INTERNATIONAL MONETARY FUND

African Deparment

Strengthening the West African Economic and Monetary Union

The Role of Fiscal and Market Institutions in Economic Stabilization

Olivier Basdevant, Patrick Imam, Tidiane Kinda, Huy Nguyen, and Aleksandra Zdzienicka

African Department

Strengthening the West African Economic and Monetary Union

The Role of Fiscal and Market Institutions in Economic Stabilization

Olivier Basdevant, Patrick Imam, Tidiane Kinda, Huy Nguyen, and Aleksandra Zdzienicka

INTERNATIONAL MONETARY FUND

Cataloging-in-Publication Data

Strengthening the West African Economic and Monetary Union/Olivier Basdevant … [et al.]. –
Washington, D.C. : International Monetary Fund, 2015.
pages ; cm – (African departmental paper)

Approved by the African Department.
Includes bibliographical references.

I. Basdevant, Olivier II. International Monetary Fund. III. International Monetary Fund. African Department. IV. Title: Strengthening the West African Economic Monetary Union: The Role of Fiscal and Market Institutions in Economic Stabilization. V. African departmental paper.

October 2015

ISBN: 978-1-51356-7-334 (paper)

Publication orders may be placed online, by fax, or through the mail:
International Monetary Fund, Publication Services
P.O. Box 92780, Washington, DC 20090, U.S.A.
Tel. (202) 623-7430 Fax: (202) 623-7201
E-mail: publications@imf.org
www.imfbookstore.org
www.elibrary.imf.org

Acknowledgments

We would like to thank the WAEMU authorities, participants to the IMF Fiscal Network seminar, and Messrs. Mark De Broeck, Xavier Debrun, and Ivohasina Razafimahefa (all FAD), and Hervée Joly, Christian Josz, and Roger Nord (AFR) for very useful discussions and suggestions. Douglas Shapiro, Monica Snyder, and Graham Colin-Jones provided excellent research and editorial assistance. This paper was prepared when Huy Nguyen was a summer intern in the African Department of the International Monetary Fund (IMF).

The authors can be contacted at obasdevant@imf.org, pimam@imf.org, tkinda@imf.org, and azdzienicka@imf.org.

Contents

I. Executive Summary 4

II. Strengthening WAEMU Fiscal Rules 5

A. The 2014 Reform of WAEMU Fiscal Rules 5

B. Options to Strengthen Rules at the National Level 9

C. Options to Enforcement Mechanisms at the National Level 11

III. Creating Public Insurance Mechanisms 14

IV. Developing and Strengthening Financial Insurance Mechanisms 20

References 25

Box 1. Fiscal Rules in WAEMU Convergence Criteria 7

Box 2. Risk-Sharing and Regional Fiscal Stabilization Fund 19

Figure 1. Experiences with Fiscal Rules in the WAEMU 8

Figure 2. Number of Countries with Fiscal Councils, 1960–2013 12

Figure 3. Frequency of Asymmetric Shocks in the WAEMU 14

Figure 4 Shock-Smoothing in the WAEMU 15

Figure 5. Shock-Smoothing with a Centralized Mechanism 17

Figure 6. Cross-border Bank Liabilities in the WAEMU, 2012[1] 21

Table 1. Banking Union in the WAEMU 22

I. Executive Summary

West African Economic and Monetary Union (WAEMU) countries[1] face a well-known dilemma between the need to provide shock-smoothing mechanisms and the lack of adequate mechanisms to do so. WAEMU countries are subject to frequent and, to a large extent, asymmetric shocks. They have remained poorly diversified and vulnerable to external shocks, such as changing weather conditions. In addition to limited shock-smoothing mechanisms at the regional level, WAEMU members' ability to respond to shocks through national policies is also constrained by limited fiscal space and the need to preserve external stability—not only at the national level but also at the union level. In this context, developing a well-defined fiscal rule framework at the national level would help to build the necessary fiscal space for shock-smoothing. In addition, the development of specific shock-smoothing mechanisms—including a more developed and integrated financial sector—would also be critical. In addition, promoting financial development is also a challenge, which needs to be addressed in tandem with an adequate surveillance system. Some of these challenges have been faced by other monetary unions, such as the euro area.

Drawing from international best practices, this note proposes reform options to strengthen the regional policy framework of WAEMU countries. The main messages are as follows.

- Fiscal rules will be more effective with greater appropriation at national levels. The WAEMU convergence criteria, which include WEAMU fiscal rules, have been revised in 2014, and it remains now to national authorities to further strengthen their fiscal policy frameworks so as to implement regional rules while preserving their development objectives (Section II).

- Even with fully functional fiscal rules that could help in building fiscal space, WAEMU countries remain vulnerable to asymmetric shocks, which would require defining a centralized risk-sharing mechanism at the regional level (Section III). Such a mechanism would help smooth asymmetric shocks without jeopardizing economic and financial stability of affected countries.

- More developed and integrated capital markets could serve not only as an additional disciplining mechanism for national fiscal policies but also as a powerful shock-smoothing tool for the region. In this context, a robust regulation framework and resolution mechanism would increase the resilience of the financial sector and boost cross-border transactions (Section IV).

[1] WAEMU countries are Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, and Togo. They share the same currency, the CFA franc, which is pegged to the euro.

II. STRENGTHENING WAEMU FISCAL RULES

One of the main difficulties with fiscal rules is preserving some room for flexibility without compromising the rules. This is particularly relevant for WAEMU countries, as large and frequent shocks could provide numerous occasions to suspend the application of the rules. This section discusses how the reform approved in early 2015 addresses this issue (Section A). It also provides suggestions on how national authorities could work on making the objectives, as defined at the WAEMU level, more likely to be attained by strengthening, at the national level, both rules (Section B) and incentives for compliance (Section C).

A. The 2014 Reform of WAEMU Fiscal Rules

The 2014 reform sought to address three main issues with existing rules. The WAEMU convergence criteria include fiscal rules (Box 2), which cover, notably, the fiscal balance and the debt-to-GDP ratio. Overall, the experience of WAEMU fiscal rules was mixed, with limited observance of the deficit target, a complex set of rules, and limited incentives for voluntary compliance.

- First, with the approval of new criteria, the WAEMU needs to reflect on previous experiences with their rules, as lessons can be learned, where the ***observance of the fiscal balance criterion was limited*** (Figure 1.A). Limited observance of the deficit criterion is a source of concern. Indeed, fiscal policy in each WAEMU country faces the dilemma of being the main policy tool to respond to shocks while being constrained by the need to preserve fiscal and external stability of each country and of the union. It also reflects that existing rules are more viewed as a constraint to preserve sustainable growth than a desirable goal for each member country. However, empirical findings suggest a strong reason to adhere to the rules, as, empirically, higher deficits in the WAEMU have not been conducive to higher growth performances (Figure 1.C).[2] Against this background, the debt criterion is easily met, owing to debt relief (Figure 1.B)[3]. However, the deficit objective is not linked to the debt criteria, and linking them could help improve compliance—for example, by defining automatic deficit adjustments when debt gets closer to its ceiling.

- Second, ***the rules were complex***, being numerous and, for some, having an unclear ultimate objective. International best practice suggests that fiscal rules should be simple and their underlying goals easy to understand. This ease is crucial to secure a broad consensus on the rules and the objectives they seek to achieve. Some of the WAEMU convergence criteria achieve this consensus—namely, those on the deficit and debt. However, the total number of

[2] The causality is uncertain, as larger deficits may precisely be a result of lower growth performance; however, there is no indication that growth can be achieved through a demand-driven policy of increasing deficits. Indeed, fiscal multipliers tend to be small in developing countries (Spilimbergo, Symansky, and Schindler 2009). Instead, fiscal policy can foster growth through macroeconomic stability and by making space for development spending.

[3] This criterion was set at a time when countries were still heavily indebted, and restoring fiscal sustainability was a critical issue. Now WAEMU countries face a different challenge, which pertains more to preserving fiscal sustainability rather than achieving sustainability, per se.

rules, six, was relatively large. The rules were also complex (for example, definition of the deficit; see Box 1, footnote 1), and not consistent (a country complying with the deficit objective would not be automatically required to adjust its deficit if it were to breach the debt-level objective). Having too many criteria runs the risk that the authorities do not focus sufficiently on those that are critical for fiscal sustainability; from this perspective, consideration could be given to keeping only two or three criteria. These criteria could relate to the stock of public debt and the flows contributing to debt accumulation (Section B).

