

# INTERNATIONAL MONETARY FUND

## Financial Sector and Bilateral Surveillance—Toward Further Integration

Prepared by the Strategy, Policy, and Review Department and the Monetary and Capital Markets Department, in collaboration with the Research, Statistics and Other Departments

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## List of Acronyms

ABS	Asset-Backed Security
AFR	African Department
APD	Asia and Pacific Department
BIS	Bank for International Settlements
BSA	Balance Sheet Analysis
CCA	Contingent Claims Analysis
CCP	Central Counterparties
CDIS	Coordinated Direct Investment Survey
CDS	Credit Default Swap
CGFS	Committee on Global Financial Systems
CPIS	Coordinated Portfolio Investment Survey
CRT	Credit Risk Transfer
CVU	Corporate Vulnerability Utility
DTCC	Depository Trust and Clearing Corporation
ECB	European Central Bank
EUR	European Department
EWE	Early Warning Exercise
FDI	Foreign Direct Investment
FSAP	Financial Sector Assessment Program
FSB	Financial Stability Board
FSF	Financial Stability Forum
FSIs	Financial Soundness Indicators
FSLC	Financial Sector Liaison Committee
FSSA	Financial System Stability Assessment
FSSGN	Financial Sector Surveillance Guidance Note
G-20	Group of 20
GCC	Gulf Cooperation Council
GFSR	Global Financial Stability Report
IIP	International Investment Position
IMFC	International Monetary and Financial Committee
INS	IMF Institute
ISDA	International Swaps and Derivatives Association
LICs	Low-Income Countries
MCD	Middle East and Central Asia Department
MCM	Monetary and Capital Markets Department
OECD	Organisation for Economic Co-operation and Development
OFC	Offshore Financial Center
OTC	Over-the-Counter
RAM	Risk-Assessment Matrix
REO	Regional Economic Outlook
RES	Research Department
ROSC	Report on the Observance of Standards and Codes
SDDS	Special Data Dissemination Standard
SIP	Selected Issues Paper
SPR	Strategy, Policy, and Review Department
SRF	Standardized Report Forms
SSP	Statement of Surveillance Policies
STA	Statistics Department

TSR	Triennial Surveillance Review
UN	United Nations
VEA	Vulnerability Exercises for Advanced Economies
VEE	Vulnerability Exercises for Emerging Markets
WEO	World Economic Outlook
WHD	Western Hemisphere Department

## EXECUTIVE SUMMARY

**The Fund has continued to make great efforts to enhance financial sector focus and analytics in bilateral surveillance.** The main initiatives include enhancing collaboration with other multilateral institutions, improving analytical tools and methodologies, and a major strengthening of the financial sector capabilities in area departments. The fruits of these efforts are already visible in the better treatment of financial sector issues in Article IV reports.

**But more needs to be done to keep up with an ever-changing financial landscape.** To be sure, it is unlikely that any single measure or reform will address this challenge, but the amendments to the Financial Sector Assessment Program (FSAP), including the introduction of financial stability modules, represents an important step. This paper discusses additional initiatives that are being considered or have recently been launched to further strengthen the treatment of financial sector issues in Article IV consultations. These include:

### *Ensuring Better Integration of FSAP Findings into the Article IV Reports:*

- Standardized risk-assessment matrix (RAM), to be produced in FSAPs, would identify the most important threats to financial sector stability, evaluate their likelihood, and discuss their expected impact on macro-financial stability, thereby helping to frame the discussion of these issues in Article IV consultations.

### *Building Bridges Across Complementary Initiatives:*

- This would involve integrating more consistently the findings from the Fund's multilateral exercises into bilateral surveillance through: (i) the review process; (ii) an enhanced interdepartmental Financial Sector Group; and (iii) cross-country, thematic staff papers.

### *Strengthening the Analytical Content of Bilateral Surveillance:*

- The coverage of cross-border issues would be improved by: (i) better integrating existing data resources and making such data more accessible to country teams; (ii) improving measurement of cross-border risks and better integrating assessments of off-shore exposures in Article IV consultations; and (iii) making greater use of cross-border analytical tools (as developed in EWE and the GFSR).
- Balance sheet analysis would be integrated more systematically into staff's macroeconomic scenarios, and stress tests and scenario analysis would also be used to assess the impact of macroeconomic scenarios on financial solvency.
- Financial sector coverage in low-income countries (LICs) would be strengthened through greater attention to the impact of underdeveloped financial markets on the

effectiveness of macroeconomic policies and the economy's ability to absorb shocks. A new IMF-World Bank LIC Financial Group, under the auspices of the Financial Sector Liaison Committee (FSLC), will help upcoming Article IV missions identify macro-financial stability issues and associated market development needs; serve as a forum to align Bank activity under FSAPs with stability needs of LICs; and facilitate collaboration in the field or off site.

**These initiatives will require difficult tradeoffs in a constrained budget environment.**

Current budget realities may require a phased approach, one that will be guided at least in part by collaborative efforts by area departments, MCM, and SPR to review the experience and tailor priorities where they are likely to be most effective.

## I. THE EVOLVING CONTEXT<sup>1</sup>

1. **The global financial crisis has spurred renewed calls from the international community for the Fund to play a lead role in financial sector surveillance.** The International Monetary and Financial Committee (IMFC), in particular, stressed the need for the Fund to enhance the effectiveness of surveillance through improving its analysis of macro-financial linkages, cross-border spillovers, and sources of systemic risks (to help prevent future crises). The IMFC also reiterated the importance of embedding financial sector surveillance more effectively in Article IV consultations, and integrating its results into the Fund's broader macroeconomic surveillance.<sup>2</sup>

2. **The Fund has affirmed its commitment to a strong focus on financial sector issues.** The 2007 Decision on Bilateral Surveillance stated that financial sector policies will always be a subject of the Fund's surveillance, and in October 2008, the Board adopted a Statement of Surveillance Policies (SSP) for 2008–11 that gave prominence to financial sector issues.<sup>3</sup> In particular, the operational priorities included financial sector surveillance and real-financial linkages, as well as risk assessments and multilateral perspectives.<sup>4</sup>

3. **The Fund has embarked on several specific initiatives to enhance the quality of financial sector surveillance.** In particular, multilateral surveillance has been enhanced by the joint IMF-Financial Stability Board's (FSB) Early Warning Exercise (EWE), which merges the Fund's macro-financial analysis with the FSB's regulatory insights to identify risks in major financial markets and provide policy options to mitigate these risks. A Financial Sector Surveillance Guidance Note (FSSGN) has been issued to staff. Research continues to strengthen the analytical tools to enable more rigorous analysis of macro-financial linkages and to improve methodologies to assess financial sector vulnerabilities. Cross-country analytical work in the Fund is also being enhanced.

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<sup>1</sup> The main contributors to this paper are Ritu Basu, Gilda Fernandez, Pedro Rodriguez, Wasima Rahman-Garrett, Era Dabla-Norris, Jean-François Dauphin and Ulric Erickson von Allmen (all SPR) under the supervision of David Marston (SPR) and Christopher Towe (MCM). The paper also benefited from contributions from Mariano Cortes (MCM) and Colleen Cardillo, Robert Heath, Rene Piche and Alfredo Leone (STA), as well as inputs from area departments (for Box 2).

<sup>2</sup> *Communiqué of the International Monetary and Financial Committee of the Board of Governors of the International Monetary Fund*, April 25, 2009. The G-20 has also called for the Fund, in cooperation with the Financial Stability Board (FSB), to monitor progress in the efforts under way to strengthen the financial system through improvements in financial supervision and regulation (*G-20 Leader's Statement*, April 2, 2009).

<sup>3</sup> *Bilateral Surveillance Over Members' Policies* (DEC/13919, 06/15/07).

