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January 16, 2009

To: Members of the Executive Board

From: The Secretary

Subject: **Integrating Financial Sector Issues and FSAP Assessments into Surveillance—Progress Report**

The attached paper on integrating financial sector issues and FSAP assessments into surveillance—progress report, provides background for an informal seminar to be held on a **date to be announced**. Issues for discussion appear on page 14.

The staff proposes the publication of this paper after the informal seminar.

Questions may be referred to Mr. Demekas, MCM (ext. 36755) and Mr. Erickson von Allmen, SPR (ext. 34764).

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INTERNATIONAL MONETARY FUND

**Integrating Financial Sector Issues and FSAP Assessments into Surveillance—  
Progress Report**

Prepared by the Monetary and Capital Markets and the Strategy, Policy, and Review  
Departments  
(in consultation with Research and other Departments)

Approved by Christopher Towe and David Marston

January 16, 2009

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## I. INTRODUCTION

1. **Improving the quality of the Fund’s financial sector analysis and integrating it with surveillance is a major undertaking that involves action on several fronts.** The 2007 *Financial Sector Taskforce Report* (“Taskforce Report”—SM/07/57) provided a comprehensive assessment of the status of financial sector analysis in the Fund and established a broad organizing framework on how to integrate better finance into Article IV surveillance. The 2008 *Triennial Surveillance Review* (TSR)—SM/08/287 and supplements) developed this theme further, and the Board’s ensuing *Statement on Surveillance Priorities* made the integration of macroeconomic and financial sector surveillance one of the four overarching operational priorities for Fund surveillance.

2. **Carrying out this agenda involves efforts at several levels.** At the conceptual level, these are aimed at enhancing the Fund’s methodological toolkit. At the operational level, they involve adaptations of the existing surveillance instruments to improve the coverage of the financial sector and its linkages with the real economy, as well as organizational changes to enhance the delivery of financial sector expertise. Human resource management is also being refocused in an effort to strengthen the financial sector expertise of the institution. These efforts are taking place in the context of a more stringent budget environment, which entails difficult tradeoffs for the allocation of financial sector expert resources between bilateral surveillance, multilateral surveillance, and capacity building.

3. **At the same time, the environment in which the Fund is conducting its financial sector surveillance is changing rapidly, creating new challenges.** The financial crisis has pushed macro-financial sector issues into center stage in IMF surveillance and program work, straining its financial sector expert resources. It underscored the importance of linkages across markets, sectors, and national borders. It spotlighted the need to expand financial sector analysis beyond the traditional core areas of banking stability and regulation and central bank operations.<sup>1</sup> And it revealed the need for closer collaboration with standard setters and international organizations, such as the Financial Stability Forum (FSF), and prompted calls for strengthening further the Fund’s role in early warning and crisis prevention.<sup>2</sup>

4. **This paper reviews the key challenges in integrating financial sector issues into surveillance and of the work underway to address them.** It does not make specific policy

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<sup>1</sup> For instance, in response to the IMFC’s October 2007 Communiqué, MCM created five working groups to draw policy lessons in the areas of risk management; credit rating agencies; valuation, disclosure, and accounting; central bank liquidity frameworks; and supervision and crisis management. Many of these topics had not previously been covered by the Fund’s surveillance activities.

<sup>2</sup> IMFC Communiqué, April 12, 2008; Statement of the G8 Finance Ministers, June 14, 2008; G20 Declaration, November 15, 2008.

proposals, but is intended mainly to provide the basis for an early, informal Board discussion of key issues and priorities. The TSR, which already provided extensive analysis and outlined the overall framework for addressing financial sector issues in surveillance, is the main point of reference for the discussion in this paper. Moreover, most of the initiatives to improve financial sector surveillance and respond to the financial crisis are still evolving: several of them are presented in separate, more detailed papers,<sup>3</sup> while others, such as the Financial Sector Assessment Program (FSAP) review, are still at their initial stage. This paper should thus be seen as an overview of the key issues and the various strands of work underway.

## II. FILLING THE GAPS: WHAT IS BEING DONE TO STRENGTHEN FINANCIAL SECTOR SURVEILLANCE

### 5. **The Taskforce Report and the TSR identified three major areas for improvement in financial sector surveillance:**

- closing the gaps between multilateral and bilateral surveillance by introducing greater cross-country perspective in Article IV consultations and by improving the analysis of regional, thematic, and market issues;
- improving the degree of coverage and the quality of analysis of financial sector issues in Article IV consultations, including by strengthening the integration of FSAP assessments into surveillance; and
- strengthening the analytical framework and toolkit for studying macro-financial linkages.

Both reports also recognized that the institution needs to build further financial sector expertise and deploy it strategically.

6. **Major initiatives are underway in all three areas.** Closer collaboration with the FSF and other international fora, as well as the proposed Early Warning Exercise (EWE) and regional/thematic studies, will help bridge the gap between multilateral and bilateral surveillance. There has been a major shift in focus of recent Article IV consultations toward financial sector issues, reflecting in large part the impact of the financial crisis. The forthcoming review of the FSAP provides an opportunity to make the program more flexible and better integrated with surveillance, as called for by the October 2008 IMFC Communiqué. And efforts are underway to strengthen the Fund's methodological toolkit, disseminate the

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<sup>3</sup> Notably the April 2008 report to the IMFC on *The Recent Financial Market Turmoil: Initial Assessment, Policy Lessons, and Implications for Fund Surveillance* (IMFC/Doc/17/08/5); the recent report on *The Fund's Response to the 2007–08 Financial Crisis—Stocktaking and Collaboration with the Financial Stability Forum* (SM/08/302); and the papers on the *Causes of the Crisis and Lessons for Macroeconomic Policy and Regulation* and on *The Fund-FSF Early Warning Exercises*.

new tools to staff through training, and build financial sector expertise through recruiting, external assignments, and staff mobility. The following Sections provide a snapshot of these initiatives.

7. **At the same time, these initiatives are highlighting a number of key tradeoffs and questions that need to be recognized and resolved.** These include developing the right instruments for regional/thematic assessments; finding the right balance—and allocating resources accordingly—between more extensive coverage of financial sector issues in Article IV consultations and the Fund’s other financial sector work (including the FSAP, multilateral surveillance, program work, and capacity building); and adapting the FSAP, which is a joint Bank-Fund program with voluntary country participation, to the exigencies of Fund surveillance. The concluding Section summarizes these issues for further discussion.

**A. Enhancing Multilateral and Regional Financial Surveillance and Early Warning Systems, and Bridging the Gap with Bilateral Surveillance**

8. **The World Economic Outlook (WEO) and the Global Financial Stability Report (GFSR) remain the main vehicles for multilateral surveillance, and the focus of recent issues naturally reflected topics of current concern, notably the financial turmoil and its implications.** In these recent issues, the respective overview chapters cross-reference each other more carefully to ensure a consistent global view, and the supporting analytical chapters illustrate a deepened analysis of key aspects of the turmoil. Appendix Table 1 summarizes the topics of the analytical chapters of recent WEOs and GFSRs. The October 2008 GFSR, in particular, provided a preliminary road map for financial sector policy makers on how to exit from the crisis and restore confidence.

9. **Closer collaboration with standard setters and other international fora of policy makers, notably the FSF, is gaining in importance.** Participation in standing Working Groups and events hosted by these organizations has provided an opportunity for staff to present the Fund’s analysis and contribute to the emerging consensus on lessons learned and implications for policy, regulation, and international standards. It has also provided a platform for intense collaboration between the Fund and those organizations, reflecting calls by the Fund’s governing bodies, as well as the international community. This facet of the Fund’s multilateral work is still evolving. Appendix Table 2 presents a list of international working groups to which staff participates. The modalities of collaboration with the FSF, in particular, were discussed in detail in *The Fund’s Response to the 2007-08 Financial Crisis—Stocktaking and Collaboration with the Financial Stability Forum* (SM/08/302).

10. **The key challenge in this area remains to bridge the gap between multilateral activities and bilateral surveillance.** The TSR found that bilateral surveillance is not sufficiently informed by either cross-border considerations or lessons derived by cross-country work. This gap, of course, is not limited to financial sector issues; but the rapid financial

globalization of recent years, highlighted by cross-border contagion during the recent crisis, underscores the importance of these issues for Fund surveillance. As the TSR noted, bridging this gap has several dimensions:

- ensuring that the findings of WEO and GFSR, as well as those emerging from joint work with the FSF and other international fora, are leveraged in bilateral consultations;
- improving access to cross-country knowledge and informing bilateral consultation discussions with cross-country perspectives; and
- developing regional/thematic surveillance initiatives and instruments.

11. **An initiative that can help bridge this gap is the Early Warning Exercise currently under preparation.** The joint IMF-FSF EWE aims at identifying emerging pressures in the global economic and financial system and ranking them. As well, the EWE will attempt to outline options for policy makers to mitigate these risks. Tools and indicators used in this exercise will focus extensively on financial linkages and analyze not only global risks, but also sectoral vulnerabilities, cross-border distress dependencies, and spillovers across markets. The Surveillance Committee and Management would finalize the prioritization and the Board would discuss it at an informal session, following which the results would be disseminated to the IMFC, Development Committee, G7/G20, and other policy makers. Area Department participation in the process would ensure that the results reflect, as well as inform, Article IV consultations. The details and resource implications of this exercise are discussed in the paper *Fund-FSF Early Warning Exercises: Conceptual Issues*.

12. **Appropriate instruments need to be developed for conducting regional/thematic assessments with a financial sector focus.** Article IV consultations and FSAPs have so far predominantly been vehicles for bilateral assessments, with few exceptions (notably the Euro area for Article IV consultations and cases of currency unions with regional supervisory arrangements, like the WAEMU, for the FSAP). There is need, however, for financial sector work with a cross-country perspective. The 2007 review of Nordic-Baltic supervisory and regulatory frameworks provides a useful model. But one could also envisage more focused, multi-country thematic studies, concentrating on issues common to several countries, rather than regions. A natural starting point for such assessments would be issues highlighted by the recent crisis, such as cross-border and cross-functional supervision and crisis management frameworks, or issues identified in the EWE. Regional/thematic assessments would permit staff to experiment in the space between bilateral and multilateral surveillance and “connect the dots” observed bilaterally or from broader market developments.

