IEO
Independent Evaluation Office
of the International Monetary Fund

IMF Performance in the Run-Up to the Financial and Economic Crisis:

IMF Surveillance in 2004–07

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Annexes

Abbreviations

CFTC	Commodity Futures Trading Commission
DMD	Deputy Managing Director
DSGE	Dynamic Stochastic General Equilibrium
ECB	European Central Bank
EIU	Economist Intelligence Unit
FAD	Fiscal Affairs Department
FCL	Flexible Credit Line
FOMC	Federal Open Market Committee
FSAP	Financial Sector Assessment Program
FSB	Financial Stability Board
FSSA	Financial Sector Stability Assessment
G-7	Canada, France, Germany, Italy, Japan, United Kingdom, and United States
G-20	A grouping composed of major industrial countries and systemically important developing and emerging market countries
GFSR	*Global Financial Stability Report*
ICM	International Capital Markets Department
IMFC	International Monetary and Financial Committee
Management	Managing Director, First Deputy Managing Director, and two Deputy Managing Directors
MBS	Mortgage-backed securities
MCM	Monetary and Capital Markets Department (combined ICM and MFD)
MD	Managing Director
MFD	Monetary and Financial Systems Department
OTC	Over-the-counter
PDR	Policy Development and Review Department (old name for Review Department)
RES	Research Department
SEC	Securities and Exchange Commission
SIP	Selected issues paper
SNB	Swiss National Bank
SPR	Strategy, Policy, and Review Department (new name for Review Department)
VEA	Vulnerability Exercise for Advanced Economies
WEMD	World Economic and Market Developments
WEO	*World Economic Outlook*

EXECUTIVE SUMMARY

This evaluation assesses the performance of IMF surveillance in the run-up to the global financial and economic crisis and offers recommendations on how to strengthen the IMF's ability to discern risks and vulnerabilities and to warn the membership in the future. It finds that the IMF provided few clear warnings about the risks and vulnerabilities associated with the impending crisis before its outbreak. The banner message was one of continued optimism after more than a decade of benign economic conditions and low macroeconomic volatility. The IMF, in its bilateral surveillance of the United States and the United Kingdom, largely endorsed policies and financial practices that were seen as fostering rapid innovation and growth. The belief that financial markets were fundamentally sound and that large financial institutions could weather any likely problem lessened the sense of urgency to address risks or to worry about possible severe adverse outcomes. Surveillance also paid insufficient attention to risks of contagion or spillovers from a crisis in advanced economies. Advanced economies were not included in the Vulnerability Exercise launched after the Asian crisis, despite internal discussions and calls to this effect from Board members and others.

Some of the risks that subsequently materialized were identified at different times in the *Global Financial Stability Report*, but these were presented in general terms, without an assessment of the scale of the problems, and were undermined by the accompanying sanguine overall outlook. These risks were not reflected in the *World Economic Outlook* or in the IMF's public declarations. The IMF did appropriately stress the urgency of addressing large global current account imbalances that, in the IMF's view, risked triggering a rapid and sharp decline in the dollar that could set off a global recession. But the IMF did not link these imbalances to the systemic risks building up in financial systems.

The IMF's ability to detect important vulnerabilities and risks and alert the membership was undermined by a complex interaction of factors, many of which had been flagged before but had not been fully addressed. The IMF's ability to correctly identify the mounting risks was hindered by a high degree of groupthink, intellectual capture, a general mindset that a major financial crisis in large advanced economies was unlikely, and inadequate analytical approaches. Weak internal governance, lack of incentives to work across units and raise contrarian views, and a review process that did not "connect the dots" or ensure follow-up also played an important role, while political constraints may have also had some impact.

The IMF has already taken steps to address some of these factors, but to enhance the effectiveness of surveillance it is critical to clarify the roles and responsibilities of the Board, Management, and senior staff, and to establish a clear accountability framework. Looking forward, the IMF needs to (i) create an environment that encourages candor and considers dissenting views; (ii) modify incentives to "speak truth to power;" (iii) better integrate macroeconomic and financial sector issues; (iv) overcome the silo mentality and insular culture; and (v) deliver a clear, consistent message on the global outlook and risks.

Chapter 1
Introduction

1. This evaluation assesses the performance of IMF surveillance in the run-up to the global financial and economic crisis. It examines whether the IMF identified the mounting risks and vulnerabilities that led to the crisis and effectively warned the countries directly affected as well as the membership at large about possible spillovers and contagion. The evaluation analyzes the factors that might have hindered the IMF's effectiveness, and offers recommendations on how to strengthen its ability to discern risks and vulnerabilities and to warn the membership in the future.

A. Evolution of the Crisis[1]

2. By mid-2007, world financial markets were in turmoil, and by 2008, the world was engulfed in the worst financial and economic crisis since the 1930s, with the global financial system threatening to collapse and sharp declines in activity across major economies. The story of the crisis is a complex one. Most analysts agree that the crisis stemmed from a combination of unconstrained financial innovation, too much global liquidity, and an extended period of accumulating macroeconomic and financial imbalances that supported an unsustainable increase in financial leverage and risks. The crisis initially manifested itself in the United States and some European financial sectors, with financial institutions facing large but uncertain losses after housing price declines accelerated and mortgage-backed securities markets collapsed. Many argue that the widespread use of very high leverage by financial institutions to underwrite and invest in difficult-to-value structured financial instruments was made possible by lax regulation and supervision in the United States and other major financial centers. Others stress that easy monetary policy and the moral hazard due to the "Greenspan Put"[2] created the environment for the housing and financial asset bubbles to develop, and that large capital inflows in deficit countries inflated these asset bubbles further. This evaluation discusses the effectiveness of IMF surveillance in identifying and conveying to the membership the critical vulnerabilities that were important in shaping or exacerbating the financial crisis; but it does not expound on the relative roles of these factors in bringing about the crisis.

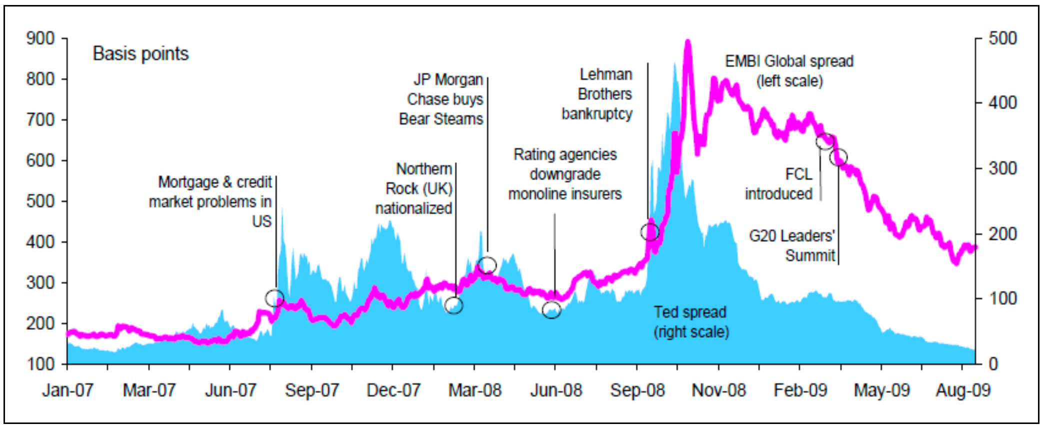
3. The crisis unfolded in several waves (Figure 1). U.S. housing prices reached their peak in 2006. By mid-2007, increasing defaults in the U.S. subprime market led to the failure of some hedge funds and mortgage companies in the United States and Europe, spikes in credit spreads, and liquidity problems in interbank markets. By early 2008, many of the advanced economies were entering an economic downturn. Between March and September 2008, Bear Stearns, Fannie Mae, and Freddie Mac were rescued from deep financial troubles

[1] Annex 1 presents a timeline of relevant events from 2004 to 2008. Annex 2 summarizes the IMF's own analysis of the factors that contributed to the crisis.