- Third, ***compliance incentives have been limited and enforcement mechanisms not used***. The WAEMU commission is in charge of the surveillance of fiscal rules observance; however, its mission is hampered by the lack of availability of data and also administrative capacity issues (IMF 2013b). Furthermore, the main compliance instrument—financial sanctions—while possible, has not been applied, and therefore lacks credibility.[4] Overall, the lack of compliance with rules has led in some WAEMU countries to increasing debt ratios post Multilateral Debt Relief Initiative (MDRI, Figure 1.D). To maintain sustainable debt levels it would be appropriate to observe deficit rules and leave the option to strengthen further regional rules by complementing them with national ones.

In line with best practices, rules were refocused on fiscal sustainability (Box 1), and enforcement mechanisms at the union level were strengthened. The 2014 reform proposes to address vulnerabilities of current rules, with the aim of making them operational by 2019.

- In line with international experience, ***rules were simplified***, with a stronger focus on fiscal sustainability. The definition of the deficit has been changed to a more comprehensive overall fiscal balance (instead of the basic fiscal balance), while abolishing the criterion of the non-accumulation of arrears. The secondary criteria are also revised, with the tax-to-GDP ratio floor increased from 17 to 20 percent and the ratio of public investment expenditure to revenue dropped.

- ***Enforcement mechanisms were refocused on voluntary compliance***. The administrative capacity of the WAEMU Commission will be strengthened and voluntary compliance encouraged through outreach missions in each member state—before finance laws are adopted. Furthermore, there is an overall strategic change in the approach, moving away from the ineffective financial sanctions, to focus on voluntary compliance through communication/peer pressure, as well as support for countries facing difficulties in meeting criteria.

[4] Under the Excessive Deficit Procedure, a deviating country is given 30 days to develop an adjustment strategy, which can benefit from financial support from the nion. Otherwise, the country would expose itself to potential sanctions.

Box 1. Fiscal Rules in WAEMU Convergence Criteria

	Old	2014 Reform
First-order criteria		
· Fiscal balance	Basic fiscal balance[1] ≥ 0 percent of GDP	Overall fiscal balance[2] ≥ -3 percent of GDP
· Debt-to-GDP ratio	Below 70 percent of GDP	Below 70 percent of GDP
· Arrears	Change in arrears ≤ 0	*Abolished criterion*
Second-order criteria		
· Ratio of wage bill to revenue	Below 35 percent	Below 35 percent
· Tax-revenue-to-GDP ratio	Above 17 percent	Above 20 percent
· Ratio of domestically financed capital expenditure to tax revenue	Above 20 percent	*Abolished criteria*

Source: WAEMU authorities.

[1] Difference between revenue and expenditure under the direct control of the authorities—that is, tax and non-tax revenue plus budget support grants (including resources from the Heavily Indebted Poor Countries Initiative), less current expenditure, domestically financed capital expenditure, and net lending.

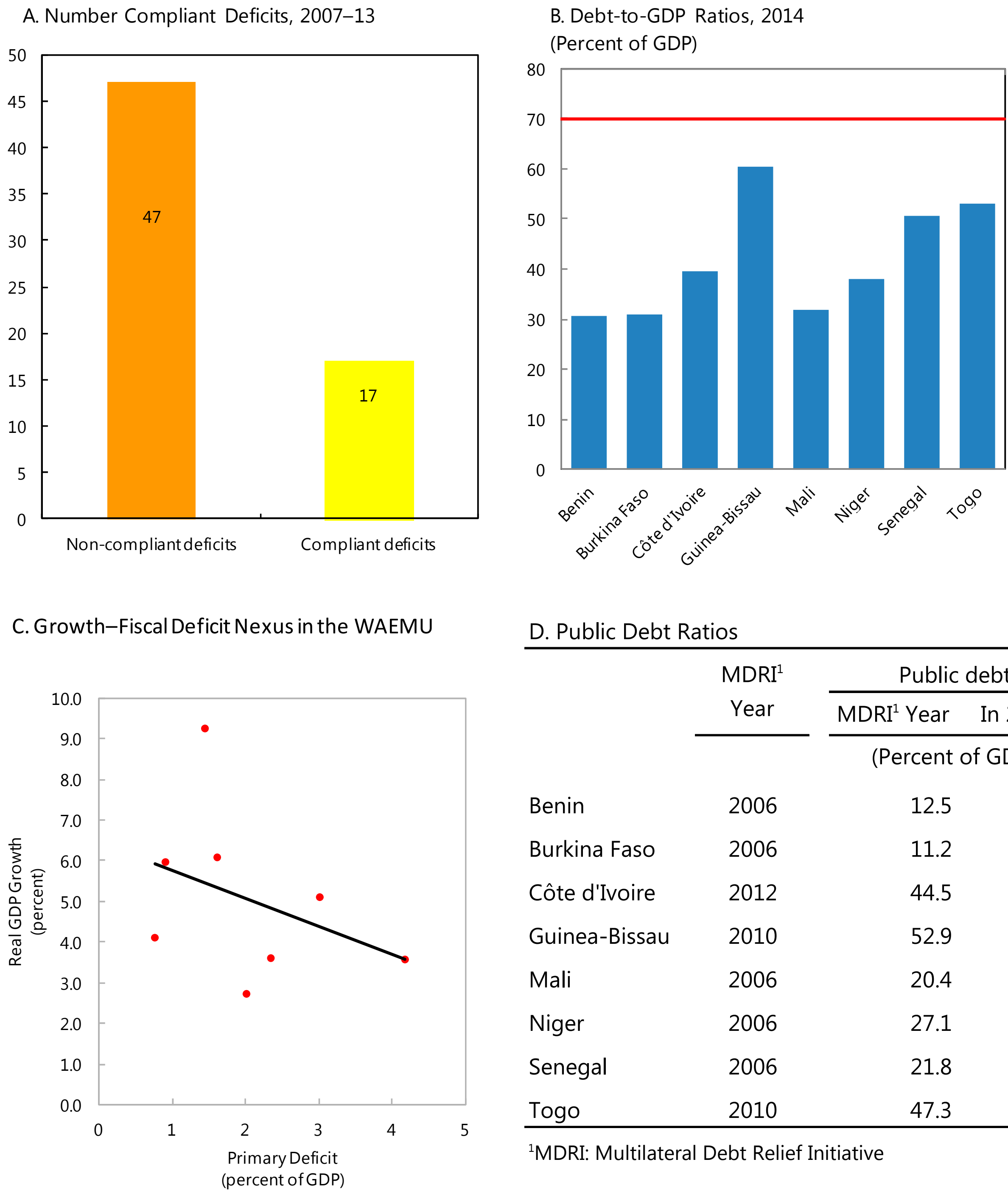
[2] Including grants.

Continued work by national authorities could help ensure the success of the reform. International experience with fiscal rules suggests that enforcement mechanisms are better designed at the country level, as they tend to be more efficient when relying on increasing the political cost for deviation rather than on introducing financial penalties. Thus, while the 2014 reforms represent a step in the right direction, some options could be considered by national authorities so that they can play their part in the success of the reform. In particular, two areas, discussed further in the next section, could be explored.

- Fiscal rule designs could be complemented by legal provisions, mostly at the national levels (Section B). For example, a common ceiling for debt-to-GDP ratio is desirable as a long-term goal, but it may not be sufficient to provide guidance in the short and medium terms for countries facing different vulnerability risks. Also, the issue of compliance relates partly to the design of rules, as, for example, escape clauses that could be designed to cope with exceptional circumstances. More generally, redesigning rules at the union level could be enhanced by strengthening the fiscal policy frameworks for each country.

- Increasing member countries' ownership could also be strengthened with the introduction at the national level of fiscal councils dedicated to the communication of compliance/noncompliance with WAEMU fiscal rules (Section C).

Figure 1. Experiences with Fiscal Rules in the WAEMU



D. Public Debt Ratios

	MDRI[1] Year	Public debt MDRI[1] Year	Public debt In 2014
		(Percent of GDP)	
Benin	2006	12.5	30.7
Burkina Faso	2006	11.2	30.9
Côte d'Ivoire	2012	44.5	39.5
Guinea-Bissau	2010	52.9	60.5
Mali	2006	20.4	32.0
Niger	2006	27.1	37.9
Senegal	2006	21.8	50.7
Togo	2010	47.3	53.1

[1]MDRI: Multilateral Debt Relief Initiative

Source: Country authorities and IMF staff estimates and computations.

B. Options to Strengthen Rules at the National Level

This section offers some guidance on how national authorities could rework their own fiscal frameworks to help ensure the success of the 2014 reform. It focuses on the following principles: (1) ensuring the mutual consistency of debt and fiscal objectives, by relying, for example, on debt-sustainability analyses or a debt brake mechanism; (2) defining conditions that would allow temporary suspensions of the rules; and (3) strengthening the budget process, notably by framing fiscal policies within medium-term frameworks.