13. **Several other initiatives have the potential of bringing multilateral and cross-country perspectives into bilateral surveillance.**

- **Staff continues to work on drawing and disseminating lessons from the crisis.** In June 2008, following the report to the IMFC on preliminary lessons from the crisis, MCM issued detailed operational guidance to Article IV and FSAP mission teams. Continuing this work, MCM internal working groups have been constituted to study more deeply the gaps that contributed to the crisis and derive policy recommendations in the areas of cross-border/cross-functional regulation, the perimeter of regulation, procyclicality in accounting and prudential frameworks, leverage, and systemic liquidity management. Separately, MCM and LEG are studying crisis management and bank resolution frameworks, while another strand of analytical work has focused on learning from the experience of major central banks' efforts to restore the smooth functioning of money markets. Finally, the Crisis Group website provides a shared workspace disseminating cross-country experience.
- **Staff is expanding the coverage of financial sector issues in *Regional Economic Outlooks* and other regional activities.** Regional Economic Outlooks (REOs) are becoming more sophisticated in their analysis of financial linkages and potential spillovers. New, flexible forms of engagement at the regional level (seminars, ad hoc meetings) have been deployed in the aftermath of the financial turmoil to supplement and enrich bilateral surveillance. Appendix Table 3 presents a sample of recent financial sector themes in REOs and regional surveillance activities.

### **B. Improving Financial Sector Analysis in Bilateral Surveillance**

14. **The drive to improve bilateral financial sector surveillance within existing budget constraints implies tradeoffs between the various instruments at the Fund's disposal.** The Article IV consultation is the main vehicle for *all* bilateral surveillance, but it receives critical support from the FSAP, which provides a more in-depth, but much less frequent, assessment of financial stability. At the same time, the TSR found—and recent experience confirms—that the quality of financial sector coverage in Article IV consultations depends importantly on the availability of expert resources to participate in Article IV missions. These expert resources currently reside mainly in MCM, and there are tradeoffs between their deployment for Article IV support, FSAP assessments, as well as support of Fund programs, capacity-building, multilateral surveillance, and methodological development.

15. **Effective financial sector surveillance also requires difficult choices as regards allocation of resources across countries.** Given resource constraints, the TSR stressed the need to “deploy financial sector expertise strategically, using a risk-based approach, and prioritizing according to the criteria of systemic or regional importance, importance of vulnerabilities, and importance of financial development issues for present or prospective macroeconomic or external stability.” This is relatively straightforward for financial sector expert resources allocated to Article IV consultations. Participation in the FSAP, however, is voluntary for member countries: in this sense, the FSAP is akin to technical assistance. Therefore, although a majority of members has undergone assessments (Appendix Table 4 and

Figures 1–3), the Fund is not always able to direct FSAP resources where the needs are most urgent. In addition, although there is no obligation for the Fund and the Bank to provide an FSAP assessment to any member that requests it, both institutions try in practice to respond positively to all requests (although possibly with delay), which further limits the scope to focus resources on high-priority cases.

### **Article IV consultations**

16. **Financial sector issues have become more central to Article IV consultations, in part reflecting the recent focus on the financial turmoil.** Progress in this area was documented in the TSR, and further background is contained in Appendix Table 5, which lists the actual financial sector topics on which the most recent Article IV consultations have focused. Not surprisingly, these were dominated by issues related to the financial turmoil, such as the vulnerability of domestic banking systems to contagion, risks emanating from housing credit and new financial instruments, financial safety nets and crisis management frameworks, and central bank liquidity management. This focus was even more prominent in cases where Article IV consultations were combined with FSAPs.

17. **Financial sector analysis in Article IV consultations will be further supported by the *Financial Sector Guidance Note for staff*, currently under preparation by MCM and SPR.** This Guidance Note will help codify standards and expectations regarding the depth and breadth of analysis of financial sector issues in bilateral surveillance, while at the same time providing operational guidance to staff in key areas. This resource would both enhance the quality and evenness of analysis and make it easier for Article IV consultation teams to bring cross-country perspectives on financial sector issues to bear in consultation discussions.

18. **Nevertheless, obstacles to boosting financial sector coverage remain and, in some cases, have become more acute.** While progress continues to be made in improving the analytical toolkit available to staff,<sup>4</sup> an organizing framework for more systematic macro-financial surveillance, including the analysis of macro-financial linkages, is still not well-established. And while MCM has continued to provide both analytical support and staff resources to Article IV consultation missions, its contribution in this area was cut in the context of the recent restructuring of the Fund.<sup>5</sup>

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<sup>4</sup> Recent IMF research in this area has focused on the use of contingent claims analysis. For a summary, see Dale Gray and Samuel Malone, *Macrofinancial Risk Analysis*, 2008.

<sup>5</sup> Since the onset of the financial crisis, additional budgetary resources have been temporarily allocated to MCM, but these still leave the department smaller than before the restructuring. Moreover, this still leaves the challenge of replacing experienced staff lost during the downsizing.

19. **Further progress in this area will inevitably be gradual and, at least in the short run, conditional on resource availability.** Section C highlights a number of initiatives aimed at enhancing the toolkit for analyzing financial sector issues and spreading financial sector expertise more widely through staff recruiting, mobility, and training. These initiatives, however, will generate benefits gradually, by enabling Area Department staff to play a greater role in financial sector work. At least in the near term, the prospects for bringing financial sector issues to the core of bilateral surveillance will continue to be determined to a large extent by the availability of specialized staff resources for participation in Article IV consultation missions.

### **The FSAP**

20. **Since its inception a decade ago, the FSAP has achieved significant success.** As noted above, its contribution to raising the quality of financial sector analysis in Article IV consultations has been considerable. It has an established “brand name” as a comprehensive assessment of both stability and developmental needs of the financial sector. The involvement of the Bank in non-industrial countries helps ensure consistent advice and allows the Fund to leverage its limited resources. Moreover, with the increasing shift to updates, the resource cost of the program has been contained, and the recent crisis has illustrated the scope for the focus of assessments to respond to emerging priorities (Box 1).

#### **Box 1. The Focus of Recent FSAPs**

In the last 18 months, 35 FSAP assessments were initiated, of which 25 were updates (not including the FSAP updates in the Crown Dependencies of the U.K.). In almost all cases, the focus of the assessments—and of the Article IV consultation that followed—was influenced by the turmoil.

- In the three advanced economies that underwent assessments during this period (Canada, Austria, and Iceland), the focus was predominantly on evaluating the risks of exposure to U.S. subprime-related products or, more broadly, the risks from external contagion through, e.g., a sharp rise in finding costs; as well as cross-border coordination and—particularly in the case of Iceland—crisis management and problem bank resolution.
- FSAP assessments in emerging market countries focused on assessing resilience to a range of possible shocks that could be triggered as a consequence of the unfolding crisis. Given the large external funding needs of some of these countries, particular attention was paid to stress-testing “sudden stop” scenarios. Particular emphasis was placed on crisis management frameworks and, in countries where foreign banks predominate, attention was given to assessing cross-border cooperation arrangements among host and home country supervisors.

21. **However, the FSAP also has limitations as a surveillance instrument.** Its voluntary nature constrains the scope for prioritization. And despite the streamlining of FSAP updates endorsed by the Board in 2005, the combination of joint Bank-Fund missions, the requirement

that assessments be relatively comprehensive, and resource constraints at the Fund mean that missions still take long to prepare and are infrequent (the gap between updates is 5–7 years).

22. **Nevertheless, the FSAP—appropriately reshaped—should continue to be a key element of the strategy for integrating financial sector work into surveillance.** Its comprehensiveness would be difficult to duplicate in Article IV consultations, and its brand name carries considerable value, both for the Fund and for members. But there is scope for the FSAP to make a bigger contribution to integrated financial sector surveillance. Recognizing this, the October 2008 IMFC Communiqué called for “a reshaped FSAP that is more flexible, better integrated with the Fund’s core surveillance mandate, and embraces regional perspectives.”

23. **Discussions among Bank and Fund staff on this reshaping are ongoing in the context of the forthcoming FSAP review, but three proposals warrant consideration.**

- **“Modular” FSAPs.** Currently, FSAP assessments are supposed to be comprehensive, covering both stability and developmental issues. When circumstances call for—and the authorities request—a more flexible approach, a modular model would provide the option for the Fund and the Bank to launch separate, stand-alone stability and developmental assessment modules, respectively. Individual modules would not be substitutes for a “complete” assessment, but could be conducted separately or together. Existing mechanisms of institutional coordination, notably the Financial Sector Liaison Committee, would continue to ensure the joint nature of the program, including with regard to country prioritization, consistency of advice, and effective synergies. This approach would help the program become more responsive to circumstances: both in-depth and comprehensive, as well as quicker and more focused assessments would be possible, depending on country need (and demand), as well as institutional priorities. It would also strengthen accountability along each institution’s mandate and comparative advantage, and permit the Fund to mold the stability modules more closely to the needs of surveillance and—resources permitting—increase their frequency relative to the current comprehensive FSAPs.
- **Stronger integration of analytical content and offsite monitoring.** The Bank and the Fund would continue to develop the analytical framework for financial sector assessments, focusing on systemic links and dynamics, cross-country benchmarks and indicators, and a more systematic approach to stability and developmental assessments to make these more comparable across countries. They would also develop the capacity for a more continuous offsite monitoring to bridge the information gap between assessments, subject to resource constraints. These efforts would enhance the integration of both institutions’ policy advice, both within and across countries.
- **Risk-based ROSCs.** Currently, ROSCs—be they initial assessments or updates—must be based on a *comprehensive detailed assessment of all principles*. In recent years,

financial standards and assessment methodologies have become more complex while FSAPs have been resource-constrained. As a result, the number of ROSCs has dropped from five per initial FSAP in FY2002 to about two in FY2007 (and to less than one in FSAP updates). Instead, staff is producing technical notes on selected principles (usually those with which the authorities were less than fully compliant in earlier assessments). This is arguably less transparent (technical notes are not, as a rule, issued to the Board) and less effective (full ROSCs have been found to spur authorities to take remedial action). The proposal thus would be to modify the existing requirement so that, following the initial comprehensive assessment, staff could undertake either a full or a partial ROSC update.<sup>6</sup> The principles selected for a partial reassessment would be determined in advance of the mission on the basis of key risks and vulnerabilities (“risk-based”), with appropriate safeguards against “cherry-picking.” This proposal would help streamline the FSAP and improve the transparency of standards assessments.