[2] The "Greenspan Put" refers to the markets' belief that the Federal Reserve would lower interest rates and provide liquidity in reaction to large market disturbances.

with U.S. government support. In September of that year, the Lehman Brothers collapse led to a reassessment of risk, triggering a liquidity crisis and a sudden stop in capital flows around the world. This, together with the sharp drop in global economic activity, spread the crisis to emerging markets. Domestic vulnerabilities also played a major role in the contagion. Some of the most adversely affected emerging and advanced economies had pursued policies that made them particularly vulnerable—they had experienced rapid increases in consumer debt, high leverage ratios in many finanical institutions, and housing and equity market booms.

Figure 1. Timeline of Crisis in Advanced and Emerging Markets



Source: Reproduced from IMF (2009d).

B. IMF Surveillance Objectives

4. This evaluation examines how well the IMF met the objectives of surveillance in the run-up to the crisis. Surveillance is one of the IMF's core activities. It consists of monitoring the global economy and that of member countries to help head off risks to international monetary and financial stability, alert member countries to potential risks and vulnerabilities, and advise them of needed policy adjustments. The two main modalities of surveillance are multilateral and bilateral. Multilateral surveillance focuses on ensuring the stability of the global system and is mainly conducted via two twice-yearly "flagship" publications—the *World Economic Outlook* (*WEO*) and the *Global Financial Stability Report* (*GFSR*)—and through confidential discussions of World Economic and Market Developments (WEMD).[3] Bilateral surveillance centers on Article IV consultations, that is, IMF Executive Board (the Board) discussions of a staff report that is prepared following a staff visit to the

[3] The WEMD discussions refer to periodic, strictly confidential discussions at the IMF's Executive Board on the key risks to the global economic and financial outlook.

corresponding member country to assess its policies and compliance with the IMF Articles of Agreement.[4]

5. The implementation of surveillance and expectations regarding the IMF's role have evolved in response to changes in the global economic environment. The series of crises in the 1990s led to the recognition of the importance of a healthy financial sector in supporting macroeconomic stability and thus to some major changes in the practice of surveillance. In 1999, the IMF and the World Bank introduced the Financial Sector Assessment Program (FSAP) to help promote sound financial systems in member countries. IMF area departments were tasked to examine macro-financial linkages as part of Article IV consultations. In 2001, the IMF's International Capital Markets Department (ICM) was established to focus on systemic capital market developments and risks. In 2006, the Monetary and Capital Markets Department (MCM) was created (by merging ICM and the Monetary and Financial Systems Department), with the aim of better integrating the work on financial institutions and capital markets. In June 2007, the Board adopted a Decision on Bilateral Surveillance to clarify the purpose of bilateral surveillance, using the concept of a country's external economic stability as the organizing principle.

C. Outline of Report

6. The report is organized as follows: Chapter 2 discusses the evaluation framework, including its scope, questions, and methods. Chapter 3 considers the IMF's messages to member countries in the run-up to the crisis. Chapter 4 explores possible reasons for the IMF's performance, and Chapter 5 concludes with recommendations to strengthen the IMF's surveillance in the years ahead.

CHAPTER 2

EVALUATION FRAMEWORK

A. Scope of Evaluation

7. The evaluation assesses the IMF's performance during the period up to the crisis, focusing primarily on 2004 through 2007.[5] It is centered around three pillars, each studying a different aspect of IMF surveillance: multilateral surveillance, bilateral surveillance in

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[4] See, in particular, www.imf.org/external/pubs/ft/aa/aa04.htm for the obligations of IMF members under Article IV of the IMF's Articles of Agreement.

[5] Other periods, particularly into 2008, will be reviewed when relevant to understanding developments in the run-up to the crisis either globally or in a particular country. This evaluation, however, does not assess the many programs and other initiatives undertaken by the IMF to address the crisis. These may be the subject of a future IEO study.

systemic financial centers seen as those where the crisis originated (e.g., the United States, and United Kingdom), and bilateral surveillance in selected other advanced and emerging economies that were affected by the crisis (Annex 3 lists the countries covered). The report integrates the findings, lessons, and recommendations of case studies and background papers prepared on these pillars.[6]

8. The evaluation examines the IMF's analysis, diagnosis, and recommendations on financial, monetary, fiscal, and structural issues in the run-up to the crisis. It focuses on financial and monetary issues, which are seen as having been at the root of the crisis. It reviews the messages that were conveyed by the staff, Management, and the Board to the membership and other stakeholders. Technically, the IMF's view comprises what is endorsed by the Board. In this paper we also include public statements made by Management and senior staff in their official capacity, the flagship documents, and notes that were prepared for the G-7 and G-20 as expressing the IMF's view because these are perceived as such by external audiences and senior policymakers, even though, strictly speaking, they reflect the views of IMF staff. The focus of the evaluation is on learning, rather than accountability, which has implications for the questions raised and the methods used, including the benefit of hindsight that is a helpful framework for drawing lessons and recommendations.

B. Evaluation Questions

9. The IMF did not anticipate the crisis, its timing, or its magnitude, and, therefore, could not have warned the membership. But this is not the yardstick used here to assess IMF performance. Instead, *the evaluation focuses on whether the IMF identified the evolving risks and vulnerabilities that led the financial system into its fragile position*, and the IMF's messages regarding these risks and vulnerabilities. In particular:

- Whether and how far the IMF probed emerging risks and vulnerabilities, especially in systemic financial centers, in the period before the crisis;
- To what degree the IMF examined the potential interactions between the real economy and the financial sector (i.e., macro-financial linkages);
- What type of analyses and warnings the IMF gave to the countries where the crisis originated, and to the broader membership;
- Whether the IMF paid enough attention to spillovers and contagion risks and gave appropriate advice to mitigate such risks;
- What constraints the IMF faced in conveying difficult messages; and
- What factors might have hindered the IMF's performance.

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[6] Banerji (2010), Bossone (2010), Dhar (2010), Peretz (2010), and Wagner (2010).

C. Evaluation Methods and Sources

10. To answer these questions, the evaluation team gathered information from a review of IMF documents (both internal and external); past and ongoing IEO evaluations; and documents from member countries, other international organizations, private sector research, and academia. Evidence was also gathered through semi-structured interviews, focus groups, and workshops with key stakeholders within and outside the IMF, including country authorities, IMF Executive Board members, current and former IMF Management and staff, private financial organizations, and counterparts from other multilateral institutions including the Bank for International Settlements (BIS), the Organization for Economic Cooperation and Development, and the European Central Bank (ECB).[7]

CHAPTER 3

IMF MESSAGES IN THE RUN-UP TO THE CRISIS

A. Overview of Main Findings

11. During the period 2004 through the start of the crisis in mid-2007, the IMF did not warn the countries at the center of the crisis, nor the membership at large, of the vulnerabilities and risks that eventually brought about the crisis. For much of the period the IMF was drawing the membership's attention to the risk that a disorderly unwinding of global imbalances could trigger a rapid and sharp depreciation of the dollar, and later on the risks of inflation from rising commodity prices. The IMF gave too little consideration to deteriorating financial sector balance sheets, financial regulatory issues, to the possible links between monetary policy and the global imbalances, and to the credit boom and emerging asset bubbles. It did not discuss macro-prudential approaches that might have helped address the evolving risks. Even as late as April 2007, the IMF's banner message was one of continued optimism within a prevailing benign global environment. Staff reports and other IMF documents pointed to a positive near-term outlook and fundamentally sound financial market conditions. Only after the eruption of financial turbulence did the IMF take a more cautionary tone in the October 2007 *WEO* and *GFSR*. `

12. At different times during the evaluation period, *the GFSR identified many of the risks that subsequently materialized, but not in an effective manner.* Warnings about these risks were seldom incorporated in the IMF's banner messages. They were given in general terms,

[7] This study relied on triangulation, a common evaluation technique, to examine the information gathered from all these different sources, as well as from the case studies and background papers. The evaluation approached questions from alternative and independent perspectives, taking concurrence in findings as validating each other. Outlier views and responses were scrutinized further, and they were discarded unless additional supporting evidence was found. For exposition purposes, this report uses quotes from IMF staff and Management, as well as officials in member countries. These quotes, in fact, reflect views that are broadly shared—at least in substance, if not in how they are expressed.

without an assessment of the scale of the problems or the severity of their potential impact, and were undermined by the accompanying sanguine overall outlook. To a large extent this was due to the belief that, thanks to the presumed ability of financial innovations to remove risks off banks' balance sheets, large financial institutions were in a strong position, and thereby, financial markets in advanced countries were fundamentally sound. This belief was strengthened by the extended period of global growth with low financial volatility that had generated the idea that serious recessions could be avoided, and that the global economy had entered a period of "Great Moderation." Another source of complacency was the result of stress tests and other analytical techniques in use that could not capture the vulnerabilities created by new and complex financial instruments.