The rules defined at the WAEMU level could be complemented at the member countries by linking the deficit and debt objectives, and by allowing some tailoring if countries need further constraints on their budgets. The link between debt and deficit objectives should be as clear as possible. For instance, a ceiling on the deficit should not be set at a level so high that it would likely lead in the medium term to a breach of the debt ceiling by most countries. From this perspective, relying on comprehensive Debt Sustainability Analysis (DSA) helps ensure this consistency. Additionally, the consistency could be improved by introducing "debt brakes," which adjust the deficit ceiling based on past deviations from targets or the distance to the debt ceiling.[5] For example, slippages from deficit objectives could be automatically corrected the following year. Similarly, deviations from debt levels (or debt accumulation) could also lead to automatic corrections. The latter would be particularly relevant for countries approaching their debt limits. This type of link between debt and deficit objectives could be designed at the country level so as to provide an operational guidance to each country on how to implement the general rules defined at the WAEMU level. In addition, it would allow each country to adopt a stricter debt limit than the one provided at the union level, which may be particularly relevant for countries facing more vulnerabilities. Also, countries with a high share of revenue coming from natural resources (for example, Burkina Faso, Mali, and Niger) may wish to adopt expenditure rules to cap outlays growth during booms (including investment in public infrastructure) or revenue rules defining savings for future generations (because of the exhaustibility of the resources). Against this background, countries with stronger budgetary processes—including an effective medium-term framework—and with access to market financing may wish to specify the scope for countercyclical policy.

Dealing with the dilemma of rules versus discretion in the WAEMU. The past experience of WAEMU fiscal rules has shown a dilemma between the rules and discretion faced by each country's authorities. While rule objectives are desirable, WAEMU member countries are exposed to external shocks, which can warrant countercyclical policies; at times, such policies can go against the rules. Furthermore, the large developmental needs faced by all WAEMU countries require that fiscal policies maintain an adequate level of development spending, which is harder to do during downturns. The key to avoiding

[5] Automatic correction mechanisms have been adopted internationally. Here are three examples that the WAEMU could consider. In Switzerland, the fiscal rule specifies a one-year-ahead ceiling on central government expenditures. If budget target balances and outcomes exceed 6 percent of expenditures, the government must bring it below 6 percent in three years. In the Slovak Republic, a constitutional bill was adopted in 2011, limiting public debt at 60 percent of GDP. Automatic sanction mechanisms take effect when the debt-to-GDP ratio reaches 50 percent. Finally, in Jamaica, a fiscal rule is being prepared that will establish an automatic correction mechanism that would be triggered by substantial cumulative deviations from the annual overall balance target.

recurrent slippages in deficit objectives would be to clarify when countries can suspend the application of fiscal rules, and what to do when rules are breached.

- Escape clauses can play a useful role, as they allow for the temporary suspension of the fiscal rule in exceptional circumstances. For this to work, a consensus on the process should be agreed to at the union level, and then each member country would need to design an institutional framework to make escape clauses operational. Each parliament would have to approve the government plan for the temporary suspension—ideally, by a super-majority to ensure that the political consensus is solid. Further, government would have to clarify a strategy for reinstating the rule after its suspension.

- In order to increase the credibility of rules even in case of temporary suspension, countries could build contingency plans and disclose fiscal risks. As shown in Mauro (2011), planning for contingencies is critical when implementing a fiscal strategy. This would be particularly relevant for WAEMU countries that need to preserve development spending approved in budget laws when they get hit by relatively small shocks. However, large shocks may require a temporary suspension of rules. While all shocks are not predictable, some are, because they are related to underlying vulnerabilities, and could therefore be included in fiscal strategies (IMF 2010). A typical issue for WAEMU countries in this regard is the risks pertaining to the energy sector. The budgetary cost of supporting energy sectors not only has tended to be high but also has often been higher than initially budgeted—thus complicating fiscal management and adherence to fiscal rules. This condition has also led to inefficient adjustment, with investment spending bearing the brunt of spending cuts. Contingency planning is, therefore, highly desirable in order to avoid such outcomes.

Rules should be accompanied by a strengthening of the budget processes. The latter are critical to avoid deficit slippages (Milesi-Ferretti 1997) and, therefore, to achieve fiscal sustainability. The WAEMU has a number of recent public financial management (PFM) rules, which are spelled out in directives.[6] All WAEMU countries have made progress in transposing these rules into their national laws, and Côte d'Ivoire, Mali, and Senegal have transposed all of them (this step was initially expected to be completed by end-2011). Framing fiscal strategies within a medium-term fiscal framework (MTF) would facilitate compliance with rules without hampering development spending. This would be particularly relevant if automatic adjustments were made to the deficit in case debt gets close to its ceiling, or if deficit slippages were to be observed in previous years. Within MTFs, policymakers could, therefore, gain flexibility in implementing expenditure programs while preserving the fiscal rules' objectives. MTFs would thereby become a tool to make national numerical rules operational. They not only would help bring budgets in line with medium-term objectives but also would offer a forum for all government agencies to agree jointly on a set of fiscal objectives.

[6] The WAEMU directives harmonize the rules for the preparation, submission, approval, execution, and control of the budget, and encourage efficient and transparent management of public finances.

C. Options for Enforcement Mechanisms at the National Level

International experience suggests that incentive mechanisms are more effective at the national level. Adopting binding rules at the country level may help foster ownership and adherence. Financial sanctions have proved ineffective in the WAEMU. Costs, therefore, need to be of a different nature. Typically, these costs can be of two types: either of a legal nature or of a political one, by raising public awareness of deviations and their economic implications. Based on international experience, three avenues could be explored: (1) framing fiscal rules in national laws, (2) introducing fiscal councils at the national level, and (3) improving fiscal transparency.

Transposing WAEMU fiscal rules into domestic laws will increase their binding character for national policymakers. In line with international best practices, legislations could be adopted at the national level to make rules even more binding. These amendments can be complemented with a fiscal responsibility law defining the specific features of the rules, notably the quantitative ceilings. The main advantage of providing a legal basis to fiscal rules is to create incentives for compliance, as they usually imply sanctions if the law is violated. For example, parliaments could be constrained to approve budgets only if they are consistent with fiscal rules.

With commitments to sustainable public finances under close scrutiny since the 2008 crisis, policymakers' interest in fiscal councils is growing (Figure 2).[7] Fiscal councils are independent public institutions that aim to strengthen governments' commitments to sustainable public finances. They do that through various functions, including public assessments of fiscal plans and performance, and the evaluation or provision of macroeconomic and budgetary forecasts. By fostering transparency and promoting a culture of stability, they can raise the reputational and electoral costs of undesirable policies and broken commitments. The main takeaways from international experience are as follows:

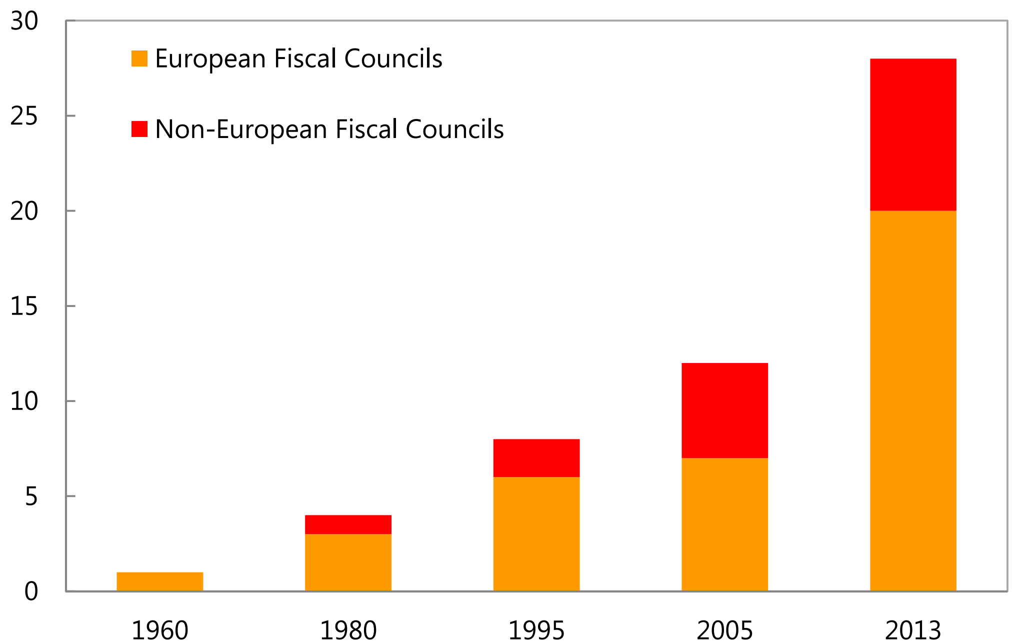
- *There is suggestive evidence that, all else being equal, fiscal councils contribute to fiscal discipline*. Part of their effectiveness comes from the provision of unbiased budgetary execution assessments as well as active participation in public debate, including in the monitoring of fiscal policy rules. Although the evidence is subject to the usual caveats regarding the existence of a causal link between institutions and policy outcomes, case studies broadly support these conclusions.