24. **These proposals also have caveats.** The modular approach, if taken too far, risks diluting the quality of FSAP assessments. The frequency of updates, modular or otherwise, would continue to be ultimately determined by the resource constraint. And even if these proposals are implemented in full, so long as the FSAP continues to be voluntary, seamless integration into the Fund’s surveillance would remain elusive.

25. **In the absence of these—or similar—reforms to the FSAP, the alternative would be to expand the financial stability work done in the context of Article IV consultations.** Indeed this is already taking place gradually, as financial sector expertise is being built up in Area Departments. However, a decisive push in this direction could only happen through a substantial increase of MCM resources devoted to Article IV participation or other Area Department mission support. Under the current resource envelope, this could only take place at the expense of other MCM activities, including notably the FSAP, capacity building, and multilateral surveillance. Therefore, reforms to make the FSAP more flexible would not only result in better integration with surveillance but also ensure the continued strength of the program.

### **C. Improving the Analytical Toolkit and Building Financial Sector Expertise**

26. **Work in RES is underway to strengthen the tools that would permit a more rigorous analysis of macro-financial linkages.** This work can be grouped under four headings (Appendix Table 6 provides a selective list of recent papers and conferences in these areas). The first is an umbrella project on the fundamentals of the various links between the real economy and the financial sector, and the next three cover more specialized topics, each serving the general goal of understanding macro-financial linkages.

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<sup>6</sup> This option would not apply to AML/CFT standards, which would continue to be assessed in their entirety.

- **Fundamentals of macro-financial linkages.** This project attempts to provide a systematic overview of the links between the financial sector and the real economy; the effect of the financial sector on the conduct of macroeconomic policies; the role of the financial sector in initiating, amplifying, or muting disturbances to the economy; and the potential cross-border spillovers of financial sector developments.
- **Boom-bust cycles in financial and macro variables.** This work examines the main characteristics of credit booms, the linkages between credit booms and crises, and the optimal policy responses.
- **Implications of financial globalization,** in particular the measurement of financial globalization, its impact on economic growth and macroeconomic volatility, and the policies that can best promote the benefits of globalization.
- **Financial system performance and governance.** Work under this heading is focusing on how competition, foreign bank entry, financial conglomerates, and diversification affect financial sector performance; the relationship between corporate governance and corporate performance; measures of corporate sector vulnerabilities; and the impact of regulation on financial stability.

27. **Within MCM, work is underway to develop and apply enhanced methodologies for stress testing and other quantitative analyses of financial sector vulnerabilities.** The recent financial market turmoil has lent further impetus to this work. Important progress has been made in the following areas, in particular.

- **Credit risk.** Stress-testing has built on new approaches to modeling credit portfolio loss distributions more rigorously, so as to better quantify the impact of macroeconomic shocks on banks' economic capital in the presence of both limited data series and default correlations that vary over the credit cycle.
- **Liquidity risk.** Methods to stress-test liquidity risk exposures are increasingly incorporating non-traditional funding liquidity risks (e.g., through securitization), market liquidity risks (e.g., effects of "fire sales"), and off-balance sheet concentration risk (e.g., excessive credit lines extended to a single counterparty).
- **Second-round effects.** New models capture more fully the potential importance of correlations between individual financial institutions within a system as a reflection of potential contagion channels or simply similar exposures (e.g., based on banks' joint probability of default). New contagion models can also capture better the specificities of extreme shock transmission across financial systems.

- **Risk-adjusted balance sheets.** The contingent claims approach (CCA) to constructing risk-adjusted balance sheets has also been increasingly used for scenario analysis. In addition, a framework integrating the CCA approach with various aspects of macroeconomic models has been applied in several cases.
- **Summary fragility measures.** Some of the methodologies developed for better risk modeling and system level stress testing can also be used to produce summary measures of financial stability on a time series basis.<sup>7</sup> As well as being applied to national banking systems, these methods are being applied to analysis of cross-border and cross-sector correlations between groups of institutions, as well as the potential implications of counterparty risk exposures.

28. **Several initiatives in STA should also help strengthen financial sector analysis and transparency.** Efforts to collect better data for balance sheet analysis (through the *Supplementary Report Forms* for monetary and financial statistics) are helping to construct a better picture of linkages between the financial and others sectors, and within the financial sector. Also, STA is working to initiate regular collection and dissemination of data of Financial Soundness Indicators (FSIs) for banks, their client sectors, and financial and real estate markets for around 50 IMF member countries in the second quarter of 2009, and to subsequently expand coverage to other member countries. To consolidate this effort, STA is working on the possibility to broadening the SDDS on financial indicators to provide early warning signals and monitoring information to markets and policymakers, which are comparable across countries. Moreover, in order to further help assess macrofinancial risks and systemic vulnerabilities, there is a need to improve the availability, timeliness, and frequency of data, particularly on nonbank financial institutions, and on housing-related statistics, as well as gain a better understanding of credit risk transfers. Further, better information will be needed on the financial operations of large nonfinancial corporates that have significant links in both the national economy, but also potentially across borders as well. To advance this statistical work, assess other data gaps, and leverage resources and expertise, STA is chairing an Inter-Agency Group on Finance Statistics (involving the BIS, the ECB, Eurostat, OECD, the UN, and the World Bank).

29. **In addition to developing analytical tools, efforts are also underway to disseminate them more widely to staff, particularly Area Department economists.** As noted in the TSR, new training programs have been developed by INS and MCM aimed at increasing the staff's familiarity and comfort with financial sector surveillance diagnostic tools and indicators. A key priority in designing these courses has been to make them operationally relevant. In this way, these courses would not only introduce Fund staff to the terminology of

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<sup>7</sup> See, for example, Box 1.5 on the "Banking Stability Index" in the April 2008 GFSR.

finance, but also deepen the dialogue with country authorities and the private sector on financial issues.

- The course *Foundations of Macro-Financial Surveillance* presents analytical tools used by practitioners (e.g., risk managers and bank supervisors) to assess financial risks and vulnerabilities. In addition to balance sheet analysis and related financial soundness indicators, the course examines regulatory policy issues and cross-border supervision and cooperation. The analysis of macro-financial linkages stresses how risks can propagate to the real economy and vice versa. The course also examines how to apply such analytical methods to improve the manner in which macroeconomic and financial surveillance is conducted by the Fund.
- A second course on *Extracting Information from Financial Data* is targeted toward introducing staff to market indicators from which information on expectations can be extracted for diagnostic and policy design purposes. At the core of the course is the analysis of yield curves, options prices, and spreads. It is expected that market indicators and related analytical tools will increasingly be applied in surveillance work as more staff become familiar with their strengths and limitations.

30. **Here too, however, resources are a major constraint.** Internal staff training is a time-intensive activity for both trainees and trainers. Since these courses are delivered primarily by staff with background and experience in financial systems, they represent a competing claim on these experts' time with the increasing demand for financial sector work and mission staffing.

31. **Recruiting, staff mobility, and external training can help ease this constraint, although these methods take time to deliver results.**

- Securing financial sector expertise has been a part of the Fund's general recruitment drive over several years, but has gained more emphasis recently. The Fund increasingly seeks economists with training and experience in financial economics, financial sector policy, and financial regulation and governance. HRD has advertised internally and externally for financial experts (*Economist*, December 20, 2008) and is working with departments to identify more accurately the specific skill requirements.
- Swap arrangements and temporary assignments (TAPs) provide the opportunity for on-the-job training in financial sector issues. However, the uptake has so far been limited (one senior staff on TAP to MCM), largely due to increased work pressures in Area Departments.
- To facilitate external assignments to the private financial sector, Management lifted restrictions on these types of assignments under leave without pay (LWOP) arrangements. To date, 12 staff have been approved either under LWOP in the interest

of the Fund or for personal reasons. Two staff members recently returned from short-term external assignments in private financial firms.

- Staff also have the opportunity to enhance their skills/knowledge through a number of programs that support external study. Over the last two years, 13 staff have been approved for short external courses on financial and banking sector topics, and an additional 9 have received support to pursue the CFA certification.

### III. ISSUES FOR DISCUSSION

32. **This paper raises several issues related to how the Fund can integrate financial sector issues into surveillance and summarizes the work underway to address them.** The paper offers an overview of the issues and does not make specific policy proposals. These will be presented in follow-up work, including in the context of the forthcoming FSAP review. Directors may wish to indicate their views on the following issues:

- Especially in light of the financial crisis, has the focus and depth of analysis of macro-financial issues in Article IV surveillance been appropriate, and in what areas would there be scope for further improvement?
- Given budget constraints, is the Fund's limited financial expertise appropriately targeted between Article IV surveillance, FSAPs, and other areas, including programs, capacity building, multilateral surveillance, and methodological development?
- Where do Directors see the priorities for reshaping the FSAP and integrating it more effectively into bilateral surveillance? Is there a need to reconsider the voluntary nature of the program and the manner in which assessments are prioritized in the forthcoming FSAP review? Is there merit in introducing more modular FSAP assessments, stronger offsite monitoring, and risk-based ROSCs, currently under discussion with the Bank?
- What are the appropriate vehicles for regional and thematic financial sector assessments, and do Directors view these as a useful approach to bridging the gap between multilateral and bilateral surveillance?