<sup>4</sup> *Surveillance Priorities for the International Monetary Fund, 2008–2011*. The economic priorities of the SSP are expected to be revised in September 2009 but will continue to give prominence to financial sector issues.

4. **The proposed amendments to the FSAP are part of this broader effort.**<sup>5</sup> These changes are intended to sharpen the focus of assessments; make them more flexible and nimble; strengthen the analytical content of stability analysis, comparability, and dissemination of assessments; ensure effective Bank-Fund coordination; and improve resource utilization, cost control, and internal processes.

5. **The full benefits of these initiatives will come only with complementary efforts to strengthen the treatment of financial sector issues in Article IV consultations.** This paper discusses further steps to maintain the momentum in this area, including: better integration of the Fund's various vehicles for surveillance; better capturing cross-border risks; and enhancing the analysis of macro-financial linkages. In addition, it also discusses how to deepen the coverage of financial sector issues in low-income countries (LICs). Finally, the paper provides further direction to optimize process and resource allocation for more effective bilateral financial sector surveillance. Some of these efforts have already started as part of this review.

## II. RECENT STEPS AND REMAINING CHALLENGES

### A. Recent Steps

6. **The Fund has strengthened its financial sector surveillance in several dimensions.** Some of these efforts were described in *Integrating Financial Sector Surveillance Issues and FSAP Assessments into Surveillance*<sup>6</sup>, which reviewed the key challenges and recent steps taken, but did not make specific proposals. Since then:

- ***Knowledge management has improved.*** In particular, the FSSGN was issued in April 2009, providing an organizing framework to help country teams conduct financial sector surveillance and access a wealth of resources (Box 1). Also, an intra-Fund collaborative website on cross-country work, spillovers, and linkages was established.
- ***The EWE has been initiated.*** A dry-run was conducted in early 2009 and a full-scale rollout will be conducted during the 2009 Annual Meetings.

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<sup>5</sup> See accompanying reports *The FSAP After Ten Years: Experience and Reforms for the Next Decade* and *Revised Approach to Financial Regulation and Supervision Standards Assessment in FSAP Updates*.

<sup>6</sup> Available at [www.imf.org](http://www.imf.org).

### **Box 1. Financial Sector Surveillance Guidance Note (FSSGN)**

**The FSSGN provides an organizing framework and access to a wealth of resources for the conduct of financial sector surveillance.** The note is nonprescriptive, and provides access to quantitative tools and other analytical material on macro-financial risk assessment and to evolving international views on financial sector policy issues through an interactive web-based platform. It also provides examples of good practice in Article IV staff reports and FSAPs, links to MCM's Knowledge Bank (an evolving product), and contacts of Fund's financial sector experts. Specifically, the FSSGN:

*Provides guidance on how to assess possible sources of risks, including:*

- Exposures of financial institutions to credit, market, liquidity, and operational risks;
- Risks from linkages across sectors in the domestic economy and across borders; and
- Legal, institutional, and other structural issues, including the contractual environment, the role of state banks, and foreign bank entry.

*Describes quantitative diagnostic tools to assess various types of risks, including:*

- Financial Soundness Indicators (FSIs);
- Market-based indicators (i.e., equity prices, credit spreads, and credit ratings, etc.); and
- Modeling techniques such as stress testing and the balance sheet approach.

*Describes qualitative tools, including:*

- Assessments of a country's compliance with various standards; and
- Codes and other guidelines that provide broad principles and benchmarks to identify deficiencies in key areas.

*Points out possible policy recommendations depending on country circumstances, including the macro and micro aspects of:*

- Crisis prevention policies to address emerging asset price bubbles, credit booms, potential capital flow reversals, and inadequacies of capital requirement frameworks, supervisory practices, and liquidity management frameworks; and
- Crisis management policies to improve existing frameworks to deal with crisis containment, restructuring and resolution, and asset management.

- ***The collection, dissemination, and quality of existing data have been improved.*** New websites including STA's Data Link (for internal Fund use only) and the external [Principal Global Indicators](#) site (developed jointly with other international agencies), provide access to cross-country comparable indicators for the G-20, links to key country-specific public agencies, and economic and financial indicators from selected international agencies (a number of additional countries, agencies, and indicators are covered in STA's data link). In addition, a group of more than 25 countries started in July 2009 to disseminate FSIs via the IMF's [Financial Soundness Indicators](#) website, with the participation expected to increase as the database is expanded. Furthermore, work is under way to explore the inclusion of financial indicators in the Special Data Dissemination Standard (SDDS) on an encouraged basis.

- ***Extensive work is being done to fill data gaps.***<sup>7</sup> An Inter-agency Group on Economic and Financial Statistics chaired by the Fund and comprising the Bank for International Settlements (BIS), the European Central Bank (ECB), Eurostat, the Organisation for Economic Cooperation and Development (OECD), the World Bank, and the United Nations (UN) is working in several areas to fill data gaps revealed by the crisis. In addition, in July 2009, an FSB/IMF “[Users Conference on the Financial Crisis and Information Gaps](#)” stressed the following areas for national and multilateral action: develop better analytical frameworks for system-wide risk assessments; strengthen the monitoring of the risk exposures of systemically important institutions, as well as of the nonbank financial sector, and their inter-linkages both domestic and cross-border; reprioritize and review FSIs and broaden their coverage to nonbank intermediaries; and enhance analysis and data on cross-border financial flows. Also, a Working Group (BIS, ECB, IMF and World Bank) on Securities Databases is preparing a Handbook on Securities Statistics to promote coherent and internationally comparable securities statistics. Work is also under way to better assess the systemic importance of financial institutions.<sup>8</sup>
- ***Area departments have continued to build financial sector analysis capacity.*** This reflects the many initiatives to strengthen in-house quality of financial sector surveillance (Box 2).
- ***Continued efforts are being made to enhance multilateral analyses of macro-financial linkages.*** MCM’s high-frequency market monitoring has been strengthened and provides an important input for country teams; weekly interdepartmental meetings chaired by management have provided an important platform for disseminating information and flagging emerging vulnerabilities; efforts to integrate the core policy messages of the WEO and GFSR have yielded important improvements; and greater effort is being made to integrate the results of the Fund’s various vulnerability exercises into bilateral surveillance.

7. **These efforts have helped improve the quality and depth of financial sector analysis.** For instance, many Regional Economic Outlooks (REO) have covered in depth financial sector issues. And the analysis and coverage of financial sector issues in Article IV staff reports and selected issues papers (SIPs) have strengthened in spite of the added complexities of the current environment. Staff has also put out its views and research on specific financial sector topics through Staff Position Notes and Working Papers. Studies on financial globalization and economic policies, the implications of global liquidity for monetary policy, the contribution of financial globalization to systemic risk, and the

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<sup>7</sup> See [Addressing Information Gaps](#) by B. Johnston et al., IMF Position Note, March 2009 (SPN/09/06).

<sup>8</sup> *Guidance to Assess the Systemic Importance of Financial Institutions, Markets, and Instruments: Initial Conditions* (forthcoming at [www.imf.org](http://www.imf.org)).

evolution of financial balance sheets and links to macroeconomic fundamentals, among others, are under way.<sup>9</sup>

### **Box 2. Area Department Financial Analysis Capacity Development**

**Area departments have invested significantly in building capacity in financial sector analysis.** This is evidenced in the more comprehensive and in-depth treatment of these issues in recent reports and reflects a number of initiatives to strengthen in-house quality of financial sector surveillance:

#### *Enhanced coverage and output in bilateral surveillance and improved financial sector analysis*

- Greater attention paid in recent Article IV reports and selected issues papers to financial sector issues, including the impact of the global financial turmoil on domestic banking systems, real-financial sector linkages, financial sector developments and risks, and stress testing;
- More focused research by regional studies divisions on financial sector issues, including increased coverage of financial sector issues in REOs. For example, the [May 2009 APD REO](#) looked at the global financial crisis and trade finance, the potential threat from further housing price declines to growth, and deriving a financial conditions index in key Asian markets; and the [April 2009 AFR REO](#) analyzed the Sub-Saharan African Financial Systems in the context of the current global financial shock; and
- Books, working papers and informal/internal technical notes on financial sector issues. Examples include EUR's book on [Integrating Europe's Financial Markets](#) and MCD's analytical papers on financial sector regional developments in the Gulf Cooperation Council (GCC).