13. **The IMF missed key elements that underlay the developing crisis.** In the United States, for example, it did not discuss, until the crisis had already erupted, the deteriorating lending standards for mortgage financing, or adequately assess the risks and impact of a major housing price correction on financial institutions. It was sanguine about the propensity of securitization to disperse risk, and about the risks to the financial system posed by rising leverage and the rapid expansion of the shadow banking system. In fact, the IMF praised the United States for its light-touch regulation and supervision that permitted the rapid financial innovation that ultimately contributed to the problems in the financial system. Moreover, the IMF recommended to other advanced countries to follow the U.S./U.K. approaches to the financial sector as a means to help them foster greater financial innovation. The IMF did not sufficiently analyze what was driving the housing bubble or what roles monetary and financial policies might have played in this process.[8] Furthermore, the IMF did not see the similarities between developments in the United States and United Kingdom and the experience of other advanced economies and emerging markets that had previously faced financial crises.

14. The IMF appropriately stressed the urgency of addressing the persistent and growing global current account imbalances, but it did not look at how these imbalances were linked to the systemic risks that were building up in financial systems. The IMF focused on the risks of an exchange rate crisis characterized by a rapid pullout from dollar assets, leading to a disorderly decline in the dollar and a spike in interest rates.[9] It attempted to tackle this issue through a multipronged strategy, using its instruments of bilateral and multilateral surveillance and the newly-created mulilateral consultation process.[10] Its recommendations

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[8] By mid-2006, concerns about the bursting of the housing bubble were widespread. For example: "The front pages of *The Wall Street Journal* and other newspapers, and the covers of *The New Yorker*, *The Economist,* and virtually every news magazine and newspaper in America have heralded the bursting of the 'housing bubble'" (Case and Shiller, 2006). As early as 2004, the U.S. Federal Bureau of Investigation was warning of a mortgage fraud "epidemic."

[9] In the event, a reduction in global imbalances took place during the financial crisis as U.S. private absorption fell. Meanwhile, the dollar became the safe haven, and global interest rates hit new lows.

[10] The multilateral consultation was designed to foster debate and policy actions on a problem of systemic importance among key actors. China, the euro area, Japan, Saudi Arabia, and the United States participated in

(continued)

included fiscal consolidation in the United States, greater exchange rate flexibility in China, structural reform in the euro area, financial sector reform in Japan, and increased domestic spending in oil-producing countries.[11] A second consultation on financial sector issues did not garner sufficient support from concerned member countries and, therefore, was not undertaken.

15. There were elements of good surveillance in many emerging and other advanced economies, but they were mostly focused on traditional macroeconomic risks and not necessarily on those that materialized in the crisis. The IMF urged countries to take advantage of favorable conditions to undertake measures that would make the country more resilient in the event of a shock. In some of these countries the IMF also gave advice on policies to enhance their financial sector regulation and supervision. At the same time, the IMF paid too little attention to potential spillovers or contagion from advanced economies, despite concerns raised by the April 2006 *GFSR*.

16. The key findings from the three pillars of the evaluation, discussed below, are as follows: Broadly speaking, multilateral surveillance did not convey a clear message to the membership about the urgent need to address financial sector risks, even though it identified some of the relevant risks. Bilateral surveillance in the United States and United Kingdom, the systemic financial centers most directly at the core of the crisis, failed to highlight the relevant vulnerabilities. On the other hand, the performance of bilateral surveillance in other countries was more mixed, with better examples in several emerging markets with traditional macroeconomic vulnerabilities but less laudatory results in many other countries.

B. Multilateral Surveillance[12]

17. Multilateral surveillance did not sound the alarm in advance of the crisis, even though the IMF identified some of the relevant risks. Until October 2007, the IMF's banner messages, especially on the global economic outlook, were typically sanguine, as illustrated by the quotations in Box 1. Only after the first signs of the crisis did the October 2007 *WEO* and *GFSR* warn that there were risks that the outlook could be "derailed" by financial turmoil, that financial markets had become more volatile, and that a rapid deleveraging and retrenchment from riskier assets was taking place. Nevertheless, even then the IMF believed that the financial crisis would remain contained because the large financial institutions could weather the severest stress. The IMF grew more concerned as the crisis evolved. The April 2008 *GFSR* pointed out that some large financial institutions might have solvency problems,

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the first (and only) multilateral consultation in 2006–07 that focused on facilitating the reduction of global imbalances.

[11] As background for the 2006–07 multilateral consultation, a team of IMF financial experts examined the impact of a disorderly adjustment on the financial sectors in the United States and the euro area. Their paper sketched out the contours of a systemic crisis (Annex 4 provides some of the content of this paper). However, there was no follow-up to the concerns expressed in this background paper.

[12] This section draws on Banerji (2010).

estimating that losses in the financial sector could be as high as one trillion dollars—an estimate that senior officials in some advanced economies criticized as being alarmist. However, by the summer of 2008, the IMF became more confident in its public statements that the crisis had been contained (although many staff remained concerned about emerging vulnerabilities).

18. The *GFSR* and other documents discussed many of the relevant risks, but concerns were muted by the reassuring headline messages that financial markets and large financial institutions were fundamentally sound. Over the evaluation period, various *GFSR* issues warned that abundant liquidity was boosting asset values beyond levels justified by fundamentals and was making investors complacent; that a structural shift in global financial markets—via financial innovations—was reallocating credit risk from banks to nonbanks, with potential implications for financial stability; and that the proliferation of complex, leveraged financial instruments made liquidity risk increasingly relevant. But the risks flagged in the *GFSR* did not feature prominently in the IMF's banner messages. The lack of a coherent macro-financial storyline to underpin the laundry list of risks, and the dominance of the *WEO's* messages—which were more sanguine than those in the *GFSR*—in the IMF's public pronouncements, created an impression that the IMF was warning only about global imbalances and inflation. This was the message heard by authorities, other stakeholders, and most staff interviewed for this evaluation.

Box 1. Multilateral Surveillance: A Rosy Picture of the Global Economy

The WEO and GFSR highlighted some relevant vulnerabilities over the course of the evaluation period, but not forcefully enough. Instead, the key messages that came out of the flagship documents were upbeat, supporting the widespread belief in the "Great Moderation" and leading to complacency about evolving risks and vulnerabilities:

According to the *WEO*, the world economic outlook was "among the rosiest" in a decade (April 2004); expected to be "one of its strongest years of growth" unless events take "an awful turn" (September 2004); in the "midst of an extraordinary purple patch" (April 2006); and "strong" (September 2006); all the way up to April 2007 when the report forecast that "world growth will continue to be strong" and opined that global economic risks had declined since September 2006.

Public statements by senior officials—largely based on the *WEO*—reiterated these messages; as late as August 2007, Management considered the global economic outlook to be "very favorable." Even in the summer of 2008, Management was prematurely reassuring, with "…the U.S. has avoided a hard landing" and "the worst news are behind us." Meanwhile, at the July 2008 WEMD session, the message was that "risks of a financial tail event have eased."

