, NBER Macroeconomics Annual 1997, Volume 12, pages 11-72, National Bureau of Economic Research, Inc.

Schaechter, A., T. Kinda, N. Budina and A. Weber, "Fiscal Rules in Response to the Crisis - Toward the "Next-Generation" Rules. A New Dataset," IMF Working Paper 12/187 Washington: International Monetary Fund).

Talvi, E. and C. A. Végh, 2005, "Tax Base Variability and Pro-Cyclical Fiscal Policy in Developing Countries," Journal of Development Economics 78 (1): 156-190.