#### *Building infrastructure for supporting financial sector surveillance*

- Preparation of internal guidance notes on the treatment of financial sector issues and how to better integrate financial sector analysis in Article IV reports (APD, MCD);
- Formation of special financial sector working groups on issues such as financial market developments in countries at risk of capital outflows; credit risk; corporate sector financing and vulnerabilities; bank resolution frameworks; bank regulations and supervisory framework; and central banking issues (AFR, WHD, MCD);
- Creation of internal websites to disseminate financial sector information, analysis, and policy advice (AFR, APD); and internal publications of monthly and weekly monitors to keep staff updated on the latest regional developments, including on the financial sector (APD, EUR, MCD); and
- Increased provision of INS/MCM training to staff on financial sector analysis.

#### *Enhancing focus on the financial sector in mission-related activities and increased outreach*

- Multiple-country missions to various emerging markets to assess the impact of the financial crisis (e.g., the MCM supported 2009 cross-country mission to systemically important African emerging markets, and similar missions by APD and WHD);
- Seminars on various financial sector issues; and
- Active participation of EUR in the debate on the EU's financial integration and cross-border financial stability arrangements, including through research and outreach.

#### *Increasing collaboration and integration*

- Closer follow-up by area departments of FSAP recommendations and conduct of stress testing;
- EUR and MCM collaboration on stress testing and bank recapitalization frameworks for EUR-area program cases;
- Participation of MCM and RES economists in Article IV missions as part of area departments' capacity-building efforts; and
- Participation of area department economists in technical assistance missions on financial sector issues.

<sup>9</sup> A. Kose, et al., *Financial Globalization and Economic Policies*; A. Kose, *Does Financial Globalization Contribute to Productivity Growth*; B. González-Hermosillo and H. Hesse, *Global Market Conditions and Systemic Risk* (forthcoming at [www.imf.org](http://www.imf.org)); and M. Espinosa-Vega, J. Chan-Lau, K. Giesecke, and J. Solé, *Network Analysis as a Tool to Assess Cross-Border Financial Linkages* (forthcoming at [www.imf.org](http://www.imf.org)).

## B. The Framework for Financial Sector Surveillance after the FSAP Reforms

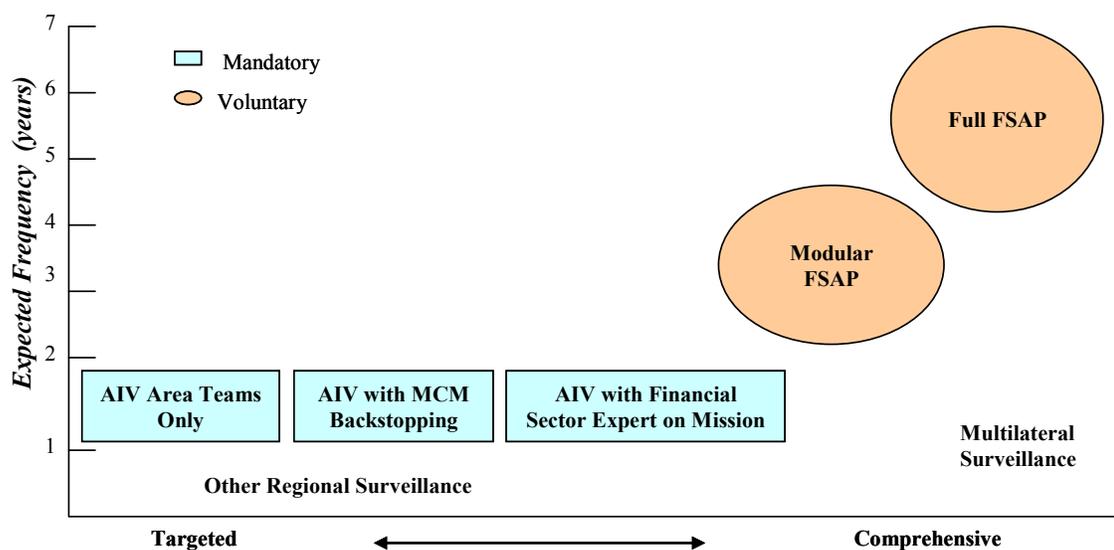
8. **The FSAP review is proposing a more focused and nimble instrument.** The option of modular FSAP assessments and risk-focused Report on Observance of Standards and Codes (ROSC) updates is intended to provide more flexibility, and to allow more targeted assessments that will drill deeper in areas of systemic relevance, sharpen the focus of assessments, and align them more closely to country-specific needs. Better prioritization and more targeted assessments could also allow more frequent assessments.

9. **The FSAP review will help ensure a more continuous oversight of bilateral financial sector developments** (Figure 1).<sup>10</sup> At the one end of the spectrum is the standard, full-fledged FSAP assessment, which is a relatively low-frequency but comprehensive and in-depth review of the financial sector. At the other end is surveillance conducted in the context of Article IV missions, for which the depth and coverage of financial sector issues can vary reflecting the degree to which expert resources are tapped, for instance through MCM backstopping from headquarters or mission participation of MCM financial sector experts. The modular FSAP will help in filling the gap by allowing a more targeted and (possibly) higher frequency assessment of stability issues. In addition, higher frequency surveillance of financial sectors is undertaken biannually at a multilateral level (World Economic Outlook (WEO)/Global Financial Stability Report (GFSR)/EWE) and regional level (e.g., REOs). And even higher frequency surveillance occurs in the context of the quarterly updates of the WEO and GFSR, and MCM and area department daily monitoring.

10. **A voluntary and flexible FSAP together with the mandatory Article IV surveillance provides scope to direct the Fund's efforts where needed.** The FSAP will remain voluntary, limiting its role as input to Fund surveillance. By contrast, the mandatory nature of Article IV consultations provides the Fund with a higher frequency surveillance instrument and, with reforms to integrate FSAP findings and strengthen the treatment of financial sector issues in Article IV consultations, will ensure the complementarity of the two vehicles.

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<sup>10</sup> Note that FSAPs are legally a form of technical assistance.

**Figure 1. The Continuum of Financial Sector Surveillance**

11. **A remaining question is whether a full merger of the FSAP and Article IV surveillance is warranted.** A merger would have advantages, including by making the FSAP assessment mandatory and by increasing the flexibility to allocate resources where they are more needed from the perspective of risks to the stability of members' economies or the system as a whole. However, a number of arguments favor maintaining them as separate instruments. First, Article IV surveillance is intended to cover only financial sector issues that are relevant for external stability, while the issues covered in an FSAP typically span a much wider range and are also intended to pave the way for technical assistance. Second, the joint nature of the program with the World Bank would pose complications if the FSAP were made a mandatory IMF surveillance instrument, jeopardizing the FSAP's role in ensuring effective collaboration and consistent advice. Finally, effective FSAP assessments require access to data and a level of country cooperation that could not easily be required under Article IV.<sup>11</sup>

### C. Remaining Challenges

12. The 2008 Triennial Surveillance Review (TSR) **identified major areas for improvement in bilateral surveillance in general, and in financial sector surveillance in particular.** Its recommendations included:

- Improving the assessments of key financial stability risks and the integration of the analysis of financial sector and macroeconomic issues more generally, as well as the integration of FSAP assessments into Article IV reports;

<sup>11</sup> For instance, [Article VIII, Section 5\(b\)](#) explicitly states that members are under no obligation to provide data to the Fund on individual institutions, and this applies regardless of the systemic importance of the institutions.