**Appendix Table 1. Analytical Chapters in Recent Global Financial Stability Reports and World Economic Outlooks on Financial Sector Issues**

Edition	Chapter
Fall 2007 GFSR  Fall 2007 WEO	<ul style="list-style-type: none"> <li>● Do Market Risk Management Techniques Amplify Systemic Risk?</li> <li>● The Quality of Domestic Financial Markets and Capital Inflows</li> <li>● Managing Large Capital Inflows</li> </ul>
Spring 2008 GFSR  Spring 2008 WEO	<ul style="list-style-type: none"> <li>● Structured Finance: Issues of Valuation and Disclosure</li> <li>● Market and Funding Liquidity: When Private Risk Becomes Public</li> <li>● The Changing Housing Cycle and the Implications for Monetary Policy</li> </ul>
Fall 2008 GFSR  Fall 2008 WEO	<ul style="list-style-type: none"> <li>● Bank Funding Markets in the Current Financial Turmoil, and their Impact on Monetary Policy</li> <li>● Fair value Accounting and Procyclicality</li> <li>● Spillovers to Emerging Equity Markets</li> <li>● Economic Cycles in the Aftermath of Financial Crises</li> </ul>

## Appendix Table 2. MCM Staff Participation in International Working Groups

<b>FSF</b>
<p>Joint FSF-CGFS Working Group on the Role of Valuation and Leverage on Procyclicality            Team 1: Leverage            Team 2: Fair Value</p> <p>FSF—Consultative Group Meeting on Risks and Vulnerabilities</p> <p>FSF Working Group on Provisioning            Technical Team            Technical Team Sub-groups</p> <p>FSF Working Group on Capital Procyclicality</p>
<b>Standard Setters</b>
<p>Basel Committee's International Liaison Group (ILG)            Working Group on Capital (ILGC)</p> <p>Basel Committee on Banking Supervision (BCBS) Research Task Force (RTF)            RTF Working Group on Transmission Channels between the Financial Sector and the Real Economy</p> <p>Bank for International Settlements (BIS)-Basel Accord Implementation Sub-group on Model Validation (BIS-AIGV)</p> <p>Committee on Payment and Settlement Systems (CPSS) Working Group on Standards</p> <p>International Association of Insurance Supervisors (IAIS) Technical Committee            Solvency and Actuarial Sub-Committee            Task Force on the Revision of the Insurance Core Principles</p> <p>International Accounting Standards Committee (IASC) Foundation's Standards Advisory Council (acts as an advisory body for the International Accounting Standards Foundation on issues of the standard setting agenda)            International Organization of Securities Commissions (IOSCO) Emerging Market Committee (EMC)            Project on Securitization in Emerging Markets and Effect of Current Crisis</p> <p>IOSCO Implementation Task Force</p>
<b>Working Groups</b>
<p>International Working Group of Sovereign Wealth Funds            Organization of Economic Cooperation &amp; Development (OECD) Working Party on Public Debt Management            OECD-World Bank-IMF Forum on Bond Markets            OECD African Debt Forum            Technical Advisory Group (TAG) under the Debt Management Facility (DMF) of the World Bank            OECD Investment Committee</p>

**Appendix Table 3. Integration of Financial Sector Issues in Bilateral Surveillance—Recent Activities in Selected Countries**

<b>Country</b>	<b>Activities</b>	<b>Output</b>
<b>Australia</b>	The <b>2008 Article IV Consultation</b> focused, in particular, on bank resilience to shocks, including increased funding costs as a result of the global financial turmoil.	<a href="#">Article IV Consultation Staff Report</a> , <a href="#">Selected Issues Paper</a>
<b>Austria</b>	<b>FSAP Update</b> (June 2008)—The assessment focused on the impact of global funding pressures on Austrian banks, with emphasis on liquidity risks and cross-border effects.	<a href="#">FSSA Update Report</a> Technical Notes
<b>Barbados</b>	Box 4 in the <b>Article IV Consultation report</b> was dedicated to the recommendations of the <b>FSAP Update</b> mission. The full FSSA report was also discussed by the Board together with the staff report for the Article IV Consultations.	<a href="#">Article IV Consultation Staff Report</a> FSSA Report (forthcoming)
<b>Belarus</b>	<b>Technical Assistance</b> in April 2008 reviewed financial safety nets and crisis preparedness, drawing on lessons from the global financial turmoil, such as the Northern Rock crisis in the United Kingdom (U.K.), and the design of deposit insurance and crisis management frameworks. An <b>FSAP Update</b> is scheduled for late 2008.	Technical Assistance Report.
<b>Belize</b>	One of the key topics of <b>2008 Article IV Consultation</b> was liquidity management reform.	<a href="#">Article IV Consultation Staff Report</a> Background paper on fiscal costs of liquidity management reform.
<b>Bolivia</b>	The <b>2007 and 2008 Article IV Consultations</b> reports had a dedicated section on financial sector issues, with policies needed to address remaining vulnerabilities. The 2007 report contained a Box on the state of the banking system and pending reform agenda, while the <b>Selected Issues Paper</b> included chapters on the monetary policy transmission mechanism and debt management.	<a href="#">Article IV Consultation Staff Report</a> <a href="#">Selected Issues Paper</a>
<b>Bosnia and Herzegovina</b>	The <b>2008 Article IV Consultation</b> report includes a section on financial sector issues, in particular a discussion of measures to improve risk management, information sharing and crisis preparedness.	<a href="#">Article IV Consultation Staff Report</a>
<b>Brazil</b>	The <b>2008 Article IV Consultation</b> (July 2008) included an assessment of the financial sector risks posed by the global financial turmoil, the functioning of derivatives markets in Brazil and their potential role in the transmission of external shocks, and the risks associated with rapid credit growth. <b>Technical Assistance</b> in May 2008 provided advice on the estimation of bank credit risk indicators, and on developing a factor model linking those indicators to a set of macrofinancial variables. This was followed by <b>Technical Assistance</b> in August 2008, which assisted in the development of securities regulation and capital market development. Further <b>Technical Assistance</b> in December 2008 examined the role of domestic investment funds in the financial sector, including the implications for financial stability, and made recommendations for regulatory improvements.	2008 Article IV Consultation Staff Report and Selected Issues Papers (not published). <a href="#">Public Information Notice (PIN)</a> Technical Assistance Reports
<b>Burundi</b>	The staff report for the First Review under the <b>Poverty Reduction and Growth Facility (PRGF)</b> program assessed the impact of the global financial crisis on the banking system	Staff Report for First Review Under the PRGF.

Country	Activities	Output
	and the overall economy in Burundi.	
<b>Cameroon</b>	The <b>2007 Article IV Consultation</b> (June 2007) included a Selected Issues Paper on the financial sector, which was presented in a workshop during the mission. The country team then carried this research agenda forward, contributing a paper to a Central African Economic Community (CEMAC) conference in the context of a regional surveillance mission.	2007 Article IV Consultation <a href="#">Article IV Consultation Staff Report</a> <a href="#">Selected Issues Paper</a>
<b>Canada</b>	The <b>FSAP Update</b> (January 2008) assessed the resilience of the banking system, notably to shocks emanating from the U.S. subprime crisis. It also reviewed the agreement to restructure non-bank Asset Backed Commercial Paper and its impact on financial market conditions. The <b>2008 Article IV Consultation</b> (February 2008) addressed the quantitative impacts of U.S. financial shocks on Canada.	<a href="#">FSSA Report</a> <a href="#">Selected Issues Paper</a> with a chapter quantifying the spillovers from the U.S. financial shocks
<b>Chile</b>	The <b>2008 Article IV Consultation</b> assessed how changes in global liquidity affect Chile, evaluated Chile's sovereign wealth funds asset allocation and investment practices (Sovereign Wealth Funds) vis-à-vis other countries' Sovereign Wealth Funds, and identified a number of remaining obstacles to a further deepening of local capital markets.	<a href="#">Article IV Consultation Staff Report</a> <a href="#">Selected Issues Paper</a>
<b>Colombia</b>	The <b>2009 Article IV Consultation</b> (January 2009) focused on assessing financial and corporate sector risks and the adequacy of financial safety nets in light of the global financial turmoil. The Article IV Consultation report will also assess the effects of capital controls. <b>Technical Assistance</b> in October 2007 provided assistance on the design of the prudential regulatory framework for derivatives.	Article IV Consultation Staff Report, (forthcoming) Four Selected Issues Papers on Financial Sector Topics, (forthcoming) Technical Assistance Report
<b>Costa Rica</b>	The <b>FSAP Update</b> was discussed by the Board together with the <b>2007 Article IV Consultation</b> staff report in February 2008.	Article IV Consultation <a href="#">Article IV Consultation Staff Report</a> <a href="#">FSSA Report</a>
<b>Croatia</b>	The <b>FSAP Update</b> (May 2008) focused on measures to address rapid credit growth and the associated risks, as well as on the supervisory and regulatory framework, home-host supervisory coordination, Basel II implementation, liquidity and risk management, and contingency planning arrangements.	<a href="#">FSSA Report</a>
<b>Czech Republic</b>	The <b>2008 Article IV Consultation</b> (November 2008) assessed the risks to the financial sector, the adequacy of risk management practices and existing financial safety nets (including arrangements for corrective action, deposit insurance, crisis management, and cross-border collaboration).	Staff note on methods by which foreign subsidiaries could transfer liquidity to parent banks overseas. Box in Article IV Consultation staff report analyzing the direct impact of a sharp withdrawal of foreign lending on Czech economic growth, drawing on working papers by staff. <a href="#">Mission Concluding Statement</a>
<b>Denmark</b>	The <b>2008 Consultation</b> (October 2008) included an analysis of the impact of the global financial crisis on Denmark.	Article IV Consultation Staff Report (SM/08/339)

