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CONTENTS

BOXES

FIGURES

TABLES

ANNEXES

I. RISKS AND SPILLOVERS[1]

Executive Summary

Risk and spillover analysis is critical for the Fund's mission. The size of shocks during the global financial crisis and the speed at which they were transmitted across sectors and borders brought the importance of this work into sharper focus. The world remains highly interconnected and, even though the crisis has subsided, country policies will continue to propagate shocks. Further developing this analysis will support the Fund's efforts to provide advice that helps members avoid risks and mitigate their impact should they materialize.

Country authorities welcome the Fund's efforts so far to advance this agenda, and have called for the analysis to be deepened. In the wake of the 2011 Triennial Surveillance Review (TSR), the Fund has strengthened risk assessments in all surveillance products and given more weight to spillover analysis. This has been supported by the adoption of the Integrated Surveillance Decision (ISD) and new processes, including a more systemic approach to identifying global risks. To respond to members' calls for more in-depth analysis, the Fund will have to address challenges that have emerged due to the pioneering nature of this work, uncertainties about transmission channels, data constraints, and the perceived lack of transparency of some models.

The Fund should respond with an eclectic approach, integrating results across surveillance products, drawing from a range of analytical tools, and applying judgment as needed. Key conclusions from relevant multilateral products and cross-country exercises should be integrated into bilateral surveillance and, conversely, multilateral surveillance can draw more effectively on the granular analysis that is possible only in bilateral surveillance. The Fund's modeling toolkit can be leveraged further if tools can be adapted to better fit country circumstances with more transparency on their key features and limitations. However, some risks do not lend themselves to formal modeling, such as those arising from financial regulatory developments, should be assessed by informed judgment.

The Fund should leverage existing tools and selectively add new ones in order to address gaps in coverage of external risks, spillover channels and cross-sectoral linkages. More extensive sharing of the analysis of outward spillover from systemic countries can help deepen analysis of external risks in other countries. The focus on global spillovers should be accompanied by more systematic work on cross-border risks that may not be globally systemic, such as regional risks. The Fund's understanding of linkages can be greatly enhanced by reviving and adapting the analysis of national balance sheets.

Macro-financial analysis should be mainstreamed. Financial surveillance has proved challenging for country teams owing to the variety of risks that need to be assessed and broad spectrum of skills required. To make headway in mainstreaming of financial surveillance, staff should focus on

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[1] Prepared by a staff team comprising Ding Ding (APD), Qianying Chen (EUR), Hiroko Oura and Francis Vitek (both MCM), Eugenio Cerutti, Ayhan Kose and Esteban Vesperoni (all RES), Evrim Bese Goksu, Noriaki Kinoshita and Manik Shrestha (all STA), Sean Craig, Gavin Gray (lead), Jean Frederic Noah Ndela Ntsama, Rania Papageorgiou, Michael Perks and Veronique Salins (all SPR). David Marston (RMU) provided general guidance.

investing in tools, techniques and analytical frameworks to better assess the risks posed by rapidly evolving macro-financial and capital market developments. In particular, more systematic analysis of the relationship between credit and economic developments would help pinpoint both risks building up in the baseline and likely to emerge in shocks scenarios.

Data gaps remain a significant impediment to the Fund's efforts to strengthen risk and spillover analysis. More than five years after the global financial crisis, the Fund has been unable to obtain from the membership some of the data required to assess key systemic risks, including cross-border banking exposures and the linkages between systemic global banks. Data gaps are also holding back efforts to strengthen structural macro models used for spillover analysis.

A. Framing and Evaluating Risk and Spillover Analysis

Introduction

1. **Risk and spillover analysis is critical for the Fund's mission.** This follows from its role in assessing stability, the anchoring concept for surveillance. The size of shocks during the global financial crisis, and the speed at which they were transmitted across sectors and borders, brought the importance of this work into sharp focus.[2] Even though the crisis has subsided, the world remains highly interconnected and country policies will continue to spillover across borders, underscoring the relevance of this analysis for Fund surveillance. Achieving a rich understanding of countries' exposure to domestic and external risks will help the Fund advise members on policies to strengthen their capacity to avert risks and mitigate their potential impact.

2. **The 2011 TSR laid out a comprehensive and ambitious strategy to advance this agenda, which has necessitated a strengthening of the Fund's analytical toolkit.** The adoption of a new legal framework, the launch of new products, and the development of internal processes have laid the foundations for an expansion in risks and spillovers coverage in core surveillance products. The need to deliver rigorous analysis has also spurred the development of a range of quantitative tools, which represents a major undertaking given the pioneering nature of this work.

3. **Stakeholders and external experts would like the Fund to go even further, which will pose some challenges.** Country authorities would like deeper analysis, including more in-depth discussion of the impact of systemic countries' policies. External experts are also strongly supportive of this agenda, and provide a number of suggestions to refine the way it is carried out, including calling for greater focus on balance sheets. At the same time, staff needs to manage the practical challenges of delivering effective analysis, including the limitations and perceived lack of transparency of some of the new models, data constraints, and difficulties in gaining traction with authorities in discussions on their outward spillovers.

4. **This paper provides suggestions to advance this agenda taking into account the challenges that have emerged.** It proposes an organizational framework for risk and spillover analysis at the Fund and suggests how the institution's analytical capacity can best be leveraged. It

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[2] At the same time, calls for work on spillovers date back to at least the 1990s, when the Asian financial crisis demonstrated the significance of cross-border linkages. See IEO (1999).

draws on the stakeholder surveys, a review of surveillance products and a parallel study by external experts. It also complements other TSR work-streams relating to the integration of bilateral and multilateral surveillance, and the scope of multilateral surveillance.

Box 1. Possible Options to Advance Risk and Spillover Analysis

Enhance coordination and cross-fertilize ideas

- **Multilateral surveillance could feed more effectively into bilateral surveillance while drawing on insights from the more granular analysis possible at the bilateral level.** Mechanisms for this are in place but can be strengthened to improve the sharing of information, for example by providing more details on how global and regional risks could play out, depending on conditions in individual countries.
- **Further mainstream analysis of financial sector risks.** This involves focusing Article IV surveillance on rapidly evolving macro-financial risks, while slower moving risks arising from weaknesses in institutions are assessed at a lower frequency drawing on specialized expertise such as that provided by FSAPs. This analysis should also consider macro-prudential policy measures to address these risks.

Strengthen analysis of spillovers

- **Adopt an eclectic approach that combines quantitative analysis with judgment.** The more rigorous analysis from models and quantitative techniques needs to be accompanied by a deeper understanding of their limitations and whether they fail to capture some spillover channels.
- **Integrate the analysis of outward spillovers from systemic countries into the surveillance of non-systemic countries.** As outward spillovers are a source of external risk for other countries, mechanisms for effectively sharing this analysis can deepen the assessment of external risks.
- **Integrate spillbacks into spillover analysis.** Spillbacks occur when outward spillovers boomerang back on the source country. Identification of spillbacks can enrich policy discussions with systemic country authorities by providing a basis to discuss alternative policies (as required under the Integrated Surveillance Decision).

Deepening risk analysis building on quantitative tools

- **Expand balance sheet analysis in surveillance.** The identification of balance sheet mismatches and the analysis of linkages among sectors using new data in a matrix of balance sheet exposures can reveal how vulnerable a country is to shocks and how they will be transmitted.
- **Mainstream analysis of macro-financial linkages in Article IV consultations.** This involves assessing the influence of the financial sector on the macroeconomic outlook. This would clarify, for example, whether the outlook is consistent with the banking system's capacity to lend when it is deleveraging.
- **Make financial tool and models more accessible and transparent.** Increased usage of a wider range of quantitative tools and models is impeded by concerns about their lack of transparency, which can be countered by making them widely available and easily useable.
- **Assess cross-border exposures using a Global Flow of Funds (GFF) framework.** Surveillance of external risks can be deepened by using BIS, CPIS and IIP data to assess the cross-border transmission of financial shocks. This analysis builds on the GFF analytic framework developed at the Fund.
- **Extend the external debt sustainability analysis (DSA).** Applying the DSA framework to cover the impact of external shocks on flows will help pinpoint external liquidity risks.
- **Address data gaps.** Despite some improvements, data gaps have become more serious as Fund surveillance has been strengthened after the crisis. International understandings to improve data on GSIBs to assess spillovers among major banks and BIS banking statistics need to be implemented.

5. **The remainder of the paper is organized as follows.** This opening section provides context, an overview of the key concepts, an evaluation of progress so far, and points to the issues that should shape the Fund's agenda on risks and spillovers in the period ahead. Section B lays out the broad contours of a framework for delivering effective coverage of risks and spillovers, while addressing the challenges that have emerged since the 2011 TSR. Section C explores how various tools fit into this framework, and how staff can respond to stakeholders' calls to deepen their analysis, while taking into account the limitations of models.

Joining the Dots through Risk-Based Surveillance

6. **Risk and spillover analysis are two very closely related agendas (see Box 2 for key definitions).** Risk analysis involves identifying domestic and external risks, and assessing their probability and likely impact. External risks for one country—which are potential inward spillovers—are often associated with *domestic risks* in another country. Thus, there is much to be gained by effective sharing of information on risks and spillover assessments on different countries.

7. **The Fund has made major organizational changes in order to deliver consistent, pointed and targeted analysis of risks and spillovers.** The aim has been to ensure that surveillance focuses on the key risks, both globally and for each member. This has involved amending surveillance policies, revamping existing products and selectively introducing new ones, while also adapting internal processes to achieve consistency:

- An **Integrated Surveillance Decision (ISD)**, adopted in 2012, clarifies the scope of risk analysis and makes spillover analysis a mainstream feature of Article IV surveillance (see Annex I). It also calls for bilateral and multilateral surveillance to be more closely integrated.
- More systematic risk assessments have been introduced in the **WEO, GFSR** and **Article IV** consultations.
- The **Spillover Report**, prepared annually since 2011, initially focused on outward spillovers from the "S5" economies (China, Euro Area, Japan, United Kingdom, US). While these five economies were chosen for their size and interconnectedness, other countries are also likely to have "systemic spillovers" (and the 2014 Spillover Report takes a broader approach—see below).
- The launch of the **Pilot External Sector Report (ESR)**, to provide a comprehensive and consistent assessment of external sector positions and policies, supported by a new methodology, the External Balance Assessment (EBA).
- **New internal processes** to spur more systematic and consistent thinking on risks and spillovers. An inter-department group is charged with developing an institution-wide view of the key global risks, which are summarized in a global risk assessment matrix (G-RAM). The internal vulnerability exercises (VE) have also been expanded to make them more relevant for Fund surveillance.
- The **Early Warning Exercise (EWE),** presented to the Board and IMFC twice a year, assesses low-probability but high-impact risks to the global economy and identifies policies to mitigate them.

Box 2. Risks and Spillovers 101

The following definitions of risk and spillovers form the basis for the conceptual framework:

- **Risks** are potential shocks that have some probability of materializing with an impact on macroeconomic or financial conditions in a country or across countries. They can be domestic or external, and related to exogenous or policy shocks.
- **Linkages** refer to the links between sectors within an individual economy or across countries, which can act as transmission channels for shocks.
- **Spillovers** refer to the cross-border transmission of shocks. These can be global or affect one or more countries, and occur through a variety of channels. Spillovers can arise from exogenous shocks or, importantly, a country's policies (*policy spillover*—see below). The impact of spillovers depends on the size and nature of the underlying shocks, the transmission channels associated with macroeconomic and financial cross-border linkages, as well as the economy's resilience to shocks.
- The analysis of **inward spillovers** involves evaluating the channels through which external shocks affect a country and quantifying their impact. The term encompasses *actual* spillovers and *potential* spillovers. The former is when risks have already materialized (as "shocks"), allowing the spillovers through the different channels to be observed and estimated directly. Potential spillovers correspond to risks that have not yet materialized.
- **Policy spillovers.** The Fund has focused on identifying *policies* that generate spillovers. This helps increase the awareness in "source" countries of the impact of their policies on others, which can facilitate policy cooperation.
- **Spillbacks (or boomerang effects)** are a special case of spillovers where, for example, one country's outward spillovers affect a number of third parties, whose economic situation deteriorates, leading to adverse feedback effects ("spillbacks") on the source country.

8. Risks and spillovers have also been made a central part of the IMF's Financial Surveillance **Strategy (FSS).**[3] The pillars of the FSS include: (i) strengthening the analytical underpinnings of macro-financial risk assessments and policy advice; and (ii) upgrading the instruments and products of financial surveillance to foster an integrated policy.[4] The FSS also emphasizes that departments should work together to produce more integrated macro-financial risk assessments.

9. The Fund and the Financial Stability Board (FSB) have also launched an initiative to address data gaps in recognition of the risk that they could impede the Fund's work. The G-20 Data Gaps Initiative (DGI), which is led by the Fund and the FSB, aims to close gaps in four areas: identifying and monitoring financial-sector risks, cross-border linkages, vulnerabilities and sectoral interconnections in domestic economies, and the communication of official statistics.

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[3] Financial Surveillance Strategy, IMF 2012.

[4] The third pillar of the FSS was to engage more effectively with stakeholders in order to improve the traction of financial sector surveillance.

Shaping the Agenda Ahead

10. Country Authorities (CAs) welcome the changes so far, and would like the Fund to go even further.[5] They value the quality of the Fund's risk assessments, with around 70 percent of CAs agreeing with the Fund's overall assessment of the risks facing their country. Spillover analysis has also improved markedly since 2011 (when it was seen as a weakness), although it lags behind other policy areas in terms of the value added it provides. For the future, the recommendations from the CAs amount to a call for the Fund to persevere with its existing strategy. They would like deeper analysis of the transmission channels of shocks, greater quantification of risk assessments, and more in-depth discussion of the impact of systemic countries' policies on the rest of the world.

11. External experts, in a parallel study conducted for the TSR, provide specific recommendations to help the Fund shape its agenda ahead.[6] Above all, they call for the Fund to be "joined up" in the way it tackles risks and spillovers, and to avoid overreliance on models. They offer specific recommendations for the Fund's strategy ahead, including the following:

- ***Strategy***. Multilateral surveillance needs to feed directly into bilateral reports, while bilateral surveillance should be used to deliver more granular evidence to support analysis at the multilateral level. The Spillover Report is a key disciplining device to support this. The Fund should also make recommendations on macro-prudential policies and cover outward spillovers (including spillback effects).
- ***Substance***. Analysis of national balance sheets should be a priority. The Fund should also do more work on spillback effects, the adequacy of members' macro-prudential frameworks, and make greater efforts to distinguish tail risks.
- ***Research and data***. The experts call for more research on the risk channels of monetary policy, cross-border capital flows, and the impact of macro-prudential policies. On the data front, balance sheet and flow of funds data should be a priority.
- ***Communications***. Senior Fund officials should give more airtime to the Spillover Report, and the Fund should in general be more open to covering tail risks that are already in the public domain.

Usage of Quantitative Tools

12. The Fund has significantly expanded its analytical toolkit for risks and spillovers, although the application of these new models has been uneven.[7] They have been used more extensively in multilateral surveillance. The *WEO*, for instance, has underpinned its risk assessments

[5] TSR background papers on "Stakeholders' Perspectives on IMF Surveillance" and a "Review of IMF Surveillance Products" provide more detail on country authorities' views and on gaps identified in a review of surveillance products.

[6] See the TSR External Study on "Risks and Spillovers" by David Li and Paul Tucker.

[7] Section C discusses the individual models in greater detail.

with a wide range of quantitative tools, including structural models, event studies, VARs, indicator-based models and market perspectives. The *Spillover Reports* initially used a mixture of structural models (the GIMF and G-35S), VARs and detailed analysis of BIS and market data, but in the 2013 report relied more on structural models; with the G-35S assessing financial spillovers, and the GIMF and FSGM focusing on spillovers from macroeconomic shocks. Bilateral surveillance has drawn much less on formalized models.

13. The lower take-up of models in bilateral surveillance reflects concerns about their applicability. Some models are seen as not adequately transparent, as they are not always fully documented and can be hard to understand. In addition, models developed for one country require significant modification to make them applicable to other countries or regions with different structural features. Moreover, many of the Fund's global models do not cover the majority of the membership.

Figure 1. Quantitative Tools Used in 2013 Article IV Reports[1/]
(percent of reports reviewed)

Inward Spillovers & Risks

	OVERALL Model Usage	Macro-framework Scenarios	Traditional Macro Models	DSGE	VAR	Panel Regressions	Stress test	Other	Passing Reference
Systemic	100	25	0	25	0	0	0	63	13
Non-Systemic	50	67	5	10	33	14	24	19	0
TOTAL	58	55	3	14	24	10	17	31	3

Outward Spillovers

	OVERALL Model Usage	Macro-framework Scenarios	Traditional Macro Models	DSGE	VAR	Panel Regressions	Stress test	Other	Passing Reference
Systemic	67	17	17	50	0	17	0	0	33
Non-Systemic	50	0	0	17	17	0	17	17	17
TOTAL	58	8	8	33	8	8	8	8	25

1/ The color coding indicates the relative frequency of use of each approach, ranging from red (none or very few reports) to green (more than half).

Data Gaps: Running to Stay in the Same Place

14. Despite some improvements, data gaps remain a major obstacle to this agenda.

- **Expanded datasets are being used in surveillance.**[8] The Coordinated Portfolio Investment Survey (CPIS) is now reported semi-annually, improving the monitoring of cross-border investments at the sectoral level. Over 80 countries also report quarterly international investment positions (nearly twice the level in 2009), helping to improve the early detection of

[8] Examples of usage in Fund research include *Financial Soundness Indicators and the Characteristics of Financial Cycles*, Lane R. P. and Gian Maria Milesi-Ferretti *Cross-Border Investment in Small International Financial Centers*, IMF WP No. 10/38, and Brushko, Iuliia and Yuko Hashimoto (2014) *The Role of Country Concentration in the International Portfolio Investment Positions for the European Union Members*, IMF WP No. 14/74.

external vulnerabilities. Many advanced and emerging market economies (including the G20) have developed sectoral balance sheets, or are in the process of doing so, which will help improve monitoring of domestic linkages, including non-bank financial institutions.[9] Lastly, almost 100 members now provide financial soundness indicators (FSIs), a two-fold increase since 2009, enabling better monitoring of financial sector risks.

- **However, demands for new analysis have increased and model developers and users indicate that data are a severe binding constraint on their work**. The lack of financial sector data is a key concern: more than five years after the collapse of Lehman Brothers, the Fund still lacks aggregated data on global systematically important banks (See Box 3), and access to aggregated cross-border banking data is restricted (Box 4). Moreover, some of the Fund's counterparts have become less willing to share data as the crisis has subsided.

Box 3. Addressing GSIB Data Gaps Hampering IMF Surveillance

The triggering of the 2008 global financial crisis by the failure of one large U.S. financial institution with extensive linkages to other global banks revealed critical gaps in data that the IMF needed in order to assess risks to global financial stability. In 2009, the G-20 responded by launching a broad Data Gaps Initiative, led by the IMF and the FSB, that included more granular data on 29 Global Systemically Important Banks (GSIBs). These data are necessary to detect risks that are masked by the high degree of aggregation in existing data covering the whole banking system (e.g., FSIs). Supervisors of GSIBs already collect similar data but do not share them owing to confidentiality concerns. To address these concerns, the G-20 agreed to the creation of "institution-to-aggregate" data where each GSIB's exposures are aggregated across sectors and countries to ensure confidentiality. The national authorities supervising GSIBs started sharing some data among themselves in early 2013 and are expected to have more granular data by mid-2016. The sharing of these granular data with the IMF has been agreed in principle but the implementation is still an outstanding issue.

The perpetuation of this data gap severely hampers IMF surveillance. These data are essential to identify spillover channels among GSIBs, which has become even more critical to surveillance with the adoption of the ISD and creation of the Spillover Report. They would allow recognition of the buildup in balance sheet mismatches by providing details on currency, instrument type, and maturity. Systemic liquidity risk—a key factor contributing to the crisis—is concentrated in GSIBs and cannot be assessed adequately with existing indicators such as the crude, but available, loan-to-deposit ratio. To evaluate the robustness of a financial system to liquidity shocks, and the potential for these to have spillover effects, it is essential for the Fund to obtain data on the maturity and currency of GSIBs' liabilities, on the reliance on marketable instruments for funding, and on the geographic structure of external financing.

Coverage of these risks and spillovers depends on national authorities' sharing their GSIBs' data with the IMF. These data cover the countries and sectors to which the GSIBs are exposed, the financial instruments they hold, and the currency and maturity structure of their assets and liabilities, while being aggregated sufficiently to ensure confidentiality. Given the legitimate confidentiality concerns, an additional layer of confidentiality protection would be provided by internal IMF procedures governing how the data are reported and who has access to them. Discussion on the timing and extent of sharing of these data with the IMF will start in the second half of 2014.

[9] Available data are posted on the Principal Global Indicators website.

Box 4. Mapping the Global Banking Network in IMF Surveillance[1/]

The global banking network played an important role in the propagation of the global financial crisis across countries. These spillovers can be assessed using the IMF's Bank Contagion Model, which uses the BIS international banking statistics and individual bank data to map them.

The mapping of the global banking network is challenging due to the complicated structure of international banking groups and multiplicity of lending and funding channels. International banks can lend to a borrower country directly through cross-border loans, or indirectly through branches or subsidiaries in either the borrower country or in third countries. The funding model varies across banking groups, with some local branches or subsidiaries able to rely largely on local deposits as the main source of funding while others are heavily dependent of parent bank funding or wholesale financing. It also differs across regions, with subsidiaries in Latin America relying largely on local deposits, for example.

Figure 1. Mapping Bank Inter-Linkages Using LBS And CBS

Note: The darker the color of the arrows the larger the size of the banking linkage.

Two BIS datasets allow us to map these cross-border banking linkages, each with strengths and weaknesses. The BIS Locational Banking Statistics (LBS) captures the cross-border exposures of all international active offices in a reporting country, regardless of the nationality of the parent bank. Bank positions are recorded on an unconsolidated basis and includes those vis-à-vis their own offices in other countries. This artificially increases the size of financial centers. Figure 1 illustrates this case showing that the nominal amount of US banks' claims on Cayman Islands borrowers appears much larger than for other countries when using LBS. The use of the Consolidated Banking Statistics (CBS) reduces this bias by consolidating exposures between parent banks and their foreign affiliates. The CBS foreign claims concept, however, can overstate the size of foreign exposures as it includes assets of subsidiaries funded by local deposits as well as parent banks' resources. Figure 1 shows Spanish banks' claims on Brazilian, Mexican and US borrowers. Using CBS, the amount of Spanish banks' claims on Brazilian, Mexican and US borrowers is larger than when using LBS.

The RES Bank Contagion Module (Cerutti 2013) uses an adjusted consolidated measure. It is constructed using CBS, to avoid overstating the size of financial centers while adjusting the consolidated group assets to reflect the funding structure. Figure 2 shows the adjusted consolidated metric in which the banking linkage between US banks and Cayman Islands is much smaller than for LBS, while the banking linkages between Spanish banks and Brazilian and Mexican borrowers is significantly lower than for CBS.

Figure 2. Mapping Bank Inter-Linkages Using Adjusted CBS

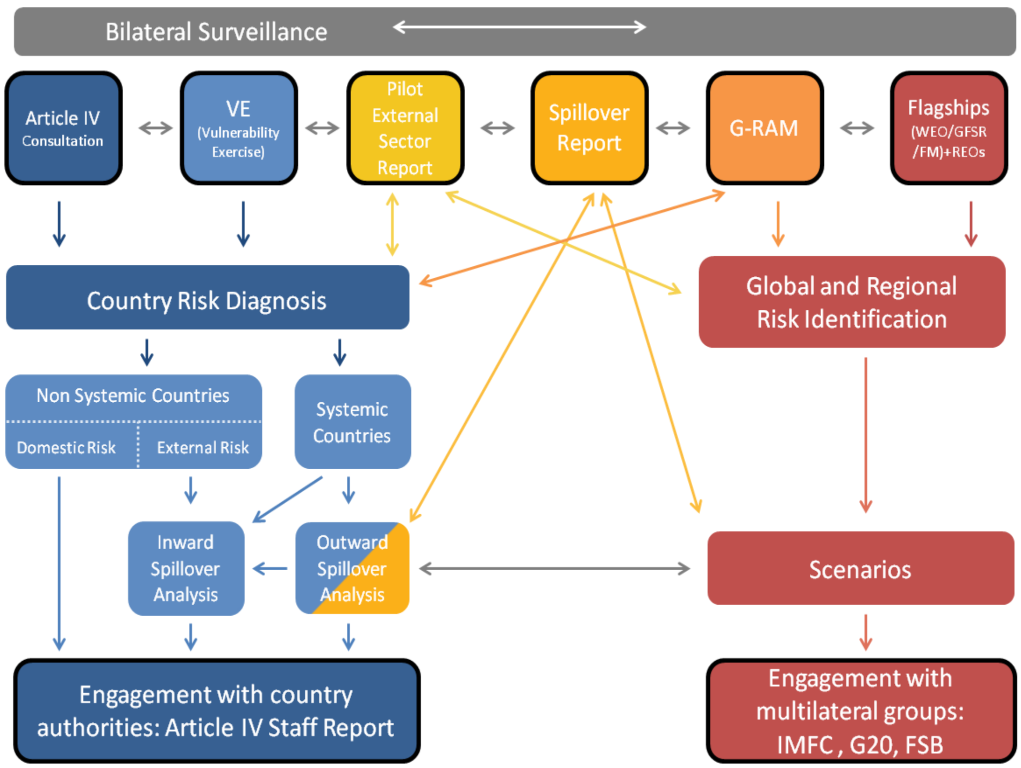
Note: The darker the color of the arrows the larger the size of the banking linkage (Cerutti (2013))

[1/] Prepared by Eugenio Cerutti based on Cerutti and Ohnsorge (2014).

B. Consolidating the Framework for Risk and Spillover Analysis

15. The task for the Fund is to enhance its framework for risk and spillover analysis in order to deliver on country authorities' expectations and address the challenges that have emerged. This section lays out the broad contours of the framework while the next section examines in more detail analytical techniques that can help deliver on these goals.

Figure 2. The IMF's Surveillance Framework



16. The Fund has adapted its organizational framework, with further changes underway.

- The simpler pre-crisis framework (shown as boxes with solid borders in Figure 2) has been augmented with the Spillover Report and G-RAM, and the addition of inward and outward spillover analysis. This has facilitated the integration of bilateral and multilateral surveillance, with the G-RAM identifying global risks to be included in individual risk assessments and the Spillover Report contributing to outward spillover analysis for systemic countries.

- **The Spillover Report was reorganized in 2014 along thematic lines** to focus on a few key spillovers rather than covering a fixed set of economies (e.g., the S5). Consequently, rather than providing a wide range of model based scenarios, two broad spillover themes are analyzed more thoroughly with strengthened analytical underpinnings of model simulations. In parallel, the G-RAM now includes model simulations for the key risks and pays greater attention to tail risks. Finally, the VE is drawing increasingly on quantitative tools; including, for example, models to identify vulnerabilities in resource rich countries.

An Integrated Approach to Risk Analysis

17. The Fund's framework for risk identification has long been relatively decentralized. Individual country teams are charged with developing their own views of the major risks facing their country, informed by consultations with the authorities and private sector. This represents one of the most important sources of pointed and granular information on risks.[10]

18. New products and processes have been put in place in order to support bilateral surveillance with a coordinated analysis of risk. They draw on both the results of bilateral surveillance and analysis undertaken at the multilateral level: the arrows in Figure 2 show the linkages, and how these products and processes support surveillance.

- The ***Global Risk Assessment Matrix (G-RAM)*** is an internal product, which lists key global and regional risks, identified and periodically updated by a Risk Group drawn from across the Fund. G-RAM risks are expected to be covered in the same way in bilateral surveillance, although their impact on each country must be assessed individually through inward spillover analysis (see below). The G-RAM also informs risk identification at both bilateral and multilateral levels. It is complemented by the Vulnerabilities Exercise, an internal exercise to assess individual countries' vulnerabilities, and an internal group set to analyze tail risks.

- The ***External Balance Approach*** **provides a multilaterally consistent assessment of countries' external sustainability** that helps identify the risk of a sharp correction from an overvalued currency or unsustainable current account deficit. It feeds into the assessment of external risks in individual countries and also at the multilateral level, where it ensures that unsustainable deficits in some countries are counterbalanced by surpluses in others.

19. These initiatives are designed to support bilateral surveillance, but their effectiveness also depends on the extent to which they draw on analysis by country teams. Area department teams generally undertake more granular analysis and provide a reality check for analysis done at the multilateral level. In practice, country teams review, and have final say on, the assessments in the Vulnerabilities Exercise and External Balance Approach. Global risks in the G-RAM, for example, include scenarios that illustrate how they might play out at the country level, making it easier to incorporate them into country risk assessments. These risks and scenarios are, in turn, vetted by area department members on the Risk Group. Coordinating this global risk identification with Article IV consultation cycles involves challenges that the risk group can help manage.

External and Financial Risks

20. Processes to ensure that risks identified in multilateral surveillance are used in countries' assessment of external risk can be strengthened. Key messages from the WEO and GFSR's in-depth analysis of global risks are being distilled for area departments but could include

[10] As David Li and Paul Tucker note: "Bilateral surveillance will often be closer to the vulnerabilities and pathologies that give rise to international spillover risks and problems."

more detail on how these risks might play out in different countries. Regional Economic Outlooks (REOs) can help support this. The analysis of risks and outward spillovers from surveillance in systemic countries can be shared more effectively to deepen the analysis of external risk in non-systemic countries that are associated with these potential outward spillovers.

21. Financial sector risks—both domestic and cross border—are important for many members. Crises are often sparked or magnified by financial sector developments, such as sharp shifts in global liquidity or capital flow reversals.

22. However, financial risks are often not easy to diagnose as they combine rapidly evolving market and macro-financial risks and slower-moving risks from institutional weaknesses. The Fund is putting a greater emphasis on macro-financial analysis, which involves country teams focusing on evolving risks that are macro relevant. The slower-moving risks can generally be assessed at a lower frequency, depending on whether they are a concern or if regulatory changes are being considered, and may require highly specialized knowledge in banking supervision.

Spillover Analysis

23. The goal of spillover analysis is to identify and quantify the channels through which risks are transmitted internationally. The imperative of quantifying spillovers was a factor behind that development of large, multi-country models to simulate scenarios that illustrate how outward spillovers from a shock in a systemic country are transmitted to other countries, although other, more specialized, techniques can be used as well.

24. The appropriate techniques for assessing spillovers vary according to their type and channel:

- ***Actual spillovers*** are often observable in existing data, and so can be assessed at least qualitatively without sophisticated models.
- ***Potential inward spillovers*** are associated with external risks that have not yet materialized; and, thus, need to be assessed by simulating the impact of shocks using a model for the country.
- ***Potential outward spillovers*** are associated with risks in systemic countries that, when they materialize, trigger outward spillovers to many other countries. Outward spillovers need to be assessed by simulating multi-country models that can trace out the global impact of shocks and policies originating in the systemic country.
- ***Potential spillbacks*** are outward spillovers that boomerang back to the systemic country that is the source of the outward spillover. This can trigger a policy response in the country that has the effect of modifying the impact of the original spillover. Spillbacks are often underestimated as they tend to occur through channels missing from models. Thus, expert judgment is critical for assessing this type of spillover.

25. Analysis of spillbacks can help the Fund gain more traction with systemic countries in discussions of outward spillovers. The mandates of authorities in systemic countries generally oblige them to focus on the domestic impact of shocks and not the impact of their policies on the rest of the world. This can complicate discussions with the Fund of alternative policies to mitigate outward spillovers—as long as they do not adversely affect domestic stability, as required under the ISD. However, when outward spillovers can be shown to have material second-round "spillback" effects authorities are likely to be more open to considering alternative policies.[11]

26. While the Fund has focused on global risks, further efforts can be made to assess regional spillovers.[12] REOs and clustered report identify risks at the regional level effectively but tend to focus on real (i.e., trade) economy spillovers as they have found financial spillovers to be smaller (See Box 5). So far, this analysis has concentrated on spillovers within a region. It could be broadened to cover spillovers between regions; for example when a financial shocks originating in a large emerging market country in one region spills over into EMs in other regions.

[11] Examples of spillbacks are provided in the TSR External Study on "Risks and Spillovers" by David Li and Paul Tucker.

[12] A parallel staff study on the scope of "Surveillance in Low Income Countries (LICs)" covers the relevance of risks and spillover work for this group of countries.

Box 5. Regional Spillovers

Regional macroeconomic and financial linkages are potentially significant sources of spillovers. This issue has attracted increasing interest in the context of the general slowdown of major emerging economies. Regional linkages could occur through a wide range of channels including trade, migration, remittances and tax spillovers.

Fund surveillance has used a variety of techniques to assess these linkages. A number of Regional Economic Outlooks have analyzed the impact of the regions' leading economies on their neighbors' output using econometric tools such as panel regressions, VARs and GVARs (see table). The results suggest that major emerging countries can generate significant regional spillovers through trade while regional financial market linkages are generally less significant.

There is scope to apply a wider range of analytical techniques—along with judgment—to assess regional spillover channels. A more systematic assessment of spillover channels, both quantitative and qualitative, would be useful. For example, many of the panel regressions provide estimates of the overall spillovers, but do not identify individual spillovers channels, and could be complemented with a VAR that models specific spillover channels. VARs can miss some channels, and judgment should play a role to ensure comprehensive coverage.

The following table summarizes a selection of recent studies on regional spillovers.

Study	Country	Spillover Channels (qualitative assessment)	Econometric Tool	Results
REO Asia and Pacific, 2014	China	· Mainly trade · Limited regional financial integration	Panel regression	Significant regional spillovers: 1 percent decline in China's growth would lower GDP growth in the median Asian economy by 0.3 percent, twice as much as the estimated impact for the median non-Asian economy
REO, Sub Saharan Africa, 2012	South Africa	· Trade · Fiscal (SACU customs-sharing mechanism) · Monetary (Lesotho, Namibia and Swaziland peg their currencies to the rand) · Remittances · Financial (FDI and subsidiaries of South African banks in the region)	Dynamic Panel Regressions and VAR	No significant regional spillovers are found in the study
REO Western Hemisphere, 2012	Brazil	· Mainly trade · Limited regional financial integration	VAR	Significant impact on the Southern Cone economies: 1 percent decline in Brazil's growth would reduce Paraguay's output by 0.9 percent after a year and Argentina, Bolivia and Uruguay's output by about 0.25 percent
India Article IV report, 2014	India	· Trade · Monetary (Nepal pegs its currency to the rupee) · Financial (FDI) · Remittances	GVAR	Significant spillovers on Nepal (1 percent decline in India GDP would lower Nepal's GDP by 0.21 percent after a year) but modest impact on the rest of the South Asian countries

C. Deepening Analysis of Risks and Spillovers

27. The Fund's strategy amounts to an eclectic analytical approach that combines quantitative analysis with judgment. The aim is to integrate the various strands of surveillance more effectively. The analytical toolkit that the Fund has developed over the past few years is diverse. It includes cross-country models and techniques that allow staff to tackle key questions with consistency and rigor. However, as emphasized in the parallel external study,[13] formal models may fail to capture all the key features of some risks, and certain issues are best tackled by drawing on judgment and anecdotal evidence. The Fund has also developed more specialized models for analyzing certain types of risks. All of these models and techniques have limitations, and their interpretation must reflect judgment informed by in-depth knowledge of country circumstances.

28. Members' calls for deeper analysis can be addressed by better integrating and further developing existing tools, and—where necessary—adding new tools. To a large extent, this involves refining existing diagnostic tools so they can be used more widely by staff. Large models capable of running multi-country scenarios can provide a wide range of simulations on how global shocks will impact a large number of different countries. Use of results from these models in Article IV reports has so far been limited largely to S5, systemically important economies that have been the focus of Spillover Reports until 2013. Bilateral surveillance in many more countries can draw on the Spillover Report analysis with the broadening of the country coverage in the scenarios.

Diagnosing Vulnerabilities and Risks

29. A number of specialized tools have been developed to assess risks and vulnerabilities, and can be better tailored for wider use in surveillance. For instance, tools used in the Vulnerabilities Exercises (*VEs)*, which are internal exercises to inform management of vulnerabilities in individual countries, could be applied more systematically. *Debt Sustainability Analysis* (DSA), which is already widely used to assess public sector risks in surveillance, could be applied more systematically to assess external sector risks, including risks from external flows. The *Balance Sheet Approach* (BSA) could be used more extensively thanks to improvements in data availability, and *banking sector stress testing models,* which are primarily used at present for FSAPs, could be applied in Article IV consultations. Finally, there is scope to integrate *analysis of credit into macroframeworks* to better understand, for example, risks embedded in baseline projections if either deleveraging or rapid credit growth is taking place.

Bringing the VE Models into the Mainstream

30. The VEs[14] were created to facilitate the Fund's internal assessment of risks and vulnerabilities consistently across countries. The exercise gives countries overall vulnerability and

[13] See the TSR External Study on "Risks and Spillovers" by David Li and Paul Tucker.

[14] The VE comprises three separate exercises covering advanced economies (VEA), emerging markets (VEE) and low-income countries (VE-LIC).

crisis risk ratings that are built up from sector ratings (e.g., external, fiscal, corporate/real and financial), based on model results, which are then adjusted by country teams based on their local knowledge. It provides a framework for Fund staff to compare sectoral vulnerabilities across countries.