- Closing the gaps between multilateral and bilateral surveillance by introducing greater cross-country perspectives in Article IV consultations and by improving the analysis of cross-border spillovers; and
- Strengthening the analytical framework and toolkit for studying macro-financial linkages.

13. **Despite a major shift in the focus of recent Article IVs toward financial sector issues, reflecting both the crisis and efforts under way, more can be done.** First, it will be critical to integrate more closely the Fund's various surveillance vehicles and inputs, including the FSAP and Article IV surveillance. Second, it is important for bilateral surveillance to take into account cross-border issues and in particular linkages and spillover risks. Third, while work continues toward a well-developed, integrated analytical framework for capturing macro-financial linkages, more can be done now in using partial methodologies to capture risks around alternative scenarios and the financial sector viability and policy trade-offs. Fourth, more needs to be done to fill data gaps. Finally, for LICs, there is scope to take better account of their specific challenges in securing macroeconomic and financial stability that arise from shallow markets. Section III of this paper discusses already-started and further-proposed reforms along these dimensions.

14. **In a constrained budget environment, difficult choices have been made and more may be needed going forward.** Resources have already had to be redirected toward meeting the demands stemming from the global crisis and responding to the new demands of the G-20. The further reforms envisaged in this paper will require careful consideration of how best to prioritize and leverage MCM and area department resources.

### III. FURTHER STEPS TO INTEGRATE FINANCIAL SECTOR SURVEILLANCE BETTER INTO BILATERAL SURVEILLANCE

15. **This section discusses new initiatives to deepen the integration of financial sector surveillance into bilateral surveillance.** These initiatives will help improve staff's analysis, but also support the formal conduct of surveillance by the Executive Board.

16. **At the same time, it is important to ensure that expectations are realistic.** No single measure will suffice in the face of the continuously evolving financial landscape, and Fund surveillance will also need to evolve continuously to meet this challenge. But it is expected that the many efforts under way and the initiatives discussed in this paper will ensure continued progress.

#### A. Linking the Reformed FSAP and Article IVs

17. **Standardized risk-assessment matrices (RAMs) would help better target financial sector surveillance in individual consultations.** It is a long-standing concern that

### Box 3. Risk Assessment Matrices (RAMs)

Largely based on an approach pioneered by the Bank of England and others, the Fund has developed, and tried on an experimental basis, a RAM designed to help organize the analysis and presentation of FSAP stability assessments and to facilitate their integration into both bilateral and multilateral surveillance.

The RAM should help to make *stability assessments* more specific, candid and transparent, by combining in one template:

- the identified major sources of risks (e.g., over-indebted households, undercapitalized banks),
- possible triggers (e.g., a severe macroeconomic downturn, a failure of a systemically important institution), and transmission mechanisms, and
- the assessment of regulatory, supervisory, and crisis management frameworks and the results of stress tests to arrive at qualitative assessments.

The RAM also specifies (i) the probability of risk triggers being activated (low, medium, high); and (ii) the potential impact on financial stability and on the broader economy were those events to materialize.

The RAM has been used in a number of recent FSAP assessments (both initial and updates). So far it has been used for Terms of references and Aide-Mémoires, but not published in Financial System Stability Assessments (FSSAs).

It is expected that the RAM will be mainstreamed in the Fall, after the guidelines have been finalized based on the experience with the pilot. RAMs could play an important role along with prioritized recommendations in discussions with the authorities.

the analysis, findings, and recommendations of FSAPs are not properly integrated into Article IV staff reports. In strengthening the links between the two, staff proposes that the RAMs that will be produced in the context of stability assessments in FSAPs or FSAP stability modules (as per proposal in the FSAP Review paper) be used as a basis for discussing financial stability issues in Article IV consultations. These matrices would identify the most important threats to financial sector stability, evaluate the likelihood of these threats over a three-year period, and discuss the expected impact of the identified risks, if realized, on macro-financial stability (Box 3).<sup>12</sup>

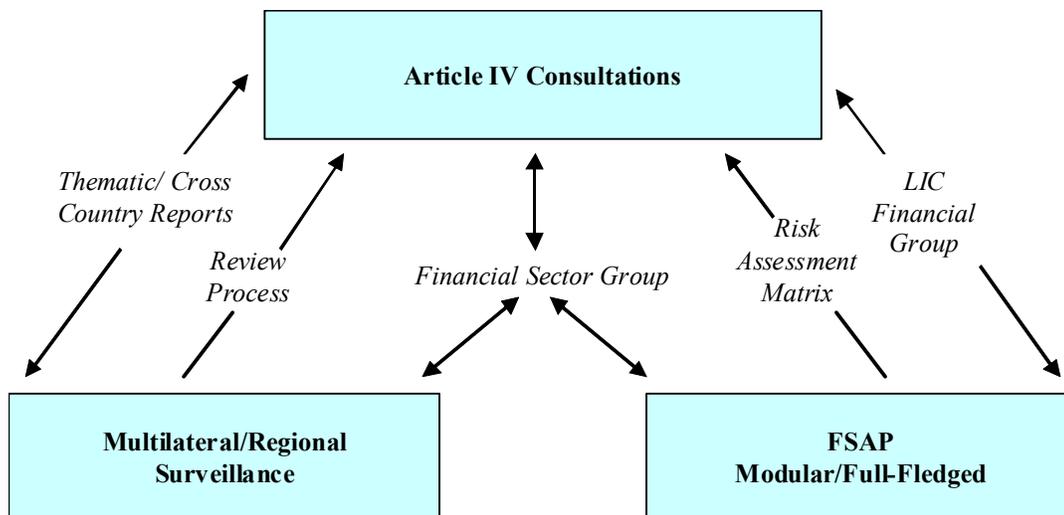
<sup>12</sup> See Appendix IV of *The Financial Sector Assessment Program After Ten Years: Experience and Reforms for the Next Decade* for an example.

18. **The RAMs will help frame the Article IV discussion on policies to address identified risks to financial stability.** The intention is not for RAMs themselves to be a formal requirement in Article IV reports that follow an FSAP, but rather that they be used as a tool to frame the discussion of risks to macro-financial stability and the policies to address them. As RAMs are gradually rolled out, area departments and MCM will design ways to update them in subsequent Article IV consultations, with the understanding that the breadth and depth of the updates inevitably will vary with the amount of resources devoted to financial sector issues in those consultations.

### B. Building Bridges Across Complementary Initiatives

19. **Connecting the dots across complementary initiatives will enhance bilateral financial surveillance at several levels.** In addition to better linking the reformed FSAP to Article IVs through the RAMs, staff is implementing a number of other initiatives that seek to better bridge the various vehicles for surveillance (Figure 2).

**Figure 2. Building Bridges Between Surveillance Vehicles**



20. **Steps are being taken for multilateral and cross-country risk and vulnerability analyses to inform country surveillance work more systematically and help with prioritization.** Findings from work done at the multilateral level, such as in the GFSR, Vulnerability Exercise for Emerging Economies (VEE), Vulnerability Exercise for Advanced Economies (VEA), and the EWE will need to be internalized and leveraged by area department teams. One avenue for this will be a cross-departmental Financial Surveillance Group that will provide a collaborative forum for sharing information, experiences (including with the reforms discussed in this paper), and good examples, and helping to identify cross-cutting issues. Moreover, through the modifications to the review process, vulnerabilities flagged in the multilateral process are now required to be explicitly considered in Policy

Consultation Meetings and Notes. It is also proposed that the VEE, VEA, and EWE more systematically inform the prioritization and allocation of financial sector expertise, including in the deployment of FSAP stability modules.