- *Clear guarantees of independence from politics are essential*. They can notably entail secured financing, and open and transparent hiring processes. These guarantees would typically be complemented by adequate transparency and accountability requirements from the fiscal council.

[7] See also IMF (2013a) and Debrun and Kinda (2014).

- *The remit, tasks, and institutional models can vary greatly across countries,* reflecting available human and financial capacities, political traditions, and causes for excessive deficits and debts.

Figure 2. Number of Countries with Fiscal Councils, 1960–2013



Source: IMF Fiscal Councils Database.

In line with the definition proposed above, fiscal councils generally carry out the following functions:

- The basic functions of fiscal councils are independent analysis, review, and monitoring of a government's fiscal policies, plans, and performance. This includes reviews of the government's annual or medium-term budget proposals, generally with respect to compliance with official objectives—such as those enshrined in fiscal policy rules. Fiscal councils also provide ex post assessments of macroeconomic and fiscal performance against official aggregate objectives and targets.

- *Three advanced functions can be performed by fiscal councils.*[8] First, councils can be mandated to prepare the macroeconomic forecasts used for budget preparation or to set

[8] There is significant variation with regard to these three functions. For instance, the Netherlands Bureau for Economic Planning Analysis performs extensive forecasting and costing functions; however, it does not make judgments on the appropriateness of the government's budgetary plans. In contrast, the Swedish Fiscal Policy Council and the Irish Fiscal Advisory Council engage in normative analysis but do not produce their own forecasts or costing. Some countries have even established a division of labor between different institutions. In Belgium, the Federal Planning Bureau focuses strictly on the provision of macroeconomic forecasts, whereas the High Council of Finance

key assumptions and parameters. These could cover, for example, a prudent price level for certain commodities with a large budgetary impact (either because the country is a large commodity producer or because of extensive subsidy schemes). Second, councils can also be tasked to produce unbiased estimates related to specific spending programs or policy measures. Third and finally, councils can also advise policymakers on policy options. This function can be general—a right to comment and issue recommendations on any policy issue of its choosing—or specific—limited to a particularly contentious issue that must be solved by consensus. A general function is better suited to countries with an already rich public debate and a relatively consensual approach to policymaking. A specific function can be useful in such issues as the sharing of certain revenues across unequal regions, where a consensus must be found but interests among decision makers diverge strongly.

Recent fiscal councils are often explicitly tasked to monitor compliance with fiscal policy rules. While the vast majority of fiscal councils continue to perform positive analyses, evaluate long-term sustainability issues, and prepare or assess macroeconomic forecasts, newly created ones have broader remits. The majority (more than three-quarters) of the new generation monitor compliance with fiscal rules, more than the double compared with veteran institutions. This trend is associated with the increasing use of numerical fiscal rules (Schaechter and others 2012) and is likely to continue given the requirements of Treaty on Stability, Coordination and Governance, which mandates such independent monitoring for European Union signatories.

When establishing fiscal councils in WAEMU countries, it would be desirable to take into consideration administrative setup and capacity of those countries. For WAEMU countries, the case could be made to: (1) find synergies when building fiscal councils, for example by attaching the council to parliament (for example, Kenya and South Africa), or by using an existing institution, as France did when deciding to attach its new fiscal council to the existing external audit court (*Cours des Comptes*); and (2) require the councils to focus solely on reporting and alerting the public on compliance/noncompliance. Such councils would complement the regional surveillance exercised by the WAEMU Commission, and, in time, could also build from their experience to assess budget projections.

Fiscal transparency and communication must be central to the strategy of improving voluntary compliance. To be effective, the objectives of the fiscal rules must be widely understood and accepted by the public so that a political and social consensus can be reached. Communication campaigns could, therefore, be organized to inform the public about the scale of the fiscal challenges and explain what can be reasonably achieved through reforms without overburdening taxpayers or unduly curtailing necessary public services. Similarly, communication of the adverse consequences of not adjusting would also be essential, particularly in cases of fiscal adjustments. The publication of annual reports on implementation could provide incentives for member countries to enact the directives. Applying

(Public Sector Borrowing Requirement Section) performs oversight and monitoring functions, and must provide policy recommendations, including on the distribution of the eventual fiscal effort among central and subnational entities to comply with general government rules.

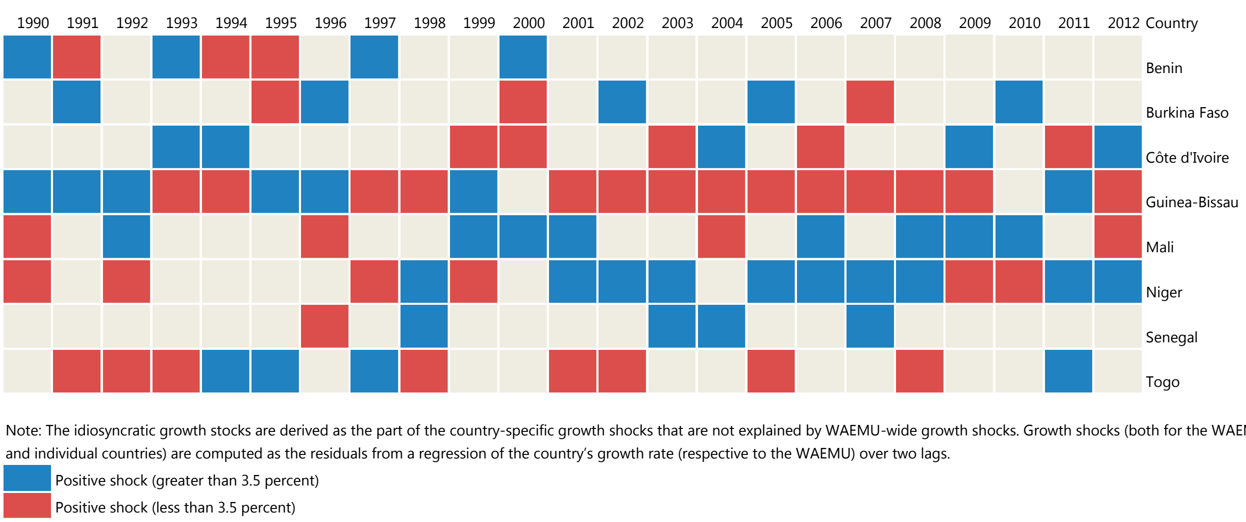
international best practices in terms of fiscal transparency would imply, among other things, publishing accounts and budget execution reports, and having external assessments (overseen by parliaments) and external audits of public accounts performed and made public.[9] With the disclosure of budget documents, budget execution, and fiscal risks, governments could then have the tool to provide convincing arguments about the implications of fiscal adjustment (or lack thereof) as well as their efforts to protect the most vulnerable. By helping the public and key stakeholders to understand fiscal policy and fiscal trends, the authorities could facilitate the emergence of strong support, both domestically and externally, for their fiscal strategy. The credibility of the authorities would also be enhanced if their policies were supported by an independent assessment provided by the fiscal council.

III. CREATING PUBLIC INSURANCE MECHANISMS

Frequent and large asymmetric shocks and limited effectiveness of shock-smoothing mechanisms challenge the stability of WAEMU economies. A public insurance mechanism—even in its less centralized form—could provide an additional tool to smooth severe shocks.

WAEMU countries are subject to frequent and, to a large extent, asymmetric shocks. WAEMU economies have remained poorly diversified and vulnerable to external shocks and changing weather conditions. Moreover, their economic structure—production and trade specialization, and geographic orientation—has stayed relatively heterogeneous, and economic integration in the region has been limited (IMF 2013a). Therefore, business cycles of WAEMU members have not been well synchronized (BCEAO 2012), and asymmetric shocks have remained large and frequent (Figure 3). The region has also faced recurrent sociopolitical turbulences that significantly affected economic activity (IMF 2013b).