31. To promote wider use of these models in Fund surveillance, a number of issues need to be addressed:

- *Vulnerability ratings models.* The methodologies for deriving vulnerability ratings for the VEE and VE-LIC exercises have been discussed by the Board.[15] In view of the wide variety and complexity of the models used in these exercises, greater transparency on their methodologies would promote their integration in surveillance.
- *Crisis risk models*. The crisis risk ratings rely largely on a non-parametric approach that uses cross-country data on crisis episodes to estimate crisis risk thresholds for a number of indicators. Making the underlying models public would allow them to be much more widely used in Article IV surveillance.
- *Political risk ratings*—are based on external cross-country analysis supplemented by judgment of country desks. Political risk can be an important indicator of a country's capacity to respond to shocks and is routinely covered in Fund surveillance.

Extending External DSAs to Assess Risks from External Flows

32. Extending the Fund's external DSA—which currently assesses only external solvency—to cover also *external flows* could provide a useful indicator of the likely impact of external shocks. It can be constructed for any Fund member to provide a summary indicator of the likely impact of aggregate shocks to external flows, based on scenarios tailored to country circumstances, and with a breakdown by channel (e.g., trade, remittances, portfolio flows, FDI). An example for an emerging market (Box 6) shows some scenarios and demonstrates how some channels are considerably more powerful than others for shocks calibrated to historical experience.

33. An external DSA could be tailored closely to country circumstances. It could illustrate the impact of shocks, either derived from global scenarios (e.g., based on the Lehman crisis), or the country's own experience in periods of stress (e.g., a standardized shock of two standard deviations). The shocks affect countries' (i) *gross financing needs* (such as export volumes or the terms of trade) and (ii) access to *external financing* (such as FDI or portfolio flows) to cover these needs. The output of the external DSA is expressed in the form of the instantaneous financing gap that would emerge absent a move in the exchange rate or other variables.

[15] See Managing Volatility: A Vulnerability Exercise for Low-Income Countries (March 9, 2011), and *The IMF-FSB Early Warning Exercise: Design and Methodological Toolkit*.

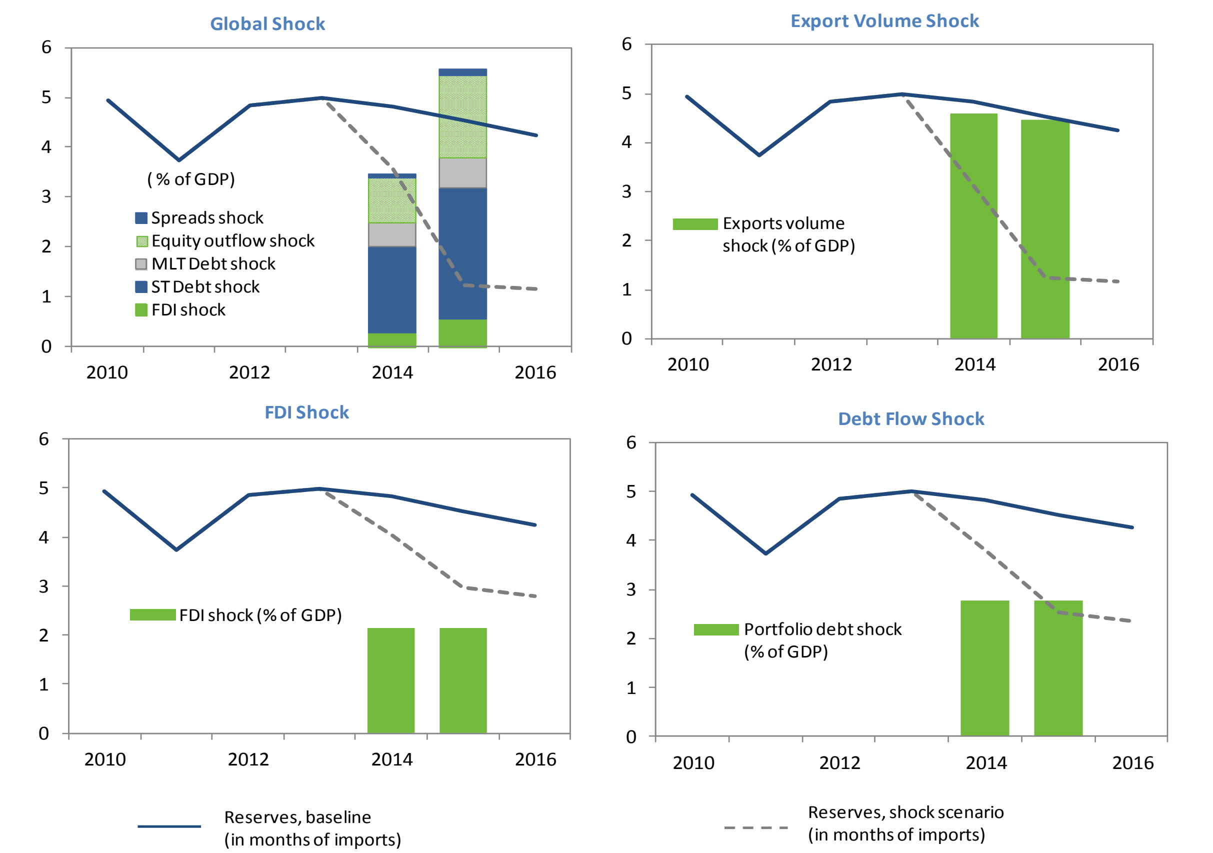
Box 6. Using an External DSA Model to Assess External Risks

An emerging market country example can illustrate the benefits of extending the external DSA to think more systematically about how shocks can affect external flows. Scenarios can be developed by applying calibrated shocks to the determinants of external financing needs and financing sources, with the impact expressed as a financing gap normalized by GDP. Two alternative approaches for calibrating the shocks are shown in this case:

- **Country-specific shocks.** The country's own experience can be used to size shocks. This is the normal practice for DSAs, which typically show scenarios based on shocks amounting to two standard deviations of individual variables, along with combined shock scenarios based on half a standard deviation shock to a number of variables. This approach gives a sense of how shocks typically play out in the country in question.

- **Global shock.** An alternative approach is to consider how a well-articulated global shock scenario would affect a country (Figure, upper-left panel).[1/]

The figure shows the main elements of the analysis. This example consists of both standardized shocks and country-specific shocks. The size of the financing gap under each shock is measured in percent of GDP as well as against the stock of international reserves.



[1/] The global shock assumes (i) FDI inflows drop by 15 and 25 percent, respectively, in 2014 and 2015; (ii) rollover rates of both short-term debt and medium- to long-term debt drop to 90 percent in 2014 and 85 percent in 2015; (iii) outflow of portfolio equity at the magnitude of 10 percent of total stock in 2014, and 20 percent in 2015; and (iv) higher interest rates on new debt issued.

Reviving Balance Sheet Analysis

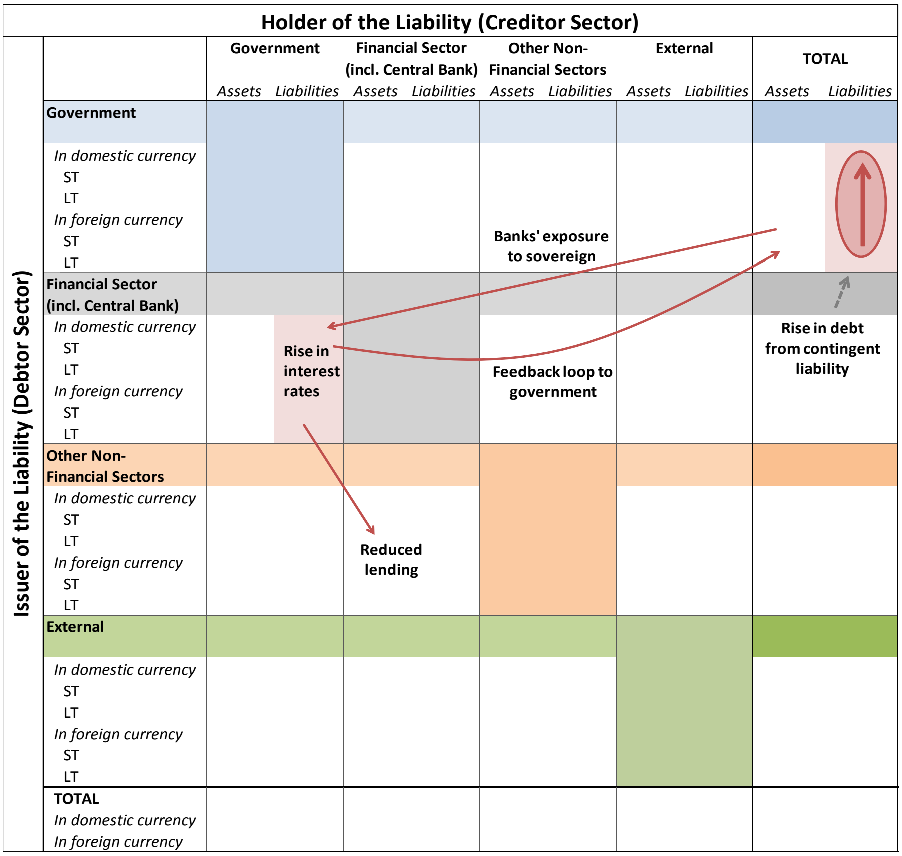
35. The balance-sheet approach (BSA) can now be used more widely as data availability has improved substantially. The BSA, developed in the early 2000s, tracks gross asset and liability positions between sectors, and can be used to assess emerging risks.[16] Balance sheet analysis starts with the BSA matrix of assets and liabilities positions of the main sectors—government, financial sector, non-financial (e.g., corporates and households) and non-residents—broken down by currency and maturity. The matrix captures claims across sectors, and can help assess the transmission of shocks between sectors. The BSA has been applied intermittently to some emerging markets and a few advanced markets, and there is scope for it to be used more widely given the improvement in data.

36. The BSA can deepen our analysis of risk by generating sector balance sheet risks indicators and mapping linkages among sectors. The BSA risk indicators are standard—the leverage ratio, maturity mismatch indicators to capture rollover risk, and currency mismatch measures—but have the advantage of being granular, allowing more precise identification of risks in particular sectors. The most important benefit, however, is that the inter-sectoral linkages mapped by the BSA matrix make it possible to trace out how shocks could be transmitted between sectors. Figure 3 illustrates how this matrix could be used: an initial shock from, say, a rise in contingent liabilities originating in the government sector is transmitted to the banking sector through losses on its holdings of government debt, eroding its capital base. The shock is then transmitted to the corporate and household sectors through a reduction of credit from the banking sector.

37. National balance sheets can now be constructed for many countries. This can be done for the breakdowns of the four sectors shown in Figure 3 by combining data from several sources. The basic matrix can serve as a starting point for a more in-depth analysis drawing on more detailed sector breakdowns provided by national sources (e.g., for the household and corporate sectors separately), depending on the data availability. For countries that report all the financial, government, and external balance sheet data requested in Fund templates, complete balance sheet matrices are available, while partial balance sheets can be constructed for other countries depending on how much they report. Efforts to improve this reporting across countries will expand the scope for BSA. The analysis would also need to consider whether data are sufficiently granular to capture all relevant risks, such as those that arise in the shadow banking system or from derivatives. Given that the build-up in balance sheet mismatches tends to occur slowly, the depth of coverage could vary from year-to-year.

[16] Key papers developing the BSA are Allen, et al, IMF WP/02/210 and Mathisen and Pellechio, IMF WP/06/100.

Figure 3. Balance Sheet Approach (BSA) Matrix



Mainstreaming Macro-Financial Analysis

38. Macro-financial analysis assesses the linkages between the financial sector and macro-economy. Much of the work in Article IVs so far has focused on shocks that lead to deviations from the baseline macroeconomic outlook rather than how developments in the financial sector influence the baseline itself, reflecting the lack of a standard framework for this. Articulating assumptions about macro-financial relationships in the baseline would help put the spotlight on emerging risks and the credibility of medium-term projections. Further research would be helpful for this to be mainstreamed. The Fund has developed a number of tools to assess the impact of financial shocks, including the balance sheet approach and bank stress tests (see below), but there may be scope to further develop its macro framework to better delineate the role of the financial sector in shaping the macroeconomic outlook.

39. This could help deepen Fund analysis of leverage cycles. It could assess, for example, whether the macroeconomic outlook is consistent with the capacity of a banking system to provide credit when it is deleveraging. The need for a richer treatment of how the determinants of credit in a financial system impact an economy was highlighted in the aftermath of the global financial crisis as bank deleveraging in advanced markets led to a much weaker recovery than many projected. In addition to such downside risks, where credit growth is insufficient to support growth, this analysis can also help identify the risk of unsustainable credit growth that could generate asset price bubbles and inflation. A recent example of how to integrate an analysis of the leverage cycle into the outlook is provided by Spain (Box 7). The relationship between output and financial variables could also be explored more closely through empirical methods, which would help assess the internal consistency of baseline projections (Box 8).

Box 7. Incorporating Macro-Financial Linkages in the Baseline: The Case of Spain

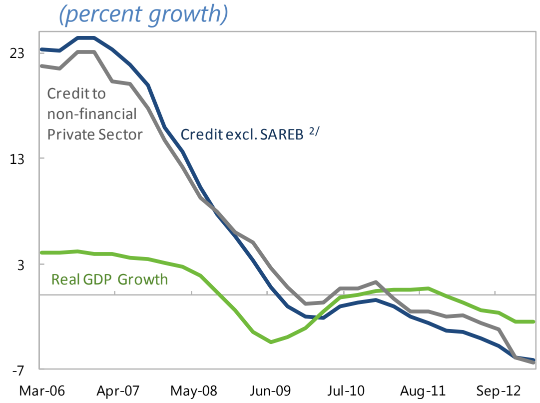
After a decade of strong growth driven in large part by a credit-fueled housing boom, Spain was hard hit by the global financial crisis. The subsequent real estate bust, financial market turmoil, and rising borrowing costs pushed the economy into a sharp recession. Banks could not roll over their liabilities to foreign creditors, and refinanced them through the European Central Bank (ECB), to whom their liabilities approached 40 percent of the GDP by mid-2012.

Macro-financial linkages have continued to have powerful effects in the aftermath of the crisis. The Spanish economy is undergoing a large and prolonged adjustment to address its imbalances. Bank credit to the private sector has contracted sharply, reflecting not only weak demand but also supply factors such as pressure on the banks to reduce their liabilities to the ECB. The persistence of credit constraints is expected to weigh on domestic demand and output.

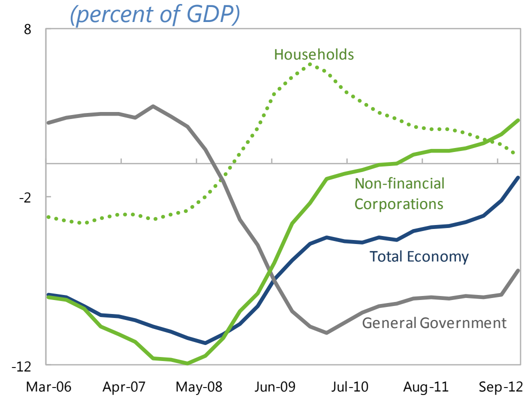
To highlight the consequences of private sector deleveraging on output, the Fund has integrated macro-financial linkages into its baseline projections for Spain. The 2013 Article IV consultation report [1/] included five-year projections for private sector debt, anchored on an assessment of the financial sector as well as the borrowing patterns of households and non-financial corporations:

- *Households*. The team envisaged subdued household consumption due to (i) ongoing deleveraging preventing a further decrease of the saving rate, (ii) the likelihood that households have already significantly exhausted their capacity to reduce their equity holdings and other financial assets.
- *Corporates*. Although their capacity to invest or hire was restrained by lack of credit, at the same time investment has rebounded as operational margins have increased.

Spain: Credit to Private Sector
(percent growth)



Spain: Savings & Investment
(percent of GDP)



Incorporating macro-financial linkages in the baseline has helped staff avert potential inconsistencies in macroeconomic forecasts and policies during the financial sector program.[3/] Projections by banks of their balance sheets assumed they would rapidly reduce both their exposure to the sovereign and their reliance on ECB financing. Integrating this with staff's macro scenario, which envisaged continued increases in public debt and no significant pick up in other sectors' demand for government bonds, suggested that either credit would contract faster than banks projected (which would be negative for growth) or that ECB financing would have to contract less fast. This in turn, staff pointed out, would argue for continuation of supportive ECB policies and avoiding stigma being associated with the use of ECB facilities.

[1/] See Spain – Staff Report for 2014 Article IV Consultation.
[2/] SAREB (i.e., Spain's bank asset management corporation).
[3/] See Spain – Financial Sector Reform: Third Progress Report.

Box 8. Assessing Macro-Financial Linkages Between Credit and Growth

Efforts to deepen analysis of credit and leverage in surveillance can draw on recent empirical research. At the IMF, for instance, the relationship between financial variables and macroeconomic activity has been comprehensively documented for more than a hundred countries from 1970 to 2013 using a cross-country framework.[1/] This shows that the main macroeconomic indicators (GDP and its components, industrial production and employment) can be predicted by financial variables in a forecasting regression framework. Private sector credit growth, housing prices and equity prices have the strongest predictive power among financial variables. The relationship varies between advanced, emerging market, and low income countries, but remains strong.[2/]

This research provides benchmark estimates of macro-financial linkages that can be useful in analyzing the consistency between credit developments and baseline macroeconomic projections. In particular, the regression results provide country teams with information on the distribution of key macro variables in response to shocks to financial variables. They can only serve as a guide, as the relationship between financial and macro variables will depend on country circumstances, and can change in countries implementing major financial reforms or undergoing financial deepening.

1/ See Chen and Ranciere (2014, forthcoming).

2/ See Claessens et al., *Lessons and Policy Implications from the Global Financial Crisis* IMF WP/10/44.

Broadening Use of Bank Stress Testing

40. Bank stress tests can be used more widely in Fund surveillance to quantify macro-financial linkages and inform macroprudential policy advice. In countries that have recently had an FSAP, the FSAP stress tests can be updated, either by the authorities or the Article IV mission team, to give a sense of the evolution of risks. In other cases, a basic version of the well-established FSAP stress testing model can be applied in surveillance.[17]

41. A simple, top-down credit risk stress test can be carried out using existing spreadsheet tools. It assesses the impact of hypothetical macroeconomic shocks on bank asset quality and capital ratios (Figure 4). This focus on credit risk reflects the fact that it is for most countries the primary source of bank stress. The effect on the soundness of a financial system is evaluated by comparing the lower, post-shock capital ratio to its regulatory minimum. The stress test has two main elements: (i) a simple econometric model relating growth and other macro variables to NPLs; and (ii) a spreadsheet tool incorporating simplified accounting relationships that link NPLs to bank capital.[18] This can typically be done with published data on balance sheets, NPLs and regulatory capital for individual banks that make up a large part of a financial system. More sophisticated stress

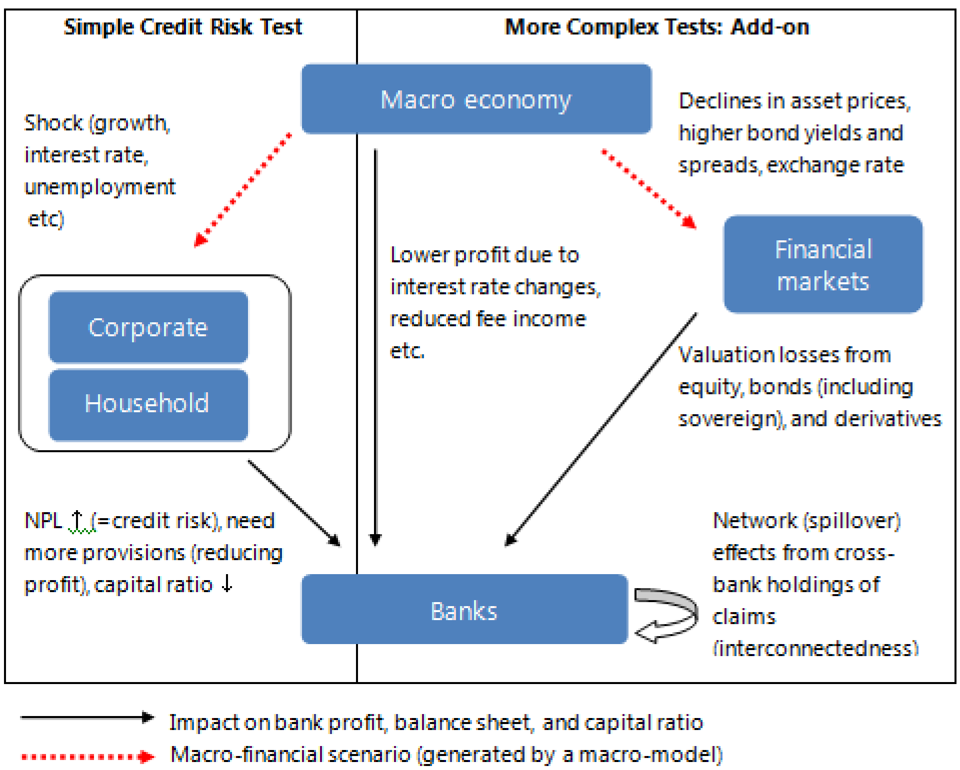
17 Stress tests assess the soundness of the system as a whole. Staff should be careful about how they are communicated to avoid making implicit judgments about the health of individual banks.

18 These relationships are typically approximations that may not fully reflect regulatory treatment of banks in a country. If estimation is difficult, one can consider some arbitrary shocks (for instance, that the NPL ratio increases by 5 percentage points). A top-down test, which can be carried out by a country-authority or IMF staff using supervisory data, will usually be more accurate. A bottom-up test is a test carried out by banks themselves. See recent IMF policy paper on stress testing for typology and basic structures of stress tests, as well as a survey of stress testing practice of country authorities.

tests are possible—and carried out on FSAPs—and Figure 4 illustrates how the basic framework can be extended.

42. While bank stress tests vary in sophistication, they have limitations. First, while they are designed to capture the impact of macroeconomic and capital market shocks on banks, they often fail to capture the macro-financial linkages that cause significant feedback effects. The models typically lack, for example, a channel that captures the effect of a fall in the capital ratio on banks' decision to deleverage and curb private sector credit. Second, the reliability of the stress tests depends on data quality, which in turn reflects the quality of supervision and accounting systems, which can be distorted by factors such as ever-greening. Third, national regulations—which govern how potential losses change regulatory capital and liquidity ratios—vary across countries and may not be adequately captured by the accounting relationships in the model. There is no canonical stress testing model; rather, each model needs to be tailored to the country based on a set of guiding principles.

Figure 4. Structure of a Macro Scenario Test



Putting it all Together: Applying Models for Spillover Analysis

43. The goal of spillover analysis is to identify and quantify the channels through which risks are transmitted internationally. A defining feature of this analysis is the use of models containing a large number of countries, reflecting the IMF's unique responsibility for global stability. This need to quantify spillovers leads to a heavy reliance on large, multi-country models that can simulate the scenarios that illustrate how outward spillovers from a shock in a systemic country are transmitted to other countries. This contrasts with the more specialized empirical tools used for diagnosing risk outlined above.

44. The specification and properties of these models are improving steadily but have limitations that need to be taken into account. Country coverage is small relative to the membership (at most 40 countries) and their capacity to incorporate differences in economic structure is limited. Some spillover channels are difficult to capture in models and, thus, may be overlooked, such as the impact of regulatory changes (discussed below). Also, the impact of a shock may be underestimated when shocks have non-linear effects that are not captured well by most models, which are largely linear in specification. Finally, there are significant data constraints that can limit the application of these models (see Box 9). Thus, surveillance of spillovers must use models cautiously and rely on judgment to identify potential spillovers that are not adequately captured by models.

Box 9. Data Gaps Impeding Structural Macroeconomic Modeling

The Fund's efforts to further develop structural macro models are running into data constraints. In response to user demand, model builders have expanded country coverage, especially of emerging markets, and included new sectors to capture important economic relationships. Such models critically depend on interrelated national, government, and balance of payments accounting identities. It will be difficult to further develop these models without confronting data gaps, which exist across economies and sectors. Key gaps include the following:

- ***Expenditure breakdown***. The calibration or estimation of these models depends on a minimal expenditure breakdown of the quarterly national accounts, which remains unavailable even for some G20 economies. In the absence of data, model builders use estimates, which introduce measurement error.
- ***Macro-financial linkages***. Decompositions of private consumption (nondurables versus durables) and private investment (residential versus business) are vital for understanding linkages, because these subcomponents respond very differently to changes in financial conditions.
- ***Capital stock data.*** These are important for behavioral relationships in large macro models and it is critical to obtain data on residential and business capital stocks for a larger group of countries. Likewise, a lack of data on the stock of public infrastructure impedes some fiscal applications.
- ***Import content and trade linkages***. The import content of expenditure components varies markedly, which can interact with domestic demand changes to generate shifts in trade flows. The lack of a full expenditure breakdown and incomplete import content data in many advanced economies (and most EMs) means that modeling of many interconnected economies must be done at a higher level of sectoral aggregation, and risks in subsectors will not be captured by the models.
- ***Trade linkages***. In view of the growing importance of trade in services, it would be desirable to complement existing bilateral export and import data for goods with comparable data for services. Without this detail, model builders assume that services trade patterns match those of goods—which can significantly distort estimated spillovers.
- ***Financial linkages***. Attempts to model these have focused on cross-border balance sheet exposures and contagion effects. Accurately representing these transmission channels and accounting for their impacts requires measures of private and public sector borrowing costs at different maturities. While sovereign borrowing costs are readily available, corporate yields are typically only available for individual securities, and data are needed on internationally comparable benchmarks or economy wide indexes. Accurately accounting for the associated financial income flows requires data on the maturity structures of government debt and net foreign asset positions reported in a consistent and internationally comparable way.

45. The IMF deploys three broad classes of multi-country models for spillover analysis: *structural macro models* (known as Dynamic Stochastic General Equilibrium—DSGE—models); *Global Vector Auto-Regression (GVAR) models*; and *balance sheet contagion models*. Each has advantages that are outlined below. Structural models have a well developed theoretical structure that makes them well suited to policy analysis and facilitates the interpretation of spillovers results. The GVAR can be easily implemented for different sets of countries and variables, making it a highly flexible tool but the less developed theoretical structure makes the results less amenable to interpretation. The balance sheet contagion models are essentially matrices of data on cross-border exposures that can be used to trace spillovers between countries but are based largely on accounting identities and do not capture behavioral relationships well.

Structural Multi-Country Models

46. The Fund has developed a number of structural, multi-country macro models for spillover analysis that each embodies different trade-offs in model design. Specifically, the large size of these models leads to a trade-off between the degree of country differentiation and the variety of spillover channels (Annex II). These differences in models need to be taken into account in how they are used. Specific types of scenarios are more suited to one model than another and can be expected to generate different simulation results, reflecting the different design choices. Some parameters in these models must be imposed rather than estimated, which needs to be taken into account when assessing the results.

- ***The Flexible System of Global Models (FSGM)*** involves design choices that allow a greater degree of differentiation across countries and, thus, better captures the differential impact of a shock on each individual country in the model. The model can accommodate up to 24 countries. In order to achieve this diversity while keeping the dimensionality of model to a size that allowed to be simulated, the specification of the cross-country linkages were simplified. Specifically, the complex set of bilateral trade linkages between countries was replaced by a single reduced-form equation, and financial linkages with the rest of the world are based on uncovered interest parity.

- ***The G-35S Model*** made a different design choice: to have more detailed bilateral linkages among countries and to limit differentiation across the 35 countries. Thus, it includes a wider variety of financial contagion channels but imposed common structural parameters across countries, obtained from panel estimation, to keep the dimensionality of the model to a size where it can be simulated.

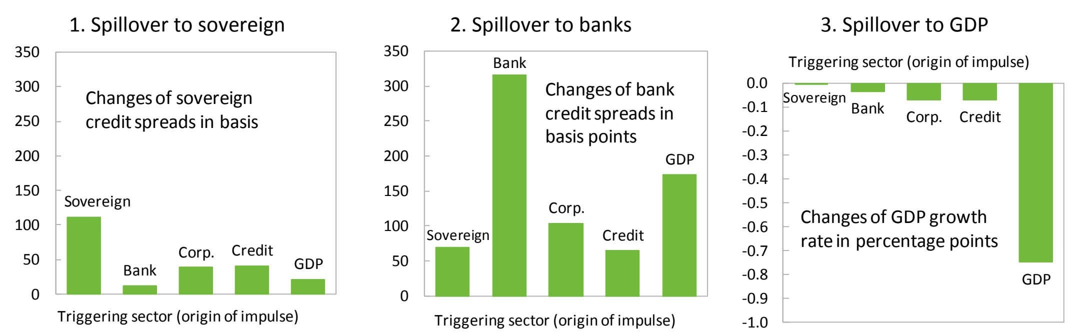
- ***The Global Integrated Monetary and Fiscal Model (GIMF)*** has bilateral trade linkages and a rich dynamic structure that includes a household sector with overlapping generations and firms with a financial accelerator; but, to achieve this complexity, it can accommodate a maximum of six countries/regions.

Box 10. Applying the CCA-GVAR: An Italian Case Study

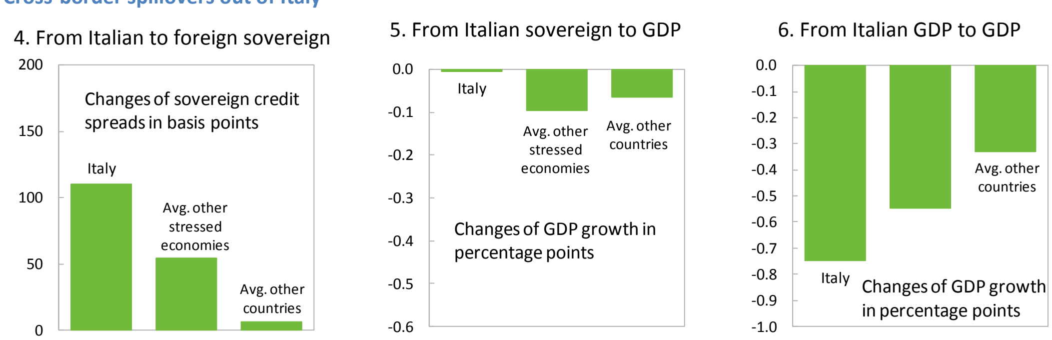
The GVAR can also be combined with the Contingent Claims Analysis (CCA) model to deepen the analysis of financial spillovers. CCA produces an indicator of financial distress than can be used as dependent variables in the GVAR. Other variables such as bank equity prices, NPL ratio, and CDS spreads could be used, but CCA variables efficiently combines forward-looking information from financial markets and firms' balance sheet data. The GVAR-CCA model has been used to quantify domestic sovereign-bank linkages and outward spillover effects for Italy, drawn from the recent Italian FSAP.[1/] This GVAR includes 17 countries and CCA-based financial distress indicators for banks, non-financial corporate, and the sovereign, as well as the growth rates for bank credit and real GDP as variables.

- ***Cross-sector linkages within Italy*** (Figure, panels 1-3): Italian banks are exposed to other sectors (panel 2). However, the effects from banks to the rest of the economy seem relatively small: bank distress generally causes a smaller impact on the sovereign credit spread and GDP growth ("bank" bars in panels 1 and 3) compared to the shocks to the other sectors.
- ***Outward spillovers from Italy*** (Figure, panels 4-6): There are spillover effects from an increase in Italian sovereign credit spreads to sovereign spreads of other stressed economies (panel 4), although its effects on the real sector are small (panel 5). Cross-border spillovers to GDP are mostly channeled though real economic linkages.

Cross-sector linkages within Italy [2/]



Cross-border spillovers out of Italy [2/]



Source: Gray, Gross, Sydow and Paredes "Modeling the Joint Dynamics of Banking, Sovereign, Macro and Financial Risk using CCA in a Multi-country Global VAR," IMF Working Paper (forthcoming).

[1/] Italy: Technical Note on Interconnectedness and Spillover Analysis, IMF, November 2013.
[2/] Cumulative 24-month response to a one standard deviation shock in a sector. Based on GVAR estimate for 16 countries and five variables (sovereign, bank, corporate, real GDP, and bank credit) using data for 2002-12. The estimation reflects the average relationship over the past decade (which includes a long period of tranquility, especially regarding the sovereign credit risk indicator) vis-à-vis a standardized shock. Other stressed economies include Ireland, Portugal, and Spain.

Global Vector Auto Regression models

47. The GVAR model provides a practical alternative to structural macro models. They can be estimated quickly and for groups of countries that may not be covered by the structural macro models. They also provide the flexibility to vary the choice of variables to incorporate spillover channels that may not be adequately captured in structural models. An example, discussed in Box 10, is the addition to a GVAR model of a variable capturing market perceptions of the risk of a systemic crisis derived from a Contingent Claims Analysis (CCA) model.

48. GVAR models have the advantage that they estimate jointly the linkages within an economy and spillovers between countries. GVARs typically report results in the form of impulse response functions, which are standardized shocks (e.g., of one standard deviation) that facilitate comparison of the impact across countries. The estimated model can be used to run policy scenarios but the results are harder to interpret given that they are a reduced-form model with a less developed theoretical structure (than structural models). The estimated statistical relationships in GVAR can be prone to parameter instability, which can lessen their reliability.

Balance Sheet Contagion Models

49. Bank contagion analysis applies stress testing concepts to assess spillovers between national banking systems. It relies on balance sheet identities that link banking systems across countries, which allow the impact of a shock in one banking system to be traced to others. For example, losses in one banking system could cause it to deleverage by cutting international interbank lending and by selling asset in global markets which, in turn, triggers losses and deleveraging in other systems. This model is described in Box 4, which also highlights how our capacity to do this analysis is constrained by the lack of sufficiently detailed disaggregation in the BIS banking statistics.

50. Progress is continuing, with the development of a Global Flow of Funds (GFFs) by the IMF in cooperation with a number of jurisdictions.[19] This involves expanding the external sector of the BSA matrix with data on the bilateral exposures between the sectors among countries, as illustrated for a pair of countries in Figure 5. This work is still in the early stages and a full GFF matrix for multiple countries cannot yet be produced. However, existing BIS international banking statistics and IMF IIP data can be used to partially construct a GFF matrix for cross-border bilateral exposures through banking and portfolio channels, which can allows mapping of financial spillovers. This detailed disaggregation of a country's external sector into a network of bilateral exposures makes the GFF into a useful surveillance tool that permits a much more granular mapping of potential spillover channels, and would greatly enhance the Pilot ESR's coverage of external balance sheets and their linkages.

[19] See *Mapping the Shadow Banking System Through a Global Flow of Funds Analysis*, IMF WP/14/10.

Figure 5. Global Flow of Funds: Bilateral Cross-Border Exposures between Country Sectors

Country A: Holder of the External Liability (Creditor Sector)

Country B: Issuer of the External Liability (Debtor Sector)

	Government		Financial Sector (incl. Central Bank)		Other Non-Financial Sectors		TOTAL	
	Assets	*Liabilities*	*Assets*	*Liabilities*	*Assets*	*Liabilities*	*Assets*	*Liabilities*
Government								
In domestic currency								
ST								
LT								
In foreign currency								
ST								
LT								
Financial Sector (incl. Central Bank)								
In domestic currency								
ST								
LT								
In foreign currency								
ST								
LT								
Other Non-Financial Sectors								
In domestic currency								
ST								
LT								
In foreign currency								
ST								
LT								
TOTAL								
In domestic currency								
In foreign currency								

Spillovers from Financial Regulation and Macroprudential policies

51. Financial regulatory reforms and macroprudential policies could potentially have large spillovers—and spillbacks—but existing models are not well suited to capture these effects. These reforms strengthen the resilience of the financial sector, but they could have significant but unintended adverse cross-border spillovers.[20] Scenarios driven by regulatory reform therefore involve a more substantial element of judgment. Specifically, the increase in capital and liquidity buffers under Basel III could lead to deleveraging with adverse impacts on credit. Moreover, it could make G-SIFIs less willing to hold emerging market securities and credit due to their higher capital charges, impacting global capital flows. The requirement that G-SIFIs have additional capital charges would have similar effects as Basel III.

[20] For instance, Santos and Elliott, *2012, Estimating the Costs of Financial Regulation*, SDN/12/11; and Viñals, Pazerbasioglu, Surti, Narain, Erbenova, and Chow, 2012, *Creating a Safer Financial System: Will the Volcker, Vickers, and Liikanen Structural Measures Help?* SDN/12/4.

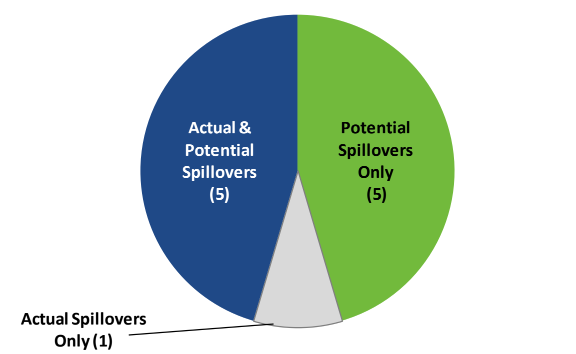
Annex I. Implementation of the ISD: 2013 Article IVs

This annex discusses early experiences from the first year of implementing the Integrated Surveillance Decision (ISD), based on an assessment of 11 Article IV consultation reports.[21] *All of these reports examined outward spillovers, although they varied in terms of the depth of analysis and coverage of transmission channels. Most of the reports spelled out alternative policies, although they did not necessarily document spillovers from the country's existing policies. It is unclear whether staff gained much traction with authorities in discussions of outward spillovers.*

A. Scope of Spillover Analysis

All 11 Article IV staff reports contained at least some coverage of outward spillovers, although the scope of the analysis varied. Five reports covered both actual and potential spillovers from current or alternative policies, while five considered only potential policy spillovers. A number of reports discussed potential benefits from alternative policies ("positive spillovers") without always examining the *negative* spillovers from current policies as envisaged by the ISD. The benefits from alternative policies may in some cases be the mirror image of the spillovers from current policies, although this was not always clarified.