21. **Thematic reports on topics relevant to a group of countries could also serve to translate multilateral issues into bilateral surveillance.** These (multi-country) staff reports would address topics relevant to a group of countries and could be attached or distilled for discussion with individual staff reports. They could serve to provide country authorities with context and cross-country experience in addressing particular issues and, importantly, could also serve as the basis for flagging where coordinated action is warranted. Initially, themes could derive from the Fall multilateral round thereby providing a further vehicle for policy traction when the issue is discussed in a bilateral context. Further use of regional approaches could also be considered (Box 4).

#### **Box 4. Integrating Multilateral and Bilateral Surveillance: Recent Initiatives**

*Cross-Cutting Thematic Staff Papers:* Identifying cross-country relevant themes is key to bridge multilateral and bilateral surveillance. These themes, which are typically identified in the context of Article IV consultations, should inform multilateral surveillance and feed back into Article IV consultations. Thematic staff reports can be an instrument through which this bridge can be operationalized. Furthermore, these reports are likely to be sufficiently flexible as to permit a deep coverage of both country-specific details and broader thematic issues.

A first thematic report distilling common themes in the Article IV consultations of five systemic economies (China, the Euro area, Japan, the United Kingdom and the United States) was discussed by the Board in an informal seminar on August 26, 2009. It focused on policy responses to the crisis, exit strategies, and structural policies needed to achieve balance growth. Financial sector issues figured prominently in all these areas. Particular attention was paid to the support that many governments and central banks gave to the banking system after the collapse of Lehman Brothers and the spillovers associated with these support measures. Furthermore, the report noted the importance of coordination for unwinding the support to the banking system and for the financial reform agenda that laid ahead of many countries.

*Regional Outlooks:* REOs have proven to be a useful tool to bridge multilateral and bilateral surveillance, as they are a good outreach vehicle to present stylized facts, assess common trends, and discuss broad policy implications while taking into account country-specific features. For instance, chapter III of the [May 2009 REO](#) for Europe presents some stylized facts regarding the impact of the crisis on Emerging Europe and, among other things, discusses the role of the banking system for the recovery of these economies. Another bridge that is being experimented with is the implementation of regional assessments, such as the regional stress tests that are being undertaken in Central and Eastern Europe. Regional assessments not only have the advantage of enhanced cross-country comparability, but may also facilitate the incorporation of feedback loops into the assessments.

## C. Strengthening Financial Sector Analysis in Bilateral Surveillance

### Strengthening the analysis and coverage of cross-border issues

22. **Steps can already be taken to improve the analysis of risks from cross-border exposures.** The financial crisis has illustrated once more the need to go beyond identification of aggregate financial linkages with the rest of the world and to try to look at cross-border exposures and risks. While the Fund and other institutions have made progress in this area in recent years, the key resources (notably [the BIS consolidated banking statistics](#) and [the Fund's Coordinated Portfolio Investment Survey \(CPIS\)](#)) appear to remain underutilized in the Fund. In this context, it is paramount to:

- ***Integrate existing resources and make them more easily available to country teams to facilitate assessments of inward and outward spillovers.*** An ongoing project on cross-border exposures provides a first attempt in this area, with the aim to provide easy access through an automated facility to existing measures of cross-country exposures (Appendix 1).
- ***Improve measurement of cross-border exposures.*** In this context, undertaking the planned Coordinated Direct Investment Survey (CDIS) is essential, as it will shed light on a source of cross-border exposures that is otherwise very difficult to measure.<sup>13</sup>
- ***Pay greater attention to offshore transactions in Article IV consultations.*** This will admittedly not always be easy, given the complex linkages between on- and offshore transactions; the blurred distinction between offshore centers (OFCs) and other financial centers in a globalized world; and the persistent data gaps, particularly for smaller low-income jurisdictions. Nonetheless, mission teams should seek to take these into account when assessing the stability of members and spillovers between countries.<sup>14</sup>

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<sup>13</sup> The CDIS is expected to provide comprehensive and harmonized FDI positions data (both inward and outward) with detail on immediate counterpart economy (i.e., geographical breakdown). This will not only help improve the measurement of FDI in participating economies, but will also provide information on cross-border exposures and enable participants to cross-check aggregate figures.

<sup>14</sup> The Fund's OFC program began in 2000 and was integrated into the FSAP in 2008, but more could be done to integrate analysis of cross-border transactions, including with OFCs, into the Fund's regular surveillance work. In operational terms this could involve country teams taking better account during their Article IV consultation discussions of: risk exposures to onshore sector vis-à-vis ownership structures, services offered, and innovation in financial products; exposure to regional contagion (reputation risk); the ability of the onshore sector to carry out effective consolidated supervision; the adequacy of cross-border supervision of foreign branches and subsidiaries; and the degree of cooperation of local supervisors and authorities with their offshore counterparts.

- ***Make greater use of cross-border analytical tools (as developed in EWE and GFSR) in bilateral surveillance.*** These include tools for measuring systemic bank risk and contagion vulnerabilities, which some desks are already applying in their work.

23. **Work is under way to improve reporting of statistics on derivative markets, including with additional geographical breakdowns.** The goal is to improve the transparency and coverage of information on over-the-counter (OTC) derivatives markets. The BIS's Committee on Global Financial Systems (CGFS) is presently looking at credit risk transfer data, particularly on credit default swaps. It has established a Working Group on Credit Risk Transfers chaired by the ECB, to which the Fund (MCM, SPR and STA) is contributing comments through the BIS (Box 5). The final report of the working group, which will include recommendations, will be published later this year.

### **Box 5. Improving Credit Risk Transfer Data**

In November 2008, the BIS Committee on the Global Financial System (CGFS) established a working group to explore how data on credit risk transfer collected under the auspices of the CGFS could be enhanced. In particular, the working group was asked to explore: (i) possible revisions of the current reporting on credit default swaps (CDS) to expand on data on reference entity and counterparty type; (ii) possible widening of the coverage of CDS instruments to include more detailed information on multi-name indices, and to enrich current statistics with additional geographical, credit rating, and counterparty breakdowns; and (iii) the compatibility of CDS statistics and statistical information on other credit risk transfer (CRT) instruments, in particular on structured securities, and the needs in other statistical areas (e.g., securitization) required to gauge global CRT.

The working group includes the BIS and representatives of central banks from G-10 countries. It surveyed users of statistics from those countries and the Fund to assess the usefulness of additional data, and also surveyed data reporters to assess the cost of implementation of possible new data requirements. The final report of the working group, which will include recommendations, will be published later this year.

More generally, the BIS has been working with the US Depository Trust and Clearing Corporation (DTCC) and the International Swaps and Derivatives Association (ISDA) to examine how best to provide a more consistent measure of global CDS market size.

Taken together, these efforts may help to address some key deficiencies highlighted by the crisis, such as the lack of information on cross-border exposures through CDS markets, the concentration of risk in over-the-counter CDS (which potentially could be lessened with the use of central counterparties—CCPs), or the amounts of exposure embedded in CDS on ABS (Asset-Backed Securities). The new data could also help monitoring rapidly growing financial instruments, such as index CDS.

### **Improving analytical approaches in the existing framework of macro-financial surveillance**

24. **There has been considerable push in recent years to enhance the integration of financial sector considerations into the Fund's macroeconomic analysis.** These efforts have borne considerable fruits but progress has been hampered by the imperfect

understanding—theoretical and empirical—of the various macro-financial channels. Moreover, the challenge to making operational a fully fledged surveillance framework is further complicated by the need to account for a wide variety of country circumstances, and the fast-evolving national and global economic and financial landscapes.<sup>15</sup>

25. **Substantial progress also has been made in the evolution and application of partial methodologies.** Staff reports have sought to enrich their policy analysis and risk assessments by using *econometric models* that seek to link conventional macroeconomic variables with indices of financial conditions. Staff reports have also used *balance sheet analysis (BSA)* and *options pricing frameworks* (like the CCA) to assess risks to different sectors of the economy. Moreover, *automated, excel-based, tools for producing quarterly BSA and CCA* tables for countries with adequate data are available to Fund staff.<sup>16</sup> Country teams also make frequent use of *indices of corporate and/or bank default risk*, to provide measures of the vulnerability of individual institutions to default, but more recent staff analysis has enabled the construction of measures of systemic risk.<sup>17</sup> The corporate vulnerability utility (*CVU*) developed by the Research Department is also a useful automated tool to assess vulnerabilities in corporates' balance sheets. Most staff reports now, as a matter of course, contain significant reference to *market-based indicators*—including yield and credit default swap (CDS) spreads—to assess the vulnerability of asset prices to correction, or the extent to which country policies may lack market credibility.