Figure 3. Frequency of Asymmetric Shocks in the WAEMU

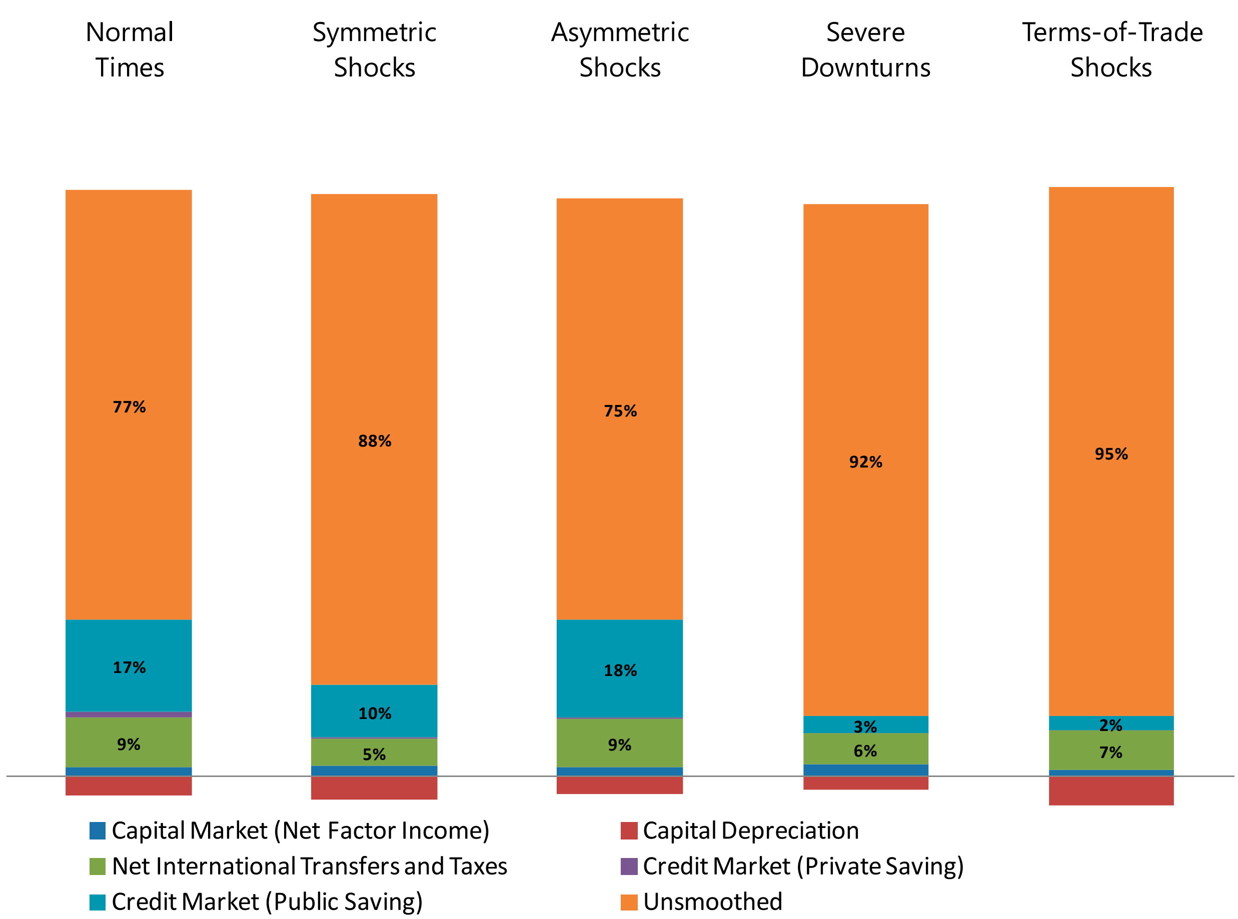


Note: The idiosyncratic growth stocks are derived as the part of the country-specific growth shocks that are not explained by WAEMU-wide growth shocks. Growth shocks (both for the WAEMU and individual countries) are computed as the residuals from a regression of the country's growth rate (respective to the WAEMU) over two lags.

[9] See http://www.imf.org/external/pubs/ft/dp/2009/dp0901.pdf and http://www.imf.org/external/pubs/ft/spn/2009/spn0918.pdf.

The effectiveness of existing shock-smoothing mechanisms has been limited. Limited capital mobility with the rest of the world means that, despite the CFA franc being pegged to the euro, there is some scope for an independent monetary policy. The effectiveness of monetary policy, however, has been limited by a shallow and fragmented financial system. For similar reasons, country-specific shocks have not been smoothed through international borrowing/lending and cross-border ownership of assets and liabilities. On the other hand, international income transfers have provided little risk-sharing, as foreign aid tends to be procyclical and a federal system of transfers and taxes is practically nonexistent. The role of fiscal policies has also been rather limited (see below). Remittances have been often the only effective and stable smoothing mechanism in the WAEMU. Overall, a large proportion of shocks to GDP (Figure 3) remain unsmoothed. In addition, the effectiveness of smoothing mechanisms, especially fiscal policy, seems significantly reduced during very severe shocks (Figure 4).[10]

Figure 4. Shock-Smoothing in the WAEMU



Source: IMF staff estimates.

[10] This is the case particularly during very severe downturns, symmetric and terms-of-trade shocks, and periods of civil conflict. Social conflicts, recurrent in WAEMU countries, have detrimental economic effects and can significantly affect the ability of risk-sharing mechanisms to absorb shocks (Zdzienicka 2013).

A public insurance scheme at the regional level could serve as an additional shock-smoothing mechanism. Possible options vary, from a centralized insurance fund to a regional budget, depending, for instance, on a degree of centralization and institutional requirements.

- *A centralized insurance fund* would be a minimal institutional form of a public insurance scheme, which would provide transfers during crisis times. Such a fund could be financed by annual contributions from each member state and, possibly, regional bonds issuance (although the latter would require further and carefully designed fiscal integration). Furthermore, the insurance fund would also need to focus on smoothing non-policy-related temporary shocks, to reduce moral hazard issues.[11]

- *Common welfare fund and unemployment insurance.* Insurance of per capita income or social protection can also contribute to shock-smoothing.[12] This would, however, require a higher degree of centralization and institutional setup. This common insurance would be pre-funded by individual social security contributions or other labor taxes. Automatic payments would take place if income per capita or rate of unemployment in a country deviates from its reference level, compared with deviations in other WAEMU countries. To effectively play its stabilization role, some degree of harmonization of labor taxes and social benefits, as well as distribution channels, would be necessary. As with the centralized insurance fund, transfers should be used to smooth temporary deviations or be temporary to avoid moral hazard problems. This risk-sharing mechanism could be costly to put in place in the WAEMU, as national social security systems remain underdeveloped[13] and low rates of formal employment make it harder for the government to collect direct taxes. However, it could have the significant advantages of being more publicly acceptable and being able to smooth directly individual income.

- *Regional budget.* Centralization of (parts of) national budgets to a regional authority would provide automatic shock-smoothing.[14] In particular, as certain taxes would be collected and managed by the regional government, a country touched by a negative shock could automatically benefit from supranational transfers. These transfers could take the form of social benefits and/or another compensation scheme, as well as capital spending. This option

[11] There could be also alternative options to finance shock-smoothing. If some WAEMU countries were to meet donors or IMF criteria for credit lines, they could also use these lines to respond to asymmetric shocks.

[12] This assumes a timely reaction to negative shocks.