Coverage of Actual and Potential Spillovers
(Number of reports)



Coverage across reports could be more consistent. Some spillovers were covered as *inward spillovers* in the reports of countries that might be affected, but received only limited coverage in the originating country. For instance, the 2013 China Article IV did not examine spillovers from a sharp slowdown in growth triggered by a build-up of excess capacity or capital flow reversals, which was identified as a risk by a number of other countries, although this issue had been discussed in the 2012 China Article IV. Similarly, some outward spillovers were discussed in the Spillover Report, but did not appear in the corresponding Article IV report. Moreover, outward spillovers of policies or shocks highlighted in the Euro Area report, such as spillovers from the stagnation of medium-term growth, did not always receive attention in the report of individual member countries where they seemed relevant.

[21] The reports covered China, Euro Area, France, Germany, Greece, Italy, Japan, Spain, Switzerland, United Kingdom, and United States.

Box. Impact of the Integrated Surveillance Decision

The ISD clarified the scope of risk analysis and made spillover analysis a mainstream feature of Article IV surveillance. It requires Article IVs to cover members' policies that can significantly influence their own domestic or balance of payments stability.[1/] Coverage of outward policy spillovers is also required in certain situations, including where a country's policies have spillovers that "significantly influence" global economic and financial stability, which in the remainder of this paper are referred to as "systemic spillovers". In such cases, the Article IV should cover actual or potential outward spillovers from all of the members' policies and through all relevant channels (BOP or non-BOP, e.g., contagion, or market pricing effects).[2/] If a country's policies are promoting domestic stability—yet could cause adverse systemic spillovers—staff should discuss with the authorities alternative policies that minimize spillovers while continuing to promote domestic stability.

The ISD also calls for bilateral and multilateral surveillance to be more closely integrated. These two strands of surveillance are mandated by different clauses of the Fund's Articles of Agreement; and, until recently, have been conducted in parallel. The ISD establishes a conceptual link between them, and makes the case for much closer operational integration to help strengthen the coherence of the Fund's risks and spillover work.

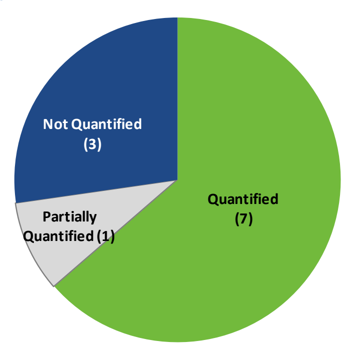
[1/] Previous guidance was for Article IVs to focus only on policies affecting the member's own economic and financial stability. Although many teams already looked at a wider range of risks and spillover channels, coverage was uneven, which may have contributed to the failings of surveillance in the run up to the crisis.

[2/] Outward spillovers are deemed to "significantly influence" the effective operation of the international monetary system (hereinafter "significant impact on global stability"), if by themselves, or in combination with spillovers from other members' policies, or through their regional impact, they enter the macro-financial policy considerations of members representing a significant portion of the global economy. Outward spillover analysis is also required for any spillovers where a country is not promoting its domestic or balance of payments stability.

B. Depth of Analysis

The reports varied in the degree to which they quantified spillovers. Half of the reports quantified outward spillovers, all drawing from quantitative models used in the Spillover Report. Two reports elaborated the models and discussed the quantitative impact, while one report mentioned the quantitative impact without discussing the models used. Some reports, including the US Article IV consultation, did not seem to draw extensively on quantitative tools.

Quantification of Outward Spillovers
(Number of reports)

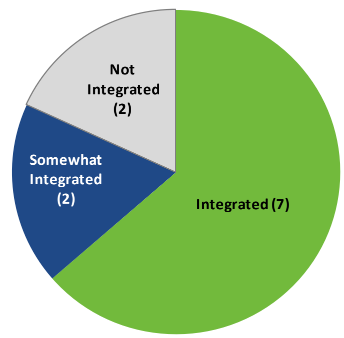


Transmission channels were discussed in most reports, but coverage was sometimes narrow. Currently available models, such as those used in the Spillover Report, do not capture all transmission channels, and generally do not capture the impact of financial regulations or capital flow/portfolio rebalancing channels. This forced many reports to impose simplifying assumptions for some sectors, or meant that they were unable to include very rich dynamics. Nevertheless, some reports flexibly combined results from different results and applied judgment on the effects of other channels to produce a richer analysis of the impact of spillovers.

C. Integration and Traction

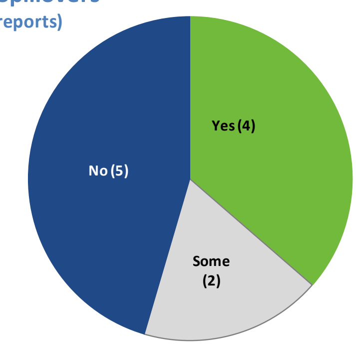
The outward spillover discussion was well integrated into most reports. They varied, however, in the weight they attached to spillovers, and only a minority of the reports alluded to outward spillovers in the staff appraisal. The authorities' reactions to the spillover work (including alternative policies) were not recorded in half of the reports, which raises uncertainties about how much traction staff gained with the authorities from discussing outward spillovers.

Integration of Outward Spillover Analysis
(Number of reports)



Most Article IV consultation reports discussed the spillovers of alternative policies. Six reports provided alternative policies to mitigate outward spillovers, in most cases reflecting "positive" spillovers from policies that are designed to be welfare enhancing domestically. In some cases, staff recommended policy packages, and it was hard to discern the impact of the various components of the package.

Alternative Policy Options to Reduce Outward Spillovers
(Number of reports)



Annex II. Lessons from a Seminar on Modeling Risks and Spillovers at the IMF

The IMF relies on a variety of economic models to assess risks and spillovers. To clarify how different models should be used in surveillance, a seminar was held in April 2014 to obtain the perspectives from seven academics and practitioners, as well as model users. They assessed the IMF's three main structural macroeconomic models for spillover analysis and a variety of specialized models, focusing on specific applications illustrating how the models were used. This annex summarizes the conclusions from the seminar.

Challenges of Using Models in IMF Surveillance

Models provide a rigorous analysis of macroeconomic processes and help quantify the impact of shocks. They necessarily simplify the complex systems they seek to describe, which can limit their usefulness. The challenge for surveillance is to make effective use of models while taking account of their limitations. The decision regarding the extent to which one can rely on models or must rely on judgment can benefit from a deeper understanding of their strengths and weaknesses provided by the seminar. The seminar also helped identify directions in which to develop models to enhance their usefulness.

Three Multi-Country Structural Macroeconomic Models

Three large structural DSGE models have been developed. The coverage of multiple countries by these models—reflecting the global role of the IMF—makes them uniquely suited to assess international spillovers. However, their larger size relative to single-country models gives rise to tradeoffs in model design, notably between the degree of country differentiation and the variety of spillover channels. Each of the models embodies a different tradeoff that results in important differences in their properties and in the scenarios for which they are used.

- The **Flexible System of Global Models (FSGM)** is designed to allow substantial differentiation across a large number of countries and, thus, better captures the differential impact of shocks across up to 24 countries. To allow this flexibility while keeping the model solvable, cross-country linkages are simplified, with countries' bilateral trade linkages replaced by a single reduced-form equation, and simple financial linkages based on uncovered interest parity. The FSGM has been used to generate a global downside scenario in which recovery in the U.S., Europe, Japan and emerging markets is weaker that the WEO baseline.

- The **G-35S Model** made the strategic choice to have detailed and varied international linkages, including by building in financial contagion channels, but limited differentiation across the 35 countries.[22] To make the model solvable, panel estimation of common structural parameters across countries is used to reduce the dimensionality of the model. The G-35S has been used to model spillovers from early exit from unconventional monetary policy (UMP) due to faster U.S.

[22] See *Policy Analysis in the World Economy: A Panel Unobserved Components Approach*.

growth, which led to a sharp rise in U.S. interest rates with negative financial spillovers that partly offset the positive ones from stronger U.S. growth.

- The **Global Integrated Monetary and Fiscal Model (GIMF)** has bilateral trade linkages and a rich dynamic structure that includes a household sector with overlapping generations and firms with a financial accelerator,[23] but this complexity limits the number of countries/regions it can handle to six. The model also has relatively simple financial linkages based on uncovered interest parity. It has been used to study a euro area fiscal consolidation in which structural reforms help offset the growth impact of the consolidation.

Directions for Future Work

The design choices embodied in these models results in differences in their coverage of international linkages and, therefore, in the types of scenarios they are most suited to assess in Fund surveillance. The outside academics and practitioners outlined the direction in which they thought IMF modeling work could be strengthened:

- **Efforts should focus on better capturing financial spillovers.** This includes the non-linear effects that amplify spillovers during episodes of financial stress. The use of event studies to calibrate spillovers is one approach but this inevitably involves a large degree of judgment.

- **Financial spillovers could be better captured by building balance-sheet effects into models.** This would allow them to incorporate the build-up of currency and liquidity mismatches that increase vulnerability to exchange rate and capital flow volatility.

- **Spillover analysis using models could distinguish more clearly between spillovers from the initial shocks, the policy responses and second round spillovers (i.e., spillback effects)**.

- **More realistic modeling of capital flows and financial account openness is needed.** Significant departures from uncovered interest parity occur in practice, and portfolio balance effects need to be incorporated.

The Role of Specialized Models in IMF Surveillance

The limitations of large structural macro models mean that the Fund also needs specialized models to assess specific risks or spillovers in greater depth. These typically cover only some of the risks and spillover channels and lack the rich theoretical structure of the large macro models. Specialized models rely to a greater extent on accounting identities to define spillover channels, or on econometric methods to estimate them. This limits the extent to which they can be used for policy scenarios needed to assess policy spillovers, relative to structural models. The IMF uses many

[23] See *The Global Integrated Monetary and Fiscal Model (GIMF)—Theoretical Structure*, and *Getting to Know GIMF: The Simulation Properties of the Global Integrated Monetary and Fiscal Model*.

specialized models and the seminar had to be selective and choose several representative models on which outside academics and practitioners could comment.

- **Country crisis risk models** that use a nonparametric statistical technique that can combine a large number of indicators of vulnerability to come up with a crisis risk rating for each country.

- **A bank contagion model** that relies on balance sheet identities linking banking systems across countries. It enables users to trace the impact of shocks, but can capture only a limited set of spillovers and does not incorporate offsetting private sector and policy responses.

- **Global vector auto-regressions (GVARs)** provide a flexible econometric approach to estimating spillovers for country groupings but are not well suited for policy scenarios that assess alternative policies.

Directions for Future Work

The IMF's specialized models offer greater flexibility than structural models to delve more deeply into specific risks such as, for example, tail risks scenarios. Future work needs to take account of these more diverse objectives while helping to strengthen these models. Models could be developed in the following directions:

- **Allowing for "time variation" between crisis and non-crisis episodes** would help to assess the impact of shocks more accurately. Failure to allow for this leads to underestimation of the role of country vulnerabilities and a failure to appreciate the larger spillovers that can occur when these are weak.

- **Models need to incorporate liquidity risk more effectively.** This involves capturing better the sensitivity of external funding (in the form of portfolio or international banking flows) to shifts in investor perceptions of default risk in the banking, sovereign and corporate sectors.

The leverage cycle in financial sectors driven by global liquidity conditions needs to be better incorporated into models. This involves more accurate measurement of leverage (i.e., to capture leverage from corporate bonds issued offshore) and an assessment of the risk that capital supporting this leverage may prove inadequate in the face of adverse shocks.

II. REVIEW OF FISCAL POLICY ADVICE[1]

Executive Summary

The global financial and economic crisis sparked a wide-ranging debate about the efficacy of conventional policy approaches. Central to this debate were questions about assessing the appropriate stance of fiscal policy over the business cycle and the design of fiscal adjustment strategies, and how well this was reflected in Fund surveillance.

In this context, this paper has three broad objectives, namely to: (i) review how Fund-wide fiscal policy advice changed with the crisis; (ii) analyze the scope, depth and consistency of the Fund's fiscal advice to individual countries; and (iii) examine whether the Fund's fiscal policy analysis and advice was well integrated as part of a comprehensive policy discussion. To this end, staff examined a range of multilateral surveillance products and Article IV consultation staff reports.

Drawing on the early lessons from the crisis, the Fund adopted a more nuanced approach that better balances the short- and medium-term roles of fiscal policy. The Fund's bilateral fiscal analysis and advice also sought to respond to changing country circumstances, and has been broadly consistent with Fund-wide advice and across countries. While there has been important progress in the depth of analysis, the specificity and comprehensiveness of fiscal advice varies across Article IV reports.

During the crisis, the Fund's fiscal advice generally had a stronger cyclical element and was correspondingly more focused on the pace of adjustment. The composition of fiscal measures also received greater attention, reflecting the implications for sustainability as well as growth and equity considerations. Article IV reports have a medium-term focus and the coverage of debt sustainability analyses has improved.

However, most reports did not propose a clear medium-term fiscal anchor. Also, the analysis of fiscal risks and intersectoral connections varied across countries. While fiscal institutions (e.g., fiscal rules) have been prominent in Fund advice, there was still insufficient focus on other factors affecting implementation (e.g., capacity and political economy). The role of fiscal policy within the policy mix is often not considered in a sufficiently integrated way.

The following are possible options that could help support the objective of deeper, more cohesive, and consistent advice:

- **Present fiscal advice in terms of a clear and well justified anchor**, specified as appropriate for each country either in terms of levels (e.g., fiscal balance, debt stock) or changes (e.g., a recommended amount of adjustment).
- **Strengthen the Fund's analytical basis for using the structural balance** to better integrate cyclical considerations into fiscal policy advice.

[1] Prepared by an FAD-led team, comprising Bernardin Akitoby (lead), Luc Eyraud, Serhan Cevik, Carolina Correa Caro (all FAD), Myrvin Anthony, M. Astou Diouf, Mark Flanagan (co-lead), David Moore, and Karen Ongley (all SPR). Hugh Bredenkamp (SPR) and Martine Guerguil (FAD) provided general guidance.

- **Deepen Fund-wide analysis and guidance on spending measures** to support increased attention to advice on the composition of fiscal measures.
- **Include more comprehensive analysis of fiscal risks** (e.g., contingent liabilities, intersectoral risks) and, over time, develop tools for more comprehensive balance sheet analysis.
- **Consider the practical and political feasibility of policy advice** for policymakers, including in the context of follow-up on past policy advice.
- **Give more attention to intersectoral connections and the interaction of policies**, with a view to providing advice on a well-integrated and comprehensive policy mix.

A. Introduction

1. Overview. The recent global financial and economic crisis sparked a wide-ranging debate about the efficacy of conventional policy approaches. Central to this debate were questions about choosing the appropriate stance of fiscal policy through the different phases of the crisis and the design of fiscal adjustment strategies, including the implications for both economic growth and fiscal sustainability. In response, the Fund's fiscal advice through its multilateral and bilateral surveillance has evolved throughout the crisis and with changing economic circumstances, signaling a more discerning approach to fiscal policymaking.

2. Scope and methodology. This paper has three broad objectives, namely to: (i) review the impact of the crisis on the Fund's fiscal policy advice; (ii) analyze the scope, depth and consistency of the Fund's fiscal policy advice across countries and over time; and (iii) examine the links between the Fund's fiscal policy analysis and advice and developments and policies in other sectors. To this end, staff examined a range of multilateral surveillance products and staff reports for Article IV consultations (hereafter, Article IV reports) for 24 countries over the period 2008–13.[2]

3. Structure. This paper is organized as follows. Section B discusses the wider analytical debate and traces the evolution of Fund-wide fiscal policy recommendations. Section C analyzes the scope, depth and consistency of the Fund's policy advice to individual countries. Section D examines the overall cohesiveness of fiscal policy advice. Finally, Section E concludes and offers possible options to strengthen the Fund's fiscal policy analysis and advice, with emphasis on better integrating multilateral and bilateral surveillance.

B. The Wider Analytical Debate and Evolution of the Fund's Policy Advice

Analytical Debate on the Role of Fiscal Policy

4. The consensus view prior to the global crisis was that fiscal policy should play a limited role as a short-term stabilization tool.[3] The reluctance to use fiscal policy actively for stabilization

[2] Annexes I and II describe the country sample and the review methodology, respectively. An important caveat is that the sample is small and excludes program country cases (to ensure a focus on the assessment of fiscal policy advice delivered in the context of surveillance). This leads to the exclusion of advanced economy program cases and, as many low-income countries are program cases, this limits the number of LICs in the sample.

[3] The pre-crisis rejection of discretionary fiscal policy as an effective countercyclical policy instrument was not universal. It was perhaps stronger in academia than among policymakers. Discretionary fiscal stimulus measures were

(continued)

reflected three broad considerations: (i) the time it takes for fiscal measures to be felt in the economy (monetary policy was seen as more agile and thus a preferred countercyclical policy tool); (ii) fiscal policy responses had often been asymmetric in previous decades (procyclical in good times, leaving little room for countercyclical policy in bad times); and (iii) the notion that markets reward fiscal discipline (and that, at the extreme, fiscal consolidation could be expansionary). In part, skepticism about the effectiveness of fiscal stimulus also reflected a lack of conclusive evidence regarding the sign and magnitude of fiscal multipliers—the change in output resulting from an exogenous change in government spending or taxes.[4]

5. Early in the crisis, there was a wide spectrum of views regarding fiscal policy effects. At one end of the debate, some academics and policymakers continued to doubt the ability of fiscal policy to effectively support demand. They also argued that positive confidence effects could lead to "expansionary fiscal consolidations." At the other end of the debate, some academics found evidence of larger multipliers.[5] They also suggested that adverse market reactions to declining economic activity and rising debt ratios could undermine the scope for confidence effects to offset the direct Keynesian effects of fiscal policy. As the legacies of the crisis—high sovereign debt and protracted low growth—became more evident, the positions within the debate became more entrenched, as illustrated by the debate over the debt overhang.[6] The Fund, through its analytical work and real-time policy advice, contributed prominently to this intense and ongoing debate.[7]

6. Although the verdict is still open, the case for counter-cyclical fiscal policy now seems stronger than before the crisis, especially in severe and protracted recessions. In particular, a sizable body of literature—including studies at the Fund—concludes that fiscal multipliers are larger when monetary policy is constrained by the zero lower bound (ZLB), the financial sector is weak, or the output gap is particularly large. A number of studies also questioned the earlier evidence of negative fiscal multipliers associated with expansionary fiscal contractions. Nonetheless, a number of questions remain open, including identifying factors that could mitigate the effectiveness of fiscal stimulus (such as low confidence in government actions or highly rigid labor markets), and the

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sometimes deployed in the face of severe shocks (e.g., Japan during the early 1990s). These broad issues were also discussed in the paper on *Reassessing the Role and Modalities of Fiscal Policy in Advanced Economies* (IMF 2013).

[4] Part of the pre-crisis literature found cases of negative multipliers, while some studies found that fiscal consolidation episodes could be expansionary (e.g., Francesco Giavazzi & Marco Pagano, *Can Severe Fiscal Contractions Be Expansionary? Tales of Two Small European Countries*, NBER Macroeconomics Annual 1990, Volume 5, pages 75-122, National Bureau of Economic Research).

[5] This included contributions from Fund staff, including the April 2012 *Fiscal Monitor* (in particular, Chapter 3 and Appendix 1) and *Growth Forecast Errors and Fiscal Multipliers* by Olivier Blanchard and Daniel Leigh (WP/13/1).

[6] For example, with regard to Reinhart and Rogoff's analysis, see: Reinhart, C., and K. Rogoff, "Growth in a Time of Debt", American Economic Review: Papers & Proceedings, Vol. 100, No. 2, pp. 573–78; Herndon, T., M. Ash, and R. Pollin, 2013, "Does High Public Debt Consistently Stifle Economic Growth? A Critique of Reinhart and Rogoff", Political Economy Research Institute, Working Paper No. 322; and Pescatori, A., D. Sandri, and J. Simon, *Debt and Growth: Is There a Magic Threshold?*, IMF WP/14/34.

[7] For example, *Reassessing the Role and Modalities of Fiscal Policy in Advanced Economies* (IMF 2013).

dependence of the multiplier effect on the initial state of the fiscal accounts or type of fiscal instruments (i.e., expenditures and taxes).

7. The evidence for using discretionary fiscal policy to counter more "normal" cyclical fluctuations is less well established. Lags in the design and implementation of discretionary fiscal policy—i.e., a change in the structural fiscal balance—are still an important consideration in short recessions.[8] In any event, the very high level of public debt in many countries now also limits the room for future fiscal expansion in downturns.[9] There may also be political constraints on reversing discretionary fiscal stimulus when economic conditions improve (creating questions about sustainability and potentially leading to market reactions that could reduce the value of stimulus). These factors tend to suggest that, in response to "normal" cyclical fluctuations, the preferred approach may be to combine the free play of automatic fiscal stabilizers with more active monetary policy (provided it is not constrained).

The Fund's Multilateral and High-Level Fiscal Advice[10]

8. Fund-wide analysis and advice on fiscal policy has evolved in step with the changing economic environment (Figure 1—timeline of Fund's fiscal policy advice). As the economic downturn deepened in 2009, the Fund called for a coordinated and front-loaded fiscal stimulus in the short run, as well as for a credible path towards fiscal normalization over the medium term. This shift in advice both contributed to, and reflected, the wider debate on the effectiveness of fiscal policy when an economy faces the ZLB constraint.[11] As the global economy showed signs of turning around in 2010, the Fund turned its focus to the need for clear medium-term exit strategies, while warning against an abrupt, front-loaded tightening and advocating adequate cross-country coordination to mitigate risks to the global recovery.[12] As the strength of the recovery waned (2011-13), the Fund continued to caution against overdoing adjustment in the short term, while still calling for credible medium-term adjustment. Although the Fund did not go as far as some in the debate, this body of advice marked an institutional shift toward a more state-contingent view of the effectiveness of fiscal policy as a stabilization tool than had been the case prior to the crisis.

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[8] Optimizing the design of automatic stabilizers can help reduce lags. But as the size of automatic stabilizers ultimately reflects socio-political choices on the size of government, some countries may choose to rely on discretionary measures for counter-cyclical policy action. (See Blanchard, Olivier, Giovanni Dell'Ariccia, and Paolo Mauro, 2010, *Rethinking Macroeconomic Policy*, IMF SPN/10/03.)

[9] With the possible exception of countries with very high levels of domestic savings, like Japan.

[10] This section discusses the Fund's high-level fiscal policy analysis and advice as articulated in multilateral surveillance products (namely the *World Economic Outlook* and *Fiscal Monitor*), policy and other analytical papers, and speeches.

[11] This approach was consistent with historical episodes and model simulations predicting that multipliers would be larger during such episodes (e.g., Perotti, 1999; Blanchard and Perotti, 2002; Spilimbergo, Symansky, Blanchard, and Cottarelli, 2008). Later studies, once data became available, validated this recalibration of fiscal advice during the crisis (e.g., Blanchard and Leigh, 2013).

[12] For example, *Exiting from Crisis Intervention Policies*, IMF 2010, or *Ten Commandments for Fiscal Adjustment in Advanced Economies*, Blanchard and Cottarelli, IMF 2010.

9. Fiscal policy advice was calibrated and tailored for advanced, emerging market, and low-income countries, taking into account their own dynamics and financing constraints (Box 1). The Fund's institutional advice, particularly as delivered in flagship publications and policy papers, has focused mostly on developments in advanced economies (AEs)—in particular the euro area sovereign debt crisis and risks of euro breakup—and large emerging market economies (EMs). Although since 2012, the *Fiscal Monitor* has provided more analysis and policy advice specific to low-income countries (LICs). Fund-wide advice to EMs and LICs has mostly been shaped by analytical work outside the flagship publications and articulated in regional products, such as *Regional Economic Outlooks*, that provide a 'bridge' between multilateral and bilateral surveillance. A number of policy papers focused on EM- or LIC-specific challenges, including food and fuel subsidy reform, revenue mobilization, fiscal management of external shocks, and fiscal frameworks for resource-rich countries.[13]

10. Drawing on the early lessons from the crisis, the Fund's fiscal advice has become more pragmatic and flexible, balancing a wider range of macroeconomic considerations. Sound government finances remain the central objective as a basis for macroeconomic stability and sustainability. However, Fund advice now also gives greater attention to a range of short- to long-term considerations. These include:

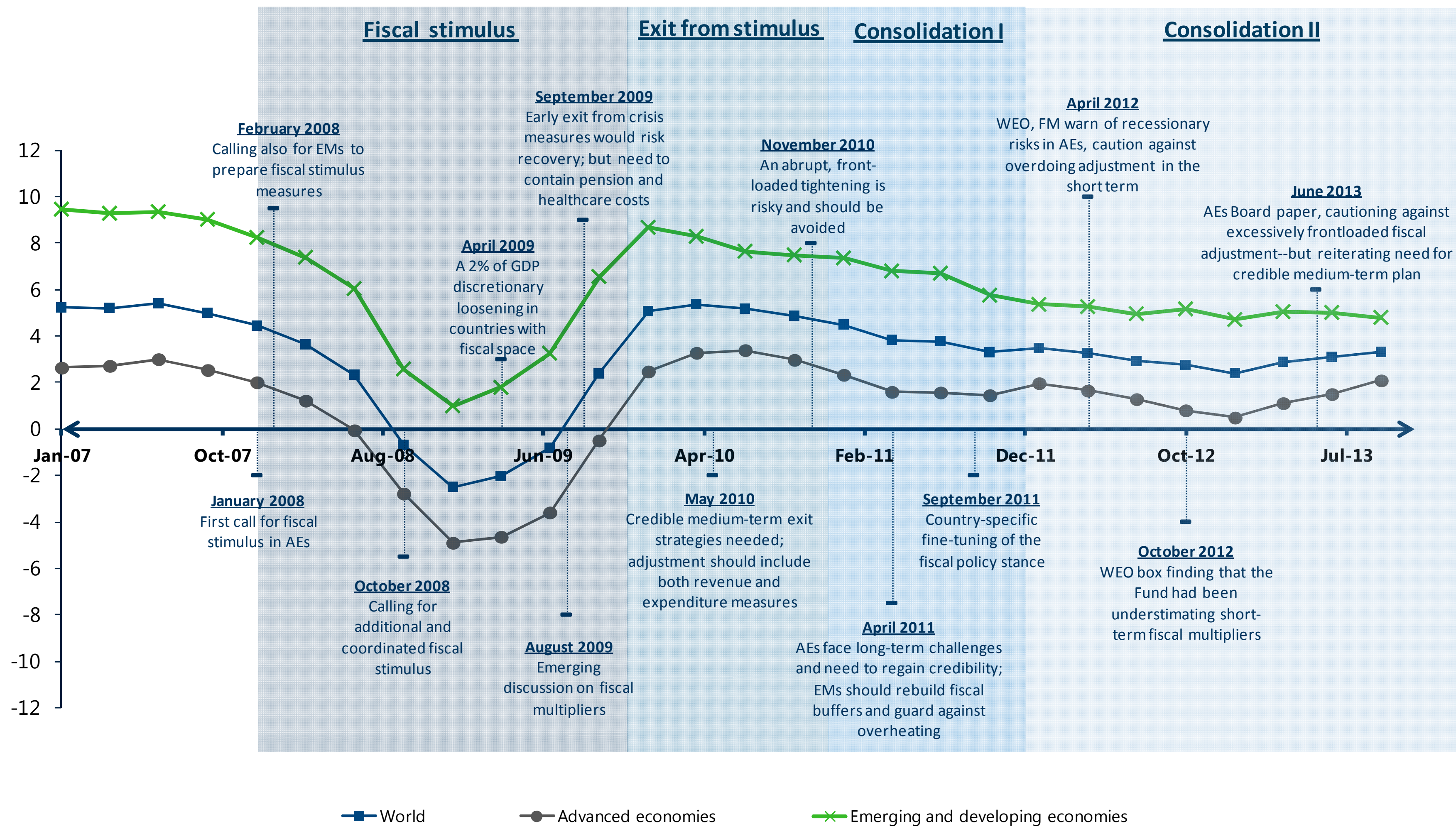
- the **pace and phasing** of fiscal measures, which weighs the costs (i.e., adverse short-run effects on growth) and benefits (i.e., reduction in sovereign risk) of a faster adjustment;
- the **composition** of fiscal packages, taking into account not only the aggregate expenditure-revenue mix, but also the efficiency, growth, and equity implications of individual measures;
- a more risk-based approach than in the past, with more in-depth analysis of **debt sustainability** and more comprehensive assessment of **fiscal risks**;
- the design of **institutional frameworks**, which have gained prominence as tools to underpin effective fiscal policy; and
- a well integrated **policy mix**, accounting more fully for **intersectoral connections** and policy spillovers.

11. Weaving together this wider range of considerations has, at times, posed a challenge for conveying the Fund's evolving approach to fiscal policy. However, the collective lessons from the past five years point toward a set of principles for sound fiscal policy design, particularly during crises, although **many** of them remain relevant beyond the crisis (Box 2). While these principles do not apply equally to all countries or all circumstances, they provide an analytical framework and a menu of options to formulate relevant and more analytically-grounded bilateral fiscal policy advice.

[13] *Emerging from the Global Crisis—Macroeconomic Challenges Facing Low-Income Countries*, 2010; *Fuel and Food Price Subsidies—Issues and Reform Options*, IMF 2008; *Energy Subsidy Reform: Lessons and Implications*, IMF 2013; *Revenue Mobilization in Developing Countries*, IMF 2011; *Managing Global Growth Risks and Commodity Price Shocks—Vulnerabilities and Policy Challenges for Low-Income Countries*, IMF 2011; *Macroeconomic Policy Frameworks for Resource-Rich Developing Countries*, IMF 2012; *Fiscal Regimes for Extractive Industries—Design and Implementation*, IMF 2012.

Figure 1. Timeline of IMF Fiscal Policy Pronouncements Mapped Against Global GDP Growth by Income Group

(Year-on-year percentage change)



Source: IMF staff

Box 1. Multilateral Fiscal Policy Advice by Income Group

Advanced economies: The Fund recommended a discretionary fiscal stimulus of 2 percent of GDP in 2009–10 for AEs that had fiscal space without financing constraints. It cautioned against an early withdrawal of stimulus that could jeopardize economic recovery, recommending that fiscal consolidation start only after clear evidence of self-sustaining recovery. As economic conditions began to stabilize during 2010, the focus turned to preparations for an "exit strategy." The Fund called for a shift to consolidation paired with "growth-friendly" structural reforms that would also support domestic demand in the short run.[1/] However, as growth faltered in 2012, the Fund emphasized the need for more gradual adjustment (1 percent of GDP a year on a structural basis) supported by a credible medium-term plan, instead of heavy front-loading, and provided that financing allowed.[2/]

Emerging market economies: The Fund supported early stimulus efforts for EMs, albeit more cautiously than in AEs given the potential for less well developed institutions and less secure financing to limit fiscal space. The Fund's advice to EMs was calibrated to their different circumstances, calling for expansionary fiscal policy in EMs with low public debt, while warning of large public sectors and debt constraints in Brazil, India, and the Middle East. As EM economies recovered more rapidly from 2009, the Fund's fiscal advice in EMs shifted to taking advantage of favorable cyclical conditions to rebuild fiscal buffers, with an explicit link to cyclical and financing conditions.

Low-income economies: The Fund encouraged LICs to use available fiscal space to defend against the dampening affects of the crisis.[3/] This advice generally focused on structural reforms (e.g., to encourage private investment) and, to a lesser extent, keeping spending plans unchanged, given that many LICs were subject to significant financing constraints. IMF financial support to LICs was also redesigned and expanded specifically to address crisis constraints. As economic conditions in LICs improved, and against the backdrop of countries' own effort to protect social expenditure, the Fund's fiscal policy advice to LICs increasingly highlighted the need to make growth more inclusive while preserving debt sustainability.[4/] With the recovery gaining momentum, the Fund recommended rebuilding fiscal buffers, and addressing gaps in infrastructure and social safety nets.

[1/] These include healthcare and pension reform, and improvements in fiscal institutions, which could help bring debt ratios back towards prudent levels over the medium term.
[2/] This recommended adjustment was discussed in several multilateral products and was prominent in the November 2010 Fiscal Monitor, *Fiscal Exit: From Strategy to Implementation*. The post-crisis fiscal consolidation strategy for AEs also included: (i) non-renewal of stimulus packages; (ii) freezing real per capita spending, excluding pension and health; (iii) stabilizing entitlement spending-to-GDP; and (iv) measures to widen the tax base and reduce evasion.
[3/] While the *World Economic Outlook* tends to group LICs together with EMs, the *Fiscal Monitor* and various *Regional Economic Outlooks* have analyzed LICs as a separate group and provided more LIC-specific advice.
[4/] The April 2010 Regional Outlook *Sub-Saharan Africa. Back to High Growth?* shows that most countries in Sub-Saharan Africa were able to shield pro-poor and pro-growth public spending during the crisis.

Box 2. Principles for Sound Fiscal Policy

The crisis profoundly altered the Fund's advice on the role of fiscal policy as a macroeconomic policy tool. The combination of impaired monetary policy, severely damaged (if not failing) financial sectors, the associated debt overhang and faltering growth brought into sharper focus the need to design fiscal strategies that balance short-term and medium- to longer-term considerations. Drawing on the lessons from the crisis, analytical work by the Fund[1/] *articulates the core principles for designing and implementing effective fiscal policy.*

- To be an **effective countercyclical tool,**[2/] discretionary fiscal policy should be timely, targeted and temporary. It should also depend on there being sufficient fiscal space so that the resulting debt increase does not undermine sustainability (accounting for contingent liabilities).
- To support confidence and maintain market access, a fiscal strategy should be based on **a credible and concrete medium-term fiscal plan with a clear anchor**. A medium-term anchor helps balance cyclical and debt sustainability considerations in the formulation of policy. The anchor could be specified in terms of either a fiscal (level) or adjustment (change) target to be achieved in 4-5 years.
- The **pace and phasing of fiscal measures** should be clearly anchored and calibrated depending on the state of the economy and taking account of the need for: (i) timely withdrawal of stimulus (but not too early); (ii) more gradual consolidation to avoid undue damage to growth; and (iii) the importance of market pressures and financing constraints in determining fiscal space.
- The **composition** of a fiscal package is important, reflecting in large part that different revenue and expenditure measures have different impacts on growth and sustainability (for instance, raising the efficiency of health care spending helps fiscal sustainability without having large short-term output costs; and well-designed infrastructure spending can have positive growth effects and thus different effects on fiscal dynamics than an increase in current spending). Equity and efficiency considerations are also important.
- In light of the macro-fiscal vulnerabilities that were not fully recognized before the crisis, fiscal policy analysis should reflect a more in-depth approach to **debt sustainability** and a more **comprehensive coverage of fiscal risks** (e.g., macroeconomic uncertainty, contingent liabilities including intersectoral or intergovernmental exposures, or implementation risks).
- The **design of institutional frameworks** is crucial for policy credibility and effective implementation. This entails: (i) more policy flexibility within binding commitments, such as fiscal rules based on structural rather than nominal fiscal balances (recognizing that the former may be more complicated, requiring special attention to enforcement and monitoring); (ii) more transparency, including efforts to improve disclosure of contingent liabilities; and (iii) being more forward-looking, including through developing medium-term budget frameworks.
- For fiscal policy to be fully effective, **coordination and cooperation** with other policies, levels of government, and across countries is crucial. In this regard, examining intersectoral connections and policy spillovers is an important diagnostic step to embed fiscal policy in a well-integrated policy mix. For instance, beyond automatic stabilizers, the size of discretionary fiscal action should depend on other countercyclical measures (particularly on the monetary side).

[1/] Including *Reassessing the Role and Modalities of Fiscal Policy in Advanced Economies*, September 17, 2013, and *Fiscal Policy and Employment in Advanced and Emerging Economies*, June 15, 2012.
[2/] A countercyclical policy may be conducted either through discretionary revenue or spending measures (thereby changing the structural fiscal position) or by letting automatic stabilizers operate (at unchanged structural stance).

C. Fiscal Advice to Individual Countries

12. As the Fund's fiscal policy advice has evolved at an institutional level, so too has the Fund's bilateral surveillance sought to respond to the changing circumstances in countries. This has prompted questions—and, at times, criticisms—about the consistency of fiscal advice across countries. Accordingly, this section analyzes the coverage, depth and consistency of the Fund's fiscal advice to member countries in the context of bilateral surveillance. For a majority of the 24 countries in the sample (see Annex I), fiscal issues or vulnerabilities were a central policy issue from early in the crisis.[14] The analysis involved assessing Article IV reports for these countries during 2009–13[15] against a structured set of questions (see Annex II). On that basis, this section examines the following aspects of the Fund's fiscal advice and how they changed over the period: the design of fiscal policy as a demand management tool; the medium-term fiscal path; the composition of fiscal measures; fiscal sustainability and risks; and fiscal institutions and policy implementation.

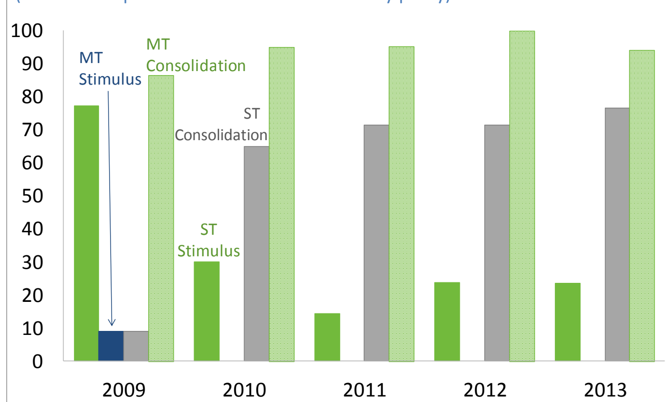
Fiscal Policy and Demand Management

13. Fiscal advice has generally been sensitive to cyclical developments.

- Over 70 percent of reports advised stimulus in 2009, consistent with high-level multilateral advice at the time.