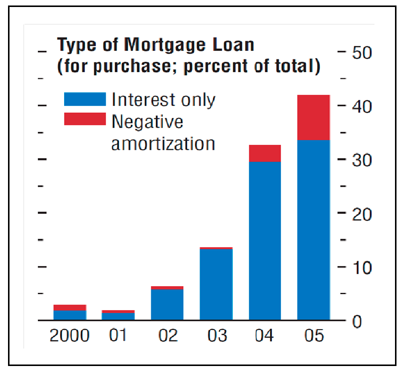
The *GFSR* echoed these sentiments, declaring that the global financial outlook was "enjoying a 'sweet spot'" (April 2004); that it was "hard to see where they [systemic threats] could come from in the short-term" (Fall 2004); with the global financial system "improved;" "strong and resilient" (various years); and "not bad" (April 2006).

The overall tone of the *GFSR* became more cautious thereafter, but this was not reflected in the IMF's other public messages. The April 2007 *GFSR* struck a more somber note of warning that "underlying financial risks have shifted" and that the "collective build-up of investment positions in certain markets could result in a disorderly correction when conditions change." Even this cautious note, however, was accompanied by an assessment that the foundations for global financial stability were "strong."

19. A number of Board members took issue with the upbeat banner messages of the flagship documents before the crisis broke, as did a number of staff that had participated in the internal review. "The truly damaging financial bubbles have been those that persisted long enough for almost all institutions to start believing in a 'new paradigm'," warned one IMF department (Fall 2005). Several Board members were also not persuaded; as one Executive Director noted, "…the favorable assessment provided by staff merely describes the calm before the storm and urgent action is needed to avert a crash" (Spring 2005). A majority of staff reviewers, Management, and many Board members were not convinced by the 2006 *GFSR's* conclusions that financial innovation was making banks and the overall financial system "more resilient." Similarly, the *WEO* was criticized by the Board for being too optimistic, and several reviewers questioned its take on policies to mitigate property bubbles, especially monetary policy.

20. The IMF, and in particular the *GFSR,* did not highlight emerging vulnerabilities in large financial institutions until Spring 2008, when the crisis had already erupted. The *WEO* worried repeatedly about advanced countries' "richly valued" property markets increasingly unjustified by fundamentals but it focused almost exclusively on the potential impact of a correction on the real economy. As late as April 2006, shortly before U.S. housing prices peaked, the *WEO* and the *GFSR* explained away the rising share of nontraditional mortgages in the United States (Figure 2) thus: "Default rates on residential mortgage loans have been low historically. Together with securitization of the mortgage market, this suggests that the impact of a slowing housing market on the financial sector is likely to be limited."

Figure 2. U.S. Mortgage Loans



Source: WEO, April 2006, p.18.

21. The IMF Economic Counsellor had warned about growing financial sector risks at a conference organized by the Federal Reserve at Jackson Hole in August 2005. In contrast to prevailing wisdom, Rajan (2005a) noted that under certain conditions, financial innovation could leave countries more exposed to financial-sector-induced turmoil than in the past, notwithstanding its potential to expand the financial sector's ability to spread risks. He warned that a loss of confidence in an environment with credit default swaps growing exponentially and with savings increasingly managed by nonbank intermediaries could freeze the interbank market and precipitate a full-blown liquidity crisis. He also explained how incentives for risk taking were rising and how this could drive asset prices away from fundamentals, which would be accentuated in a low interest rate environment. He, therefore, noted the need for "greater supervisory vigilance…to contain asset price bubbles," and that central banks would need "to be vigilant for any possible shortfalls in aggregate liquidity." He concluded that "we should be prepared for the low probability but highly costly downturn." Rajan's speech was posted on the IMF's external website and he went on to

present these views on other occasions and publications.[13] Despite the importance of the Economic Counsellor's position, there was no follow up on Rajan's analysis and concerns—his views did not influence the IMF's work program or even the flagship documents issued after the Jackson Hole speech.[14]

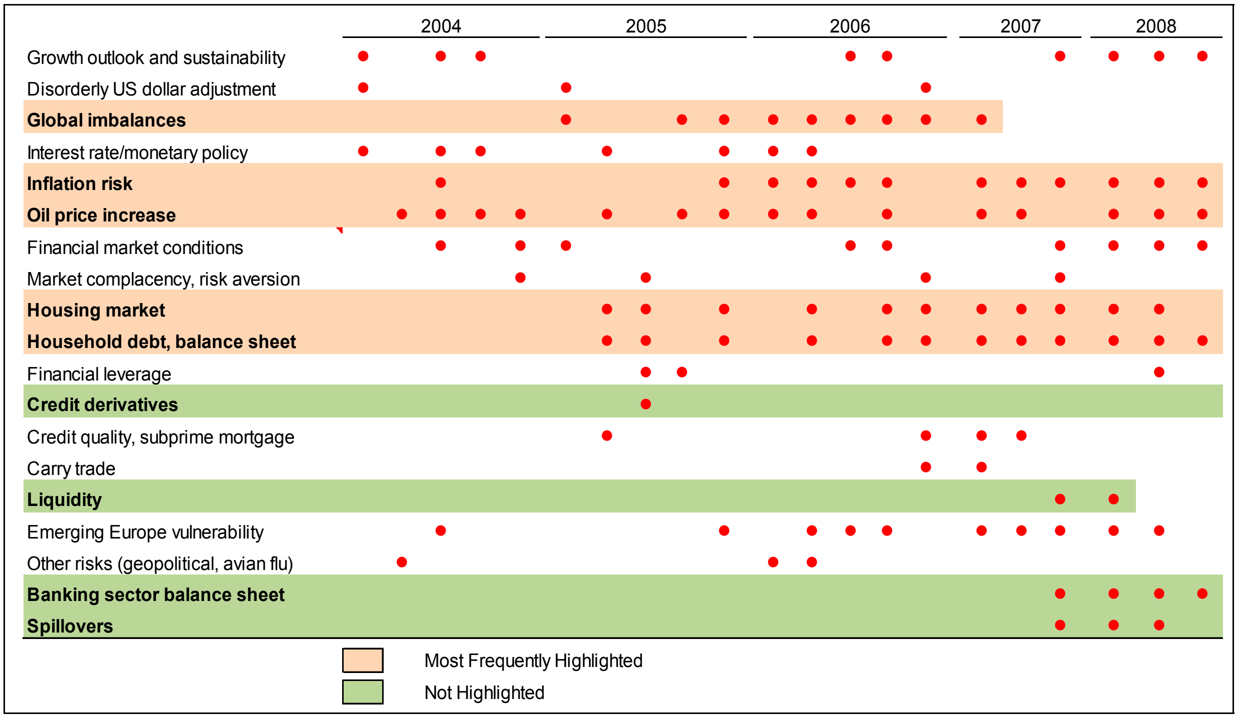
22. Unsustainable global imbalances were a persistent theme, with clear warnings about a disorderly decline in the dollar, but multilateral surveillance did not generally connect this with the financial and housing market risks pointed out by the *GFSR* and the *WEO*. It did not highlight the systemic problems that were building up in large financial institutions, caused in part by strong capital inflows and low interest rates. Analysts view these factors as having helped push up asset prices, prompting a search for yield and an underestimation of risks, leading to the creation of ever-riskier assets.

23. Views expressed in confidential discussions were largely in sync with the IMF's public messages. In the run-up to the crisis, the restricted WEMD sessions at the Board largely focused on macroeconomic risks (Figure 3). As late as July 2007, staff considered that the "global expansion [would] remain strong" and revised upward the outlook for growth, while drawing attention to growing vulnerabilities in some emerging markets. The financial market turbulence in early 2007 was seen as "not warrant[ing] a fundamental reassessment of the global outlook" (March 2007)—a view that the IMF also conveyed to the G-7 and the G-20.

[13] Rajan (2005b, 2005c, and205 d).