Country	Activities	Output
		<a href="#">Mission Concluding Statement</a> .
<b>Dominican Republic</b>	The <b>2008 Article IV Consultation</b> (January 2008) included a joint stress testing exercise for the banking system, which was conducted jointly with the central bank and banking supervision staff. In addition, the staff report presented a table updating the status of the recommendations made during the 2002 staff report.	Article IV Consultation Staff Report (forthcoming).
<b>Ecuador</b>	One of the key topics of the <b>2007 Article IV consultation</b> (January 2008) was financial sector reforms to address longstanding vulnerabilities. In particular, the report discussed policies to strengthen the financial sector safety net and the resolution framework, and market policies to reduce the cost of credit and enhance the efficiency of the financial sector.	Article IV Consultation Staff Report (forthcoming).
<b>Egypt</b>	An <b>FSAP Update</b> was undertaken in November 2007. The <b>2008 Article IV Consultation</b> (concluded in November 2008) focused in particular on financial sector vulnerabilities (liquidity and credit risks) and implications of the global financial turmoil. The mission also inquired about corporate sector vulnerabilities.	Article IV Consultation Staff Report (forthcoming) <a href="#">Mission Preliminary Conclusions</a> FSSA Report (not published)
<b>Estonia</b>	The <b>2008 FSAP Update</b> focused on balance sheet risks economy-wide, banks' liquidity risks stemming from their dependence on financing from parent institutions, and the supervisory and crisis management and resolution frameworks. These aspects were also a core element of the <b>2008 Article IV Consultation</b> discussion.	Article IV Consultation Staff Report (forthcoming) Selected Issues Paper (forthcoming) <a href="#">Mission Concluding Statement</a> FSSA Report (forthcoming)
<b>Finland</b>	The <b>2008 Article IV Consultation</b> (Board discussion scheduled for January 2009) focused on financial sector soundness and risks stemming from the global financial market turmoil. Developments in banking, insurance, and the pension system were covered, as well as European coordination and harmonization in deposit insurance and cross-border financial supervision.	<a href="#">Article IV Consultation Staff Report</a> contains an appendix analyzing financial-real sector linkages.
<b>Germany</b>	Following two bank rescues at the outset of the global turmoil, the <b>2008 Article IV Consultation</b> (November 2008) focused extensively on deposit insurance, spillovers from emerging markets, supervision, and banking sector restructuring.	Article IV Consultation Staff Report (currently circulating at the Executive Board)
<b>Guatemala</b>	Following the <b>FSAP Update</b> (2006) and the failure of two banks in 2006/2007, surveillance and <b>Technical Assistance</b> have focused on financial sector issues. The <b>2006 Article IV Consultation</b> summarized FSAP findings and provided a detailed analysis of issues and priorities regarding banking sector policies, including the need to strengthen crisis prevention and crisis resolution. The <b>2008 Article IV Consultation</b> followed up on these findings. MCM has provided Technical Assistance on banking legislation and regulation and banking sector stress.	FSSA Update Report 2008 Article IV Consultation Staff Report (forthcoming) <a href="#">Mission Concluding Statement</a> Technical Assistance Report
<b>Guyana</b>	The <b>2007 Article IV Consultation</b> (January 2008) included a selected issues paper entitled "Guyana-Enhancing The Financial System's Contribution to Growth", which described the main features of the financial system in Guyana, identified measures to enhance its contribution to growth, and updated the <b>2006 FSAP</b> stress tests.	Selected Issues Paper (forthcoming).

Country	Activities	Output
Haiti	The <b>2007 Article IV Consultation</b> discussed banking sector developments and weaknesses. <b>FSAP</b> missions were undertaken in June and September 2007. The FSAP concludes that banks are relatively sound, but that the effectiveness of monetary policy has been undermined by dollarization, while fiscal dominance has eroded the central bank's capital. A new banking law should be enacted to strengthen banking supervision. A regulatory framework for credit unions should be introduced. The FSAP conclusions are discussed in the staff report for the <b>Second Review under the PRGF</b> . The findings have been followed-up upon in the context of the PRGF-supported programmed, and have, in particular, helped better frame program conditionality.	<a href="#">Article IV Consultation Staff Report</a> <a href="#">Staff Report for Second Review Under the PRGF</a> . FSSA Report (not published).
Honduras	The <b>FSAP Update</b> indicated that: (i) capital buffers of the banking system may be insufficient to absorb credit losses associated with a less benign macro environment; (ii) indirect credit risk is substantial and some banks face heavy concentration risk in their portfolios; (iii) there is a need to strengthen banking supervision and enforcement of regulations, undertake measure to support the development of local capital markets, and strengthen financial institutions (particularly pension funds). Several <b>Technical Assistance</b> missions have taken place in 2008 to support the authorities' efforts to improve banking supervision by moving toward a risk based approach—in line with the policies supported under the Stand-By Arrangement.	FSSA Report (forthcoming).
Hungary	The <b>2008 Article IV Consultation</b> (June 2008) assessed the adequacy of risk management practices and existing financial safety nets (including arrangements for corrective action, deposit insurance, crisis management, and cross-border collaboration).	<a href="#">Article IV Consultation Staff Report</a> <a href="#">MCM Internal Report</a> : Financial Sector Developments and Risks to the Outlook 2007-08.
Iceland	The <b>FSAP Update</b> (June 2008) assessed in particular the policy frameworks for supervision and regulation, cross-border coordination; crisis management and problem bank resolution, as well as the market infrastructure (systemic liquidity management; payment and settlements systems).	<a href="#">FSSA Report</a> . <a href="#">Article IV Consultation Staff Report</a> .
India	The <b>2008 Article IV Consultation</b> (December 2008) assessed the impact of the global financial crisis on capital flows and domestic macro-financial indicators, liquidity and credit risks in the banking system, and threats to financial stability stemming from corporate sector vulnerabilities.	Article IV Consultation Staff Report (forthcoming). Selected Issues Paper (forthcoming).
Israel	A major focus of the <b>2007 Article IV Consultation</b> (February 2008) was the assessment of the banking and insurance supervision frameworks, which included reviews of progress toward Basel II implementation and the onsite and offsite supervision processes.	<a href="#">Article IV Consultation Staff Report</a> . <a href="#">Selected Issues Paper</a> .
Italy	The <b>2008 Article IV Consultation</b> (November 2008) assessed the strengths and vulnerabilities of the financial system with regard to the financial crisis, the financial safety net; and the official response to crisis and further steps needed; and evaluated the impact on the real economy.	Working Papers <a href="#">No. 08/74</a> and IMF. Working Paper No. 08/91 <a href="#">No. 8/91</a> Article IV Consultation Staff Report (forthcoming).
Jamaica	The <b>2007 and 2008 Article IV Consultations</b> explored progress made in implementing key recommendations of the <b>2006 FSAP</b> , which relate mainly to: i) initiatives to strengthen	<a href="#">2007 Article IV Consultation Staff Report</a> 2008 Interim Article IV Consultation Report

Country	Activities	Output
	capacity and coordination across supervisory agencies to permit comprehensive consolidated supervision; and, ii) legal reforms to bolster regulatory and supervisory frameworks. The 2008 Article IV consultation also extensively examined the macroeconomic risks associated with the emergence of Ponzi-type unregulated investment schemes. A joint MCM/LEG <b>Technical Assistance</b> mission was fielded to examine this issue. The <b>2008 Interim Article IV Consultation</b> focused on spillovers risks associated with ongoing international financial market turbulence that could expose existing financial sector weaknesses, particularly as it relates to the highly leveraged securities sector which is vulnerable to interest rate and rollover risk.	(forthcoming). <a href="#">2008 Article IV Consultation Staff Report</a> Technical Assistance Reports.
Nicaragua	The <b>2008 Article IV Consultation</b> was postponed due to political complications and security concerns. The consultation was to focus on evaluating the impact of the global financial crisis on the domestic financial system, and assessing Nicaragua's competitiveness by applying the CGER methodologies to a LIC case. An <b>FSAP Update</b> is expected to take place in Q1-2009. Structural measures in the financial sector are envisaged under the three-year <b>PRGF</b> arrangement approved in October 2007, for which a first review was completed in September 2008. MCM staff participated in several negotiation missions during 2008.	Briefing Paper (not published).
Panama	The <b>2008 Article IV Consultation</b> (July 2008) focused on the unprecedented economic growth, risk of overheating, and inflation; it reviewed financial sector developments and concluded that Panama had been unaffected by the global financial turmoil because of the sector's minimal exposure to subprime mortgage based securities. With the deterioration of global conditions in September, staff elaborated in an October 2008 Memo and the Briefing Paper for the November Staff Visit the risk of a sudden stop and financial contagion and recommended more intense monitoring of banks and contingencies to deal with a loss of liquidity and/or a rapid withdrawal of deposits. The staff also reviewed prospective Fund support to Panama, but after some deliberation the authorities decided not to pursue this route. A Note to the Minister of Finance was prepared in December 2008 detailing recent developments and policy measures adopted in Hong Kong in response to the financial crisis that could be useful in Panama.	Article IV Consultations Staff Report: (not published). Internal Memos and Briefing Papers.
Japan	The <b>2008 Article IV Consultation</b> assessed the exposure to and impact of the global financial crisis on Japanese financial intermediaries, with a particular focus on new channels of transmission from global to domestic markets. They also reviewed lessons from the crisis for risk management and prudential oversight. A staff visit scheduled for January 2009 will examine vulnerabilities in the corporate and financial sectors and assess the crisis management framework.	<a href="#">Article IV Consultation Staff Report</a> . <a href="#">Selected Issues Paper</a> .
Jordan	The <b>FSAP Update</b> (November/December 2008) focused on banking sector vulnerabilities, especially following the global financial turmoil.	FSSA Report (forthcoming).
Kazakhstan	In recent months, including in the <b>2008 Article IV Consultation</b> , the Fund has focused on crisis preparedness. The <b>FSAP Update</b> (March 2008) assessed banking sector	<a href="#">Article IV Consultation Staff Report</a> . FSSA Update Report. [not published?]