- Advice focused on discretionary fiscal policy—i.e., a change in the structural balance—in about three quarters of the sample, reflecting the desire to better calibrate fiscal policy to cyclical conditions (particularly given the emphasis on countercyclical advice early in the crisis). Advice covered both discretionary policy and automatic stabilizers in about a quarter of Article IV reports, but rarely focused solely on automatic stabilizers. The vast majority of reports did not explicitly discuss the effectiveness of automatic stabilizers in considering the size of discretionary action.[16]

Types of Advice on Discretionary Policy
(Percent of reports with advice on discretionary policy)



[14] As noted earlier, the sample is small and excludes program cases to ensure a focus on policy advice delivered in the context of surveillance. This leads to the exclusion of AE program cases and limits the coverage of LICs.

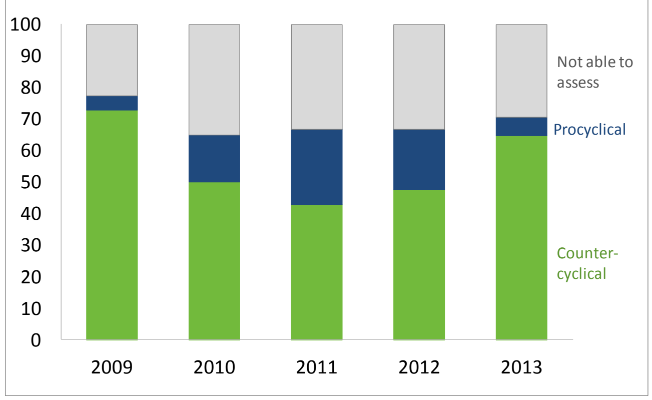
[15] For countries that did not have an Article IV report in 2009, the analysis is based on the 2008 report.

[16] Countries with effective automatic stabilizers could smooth output shocks without relying on large discretionary fiscal actions.

- Short-term advice varied over time and across countries, in keeping with changing economic circumstances as reflected in Figure 1. As the crisis progressed and the path to recovery was more varied across countries, so too was the Fund's fiscal advice. In 2010, stimulus was recommended for one third of the sample and consolidation for the other two thirds (with a similar split for both AEs and EMs). By 2011, most countries in the sample were advised to withdraw fiscal stimulus, entailing short-term consolidation in most cases. While increasing attention was paid to the pace of fiscal adjustment during this period, in retrospect the distinct shift back to short-term consolidation may, in some cases, have come too soon.[17]

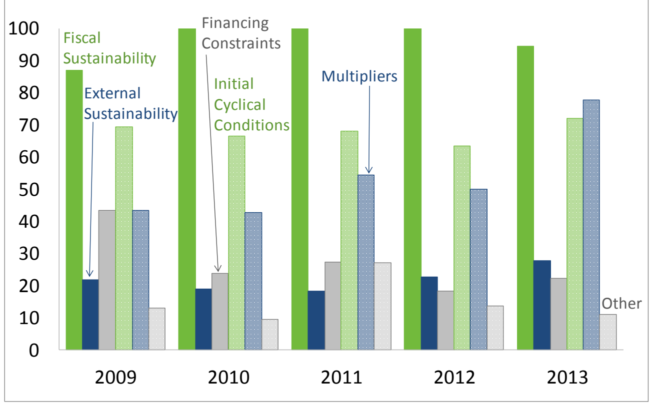
Short-Term Discretionary Policy: Cyclicality of Advice

(Percent of reports with advice on discretionary policy)



Criteria Taken into Account in Advice

(Percent of reports)



- Cyclical considerations were balanced against other considerations over time, such as sustainability, financing constraints or fears of contagion. Throughout the period, initial cyclical conditions were used to determine the recommended size of fiscal actions in around 60 percent of reports. A larger share (90 percent) also considered sustainability.

14. However, there appear to be some important caveats in how consistently cyclical factors have been reflected across countries and over time.

- There were differences between AEs and EMs in how closely the fiscal advice reflected cyclical considerations.[18] In most AEs, the focus on counter-cyclical policies became less pronounced as economic conditions improved. From 2011 onwards, the focus shifted from crisis response to restoring sustainability (for instance, following Japan's shift to fiscal expansion in early 2013 as part of the broader three "arrows" reform strategy, the 2013 Article IV report noted the need to complement short-term stimulus with an "ambitious and concrete consolidation plan beyond

[17] With program countries excluded from the sample, only a few countries in the sample experienced any significant market pressures (e.g., Italy). However, when worries of a euro area breakup peaked in 2011, fear of contagion may also have influenced the observed shift toward consolidation for other countries in the sample (e.g., Belgium, Poland, and Turkey).

[18] There was no clear pattern among the relatively small sample of LICs.

2015"). In contrast, fiscal advice remained clearly countercyclical in more than half the EMs in the sample throughout the entire period, partly reflecting the larger available fiscal space—in some cases due to a lower debt level (Figure 1).

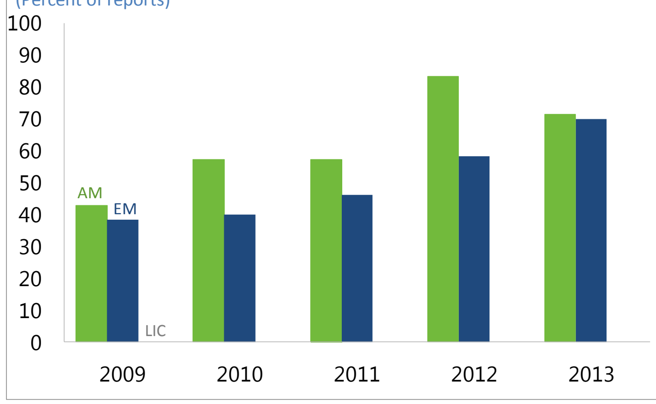
- The difficulty of pinpointing turning points in cycles and/or accurately estimating the output gap has sometimes led to differences of views between staff and the authorities. Particularly in some AEs where recoveries remained weak and uncertain, staff and the authorities did not always have a common view on the underlying macroeconomic assumptions or the appropriate stance of fiscal policy. In the 2013 Article IV consultation for the United Kingdom, for example, much of the discussion focused on market risk and the pace of consolidation, with different views about the growth upside from slower consolidation and the downside from loss of confidence, and also reflecting underlying assumptions about the output gap and the extent to which growth momentum was building.[19]

15. The analytical foundations for the Fund's cyclical advice were generally placed on a firmer footing. Often advice at the country level benefited from Fund-wide analytical work with a clear operational orientation.

- The share of reports that explicitly took into account the macroeconomic *impact* of fiscal policy, including **fiscal multipliers**, rose from less than half in 2009 to three quarters in 2013. Much of this advice is directly informed by research and staff guidance[20] on the use of multipliers and, where possible, presented in structural balance terms.

- **Structural fiscal balances** have increasingly provided the basis for fiscal advice. Around half of the sample AEs during 2009–11, and the majority in 2012–13, used structural balances for policy analysis and advice. The shift was also evident in EMs, where advice using structural balances increased from one third of EMs in 2009 to two thirds in 2013. However, structural balances were not used for advice to the LICs in the sample. This is not surprising given the technical and operational difficulties even among AEs and EMs, including in calculating structural balances and the underlying output gaps, as well as the associated communication difficulties (Box 3).

Use of Cyclically-Adjusted (or Structural) Balance by Income Group
(Percent of reports)

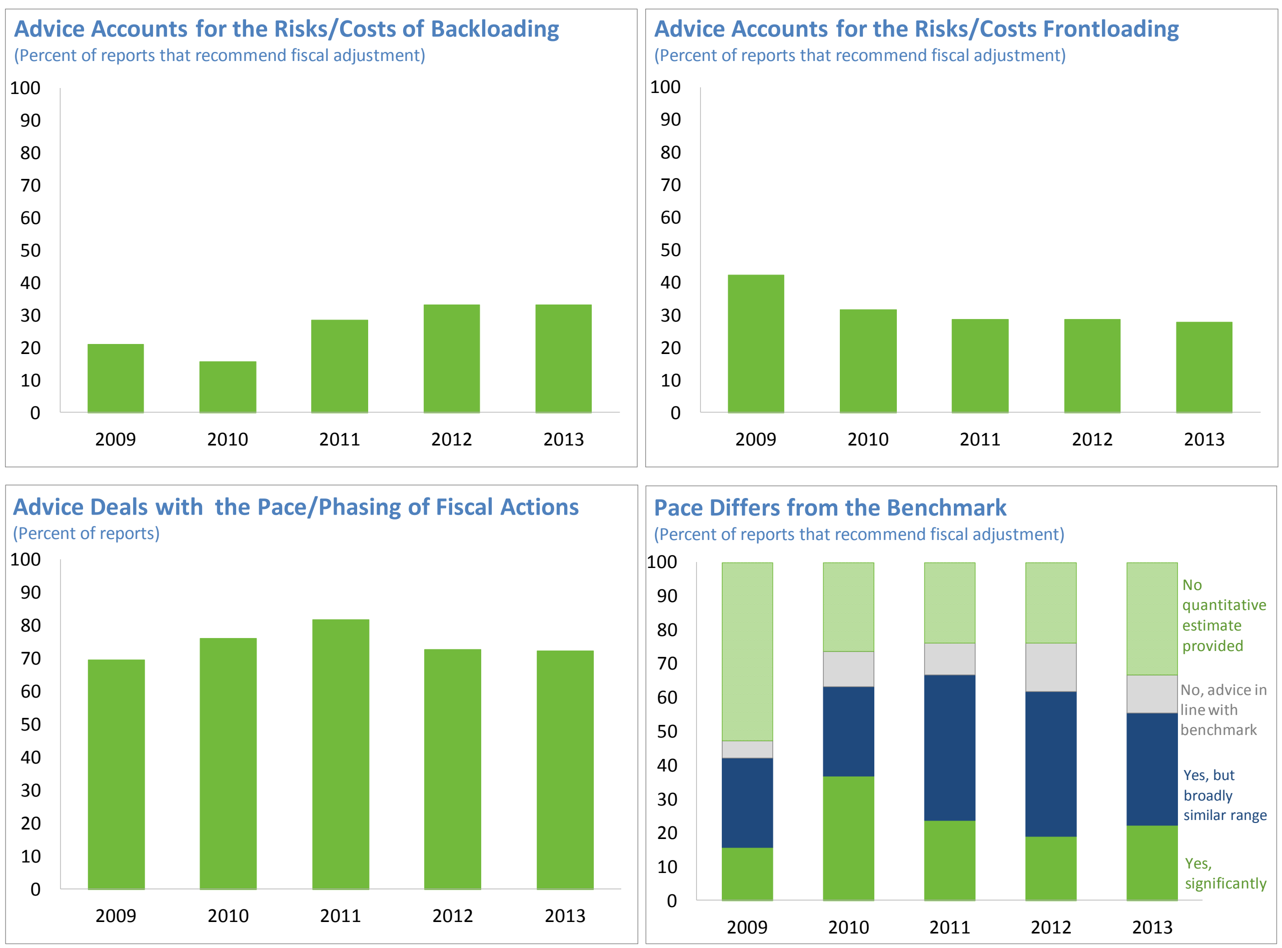


[19] Statement on behalf of the authorities by Executive Director for the United Kingdom, and the Executive Board Assessment, IMF 2013.

[20] In addition to standard research papers on multipliers (reported in the April 2012 Fiscal Monitor and October 2012 WEO), staff guidance was issued in November 2013.

16. As advice became more sensitive to the cycle, this led to greater focus on the pace of adjustment. From 2009 onwards, fiscal advice in most sample countries considered explicitly the pace or phasing of fiscal actions (Figure 2). Against a backdrop of the shift towards recommending fiscal consolidation in 2010–11, the majority of AE and EM reports were broadly in line with the recommended 1 percent of GDP annual adjustment in the structural balance.[21] However, for another quarter of sample AEs and EMs, the advice was not sufficiently quantified to assess against this benchmark (reflecting the insufficient attention given to defining a country-specific anchor, discussed further below). Frontloading or back-loading fiscal adjustment had potential implications for growth—roughly a quarter of reports discussed these issues (Figure 2).

Figure 2. Considerations Related to the Pace or Phasing of Fiscal Actions



[21] Box 1 describes the Fund's multilateral fiscal advice in this area. See also the November 2010 *Fiscal Monitor*, "Fiscal Exit: From Strategy to Implementation." While the 1 percent annual adjustment is a benchmark, country teams calibrated the appropriate pace of consolidation depending on, among other things, initial fiscal conditions, the state of the economy, and the extent of market pressures.

Box 3. Structural Fiscal Indicators

The main purpose of the structural balance is to show the fiscal position net of cyclical and other temporary effects. The IMF has long used structural balances in AEs and some EMs to evaluate the extent to which a deterioration in the fiscal balance reflects adverse macroeconomic conditions, and to calibrate the amount of adjustment needed to reduce public debt ratios to more sustainable levels. Recently, the structural balance has increasingly been used as a policy target—sometimes as part of a fiscal rule. The main advantage is that it is more directly under the control of governments than the "headline" or nominal balance. The structural balance can help policymakers take a medium-term perspective rather than attempting to fine-tune a nominal balance. If a country is able to pursue a predetermined structural stance, it would not offset cyclical factors but instead let automatic stabilizers operate. Structural balance targets entail a more binding fiscal stance in good economic times (relative to the nominal balance), while allowing room for maneuver via automatic stabilizers in downturns.

However, estimating structural budget balances is not straightforward and subject to significant measurement errors. Extracting the non-discretionary component of revenue is a particularly difficult step. The standard methodology filters out cyclical movements by using constant elasticities of revenue to the output gap. However, this is not always sufficient to remove all cyclical factors. While the business cycle is the most prominent source of macroeconomic fluctuations, others include boom-and-bust cycles of asset or commodity prices, and compositional changes in output. To address this issue, the calculation of structural balance has evolved in two distinct directions. The first approach adjusts the structural balance formula beyond the output gap. New structural balance indicators have been developed to correct for a broader range of macroeconomic fluctuations; but these add further complexity to the concept (Bornhorst and others, 2011). The second approach measures discretionary revenues through a bottom-up approach by using budget estimates of tax measures mandated by law. The second approach is conceptually more appealing but faces practical difficulties, in particular regarding the characterization of the "unchanged policy" benchmark.

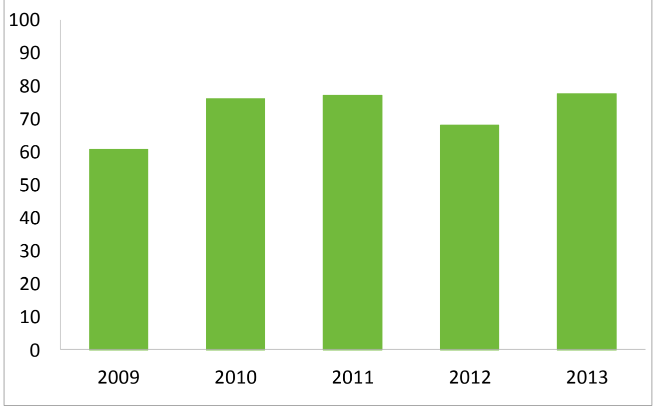
Another issue pertains to measurement bias of the output gap, which is a central component of the structural balance formula. Even when it is measured on the production side, potential output calculations typically involve the use of statistical filters that give excessive weight to the most recent observations and result in frequent revisions—an issue described as the "end-point bias." In the country sample for this study, the *World Economic Outlook* real-time output gaps are found to be underestimated, on average, by about 0.5–1 percent—a similar order of magnitude to that reported by Kempkes (2012). This makes the structural budget balance prone to ex post downward revisions, thus potentially changing the assessment of the fiscal stance.

These issues do not fundamentally undermine the relevance of the structural balance, but do complicate its implementation in practice. While this indicator imperfectly filters out asset and commodity price cycles, it is still more "accurate" than the nominal balance, which does not extract these factors at all. In addition, the potential output measurement error is generally significantly lower than the "noise" created by the cyclical component of the nominal balance. Even so, the measurement difficulties can make the concept difficult to communicate to non-specialist policymakers and the wider public, who tend to focus on nominal balances.

Medium-Term Path

17. Virtually all Article IV reports discuss the medium-term fiscal path. Despite the greater emphasis on responding to cyclical conditions, in most cases the Fund's fiscal advice continued to aim at medium-term consolidation, consistent with the multilateral call for a credible path for fiscal normalization (¶8). Most reports discuss explicitly fiscal and debt sustainability and a medium-term fiscal adjustment plan. Even in 2009, when the Fund's call for short-term stimulus was strongest, more than half of reports discussed the tradeoffs between sustainability and growth. The share has since risen.

Discussion of Sustainability and Growth Tradeoffs
(Percent of reports)



18. At the same time, a surprising number of reports do not clearly identify or quantify a country-specific medium-term anchor for fiscal policy. The Fund's multilateral advice has advocated specifying medium-term plans consistent with fiscal sustainability, in terms of either an average pace of adjustment (typically in the structural balance) or a fiscal balance or debt target to be achieved within 4-5 years.[22] However, Article IV reports tend to present a baseline projection that reflects the authorities' fiscal plans, and then provide advice that would result in a different path—but are not always clear on the alternative path or the target. Lack of clarity on the target or anchor adds to the difficulty in pinning down the extent to which the Fund's policy advice is pro- or countercyclical.

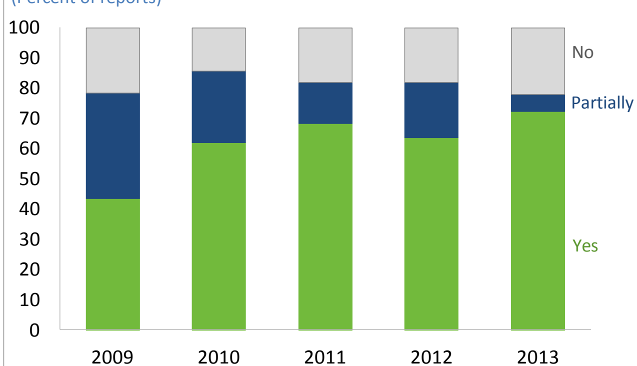
Composition of Fiscal Measures

19. The Fund's fiscal advice has given progressively more attention to the composition of fiscal measures to achieve sustainability.

- This advice has tended to focus more on permanent fiscal measures, or a mix of permanent and temporary measures, rather than temporary measures alone.

- The Fund's recent advice has moved towards a balanced mix of revenue and

Provision of Advice on the Composition of Fiscal Packages (spending vs. revenue)
(Percent of reports)

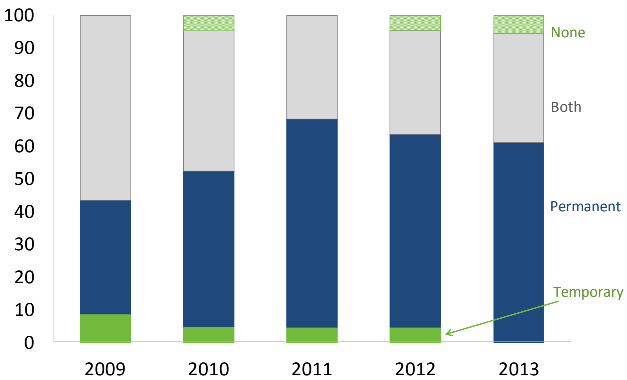


[22] See, for example, the IMF policy papers on *Fiscal Rules: Anchoring Expectations for Sustainable Public Finances* (December 16, 2009) or *Strategies for Fiscal Consolidation in the Post-Crisis World* (February 4, 2010).

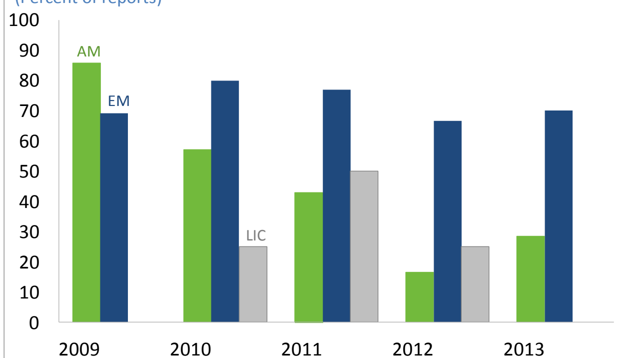
expenditure measures. In 2010–11, nearly two thirds of reports in the sample gave more emphasis to expenditure than revenue measures. The emphasis on expenditure measures diminished in 2012–13, suggesting a broader balance of revenue and expenditure advice.

- This pattern was more evident among AEs and LICs in the sample than for EMs, where the focus remained on expenditure measures throughout the period. This could well reflect the generally faster recoveries in EMs. In contrast, a durable solution to the larger and more protracted fiscal adjustment needs in AEs post-crisis would more likely require both revenue and expenditure measures. In this regard, the "size of the adjustment" was the most frequent criterion in determining the recommended composition in AEs (Figure 3). For LICs, initial conditions and efficiency considerations (e.g., fuel subsidies) were cited most frequently.

Type of Measures: Temporary vs. Permanent
(Percent of reports)



More Emphasis on Expenditure Measures than Revenue Measures
(Percent of reports)



20. Recommendations related to composition have become better justified, taking into account a wider range of considerations.

- Most reports took account of the **impact on growth** in advising on the composition of fiscal packages (Figure 3). Staff typically recommended that fiscal adjustment focus on measures having the smallest negative impact on short-term growth (low fiscal multipliers), such as entitlement reforms and increases in less distortionary taxes. To the extent that fiscal measures also promote higher potential growth (through explicit efficiency considerations—for instance, a shift away from payroll taxes) or help avoid the problem of hysteresis in growth,[23] they can also improve longer-term fiscal sustainability.

- Coverage of **efficiency considerations** in fiscal analysis—such as subsidy reform, which the Fund has sought to promote both analytically (papers and conferences) and operationally (technical assistance (TA))—increased to around two-thirds of the sample in 2011 before falling back somewhat in subsequent years.

[23] A process of "hysteresis" links the short-term economic cycle to the long-term trend, so that a temporary change in economic conditions has a tendency to become permanent.

- **Equity considerations**—while not a new paradigm—have also become increasingly important for advice on composition. In 2010, fewer than 15 percent of reports explicitly considered equity issues as part of fiscal advice, compared with around 40 percent of reports in the subsequent three years (Figure 3). As with potential efficiency gains, the peak in coverage of equity issues (2011) coincided with the shift in advice towards consolidation. This was most important in the initial design of fiscal packages, with a view to sharing the burden of adjustment fairly.

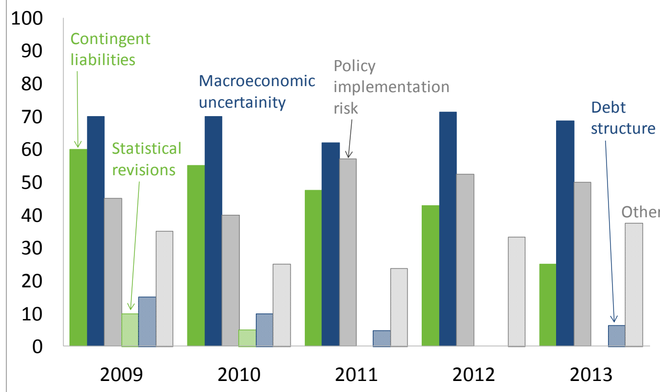
21. Although the Fund has paid more attention to the composition of adjustment, the depth of analysis has been uneven. While fiscal advice has been pragmatic, tackling *both* revenue and expenditure measures, the Fund's recommendations on the revenue side have tended to be more concrete, drawing from the institution's considerable expertise in the design, effectiveness and impact of revenue measures. More in-depth analysis of expenditure policies, in particular beyond health and pension reforms, would make the Fund's fiscal policy advice more effective. One exception tends to be for resource-dependent economies, particularly LICs and in the Middle East and North Africa, where advice to scale back fuel subsidies or cut other non-pro-poor spending has been more concrete and where the Fund has recently invested in more analytical work.

Fiscal Sustainability and Risks

22. The crisis has spurred efforts to improve the coverage and depth of debt sustainability analyses (DSAs), especially for market access countries. DSAs have long been standard for LICs, but before the crisis they were not systematically part of fiscal analysis in AEs and EMs. In an effort to address these gaps, the Fund reviewed the DSA framework for market access countries (MAC DSA) in 2011. Nonetheless, as recently as 2013, two reports in the sample still did not include a public DSA at all, and three reports (down from six in 2012) included only basic DSA charts and tables without the analysis being more integrated into the policy discussion. Following new guidance on the MAC DSA in 2013, early evidence points to more in-depth and better integrated assessments of risks to fiscal sustainability in countries that have applied the MAC DSA (Box 4). However, attaching relative significance to the various dimensions of risk now being captured in the new framework (i.e., debt stock, financing requirements, etc) remains a challenge and will benefit from further experience with implementing the new framework. Moreover, some risks in the MAC DSA are not standard in the LIC DSA framework (i.e., gross financing needs and debt portfolio composition). These risk metrics could be added where relevant for "frontier" LICs that have market access (e.g., drawing on the joint IMF/World Bank medium—term debt management strategy analytical tool).

23. Progress toward more comprehensive assessments of fiscal risks is less well advanced. For individual countries, Article IV reports most often examine risks arising from macroeconomic uncertainty. The analysis of fiscal risks related to policy implementation, credibility and, to a lesser extent, contingent liabilities (such as those reflecting sovereign-bank linkages) gained ground during the crisis, although attention to these issues dropped off in 2013. At this stage, it is difficult to ascertain whether this reflects a continuing gap in the coverage of risks or an appropriate decline from crisis-related peaks (i.e., as banking sectors stabilize). More surprisingly, only a few reports scrutinized risks associated with the structure of public debt, suggesting that liquidity and composition risks have been covered less well than solvency risks. However, staff reports that incorporate analysis from the new MAC DSA framework appear to address this by examining both gross financing need and debt portfolio characteristics.

Assessment of Fiscal Risks
(Percent of reports that discuss fiscal risks)



24. The coverage and depth of analysis of specific long-term fiscal challenges—such as pension reforms, social security, health care, and aging—varies across countries. Staff reports for AEs cover these issues more than reports for EMs and especially LICs, where coverage is minimal (Figure 3). However, this may reflect tailoring to countries' needs rather than gaps in coverage, given the looming demographic challenges facing AEs and some EMs. Yet, even among AEs, the emphasis on long-term challenges has waned since the height of the crisis.

25. Very few reports present a systematic assessment of the overall public sector balance sheet. There are, of course, data limitations; the vast majority of countries do not report comprehensive data on financial assets and liabilities, and there has been even less progress on the disclosure and valuation of nonfinancial assets.[24] Nevertheless, information is available—and tools exist to assess—some financial assets and liabilities of a government (e.g., public debt stock, contingent liabilities, and pension liabilities). Moreover, a framework for compiling these data exists in the IMF's Government Finance Statistics Manual. This suggests that there is scope, which is rarely exploited, to more systematically cover stocks and examine liquidity and solvency risks through this lens. More broadly, the relevant standards and codes provide the basis for strengthening the foundations for public sector balance sheet analysis over the medium- to longer-term.[25]

[24] See *Fiscal Transparency, Accountability, and Risk*, IMF 2012.

[25] The *Government Finance Statistics Manual 2001* (and its update GFSM 2014) as well as the *2011 Public Sector Debt Statistics: Guide for Compilers and Users* provides clear and internationally agreed guidelines for constructing public sector balance sheets.

Figure 3. Criteria Taken Into Account in Advice on Composition of Measures
(Percent of reports)

1/ For example, high level of expenditure or taxation relative to GDP.
2/ For example, large adjustment needs may require to rely on both revenue and spending measures.
3/ For example, subsidy reform.
4/ For example, wealth tax.
5/ For example, multipliers.

Box 4. Debt Sustainability Analysis in Market-Access Countries: Early Lessons

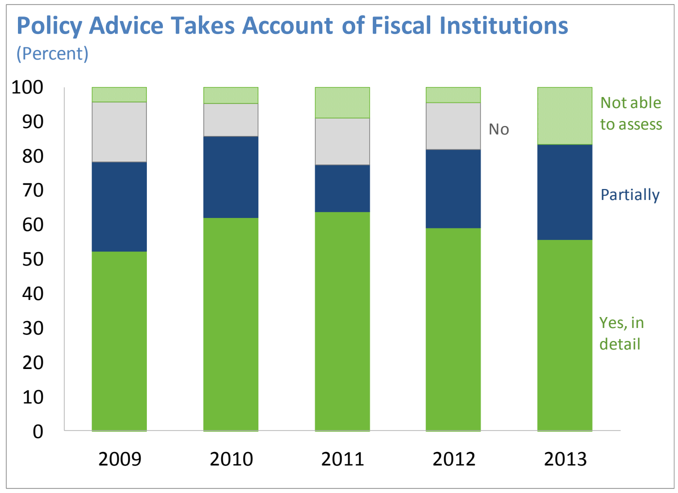
This study assessed how the new MAC DSA has informed the Fund's fiscal policy advice based on staff reports for 14 higher scrutiny countries—Bahamas, Belarus, Canada, India, Italy, Namibia, Macedonia, Mexico, Morocco, Slovenia, South Africa, Turkey, Ukraine and Uruguay.[1/ 2/]

- **The new MAC DSA has resulted in a richer and more detailed assessment of the risks to public debt sustainability for higher scrutiny countries**. Following the new guidelines, staff put more emphasis on the risks to public debt sustainability in 2013 staff reports compared to the previous 2012 staff reports. Less than one-third (29 percent) of the 2012 staff reports in our sample contained a write-up on public debt sustainability.
- **New MAC DSA write-ups now cover both the gross financing and the debt profile**. In contrast to the "old" MAC DSA, the new template allows for the discussion of risks to public debt that stem from large gross financing needs and the characteristics of the public debt, including banking sector shocks, the currency composition of the debt, and the profile of the investor base.
- **In our sample, public debt vulnerabilities related to the gross financing need and debt profile are much more prominent than those related to the level of the debt**. All of the reports document public debt vulnerabilities that arise from either large gross financing needs or risky debt profiles or both. In contrast, almost two-thirds (64 percent) of reports reviewed do not identify any public debt sustainability risk arising from the level of public debt. Moreover, only one country in our sample has been classified as high scrutiny on the basis of the level of its debt alone.
- **There is some evidence that staff's analysis and advice incorporates a more detailed discussion of public debt vulnerability**. This is most notable for countries (e.g., South Africa and Turkey) where the public debt level is not as high as in some AEs, as the analysis in Article IV reports now reflects other public debt vulnerabilities (e.g., the debt portfolio structure or high gross financing needs). Countries with a high level of public debt (e.g., Italy) or where debt is projected to rise beyond benchmarks in adverse scenarios (e.g., Slovenia) also have their public debt analysis integrated into the fiscal advice. For the other countries in the sample (9 out of 14 countries reviewed), the public debt sustainability analysis is not as well integrated into fiscal advice.

[1/] The new MAC DSA framework became effective from September 2013. We reviewed all higher scrutiny countries (except those with Fund-supported programs) for which a public debt sustainability analysis using the new MAC DSA template was included in 2013 Article IV reports submitted to the Board no later than January 31, 2014. The debt sustainability assessment in each 2013 Article IV report was compared to the preceding one, which for all but one country was presented in the 2012 Article IV report. The sample tended to favor EMs given the exclusion of program countries and the new MAC DSA reports that happened to be completed during the time period covered. The findings presented in this box should therefore be viewed with this sample limitation in mind.

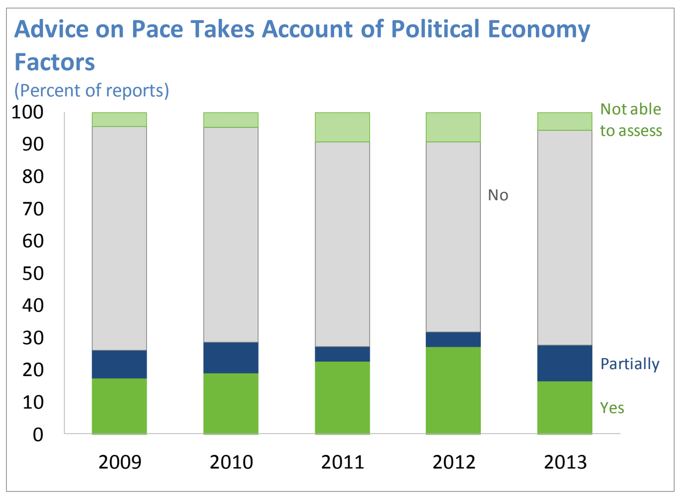
[2/] A country is classified as higher scrutiny if it: (i) has a current or projected debt-to-GDP ratio above 60 percent if classified as an AE or 50 percent if classified as an EM; (ii) has a current or projected gross financing needs-to-GDP ratio above 15 percent if classified as an AE or 10 percent if classified as an EM; or (iii) has or is seeking exceptional access to Fund resources.

From Recommendation to Action: Supporting Implementation



26. Advice on fiscal institutions has been an important element of Fund surveillance on fiscal issues. Advice in most Article IV reports took detailed, or at least partial, account of fiscal institutions. In EMs and LICs, for example, advice has focused on medium-term budget frameworks, including for resource-rich countries (less so in AEs where medium-term frameworks are more firmly established). In AEs and also EMs, advice has also focused on (independent) fiscal councils and fiscal rules (Figure 4).[26]

27. However, Article IV reports do not consistently discuss other key factors affecting policy implementation.



- Fiscal advice does not always take full account of administrative capacity constraints. Also, most reports do not explicitly refer to recommendations from TA.[27] There is scope to better integrate TA and judgments about implementation capacity into fiscal policy advice provided in bilateral surveillance.
- About 70-80 percent of reports do not explicitly account for political economy factors in forming their fiscal advice.[28] In this regard, Article IV reports focus almost exclusively on recommending "first best" economic policy measures.

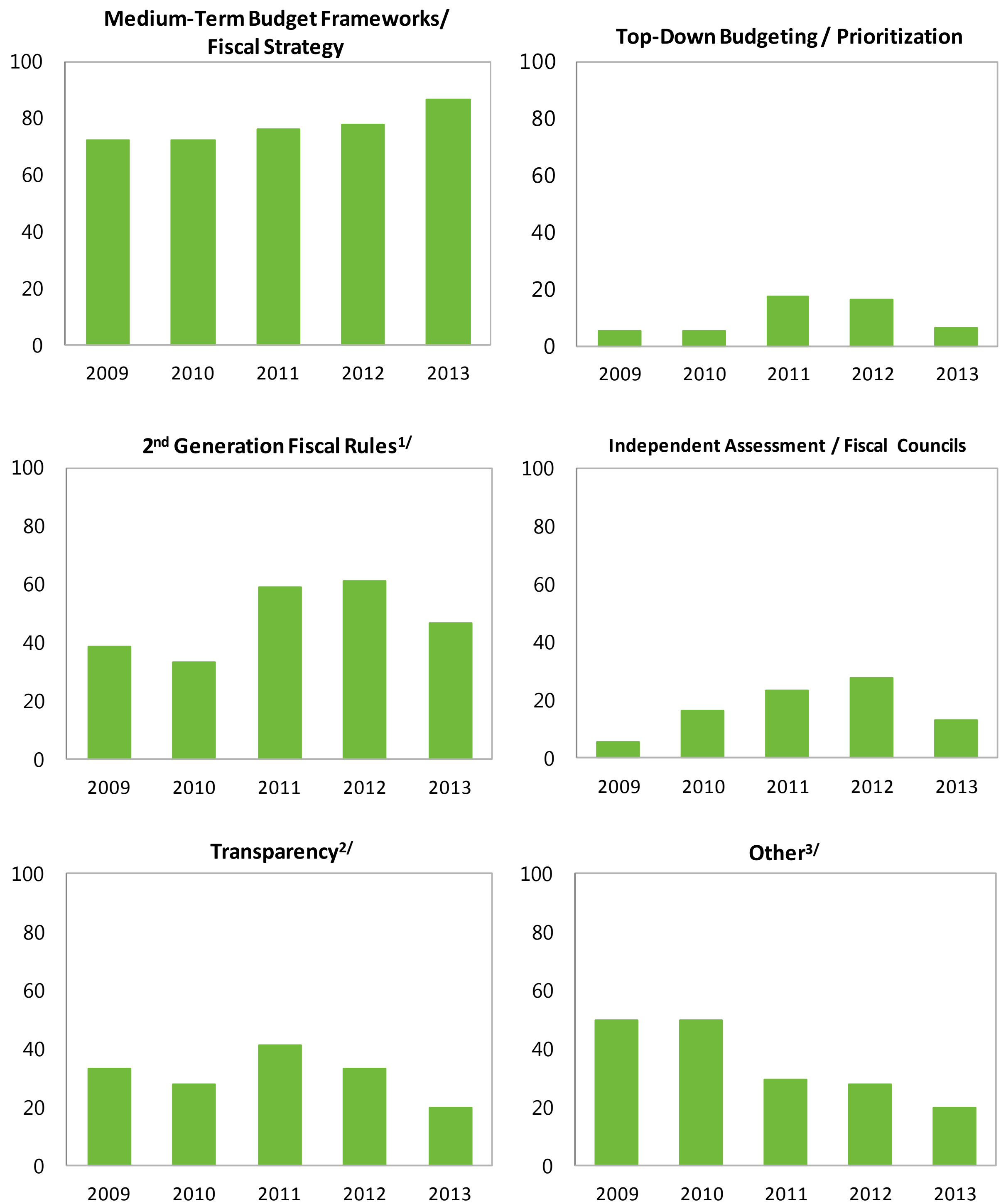
[26] These features are mandatory, and thus likely to be covered, in the European Union.