[14] The evaluation team was given several alternative explanations for the lack of traction of Rajan's views. The most common explanation was that his concerns were considered as only having a low probability, mainly because most staff saw financial markets as inherently stable. Some thought that "turf" played an important role, that is, others in the IMF objected to Rajan taking a lead on financial sector issues. In any case, the fact that concerns repeatedly raised by the IMF Economic Counsellor failed to influence the IMF work program and the flagship documents indicated a lack of clarity on whose responsibility it was to follow up on these issues.

Figure 3. Key Vulnerabilities and Concerns Highlighted in World Economic and Market Developments Sessions (2004–08)[1]



Source: IMF Board documents for the WEMD sessions.

[1] Includes risks specifically highlighted for discussion and issues flagged as cause for concern in the main text.

C. Bilateral Surveillance of Systemic Financial Centers[15]

24. The IMF largely endorsed the policies and practices of the largest systemic financial centers at the epicenter of the crisis. On financial sector issues, the IMF largely relied on the assessments by the U.S., U.K., and euro area authorities, who were confident about the capacity of their respective financial sectors to absorb the shocks that could arise. The prevailing view was that their financial systems were robust and regulatory and supervisory institutions were strong and sophisticated. Also, it was believed that the authorities' views were based on information on individual institutions that was not available to IMF staff and that, in any case, IMF staff would not have had the resources to analyze these data in depth. At the same time, many of the pertinent and more specific risks and vulnerabilities that were identified in multilateral surveillance or by independent analysts during this same period found little voice in most bilateral surveillance discussions.[16] An exception was the case of Switzerland, where IMF staff were more willing to express concerns and provide advice

[15] This section is drawn from four IEO Background Papers on bilateral surveillance by Bossone (2010), Dhar (2010), Peretz (2010), and Wagner (2010).

[16] Annex 4 presents a sample of citations from analysts, both inside and outside the IMF, who warned about risks and vulnerabilities in the financial sector ahead of the crisis.

regarding the financial system during bilateral surveillance—something that was appreciated by the Swiss authorities.

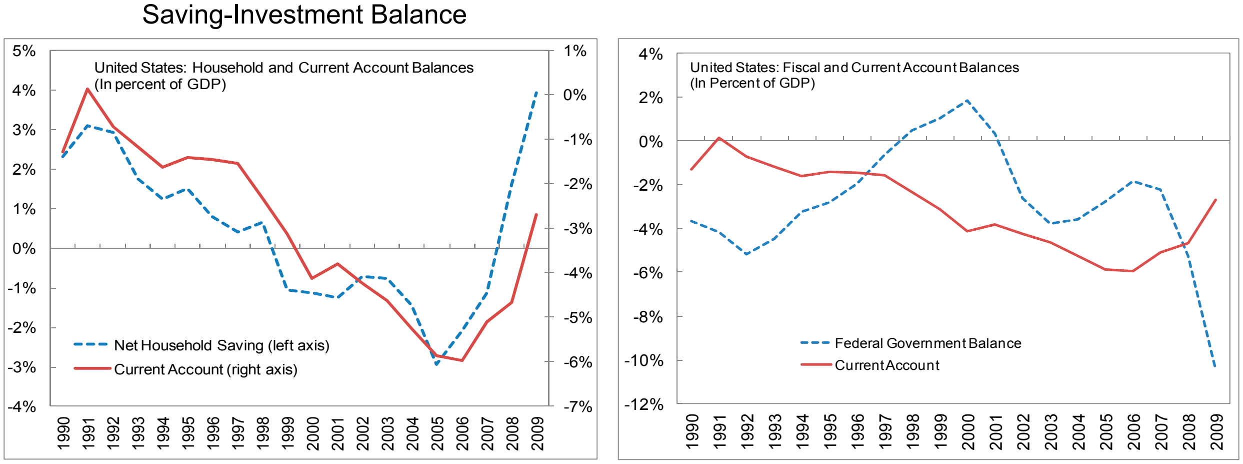
25. Bilateral surveillance of the U.S. economy failed to warn the authorities of the pertinent risks and policy weaknesses; nor did it warn the membership at large about the possibilities of spillovers and contagion from problems originating in the United States. Indeed, the IMF often seemed to champion the U.S. financial sector and the authorities' policies, as its views typically paralleled those of the U.S. Federal Reserve. The chief concern was about the risks stemming from the large and growing current account deficit, and the main recommendations were for fiscal adjustment and continued financial innovation to attract capital inflows. It did not adequately probe the interplay between financial innovation, foreign capital, and the housing and securitization booms. Nor did it promote the use of prudential regulatory measures as an appropriate response to households' over-borrowing.

26. The U.S. Article IV discussions repeatedly stressed the need for fiscal consolidation to reduce the current account deficit. Meanwhile, analysis by the PDR Department in 2006 showed that the U.S. current account balance closely tracked the saving-investment balance of households, while the fiscal balance showed little correlation (Figure 4). Despite this finding, policies to address the household saving-investment imbalance received little attention, as did the question of what role monetary policy might have played in the credit and housing prices booms.

Figure 4. Trends in U.S. Current Account, Household Saving/Investment Balance, and Fiscal Balance, 1990–2009

Current Account Trend Paralleled Household Saving-Investment Balance

But Not the Fiscal Balance



Source: Bakker and Meier, "Asset Price Booms, Monetary Policy, and Global Imbalances," IMF Mimeo, 2006; U.S. Bureau of Economic Analysis.

27. The IMF heralded the benefits of securitization for its (assumed) risk-diversifying properties and downplayed the likelihood of a major housing-price decline. Even after house prices began to drop, staff believed that the repercussions for financial institutions would not be serious. The liquidity risks and opportunities for regulatory arbitrage from the shadow

banking system went unnoticed, and the first analysis of the subprime issue only appeared in the July 2007 staff report, more than six months after problems in this sector had already surfaced. The 2007 staff report discussed several risks from financial innovation and the regulatory challenges they posed—as problems in housing and financial markets were becoming evident—but it remained sanguine about the soundness and resiliency of major financial institutions based on their profitability and capital adequacy. Thus, the banner message was that "[t]he most likely scenario is a soft landing of the U.S. economy." Box 2 provides some other key quotations, organized by theme, from U.S. Article IV consultations.

28. The IMF did not conduct an FSAP for the United States because the U.S. authorities did not agree, despite repeated requests during 2004–07. This omission is regrettable because an FSAP could have helped the authorities and more experienced financial experts look into financial sector issues in a comprehensive way. An FSAP might have followed up on the risks highlighted in the *GFSR* and possibly detected some of the evolving vulnerabilities.[17]

[17] Yet, the mixed experience with FSAPs in other advanced economies raises questions about what the results of a U.S. FSAP would have been. Annex 5 lists factors that led to overly sanguine assessments in FSAPs for several advanced economies. In this regard, IMF (2009b) diplomatically states that "it is not clear that the analytical approach typically employed in the FSAP would have identified the sub-prime problems or valuation issues and risks associated with structured credit products in the United States…."

Box 2. Bilateral Surveillance of the United States: Sanguine on Financial Innovation and Behind the Curve on Risks

Housing finance. "Exotic mortgages have only begun to spread as better data and more refined financial tools have become available to lenders, including complex behavioral models and sophisticated financial innovations that allow the tailoring of attendant risks to dedicated investor classes" (2006).

Subprime securitization. "Rising sub-prime delinquencies led to a jump in spreads on higher-risk mortgage-backed securities, but there has yet been little contagion outside of the near prime ("Alt-A") segment of the mortgage market, reflecting the wide dispersion of risk and concentration of difficulties in specialist sub-prime originators, many of which have failed" (2007).

Financial soundness. "Core commercial and investment banks are in a sound financial position, and systemic risks appear low. Profitability and capital adequacy of the banking system are high by international standards… despite a recent uptick following sub-prime difficulties, market measures of default risk have remained benign" (2007).

Innovation and risk. "[The credit rating agents were] uniquely positioned to assess a wide range of structured transactions" (2006).