Country	Activities	Output
	vulnerabilities and the supervisory framework, as well as crisis management and contingency planning, and housing finance. An MCM <b>Technical Assistance</b> mission to help the supervision agency strengthen its stress testing and early warning systems took place in mid-January, 2008.	Technical Assistance Report.
<b>Kenya, Tanzania, Uganda</b>	For the <b>2008 Article IV Consultation</b> , a regional Selected Issues Paper assessed the status of the capital markets in Kenya, Uganda and Tanzania and derived empirical estimates of capital market integration. It also examined the challenges of monetary and foreign exchange policy in a unified EAC financial market.	Selected Issues Paper. Progress Toward Harmonization of Capital Account Regulations and Capital Market Integration in the East African Community (SM / 08 / 354).
<b>Korea</b>	The <b>2008 Article IV Consultation</b> focused on financial sector risks related to wholesale financing and the external debt of banks, as well as on lessons from the ongoing global financial crisis for Korea, including the need for regulation to keep pace with financial innovation and over-the-counter market liquidity. The <b>staff visit</b> in December reviewed financial vulnerabilities and the risk of negative feedback loops between credit market stresses and the real economy. It also examined the associated need for comprehensive and coordinated macroeconomic and financial policies.	<a href="#">Article IV Consultation Staff Report</a> . <a href="#">Selected Issues Paper</a> . PowerPoint presentation.
<b>Latvia</b>	A <b>Technical Assistance</b> report (June 2008) provided recommendations for enhancing Latvia's contingency framework, including reforms in deposit insurance, emergency liquidity assistance, bank intervention and recapitalization. A <b>Supplement to the FSSA Update</b> (September 2008) expanded on these issues, and provided recommendations to increase Latvian banks' liquidity and capital buffers as the economy decelerates.	Technical Assistance Report. Supplement to FSSA Update Report (not published).
<b>Lesotho</b>	During the <b>2007 Article IV Consultation</b> , staff helped the authorities evaluate the large Ponzi schemes operating in the country, and their potential impact on the financial and real sectors. The consultation provided the technical basis for the authorities to mobilize the necessary broad-based political support to address this issue.	<a href="#">Article IV Consultation Staff Report</a> .
<b>Lithuania</b>	A major focus of the <b>FSAP Update</b> was an assessment of crisis management framework, in particular with regard to cross-border coordination between supervisors, central bank, and Ministry of Finance, emergency liquidity assistance, deposit insurance and bank resolution. The <b>2008 Article IV Consultation</b> (February 2008) assessed the impact of the cooling housing market, and slowdown in GDP growth on the financial sector. A subsequent <b>staff visit</b> (December 2008) focused on the resilience of the financial system to shocks, including from the slowdown in trading partner growth and the global financial crisis. The mission also analyzed the central bank's financial sector crisis resolution frameworks and the authorities' contingency plans for bank restructuring.	<a href="#">FSSA Report</a> . <a href="#">2008 Article IV Consultation Mission Concluding Statement</a> .
<b>FYR Macedonia</b>	The <b>2008 Article IV Consultation</b> (December 2008) drew extensively on the <b>FSAP Update</b> that took place earlier in the year.	Article IV Consultation Staff Report (forthcoming). Selected Issues Papers (forthcoming). FSSA Report (forthcoming).
<b>Malawi</b>	The 2007/2008 <b>FSAP</b> looked closely at mechanisms to recapitalize the central bank, a	<a href="#">Article IV Consultation Staff Report</a> .

Country	Activities	Output
	difficult political and policy issue affecting the conduct of monetary policy and the subject of extensive high-level policy discussions at the time of the <b>Third Review under the PRGF Arrangement</b> in fall 2007. The authorities fully recapitalized the central bank in early 2008 and have begun work on operational restructuring, as reported in the staff report for the Fourth and Fifth reviews under the PRGF.	<a href="#">Article IV Consultation and Third Review.</a> <a href="#">Staff Report Fourth and Fifth Reviews.</a>
<b>Mexico</b>	The <b>2007 Article IV Consultation</b> (November 2007) included a review of developments in the financial system in the context of the global financial turmoil and potential financial spillovers from advanced economies. The report also examined ongoing financial sector reforms, developments in local capital markets, and the status of the <b>FSAP Update</b> recommendations. The report highlights the challenge of containing risks while stimulating financial development, with emphasis on analysis of the recent rapid growth of mortgage-backed securities in Mexico, taking into account lessons emerging from the U.S. experience.	<a href="#">Article IV Consultation Staff Report.</a> <a href="#">Selected Issues Paper.</a>
<b>Moldova</b>	The <b>FSAP Update</b> (April 2008) assessed the policy frameworks for liquidity management and banking supervision and regulation, as well as the market infrastructure, particularly the payment and settlements systems. It also assessed vulnerability of the banking system to credit, liquidity, and exchange rate risks.	<a href="#">FSSA Report.</a>
<b>Morocco</b>	The <b>FSAP Update</b> (November 2007) considered the spillovers from the global financial turmoil, and concluded that they were limited, including because of Morocco's low and long duration external public debt, and the minimal external financing needs of the banking system.	<a href="#">FSSA Report.</a>
<b>Mozambique</b>	The <b>2007 Article IV Consultation</b> assessed the financial sector reform strategy, which was discussed in a Selected Issues Paper.	<a href="#">Selected Issues Paper.</a>
<b>Netherlands</b>	The <b>2008 Article IV Consultation</b> (March 2008) focused on the soundness of the financial sector and the risks stemming from the global financial market turmoil. It also looked into cross-country supervision issues related to a takeover of a large Dutch bank by an international consortium.	<a href="#">Article IV Consultation Staff Report.</a>
<b>Nigeria</b>	A <b>staff visit</b> (November 2008) with MCM participation assessed the impact of the global financial crisis on the Nigerian economy, particularly the financial sector. The meetings included discussions with market participants in London, U.K., with commercial banks in Lagos, and with the regulators and supervisors in Abuja.	Mission Concluding Statement (not published). Internal staff notes.
<b>Peru</b>	The 2008 Article IV Consultation and the Fourth Review under the SBA focused on the measures needed to preserve orderly financial deepening and crisis preparedness. There has been considerable TA in recent years, most notably on how to develop domestic capital markets and improve their supervision.	<a href="#">Mission Concluding Statement.</a> Article IV Consultation Staff Report (forthcoming). Technical Assistance Reports.
<b>Pakistan</b>	Advice has been provided on crisis preparedness, including based on analyses of banking system vulnerabilities and financial market volatility. Recent <b>Technical Assistance</b> reviewed proposed changes to the banking legal framework. An <b>FSAP Update</b> mission took place in September 2008 and provided significant input into the design of the Fund-	<a href="#">Article IV Consultation Staff Report</a> FSSA Report (not published).

Country	Activities	Output
	supported program.	
<b>Paraguay</b>	The <b>2007 Article IV Consultation</b> (June 2007) included an extensive section identifying financial system weaknesses. The Stand By Arrangement, which expired in August 2008, included nine measures on financial sector reforms. They touched on the strengthening of the central bank balance sheet, the payment system, and the supervision and regulations of the cooperatives and commercial banks. The implementation of the program agenda was supported by numerous <b>Technical Assistance</b> missions. Regular video conferences with the authorities and preparation of policy notes allowed for further sharing of Fund expertise on crisis preparedness.	<a href="#">Article IV Consultation Staff Report.</a> Selected Issues Paper. Technical Assistance Report. Internal staff notes.
<b>Portugal</b>	The <b>2008 Article IV Consultation</b> focused on enhancing the financial stability framework through stronger supervision of liquidity developments, more pro-active use of stress tests, and an improved deposit insurance fund, the latter in the context of EU-wide revision of deposit insurance schemes.	<a href="#">Article IV Consultation Staff Report.</a>
<b>Russia</b>	A key focus of the <b>FSAP Update</b> (August 2008) was the review of the financial stability framework, including monitoring of banks' liquidity positions, cash management coordination between the central bank and the Ministry of Finance, and bank-by-bank contingency plans. <b>Technical Assistance</b> in April 2008 drew lessons from the global financial turmoil to recommend enhancements to the collateral framework for central bank liquidity injections and improvements in banks' liquidity management practices.	FSSA Report.
<b>Singapore</b>	The <b>2008 Article IV Consultation</b> looked at interdependencies between Singaporean and regional financial institutions.	<a href="#">Article IV Consultation Staff Report.</a> <a href="#">Selected Issues Paper.</a>
<b>South Africa</b>	The <b>FSAP Update</b> (May 2008) and the <b>2008 Article IV Consultation</b> (June 2008) took place in the context of declining portfolio inflows, global food and fuel price shocks, and the global financial market turmoil of early 2008. They focused, among other issues, on the risks from elevated household debt service burdens and enhancing the resilience of the financial system to a sudden stop in capital inflows. Recommendations included: using scope available under Basel II to ensure adequate capital buffers; closely monitoring emerging risks through integrated forward-looking financial stability analysis based on bank-level data; monitoring liquidity and funding risks; and strengthening the framework for financial contingency planning and liquidity assistance, including through crisis simulation.	<a href="#">Article IV Consultations Staff Report.</a> <a href="#">FSSA Report.</a>
<b>Sweden</b>	The <b>2008 Article IV Consultation</b> (August 2008) assessed risks in the banking sector stemming from the exposures to the Baltics.	<a href="#">Article IV Consultation Staff Report.</a>
<b>Switzerland</b>	The <b>2008 Article IV Consultation</b> focused heavily on financial sector issues, including a review of liquidity management efforts to limit the knock-on effects of the financial crisis and efforts to increase buffers in the financial system, as well as the supervisory capabilities of Federal Authority for Market Oversight (FINMA).	<a href="#">Article IV Consultation Staff Report.</a>
<b>Trinidad and Tobago</b>	The <b>2008 Article IV Consultation</b> (January 2009) focused extensively on potential spillovers from the global financial crisis, financial and real sector linkages, and policies to	Article IV Consultation Staff Report (forthcoming)