[27] Staff recommendations may nonetheless have been informed by TA. This is difficult to measure. It should also be noted that the bulk of IMF TA is delivered to program countries, which are not represented in this sample, so surveillance experience should not be seen as indicative of the broader integration of TA into Fund work.

[28] The *economic* case for more gradual consolidation (less damaging to growth) is distinct from a *political economy* case for more consolidation upfront to get the pain out of the way and limit adjustment fatigue.

Figure 4. Institutions Covered by Fiscal Advice

(Percent of reports reviewed for which policy advice takes account of institutions)



1/ For example, structural, escape clauses, automatic correction mechanisms, or national legislation.

2/ For example, better fiscal reporting or communication strategy.

3/ For example, debt target, expenditure growth rule, or legal framework for public-private partnerships.

- Very few reports supplement their policy advice with practical examples of successful implementation (e.g., through cross—country experiences) or complementary policies that might facilitate implementation. Advice on the removal of fuel subsidies has been a notable exception, as it has often been packaged (particularly since 2012) with advice on measures to mitigate the impact on the most vulnerable, communication strategies to build public support, and steps to increase transparency on the use of savings.

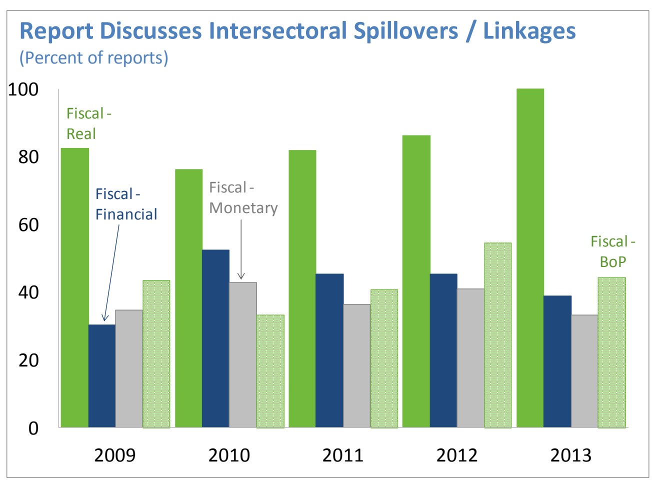
28. When the Fund's fiscal advice has limited traction, staff reports do not often explicitly factor this into future advice. In cases where country authorities indicate that a policy recommendation cannot be implemented (due to political, social, capacity or other constraints), Article IV reports typically do not discuss how the Fund's advice has been adapted either to offer policy alternatives or new arguments and evidence. While offering "first best" advice, even where not politically or technically viable, may help anchor practical policy discussions, complementing "first best" with policy alternatives may help build traction and provide an even deeper basis for policy discussions. For example, Article IV reports for the United States have consistently recommended introducing a VAT and a carbon tax; the authorities each time countered that the proposals were not politically feasible. While it did not provide an explicit alternative option, the 2013 Article IV report opened the door to a discussion of alternatives, recognizing that "policymakers can choose from this menu of options to achieve a particular level of adjustment."

D. How Integrated is Fiscal Policy Advice within the Overall Policy Advice?

29. The coverage of intersectoral connections has been incomplete:

- Most reports covered **fiscal-real linkages**—such as the multiplier effects of fiscal policy on growth or the fiscal risks related to growth prospects—which is unsurprising given the extent of recent analytical work in this area. However, sufficient attention was not paid to the sovereign-bank, fiscal-monetary and fiscal-BOP linkages.

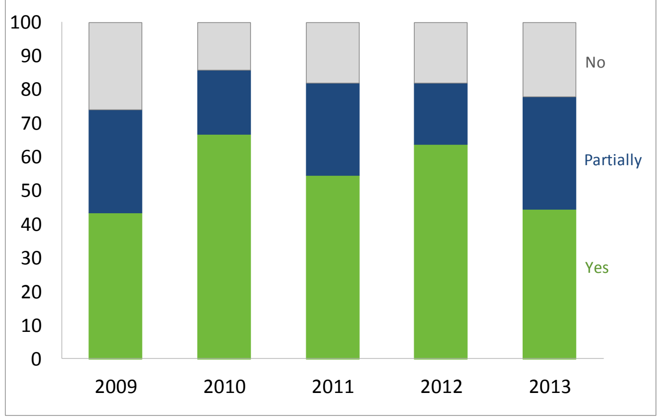
- Less than half of the sample reports covered **fiscal-financial linkages**, which is less than might be expected given the nature of the crisis. Article IV reports for AEs paid somewhat more attention to this issue, reflecting the evident risks stemming from potential contingent liabilities in the banking system, and the consequent need for fiscal backstops. Some reports made below-the-line recommendations while others discussed the financial sector's impact on public debt and the associated increased fiscal adjustment needs. The coverage was surprisingly high among LICs (around a third) and least well covered by reports for EMs (less than 15 percent), despite the larger size and integration of their financial sectors.



- A similarly small proportion of reports covered **fiscal-monetary** and **fiscal-BOP linkages**. AEs did a better job on the latter—maybe because it includes spillovers to other countries (which under the Integrated Surveillance Decision should be examined for systemic countries).

30. The role of fiscal policy is often not examined in a sufficiently integrated way as part of the broader policy mix or in coordination with other policies. Depending on underlying economic conditions, the preferred combination of fiscal policy with other macroeconomic policies will differ (for instance, the balance of fiscal and monetary policies in supporting demand, or the balance of fiscal and wages policies to support employment growth). In countries where monetary policy is at the ZLB, the question of relative burdens on monetary and fiscal policy is particularly important. Only about half the Article IV reports in the sample discuss the policy mix explicitly, although another quarter provide a partial discussion. Where the policy mix is covered, Article IV reports tend to be better at covering the relationship between fiscal and monetary policies, as well as between fiscal and financial policies. Fewer reports cover linkages between fiscal policy and structural policies—perhaps to be expected given the Fund's greater expertise in monetary and financial sector policies, but noteworthy given the increased attention to growth.

Report Explicitly Discusses the Policy Mix
(Percent of reports)



E. Conclusions and Possible Options

31. The Fund's fiscal policy analysis and advice has responded actively to changing economic circumstances. Throughout the crisis, the Fund has demonstrated flexibility and a willingness to explore new fiscal policy ground in response to evolving global developments and as part of the broader analytical debate. As the recession deepened in 2009, the Fund called for a coordinated and front-loaded fiscal stimulus in the short run, but also for a credible path towards fiscal normalization over the medium term. As the global economy showed signs of recovery in 2010, the Fund turned its focus to the need for medium-term exit strategies, but warned against an abrupt front-loaded tightening and advocated adequate coordination to mitigate risks to the economic turnaround. As the strength of the recovery waned after 2011, the Fund continued to caution against overdoing adjustment in the short term, while still calling for credible medium-term adjustment.

32. The Fund's policy advice to individual countries through bilateral surveillance has been broadly aligned with its advice under multilateral surveillance and consistent across countries. Where there have been differences among countries, regions or income groups, these have generally reflected differences in cyclical and financing conditions. This is in keeping with Fund-wide advice and recent research highlighting that fiscal multipliers are state-contingent. In addition, long-run challenges vary across countries—as do demographics—warranting different emphases in the composition of fiscal measures that could secure long-run sustainability. The Fund's advice has also emphasized the importance of fiscal institutions to help transition from short-term stimulus to medium-term consolidation. An important caveat, however, is that the sample is small and excludes program country cases.

33. In addition, policy advice varied across income groups largely reflecting differences in circumstances and challenges facing each group. In most AEs, the Fund's fiscal policy advice shifted from countercyclical in 2009–10 to restoring sustainability from 2011 onwards because of the more limited fiscal space. In most EMs, however, fiscal policy advice remained clearly countercyclical for the entire period, partly because of the larger fiscal space. More attention to the composition of measures—a long-standing aspect of advice to LICs—appears to have gained ground in AEs during the crisis (more so than in EMs). The introduction of the MAC DSA helped to address an important inconsistency in the attention previously given to sustainability issues in AEs and EMs, compared with LICs.

34. There has been progress toward providing more depth and rigor to the Fund's fiscal advice. Reports have paid increasing attention to the economic cycle, increasingly grounding advice in structural balances where feasible, and giving greater attention to fiscal multipliers and the implications of the composition and/or the size of adjustment for growth. Early experience with the MAC DSA appears to be helping to strengthen and broaden the analysis of fiscal risks. In part, this benefited from coherent Fund-wide advice and operationally-oriented research, which is an important lesson for the future.

35. Nevertheless, there is scope to build on this progress. The following are possible options that could help support the objective of deeper, more cohesive and consistent advice:

i) **Fiscal advice should be presented in terms of a clear and well-justified anchor** with an explicit link to long-term fiscal sustainability and development objectives. This could be specified either in level terms (e.g., a recommended fiscal balance, debt, expenditure, or revenue target) or change terms (i.e., recommended amount of fiscal adjustment).

ii) The Fund's fiscal advice should continue to give more attention to cyclical considerations, including by explaining fiscal multipliers more carefully and, *where feasible*, through the use of the structural balance, as part of a range of fiscal indicators. However, given the operational and technical constraints in this area, the Fund should work toward **strengthening the analytical basis for calculating and communicating structural fiscal balance estimates**—which also encompasses analytical work to improve the measurement of potential output.

iii) In line with increased attention to the composition of fiscal measures, the Fund should invest more in ways to better support **analysis and policy advice on expenditure measures** (i.e., more concrete and actionable advice, especially in areas beyond health and pension spending). This could be supported by more Fund-wide research or operational guidance as well as closer collaboration with other institutions that have relevant expertise (e.g., the World Bank).

iv) To further promote a risk-based approach, the Fund's fiscal advice should be based on a more **comprehensive assessment of fiscal risks**, including more attention to contingent liabilities, intersectoral or intergovernmental risks, and long-term challenges. In particular, "frontier" LICs could benefit from a broader assessment of risks—similar to the dimensions of risk in the MAC DSA approach—as these economies transition towards EM status. In the near-term, the Fund should make better use of existing balance sheet data, which would help provide a deeper assessment of fiscal risks. Over the longer-term, as fiscal accounting standards improve, the Fund should integrate information on more difficult-to-value assets and liabilities to support a comprehensive assessment of risks.

v) The Fund's fiscal advice should **consider the practical and political feasibility** for policymakers. Surveillance should continue to offer candid, first-best economic advice even when it is obvious that it is not politically viable, as a way of anchoring practical policy discussions. In following up on past policy advice, however, reports should identify when the economic first-best or preferred policy advice is repeatedly rejected for political economy reasons and, in turn, explore policy alternatives that could deliver the same objectives and which may have better chances of being implemented.

vi) Fiscal policy analysis and advice should always be included in the discussion of the broader **policy mix**. The fiscal-monetary policy mix is particularly relevant and should figure prominently in the Fund's advice, especially in countries where monetary policy is at the ZLB. The discussion of the policy mix should go beyond a simple description and give more attention to intersectoral connections and the coordination of policies, with a view to providing a well-integrated and comprehensive policy analysis. More comprehensive analysis of fiscal risks, including progress toward a more systematic focus on public sector balance sheets, could help promote this deeper analysis of intersectoral links.

Annex I. Sample for the Country Case Study

This annex summarizes the main considerations for selecting, and the main characteristics of, the country sample that was the basis for assessing the Fund's bilateral fiscal policy advice for this 2014 TSR background study.

Methodology

The country sample was selected to include countries with a mix of fiscal challenges and vulnerabilities, while being as representative as possible of the Fund membership, according to the following criteria:

- *Exclude program countries facing financing constraints*—both those currently under a program with drawings or at some point during the study period (2009–13). This criterion ensures that program design issues do not interfere with the assessment of policy advice delivered in the context of surveillance.

- *Include cases where fiscal issues have been a central policy challenge*, including relatively more focus on countries affected by the crisis.

- *Exclude extreme or idiosyncratic cases,* notably politically instable or extremely fragile countries.

- *Cover a fair representation of the Fund membership while facilitating comparability between countries.* To the extent possible, the sample includes countries with a range of different policy characteristics and challenges (Table 1). It also includes pairs of countries with comparable characteristics, which facilitated the analysis of consistency of policy advice across countries.

Characteristics of the Country Sample

- 24 countries (see Table I).

- Spans all *five Area Departments*
    - APD (6): China, India, Japan, Nepal, New Zealand, and Vietnam.
    - EUR (6): Belgium, Germany, Italy, Poland, Turkey, and the United Kingdom.
    - AFR (4): Cameroon, Mauritius, Nigeria, and South Africa.
    - MCD (4): Morocco, Kazakhstan, Lebanon, and Saudi Arabia.
    - WHD (4): Brazil, Peru, St. Lucia, and the United States.

- Includes a *mix of economic categories:* 7 advanced economies, 14 emerging markets, and 3 low-income countries.

- *Overlaps partially with country samples of other TSR studies*, including the 2014 TSR interviews and the 2014 TSR review of surveillance products.

Table I. 2014 TSR Fiscal Policy Study: Country Sample and Characteristics by Region[1]

			Economic Category			Exchange Rate Regime		
Countries	2014 TSR Interviews[2]	2014 TSR AIV Review[3]	Advanced	Emerging	LIC	Conventional Peg	Floating (incl. in Currency Union)	Other
AFR (4)								
Cameroon		1			1	1		
Mauritius					1		1	
Nigeria				1				1
South Africa	1			1			1	
APD (6)								
China	1	1		1				1
India	1			1			1	
Japan	1		1				1	
Nepal					1	1		
New Zealand	1	1	1				1	
Vietnam		1		1				1
EUR (6)								
Belgium		1	1				1	
Germany	1	1	1				1	
Italy			1				1	
Poland				1			1	
Turkey	1			1			1	
United Kingdom	1	1	1				1	
MCD (4)								
Morocco	1	1		1		1		
Kazakhstan		1		1				1
Lebanon	1			1				1
Saudi Arabia	1	1		1		1		
WHD (4)								
Brazil	1	1		1			1	
Peru				1			1	
St. Lucia	1	1		1				1
United States	1	1	1				1	
Total	***14***	***13***	***7***	***14***	***3***	***4***	***14***	***6***

Sources: Fiscal Monitor, World Economic Outlook, and 2013 Annual Report on Exchange Arrangements and Exchange Restrictions.

[1] For each region, the numbers in brackets represent the number of countries from this region in the sample.

[2] The country sample for the 2014 TSR interviews includes 27 countries: Burkina Faso, Congo Republic of, Seychelles, Uganda, South Africa, China, India, Japan, New Zealand, Philippines, France, Germany, Portugal, Russia, Sweden, Turkey, the United Kingdom, Armenia, Kyrgyz Republic, Lebanon, Morocco, Saudi Arabia, Brazil, Chile, Mexico, St. Lucia, and the United States.

[3] The country sample for the 2014 TSR review of surveillance products includes 50 countries among which 3 currency unions, 9 advanced economies, 20 emerging markets, and 18 low-income countries.

Table I. 2014 TSR Fiscal Policy Study: Country Sample and Characteristics by Region (concluded)[1]

Countries	Overall fiscal balance (% of GDP)		Gross debt (% of GDP)		CA balance (% of GDP)		Real GDP growth (%)		GDP per capita (U.S. Dollars)		Sovereign spread (basis points)	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
AFR (4)												
Cameroon	-0.1	-1.7	10.6	16.1	-3.3	-4.0	1.9	4.6	1,113	1,181	...	...
Mauritius	-3.6	-1.8	52.1	51.5	-7.4	-7.9	3.0	3.3	6,914	8,835	224	284
Nigeria	-9.4	0.0	15.2	18.4	8.2	7.7	7.0	6.6	1,124	1,604	...	...
South Africa	-4.9	-4.3	31.6	42.1	-4.0	-5.2	-1.5	2.5	5,683	7,314	301	206
APD (6)												
China	-3.1	-2.2	17.7	26.1	4.9	2.3	9.2	7.7	3,740	6,078	19	170
India	-9.8	-7.4	72.5	66.6	-2.8	-4.7	8.5	4.7	1,159	1,515	457	621
Japan	-10.4	-8.7	210.2	237.3	2.9	1.0	-5.5	1.4	39,321	46,530	-190	-95
Nepal	-2.6	-0.6	39.3	34.1	4.2	4.8	4.5	4.9	484	690	...	...
New Zealand	-1.5	-1.6	25.7	37.5	-2.3	-4.1	-1.4	2.6	27,621	38,385	234	187
Vietnam	-6.0	-4.8	46.9	50.0	-6.5	5.8	5.4	5.2	1,181	1,753	...	...
EUR (6)												
Belgium	-5.6	-4.1	95.7	99.8	-0.6	-2.0	-2.8	-0.1	44,125	43,554	65	123
Germany	-3.1	0.1	74.5	81.0	5.9	7.4	-5.1	0.9	40,424	42,569	1	-24
Italy	-5.4	-2.9	116.4	127.0	-2.0	-0.4	-5.5	-2.4	35,875	33,915	105	369
Poland	-7.4	-3.9	50.9	55.6	-4.0	-3.5	1.6	1.9	11,314	12,709	286	320
Turkey	-6.0	-1.8	46.1	36.2	-2.0	-6.2	-4.8	2.2	8,527	10,523	619	655
United Kingdom	-11.3	-8.0	67.1	88.6	-1.4	-3.7	-5.2	0.3	35,885	38,999	39	10
MCD (4)												
Morocco	-1.8	-7.3	48.0	60.2	-5.4	-9.7	4.8	2.7	2,885	2,951	...	...
Kazakhstan	-1.3	4.5	10.2	12.4	-3.6	0.3	1.2	5.0	7,119	12,034	...	...
Lebanon	-8.2	-8.7	145.6	135.7	-12.6	-15.7	10.3	1.5	8,274	9,609	...	...
Saudi Arabia	-4.1	14.6	14.0	3.6	4.9	22.4	1.8	5.8	16,095	25,139	...	...
WHD (4)												
Brazil	-3.3	-2.8	66.8	68.2	-1.5	-2.4	-0.3	1.0	8,472	11,437	868	683
Peru	-1.5	2.1	27.1	20.5	-0.6	-3.4	0.9	6.3	4,362	6,550	...	...
St. Lucia	-3.0	-9.2	61.1	71.7	-11.6	-12.8	-0.1	-1.3	7,165	7,858	...	...
United States	-14.7	-9.7	86.1	102.4	-2.6	-2.7	-2.8	2.8	46,907	51,709	0	0
Memo Items												
Min	*-14.7*	*-9.7*	*10.2*	*3.6*	*-12.6*	*-15.7*	*-5.5*	*-2.4*	*484*	*690*	*-190*	*-95*
Max	*-0.1*	*14.6*	*210.2*	*237.3*	*8.2*	*22.4*	*10.3*	*7.7*	*46,907*	*51,709*	*868*	*683*
Median	*-4.5*	*-2.8*	*49.4*	*53.5*	*-2.1*	*-3.1*	*1.0*	*2.6*	*7,720*	*10,066*	*165*	*197*
Std. Dev.	*3.7*	*5.3*	*46.8*	*51.2*	*5.1*	*7.7*	*4.8*	*2.6*	*16,043*	*17,176*	*280*	*256*

Sources: Fiscal Monitor, World Economic Outlook, and 2013 Annual Report on Exchange Arrangements and Exchange Restrictions.

[1] For each region, the numbers in brackets represent the number of countries from this region in the sample.

[2] The country sample for the 2014 TSR interviews includes 27 countries: Burkina Faso, Congo Republic of, Seychelles, Uganda, South Africa, China, India, Japan, New Zealand, Philippines, France, Germany, Portugal, Russia, Sweden, Turkey, the United Kingdom, Armenia, Kyrgyz Republic, Lebanon, Morocco, Saudi Arabia, Brazil, Chile, Mexico, St. Lucia, and the United States.

[3] The country sample for the 2014 TSR review of surveillance products includes 50 countries among which 3 currency unions, 9 advanced economies, 20 emerging markets, and 18 low-income countries.

<u>Color coding (for debt ratios):</u>

0-30	60-90
30-60	>90

Annex II. Methodology

This study designed an Excel template to compile data on which to assess the depth and consistency of fiscal analysis and advice across countries and relative to the Fund's multilateral advice to AEs, EMs, and LICs. The template helped identify the main discrepancies and commonalities between bilateral and multilateral advice ("vertical consistency") over time. It was also used to check whether countries in similar circumstances have received similar advice ("horizontal consistency" or evenhandedness).

The template's rows correspond to the criteria used for fiscal advice, which are grouped into four main categories: size, composition, pace, and supporting policies (fiscal institutions and other macroeconomic and structural policies). The choice of questions was based on the main recommendations found in multilateral publications.

For each country, the template was filled out with data and information extracted from five Article IV reports over 2009–13. When no staff report was available for 2009, the 2008 Article IV report was used to collect and analyze the policy advice provided at the onset of the crisis.

1. Country Identification

State of Public Finances	1. GG debt (% GDP, eop)	• Numeric.
	2. GG deficit (% GDP)	• Numeric.
Macro Conditions	3. GDP growth (real)	• Numeric.
	4. Inflation (CPI, average)	• Numeric.
Market Pressures/ Access	5. No market pressures	• Yes / No.
	6. Market pressures[29]	• Yes / No.
	7. Loss of market access	• Yes / No.

2. General

8. Are fiscal issues or vulnerabilities a major policy concern for this country?	• Yes/No.
9. Does the fiscal analysis/policy advice take account of and discuss administrative capacity constraints?	• Yes, in detail. • Partially. • No.

[29] Sharp increase in sovereign yields, but continued market access.

3. Type of Fiscal Advice

Above-the-Line Advice	10. Is the fiscal advice about discretionary fiscal policy or automatic stabilizers?	• Discretionary policy.[30] • Automatic stabilizers.[31] • Both. • None.[32]
	11. If the fiscal advice is about automatic stabilizers, is the advice on?	• Letting existing automatic stabilizers operate if the macroeconomic outlook changes. • Improving the operation/design of automatic stabilizers.
	12. If the fiscal advice is about discretionary policy, is the advice on? (please check all that apply)	• Stimulus in ST. • Stimulus in MT. • Consolidation in ST. • Consolidation in MT.
	13. If the short-term fiscal advice is about discretionary policy, are the recommendations?	• Countercyclical. • Procyclical.
	14. Is the cyclically adjusted (or structural) balance used for fiscal policy analysis/advice?	• Yes/No.
	15. Is the non-oil fiscal balance used for fiscal policy analysis/advice?	• Yes/No.

Below-the-line advice	16. Are there any below-the line recommendations? (please check all that apply)	• Privatization. • Financial sector support. • Debt restructuring. • Other. (Please specify)
Medium-term advice	17. Is there an assessment and advice on the medium-term fiscal challenges, objectives and outlook?	• Yes. • Partially. • No.
	18. If yes or partially, how well is this integrated in the fiscal policy analysis and recommendations?	• Extensively. • Partially. • Little or none. • Not able to assess.
	19. Does the report reconcile the short- and medium-term policy recommendations?	• Yes. • No. • Not able to assess.
	20. Does the report include a (public) debt sustainability analysis?	• Yes, extensive analysis. • Yes, but only standard charts and tables. • No.
Type of measures	21. Does the report recommend temporary or permanent measures?	• Temporary. • Permanent. • Both. • None. • Not able to assess.

[30] Change in structural balance.

[31] No change in structural balance.

[32] For example, fiscal advice is only about fiscal institutions.

4. Size

22. Is there an analysis of the size of fiscal actions?[33]	• Yes, in detail. • Yes, but only basic or partial. • No.
23. Which criteria were taken into account? (Please check all that apply)	• Fiscal sustainability.[34] • External sustainability.[35] • Financing constraints.[36] • Initial cyclical conditions.[37] • Macroeconomic impact of fiscal policy.[38] • Other. (Please specify)
24. Does the report discuss fiscal risks?	• Yes. • Partially. • No.
25. If yes or partially, which risks are discussed? (please check all that apply)	• Contingent liabilities. • Macroeconomic uncertainty. • Policy implementation risk, credibility. • Statistical revisions. • Debt structure. • Other. (please specify)

5. Composition

26. Does the report provide advice on the overall composition of fiscal packages (split between total spending and total revenue)?	• Yes. • Partially. • No.
27. In general, does the report put more emphasis on expenditure measures than revenue measures?	• Yes/ No.
28. Does the report recommend specific discretionary fiscal measures[39]?	• Yes/ No.
29. If yes, please specify the broad nature of these measures[40].	• Please specify.
30. Does the report discuss explicitly some expenditure measures?	• Yes / No.
31. Does the report discuss explicitly some tax (and tax expenditure) measures?	• Yes/ No.
32. If the advice is on taxes, is it about? (please check all that apply)	• Increasing tax rate(s). • Decreasing tax rate(s). • Broadening tax base(s). • Narrowing tax base(s). • Other (please specify).

[33] For example, calculation of fiscal adjustment needs or size of stimulus.

[34] For example, public DSA, health and pension spending pressures, r-g.

[35] For example, external DSA, twin deficits.

[36] For example, market pressures, rollover risk, or financing needs.

[37] For example, output gap, inflation, or unemployment.

[38] Including fiscal multipliers and debt overhang.

[39] Excluding institutional reforms.

[40] For example, cuts in transfers, VAT increase, etc.

33. Which criteria were taken into account in the fiscal advice on composition? (please check all that apply)	• Initial conditions.[41] • Size of the adjustment.[42] • Efficiency considerations.[43] • Equity.[44] • Effects of growth.[45] • Long-term age-related spending pressures. • Other. (please specify)

6. Pace

34. Does the fiscal advice deal with the pace/phasing of fiscal actions?	• Yes/ No.
35. If the report recommends fiscal adjustment, does the pace differ from the 1 percent per year benchmark?	• Yes, significantly.[46] • Yes, but broadly in a similar range.[47] • No. • No quantitative estimated provided.
36. If the report recommends fiscal adjustment, does the advice take into account the risks/costs of frontloading? [48]	• Yes/ No
37. If yes, which risks/costs were identified?	• Please specify.
38. If the report recommends fiscal adjustment, does the advice take into account the risk/costs backloading?[49]	• Yes/ No.
39. If yes, which risks/costs were identified?	• Please specify.
40. Does the staff report identify that the country is subject to market pressures/financing constraints?	• Yes/No
41. If yes, are these constraints reflected in the advice on the pace of fiscal actions?	
42. Does the report discuss specifically the tradeoffs between sustainability and growth?	
43. Does the advice on pace take into account political economy factors, such as political	• Yes. • Partially.

[41] For example, high level (ratio to GDP) of spending or tax.

[42] For example, large adjustment needs may require relying on both revenue and spending measures.

[43] For example, subsidy reform.

[44] For example, wealth tax.

[45] For example, fiscal multipliers.

[46] Adjustment greater than 0.5 or less than 1.5 per year.

[47] Adjustment of 0.5 to 1.5 per year.

[48] For example, higher multipliers, stall speed, or hysteresis.

[49] For example, debt overhang or multiple equilibria.

acceptability credibility?	• No. • Not able to access.

7. Fiscal Institutions

44. Does the policy advice take account of fiscal institutions?	• Yes, in detail. • Partially. • No. • Not able to assess.
45. If yes or partially, which institutions are covered by the fiscal advice? (please check all that apply)	• Medium-term budget frameworks/fiscal strategy.[50] • Top-down budgeting/prioritization • 2nd generation fiscal rules.[51] • Independent assessment/fiscal councils • Transparency.[52] • Other (please specify)
46. If yes or partially, how well is this integrated in the general fiscal policy analysis and recommendations?	• Extensively. • Partially. • Little or none. • Not able to assess.

8. Policy Mix

47. Does the report explicitly discuss the policy mix - the relationship between fiscal, financial, monetary, external and/or structural policy?	• Yes. • Partially. • No.
48. If yes, which other policies are discussed in relation to fiscal policy? (please check all that apply)	• Monetary.[53] • Financial sector. • External. • Structural.[54]
49. Does the report discuss intersectoral spillovers or linkages? (please check all that apply)	• Fiscal-Real. • Fiscal-Financial. • Fiscal-Monetary. • Fiscal-BoP.

[50] For example, a detailed or binding framework.

[51] For example, structural, escape clauses, automatic correction mechanisms or national legislation.

[52] For example, better fiscal reporting or communication strategy.

[53] For example, impact of the zero lower bound on fiscal multipliers.

[54] For example, complementarity between labor and product market reforms and fiscal consolidation.

III. SCOPE OF SURVEILLANCE IN LOW-INCOME COUNTRIES[1]

Executive Summary

The purpose of this review is to: (i) examine the evolution of Fund surveillance of low-income countries (LICs) in recent years; (ii) assess the extent to which the cross-cutting recommendations of the 2011 Triennial Surveillance Review (TSR) and the ensuing Guidance Note have been implemented in staff work on LICs; and (iii) discuss whether this general guidance needs to be modified or augmented for LICs.

Policy issues that are of particular importance in surveillance of LICs include growth promotion, poverty reduction and economic inclusion, effective management of natural resource wealth, financial deepening, and economic diversification and structural transformation. In most countries, direct links to international capital markets are relatively weak, limiting spillovers from international capital market developments—but there are now a significant minority of frontier market LICs that have begun to actively access global capital markets and attract portfolio inflows. The conduct of surveillance is affected by LICs' institutional capacity limitations, deficiencies in the quality and availability of data, and stronger Fund engagement through programs and technical assistance.

Based on a review of 25 Article IV reports for LICs, the paper finds that adoption of the recommendations of the 2011 TSR has helped enhance the effectiveness of surveillance in recent years. The quality of work could, however, be enhanced in a number of areas:

- The analysis of spillovers and risks would be improved by discussing channels and policy implications more systematically. Financial stability analysis would benefit from greater discussion of links between the real and financial sectors. External stability assessments can be enriched by broadening the analysis beyond the current, heavy emphasis on exchange rate assessments.

- Traction could be further enhanced by tapping more the Fund's knowledge of country experiences and using the experience of other countries to shed light on the policy challenges facing national authorities in LICs.

Surveillance in LICs has also progressed in those areas of specific importance to LICs, flagged above, in line with the 2012 Surveillance Guidance Note. Areas where further progress could be made include:

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- While surveillance reports rightly devote substantial attention to structural determinants of growth, the analysis could be strengthened within the confines of staff expertise and resources.

- The attention given to poverty reduction and inclusion in surveillance reports has increased in recent years, but there is scope for doing more in many cases, including by building on recent Fund work on addressing inequality while protecting growth and by drawing on the expertise and diagnostics of other development institutions.

- The Fund has significant expertise in the areas of taxation of natural resource activities and macroeconomic management of resource revenues. Country teams could, in many cases, draw more on this body of work.

- There is room for strengthening the analysis and advice on financial deepening, including through closer engagement with other agencies, including the World Bank. Where deepening occurs, surveillance will need to focus on identifying how potential risks to financial stability from rapid credit growth and weak institutions can be contained.

Finally, the Fund deploys significant resources to capacity-building efforts in LICs, recognizing that weaknesses in institutional capacity, alongside poorly-designed policies, can impose large costs on national economies. The quality of LIC surveillance could, in many cases, be enhanced by drawing more on the sizeable body of knowledge generated by the extensive technical assistance; reports could also be strengthened by more discussion of as to whether capacity-building efforts are achieving the desired results and whether key recommendations of technical assistance have been endorsed and implemented.

A. Introduction

1. **The goal of Fund surveillance is to promote the macroeconomic stability of member countries** as well as the effective operations of the international monetary system, including through maintaining global stability. Policies that affect a country's economic stability are not limited to exchange rate, monetary, and fiscal policies, and can include policy areas such as administrative, institutional, and sectoral reforms, financial sector policies, and natural resources management if these areas affect stability. The Fund can also examine whether policies are not only keeping the economy broadly at capacity but also supporting a higher rate of potential growth where such higher growth significantly influences prospects for stability.[2]

2. **Drawing on the lessons from the global financial crisis, the 2011 Triennial Surveillance Review (TSR) established five priority areas with a view to strengthening surveillance across all Fund member countries**. In particular, it called for greater focus on: (i) interconnections and policy spillovers; (ii) in-depth risk assessments; (iii) financial stability; (iv) renewed emphasis on

[2] See the discussion of the Fund's mandate in the *Guidance Note for Surveillance under Article IV Consultations*, IMF 2012 and in *Jobs and Growth: Analytical and Operational Considerations for the Fund*, IMF 2013 and the *Guidance Note on Jobs and Growth Issues in Surveillance and Program Work*, IMF 2013.

external stability assessments; and (v) enhanced efforts to gain traction including through greater candor and relevance (e.g., adequate coverage of macro-social issues). A revised Guidance Note for Surveillance under Article IV Consultations was issued in 2012.

3. **As specified in the Guidance Note, the set of issues of potential relevance for Article IV consultations in low-income countries (LICs) is generally broader than is the case for other countries**. Surveillance in low-income countries should, as in other countries, focus on whether policies are contributing to domestic and balance of payments stability, but the range of issues to be covered will often include such topics as management of natural resources, the promotion of financial deepening, and macro-critical social issues (such as poverty reduction and employment). Issues that may warrant coverage on occasion include sectoral policies to support growth, export diversification, and governance issues that have a significant impact on macroeconomic stability.[3]

4. **This paper reviews how the 2011 TSR priorities and ensuing guidance have been applied in surveillance of low-income countries (LICs) and seeks to identify areas where greater emphasis is called for and/or current practices could be improved.**[4] Some issues relevant to LIC surveillance are examined in other background papers for the 2014 TSR, including the study of fiscal policy advice and the review of bilateral and multilateral surveillance products.

5. **The paper proceeds in two main steps.** Section II provides a brief discussion of distinctive features of surveillance in LICs. Drawing on a sample of recent Article IV consultation reports, Section III reviews the implementation of the 2011 TSR priorities and the associated guidance to staff on LIC surveillance in the ensuing period. Section IV presents the most important findings and concludes.

B. Surveillance in LICs: Distinctive Features

6. **The economic issues at center stage in surveillance of LICs differ in some important respects from those covered in more advanced economies,** reflecting distinctive structural features of LIC economies (Figure 1):[5]

- With some important exceptions, the combination of concentrated export structures and relatively weak links to international capital markets implies that inward spillovers typically feed into the domestic economy via the traded goods sector rather than through financial channels.

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[3] See paragraph 8 of the 2012 Guidance Note. Whether a specific issue warrants coverage in an individual country is dependent on country circumstances.

[4] For the purposes of this study, the LIC grouping is defined to be the 73 PRGT-eligible countries plus Zimbabwe, which has been temporarily ruled ineligible due to arrears.

[5] It is important to underscore the heterogeneity of LICs, which vary markedly in terms of population size, human capital endowments, access to international trade routes, political stress, etc. Specific guidance notes have been produced on Fund engagement (including surveillance) with countries in fragile situations and with small states.

- The exception is the small but increasing number of "frontier economies" in the LIC universe that have been attracting non-FDI private capital inflows in recent years and thus are now also exposed to financial sector spillovers.[6]

- The perceived inability of LICs to achieve adequate structural transformation and export diversification has put these issues at the center of policy-makers' concerns in many countries; and, hence, is receiving significant attention in the surveillance dialog with the Fund.

- The shallowness of domestic financial markets in many LICs acts as a key constraint on fiscal policy activism and, more generally, on economic development, while also impairing monetary transmission mechanisms.[7] Effective surveillance needs to internalize these constraints while contributing to the policy discussion on financial deepening, where feasible.[8]

- With the preponderance of the labor force employed in subsistence agriculture or other informal-sector activities, policies affecting the formal labor market typically feature less significantly in surveillance and human capital development often receives greater attention.

- Poverty reduction and economic inclusion are typically key priorities for LIC governments, with poverty-oriented and developmental spending usually supported by sizeable inflows of aid from development partners. Issues relating to poverty reduction inevitably feature in surveillance, although Fund expertise in this area is relatively narrowly focused, with core expertise housed in the World Bank and other development banks and agencies.

7. **The conduct of surveillance in LICs is also influenced by a number of special factors**:

- The main institutions of economic governance and policy implementation in LICs often suffer from serious capacity limitations, limiting the range of policies that can be implemented while also impeding the pace of policy reforms. Capacity building is a priority for both LIC governments and their development partners (including the Fund), but is usually a long-term process rather than a "quick win."

- The quality and timeliness of economic data is typically poor, undermining the ability of both policy-makers and Fund staff to assess current developments and draw lessons from statistical

[6] In this paper, the countries included in the "frontier LIC" grouping are: Bangladesh, Bolivia, Cote d'Ivoire, Ghana, Honduras, Mongolia, Nigeria, Rwanda, Senegal, Vietnam, and Zambia. These countries have recently tapped international financial markets.

[7] For an example of how policy transmission can be different in LICs see for example A. Berg, L. Charry, R. Portillo, and J. Vlcek, 2014, "Seven Questions on the Monetary Transmission Mechanism in Low-Income Countries," *IMF Research Bulletin*, Vol. 15, No. 2 (June), and the references therein.

[8] Design of effective policies to promote financial deepening typically requires significant technical expertise; policy dialogue on this issue as a component of surveillance would be dependent on the pre-existing availability of the relevant technical analysis and/or the participation in surveillance missions of technical experts.

analysis of historical data. Analysis of policy issues is thus subject to a heightened level of uncertainty, while statistical analysis of macroeconomic time series is frequently unreliable.