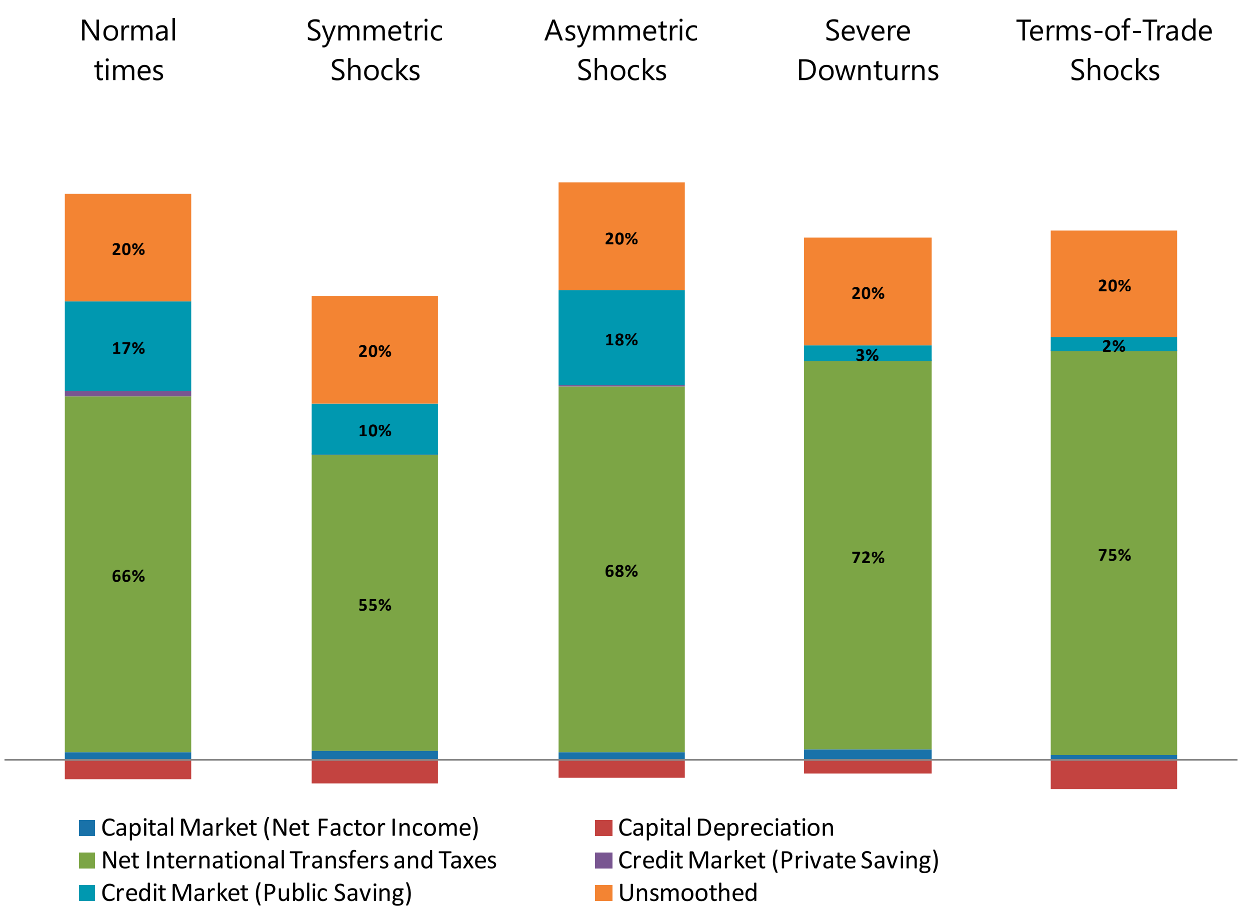
[13] The ability of social benefits to smooth shocks significantly increases over time but remains small compared with the role that these transfers plays in developed countries.

[14] Asdrubali, Sorensen, and Yosha (1996) find that federal tax-transfer and grant systems smooth about 13 percent of shocks to per capita gross state product in the United States. Hepp and von Hagen (2012) find that the federal budget smoothed about 50 percent of shocks to state gross product in Germany before 1990. Malkin and Wilson (2013) provide a more recent analysis of the U.S. tax-transfers system and find that the federal tax system has the most stabilizing impact in the short term.

would obviously require the transfer of certain sovereign budgetary powers from national to regional authorities and substantial changes in the WAEMU instructional framework.

A centralized insurance fund financed by a relatively small contribution could provide significant benefits in terms of income-smoothing in the WAEMU. A simple, automatic, and nonregressive system of temporary transfers—financed by a relatively small contribution of the order of ¾ to 1¼ percent of GDP—would smooth income in a comparable way to what other federal states have (Figure 5). In particular, the fund financed by taxes from all WAEMU members at all times would disburse transfers to countries negatively hit by the shocks. Transfers would be proportional to: (1) the size of the shocks, (2) the relative size of each economy compared with the rest of the union, and (3) the resources accumulated in the fund each year (Box 2). If no country was affected by a negative shock, then no disbursement would take place and contributions would be saved in the fund.

Figure 5. Shock-Smoothing with a Centralized Mechanism



Source: IMF staff estimates.

Depending on sociopolitical preferences, all public insurance schemes should be designed with caution and proceed in parallel with financial and institutional development. While the form of fiscal federalism would clearly depend on sociopolitical preferences, the creation of such a mechanism could alter the structure of the economic system and create a possible moral hazard problem. For instance, national authorities could have fewer incentives to conduct countercyclical policies. At the same time, a centralized insurance fund could increase investors' confidence and strengthen the effectiveness of and access to market-based mechanisms. Despite some uncertainty regarding its possible structural impact and significant immediate costs, further fiscal integration in the longer term presents potential benefits for the WAEMU countries. To play this role effectively, any public insurance scheme has to be designed with caution and move forward in parallel with the sustainable development of resilient regional financial markets and improvements in governance and the institutional environment.

Box 2. Risk-Sharing and Regional Fiscal Stabilization Fund

1. Risk-Sharing and Insurance Mechanisms

To estimate the effectiveness of risk-sharing in the WAEMU, we apply the approach developed by Asdrubali, Sorensen, and Yosha (1996) for a panel of seven WAEMU countries (Benin, Burkina Faso, Côte d'Ivoire, Mali, Niger, Senegal, and Togo) over the period 1960–2012.[1] The approach consists in desegregating gross domestic product (GDP into different national account aggregates:

$$\mathrm{GDP_i} = \frac{\mathrm{GDP_i}}{\mathrm{GNP_i}}\frac{\mathrm{GNP_i}}{\mathrm{NI_i}}\frac{\mathrm{NI_i}}{\mathrm{DNI_i}}\frac{\mathrm{DNI_i}}{(\mathrm{DNI+G})_i}\frac{(\mathrm{DNI+G})_i}{(\mathrm{C+G})_i}(\mathrm{C+G})_i, \quad (1)$$

where GNP, NI, DNI, G, and C denote gross national product, net national income, net disposable national income, and government consumption, and private consumption, respectively. GDP shocks propagate through the economic system and affect the other income variables in the identity, unless they are smoothed by some countercyclical factor. Full stabilization is obtained if only GDP varies while consumption remains unchanged. In particular, smoothing is provided by capital markets through the international net transfers of income factors if, after the shock, GDP changes while GNP remains constant. Successively, if GNP varies and NI remains unchanged, capital depreciation acts as a smoothing factor. If NI is modified and DNI stays constant, smoothing takes place via net transfers from abroad. If DNI moves while C + G remains unchanged, stabilization is obtained by credit markets through private and public saving. Finally, if total consumption also co-moves with GDP, a share of the shock remains unsmoothed.

The amount of shock-smoothing provided by each channel is then estimated using the following system of independent equations:[2]

$$\Delta\log\mathrm{GDP}_{i,t} - \Delta\log\mathrm{GNP}_{i,t} = \alpha_t^m + \beta^m \Delta\log\mathrm{GDP}_{i,t} + \varepsilon_{i,t}^m \quad (2)$$

$$\Delta\log\mathrm{GNP}_{i,t} - \Delta\log\mathrm{NI}_{i,t} = \alpha_t^d + \beta^d \Delta\log\mathrm{GDP}_{i,t} + \varepsilon_{i,t}^d \quad (3)$$

$$\Delta\log\mathrm{NI}_{i,t} - \Delta\log\mathrm{DNI}_{i,t} = \alpha_t^g + \beta^g \Delta\log\mathrm{GDP}_{i,t} + \varepsilon_{i,t}^g \quad (4)$$

$$\Delta\log\mathrm{DNI}_{i,t} - \Delta\log(\mathrm{DNI+G})_{i,t} = \alpha_t^p + \beta^p \Delta\log\mathrm{GDP}_{i,t} + \varepsilon_{i,t}^p \quad (5.1)$$

$$\Delta\log(\mathrm{DNI+G})_{i,t} - \Delta\log(\mathrm{C+G})_{i,t} = \alpha_t^s + \beta^s \Delta\log\mathrm{GDP}_{i,t} + \varepsilon_{i,t}^s \quad (5.2)$$

$$\Delta\log(\mathrm{C+G})_{i,t} = \alpha_t^u + \beta^u \Delta\log\mathrm{GDP}_{i,t} + \varepsilon_{i,t}^u \quad (6)$$

Where the coefficients β measure the incremental percentage of shocks smoothing through each channel and the coefficients α_t capture time fixed effects. β^u indicates a part of income shock that remains unsmoothed. There are no constraints imposed on the coefficients β, other than $\sum\beta = 1$ imposed by construction. The coefficients β, however, could take negative values and dis-smooth income shock or have value greater than 1.