Country	Activities	Output
	strengthen crisis preparedness, including in the regional context, given Trinidad and Tobago's role as a regional financial center.	
<b>Uganda</b>	The 2008 Article IV Consultation included discussions on financial sector issues.	Article IV Consultation Staff Report (forthcoming).
<b>Ukraine</b>	The <i>FSAP Update</i> (July 2007) focused on rising credit risks stemming from high credit growth; balance sheet mismatches; liquidity risks; weaknesses in banking supervision; and the bank resolution framework. The <i>2008 Article IV Consultation</i> (March 2008) discussed contingency planning in light of the evolving challenges of the Ukraine economy.	FSSA Update Report. <a href="#">Article IV Consultation Staff Report.</a>
<b>United Arab Emirates</b>	The <i>2008 Article IV Consultation</i> focused on the impact of the global financial crisis on the domestic financial system, with emphasis on liquidity issues and design of crisis-response for banking sector.	<a href="#">Article IV Consultations Staff Report.</a>
<b>United Kingdom</b>	The <i>2008 Article IV Consultation</i> (July 2008) assessed the U.K.'s financial stability framework, including the authorities' proposals to improve the supervisory setup in light of the Northern Rock failure, liquidity regulation, and the special framework for bank resolution.	<a href="#">Article IV Consultation Staff Report.</a>
<b>United States</b>	The <i>2008 Article IV Consultation</i> (July 2008) focused heavily on: the financial sector and its interaction with the housing downturn, with extensive MCM support, using tools recently developed by staff (such as a financial conditions index and a measure of systemic banking stress) to assess financial stability; estimating macro-financial linkages; reviewing the impact of the subprime crisis on the real economy; discussing government support for housing and financial markets; and reviewing financial regulation arrangements.	<a href="#">Article IV Consultation Staff Report.</a> <a href="#">Selected Issues Paper</a> on banking vulnerability, financial conditions index, macro-financial linkages.
<b>Uruguay</b>	The <i>2007 Article IV Consultation</i> was a pilot case for the integration of financial sector issues into surveillance. The Selected Issues Paper includes various studies on financial and monetary issues, and was eventually published as an Occasional Paper.	<a href="#">Article IV Consultation Staff Report.</a> <a href="#">Selected Issues Paper.</a> <a href="#">Occasional Paper 263</a> "Macroeconomic Implications of Financial Dollarization - The Case of Uruguay" (2008).
<b>Venezuela</b>	There was a joint <i>WHD/MCM mission</i> to review banking problems and provide recommendations in June/July 2008.	Policy note and presentation to the Board in informal country matters session (July 2008).

**Appendix Table 4. FSAP Country Coverage, FY00–09**  
**(Countries with completed assessments as a percentage of all countries in the**  
**category, cumulative)**

	Initial Assessments				Updates			
	Simple share		Weighted by GDP <sup>1/</sup>		Simple share		Weighted by GDP <sup>1/</sup>	
	FY00-08	FY00-09 <sup>2/</sup>	FY00-08	FY00-09 <sup>2/</sup>	FY00-08	FY00-09 <sup>2/</sup>	FY00-08	FY00-09 <sup>2/</sup>
All member countries	64.9	67.6	63.7	64.1	16.8	20.5	9.3	12.5
By regions								
AFR	47.7	54.5	84.8	86.7	11.4	13.6	43.9	46.7
APD	27.3	30.3	68.5	70.4	3.0	3.0	0.2	0.2
EUR	95.3	95.3	99.9	99.9	20.9	32.6	7.0	15.6
MCD	71.0	74.2	92.3	92.5	29.0	32.3	31.4	34.8
WHD	79.4	79.4	21.7	21.7	20.6	23.5	13.8	13.8
By systemic importance								
G-20	78.9	78.9	56.5	56.5	15.8	21.1	6.2	8.8
Other	63.3	66.9	90.6	92.8	16.9	21.1	21.0	26.6
By level of development <sup>3/</sup>								
Advanced economies	86.8	86.8	63.3	63.3	15.8	18.4	5.8	6.7
Emerging markets	69.1	70.2	61.2	63.2	22.3	29.8	23.1	35.1
Developing economies	41.5	50.9	88.0	89.2	7.5	7.5	2.2	2.2

Source: MCM's FSAP tracking database and staff calculations.

1/ Weighted by the FSAP countries' GDP in total GDP of the respective category.

2/ Numbers reflect initial assessments and updates completed as of November 2008. Regional FSAPs in ECCU and CEMAC are not counted, but all their member countries are counted as covered. WAEMU members are counted only if they have had an individual assessment following the regional FSAP. Countries covered both by an individual FSAP and a regional FSAP, or by two updates, are counted in the year of the first assessment.

3/ Level of development is based on the World Bank's classification of countries by income and the following criteria: all high income countries are classified as advanced; upper middle income and lower middle income as emerging; and low income as developing.

**Appendix Table 5. Integration of Financial Sector Issues in Surveillance at the Regional Level—Recent Examples**

Region	Activities	Output
APD	The APD <b>Regional Economic Outlook</b> provides an analysis of changes in Asian inflationary dynamics over the last decade and implications for monetary policy; analysis of implications of aging on capital flows and financial markets in Asia.	<a href="#">APD Regional Economic Outlook</a>
EUR-Euro Area	The <b>2008 Article IV Consultation</b> (June 2008) analyzed macro-financial spillovers from the current turmoil, discussed the ECB's liquidity management framework, and emphasized the need to improve arrangements for cross-border supervision and crisis management in light of recent developments. An update was provided to the Board as part of the informal seminar on the Euro Area on December 12, 2008. An extended and updated version of the analysis of the spillovers between the financial and real sectors in the euro area was presented at the IMF's Annual Research Conference (November 2008).	<a href="#">Article IV Consultation Staff Report Selected Issues Paper</a> . Presentation for the informal seminar (circulated to the Board). <a href="#">IMF Conference Paper</a>
EUR	Analyses of the (i) spillover risks among major EU banks, using the extreme value theory approach; (ii) regional financial interlinkages and contagion channels in emerging Europe; (iii) the extent to which the current financial turmoil, and the associated increase in banks' risk profile, affect banks' supply of credit, and consequently, output; (iv) the potential macroeconomic consequences of the current financial turmoil on emerging Europe; and (v) the diverging patterns of the European credit cycle.	<a href="#">EUR Regional Economic Outlook April 2008</a>  <a href="#">EUR Regional Economic Outlook October 2008</a>
MCD	An important activity has been the assessment of the impact of recent global liquidity and credit developments on various countries in the region.	Internal staff note.
MCD-Gulf Cooperation Council (GCC)	An assessment was updated on the impact of recent global liquidity and credit developments on GCC countries. The October 2008 <b>Regional Outlook for Middle East and Central Asia</b> discussed the emergence of new financial centers in the GCC and their evolving role as regional and global financial centers.	Internal staff note. <a href="#">MCD Regional Economic Outlook</a>
WHD	An ad-hoc financial surveillance mission to Argentina, Brazil, and Mexico (February 2008) assessed the risks originating from the external environment, and held discussions with country authorities on possible policy responses. REOs routinely assesses the financial sector risks in the context of overall economic challenges. Examples included analysis of rapid credit growth in the region and assessment of possible contagion from current global financial turmoil to the region's financial system and corporate financing.	Internal staff note <a href="#">WHD Regional Economic Outlook</a>
WHD- Eastern Caribbean Currency Union (ECCU)	The 2008 Common Policies discussions (March 2008) focused on the macro-financial spillovers from turmoil in financial markets, and emphasized the need to bolster supervision of the bank and nonbank sectors. The key drivers of banking crises were analyzed using a binary classification tree technique; stress tests examined vulnerabilities in the ECCU banking system arising from government default and shocks to tourism receipts; and the optimal level of reserves in a tourism-dependent economy was analyzed.	<a href="#">ECCU 2007 Discussion on Common Policies of Member Countries</a> (March 2008)
WHD- Caribbean Region	A major project on financial integration in the Caribbean was prepared and presented to the Board in September 2007. The paper examined the benefits of integrating the region's relatively underdeveloped and segmented capital markets and explored potential risks and regulatory challenges, including sudden swings in capital flows and creating blind zones for national regulators.	Bauer, A, Panth, S, and Cashin, P.: " <a href="#">The Caribbean: Enhancing Economic Integration</a> ." October 2008
WHD - Central America Region	Two major projects: (i) implications of the increasing presence of foreign banks in the region (presented at the regional conference in June 2008) and (ii) an assessment of public debt markets and stock market developments (a chapter in the regional book published in November 2008).	Regional book published in November 2008

## Appendix Table 6. Recent Papers and Conferences on Macro-Financial Linkages

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### Fundamentals of macro-financial linkages and policy implications

#### **Papers**

- Claessens, Stijn, M. Ayhan Kose, Marco Terrones, 2008, "What Happens During Recessions, Crunches, and Busts?" IMF Working Paper 08/274 (Washington: International Monetary Fund).
- Lall, Subir, Roberto Cardarelli, and Selim Elekdag, 2008, Financial Stress and Economic Downturns. WEO October 2008, Chapter 4.

#### **Conferences**

- Macro-Financial Linkages—IMF Ninth Jacques Polak Annual Research Conference, Washington, DC, November 13–14, 2008.
- Conference on International Macro-Finance, Washington, D.C. April 24–25, 2008.

### Boom-bust cycles in financial and macro variables, and policy responses

#### **Papers**

- Dell’Ariccia, Giovanni, Luc Laeven, and Deniz Igan, 2008, "The U.S. Subprime Mortgage Crisis: A Credit Boom Gone Bad?" IMF Working Paper 08/106 (Washington: International Monetary Fund).
- Mendoza, Enrique G. and Marco E. Terrones, 2008, "An Anatomy of Credit Booms: Evidence from Macro Aggregates and Micro Data," IMF Working Paper 08/226 (Washington: International Monetary Fund).

#### **Conferences**

- Conference on Financial Cycles, Liquidity, and Securitization, Washington, D.C., April 18, 2008.