- The Fund is heavily engaged in many LICs via financial programs of various forms and/or through strong support for capacity-building in areas where the Fund has specialist expertise. In these cases, staff typically have an ongoing close policy dialog with national authorities (including via resident representatives), along with access to a substantial body of knowledge generated by technical assistance experts.

- Development institutions, notably the World Bank, that have expertise in areas relevant, but not central to, the Fund's mandate typically also have substantial involvement in LICs. There is substantial scope for effective information-sharing and division of labor across policy areas with these institutions, expanding the available knowledge base for Fund surveillance while facilitating selectivity in coverage of policy issues by the Fund. While there is substantial collaboration in LIC work with development institutions, in particular the World Bank, fully exploiting these opportunities is often a significant challenge.[9]

8. LICs as a group receive limited attention in the Fund's flagship products, reflecting the fact that LICs account for a very small share of global output and of other macroeconomic aggregates.[10] That said, the World Economic Outlook (WEO), including its detailed database, provides a key input for analyzing the economic outlook for individual LICs by providing quantitative projections for major global and country-specific aggregates, including the evolution of global trade, inflation, and key commodity prices. Enhanced efforts to incorporate LICs (as a group) into global modeling exercises and to provide more disaggregated commodity price forecasts could significantly enhance the value of WEO outputs for LIC analysis.

C. Implementation of Current Guidance in LIC Surveillance

Background

9. In the period since the completion of the 2011 TSR, LICs have generally recorded strong economic growth, albeit with a significant number of countries falling behind in the face of conflict/fragility, debt burdens, natural disasters, or poor economic policies. The most significant structural change in the LIC universe recorded during this period has been the emergence of frontier market LICs – countries that have begun to access international capital markets in one or more forms, helped by the conjunction of strong growth rates, low debt levels (post HIPC-MDRI), and

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[9] There is a long history of, and a well established framework for, collaboration with the World Bank. As laid out in the 1989 IMF-World Bank Concordat and the 2007 Joint Management Action Plan on Bank-Fund Collaboration, this collaboration follows a lead-agency model. The model provides that the Fund has the primary responsibility to provide short-term macroeconomic analysis and related policy advice, while the Bank has the primary responsibility to advise on development strategies, sectoral policies, public expenditure priorities, and poverty reduction. In addition, there are areas of shared responsibility, for example, in public financial management.

[10] The Fiscal Monitor, as part of its coverage, is now giving specific attention to developments in LICs.

exceptionally low interest rates in advanced economies. In some cases, countries that retain closely controlled capital accounts have opted to access international capital markets via sovereign bond issues; in other cases, countries that have more open capital accounts have been attracting portfolio inflows into domestic financial markets while also tapping the sovereign bond markets. Macroeconomic policy challenges have changed markedly for this second grouping of countries. While opening up to global capital markets yields many benefits, among them opportunities to boost growth and foster risk sharing, it also brings with it the potential volatility of capital flows, particularly portfolio flows, an important new risk factor that requires careful management.[11]

10. A review of a sample of 25 Article IV reports for LICs finds that the introduction of the 2011 TSR priorities has helped sharpen surveillance, with due consideration being given to the features described above, in particular the differentiated integration of LICs in global financial markets.[12] Part of the progress also reflects the expansion of the Fund's analytical toolkit for LIC issues.[13] There is room, however, for strengthening the implementation of the 2011 TSR priorities in some areas: while reports appear to focus on the right sets of risks (narrower for most LICs and wider for frontier countries), the analyses of risks and spillovers, financial stability, and external stability could be deepened further.

Strengthening Analysis of Interconnections and of Risks

11. Discussions of inward spillovers and risks rightly focus on the risks most relevant for LICs, and the depth of the discussion has improved, but there is room for deepening the analysis further in a few areas:

- Almost all Article IV reports in the sample appropriately discuss risks related to commodity prices, and most discuss risks related to global growth. Reports also take account of aid and remittance flows where relevant. More specifically, three-quarters of the reports for highly aid-dependent countries cover risks from disruption in aid flows. Also, almost all reports for countries where inward remittances are significant cover risks from a possible decline in remittances. In frontier economies, discussions of spillovers and risks also consider risks transmitted through global capital markets and their impact on the domestic financial sector.

[11] An analysis of risks and benefits of international financial integration at different levels of development is provided in M. Ayhan Kose, Eswar S. Prasad, and Ashley D. Taylor, 2009, *Thresholds in the Process of International Financial Integration,* NBER Working Paper 14916.

[12] Annex I describes the sample. The findings from this sample are largely consistent with the ones made for LICs through surveys of surveillance stakeholders and in a broader review of surveillance through a sample of 50 Article IV reports ("2014 Triennial Surveillance Review - Review of IMF Surveillance Products"). A key difference between the two reviews lies in the focus of the present study on how implementation of the TSR priorities corresponds to LIC specificities.

[13] A detailed review of new analytical toolkits and research is presented in Annex II.

- The depth of the discussion of spillovers and risks has also improved. Risk analysis is now supported by near-universal inclusion of risk assessment matrices; about three out of four reports discuss both the channels through which risk realization and spillovers would affect the economy (albeit only rarely in a quantitative fashion); and about the same share discusses policy implications. Further progress could be made by discussing transmission channels and implications for policy settings more systematically.

- Progress could also be made by using quantitative methods more frequently, in cases where data availability permits. This could take different forms, such as the use of macroeconomic framework-based scenario analysis or the incorporation of methods used in the Vulnerability Exercise for LICs (VE-LIC).

Improving Financial Stability Analysis

12. Financial stability analysis focuses on the relevant threats, but there is room for further improvement. In countries not integrated into global capital markets, discussions related to the financial sector appropriately focus on domestic threats. In frontier economies, analysis of financial sector stability often extends beyond domestic risks to take into account risks from financial openness: three out of four of reports for these countries provide some discussion of risks from the size and volatility of capital flows. Regarding the depth of the discussion, in both frontier and other countries, a large majority of reports provide some bottom line on financial sector vulnerabilities, but there is fairly limited discussion of links between the financial sector and the real sector. Most reports also provide limited follow-up on Financial Sector Assessment Programs (FSAPs). Finally, discussions on the appropriate management of capital flows frequently remain vague, perhaps reflecting the only recently formed Institutional View on this sensitive issue, perhaps also reflecting insufficient knowledge of the existing institutional controls.[14]

Enhancing External Stability Analysis

13. Assessments of external stability continue to show some weaknesses. Almost all reports provide a real exchange rate assessment using the methodologies of the Consultative Group on Exchange Rate Issues (CGER), and more than half of the reports assess the level of reserves, in line with guidance to broaden external stability analysis beyond the assessment of real exchange rates. However, while use of the CGER approaches is mandated, authorities have voiced doubts regarding this methodology and, on the whole, these approaches have gained only limited traction with counterparts. Difficulties in providing meaningful CGER-type analysis reflect, in part, the problems of data availability cited previously. Further, external stability assessments and the associated policy recommendations are often not very well integrated with other parts of the analysis and policy advice (as is the case also in surveillance of countries at higher levels of income). For example, a substantial share of the reports reviewed contained only limited discussion of the appropriate mix of policies to address both domestic and external imbalances. Less than one-third of the external

[14] The Liberalization and Management of Capital Flows: An Institutional View, IMF 2012.

stability assessments for resource-rich LICs contained adjustments to reflect the implications of resource exhaustibility (a substantially lower share than in the case of resource-rich countries with higher income levels).

14. Accordingly, external stability assessments could be made more meaningful through a series of actions. External stability analysis could benefit from continued efforts to provide a broader perspective, for example by offering more comprehensive discussions of current-account-balance developments and reserve adequacy. Integrating elements of balance sheet analysis such as consideration of risks of private capital flow reversals, currency and maturity mismatches, and foreign financing requirements would also help. Further, where sufficient data are available, assessments could adopt stronger methodologies for the analysis of real exchange rates, for example, approaches akin to the External Balance Approach.[15] Real exchange rate analysis could also adjust more systematically for the presence of exhaustible resources. Finally, assessments could be more useful if they were better integrated with other elements of the analysis, rather than serving as something of a stand-alone exercise.

Strengthening Traction of Fund Policy Advice

15. The Fund is relatively successful at gaining traction with its policy advice in LICs, a point that was flagged already in the analysis undertaken for the 2011 TSR and that has been confirmed this time again. The stronger traction in LICs reflects several factors, including the leverage derived from the provision of Fund financing in many countries, the catalytic role of the Fund in influencing donor financial support, the capacity limitations of many domestic policy-making agencies, and the credibility-enhancing impact of well-executed technical assistance.

16. The Fund is arguably improving its ability to gain traction for its policy advice in LICs by paying greater attention to policy issues of specific concern to national authorities, using cross-country experience to inform domestic policy debates, and enhancing its outreach efforts to civil society. For example, the Fund's extensive work on the appropriate tax regime for natural resource sectors and the macroeconomics of managing resource revenue volatility has addressed a set of issues that are central to an increasing number of LICs, drawing on experiences across many countries.[16] Similarly, the substantial body of cross-country work on the energy subsidy reforms addressed in an accessible manner a sensitive but strategically important reform issue in a large number of LICs.

17. Enhancing traction in the future will require giving greater attention to tapping the Fund's knowledge of country experiences and using the experience of other countries to shed

[15] This will require efforts from functional departments to provide such tools. Efforts are under way to extend the External Balance Assessment (EBA) methodology to low-income countries.

[16] Dissemination of Fund work and country experiences were the main themes of the 2013 Fund's African Department conference in Kinshasa on the management of natural resources in Sub-Saharan Africa.

light on the policy challenges facing national authorities in LICs. This is a message that is repeatedly conveyed by country authorities.

Implementation of LIC-Specific Surveillance Guidance

18. The post-2011 TSR guidance on Fund surveillance of LICs underscored that the range of issues to be covered in LICs would typically be broader than that in more advanced economies, reflecting the specific circumstances and characteristics of LICs. Issues likely to be covered included measures to accelerate the pace of economic growth, effective management of natural resources, the promotion of financial deepening, and macro-critical social issues such as poverty reduction and inclusion. Issues seen as being possible candidates for attention included sectoral policies to support growth, the promotion of export diversification, and macro-critical governance issues. At the same time, the choice of issues to be covered in individual consultations was to be guided by the principles of focus and selectivity, with staff making a judgment, reflecting both country circumstances and Fund-wide surveillance priorities, as to the particular issues that merited in-depth treatment. We examine here how a number of these key issues are being handled in Fund surveillance.

Promotion of Economic Growth

19. While the surveillance reports reviewed for this paper rightly devote substantial attention to structural determinants of growth, the analysis could in many cases be strengthened within the confines of staff expertise and resources. A large majority of reports provides an extensive discussion of challenges to long-term growth, but the strength of the analysis is uneven and often focused exclusively on the need to improve competitiveness and the business environment; while some reports identify country-specific bottlenecks, many present only a broad checklist of potentially relevant factors (which is of limited value to policy-makers). Deepening staff analysis is challenging, given that the Fund is not itself a center of expertise in this area and that deriving a sound analytical understanding of the factors driving growth at any specific point in time is difficult even for specialists.[17] One option could be for staff to conduct "growth diagnostics;"[18]drawing on the specialist expertise of other development agencies, including the World Bank, to enhance staff analysis and diagnostics.[19]

[17] Hausmann, R., Pritchett, L., and Rodrik, D., 2004, *Growth Accelerations*, NBER Working Paper 10566.

[18] Guidance Note on Jobs and Growth Issues in Surveillance and Program Work, IMF 2013, provides a how-to guide for growth diagnostics.

[19] Collaboration with the World Bank is governed by the Bank-Fund Concordat and the Joint Management Action Plan on Bank-Fund Collaboration (JMAP). Under the JMAP, Bank and Fund country teams are to meet at least once a year to discuss how they can best collaborate to help a country address its macroeconomic and macro-critical structural challenges. The outcome of the meeting is to be presented in a staff report appendix on Bank-Fund collaboration.

Poverty Reduction and Inclusion

20. The attention given to poverty reduction and inclusion in surveillance reports has increased in recent years, but there is scope for doing more in many cases. Only about half of the reports reviewed provide a substantive discussion of poverty incidence and policies that might reduce it, with about one third of the reports making an analytical contribution.[20] With inclusion playing a key role in helping to overcome harmful feedback loops between inequality, poverty, and instability,[21] staff work on these issues should be expanded, including by building on recent Fund work on addressing inequality while protecting growth and by drawing on the expertise and diagnostics of other development institutions.[22]

Effective Management of Natural Resources

21. The Fund has significant expertise in the areas of taxation of natural resource activities and macroeconomic management of resource revenues—issues that are of strategic importance to a large and increasing number of LICs. The Fund is providing substantial technical assistance to LICs on resource taxation issues, producing a sizeable body of policy advice to be drawn on in the surveillance process. Major staff papers on both natural resource taxation issues and macroeconomic management of natural resource revenues were produced in 2012, the latter laying out policy frameworks for resource-rich countries to help determine appropriate levels of savings from and investment of resource revenues, taking into account macroeconomic and institutional capacity constraints while avoiding boom-bust cycles.[23] New approaches and modeling techniques for resource-rich developing countries have been developed to evaluate such issues as the optimal pace of scaling-up investment. However, the review of surveillance reports undertaken for this paper suggests that many country teams could draw more effectively on this body of work to enhance the quality of advice conveyed in the surveillance process.

Promoting Financial Deepening

22. Financial systems in many LICs are characterized by low depth, breadth, and reach of

[20] Coverage of poverty reduction was found to be less extensive in Article IV reports for program countries than in those for other countries. This may reflect in part other reporting on poverty reduction in the program documents.

[21] There is evidence that a high levels of poverty and inequality tend to lead to social conflict and to economic crises, see for example: A. Berg and J. Ostry, 2011, *Inequality and Unsustainable Growth: Two Sides of the Same Coin?* IMF Staff Discussion Note 11/08, and Campante, F. and Chor, D., 2012, "Why Was the Arab World Poised for Revolution? Schooling, Economic Opportunities, and the Arab Spring," *Journal of Economic Perspectives*, Vol. 26(2), pages 167–88.

[22] See *Fiscal Policy and Employment in Advanced and Emerging Economies*, IMF 2011 and *Fiscal Policy and Income Inequality*, IMF 2014. Note in this context that recent empirical work has found no evidence to support the notion that income redistribution depresses growth, except perhaps in cases of very high degrees of redistribution, see A. Berg, J. Ostry, and C. Tsangarides, 2014, *Redistribution, Inequality, and Growth, IMF Staff Discussion Note 14/02.*

[23] See Macroeconomic Policy Frameworks for Resource-Rich Developing Countries, IMF 2012. See also Buffie, E., Berg, A., Pattillo C., Portillo, R., and Zanna, F., 2012, *Public Investment, Growth and Debt Sustainability: Putting Together the Pieces*, IMF Working Paper 12/144.

financial services, with significant concentration of credit among a small pool of "blue-chip" borrowers. While many surveillance reports appropriately emphasize the importance of financial sector development in LICs, there is room to strengthen the analysis and advice that is being provided. Work on financial sector deepening could be enhanced by building on the recommendations in *Enhancing Financial Sector Surveillance in Low-Income Countries—Financial Deepening and Macro-Stability* (IMF 2012), including by benchmarking domestic financial sectors against peers. Reports could also make clearer the extent to which underdeveloped financial systems hamper the effective conduct of macroeconomic stabilization and monetary policy. Some progress towards this goal has been made in the context of selected pilot cases on financial deepening over the period 2012–13 (Box 1). Rolling out this approach to a larger number of LICs would provide significant policy insights, but the experience with the pilot cases has shown that the exercise is resource-intensive, with scaling up being difficult in the context of resource constraints. Closer engagement with, and reliance on, the expertise of other agencies, including the World Bank, could help to enhance staff diagnostics and recommendations without requiring a large injection of additional resources. Where deepening occurs, surveillance will need to focus on identifying how potential risks to financial stability from rapid credit growth and weak institutions can be contained.

Structural Transformation and Diversification

23. Concentration of economic activities, particularly export concentration, leaves LICs vulnerable to sector-specific shocks and is often seen as a significant impediment to growth over the medium-term, with countries "trapped" in products that have limited scope for productivity improvements. In part responding to demands from country authorities, Fund staff have been giving increased attention to issues relating to effective promotion of diversification, including undertaking extensive cross-country empirical research.[24] Application of this analysis to country surveillance is a work in progress at this juncture, albeit with many country teams strongly interested in undertaking work in this area. It should be noted that, where opportunities for transformation and diversification are limited, as in many small states, or are likely to take many years to fully exploit, the policy dialog in surveillance will need to remain focused on building adequate buffers to handle the elevated volatility associated with low levels of diversification.

Strengthening the Linkages between Surveillance and Capacity-Building

24. The Fund deploys significant resources to support capacity-building efforts in LICs, recognizing that weaknesses in institutional capacity, alongside poorly-designed policies, can impose large costs on national economies. There is substantial scope for Fund surveillance to exploit the body of knowledge and expertise acquired through capacity-building efforts.[25] While

[24] See C. Papageorgiou and N. Spatafora, 2012, *Economic Diversification in LICs: Stylized Facts and Macroeconomic Implications*, IMF Staff Discussion Note 12/13; and *Sustaining Long-Run Growth and Macroeconomic Stability in LICs: The Role of Structural Transformation and Diversification*, IMF 2014.

[25] Capacity development consists of training and technical assistance, in which knowledge and best practice is transferred to strengthen institutions. It includes support for the upgrading of fundamentals such as public financial

(continued)

most surveillance reports reviewed for this paper discuss Fund capacity building efforts to some degree, the review suggests that there is significant room to draw more on this body of knowledge to inform the surveillance process. Reports often leave unclear the extent to which capacity-building efforts are achieving the desired results or the degree to which key recommendations of technical assistance have been endorsed and implemented. LIC surveillance reports would benefit from providing a more comprehensive discussion of capacity limitations and capacity development activities, including the strategies pursued and the progress achieved in strengthening capacity. For this, area departments could seek the support of TA-providing departments.

25. Synergies between surveillance and capacity development could be fostered through enhanced collaboration between staff engaged in surveillance and staff engaged in capacity development. Joint participation in missions would be an important step in ensuring both enhanced knowledge-sharing and laying the basis for sustained collaboration over time.

D. Conclusions

26. Surveillance for LICs has strengthened in recent years, thanks in part to the adoption of the 2011 TSR priorities, the ensuing guidance note, and efforts to broaden the surveillance toolkit. Nevertheless, some further progress is possible in the implementation of the 2011 TSR recommendations and other LIC-specific surveillance issues. Greater use of cross-country analysis and recent analytical tools relevant for surveillance in LICs will also contribute to more effective surveillance.

27. The following are key findings for enhancing surveillance in LICs:

- **Priorities of the 2011 TSR:**
    - In analyzing spillovers and risks, further progress could be made by discussing channels and policy implications more systematically. Financial stability analysis would benefit from greater discussion of links between the real and financial sectors. External stability assessments can be enriched by broadening the analysis beyond its current heavy emphasis on exchange rate assessments to encompass risks to stability from both current and capital accounts, and by facilitating closer integration with other elements of staff analysis.
    - Surveillance for frontier countries needs to pay appropriate attention to the risks stemming from adverse spillovers from global capital markets. These countries would also benefit from enhanced advice on capital account liberalization and the management of capital flows.

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management and financial sector supervision, support for policy decisions such as the choice of tax policy and spending mechanisms, and knowledge transfer on recently developed tools such as modeling for monetary policy or the scaling up of investment. An appropriate balance needs to be struck between the goal of having capacity development focus on the most pressing issues and the goal of having it focus on issues determined by recipient countries.

- Traction could be further enhanced by giving greater attention to tapping the Fund's knowledge of country experiences and using the experience of other countries to shed light on the policy challenges facing national authorities in LICs.

- **Implementation of LIC-specific guidance:**

  - While surveillance reports rightly devote substantial attention to structural determinants of growth, the analysis could, in many cases, be strengthened within the confines of staff expertise and resources.

  - The attention given to poverty reduction and inclusion in surveillance reports has increased in recent years, but there is scope for doing more in many cases, including by building on recent Fund work on addressing inequality while protecting growth and by drawing on the expertise and diagnostics of other development institutions.

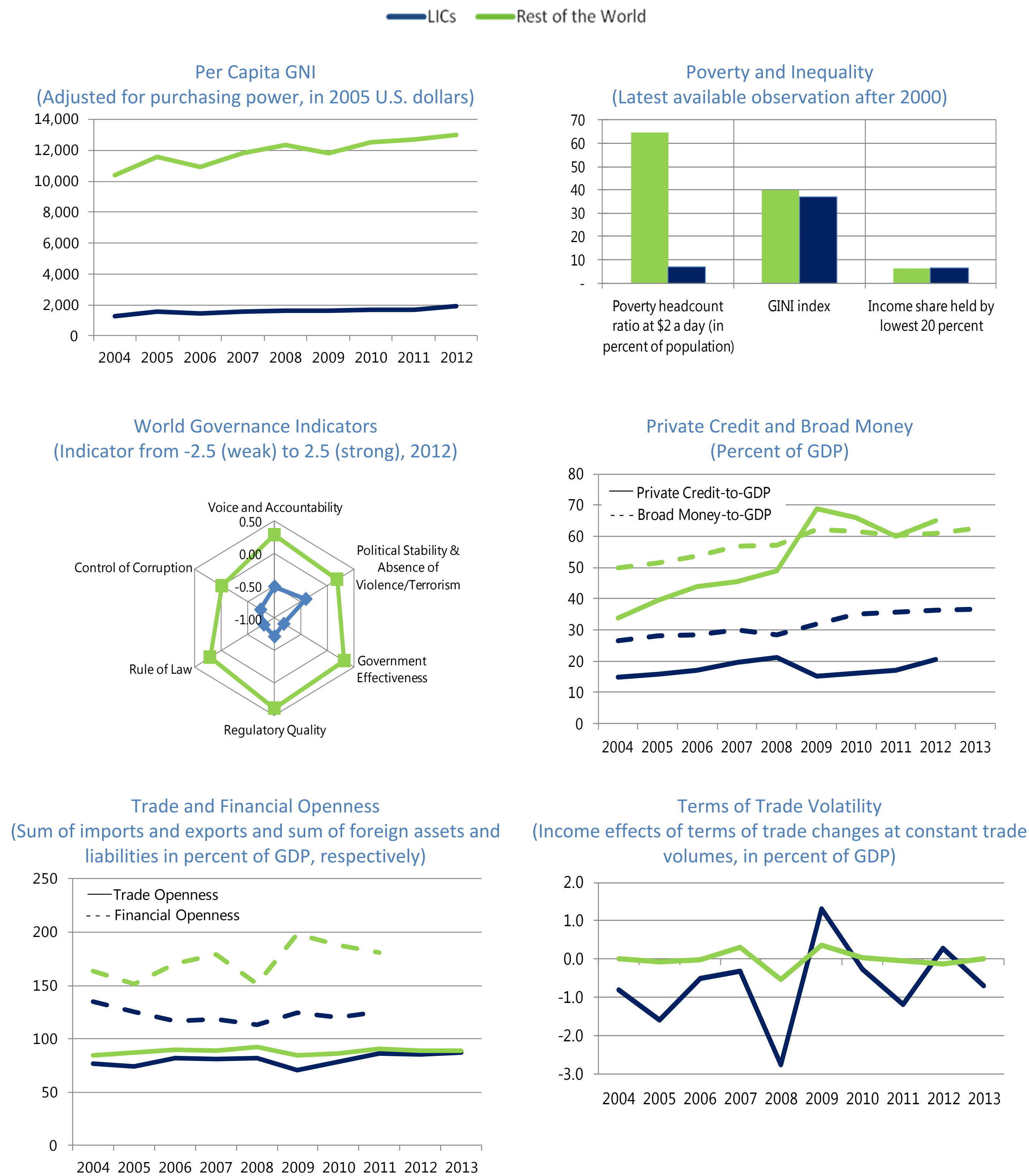
  - The Fund has significant expertise in the areas of taxation of natural resource activities and macroeconomic management of resource revenues. Country teams could draw more on this body of work.

  - There is room for strengthening the analysis and advice on financial deepening, including through closer engagement with other agencies, including the World Bank. Where deepening occurs, surveillance will need to focus on identifying how potential risks to financial stability from rapid credit growth and weak institutions can be contained.

- **Strengthening linkages between surveillance and capacity building:**

  - In many cases, LIC surveillance could do a better job of exploiting the rich body of knowledge available from the extensive capacity building efforts of the Fund and other agencies. Reports often leave unclear the extent to which capacity-building efforts are achieving the desired results or the degree to which key recommendations of technical assistance have been endorsed and implemented.

Figure 1. Contrasting LIC and Non-LIC Fund Member Countries (Median, 2004–13)



Sources: WEO, WGI, IFS,WDI, updated and extended version of the Lane and Milesi-Ferretti (2007) dataset, and staff calculations.

Box 1. Enhancing Financial Sector Surveillance in Low-Income Countries, Experience with the Pilot Cases

In May 2012, the Executive Board discussed a staff paper on Enhancing Financial Sector Surveillance in LICs (EFSL) (FO/DIS/12/66, 04/16/2012). This initiative followed from the recommendations of the 2011 Triennial Surveillance Review, which called for more work on financial stability in LICs, including deeper coverage in Article IV reports and a regular strategic work plan for promoting financial stability.

This paper examined the nexus between financial deepening and macro-financial stability and the implication for Fund surveillance. It suggested that shallow financial markets could significantly impair the effectiveness of macro policy tools. For example, the absence of deep and liquid debt markets could weaken the capacity to implement countercyclical fiscal policy, limit the monetary transmission mechanism, and diminish opportunities for households to smooth consumption. The paper proposed a series of country pilot studies be undertaken to discern how sustainable financial deepening could enhance macroeconomic policy effectiveness and implementation in specific country cases.

The first set of seven pilots—which had different formats and focuses—have been completed. Six countries (Bhutan, Benin, Ghana, Haiti, Senegal, and Sudan) and one currency zone (WAEMU) were covered in the exercise. The focus has been on access to finance, financial stability, and fiscal dominance, depending on country circumstances. A common thread from the pilots was the ability to identify the particular set/subset of constraints on financial system development, with a perspective to enhance the effectiveness of macroeconomic policy implementation and macro-stability, including through Fund TA.

These pilots have shown considerable promise. The authorities involved have welcomed the enhanced focus on their financial challenges, which has been useful in extending analysis and informing the policy dialogue. This includes improving the quality of data and addressing data gaps, to permit for stress-tests for instance, or broadening the scope of supervision to cover shadow banks (such as cooperatives), insurance companies, and micro-finance institutions that are mushrooming in some of these countries. Institutional reforms were also highlighted, including the lack of formal frameworks for monitoring and addressing systemic risks.

This pilot exercise has offered important lessons for the Fund's work in LICs:

- They have demonstrated the need and a shared desire to better integrate financial sector issues in the regular bilateral surveillance context, a key strategic goal of the Fund.
- They have provided "on-the-ground" examples of how underdeveloped financial systems affect the ability of country authorities to implement fiscal/monetary policy.
- The pilots have enhanced the linkages and promoted synergies between the Fund's TA work on financial issues and its surveillance and program work.
- They have provided a vehicle for leveraging the Fund's financial sector knowledge and helped fill the gap that is sometimes left as a result of the low frequency and relatively small number of FSAP assessments in non-systemic countries.

Annex I. Sample of Article IV Reports

The sample of 25 Article IV reports for LICs and regional groups used in this study was chosen to be broadly representative across the regional and program status dimensions of LICs (see table below). With a cut-off date of end-2013, it includes the latest available reports for Afghanistan, Bangladesh, Benin, Bolivia, Cambodia, Chad, Democratic Republic of Congo, Cote d'Ivoire, ECCU, Ethiopia, Ghana, Grenada, Haiti, Kenya, Mozambique, Nigeria, Papua New Guinea, Samoa, Sudan, Tajikistan, Tanzania, Timor Leste, Vietnam, WAEMU, and Zambia.

LIC Country Sample Properties

	Sample	Population
	(In percent)	
Regions		
AFR	48	49
APD	24	24
EUR	0	1
MCD	12	13
WHD	16	13
Program Status[1/]		
Program	40	38
Near Program	24	23
No Program	28	34
Regional	8	5
Subgroup		
Small state	12	25
Fragile state	28	38
Net-oil exporter	16	10
Resource-rich state	60	44

[1/] The term "program" here denotes all forms of engagement that go beyond surveillance, including for example staff-monitored programs.

Annex II. New Analytical Tools Relevant for Surveillance in LICs

This annex lists and briefly describes papers prepared by Fund staff since 2011 that present new analytical approaches and tools relevant for surveillance in LICs.

Vulnerability and Risk Assessments

- *Exogenous Shocks and Growth Crises in Low-Income Countries: A Vulnerability Index*, IMF 2014.
    - Develops a growth decline vulnerability index which provides early warning signals of a growth crisis in the event of large external shocks in low-income countries.
- *Global Risks, Vulnerabilities, and Policy Challenges Facing Low-Income Countries*, IMF 2012.
    - Estimates the impact and discusses related policy challenges of the following global risks: (i) a sudden downturn in global growth; (ii) a more protracted global growth downturn, and (iii) global food and fuel price shocks.
- *Managing Volatility: A Vulnerability Exercise for Low-Income Countries*, IMF 2011.
    - Introduces the analytical framework for a Vulnerability Exercise for Low-Income Countries (VE-LIC).
- *Managing Global Growth Risks and Commodity Price Shocks: Vulnerabilities and Policy Challenges for Low-Income Countries*, IMF 2011.
    - Assesses current risks and vulnerabilities faced by low-income countries, including risks of a sharp downturn in global growth and further commodity price shocks.
- *2013 Low-Income Countries Global Risks and Vulnerabilities Report*, IMF 2013.
    - Discusses macroeconomic developments in LICs since the global crisis and the near-term economic outlook, and estimates the impact on LICs of two distinct global shock scenarios: one entailing a short but sharp drop in demand in major emerging markets, and the second a protracted slowing in the pace of economic growth in the euro area.

Financial Sector Issues

- *Enhancing Financial Sector Surveillance in Low-Income Countries—Financial Deepening and Macro-Stability*, IMF 2012.
    - Discusses institutional impediments in low-income countries and enabling policies that would help facilitate sustainable financial deepening.
- *Assessing Reserve Adequacy,* IMF Policy Paper, 2011
    - Presents new metrics in assessing reserve adequacy in emerging markets and low-income countries.

- *Assessing Reserve Adequacy – Further Considerations*, IMF 2013.
    - Reviews the 2011 guidance on reserve adequacy and provides more granular guidance on establishing a benchmark for low-income countries, distinguishing across frontier markets, resource-rich LICs, and countries with net capital inflows.
- Berg, Charry, Portillo and Vicek, *The Monetary Transmission Mechanism in the Tropics: A Narrative Approach*, IMF 2013, WP/31/197.
    - Uses a narrative approach in assessing the monetary policy transmission mechanisms in Kenya, Uganda, Tanzania, and Rwanda.

External Stability and Debt

- *External Balance Assessment (EBA) Methodology: Technical Background*, IMF 2013.
    - Describes in detail the External Balances Assessment methodology for assessing current accounts and exchange rates in a multilaterally-consistent manner.
- *Revisiting the Debt Sustainability Framework for Low-Income Countries,* IMF 2010.
    - Reviews the debt sustainability framework and discusses areas where the framework could be improved.
- *Review of the Policy on Debt Limit in Fund-Supported Programs,* IMF 2013.
    - Reviews the experience with the Fund's policy on debt limits and proposes reforms to strengthen this policy.
- *Staff Guidance Note for Public Debt Sustainability Analysis in Market-Access Countries,* IMF 2013.
    - Provides detailed guidelines on assessing debt sustainability in market-access countries, focusing on a risk-based approach. It also discusses new analytical tools to improve country teams' assessments.
- *Unification of Discount Rates used in External Debt Analysis for Low Income Countries*, IMF 2013.
    - Lays out the rationale for modifications to the discount rates used by the World Bank and the IMF to calculate the present value of external debt in low-income countries in DSAs and the grant element of individual loans.
- *Staff Guidance Note on the Application of the Joint Bank-Fund Debt sustainability Framework for Low-Income Countries*, IMF 2013.
    - Provides a comprehensive guide to using the debt sustainability framework for both country teams and country authorities.

Growth

- *Sustaining Long-Run Growth and Macroeconomic Stability in LICs: The Role of Structural Transformation and Diversification*, IMF 2014.
    - Provides country teams with a new diversification tool kit which offers highly disaggregated diversification data and offers policy and reform measures that could help countries promote diversification and structural transformation.
- Buffie, E., A. Berg, C. Pattillo, R. Portillo, and F. Zanna, *Public Investment, Growth and Debt Sustainability: Putting Together the Pieces*, IMF 2012, Working Paper 12/144.
    - Lays out a model to assist teams in analyzing the macroeconomic implications of public investment surges. This tool complements the Excel-based DSA results.
- *Breaking Through the Frontier: Can Today's Dynamic Low-Income Countries Make it?* WEO: Hopes, Realities, Risks. Chapter 4, IMF 2013.
    - Analyzes the underlying factors contributing to growth takeoffs in LICs and looks at 5 individual country experiences.
- Chris Papageorgiou and Nikola Spatafora, *Economic Diversification in LICs: Stylized Facts and Macroeconomic Implications*. IMF 2012, Staff Discussion Note, SDN/12/13.
    - Studies the role of diversification in macroeconomic performance of LICs and analyzes actual country experience using four country case studies.

Inclusion and Income Distribution

- *Jobs and Growth: Analytical and Operational Considerations for the Fund*, IMF 2013.
    - Provides recommendations on how the Fund could further enhance its work on jobs and growth.
- *Guidance Note on Jobs and Growth Issues in Surveillance and Program Work*, IMF 2013.
    - Provides guidance in improving analysis and policy advice on macro-critical domestic policies, growth and employment challenges, tax and expenditure policies, and labor market policies.
- *Fiscal Policy and Employment in Advanced and Emerging Economies*, IMF 2012.
    - Identifies structural labor-market weaknesses in advanced and emerging economies; discusses the impact of tax and expenditure policies on employment; and provides a menu of tax and expenditure measures to boost employment.
- *Fiscal Policy and Income Inequality*, IMF 2014.
    - Describes experience with different fiscal instruments for redistribution; lays out options for the reform of expenditure and tax policies to help achieve distributive objectives in

an efficient manner; and presents evidence on how fiscal policy measures can be designed to mitigate the impact of fiscal consolidation on inequality.

- A. Berg and J. Ostry, 2011, *Inequality and Unsustainable Growth: Two Sides of the Same Coin?* IMF Staff Discussion Note 11/08.
    - Discusses the complex relationship between income inequality and economic growth. Finds that longer growth spells are robustly associated with more equality in the income distribution.
- A. Berg, J. Ostry, and C. Tsangarides, 2014, *Redistribution, Inequality, and Growth*, IMF Staff Discussion Note 14/02.
    - Finds that more unequal societies tend to redistribute more; that lower net inequality is correlated with faster and more durable growth, for a given level of redistribution; and that redistribution appears generally benign in terms of its impact on growth. Concludes that the combined direct and indirect effects of redistribution—including the growth effects of the resulting lower inequality—are on average pro-growth.

Resource-Rich Countries

- *Macroeconomic Policy Frameworks for Resource-Rich Developing Countries,* IMF 2012, with *Background Paper I*, *Analytical Frameworks and Applications*, *Supplement II*, and *Guidance note on the Use of FAD RRDC Fiscal Framework Template.*
    - Proposes several new approaches and tools to address the need for distinctive macrofiscal policy frameworks for resource-rich developing countries.
- *Fiscal Regimes for Extractive Industries: Design and Implementation,* IMF 2012.
    - Provides new macrofiscal frameworks and policy analysis tools to help enhance Fund policy advice for resource-rich developing countries.
- *Sovereign Asset-Liability Management: Guidance for Resource-Rich Countries,* IMF 2014.
    - Discusses a conceptual framework for issues related to sovereign asset-liability management from the perspective of natural-resource rich economies,

Capacity Development

- *The Fund's Capacity Development Strategy: Better Policies Through Stronger Institutions,* IMF 2013.
    - Provides proposals to enhance the effectiveness of the Fund's capacity development activities, including through exploring the synergies between technical assistance and training.
- *Revenue Mobilization in Developing Countries*, IMF 2011.
    - Sets out principles on administrative and policy reforms that could help low-income countries make progress in revenue mobilization.

Small States

- *Macroeconomic Issues in Small States and Implications for Fund Engagement*, IMF 2013.
- *Guidance Note on the Fund's Engagement with Small States*, IMF 2014.
  - Discusses the common economic policy issues that arise in small states and presents an analytical basis for considering possible enhancements to the Fund's engagement in small states.
- *Staff Guidance Note on the Fund's Engagement with Small States*, IMF 2014.
  - Provides operational guidance on Fund engagement with small states, including on how small country size might influence the use of Fund facilities and instruments, program design, capacity building activities, and collaboration with other institutions and donors.

Fragile Countries

- *Macroeconomic and Operational Challenges in Countries in Fragile Situation* IMF 2011, and *Staff Guidance Note on the Fund's Engagement with Countries in Fragile Situations* IMF 2012.
  - Proposes how the Fund's engagement with fragile states may be strengthened, taking into account recent experience and the evolving thinking in the international community.

IV. INTEGRATED SURVEILLANCE[1]

Executive Summary

1. **This study evaluates the progress of the Fund in providing timely and effective integrated surveillance focusing on the institutional aspects.** It looks at whether the Fund is fulfilling the requirements of integrated surveillance while providing sufficient flexibility to bilateral surveillance to focus on key issues of national concern. It also suggests ways to ensure that bilateral and multilateral surveillance become mutually reinforcing exercises, and suggests options to better utilize cross-country lessons and integrate financial sector and macroeconomic analysis.