2. Regional Fiscal Stabilization Fund

The stabilization properties of an insurance fund at the union level are estimated using the approach proposed by Furceri and Zdzienicka (2013).[1] The fund is financed by taxes (as a share of each WAEMU country's GDP) that are used to pay transfers to countries negatively hit by shocks. Disbursed transfers are proportional to the size of the shocks, the relative size of each economy compared with the rest of the union, and to the resources accumulated in the fund each year. If no country is touched by a negative shock, then no disbursement takes place and contributions are saved in the fund. The simulated stabilization fund based on cyclical fluctuations of each country's GDP is similar to the fiscal mechanism in existing federal states.[3] The fund also presents certain optimal characteristics (Hammond and von Hagen 1995). Namely, (1) it is automatic, (2) it is nonregressive (the size of transfers and contributions do not vary with per capita income), (3) it consists of temporary transfers, (4) the transfers are a function of serially uncorrelated shocks, and (5) the transfers are able to offset a large part of these shocks. In detail, the stabilization budget is designed as follows:

$$\text{Stabilization budget}_t = \sum_i \tau * \text{GDP}_{it-1} = \sum_i \text{taxes}, \qquad (7)$$

where τ is the gross contribution rate. When a country i is hit by a negative shock at time t, a transfer from the fund (T_{it}) takes place.

$$T_{it} = |\epsilon_{it}| * \frac{\text{DNI}_{it-1}}{\sum_i \text{DNI}_{it-1}} * \sum_i \tau * \text{GDP}_{it-1} \quad \text{if } \epsilon_{it} < 0$$

$$T_{it} = 0 \quad \text{if } \epsilon_{it} > 0$$

where ϵ_{it} are the shocks occurring in a country *i* at the time *t*, $\text{DNI\_(it} - 1)/(\sum\text{\_iDNI\_(it} - 1))$ captures a relative size of each economy, and $\sum_{i\tau *} \text{GDP}_{it-1}$, the size of the stabilization budget. Serially uncorrelated shocks (ϵ_{it}) are estimated country by country from the following regression model:

$$\Delta \log \text{GDP}_{it} = \alpha_i + \sum_{j=1}^{2} \beta_j \Delta\log\text{GDP}_{it-j} + \epsilon_{it}. \qquad (8)$$

The effectiveness of the stabilization mechanism to smooth the shocks is then obtained by including the net transfers into the disposable national income in equation (4) and estimating the following equations:

$$\Delta \log \text{NI}_{it} - \Delta \log \text{DNI}'_{it} = \alpha_t^g + \beta^g \Delta\log\text{GDP}_{it-j} + \varepsilon_{i,t}^g$$

$$\text{DNI}'_{it} = \text{DNI}_{it} + T_{it} - \text{taxes}_{it}$$

[1] We exclude Guinea-Bissau, owing to the lack of available data. Data for national account variables are constructed using the World Development Indicators data. Data for fiscal policy variables are taken from the IMF internal database. See Annex 1 for a detailed data description.

[2] Following Asdrubali, Sorensen, and Yosha (1996), we take log and first difference of each side of the equation (1), then multiply each term by $\Delta logGDP_{i,t}$. The cross-sectional variance in GDP is then divided by $\Delta logGDP_{i,t}$ to obtain the following equation $1 = \beta^m + \beta^d + \beta^g + \beta^p + + \beta^s + \beta^u$, which allows us to rewrite equation (1) as a set of independent equations (2–6). See the appendix for the relationship among these variables.

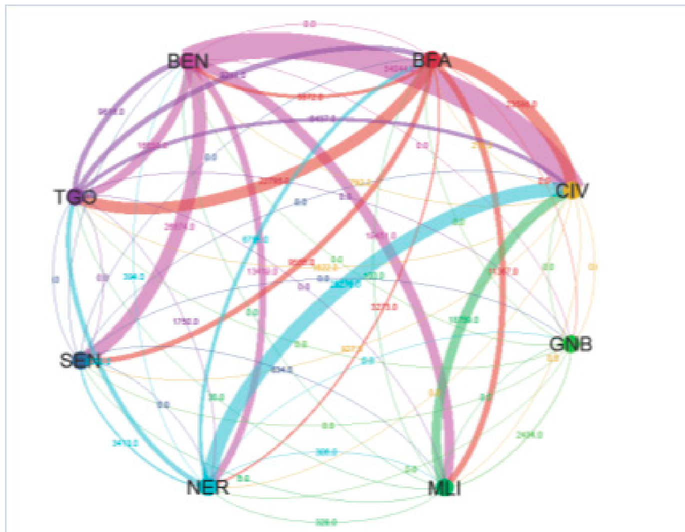
[3] In the existing mechanisms each country contribution is proportional to its size. We use GDP rather than GNP to measure income, since little consumption-smoothing takes place via international capital markets.

IV. DEVELOPING AND STRENGTHENING FINANCIAL INSURANCE MECHANISMS

Although shock-smoothing via credit and financial market channels is increasing over time, it has remained limited. The role of capital markets and private credit channels has been marginal in offering options to smooth the impact of adverse shocks. Increasing the capacity of the WAEMU member countries to absorb the impact of shocks would require deepening the financial system, creating a full banking union, and developing resilient and integrated capital markets.

Despite recent developments, the financial sector in the WAEMU remains shallow and fragmented. The financial system remains bank-centered, with 106 banks and 13 financial institutions together holding more than 90 percent of the financial system's assets. Despite rapidly raising foreign-owned pan-African groups, cross-border financial flows are limited (Figure 6). Similarly, emerging nonbank financial and macro-financial institutions are still small and do not conduct significant operations outside their own countries. The regional financial markets remain underdeveloped, with the exception of the government debt market. Equity finance is small and largely national; only 40 companies originating from Côte d'Ivoire are listed on the West Africa Stock Exchange market (*Bourse Régionale des Valeurs Mobilières*, BRVM).

Figure 6. Cross-Border Bank Liabilities in the WAEMU, 2012[1]



Source: IMF Staff estimations

[1]The size of the nodes represents the amount of liabilities of the banking system of each country in 2012. The size of the links represents the values of net loans between countries.

While financial development and integration could mitigate the impact of shocks, they could also increase financial instability. On the one hand, financial development and integration could enhance the role of credit channels in shock-smoothing through private and public borrowing and lending.[15] They could also increase the role of the portfolio diversification–capital market channel, and the cross-ownership of assets could mitigate the impact of idiosyncratic shocks. On the other hand, shocks

[15] More developed financial markets could reduce some government financing constraints and allow for more countercyclical fiscal policies. Moreover, they could improve the effectiveness of market discipline in the region (IMF 2013b).

propagate faster through more integrated financial systems, while a fast-growing financial sector could become a source of shocks itself if exiting vulnerabilities are not properly addressed.[16]

To increase the role of the credit market in risk-sharing, completing and strengthening the regional banking union would be essential (Table 1). Overall, the banking systems of member countries are weakly integrated. Bank licenses and resolutions remain country-specific,[17] which substantially limits cross-border interactions. Therefore, there is a need for developing integrated banking services, increasing interbank transactions, improving transparency, strengthening a single regulatory system and supervisory mechanism, and creating a single resolution mechanism and financing regime for bank failures. Ongoing efforts to strengthen collaboration with other supervisors (outside of the WAEMU) are also critical.

To create market-based insurance mechanisms, reforms to develop regional financial markets need to accelerate. Weak transparency, underdeveloped legal and business environments, limited financial skills, and suboptimal taxation regimes[18] are the main obstacles to financial market development and integration (IMF 2013, 2014). The Banque Centrale des Etats de l'Afrique de l'Ouest (BCEAO) and Conseil Régional de l'Epargne Publique et des Marchés Financiers (CREMPF) recently initiated a set of reforms to address these issues (for example, collateralized operations—repos, rollout of an electronic platform, primary dealers, a new electronic data management system, ratings, accounting records for small and medium-size enterprises (SMEs), trainings to increase financial skills), but they have yet to be completed.

Table 1. Banking Union in the WAEMU

Pillar	Reason	Goal	Where does WAEMU stand
Single regulatory system	All banks subject to same supervision and regulation standards.	Avoid arbitrage and create a level playing field.	In theory all banks are subject to the same regulation.
Single integrated supervision	Banks in the banking union supervised by a single supervisor.	Ensure level playing field in supervision and no arbitrage.	Banking commission is unique supervisor.
Unified deposit insurance system	While no country currently has a national deposit system, there is a proposal to have a unified scheme for the union.	A sizable deposit scheme would help minimize deposit runs, especially among the weaker members.	Moving toward it.
Unified resolution scheme	To wind down banks.	Limit the risks to public finances and the arbitraging among countries to push off costs.	Still being considered.