26. **Building on existing insights and recent experience, new analytical tools for macro-financial linkages analyses are being developed.** Recent analysis has focused on the role of leverage and liquidity in the propagation of business and financial cycles, and the role of interconnections within financial systems. Moreover, surveillance can already draw on a set of stylized facts regarding macro-financial linkages (Box 6). Further work along these lines will develop better tools to conduct routinely and at relatively low-cost financial sector assessments in surveillance.

27. **But there is scope for more systematic integration of balance-sheet effects in staff's macro-scenarios.** More consistent inclusion of financial sector viability within the Fund's traditional four-sector (real, fiscal, monetary, and external) macroeconomic financial programming framework will enable better quantification and analysis of financial sector implications (balance-sheet effects) in the baseline and facilitate a discussion of costs and

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<sup>15</sup> Analytical work on macro-financial linkages is under way in the Macro-Financial Unit of the Fund's Research Department that was set up in the spring of 2009.

<sup>16</sup> The BSA facility is available through the EDSS. M. Gapen, D. Gray, C. Lim and Y. Xiao, *Measuring and Analyzing Sovereign Risk with Contingent Claims*. Staff Papers, International Monetary Fund, Vol. 55 (Number1), 2008, discuss the CCA approach.

<sup>17</sup> M. Segoviano and C. Goodhart, *Banking Stability Measures*. IMF Working Paper 09/4, 2009.

trade-offs in alternative scenarios—e.g., implications of contingent liabilities on the public sector accounts.

### **Box 6. Macro-Financial Linkages—Stylized Facts**

Although fuller underpinnings (theoretical and empirical) of macro-financial linkages are still work in progress, many stylized patterns have been documented (including the WEO and the GFSR) that is useful for bilateral financial sector surveillance.

**It has been shown, for example, that large changes in credit and asset prices are associated with significant movements in macroeconomic variables over the business cycle.** Recent empirical studies indicate that episodes of rapid credit growth generally coincide with large cyclical fluctuations in economic activity. It has been found that real output, consumption, and investment rise above trend during the build up phase of credit booms (defined as episodes of credit growth above a certain threshold from a historical trend) and fall below trend in the unwinding phase. And it has been well documented that these types of booms are often followed by banking and currency crises in emerging market economies.

**More recently, facts regarding the interactions between financial and macroeconomic variables have been documented.** It has been shown that recessions associated with house price busts and credit crunches are both deeper and longer-lasting than are other recessions. Residential investment tends to fall more sharply in recessions with house price busts and in those with credit crunches than in other recessions. The unemployment rate increases notably more in recessions associated with house price busts. These patterns are useful for surveillance as they can help identify the role of asset prices in determining the severity and duration of recessions in advanced countries.

**Specific methodologies, toolkits and empirical analyses that have proven to be useful for surveillance and early warning include the following:**

- Credit booms and bust analyses: statistical analyses of the risks of credit booms ending in busts as a function of length of boom and other factors such as current account deficits, and initial conditions; also analysis of the chances of creditless recoveries;
- Business and financial cycles: facts of occurrence, duration, and amplitude for various combinations of recessions, recoveries, credit booms/crunches and asset price booms/busts, and implications for business and financial cycles, including the speed and strength of recovery;
- Spillovers through cross-border banking: analysis of BIS bilateral exposures and potential for banking system shocks to affect home countries and third countries through common lender effects; and
- Corporate Vulnerability Utility: Exposures in and performance of the corporate sector relevant for surveillance.

28. **In this context, there is also scope for greater integration of stress tests in the macroeconomic and financial programming framework.** Stress tests and scenario analyses assess risks by analyzing the impact of various macroeconomic scenarios (including sudden stops) on financial solvency. Integrating such stress tests into bilateral surveillance

(where data are available) would strengthen the risk assessments in Article IV reports and improve their integration with FSAP assessments.<sup>18</sup>

### **Deepening Financial Sector Coverage in LICs**

29. **Shallow financial markets create vulnerabilities for LICs.** Although the global financial crisis has had a limited direct impact on financial systems in LICs, there have been negative effects through trade, commodity price, foreign direct investment (FDI), and remittance channels. For many LICs, the scope for maintaining macroeconomic stability and for undertaking countercyclical policies is constrained in part by shallow financial markets (Box 7). This has implications for financial sector stability. Thinness of markets limits financial institutions' ability to manage their portfolios, leaving them more vulnerable to shocks. The often present excess liquidity reflects in part the lack of lending opportunities and can lead to the build up of excessive exposure to a limited number of counterparties, sectors, or institutions that are deemed creditworthy. In addition, shallow domestic debt markets limit the scope of banks to manage their exposures to the government sector.

30. **More attention needs to be paid in surveillance to the stability impact of shallow financial markets, in coordination with the World Bank.** Coverage of these issues in LICs tends to be uneven, with many Article IV reports focusing narrowly on the soundness of the banking system. Admittedly, the lack of reliable and comprehensive data in most LICs—along with capacity constraints in financial supervision—hinders the analysis and makes the design of policy advice particularly challenging. But the inconsistent coverage of this macro-financial issue in LICs also reflects a tension that delineates between stability concerns—in the purview of Fund surveillance, and developmental issues—in the Bank's mandate. Uncoordinated, these “boundaries” limit focus on an important source of macroeconomic and financial vulnerability. To address this divide, a Fund-Bank LIC Financial Group under the auspices of the FSLC, is being established with the explicit objectives to:

- ***Key off the upcoming Article IV missions to establish the macro-financial stability issues and associated market development needed.***

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<sup>18</sup> For instance, along the lines discussed in R. Basu, N. Choueiri, and A. Garcia Pascual, *Financial Sector Projections and Stress Testing in Financial Programming: A New Framework*. IMF Working Paper 06/33, 2006. This paper elaborates on a toolkit to integrate balance sheet impacts and real-financial linkages in the medium-term context. The toolkit integrates projections from aggregated profit and loss accounts of commercial banks into the standard financial programming exercise. This enables the baseline scenario to capture the impact of macroeconomic shocks on banks' aggregated balance sheets and it allows feedback and corrections consistent with a solvent path for the banks in the medium term.

## Box 7. Shallow Markets in LICs

Shallow foreign exchange, interbank, and government securities markets in LICs constrain the ability of macroeconomic policies to respond to shocks, and therefore need to be factored into the Fund's financial sector surveillance given their stability implications.

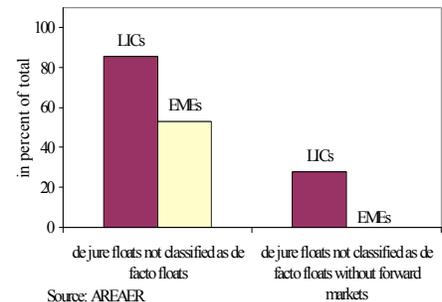
**Limited exchange rate flexibility.** Notwithstanding the move to more flexible exchange rate regimes in the past decade, most *de facto* outcomes in LICs—observed patterns of intervention and short-run nominal exchange rate volatility—show less flexibility. While partly reflecting other policy concerns and objectives, one important constraint to free-floating exchange rate regimes for LICs is the absence of markets to hedge exchange rate movements (Gulde and others, 2006). Among LICs, 30 percent of *de jure* floats classified as *de facto* less flexible report the absence of forward markets for exchange rates, compared with 0 percent in emerging markets. Forward markets, even if they exist, tend to be undeveloped, illiquid, and shallow (Canales-Krijienco, 2004).