### Implications of financial globalization and policy responses

#### **Papers**

- *IMF Staff Papers*, Special Issue on "Frontiers of Research on Financial Globalization," forthcoming March 2009. This special issue (edited by RES) provides a systematic analysis of the costs and benefits of financial globalization. It includes papers on various aspects of integration and policy responses to international financial flows.
- Kose, M. Ayhan, Eswar S. Prasad, Kenneth Rogoff, and Shang-Jin Wei, 2008, "Financial Globalization and Economic Policies," Mimeo, IMF.

#### **Conferences**

- Conference on the Causes and Consequences of Structural Reforms, Washington, D.C., February 28–29, 2008.
- Conference on Challenges for Monetary Policy from Financial Innovation and Globalization, Paris, January 29, 2008.
- Conference on New Perspectives on Financial Globalization, Washington D.C., April 26–27, 2007.

### Financial system performance, corporate governance, and surveillance

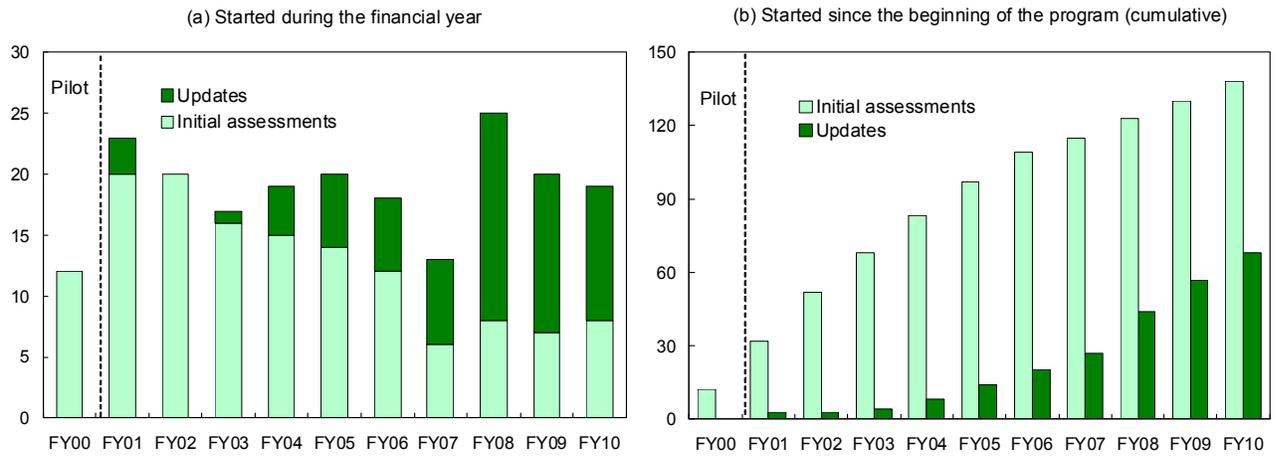
#### **Papers**

- Claessens, Stijn, and Kenichi Ueda, 2008, "Banks and Labor as Stakeholders: Impact on Economic Performance," IMF Working Paper 08/229 (Washington: International Monetary Fund).
- Laeven, Luc and Fabian Valencia, 2008, "Systemic Banking Crises: A New Database," IMF Working Paper 08/224 (Washington: International Monetary Fund).

#### **Conferences**

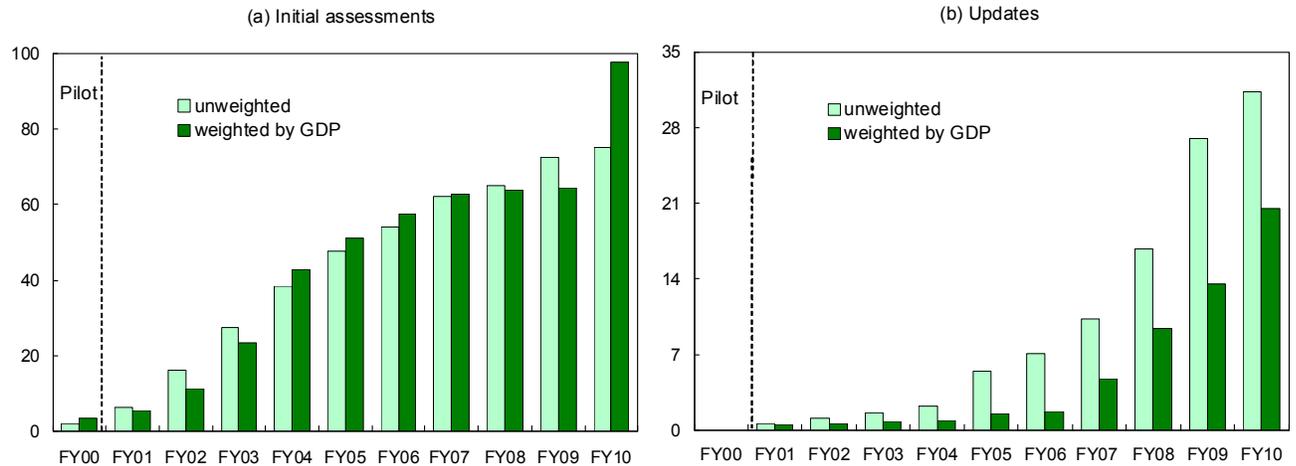
- Conference on Risks Analysis and Risk Management, October 2-3, 2008 (organized jointly by the IMF and the World Bank).
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Figure 1. Number of Assessments, FY00-FY10 <sup>1/</sup>



1/ Numbers for FY09 reflect initiated assessments and updates as of end-November 2008, and requests planned for the remainder of the fiscal year. Numbers for FY10 reflect the remaining requests to date. The pipeline of requests for FY10 is expected to fill up further over time.

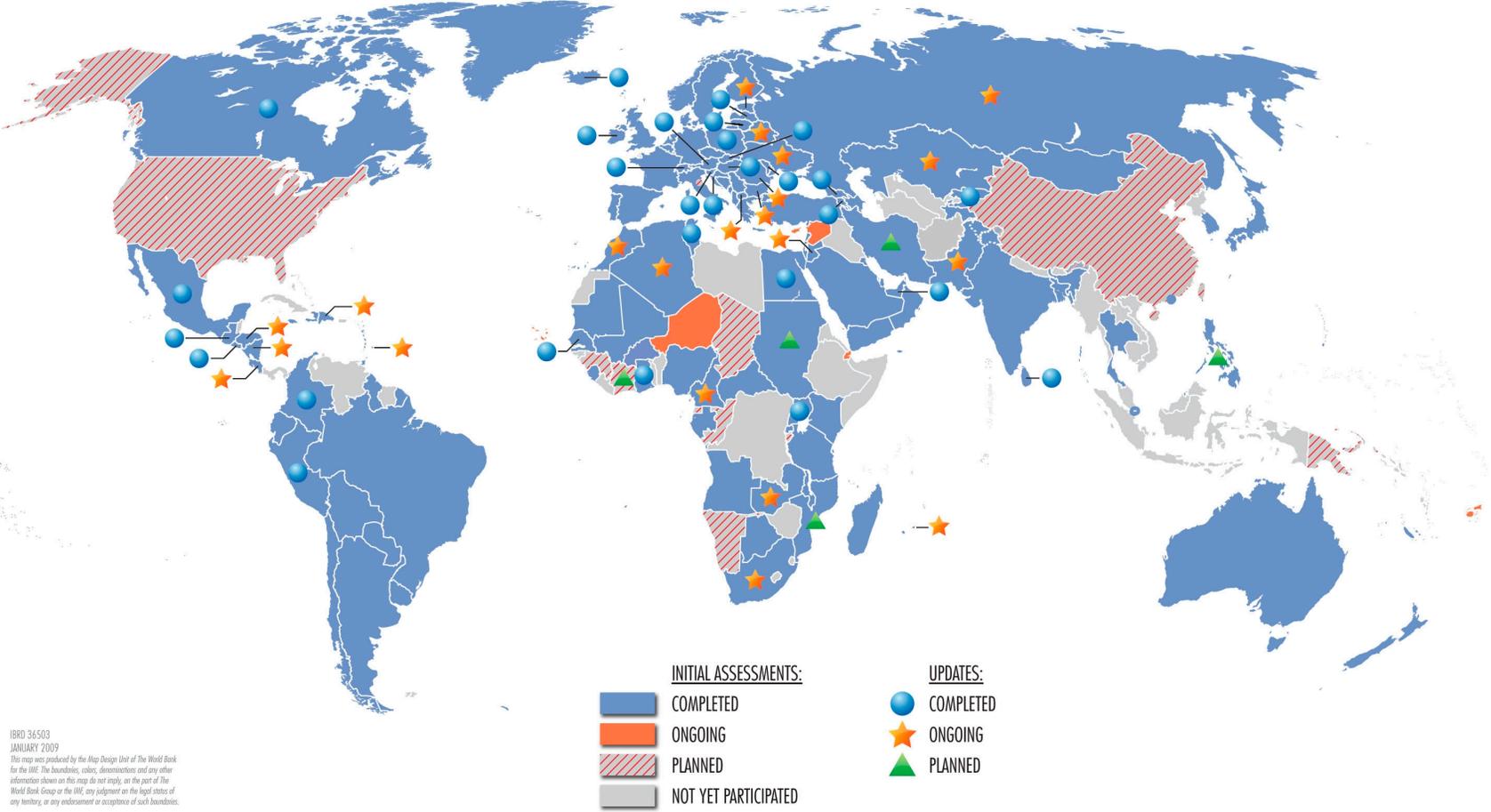
Figure 2. Coverage by Assessments, FY00-FY10 <sup>1/ 2/</sup>  
(In percentage of member countries, cumulative)



1/ The numbers include member countries covered by regional FSAPs. Countries covered both by an individual FSAP and a regional FSAP, or by two updates, are counted in the year of the first assessment.

2/ The numbers for FY09 reflect the FY08 total plus completed, ongoing assessments and updates and requests planned for FY09. The numbers for FY10 reflect the FY09 total plus requests planned for FY10.

Figure 3. FSAP Coverage



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