[16] The WAEMU financial sector appears sound on average, but vulnerabilities have increased recently (IMF 2014).
[17] Banking licenses (and their ultimate withdrawal) remain a prerogative of national authorities. In addition, the ultimate sanction by the banking commission to close down a bank lacks credibility, due to political interference at the national level.
[18] For instance, WAEMU sovereign debt receives favorable tax treatment, thereby segmenting the market by creating a tax-driven public sector bias.

To limit risks of crisis propagation, crisis management measures and financial safety nets should also be put in place. Increasing national bank exposure to sovereign risk and presence of pan-African banks in the WAEMU suggest that public default could spill more and more rapidly into national and then regional banks.[19] Similarly, the lack of a fiscal backstop/deposit insurance scheme means that problems in banks can destabilize the public purse and increase the risk that ultimate costs would be borne by taxpayers.[20] Therefore, the following crisis management and financial safety measures should be introduced to mitigate the risks:

- *Common resolution mechanism.* A single resolution framework should be put in place to avoid national-level opposition to closing down failing banks. A set timeline for banks to spend in receivership should also be introduced to limit the presence of "zombie banks" in the region. Improving the effectiveness and credibility of the crisis management framework—notably, through increasing transparency, limiting political interference, and improving the resolution framework—should be then the priority. Subsequently, other Key Attributes of Effective Resolution Regimes for Financial Institutions should be put in place to limit fiscal costs and potential spillovers (see IMF 2013). A special resolution regime for banks also would be welcome.

- *Deposit insurance scheme.* A regional deposit insurance scheme would reduce fiscal risks during episodes of banking crisis, by providing options to share the costs of crisis resolutions. The deposit insurance has been established and has some key elements found in most credible schemes, such as appropriate coverage, timely payouts, and adequate funding. However, it is not yet funded and has not been tried and tested.[21] A deposit insurance scheme, however, has a number of important limitations during crises when large segments of the banking sector are at risk of failure, because it is supposed to help deal only with smaller banks, not with a systemic crisis. In this context, unless authorities mobilize their own resources, the key objective of promoting confidence will be lost. To prevent this outcome, it is essential that all funding mechanisms for a deposit insurance system are made available, including a means of obtaining supplementary backup funding during a crisis. In addition, well-designed financial safety nets (emergency liquidity assistance and the Financial Stability Fund) are critical to an effective crisis management system and to minimize the sovereign-bank nexus.

[19] The debt restructuring of the sovereign of Côte d'Ivoire in 2011, however, is an example where the shock was partially diffused across the region, notably to the stronger members, such as Senegal.

[20] Supplement 1 to IMF (2013b).

[21] The deposit insurance system is calibrated to cope with the failure of two medium-sized banks in the WAEMU, and it can therefore absorb limited losses among its insured pool. The way the deposit insurance system is conceived right now is as a simple "pay box" administered by the central bank. Part of the deposit will cover banks, while the other part will cover microfinance institutions. Constituted over a 10-year period, it is expected to cover 80 percent of depositors (40 percent of deposits, given the concentration of wealth), with a maximum guarantee of FCFA 1.4m per account. The authorities have also launched an insurance fund to guarantee all payments through the RTGS system, financed through a tax on banks.

- *Emergency liquidity assistance (ELA).* During financial crises, liquidity support from the central bank is crucial for distressed financial institutions. Therefore, the existence of a lender of last resort providing ELA is necessary to absorb the shock and avoid its propagation.[22] This mechanism is—formally—lacking in the WAEMU, although liquidity assistance was provided by the central bank during the only systemic crisis experienced by the region, in 1994. To avoid any legal uncertainty, it would be desirable to formalize this form of assistance in the BCEAO books.

- *Financial Stability Fund.* Another element of the financial safety net is the decision to launch a Financial Stability Fund, modeled on the European Financial Stability Fund/European Stability Mechanism, whose aim is to provide temporary bridge funding to governments facing liquidity squeezes.[23] The aim is to minimize potential spillovers from such temporary shocks on the wider financial system.

---

[22] Private credit markets tend to freeze under severe stress and amplify the impact of shocks (Furceri and Zdzienicka 2013). Under severe crises, the public smoothing channel in the WAMEU is also significantly less efficient.

[23] Not only do countries in a monetary union not control interest rates and exchange rates, but they also lose the capacity to issue debt in a currency over which they have full control, leading to a "sovereign liquidity risk." This implies that a loss of confidence of investors—especially given the high rollover rate of public debt—can drive any country in the region to default, as the BCEAO is legally not able to finance states in the primary market. The analogy is similar to a bank run. When solvency problems arise in one country, bondholders may sell this country's and other nations' bonds as they fear the worst. This loss of confidence can trigger a liquidity crisis in the sovereign bond markets because there is no buyer of last resort. Without such a backstop, fears can grow until the liquidity problem degenerates into a solvency problem. The loss of confidence increases the interest rates governments must pay to roll over bonds, but the higher interest harms governments' solvency. The cycle of fear and resulting rising interest rates may lead to a self-fulfilling default. Countries can be pushed into this sort of bad equilibrium—a self-fulfilling debt crisis (see de Grauwe 2011).

REFERENCES

Asdrubali, P., B.E. Sorensen, and O. Yosha. 1996. "Channels of Interstate Risk Sharing: United States 1963–1990." *Quarterly Journal of Economics* 111 (4) : 1081–110.

BCEAO. 2012. *Symposium du cinquantième anniversaire: Remarques conclusives du Gouverneur a la clôture du symposium*. Dakar: Banque Centrale des Etats de l'Afrique de l'Ouest.

Debrun, X., and T. Kinda. 2014. "Strengthening Post-Crisis Fiscal Credibility–Fiscal Councils on the Rise. A New Dataset." Working Paper 14/58, International Monetary Fund, Washington.

De Grauwe, P. 2011. "Managing a Fragile Eurozone." *CESifo Forum* 12: 40–45.

Furceri, D., and A. Zdzienicka. 2013. "The Euro Area Crisis: Need for a Supranational Fiscal Risk Sharing Mechanisms." Working Paper 13/198, International Monetary Fund, Washington.

International Monetary Fund (IMF). 2010. "From Stimulus to Consolidation—Revenue and Expenditure Policies in Advanced and Emerging Economies." Washington. http://www.imf.org/external/np/pp/eng/2010/043010a.pdf.

International Monetary Fund (IMF). 2013a. "Toward a Fiscal Union in the European Area." IMF Staff Discussion Note 13/09, Washington. http://www.imf.org/external/pubs/ft/sdn/2013/sdn1309.pdf.

International Monetary Fund (IMF). 2013b. *West African Economic and Monetary Union.* Country Report No. 13/92, Washington. http://www.imf.org/external/pubs/ft/scr/2013/cr1392.pdf.

International Monetary Fund (IMF). 2014. *West African Economic and Monetary Union*. Country Report No. 14/84, Washington. http://www.imf.org/external/pubs/ft/scr/2014/cr1484.pdf

Kireyev, A., 2012. "Monetary Policy under a Fixed Exchange Rate Arrangement: The case of WAEMU," mimeo.

Mauro, P. 2011. *Chipping Away at the Public Debt—Sources of Failure and Keys to Success in Fiscal Adjustment* Hoboken, N.J.: John Wiley and Sons.

Malkin, I., and D., Wilson, 2013, "Taxes, Transfers, and State Economic Differences" FRBSF Economic Letters, #2013-36.

Milesi-Feretti, G., 1997. "Fiscal Rules and the Budget Process", Giornale degli Economisti 110, June 1997, 5-40.

Schaechter, A., T. Kinda, N. Budina, and A., Weber. 2012. "Fiscal Rules in Response to the Crisis—Toward the "Next-Generation" Rules: A New Dataset." Working Paper 12/187, International Monetary Fund, Washington. http://www.imf.org/external/pubs/ft/wp/2012/wp12187.pdf.

Spilimbergo, A., S., Symansky, and M., Schindler. 2009. "Fiscal Multipliers." Staff Position Note SPN/09/11, International Monetary Fund, Washington. http://www.imf.org/external/pubs/ft/spn/2009/spn0911.pdf.

Von Hagen, J., and G., Hammond, 1998, "Regional insurance against asymmetric shocks: An empirical study for the European economy," Manchester School (14636786), 66(3), 331.

Von Hagen, J., A. Hallett, and R. Strauch, 2001, "Budgetary Consolidation in the EMU," Economic Papers, No. 148, March. Available via the Internet: http://ec.europa.eu/economy_finance/publications/publication11056_en.pdf

Zdzienicka. A. 2013. "The Distributional Consequence of Social Conflicts." Unpublished.