### Weak monetary policy transmission mechanisms.

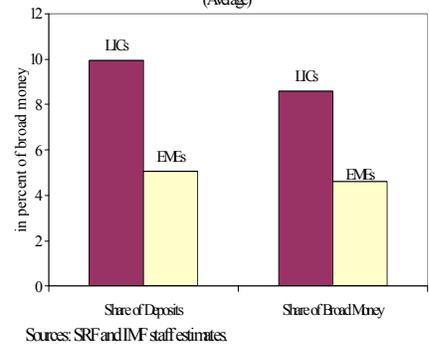
Underdeveloped interbank markets, pervasive excess liquidity in the banking system, and thin credit markets affect the transmission mechanisms of monetary policy by limiting the influence of policy rates. The transmission of the policy stance to interest rates, even at short maturities, is hampered by limited bank participation in shallow or dormant interbank markets (IMF, 2008). Excess liquidity in the banking system, which has declined during the present crisis but remains higher among LICs than emerging markets, limits the impact of monetary tightening through the interest rate and credit channels. In particular, the presence of excess liquidity hampers bank participation in interbank markets (Laurens, 2004) and monetary tightening has limited impact on credit when banks are awash with excess reserves, which may reflect their unwillingness or inability to lend (Saxegaard, 2006).

**Underdeveloped government securities markets.** Fiscal policy in LICs is constrained by small or nonexistent domestic debt markets and becomes vulnerable to availability of foreign financing and donor flows (Arvai and Heenan, 2008). While a number of LICs now issue marketable domestic securities, their usefulness both in government financing and as a vehicle for facilitating development of financial markets is limited. The sparse available information on LICs suggests that the amount of secondary government securities market trading in relation to GDP is quite low, and market trading volumes remain a fraction of the amount in emerging market countries (Ferhani and others, 2008.)

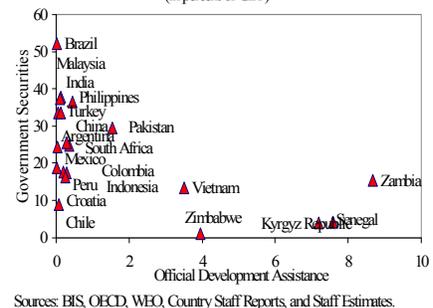
Exchange Rate Regimes and Forward Markets:  
LICs vs Emerging Markets, 2008



Excess Reserves to Deposits and Broad Money in Selected Countries:  
LICs vs Emerging Markets, 2008 1/  
(Average)



Government Securities Outstanding and Official Development Assistance in Selected Countries, 2007  
(in percent of GDP)



1/ Notes: Developing countries include: Afghanistan, Albania, Azerbaijan, Bolivia, Cambodia, Cape Verde, Comoros, Dominica, Eritrea, Georgia, Grenada, Haiti, Moldova, Mozambique, Nepal, and Timor Leste. Emerging markets include: Brazil, Chile, Egypt, Indonesia, Kazakhstan, Malaysia, Mexico, South Africa, and Turkey.

- *Serve as a forum to align Bank “development” projects under FSAPs with stability needs of LICs.*
- *Establish modalities for collaboration in the field or in off-site work jointly with the World Bank.* A LIC portal will be established and will be jointly accessible to Bank and Fund staff with common templates and shared databases; Article IV teams will produce regular FSIs with agreed coverage and definition, and the Bank will produce structural information to benchmark LIC financial systems and their market development.

#### IV. SOME PROCESS AND RESOURCE ALLOCATION CONSIDERATIONS

31. **Improving bilateral financial sector surveillance has been a challenge given the existing resource envelope.** The Fund is facing new demands and heightened expectations to deliver on bilateral and multilateral financial surveillance, which come on the heels of a financial crisis and a significant downsizing of staff resources. This has created difficult tensions with the TSR observation that the quality of financial sector coverage in Article IVs depends importantly on the availability of expert resources on Article IV missions. An example is the internal review of staff reports, in which MCM’s role has been scaled back as a way to save resources.<sup>19</sup>
32. **Nonetheless, there has been marked progress.** This has largely involved efficiency gains that come from improved mechanisms for collaboration and knowledge transfer as well as from an enhanced focus on financial surveillance work in area departments. As noted in Section II.A, the experience and focus in recent Article IVs reflect knowledge gains in area departments and growing expertise in financial surveillance.
33. **Further efforts are under way to enhance financial expertise and capacity within the Fund and across institutions.** This will involve further improvement in mechanisms for information and knowledge sharing, hiring of financial sector specialists according to internal needs, the dissemination of guidance and provision of training to existing staff, and the revamping of the FSLC and creation of the LIC Financial group. However, further investment should be considered in training, short-term assignments of area department staff to MCM, and greater access to external assignments with the private financial sector and other international financial institutions such as the BIS. These efforts would support the ultimate objective of ensuring that area departments are well placed to fulfill their responsibility for bilateral financial surveillance.
34. **Making the FSAP a more nimble instrument should facilitate better prioritization in the allocation of the Fund’s financial expertise.** It would allow resources

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<sup>19</sup> SPR, together with MCM, is working to address this issue.

to be deployed more consistently in line with the Fund's mandate, and allocation decisions should be informed by the various vulnerability exercises in the Fund. Better prioritization and more targeted assessments should also allow more frequent interim missions.

35. **These initiatives will require difficult tradeoffs in a constrained budget environment.** Some measures (e.g., integrating balance sheet analysis and stress testing into macroeconomic scenarios) would add to the demands on country teams, while others (those aimed at making information, tools and data more accessible and allowing more frequent stability assessments from MCM) could yield efficiency and quality gains, albeit with an initial investment required. In any event, current budget realities will mean that progress will have to be phased gradually (e.g., use of risk assessment matrices), and the proposed Financial Sector Group would provide a forum for area departments, MCM, and SPR to review the experience and tailor implementation appropriately.

## V. ISSUES FOR DISCUSSION

36. In discussing this paper, Executive Directors may wish to indicate their views on the initiatives to:

- Ensure better integration of FSAP findings into the Article IV reports, and in particular the use of standardized risk-assessment matrices.
- Build bridges across complementary initiatives, including more consistent integration of the findings from the Fund's multilateral exercises into bilateral surveillance, and using vulnerability exercises to inform the allocation of financial expertise, including FSAP stability modules.
- Strengthen the analytical content of bilateral surveillance, including improving the coverage of cross-border issues, integrating more systematically balance sheet analysis and stress tests into staff's macroeconomic scenarios, and strengthening financial sector coverage in LICs through greater attention to the impact of underdeveloped financial markets on the effectiveness of macroeconomic policies and the economy's ability to absorb shocks.

## Appendix I. Template for Integrating Cross-Border Issues in Bilateral Surveillance

1. **The current crisis has highlighted the importance of quantifying cross-border financial exposures.** For instance, at the onset of the crisis it became clear that there were large cross-border exposures to the market of U.S. subprime mortgages. As the crisis developed, further linkages came to the forefront, such as those associated with exposures to U.S. financial institutions (e.g., Lehman Brothers) or with exposures in derivative markets. Furthermore, it became clear that the impact of the crisis on countries that were global or regional financial centers had implications for countries that were dependent on these centers for financing (e.g., Western Europe on Central and Eastern Europe).
2. **Further progress is needed to measure cross-border exposures.** Data on cross-border exposures is so far limited. The key databases in this area are the BIS' International Financial Statistics and the IMF's CPIS.<sup>20</sup> Country-specific data on cross-border exposures are sometimes compiled at the country level, but the use of that data for cross-country surveillance is in most cases limited, given that it may be difficult to compare with data from other countries and given that it is costly to assemble (e.g., one would have to go to each country source to collect the data).
3. **While making progress in databases covering cross-border exposures will certainly take time, increasing the awareness of existing databases can improve substantially the understanding of cross-border exposures.** In particular, the BIS and CPIS data, along with other databases that measure external exposures—such as the External Wealth of Nations Database and the Developed Countries' Flow of Funds Database compiled by the IMF's Research Department, can be a rich source of information to assess countries' external vulnerabilities and cross-border risks.