2. **The study finds that the Fund has generally made good progress in integrated surveillance.** The 2012 Integrated Surveillance Decision extended the scope of Article IV consultations to include multilateral surveillance, allowing the Fund to discuss the full range of spillovers from members' policies into global stability. Accordingly, Article IV consultations have been covering outward and inward spillovers more systematically. New surveillance products, including the Spillover Report, Pilot External Sector Report, Risk Assessment Matrices and cluster reports have also strengthened integration.

3. **However, key challenges remain, and the next phase should focus on consolidating and fine-tuning the new initiatives to increase their effectiveness.**

- In the quest to expand multilateral surveillance, the sheer volume of materials produced by the Fund has led some to question whether it has gone beyond the absorption capacity of decision makers making message consistency more difficult and reducing their effectiveness. Furthermore, the complex nature of some new multilateral products requires significant time for absorption even for trained economists. Facilitating the absorption of the Fund's messages and multiple reports calls for more sharply differentiating among products, and channeling communications in a more targeted way.
- Greater use could be made of multilateral surveillance to inform country work. While stakeholders call for more progress in incorporating global and regional issues into bilateral surveillance, individual country teams often find it challenging to integrate the findings from global surveillance products. Bridging the gap between multilateral and bilateral surveillance products could be facilitated by Regional Economic Outlook (REO) and cluster reports, providing clear and actionable policy messages in flagship reports, earlier SPR input into the Article IV consultation process, and mainstreaming of new surveillance products.
- The Fund's vast knowledge base of cross-country experiences needs to be better exploited to facilitate integrated surveillance, enhance traction, and improve evenhandedness. This requires improvement of data and knowledge management techniques, strengthened collaboration across departments, and incentives.

[1] A staff team comprising Zsofia Arvai (lead), Nicolas Million, Gillian Nkhata, Michael Perks, and Di Wang (all SPR), Pelin Berkmen and Kazuko Shirono (EUR) and Silvia Iorgova (MCM) under the general supervision of Peter Allum (SPR).

- Mainstreaming macro-financial sector surveillance would require that macro-financial issues become an integral part of Article IV consultations. This would need better tools and new practices, as well as a shift in the profile of Fund staff by making macro-financial skills part of the core target competency for all (fungible) Fund economists.
- Deeper policy analysis and advice in Article IV consultations increasingly require specialized expert knowledge, thus support from functional departments, particularly MCM and FAD. This would require greater resources or a reallocation of resources among functional departments' activities, as well as further efforts to mainstream certain expertise that currently resides in functional departments, particularly in the area of financial sector surveillance. The substantial increase in resources for capacity development in the last few years could also be better leveraged to support bilateral surveillance.

A. Introduction

4. Since the 2011 TSR, the Fund has taken considerable steps to integrate and enhance the consistency of its bilateral and multilateral surveillance. The Fund adopted the Integrated Surveillance Decision (ISD) in July 2012 to modernize its legal framework for surveillance and put integrated surveillance on a firmer footing.[2] New products and processes have been introduced to fill the gaps between, and improve the integration of, bilateral and multilateral surveillance, while further efforts have been made to improve the consistency between the flagship multilateral products. Underlying all these changes, there has been strong recognition of the need to strengthen formal and informal cross-departmental collaboration.

5. This study evaluates the progress of the Fund in providing timely and effective integrated surveillance. Specifically, it looks at whether the Fund is fulfilling the requirements of integrated surveillance on a timely basis, while providing sufficient flexibility to bilateral surveillance to focus on key issues of national concern; it also suggests ways to ensure that bilateral and multilateral surveillance become mutually reinforcing exercises. Integrated surveillance is based on the notion that in an interconnected world multilateral and bilateral surveillance should be viewed in a holistic way as mutually reinforcing exercises instead of distinct and contrasting activities. Moreover, improving the effectiveness of bilateral and multilateral surveillance requires exploring and utilizing cross-country lessons and better integrating financial sector and macroeconomic analysis.

6. The focus is on the institutional aspects of integrated surveillance. The study suggests options based on the diagnosis and analysis of the factors behind the progress and the challenges in integrating bilateral and multilateral surveillance, enhancing cross-country work, improving the communications and absorption of Fund products and messages, as well as further strengthening and mainstreaming financial sector surveillance. The study draws on information from interviews

[2] According to the ISD, in addition to assessing the contribution of members' policies to their domestic and balance of payments stability, Article IV consultations should cover potential or actual outward spillovers from members' policies that may significantly influence the effective operation of the international monetary system.

with stakeholders (country authorities, Fund staff, and financial market participants), a review of Article IV and multilateral reports, as well as surveys of stakeholders and focus group discussions with Fund staff. The study also benefitted from a report on integrating multilateral and bilateral surveillance by an external consultant. Developments in Fund resources and expertise devoted to bilateral and multilateral surveillance in recent years are also analyzed with a view to evaluate whether these are sufficient to provide high quality advice to member countries on national issues.

7. **Effective integration of multilateral and bilateral surveillance at the Fund depends on effective two-way synergies.** On the one hand, policy challenges identified by country teams need to inform the global analysis and cross-country issues in multilateral surveillance products. On the other hand, such global analysis of systemic risks and spillovers needs to translate effectively into policy advice for bilateral surveillance. Effective integrated surveillance, thus, depends on: (i) a clear strategy for the messages that each multilateral (or regional) product is supposed to contribute to bilateral surveillance; (ii) effective communication across bilateral and multilateral teams, including early involvement of bilateral teams in the production of multilateral publications; (iii) exchange of data and other information between multilateral and bilateral teams supported by sufficient incentives for staff to share information; and (iv) effective delivery of key policy messages internally and externally.

8. **The paper is organized around some key remaining challenges for truly integrated surveillance.** Section B examines the relationship between multilateral surveillance provided by the Fund's flagship reports (WEO, GFSR, and Fiscal Monitor) and regional and bilateral surveillance (the REOs[3] and Article IV reports). Section C analyzes these challenges in more detail and suggests options for improving the integration of bilateral surveillance and the new multilateral surveillance products. Section D discusses the main challenges to the Fund's cross-country work and data and knowledge management. Section E discusses scaling up recent innovative approaches and Section F draws on the recommendations of an interdepartmental working group on strengthening and mainstreaming financial sector surveillance, a long-standing challenge for the Fund. Section G provides a brief overview of the Fund's communications activities in assisting timely and consistent messaging of its bilateral and multilateral products, and suggests ways to improve them. Finally, the last section discusses the findings of the analysis of resource allocation and mission staffing data.

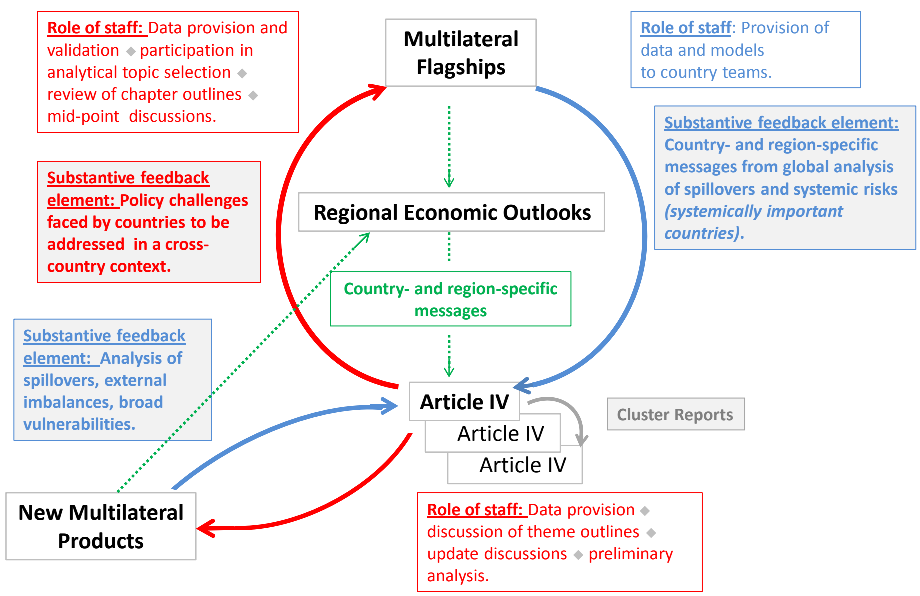
B. Building on the Flagships

9. **This section discusses progress in integrating the Fund's established bilateral and multilateral surveillance products**. An integrated approach goes beyond numerical consistency between country level and global analysis. In principle, global linkages, spillovers, and vulnerabilities identified through global surveillance should inform bilateral surveillance in a "top-down" manner (Figure 1). Equally, where bilateral surveillance identifies important vulnerabilities, spillovers and cross-country linkages, this can trigger a "bottom-up" message on the need to examine these issues at a multilateral level. Multilateral surveillance also provides an opportunity to conduct and

[3] Although REOs are legally not surveillance products, they inform both bilateral and multilateral surveillance.

disseminate cross-country analysis that can inform bilateral surveillance. The remainder of this section discusses to what extent the Fund's multilateral and bilateral surveillance results in useful analytical cross-fertilization in the above manner, with conclusions that are consistent across the multiple products.

Figure 1. Key Elements of Surveillance at the Fund



10. In general, this review finds that the Fund is making good progress in integrating bilateral and multilateral surveillance. The Fund's bilateral and multilateral surveillance products are seen by stakeholders as comprehensive (no major gaps in coverage), of a high analytical standard, and consistent across products in delivering common messages. An external study conducted to inform this review confirmed that the Fund's surveillance activities were broadly comprehensive in coverage, of good quality, and with consistent messages across the various bilateral and multilateral products (Box 1).[4]

11. The multilateral flagships (WEO, GFSR and Fiscal Monitor) are generally confirmed as bringing valuable perspectives to bilateral surveillance.[5] Interviews with country authorities and Fund teams found that the WEO and the GFSR are both used extensively to inform Article IV discussions of global risks and vulnerabilities; this analysis is often captured in risk scenarios in Article IV reports. The practice of including Risk Assessment Matrices (RAMs) in Article IV reports has also been helpful in ensuring a systematic and consistent coverage of risks, including those arising from global and regional spillovers.

[4] "Report on Integrating Bilateral and Multilateral Surveillance on a Continuing Basis" by Kenneth Rogoff, Harvard University.

[5] See Annex 1 for details on the various multilateral and integrated surveillance products.

12. Multilateral and bilateral surveillance appear to provide consistent policy messages.[6] Where differences in messages between flagships and bilateral surveillance products have arisen, these have typically been resolved through the interdepartmental review process, or where needed, through discussion with Management. In interviews, functional departmental staff argued that differences in view sometimes reflect the differences in countries' circumstances and policies as seen from a bilateral and multilateral surveillance perspective. The external study confirmed differences in messaging across Fund products can mostly be explained by differences in timing, approach and emphasis.

13. Greater use could be made, however, of multilateral surveillance to inform country work. Beyond the findings in regard to risks and spillovers, the Article IV report review revealed very little evidence of direct input from multilateral products on wider global and regional issues into bilateral surveillance. Consistent with these findings, EDs and country authorities called for more progress on incorporating global and regional issues into bilateral surveillance. Although teams working on flagships share the underlying data and analyses with desks, country teams reported that it is often challenging to integrate the lessons from the WEO/GFSR analytical chapters into their bilateral surveillance—often because the immediate policy lessons are not clearly drawn. A positive step, in this regard, is the current practice of GFSR teams to routinely provide to area departments country-specific messages from analytical chapters (in addition to useful messages from the conjunctional chapter, where relevant).

14. REO reports could help bridge from multilateral to bilateral surveillance. Where individual country teams find it challenging to integrate the findings from global surveillance products, this process can be supported by including in REO reports (and updates if there are material new developments) a discussion of the nature and magnitude of potential global spillovers to a particular region, tracing the transmission channels under possible alternative scenarios. This analysis, tailored to regional circumstances, is then more readily applied in bilateral surveillance. A review of past REOs shows that many have explored spillover and risk issues, though more generally on an ad hoc basis, and not typically as a central feature of the conjunctural discussion.

15. Non-systemic countries receive particularly limited attention in the flagships. The global focus in the flagship reports brings a natural emphasis on economic developments and policy issues in systemically-important countries. The coverage of smaller countries is typically limited,[7] especially in the GFSR where financial systems in large parts of the world are not seen as systemically critical. Where countries and regions are not featured in the flagship reports, this can send an implicit negative message about the need to bring global perspectives to bilateral surveillance.

16. Early engagement of area departments in the design of multilateral surveillance is helpful in fostering integrated surveillance. This approach is increasingly the norm, with brainstorming sessions in which authoring departments seek inputs from other departments on

[6] This consistency tends to be mostly implicit, with few direct references to multilateral analysis in Article IV reports.
[7] Nevertheless, the Fiscal Monitor already includes coverage of LICs and the WEO is looking to include a Low Income Developing Country category.

potential analytical topics; subsequently, inputs are sought on specific proposals and topic outlines, and through joint mid-point meetings on preliminary findings and issues.[8] Informal consultations complement this formal process. That said, this outreach process is not universally recognized, with many mission chiefs and desk economists are apparently unaware of the opportunities that area departments have to influence the focus of multilateral surveillance. This information gap seems to be largely a question of communication *within* area departments, rather than between functional and area departments.

17. The need for better integration of bilateral and multilateral surveillance and the new priorities arising from the ISD call for strengthening SPR's intermediary role in the Article IV consultation process. Given its policy and review function, SPR can provide significant value-added in identifying global spillovers and risks, as well as cross-country lessons that should feature in bilateral surveillance. Thus, integrating bilateral and multilateral surveillance could be further supported by early SPR input into the Article IV process. Currently, SPR discussions with country teams of important global, regional and institutional issues occur relatively late in the process of preparation for bilateral consultations, shortly before country teams leave for missions. Holding discussions earlier in the process would provide an opportunity for SPR to ensure input of key relevant messages and issues from multilateral surveillance, more effective cross-country perspectives, and identification of areas where early support from other functional departments may be required. This would require a more proactive approach from SPR reviewers to systematically hold early discussions with country teams. Compiling the key multilateral and spillover messages would also facilitate SPR reviewers' discussion of multilateral issues with country teams, along with bilateral issues, at an early stage in the Article IV process.

18. Questions of how to best communicate the findings from the Fund's numerous surveillance products are discussed separately. With multiple new surveillance products joining the traditional flagships, the challenges for communication have increased. These issues are discussed in Section G.

Possible Options

- Aim at providing actionable policy messages in the flagships. Analytical chapters, in particular, should have clear policy messages that can inform bilateral surveillance. Flagship authors could usefully provide area departments with summaries of the policy implications for country teams, following the current practice for the GFSR.
- Feature global/regional spillover and risk analysis more consistently in REOs. The conjunctural analysis in REOs should include a discussion of global spillovers and risks tailored to regional circumstances that country teams can use to inform bilateral surveillance.
- Foster earlier SPR input into bilateral surveillance. This can help country teams identify important global spillovers and risks that should feature in the bilateral surveillance discussions.

[8] E.g., in recent rounds, channels of communications on the GFSR to include: (i) formal invitations to area departments on GFSR brainstorming sessions (initially shared with heads of departments and reviewers, and most recently with the entire staff of area departments); (ii) informal contacts between MCM and area departments at the early stages of GFSR production; (iii) distribution of GFSR outlines for area department comments; and (iv) formal invitations to mid-point meetings on GFSR preliminary findings (shared with the entire staff of area departments).

Box 1. Coverage of Major Policy Shifts—Main Findings of the External Consultant Study[1/]

The external consultant study examines how the Fund has fulfilled its bilateral and multilateral surveillance with respect to four key issues that have faced the global economy over the past couple years. These four issues are as follows: (i) the Fed's quantitative easing strategy and especially the taper; (ii) Abenomics in Japan; (iii) the risk of a hard landing in China; and (iv) the spillover effects of Germany's fiscal policy.

The study finds that in all four cases, the Fund has provided its membership a useful and high-quality mixture of short-term conjunctural analysis and policy research. The extent to which the Fund's analysis has weaknesses is largely related to political and market sensitivities, particularly in dealing with large influential members.

- The study raises some concerns about whether the Fund was forceful enough in pointing out possible risks posed by the US Federal Reserve's quantitative easing (QE III) program, initiated in September 2012, and whether it was forceful enough in advocating structural reforms (e.g., tax reform) that might have helped support long-term growth and helped soften spillover effects to other countries.
- The external report finds that Fund has generally done well in the case of giving consistent policy advice to Japan and in its response to Abenomics, stressing all along the importance of structural reforms and giving extensive ideas in this dimension. However, the Fund has arguably downplayed the international spillover risks that will arise should interest rates in Japan begin to rise more quickly, either in response to rising inflation expectations, or if markets come to share the Fund's concerns about the long-run sustainability of fiscal policy. Also, the Fund perhaps should have placed even greater emphasis on "third arrow" structural reforms as an assurance that Abenomics would have a lasting long-term positive global impact, and not just short-term competitive effects.
- On China, the assessment is that Fund has been quite candid about risks to China in the Article IV reports. In its multilateral surveillance, however, it has perhaps not done enough to highlight risks to the many countries that have become very dependent on continuous high growth in China. While good discussion of the risks can be found sprinkled throughout multilateral products and exercises, but often these discussions are mainly in more technical chapters and reports.
- On the Fund's advice about German fiscal policy, the external study finds that the trail of Article IV reports and multilateral surveillance products suggests that the Fund's advice was quite nuanced, far more so than is sometimes portrayed. The Fund did not strongly endorse the view that German fiscal policy expansion would have large spillover effects to the rest of the Eurozone, and at the same time it did emphasize how strong German balance sheets helped perform a stabilizing role in Europe.

[1/] "Report on Integrating Bilateral and Multilateral Surveillance on a Continuing Basis" by Kenneth Rogoff, Harvard University.

C. Mainstreaming the New Multilateral Surveillance Products

19. The new surveillance products are gaining traction with stakeholders. This section discusses views of the Spillover Report, the Pilot External Sector Report (Pilot ESR) and the Vulnerability Exercises (VE). In each case, considerable progress has been achieved:

- **Spillover Report**. The launch of the Spillover Report and integration of detailed spillover analysis in the WEO has provided an abundance of analytical material to inform bilateral surveillance. In practice, the impact has been strongest in terms of providing analytical depth to the Article IV reports for systemic economies, particularly as regards outward spillovers. Reflecting this progress, the 2014 TSR finds that country authorities and Executive Directors appreciate the Fund's work on spillovers and give it a higher value than at the time of the 2011 TSR.

- **Pilot External Sector Report**. For the Pilot ESR, stakeholder surveys showed positive recognition of the work on external sector assessments, especially from EMs and LICs, and saw the Pilot ESR as providing useful discipline for individual country assessments and more effective surveillance of external imbalances by broadening the Fund's earlier exchange rate assessment exercises to look more systematically at current accounts, balance sheet positions, reserves adequacy, and capital flows. Stakeholders also appreciate the broader focus in the assessment of external balances (the EBA), compared with the narrower CGER approach where the focus is mainly on exchange rates.

- **Vulnerability exercises**. The internal vulnerability exercises have become progressively better integrated with bilateral surveillance. The transparency of the underlying analytical approaches, inputs, and outputs has increased considerably, allowing staff to engage more effectively with country authorities on the VE country results during Article IV discussions. This process has helped to enrich the Article IV consultation by bringing in new perspectives.

20. The new surveillance products are not yet viewed, however, as in the mainstream. Although the Fund dedicates substantial resources to produce high-quality analysis in the new surveillance products, they are too often viewed as tangential to the Fund's core analysis in the flagships and bilateral surveillance. These products were introduced on a stand-alone basis to fill perceived gaps in the surveillance process, and the Fund is still building their credibility, both among staff and the membership. The priority is to more effectively mainstream the analysis provided by these products, which will help deliver the maximum return on the Fund's analytical investments in terms of strengthening the overall surveillance process and ensuring that messages are widely received and understood. The following paragraphs discuss the TSR findings in regard of separate products.

Spillover Report

21. A key challenge is to extend spillover analysis beyond the systemic economies. As noted above, more progress has been achieved in addressing "outward" spillovers in the surveillance of systemic economies than the corresponding "inward" spillovers for the broader membership; this was a key finding in the external consultant study. One important constraint is resources—it is much easier to incorporate spillover analysis into multilateral and bilateral surveillance for five systemic economies than for over 180 other countries. In particular, it is not straightforward for country teams to interpret and convert outward spillover analysis into corresponding inward spillovers for their individual country. The narrow country and policy focus of the Spillover Report may limit its relevance for the wider membership. Thus, while work on spillovers is rated more highly than three years ago, it is still viewed as less valuable than Fund work on financial vulnerabilities, fiscal policies, and risks.

22. Further work on modeling transmission channels would help mainstream spillover analysis. Where the Fund has provided detailed scenarios mapping the transmission channels for key downside risks, country teams have been ready to include the country-specific implications in country reports, notably in RAMs. While central risk scenarios will continue to be produced, the analysis of spillovers could be further strengthened by including spillovers analysis as a regular component of REO reports. The analysis of regional transmission channels and the potential magnitude of country-by-country spillovers would provide useful results (or an analytical framework) that could inform subsequent bilateral consultation exercises. Analyzing spillbacks, that is economic feedback loops, is a further challenge for deepening the Fund's spillover analysis.

Pilot External Sector Report

23. A closer integration of external balance assessments into Article IV surveillance is needed. The Pilot ESR has played an important role in expanding and deepening external sector analysis, but the clarity and integration of assessments into Article IV reports still needs to be improved. There is a well-established process for discussing detailed external balance assessments (EBAs) with the country authorities during the Article IV consultations and throughout the year (via the Pilot ESR country pages). Better integration of countries' external sector assessments into policy discussions in Article IV staff reports could improve the perceived consistency of treatment.

Vulnerability Exercises

24. The vulnerability exercises could be further leveraged for bilateral surveillance. Notwithstanding the greater transparency of the VE process and progressive integration into some bilateral surveillance exercises, significant further progress could be made. In too many instances, the VE process ends with the submission of a cross-country assessment to Management. (The VE-LIC differs, in that it informs a published final report.) Given the resources invested by both functional and area departments in the VEs, consideration should be given on how to use the findings to inform bilateral surveillance on a more consistent basis. Without a clear operational "use" for the VE, it risks losing staff buy-in.

Possible Options

Spillover Report and spillover analysis

- As recommended in Section B, include a discussion of spillovers in REOs as part of the conjunctural and risk discussions. This could act as an anchor for spillover analysis in bilateral surveillance for countries in the region.
- For systemic economies, consider strengthening RES/SPR input into Article IVs, particularly on coverage of spillovers. A member of the WEO/Spillover team could be assigned to the Article IV team, providing input throughout the process, including participating in missions if the budget allows.

D. Promoting Cross-Country Analysis and Upgrading Data and Knowledge Management

25. The Fund's vast knowledge base of cross-country experiences needs to be better exploited to facilitate integrated surveillance, enhance traction, and improve evenhandedness. For some time, surveys of country authorities have suggested that they would like to see the Fund drawing more policy lessons from its extensive cross-country experience. They see the Fund as uniquely placed to set out relevant experiences and policy choices and there appears to be significant demand from member countries for cross-country analysis that goes beyond a narrow regional perspective. Research has progressed in a number of cross-cutting issues, in particular on capital flows and financial interconnectedness, and several initiatives were taken to improve information-sharing across and within departments. However, the 2014 TSR review of Article IVs found that cross-country analysis is still limited, often focusing on comparison of peer group indicators such as fiscal deficits or credit growth. Only a few reports make extensive use of cross-country findings and draw on cross-country policy experiences to support their analysis. Surveys of staff still indicate that accessibility of the information is still a major constraint. Where the Fund is unable to cite relevant cross-country examples, this can weaken the traction of the Fund's policy advice.[9]

26. Identifying cross-country policy lessons is hampered by the lack of readily accessible and well-organized sources of information on cross-country findings and cross-country policy experiences. Considerable information on country policies is disseminated, but a good deal is effectively available only within departments and are difficult for outsiders to tap. Much of the staff knowledge rests with individuals (in both area and functional departments) and often is lost when these individuals move on to different assignments, a problem thought to be aggravated by the increasing mobility requirements within the institution. In addition to that, there appear to be inadequate incentives for Fund staff to build and maintain knowledge bases, beyond basic spreadsheets. Opportunities for cross-country collaboration are frequently identified through serendipitous exchanges of information, often within departments. As a result, cross-country work tends to have a strong regional focus, even though members may be equally, if not more interested in lessons from very different global contexts.

27. Efforts to lower the barriers to collaboration across departments involve a combination of better knowledge management techniques, expectations for collaboration, and incentives. Some success has been achieved by functional departments disseminating Fund-wide templates that help country teams distill policy recommendations based on cross-country lessons and by establishing teams designed to collaborate across departmental lines. This appears to work well where a specific issue is being tackled (e.g., jobs and growth) or where a well-defined product is being produced (e.g., the Spillover Report). The challenge is to foster more horizontal collaboration of this type. Key issue is minimizing the burden of collaboration, while ensuring that efforts are focused on issues that have high value added to participants. An SPR working group is in the process of rolling out work that will facilitate cross country efforts across the Fund. The group is

[9] See IEO—Evaluation Report on Recurring Issues from a Decade of Evaluation: Lessons for the IMF (Forthcoming).

assessing the current status of knowledge management across the Fund, and working with area departments to identify about 5-10 priority areas where cross-country policy lessons constitute a priority for the coming year. The relevant information will then be gathered, in particular from functional departments, and the results eventually presented on a new intranet page dedicated to cross country work.

28. Shortcomings in the ability to share economic data present further challenges. Country teams continue to flag the lack of a broad-based and user-friendly economic database that could be quickly tapped to explore economic features of countries in different regions. Responding to the Fund's evolving mandate and surveillance priorities, the existing data provision framework has been strengthened in the 2012 Review of Data Provision for Surveillance Purposes and efforts to address data gaps have been enhanced. In May 2012, a new economic data governance structure was created to improve data collection, management, analysis, dissemination and sharing throughout the Fund.

29. There have been many efforts over the years to address knowledge management issues, but more needs to be done. Recently, there have been initiatives to improve the facilities for the storage and retrieval of documents in the institution. For instance, the intranet portal "Knowledge Exchange" provides centralized intranet access to the most important and authoritative resources produced by staff. Even more recently, the Fund launched PARIS (Policy Analysis Research Information System) to improve staff's access to analytical content produced in the Fund. A Knowledge Management Working Group was established by Management in March 2014 to review knowledge management in the Fund and to make proposals for reform by November 2014. The group is tasked with identifying options for improving knowledge management in the Fund in a pragmatic and cost-effective way.

Possible Options

- Area departments to develop a strategy and agree on 5-10 priority areas where identifying cross-country policy lessons would be particularly valuable in the coming year. In each case, an inter-departmental project to identify shared policy lessons should be conducted, with the findings disseminated externally. This exercise should also be monitored with a view to identifying lessons for how to sustain the momentum of cross-country analysis.
- Include strengthening cross-country analysis in departments' accountability framework, with departments reporting to Management on implementation.
- Strongly encourage that country teams prepare early in the Article IV process for cross-country analysis and policy discussion and include reference to it in the Policy Note.
- Develop a more carefully thought-out Fund-wide approach to Knowledge Management issues, based on the findings of the Knowledge Management working group launched by the Managing Director in March 2014.
- The Knowledge Management working group should examine options for promoting knowledge sharing on country policy experience. One possibility would be to encourage staff returning from Article IV or technical assistance missions to store in a searchable repository references to policy issues substantively analyzed in their reports.

E. Cluster Reports and Other Innovations

30. Cluster and thematic reports show promise as innovative options for enhancing cross-country analysis and integrating bilateral and multilateral surveillance. Cluster reports focus on the inter-linkages between a small group of economies and the spillovers and vulnerabilities that might arise in this context, or on common concerns and policy issues for a cluster of countries. Cluster reports are discussed by the Board as background to the Article IV consultations of some or all of the associated countries, which are conducted on a parallel schedule with Board discussion timed to closely coincide. In this fashion, cluster reports can help bridge the gap between bilateral and multilateral surveillance (Annex II). A similar approach has been taken in other cases, with Article IV consultations for a group of countries with common policy challenges timed to broadly coincide, but without the cluster report, so that their respective staff reports can be read in conjunction. A third approach has been to prepare studies on cross-country linkages that are not strictly linked to the Article IV process, but which are circulated to the Board and can inform subsequent bilateral country work (e.g., annual surveillance report for six GCC countries).

31. While offering analytical advantages, clustering can be administratively challenging. Clustering requires buy-in from country authorities early in the process to ensure that agreement is reached on the cluster theme and the timing of the Article IV consultations. Timing is an especially difficult issue in clustering Article IV consultations, both because of staffing bottlenecks and because authorities often have strong preferences about the timing of their own Article IV consultation. Early engagement with the authorities is key, along with a clear message that cluster reports are a complement to Article IV consultation, not a substitute. On the Fund's part, resource constraints can pose challenges. Completed cluster reports so far were produced largely by country teams within the existing staffing framework. While there were synergies between the cluster reports and Article IV work, workloads increased substantially. Continued flexibility in cluster report design and processes remains essential, as criteria for identifying clusters can vary across regions and over time.

Possible Option

- Continue experimenting with regional and thematic approaches building on existing innovative approaches.

F. Strengthening and Mainstreaming Financial Sector Surveillance[10]

32. Progress toward strengthening financial analysis and integrating it into the Article IV process has been mixed. The Review of Article IV reports finds that while most reports include some discussion of financial sector issues, the depth and breadth of analysis varies across countries and institutions. Specifically, 90 percent of reports for AMs include an extensive analysis of financial stability compared to around 50 percent of reports for EMs and LICs. Furthermore, financial sector

[10] This section is based on the findings of an inter-departmental working group led by MCM and SPR, set up to explore practical proposals to enhance the coverage and depth of analysis of financial sector issues in Article IV consultations.

policy advice focused mostly on regulatory and supervisory improvements, and less on macroprudential policies. Even when reports discuss macroprudential measures, less than a quarter discuss the implications for the macroeconomy.

33. Despite some progress, significant challenges remain for strengthening financial stability analysis in-between FSAPs. Article IV consultations are currently tasked to follow up on the implementation of FSAP recommendations, but this financial stability analysis varies widely across countries. In this context, diagnosing financial vulnerabilities and risks between FSAPs remains a challenge for many country teams. While FSAPs provide deep and detailed insights into financial sector issues, they are too infrequent—especially in non-systemic countries—to be useful for continuous surveillance of macro-financial issues. Moreover, an "FSAP-centric" approach to financial surveillance tends to limit the focus of the analysis to the stability of the (domestic and global) financial system, and FSAPs are still heavily skewed toward institutional and microprudential issues, which are too technical and not necessarily macro-relevant. Between the FSAP's definition of financial stability and the issues typically covered by the World Bank's developmental assessments, there is a rich set of topics that can be macro-relevant. Questions to be addressed by Article IV teams could include

- What are the key macro and financial sector trends? Are the latter the origin or the result of the former, or are they both reflecting other underlying factors? What are the main drivers behind these trends and the short-term baseline outlook, and how do they interrelate?
- What are the key financial factors affecting macroeconomic stability (e.g., credit cycle)? Does the structure and functioning of financial sector aggravate or mitigate macro (in)stability? How does the financial sector affect the effectiveness of macroeconomic policies (e.g., monetary policy transmission)?
- How do financial sector issues affect the medium-term growth prospects?
- Beyond the baseline outlook, what are the key risks to financial and macroeconomic stability? What is the probability and impact of realization? How can macroeconomic, macroprudential, financial sector, and structural policies mitigate these risks and contribute to a balanced policy mix? What are the tradeoffs or synergies between these different policies?

34. Mainstreaming financial sector surveillance would require that macro-financial analysis become an integral part of Article IV consultations. This would recognize the financial sector as an essential element of the macro landscape, and put new demands on staff. This will require better tools and new practices. And most importantly, it will require a shift in the profile of Fund staff: treating the skills needed to undertake this work as part of a single set of macro-financial skills, essential for all Fund economists, and adjusting personnel policies and practices so as to generate incentives and opportunities for staff to acquire and use these skills. There will always be a need for true financial sector specialists (in MCM), but their main role would be to provide technical backstopping to surveillance teams; advice on implementation; and technical assistance.

35. Enabling and assisting area department teams to strengthen macro-financial surveillance necessitates enhanced tools, skills, and practices. The transition process should be supported by MCM to ensure the transferring of financial expertise from MCM to area departments. While concrete actions to achieve this objective need to be further elaborated, they could involve the following building blocks:

36. Tools. A basic toolkit for financial sector analysis in Article IV missions should contain three basic blocks: systemic risk indicators; risk assessment tools specific to the financial sector; and tools linking financial sector trends to the macroeconomy. To be generally useful, models for financial analysis should be fairly generic, applicable to a large number of countries, operable with widely—and preferably publicly—available data. Tools should be simple, requiring a minimum of documentation, and available on a widely used platform. They should be easy to find for staff, and accompanied by a brief explanation, a discussion of pros and cons, links to detailed documentation, and examples of application.

37. Skills. Although the notion that financial sector issues are a central part of Fund surveillance has gained acceptance, financial sector skills are persistently viewed as "specialist" skills. Defining the single set of macro-financial skills all Fund economists need in order to integrate financial sector issues into macro surveillance, and making a deliberate effort to establish these skills among staff would be crucial. Building a cadre of macro-financial economists in every department in the Fund would involve changes in hiring policies, a much more targeted effort at training than at present, and a more deliberate approach to inter-departmental mobility.

38. Practices. Incentives are important, and staff should feel that macro-financial skills are valued by the institution. Macro-financial issues should be one of the mainstays of the Article IV process, just like exchange rate or fiscal issues. This will require constant focus and sustained messaging by departmental senior staff to mission chiefs and teams. Designating a few economists with macro-financial skills to work on financial issues within regional units of area departments and assigning them to missions would supplement country teams that lack macro-financial capacity. At the same time, MCM should strive to raise the profile of country work. Furthermore, FSAPs should be adapted to facilitate the integration of their analysis into the Article IV process by shifting their focus more toward macro-financial issues. MCM technical assistance (TA) can also play a role in supporting area departments' financial surveillance efforts in LICs, e.g., by multi-topic diagnostic TA missions. Finally, SPR has a key role in ensuring implementation of all operational changes through the review process and documentation and dissemination of best practices.

Possible Options

- Area departments should assume lead responsibility for conducting financial sector surveillance as an integral part of the Article IV process.
- The transition process should be supported by MCM including by providing greater continuity and consistency in MCM support of Article IV missions.

Tools. The financial sector toolkit supporting area department staff conducting surveillance should be further expanded by

- (i) further developing simple, portable tools for financial sector risk assessment and stress testing; (ii) developing simple tools facilitating the integration of financial sector variables into standard macro analysis; and (iii) expanding use of tools to assess the links between specific financial sector reforms and macro outcomes in countries where financial deepening is a priority.

Skills. The financial skills of economists in area departments should be strengthened.

Practices. Operational requirements and practices should support the development of tools and skills by

- setting clear expectations about the sophistication of analysis country teams should produce, and potentially experimenting with financial focus groups within regional units;
- adjusting FSAP output to facilitate its integration into the Article IV process and help shape area departments' macro-financial surveillance priorities;
- exploring ways to use TA more creatively as an input to macro-financial surveillance by area departments

G. Communications Issues

39. The external study highlights that the sheer volume of materials produced by the Fund has gone beyond the absorption capacity of senior policy officials and their advisors. This makes maintaining message consistency more difficult, and necessitates more sharply differentiating the products, and tailoring and channeling communications accordingly. The External Advisory Group emphasized that the Fund is a "political actor" and must think about how its advice translates politically. At the same time, the Fund should not shy away from delivering difficult messages. Striking the right balance requires well-developed and integrated communication strategies.

40. Although the established flagship products are familiar, some of the new multilateral products have gained only limited recognition. According to the survey results and interviews, authorities are, in general, familiar with main flagships (WEO, GFSR) and to a lesser extent the Fiscal Monitor. Although demand for full document downloads has declined lately, interest in secondary communications products (blogs, survey stories, and videos) is on the rise. Also, while traditional media coverage is declining, social media coverage is rising. The new surveillance products have only a fraction of the download counts of the WEO, GFSR and the Fiscal Monitor. COM[11] has increased its support for multilateral flagships, including the new products, since 2011 (Annex III).

Figure 2A. Flagship – Number of Downloads

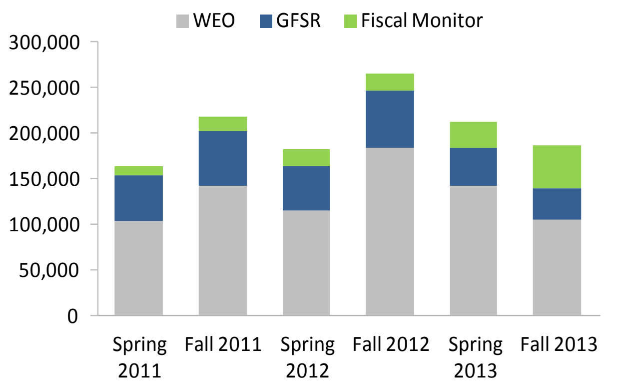
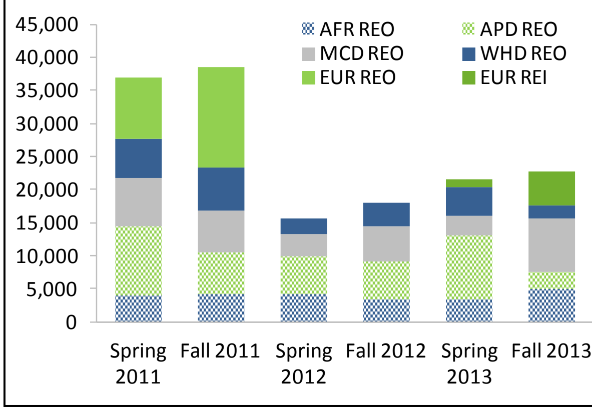


Figure 2B. REOs – Number of Downloads



41. The external study underscores that the complex nature of some new multilateral products requires significant time for absorption and assessment, even for trained economists. Country authorities receive IMF views on an almost continual basis, sometimes filtered through complex modeling exercises. The large and continual supply of products is one of the reasons why maintaining consistency has become more difficult in recent years. As the Fund continues to experiment with new products and modalities, it needs to focus on better differentiating its products and enhancing the communication of the main messages. This may include efforts to communicate results to research analysts in member central banks, finance ministries or even in universities, who are most likely to be called upon to assess whether the most senior policymakers should devote time and attention to the results. Finally, the external study stresses that the Fund's working paper series plays an important role in underpinning Fund advice, analysis and credibility.