"Although complacency would be misplaced, it would appear that innovation has supported financial system soundness. New risk transfer markets have facilitated the dispersion of credit risk from a core where moral hazard is concentrated to a periphery where market discipline is the chief restraint on risk-taking. The conduit mechanism, in turn, has facilitated broader credit extension—with the important qualitative nuance that much of the recent credit growth has reflected lending to new, previously excluded borrowers, as opposed to 'more money thrown at the same people.' Although cycles of excess and panic have not disappeared—the sub-prime boom-bust being but the latest example—markets have shown that they can and do self-correct" (2007).

Regulation. "The U.S. financial sector remains resilient and well regulated" (2005).

"The key to innovation has been that market forces have been allowed to operate. The regulatory philosophy…has emphasized selectivity in the application of safety-and-soundness oversight... with the Fed serving a singular role as guardian against more dirigiste temptations. A growing array of financial institutions has been made to function without the props and constraints of prudential norms and the counsel and intrusion of examiners, and many have become laboratories of innovation" (2007).

Financial innovation and capital flows. "… while deep, liquid, and innovative U.S. fixed income markets should continue to attract foreign capital, they will have to carry on innovating more rapidly than other financial centers to retain a relative advantage" (2007).

29. Surveillance of the United Kingdom presented a similarly overly optimistic picture, even though an FSAP follow-up was undertaken in February 2006. The FSAP follow-up appropriately noted risks from increased reliance on wholesale funding, deteriorating asset quality, the rapid growth of the credit-risk-transfer market, and increased subprime mortgage lending. But the bottom line was that financial innovation and regulation were praised, the banking sector was regarded as robust, and the overall message was reassuring. The FSAP follow-up noted: "The U.K. banking system is one of the strongest among advanced economies;" "Banks' mortgage books do not appear to be a significant direct source of vulnerability;" and "Overall, the financial sector is well regulated." Staff did raise concerns about the risk of a fall in U.K. property prices, but focused on the potential impact such a fall might have on consumption, and not on the impact on financial institutions. Again, in line with the focus on global imbalances, the main external risks identified were those of a disorderly exchange rate adjustment and/or a sharp rise in interest rates.

30. Surveillance of the euro area also conveyed a positive message. For example, according to the 2007 Article IV staff report (issued in July 2007), "[T]he outlook is the best in years. The economy is poised for a sustained upswing, partly because of cyclical considerations, but also because of policies…" and "The external setting is generally considered propitious." On the financial sector, the IMF seemed to take comfort from the fact that "financial market volatility and risk premia remain historically low." It suggested, however, that leverage in parts of the corporate and household sectors may have become excessive and noted that the complexity of financial instruments and activities of highly-leveraged nonbank financial institutions posed important risks. But it still believed that on the regulatory front, "the key challenge was to ensure the uniform implementation of the [EU] directives by national prudential authorities…" rather than stressing the need to address the above-mentioned risks.

31. Bilateral surveillance of Switzerland was more effective, but the IMF's main message was still relatively upbeat. Given the importance of the financial sector to Switzerland, IMF surveillance there had long been sensitive to financial issues. This sensitivity was further heightened by an insightful FSAP Update, conducted in May 2007 just before the crisis began to take hold. The Update focused on a number of issues highly germane to the crisis, ranging from the difficulty of pricing complex financial instruments to possible channels of systemic risk transmission. IMF staff rightly raised concerns about the high leverage and international exposure of the two largest banks—concerns that proved quite prescient. The Update also recognized the importance of spillovers from abroad, including those that could arise from a hard landing of housing markets in the United States. However, the 2007 Article IV staff report took a more upbeat tone than the Update, downplaying concerns about system-wide financial sector risks.

D. Bilateral Surveillance of Other IMF Member Countries[18]

32. The quality of bilateral surveillance varied greatly among other member countries in terms of warning about the risks that ultimately unfolded. In contrast to the upbeat messages to the largest systemic financial centers, some smaller advanced and emerging market countries with similar vulnerabilities received repeated warnings about the buildup of risks in their domestic economies. The analysis of macro-financial linkages was also typically better in emerging markets than in advanced economies,[19] yet the IMF tended to believe it did a better job in the advanced economies (Box 3).

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[18] This section draws on Wagner (2010).

[19] See also Watson (2008).

Box 3. What Did the IMF Regard as Best Practice for Financial Sector Surveillance?

A task force was formed in 2006 to examine how the IMF could strengthen its financial sector analysis and better integrate this into Article IV surveillance. The report of the task force laid the basis for a more systematic approach to ensuring adequate coverage of financial sector issues in bilateral surveillance.[1] Notwithstanding the guidance for future surveillance, the report provides some examples of best practices which, in retrospect, appear completely off the mark:

- *Iceland's* developments from 2003–06 "provide a useful illustration of the importance of a proper analysis of the relationships between financial markets, the financial sector, and the broad economy." After a lengthy description of domestic monetary policy and the carry trade, the report concludes that "[f]ortunately, in Iceland's case, and as found by the 2006 Article IV mission, hedging behavior and generally sound balance sheets and asset-liability management made the financial system relatively robust to the recent shocks."
- In a case study of *Germany*, which provides an example of the linking of structural and cyclical analysis, the report found that "[c]omparisons with "peer" countries are powerful evidence. The comparison of profitability trends hit a raw nerve with the authorities but was successful in sparking a debate about a system that had traditionally been seen as very stable and strong in comparison with those of neighbors." A senior IMF official interviewed for this evaluation admitted that one of the key crisis red flags that the IMF missed was the profits in the U.S. and U.K. banking sectors.
- In a box entitled, "Best Practice Examples of Financial Sector Surveillance in Recent Article IV Reports," the *United States* is highlighted as one such example. The task force finds that "[t]he 2006 staff report for the United States is a good example of both identification of risks and linkages as well as usage of analytical tools. Current risks arising from the cyclical position and level of macro-imbalances are clearly described as are the supervisory challenges in one of the world's most sophisticated and complex financial systems.… Additionally, there is a focus on international linkages—potential U.S. spillovers to the rest of the world's financial markets. Two SIPs also focus on financial sector topics." Based on its analysis, the staff concludes with the reassuring messages, among others, that "…a range of indicators suggested that systemic risks were at a low ebb;" "Financial sector risks related to household borrowing appeared relatively manageable;" and "The U.S. financial sector has proven innovative and resilient in recent years. The system appears well-positioned as the credit cycle turns.…"

[1] "Report of the Taskforce on Integrating Finance and Financial Sector Analysis into Article IV Surveillance" (SM/07/57), February 2, 2007.

33. A number of advanced countries—such as Iceland, Ireland, and Spain—shared many vulnerabilities, but IMF surveillance messages differed in content and forcefulness. The crisis experienced by each of these countries may have been triggered by external events, but domestic factors played a large role in its severity. These countries experienced large current account deficits, real estate booms, and rapidly rising debt levels, and faced many of the financial risks akin to those in the United States and United Kingdom (e.g., high liquidity, cross-border funding, weak risk management, and low risk premia). In Ireland, surveillance raised concerns about risks and vulnerabilities that were not discussed in the United Kingdom (even though the two countries were covered by the same unit in the European Department); for example, the IMF pointed to risks to the Irish financial system arising from exposure to an overheated property market. Still, as late as mid-2006, an FSAP Update for Ireland concluded that the "outlook for the financial system is positive," with financial institutions having sufficient cushions to cover a range of shocks and citing the diversification of wholesale funding sources as a strength. An FSAP for Spain at the same

time appeared to give a boost to the integration of financial sector analysis into macroeconomic surveillance; the IMF praised Spain's dynamic loan-loss provisioning system against a background of rapid credit growth and a potential housing bubble. This provisioning approach was not suggested for either Ireland or the United Kingdom that faced similar developments. Iceland's surveillance was notable for failing to stress the dangers of an oversized banking system and focusing instead on the possibility of overheating (Box 4).

Box 4. Iceland: What Was the IMF Saying in 2007–08?