### Identifying Cross-Border Vulnerabilities

4. **Two types of cross-border financial exposures are key, namely: exposures to financing risk and exposures to default risk.** The first type of exposure (dimension A below) is related to the vulnerability of a country to difficulties in rolling over its liabilities. The second type of exposure (dimension B below) is related to the vulnerability of a country to defaults in its cross-border assets.
5. **The balance sheet approach (BSA) and the International Investment Position (IIP) can help us organize these exposures in a broader macroeconomic framework and to identify the usefulness of the existing data on cross-border exposures.** In particular, as illustrated in Figure A1-1, the IIP corresponds to the BSA's external exposure to the rest of

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<sup>20</sup> Results of the IMF's 2009 CDIS will provide data at end-2010 or early 2011 on a country's bilateral foreign direct investment positions.

the world aggregated across the various sectors.<sup>21</sup> Specific data sets are helpful in identifying financing and default risk, at least for some particular sectors. For instance, the BIS data are helpful to identify cross-border default risk for the banking system. The CPIS data may have a similar usefulness, while also helping identify cross-border financing risk. IIP data in general, and external debt data in particular, may also help identify financing and default risks, but at a more aggregate level (since they do not provide information on cross-border links but rather provide aggregate figures).

### **The Template on External and Cross-Border Exposures**

6. **In order to facilitate the use of existing data on external and cross-border exposures staff in SPR, STA, and TGS are developing a facility to retrieve key data.** The facility would allow staff to retrieve existing data for each individual country under a predetermined template (example attached). The template pulls data from different databases. More specifically: (i) data from the IIP, Standardized Report Forms (SRFs) for Monetary and Financial Statistics, and external debt data are used to identify aggregate financing and default risk; (ii) while data from the BIS statistics (particularly [Table 9.D of the Consolidated Banking Statistics](#)), and the CPIS are used to identify cross-border financing and default risk.

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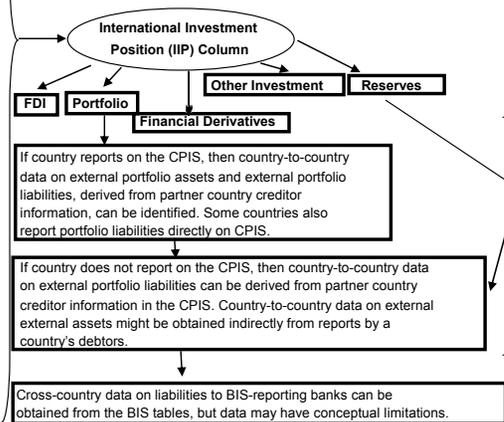
<sup>21</sup> See J. Mathisen and A. Pellechio, *Using the Balance Sheet Approach in Surveillance: Framework and Data Sources and Availability*, International Monetary Fund, 2007, for a discussion on the BSA.

Figure A1-1. Net Intersectoral Asset and Liability Positions

Holder of liability (creditor)	Public sector		Financial Sector				Nonfinancial Private Sector				Rest of the World			
	Sovereign		Banks		Nonbank financial corporations		Nonfinancial corporations		Other resident sectors		Nonresidents			
	Claims	Liabilities	Net pos.	Liabilities	Net pos.	Claims	Liabilities	Net pos.	Claims	Liabilities	Net pos.	Claims	Liabilities	Net pos.
Sovereign														
In domestic currency														
Short-term														
Long-term														
In foreign currency														
Short-term														
Long-term														
Banks														
In domestic currency														
Short-term														
Long-term														
In foreign currency														
Short-term														
Long-term														
Nonbank financial corporations														
In domestic currency														
Short-term														
Long-term														
In foreign currency														
Short-term														
Long-term														
Nonfinancial corporations														
In domestic currency														
Short-term														
Long-term														
In foreign currency														
Short-term														
Long-term														
Other resident sectors														
In domestic currency														
Short-term														
Long-term														
In foreign currency														
Short-term														
Long-term														
Nonresidents														
In domestic currency														
Short-term														
Long-term														
In foreign currency														
Short-term														
Long-term														

**Dimension B**

If the Banks report to the BIS, then country-to-country data on exposures (via assets) can be identified. Notice, however, that BIS-measured exposures and external assets may differ. So, conceptual differences need to be taken into account (which may not always be possible).



**Dimension A (via liabilities) & Dimension B (via assets)**

## Template for Bilateral Surveillance Project (Short form)

### Country name

(Country code)	Economic	Economic	Annual			Quarterly					
(Millions or Billions of U.S. dollars)	Concept	Concept	2006	2007	2008	2008Q1	2008Q2	2008Q3	2008Q4	2009Q1	
Date produced:	CTS code	EDSS Code									

## External Assets

### I. Aggregate data

#### 1.A IIP

##### Total Assets

*Direct Investment*

*Portfolio Investment*

*Financial Derivatives*

*Other Investment*

*Reserve Assets*

#### 1.B Standardized Report Forms (SRFs)

*1.B (i) Central Banks*

*1.B (ii) Other Depository Corporations*

*1.B (iii) Other Financial Corporations*

## II. Geographical Breakdowns

### II.A CPIS

#### Portfolio Investment Assets

*vis-à-vis top 10 partners:*

*(i) Equity securities*

*vis-à-vis top 10 partners:*

*(ii) Debt securities*

*vis-à-vis top 10 partners:*

*(ii-a) Debt securities short-term*

*vis-à-vis top 10 partners:*

*(ii-b) Debt securities long-term*

*vis-à-vis top 10 partners:*

### II.B BIS Banking Statistics

#### II.B (i) Consolidated Banking Statistics

#### II.B (ii) Locational Banking Statistics

### Memorandum Items

*Nominal GDP*

*Exchange rate vis-à-vis the US dollar*

## Template for Bilateral Surveillance Project (Short form)

### Country name

(Country code)

(Millions or Billions of U.S. dollars)

Date produced:

Economic Concept CTS Code	Economic Concept EDSS Code	Annual			Quarterly				
		2006	2007	2008	2008Q1	2008Q2	2008Q3	2008Q4	2009Q1

## External Liabilities

### I. Aggregate data

#### 1.A IIP

##### Total Liabilities

*Direct investment*

*Portfolio investment*

*Financial derivatives*

*Other investment*

#### 1.B Standardized Report Forms (SRFs)

*1.B (i) Central Banks*

*1.B (ii) Other Depository Corporations*

*1.B (iii) Other Financial Corporations*

#### 1.C External Debt Statistics (QEDS)

*General Government*

*Monetary Authorities*

*Banks*

*Other Sectors*

*Direct Investment: Intercompany Lending*

***Gross External Debt***

## II. Geographical Breakdowns

### II.A CPIS

*Reported Portfolio Investment Liabilities*

*vis-à-vis top 10 partners:*

*Derived Portfolio Investment Liabilities*

*vis-à-vis top 10 partners:*

### II.B BIS Banking Statistics

#### II.B (i) Consolidated Banking Statistics

#### II.B (ii) Locational Banking Statistics

### Memorandum Items

*Nominal GDP*

*Exchange rate vis-à-vis the US dollar*