42. Area departments have been active in developing communication strategies based on individual departments' needs. Some departments have formal communication strategies. These strategies identify department-wide main objectives, messages, and instruments. Other departments rely on less formal mechanisms. Both bottom-up (team plans) and top-down approaches are being utilized in developing the overall strategies. Depending on the countries' profiles, departments rely on both newer methods—such as social media and blogging—and traditional methods— such as radio broadcasting, conferences, and books. Most departments leverage REO events and MD's visits to reach out various audiences.

43. Departments highlighted various elements for effective communication, in addition to COM's support. COM is either embedded in departments' communication activities or plays an advisory role. COM's support for individual countries is more sporadic. The departments highlighted

[11]The upcoming Communication Strategy Board paper articulates COM's strategy for the coming period.

the following factors for an effective communication: i) resident representatives, and more broadly, “presence on the ground”; ii) delivering messages in local languages; and iii) consistent efforts at the team level.

44. Reduced budget allocation is a binding constraint for effective communication. The cut in budget allocation for languages have made it difficult for departments to produce documents in different languages and to improve staff skills in languages other than English.

Possible Options

- Consider options for better synthesizing the Fund’s key messages. Consider including a summary of the main messages of the Pilot ESR and the Spillover Report in the WEO.
- Revisit the structure of the flagships with a view to differentiating, to the extent possible, between policy recommendations and detailed background analytical studies. One approach would be making the key messages from main flagship products available to policy makers in a single source, with links to extended executive summaries of individual flagship products, reflecting main takeaways from policy and analytical chapters.
- Enhance departmental and team communication strategies. Having departmental strategies across the Fund would help improve departmental and Management coordination on the substance of the Fund's messages (including from MD’s messages meetings). At the team level, communication strategies could be clearly spelled out at the outreach section of policy notes to strategically plan the communication of the main messages ahead of the mission.

H. Resource Issues

45. The Fund’s efforts to strengthen integrated surveillance and the analysis of global risks and spillovers have required increased resources devoted to both bilateral and multilateral surveillance. Although there are some perceptions, highlighted in the report on interviews with staff, that the resources absorbed by the preparation of multilateral products resulted in an undue reallocation of resources away from bilateral surveillance, the analysis of resource allocation does not support this perception. This section focuses on developments in resources devoted to main Fund activities, particularly bilateral and multilateral surveillance, in recent years, and the expertise provided to bilateral surveillance by analyzing mission staffing patterns by functional departments.

46. While some major trends are discernible, the results have to be treated with caution as the classification of activities and outputs into multilateral and bilateral surveillance is not straightforward. Time Reporting for Analytic Costing and Estimation System (TRACES) is output-based, thus the allocation of resources between bilateral and multilateral surveillance is not in all cases clear-cut as some activities/outputs have both bilateral and multilateral surveillance elements (e.g., the Spillover Report, certain research output or cross-country analysis).[12]

[12] See Annex IV for the classification of the Fund’s outputs for ACES and TRACES.

Evolution of Resources Devoted to Main Fund Activities

47. Staff's reported time has been steadily rising since FY10 following the downsizing of the Fund (Table 1 and Figure 3).[13] The downsizing, initiated in 2008, implied a nearly 20 percent decline in staff time spent on the Fund's main outputs between FY07 and FY10, and staff time reached the FY07 level only in FY13.[14] The rise in total staff years from FY10 has been mostly driven by capacity development (in particular externally financed activities) and to a lesser extent by multilateral surveillance. Since the onset of the global financial crisis, there was a temporary rise in lending (through FY12), but by FY13 time reported for lending was lower than in FY10 as some programs ended. Resources for the oversight of the global system have been broadly stable.

Table 1. The Share of Main Activities in Total Staff Years without Capacity Development, FY07-FY14 [1/]

(in percent)

	FY07[2/]	FY10	FY11	FY12	FY13	FY14
Multilateral surveillance	15%	21%	24%	27%	27%	26%
Regional surveillance	...	5%	6%	6%	5%	5%
Bilateral surveillance	30%	33%	32%	31%	34%	35%
Oversight of global system	...	17%	16%	14%	14%	15%
Lending	...	25%	23%	22%	20%	20%
Total without capacity development	100%	100%	100%	100%	100%	100%
Total staff years (wthout capacity development)	1745	1420	1534	1630	1752	1793

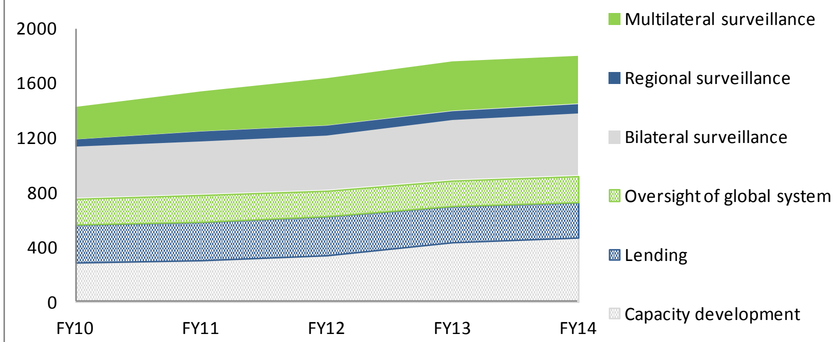
[1/]The data presented in the table covers only the five area departments and selected functional departments (FAD, MCM, RES, SPR, and STA). It reflects regular plus overtime hours.

[2/]TSR team estimate. Value for Multilateral Surveillance in FY07 is estimated by adding 50 percent of staff time for TRS codes that would be best classified as research, analysis, policy development to Multilateral Surveillance as reported in TRS in that year. The other 50 percent is unallocated. Values for bilateral surveillance and lending for FY07 are as reported under the TRS system. Values for all categories for FY10-FY14 are as reported in TRACES.

[13] The Fund's time reporting system (TRACES, introduced in 2010) captures staff time spent on various Fund outputs. It must be noted that TRACES statistics may have some limitations related to inconsistencies in the way Fund staff report their inputs to various outputs. The time input analyzed in this study includes regular and overtime hours reported by staff in area departments and selected functional departments (FAD, MCM, RES, SPR and STA).

[14] While using a longer time series of time reporting data would be useful, the changes introduced when the Fund switched from the previous time reporting system (TRS) to TRACES (in FY11) make such comparisons challenging. Nevertheless, Table 1 provides estimates for allocating resources between bilateral and multilateral surveillance for FY07, by adjusting multilateral surveillance to include a large share of general research and analysis.

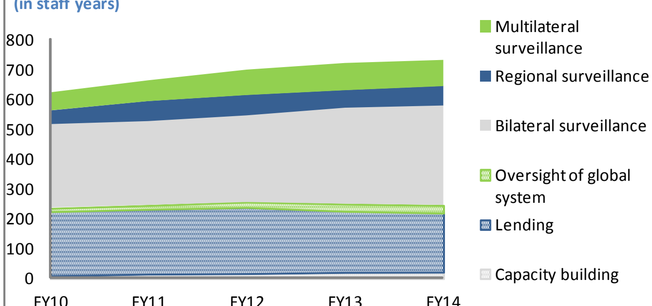
Figure 3. The Distribution of Staff Years among Main Activities, FY10-FY14
(in staff years)



Area departments and FAD, MCM, RES, SPR, STA. Includes regular and overtime hours.

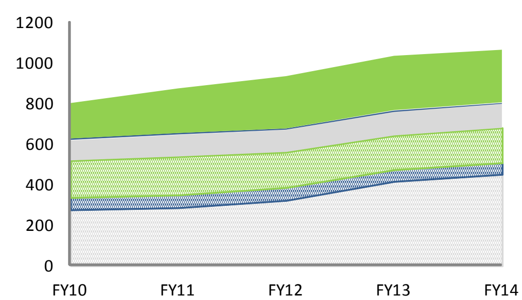
48. There is no evidence of a reallocation of staff time from bilateral to multilateral surveillance, but there is a clear rising trend in multilateral surveillance. Resources devoted to multilateral surveillance increased by 111 staff years between FY10 and FY14 translating into a five percentage point rise in staff years if capacity development is omitted, this rise was even more pronounced between FY07 (staff estimate) and FY14. Between FY10 and FY14, resources devoted to bilateral surveillance also increased steadily, by 77 staff years, translating into a modest rise as a share of total resources (excluding capacity development). Time reported for regional surveillance has been broadly stable. Thus, although the extra resources (excluding capacity development) have predominantly contributed to multilateral surveillance, this has not crowded out resources for bilateral surveillance.

Figure 4A. The Distribution of Staff Years for Area Departments among Main Activities, FY10-FY14
(in staff years)



Reflects regular and overtime hours.

Figure 4B. The Distribution of Staff Years for Functional Departments[1/] among Main Activities, FY10-FY14
(in staff years)



[1/] FAD, MCM, RES, SPR, STA. Reflects regular and overtime hours.

49. The trends in bilateral and multilateral surveillance are similar for area and functional Departments (Figures 4A and 4B). Area departments naturally devote the bulk of their time to bilateral surveillance and to lending in crisis years, whereas the distribution of staff time among the main activities shows greater variation in functional departments. Even so, the patterns in the evolution of bilateral and multilateral surveillance have been similar: between FY10 and FY14, staff time devoted to multilateral surveillance increased by nearly 50 percent in both types of departments, whereas bilateral surveillance hours rose by 19 and 25 percent in area departments and functional departments, respectively.

50. Resource trends based on the Analytic Costing and Estimation System (ACES) are broadly in line with trends in staff hours, but the share of the main output categories is somewhat different.[15] If other direct cost elements (primarily travel costs) are also taken into account in addition to staff time, the rise in resources devoted to multilateral surveillance is less steep than in the case of staff time for the comparable period (FY11–FY14). Bilateral surveillance and lending have a higher share in the total in ACES-based estimates than in TRACES, whereas multilateral surveillance has a somewhat lower share in ACES.[16] This can be to a large extent explained by higher travel costs for bilateral surveillance and lending than for multilateral surveillance.

Table 2. The Share of Fund-Financed Main Outputs without Capacity Development, FY09-FY14 [1/]
(in percent)

	FY09	FY10	FY11	FY12	FY13	FY14
Multilateral surveillance	18%	19%	20%	22%	22%	20%
Regional surveillance	5%	5%	5%	5%	5%	5%
Bilateral surveillance	39%	34%	35%	34%	37%	38%
Oversight of global system	13%	14%	14%	12%	12%	13%
Lending	26%	28%	27%	27%	25%	23%
Total without capacity development	100%	100%	100%	100%	100%	100%
Total without capacity development (in million US dollars)	329	377	357	381	380	387

[1/] FY09-10 are pre-ACES estimates by the Office of Budget and Planning. FY11-14 are ACES estimates.

Support by Functional Departments to Area Departments

51. Mission chiefs view multilateral activities crowding out the support formerly received from functional departments. According to the surveys, mission chiefs—particularly those working on EMs and LICs—call for greater support from functional departments either on Article IV missions or a continuous basis. This comes against a backdrop of perceived reductions in both the experience of teams and in functional department support for certain area departments: nearly half of mission chiefs working on EMs and LICs (particularly in MCD and AFR) report a marginal or substantial decline in support from functional departments, whereas AM mission chiefs generally report no change or a marginal improvement. Financial sector expertise, while in great demand, is particularly unevenly distributed. While the majority of EUR mission chiefs report having financial sector experts on their teams, the ratio drops to around 30 percent in AFR and MCD. A significant share of mission teams in AMs (mainly in EUR and WHD) have a permanent MCM economist, whereas EM and LIC teams rely more on staff members from their own departments.

[15] ACES data is only available from FY11. Comparisons of pre- and post-FY11 ACES data have to be interpreted cautiously as reporting behavior changed when the new TRACES system was introduced.

[16] The shares are expressed as a percentage of the total without capacity development in both cases in order to filter out the effect of the significant rise in externally-financed TA activities.

52. **Mission reporting data indicates that functional departments ramped up their mission support to area departments in the crisis years, with EUR benefitting the most (Table 3 and Figures 5 and 6).**[17] Most of the increase was allocated to program country missions while bilateral surveillance mission support remained broadly level between FY07 and FY13.[18] The number of functional department staff mission days for bilateral surveillance increased by 3 percent between FY07 and FY13, whereas their participation in program missions increased by 25 percent in the same period, with a particular sharp rise until 2011. FAD and SPR allocate around 60-80 percent of their mission support to program cases. MCM's assistance to program missions increased significantly between FY07 and FY12, while their mission support to bilateral surveillance remained steady in absolute terms and declined as a share of their total support. In parallel with the increased mission support to EUR for bilateral surveillance purposes, missions to all area departments other than AFR in this period have declined. The increase in functional departments' mission days in EUR-led bilateral surveillance missions can partly explained by an overall increase in EUR missions days. Nevertheless, from FY09, the share of functional department staff on EUR-led missions has been markedly higher than on missions led by other departments. (Table 4)

Table 3. Functional Department[1/] Mission Support to Area Departments - Bilateral and Regional Surveillance and UFR Missions
(No. of days on missions)

	AFR	APD	EUR	MCD	WHD	Total
2007	1117	600	1002	743	1053	4515
2008	1081	448	818	797	754	3898
2009	1247	392	1762	644	477	4522
2010	1253	584	2155	759	703	5454
2011	1058	591	2426	814	626	5515
2012	854	366	2371	825	600	5016
2013	1118	498	2517	821	540	5494
Increase	0%	-17%	151%	10%	-49%	22%

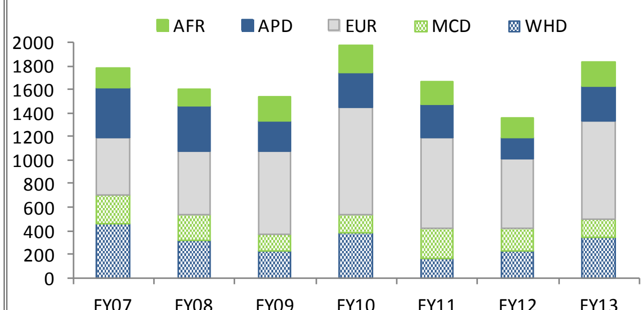
[1/]FAD, MCM, SPR and RES

Table 4. Functional Department[1/] Support to Area Department Surveillance Missions - (Share of total area department surveillance mission days, in percent)

	AFR	APD	EUR	MCD	WHD
FY07	16%	22%	20%	16%	24%
FY08	25%	20%	24%	10%	17%
FY09	19%	16%	25%	9%	14%
FY10	22%	18%	30%	9%	22%
FY11	19%	14%	25%	15%	12%
FY12	15%	9%	25%	13%	15%
FY13	13%	16%	23%	14%	18%

[1/]FAD, MCM, SPR and RES

Figure 5. Functional Department[1/] Support to Area Department Surveillance Missions
(No. of days on missions)



[1/]FAD, MCM, SPR and RES

[17] This analysis is based on TIMS data for the FY07–FY13 period. Functional department mission support for area departments include only FAD, MCM, SPR and RES for the purposes of this analysis.

[18] Bilateral surveillance missions include both Article IV missions and staff visits for the purpose of this analysis. Program country missions also include combined Article IV and review missions.

Box 2. Functional Departments' Mission Support to Area Department—Bilateral Surveillance

EUR has been the biggest beneficiary of functional departments' mission support not only for program cases but also for bilateral surveillance. *(Table 5) Since FY07, EUR's share in total mission days for bilateral surveillance increased steadily, and by FY10 it accounted for over 40 percent of mission days for all functional departments. The increased support to EUR translated into lower mission participation for other area departments: APD has received lower support from FAD, while MCM reduced its mission support for all other area departments, and SPR cut back on missions to APD, MCD and WHD.*

Table 5. Functional Department[1/] Mission Support to Area Departments Bilateral Surveillance Missions

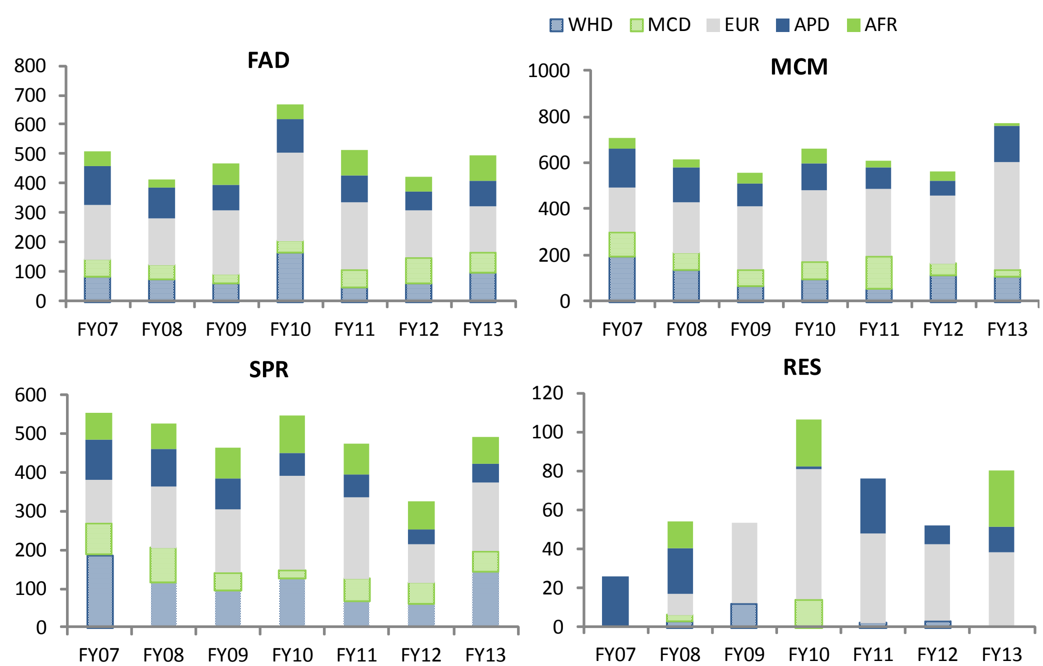
(No. of days on missions)

		AFR	APD	EUR	MCD	WHD	Total
FAD	FY07	50	132	186	58	83	509
	FY13	89	84	158	70	96	497
MCM	FY07	47	164	195	108	193	707
	FY13	16	155	466	31	108	776
SPR	FY07	68	102	113	79	188	550
	FY13	70	48	177	53	142	490
RES	FY07	0	26	0	0	0	26
	FY13	29	13	38	0	0	80

[1/]FAD, MCM, SPR and RES

Figure 6. Functional Department Mission Support to Area Departments - Bilateral Surveillance

(No. of days on missions)



53. Deeper policy analysis and advice in Article IV consultations would greatly benefit from increased functional department support both in terms of mission participation and review, particularly from MCM and FAD. Mission reporting data supports the perception of a significant share of mission chiefs and some country authorities that specialized knowledge support by functional departments to bilateral surveillance is insufficient. As the Report on Interviews for the 2014 TSR highlights, several country authorities mentioned that they found the IMF staff's analysis too general to be of great value in addressing their concrete policy challenges. Country authorities value the specialized expertise that functional departments' staff can bring to the policy dialogue in Article IV Consultations, and some of them raised the issue of decreased participation of functional department staff, especially from MCM and FAD, in Article IV consultation missions. Interviews with mission chiefs suggest that the number of countries reviewed falls short of area departments' wishes. However, data show that FAD and MCM review of Policy Notes have not declined (Table 6).

Table 6. Number of Countries whose Policy Note was Reviewed by MCM and FAD

	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14
Fiscal Affairs Department	…	…	…	…	119	107	105	112
Monetary and Capital Markets Department	67	52	57	57	57	75	80	78

54. The substantial increase in capacity building could be better leveraged to support bilateral surveillance. While some country teams have indeed received lower direct support from functional departments for the Article IV consultation process, technical assistance to the Fund's membership has increased greatly. It would be beneficial if technical assistance were better integrated with bilateral surveillance to take advantage of this increased indirect support, e.g., by aligning the timing of TA and Article IV missions, and better integrating the findings and recommendations of TA reports into the surveillance analysis. This is especially relevant for many emerging countries, particularly those without programs, where technical assistance has been somewhat disconnected from the Article IV process unlike in most program cases where technical assistance missions and findings are more integrated into country work.

Annex I. Modalities of Multilateral Surveillance at the Fund

MS Exercise / Product	Description	Launched	Frequency	Length of process	Published	Ownership	Integration with Bilateral Surveillance	Integration with other Multilateral Surveillance
World Economic Outlook	Analyzes global economic developments during the near and medium term - includes conjunctural and more detailed analytical chapters.		Biannual	6 months	Y	RES	Database - country desks undertake economic analysis, subject to WEO assumptions, and submit data to the WEO team. The teams then iterate to discuss and resolve data issues. Desks have ultimate responsibility for changes and resubmitting data. Analytical Chapters - Area Departments provide early feedback on chapter outlines, including at an informal "brown bag" seminar, in addition to formally reviewing fully drafted chapters. Conjuntural chapters - Area Departments draft sections on their regions and submit them to the WEO. Subsequently, RES and ADs iterate on finalizing the sections. Statistical Appendix: departments review tables for accuracy.	The WEO and the WEO database provide the baseline forecast for the GFSR and the Fiscal Monitor. Analysis and scenarios in the analytical chapters of the WEO are also often leveraged by the Spillover Report and the Early Warning Exercise.
Global Financial Stability Report	Identifies vulnerabilities in the global financial system - includes conjunctural and analytical chapters	2002	Biannual	6 months	Y	MCM	Analytical Chapters - Area Departments are: (i) invited participate in brainstorming sessions on analytical topic selection; (ii) review chapter outlines; (iii) review the fully drafted chapters; (iv) review charts and tables for accuracy; and (v) participate in mid-point meetings with country economists. Conjuntural chapter - Area departments: (i) review chapter outlines; (ii) review charts and tables for accuracy; and (iii) review the fully drafted chapters. Statistical Appendix: Departments review charts and tables for accuracy.	MCM and RES engage early to ensure themes for the WEO and GFSR are coordinated. An explicit objective of the GFSR is to draw out the financial ramifications of economic imbalances highlighted by the IMF's World Economic Outlook.
Fiscal Monitor	Analyzes latest fiscal developments - updates fiscal implications of the crisis, medium-term projections, and assesses policies to put public finances on a sustainable footing.	2010	Biannual	6 months	Y	FAD	Fiscal data - country desks provide comments and inputs to tables and fiscal numbers via the WEO, including updating definitional information for individual countries. Conjunctural chapters - Area Departments formally review chapters once they have been fully drafted. Analytical chapters (new in Oct 2013) - consultation with Area Departments on themes was limited and later in the process. FAD plan to engage earlier in future, in line with practice for the WEO. Other - FM team have lots of contact with country desks in the lead up to missions, often to provide cross-country analysis and advice, as well as conjunctural information. This is meant to ensure consistency in surveillance, particularly for bigger systemic economies.	The Fiscal Monitor's projections are based on the same database used for the April 2010 WEO and GFSR. The fiscal projections for individual countries have been prepared by IMF desk economists, and, in line with the WEO guidelines, assume that announced policies will be implemented.
Early Warning Exercise	Assesses low-probability but high-impact risks to the global economy and identifies policies to mitigate them.Joint IMF and Financial Stability Board (FSB) exercise, integrating macroeconomic and financial perspectives on systemic risks.	2008	Annual	4 months	N	Taskforce - RES, SPR and Area Departments	There is no formal review process. Heads of Department see and discuss the results but in practice there tends to be relatively limited reaction or feedback.	The EWE leverages inputs from other MS exercises - for example the WEO or Spillover Report - rather than underaking a lot of original analysis. The aim is to present the material in new and interesting ways to stimulate a good policy discussion at the IMFC.

MS Exercise / Product	Description	Launched	Frequency	Length of process	Published	Ownership	Integration with Bilateral Surveillance	Integration with other Multilateral Surveillance
Vulnerability Exercises	Exercises act as a basis for regular, focused discussions on key risks and their implications for IMF policy, prescriptions. Aimed at enhancing the IMF's crisis prevention capabilities.	VEE - 2001 VEA - 2011 VE-LICS - 2011	Biannual	3-4 months	Y/N	SPR	Data and Ratings - country desks provide input initial data and views on final vulnerability ratings. SPR teams and reviewers discuss any disagreements on ratings, but ultimately the country desk has the final say. Shortlist - Area Departments are also asked to coordinate and provide a rank-ordered shortlist of countries requiring heightened attention.	Functional Departments are now asked to provide information to inform country desks' final ratings – e.g. FAD provide a public sector vulnerability index; MCM provide a financial sector rating; RES provide a crisis risks rating and [x] on political risks and program performance. [The IMF Risk group also meets with country teams of the countries deemed most vulnerable countries to see what support can be provided.]
Spillover Report	Assesses how policies in the larger systemic-5 economies (Euro Area, China, Japan, UK and US), impact the rest of the world. Aimed at improving understanding of interconnectedness and supporting better policy collaboration at the global level.	2010	Annual	6 months	Yes	RES	Area departments meet with Functional Departments to discuss theme outlines and work allocation. Preliminary analysis is then submitted to the RES spillover team who coordinate and compile inputs. A cross-departmental taskforce, including Area Department representatives, comment on thematic outlines, presentation and finally the draft report. There is then a formal departmental review process where area departments can provide comments. Evidence suggests that analysis and advice from the Spillover Reports is referenced or featured in some Article IV reports, particularly in those of the systemic economies that are the focus of the Spillover Reports.	
External Sector Report	Systematic surveillance of external imbalances, including beyond the exchange rates to current accounts, balance sheet positions, reserves adequacy and capital flows. Provides multilaterally consistent analysis of the external positions of the 28 largest economies (and the Euro Area) simultaneously, and potential policy responses.	2012	Annual	6 months	Yes (ESR country pages not published)	RES	Country desks input on desirable policy values (p* values) and regularly update throughout the year. They also meet with the RES team providing feedback on the EBA results, through meetings with the RES team. Country desks can provide addition auxiliary regressions - almost like sensitivty analysis. Desks have the ultimate decision if there is a disagreement. Desks also engage with country authorities on the EBA results, at the Spring Meetings and during Article IV missions. ESR teams supports country desks, particularly on the bigger global picture. Although they are not formally involved in the Article IV process, they do have some input to the ESR-related language, with more reports beginning to now include these references.	SPR/RES front office review for consistency language.
Global Risk Assessment Matrix	Lists key global and regional risks, and associates a broad probability of realization to each (low-medium-high). The G-RAM is an internal staff document, which is discussed among departments and approved by Management, updated at least quarterly or as needed to provide an up-to-date consistent set of risks around the staff's baseline forecasts.	2012	No formal cycle to retain flexibility, though close to quarterly in practice.	1 month	N (but most material finds it way into the public domain via Article IV reports).	SPR	Departments meet at a technical level with the SPR team to set the preliminary agenda and then submit risk updates to the Interdepartmental Risk Group. Country teams draw on the GRAM for risks to include in the Risk Assessment Matrix in the Article IV reports and the FSAPs.	Draws on spillover exercises and organically evolves. Updates feed into VEs, particularly the scenarios. Also draws on discussion of downside risks in the WEO (RES people in risks group). In that way seen as a bridge to the bilateral surveillance. More integration with WEO than GFSR.
Cluster Reports	Intended to assess spillovers across a group of interconnected countries by examining the risks from common shocks, highlighting shared policy challenges and where relevant, potential gains from policy coordination.	2013	Ad-hoc	3 months (support parallel AIV processes)	Y (but requires consent of all countries involved)	Area Departments (thus far)	Cluster reports have tended leverage existing country desk work. Process usually requires early consultation by the country desks/Area Departments with country authorities to achieve buy-in for the report. Risks and policy recommendations are then discussed either during individual Article IV consultation missions, staff visits, or at conferences. Ideally, discussions allow for a joint event attended by all countries involved.	Analytical support from SPR, RES, MCM.

Annex II. Cluster Reports

55. Three pilot cluster reports, the German-Central European Supply Chain (GCESC) cluster report, the Nordic Regional Report (NRR), and the Baltic Cluster Report (BCR) have been produced so far.[19] These three cluster reports took different approaches in terms of modalities, but they all considered common concerns and policy issues of a cluster of countries in an integrated way. Moreover, all three reports had a strong focus on interconnectedness and common challenges. The GCESC report focused on both real and financial linkages supporting the supply chain, the NRR mainly focused on financial linkages, and the BCR focused on links among the Baltics and between the Baltics and Nordics, as well as issues of common concern among the Baltics. Importantly, these cluster reports were coordinated with Article IV consultations of most of the countries involved, thereby facilitating the integration of multilateral perspectives with bilateral surveillance and vise versa.

56. More generally, cluster reports fill the gap between bilateral and multilateral surveillance, by examining groups of countries with strong inter-linkages or common issues and experiences and analyzing the policies of these countries in the regional context. The two pilot cluster reports successfully demonstrated that bilateral Article IV and cluster reports can reinforce each other. Cluster reports are a form of multilateral surveillance that is well-tailored to country needs, helps identify common policy issues and build a broader picture for clustered countries, and this broader picture in turn helps inform what is needed at the national level. In other words, cluster reports provide additional analytical and policy underpinnings to bilateral surveillance.

57. The cluster reports have been very well received by the authorities. The authorities were fully engaged in the process and provided substantial feedback to both cluster reports. This was also reflected in their positive response in the survey conducted by the staff. The ED offices also provided excellent support in coordinating the work and facilitating the dialogue between the authorities.

58. The experience so far offers some valuable lessons.

- **Identification of clusters.** Criteria for identifying clusters can vary across regions and over time. Clusters can be formed beyond geographical proximity, by considering common challenges and experiences (e.g., trade linkages, housing market boom, banking issues). Clusters offer the possibility to look beyond traditional grouping of countries (e.g., Germany is a member of the euro area, while most of the supply chain countries are not). Institutional factors could also play an important role in identifying clusters. The NRR and BCR built on a long standing tradition of cooperation among Nordic and Baltic economies while this feature may not always be found in other regions. On the other hand, the model used for the GCESC report could work well even when the tradition of cooperation among the countries is less evident.

[19] More cluster reports are also in pipeline. A few other cluster reports are in the planning stage, including a housing market cluster report (EUR) and an ASEAN cluster report (APD).

- **Traction.** Common policy challenges need to be significant for all members involved, as there will be traction only if the policy analysis is relevant.

- **Resource management and planning.** Cluster reports require good resource management and planning. While other departments contributed, the three cluster reports were produced largely by the existing teams within the existing staffing framework in EUR. In the case of the NRR, while there were synergies between the cluster report and Article IV work, workloads increased substantially for the Nordic country teams. This was true to an even greater extent with the BCR which was prepared and discussed simultaneously with the Article IV reports for the Baltic countries. Similarly, the GCESC resulted in a greater workload for those involved. On the other hand, limiting the size of the team helps to minimize coordination costs. That was particularly the case for the NRR team because the most of the team members were from the same unit.

- **The Fund-level institutional factors.** Support from the Board, Management, and the Front Office was a necessary condition for the cluster reports. In the case of the NRR, it was helpful that most economies worked in the same Unit of the Department, and that economists in all country teams regularly exchanged information and worked on joint projects. In addition, there was substantial overlap in staffing among country teams. In the case of the GCESC report, new teams and infrastructure had to be set up.

59. Interviews with area departments suggest that cluster reports need to continue to be formulated in a flexible manner to be applicable to a wide range of countries. Some area departments noted the importance of a thematic approach as narrow concepts of regional clusters may not always fit. For example, sometimes countries within an area department's portfolio have limited direct linkages within the region but rather have more direct linkages with outside countries. It was also pointed out that it is not easy to coordinate the timing of Article IVs (e.g., authorities' preferences or staffing constraints at the Fund), and in some cases, the authorities may prefer not to cluster Article IVs at all. In practice, cross-regional work can add further complications in terms of coordinating the timing of Article IVs and staffing.

60. These considerations suggest that continued flexibility in cluster design will be a useful approach going forward. Flexible combinations of thematic and regional approaches beyond the models of the NRR, BCR and the GCESC will allow cluster reports to adjust to different need and circumstances while filling the gap between multilateral and bilateral surveillance. At the same time, it is important to involve authorities early and emphasize that cluster reports are a complement to bilateral surveillance, adding to and not taking away from the existing Article IVs.

Annex III. Surveillance and Communications: An Update[20]

Since 2011, new communication tools have helped to reach a broader audience and build understanding and traction for surveillance messages.

- ***Shorter documents in "plain English."*** Increased use of *IMF Survey* stories to accompany the release of systemic Article IV reports and flagship surveillance reports—WEO, GFSR, Fiscal Monitor, as well as the Spillover and External Sector Reports—helps to draw out top line policy messages in language that is tailored to the general public (see 2013 WEO Survey Story). Messages across surveillance reports are also better coordinated, which contributes to the coherence of policy advice and builds credibility.

- ***Social media.*** The expansion of the IMF's use of social media, including in a range of languages, is broadening the exposure of the key surveillance reports. The IMF's Twitter account @*IMFNews* has grown to over 200,000 followers, and through Weibo reaches over 3.8 million Chinese followers, while the global economy blog *i*MFdirect has received more than one million views since its launch in August 2009. The Spanish and Arabic blogs, introduced shortly thereafter, allow the IMF to strengthen its dialogue with readers in Latin America and the Middle East in their own language.

- ***Targeted outreach.*** Outreach for flagship reports is more strategic—and crosses regions—in recognition of increasing global interconnectedness. For example, the 2013 WEO and GFSR inter alia were presented in South Africa, where the surveillance messages of global financial turmoil were critically important. Outreach around Article IV missions is also more tailored to country circumstances. Fund missions now regularly meet with civil society organizations, labor groups, parliamentarians, youth, and other stakeholders. Resident representatives continue to play a vital role in such outreach.

- ***Digital publications.*** While the Fund still uses print strategically for the range of surveillance products, it is also publishing more widely in multiple electronic and digital formats to reach a wider audience. Since 2010, the IMF's eLibrary and Bookstore has provided global access to Fund publications to over 600 institutional subscribers (free-of-charge in developing and low-income countries).

[20] Prepared by the Communications Department.

Annex IV. The Fund's Outputs

The Fund's Outputs		
Major Output Areas	**Output Areas**	**TRACES Outputs**
Multilateral Surveillance	**1.1** Global economic analysis	**1.1.1** WEO **1.1.2** GFSR **1.1.3** General research **1.1.4** General outreach
	1.2 Cooperative economic policy solutions	**1.2.1** Multilateral consultations **1.2.2** Support and inputs to multilateral forums
	1.3 Tools to prevent and resolve systemic crises	**1.3.1** Analysis of Vulnerabilities and Imbalances **1.3.2** Other Cross-Cutting Analysis excluding Fiscal Monitor **1.3.3** Fiscal Monitor
	1.4 Regional approaches to economic stability	**1.4.1** REOs **1.4.2** Surveillance of regional bodies **1.4.3** Other regional projects
Oversight of Global Systems	**2.1** Development of international financial architecture	**2.1.1** Work with FSB and other international bodies **2.1.2** Other work on monetary, financial and capital markets issues
	2.2 Data transparency	**2.2.1** Statistical information/data **2.2.2** Statistical manuals **2.2.3** Statistical methodologies
	2.3 The role of the Fund	**2.3.1** Development and review of Fund policies and facilities excluding PRGT and GRA **2.3.2** Development and review of Fund policies and facilities - PRGT **2.3.3** Development and review of Fund policies and facilities - GRA **2.3.4** Quota and voice **2.3.5** SDR Issues
Bilateral Surveillance	**3.1** Assessment of economic policies and risks	**3.1.1** Article IV Consultations **3.1.2** Other bilateral surveillance
	3.2 Financial soundness evaluations	**3.2.1** FSAPs/OFCs
	3.3 Standards and Codes evaluations	**3.3.1** ROSCs **3.3.2** AML/CFT (incles ROSC) **3.3.3** GDDS/SDDS
Lending	**4.1** Arrangements supported by Fund resources	**4.1.1** Programs and facilities supported by general resources **4.1.2** Programs and facilities supported by PRGT resources
	4.2 Arrangements not supported by Fund resources	**4.2.1** Non-financial instruments and debt relief
Capacity Building	**5.1** Technical assistance	**5.1.1** Technical assistance reports, notes, manuals
	5.2 Training	**5.2.1** Training courses, workshops
Governance and Support	**6.1** Direction and accountability	**6.1.1** Board of Governors, IMFC, and Executive Board **6.1.2** Reform of IMF processes and audit-related activities
	6.2 General support	**6.2.1** Management and control of financial resources **6.2.2** Other general services **6.2.3** My career development **6.2.4** Management and career development of staff **6.2.5** Other HR activities