In spite of a banking sector that had grown from about 100 percent of GDP in 2003 to almost 1,000 percent of GDP, *financial sector issues were not the focal point of the 2007 Article IV discussions.* The massive size of the banking sector was noted, but this was not highlighted as a key vulnerability that needed to be addressed urgently. Instead, the IMF worried about the possibility of overheating, and the staff report was sanguine about Iceland's overall prospects. For example, the headline sentences in the staff appraisal were "Iceland's medium-term prospects remain enviable. Open and flexible markets, sound institutions…have enabled Iceland to benefit from the opportunities afforded by globalization." The report presented a positive picture of the banking sector itself, noting that "the banking sector appears well-placed to withstand significant credit and market shocks" and "[B]anks took important steps over the past year to reduce vulnerabilities and increase resilience."

Serious doubts about the health and viability of Iceland's three largest private banks were being raised by investment banks and a Board member, who at the Article IV discussion remarked that Iceland essentially was functioning like a hedge fund, borrowing abroad to acquire foreign assets, adding that Iceland's high leverage posed a risk to the financial system. But these views did not impact IMF surveillance. In fact, following the completion of the 2007 Article IV, Iceland went without an IMF mission chief for about six months, in spite of the view by many external analysts that Iceland was moving into a precarious position regarding continued access to external financing.

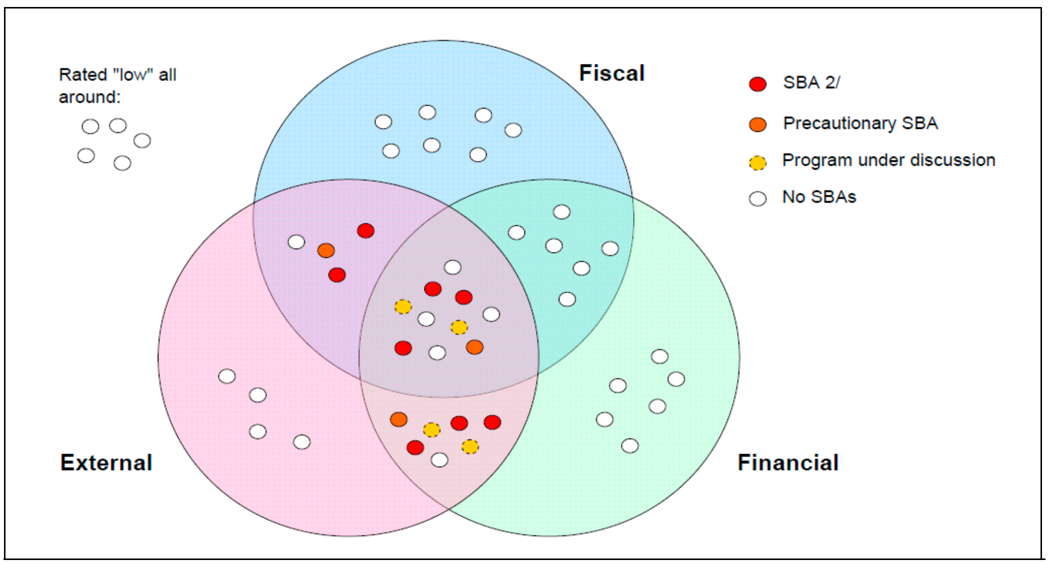
In *August 2008*, a few months before the eruption of the crisis, the IMF issued a Financial Sector Stability Assessment Update and a staff report for the 2008 Article IV consultation. Strangely, *the tone of the Update was relatively reassuring, while the Article IV report, which had a wider macro perspective, painted a rather alarming picture*. The Update claimed that "[T]he banking system's reported financial indicators are above minimum regulatory requirements and stress tests suggest that the system is resilient." It then noted a long list of vulnerabilities, but concluded that "banks are implementing measures to manage these risks.… They have diversified their funding sources, increasing the proportion of retail deposits," referring to the development of retail bases from abroad (e.g., Icesave) and noting only in passing that such deposits may be more volatile. In contrast, the Article IV report stated that "[W]ith external liquidity constraints binding, economic activity is expected to slow significantly from unsustainably high levels…. Uncertainty surrounding the outlook is unusually large, dominated by significant downside risks—both external and domestic. In the event of a prolonged external liquidity crunch, the economy could face severe financial strain, especially if domestic risks materialize simultaneously." The contrast between these two reports highlights how weaknesses in internal governance can undermine the clarity and coherence of IMF's messages.

34. For some advanced countries with relatively more stringent regulation, IMF policy prescriptions seemed to champion the approaches taken by the United States or the United Kingdom. The focus of this advice was to foster innovation, which was seen as a main factor behind the soaring profitability in the United States and the United Kingdom, with little or no discussion of the risks involved. Germany and Canada were among those advanced countries for which the IMF believed "…profitability is not yet on par with international levels and innovation needs to advance further" (2006 Germany Article IV staff report) or "conservative Canadian banking strategies yield significantly lower returns on assets than in the U.S" (2007 Canada Article IV staff report). In these countries, the IMF's advice concentrated on market-

oriented reforms to overcome structural "impediments," some of which helped protect them from becoming exposed to the crisis triggers.

35. IMF performance was better in some emerging markets that were subject to more "traditional" macroeconomic vulnerabilities. A series of crises in the 1990s and early 2000s had led the IMF to concentrate on identifying risks and vulnerabilities in these countries. In 2001 the IMF launched the Vulnerability Exercise, an interdepartmental surveillance tool aimed at identifying underlying vulnerabilities and crisis risks in emerging markets. This exercise succeeded in identifying the countries most at risk and in strengthening the surveillance messages in those countries.[20] Figure 5 shows the results of an exercise conducted using data as of September 2007 which identified all the countries that eventually requested an IMF-supported program as having medium or high vulnerability. These results helped focus interdepartmental collaboration that served to strengthen bilateral surveillance for the emerging markets.

Figure 5. Vulnerability Exercise
(Sectoral vulnerabilities in emerging markets as of Sept. 2007[1])



Source: Reproduced from IMF (2009d).

[1] Countries within circles were identified as having "medium" or "high" vulnerabilities in the respective areas.
[2] Stand-By Arrangement.

36. The success of the Vulnerability Exercise in identifying crisis-prone countries raises the question of why this exercise, along with the IMF's work on early warning systems, focused solely on emerging markets. The IMF seemed to ignore the fact that a number of advanced economies had also suffered serious financial crises in the not-too-distant past. As early as 2003–04, some senior staff and Executive Directors had suggested that advanced countries be included in the Vulnerability Exercise. It is not entirely clear why these

[20] IMF (2009d).

countries were ultimately excluded; some senior staff indicated that it would have been uncomfortable to inform the corresponding authorities that their country would be included.[21]

37. IMF surveillance in some emerging markets had elements that were better than in advanced economies, but with some important deficiencies. In these cases, the IMF gave consistent warnings on vulnerabilities related to: overheating, large current account deficits, credit booms, and unsustainable debt buildups. While acknowledging that foreign banks brought resources and expertise, in some countries the IMF noted that over-reliance on funding from parent banks could be a risk. Still, in most countries, the overall messages were overly positive, even for some of the most crisis-prone countries. For Hungary, for example, the headline message in the 2007 Article IV staff report was "[w]ith fiscal consolidation on track for 2007 and 2008, short-term risks have receded, especially due to the favorable international financial environment." Furthermore, surveillance typically focused on domestic vulnerabilities, not those associated with spillovers or contagion, yet some of the domestic vulnerabilities played little part in the country's own variant of the crisis.

38. In some other emerging markets, the quality of surveillance was mixed. In India, for example, in 2006–07, the IMF was recommending that India continue to move forward with liberalization of financial markets and the capital account. Yet, some senior officials consider that India's success in weathering the crisis could be attributed in part to its more conservative banking sector and gradual approach to liberalizing its capital account. Other emerging markets, particularly commodity exporters and those in regions that had been hardest hit by past crises, had been running current account surpluses in the period before the crisis. For these countries the IMF had expected a "decoupling," and did not fully recognize the adverse impact of the crisis on them. Indeed, there was a perception among country officials that the IMF was pushing these countries to reduce the pace of accumulation of their "excessive" reserves (which ultimately helped these countries to weather the worst of the crisis). Some observers presumed that these messages reflected political pressures from advanced economy members to address the global imbalances in a manner that better suited their domestic interests.

39. In a number of cases, the 2007 Decision on Bilateral Surveillance led to a much greater emphasis on exchange rate misalignments, in a manner and to a degree that triggered tensions between the IMF and country authorities. In Latvia, for example, an otherwise good surveillance effort[22] was ultimately derailed by the new emphasis on the exchange rate level,

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[21] In 2009, the IMF launched the Vulnerability Exercise for Advanced Economies. At that time, staff prepared a paper that showed that using data that had been available in 2006, the new vulnerability framework would have pointed at the United States, the United Kingdom, and Iceland as having a high risk of financial crisis in 2007. This result is tempered by the fact that the framework was developed with the benefit of hindsight. But the question still arises of whether earlier inclusion of the advanced countries might have provided clues about the need to take corrective actions.

[22] Latvia's Article IV consultations sent clear messages of concern about overheating, massive imbalances, and banking system vulnerabilities**.** A March 2007 FSAP Update supported an already strong focus on macro-financial linkages and systemic risks in the banking sector. IMF staff were so concerned about Latvia's

(continued)

creating a rift in communications and a weakening of traction with the country authorities just before the crisis erupted. As of December 2008, the Article IV consultations for several countries were significantly delayed, owing to "ongoing internal discussion on the implementation for the 2007 Surveillance Decision."[23] These delays occurred during the most critical period in the run-up to the crisis.

CHAPTER 4

WHY DID THE IMF FAIL TO GIVE CLEAR WARNING?

40. Various factors played a role in the IMF's failure to identify risks and give clear warnings. Many of these factors represent long-standing problems that had been highlighted for over a decade.[24] In this section, these factors are grouped into the following broad categories: analytical weaknesses, organizational impediments, internal governance problems, and political constraints.[25] There are considerable interconnections among these categories, and their relative importance is based on subjective judgments. The IMF's ability to correctly identify the mounting risks was hindered by a high degree of groupthink, intellectual capture, a general mindset that a major financial crisis in large advanced economies was unlikely, and incomplete analytical approaches. Weak internal governance, including unclear lines of responsibility and accountability, lack of incentives to work across units and raise contrarian views, a review process that did not "connect the dots" or ensure follow-up, and an insular culture also played a big role, while political constraints may have also had some impact. Interviews with country authorities (Annex 7) and survey evidence from staff (Annex 8) echo many of the same factors.

A. Analytical Weaknesses

41. Analytical weaknesses were at the core of some of the IMF's most evident shortcomings in surveillance, particularly for the largest advanced economies. These weaknesses were of two broad types: groupthink and other cognitive biases, and analytical approaches/knowledge gaps. Neither implies that the IMF staff lacked skills or expertise; the

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vulnerabilities that an interdepartmental working group was formed in early 2007 to do high-frequency monitoring of the economy and develop contingency plans. This represented a good example of interdepartmental collaboration in this period.

[23] IMF, EBD/08/114, 12/23/08.

[24] Annex 6 lists conclusions and recommendations from reports and evaluations prepared over the past 15 years that remain relevant in analyzing IMF performance in the run-up to this crisis.

[25] This report separates organizational impediments and internal governance problems into distinct categories. It is common, however, to include structural organizational issues and incentives/corporate culture issues into a single governance category. The evaluation team, nevertheless, considered that such an approach would have blurred some important factors that help understand IMF performance. In any case, many of the factors discussed could also be placed in a different category.

first type is about thought processes and decision-making, the second is about the approaches and tools that staff used.

42. Several ***cognitive biases*** seem to have played an important role. *Groupthink* refers to the tendency among homogeneous, cohesive groups to consider issues only within a certain paradigm and not challenge its basic premises (Janis, 1982). The prevailing view among IMF staff—a cohesive group of macroeconomists—was that market discipline and self-regulation would be sufficient to stave off serious problems in financial institutions. They also believed that crises were unlikely to happen in advanced economies, where "sophisticated" financial markets could thrive safely with minimal regulation of a large and growing portion of the financial system.

43. IMF staff was essentially in agreement with the views of the U.S., U.K., and other advanced country authorities that their financial systems were essentially sound and resilient. They also concurred with the paradigm that the system could not only allocate resources efficiently, but also redistribute risks among those better prepared to bear them. Moreover, IMF staff felt uncomfortable challenging the views of authorities in advanced economies on monetary and regulatory issues, given the authorities' greater access to banking data and knowledge of their financial markets, and the large numbers of highly qualified economists working in their central banks. The IMF was overly influenced by (and sometimes in awe of) the authorities' reputation and expertise; this is perhaps a case of *intellectual capture*.

44. *Confirmation bias* is a well-documented cognitive bias that refers to the tendency of people to only notice information consistent with their own expectations and to ignore information that is inconsistent with them (Bazerman and Moore, 2009). This may explain staff's focus on the IMF's primary concern—global imbalances and a disorderly dollar decline—as the key risk to global stability, largely ignoring evidence pointing to other risks.

45. The ***choice of analytical approaches and important knowledge gaps***, some of which were shared by the whole profession, also played a role in the failure to identify risks and vulnerabilities. The *linking of macroeconomic and financial sector analysis* remained inadequate, even though a series of evaluations since the Asian crisis had called for enhanced attention to macro-financial linkages in the IMF's surveillance (Caprio, 2011, and Annex 6). This reflected the lack of a suitable conceptual framework for analyzing such linkages within the economics profession at large, as well as the view common among IMF economists that financial issues were not central.[26]

46. IMF economists tended to hold in highest regard *macro models that proved inadequate* for analyzing macro-financial linkages. The dynamic stochastic general equilibrium (DSGE) model that was the work horse for policy discussions introduced money

[26] For example, in an April 2009 IMF Working Paper (Blanchard, 2009), the IMF's Economic Counsellor stated: "In the interest of full disclosure: This is a first pass by an economist who, until recently, thought of financial intermediation as an issue of relatively little importance for economic fluctuations.…"

and asset markets in only the most rudimentary manner. Work is now ongoing to develop models that can incorporate financial frictions. Perhaps more worrisome was the overreliance by many economists on models as the only valid tool to analyze economic circumstances that are too complex for modeling.[27]

47. ***Balance sheet analysis*** was used insufficiently and occasionally incorrectly, despite the fact that sometimes this approach captures risks and vulnerabilities better than would a typical open-economy macro model. As one senior staff member put it, "balance-sheet analysis was the missing link in macro analysis." Unfortunately, sometimes when this approach was used, it yielded misleading results as it did not account for the ongoing bubble in asset prices.

48. FSAPs used ***stress testing*** to help determine the soundness of banking systems. While stress tests are useful for a first-round examination of risks, they typically do not capture second-round effects or liquidity shocks. As a result, a number of authorities and staff believe that stress tests could have led to complacency, because their limitations were not explicitly discussed.

49. Lack of data and information, while a problem, was not a core reason behind the IMF's performance. First, much available data were ignored or misinterpreted (e.g., credit growth, leverage, the growth of high-risk instruments, and household balance sheets).[28] Indeed, the April 2008 *GFSR* estimate of financial sector losses was produced without any additional access to data. Second, the lack of data did not prevent the IMF from praising the state of some financial systems nor the risk-diversification features of securitization. Moreover, the relative paucity of data in some emerging markets did not prevent the IMF from raising the alarm in these countries. Finally, advanced country surveillance teams typically received the information that they requested, and in any case it is unclear how they would have used additional data on individual financial institutions given their prevailing conceptual framework on macro-financial linkages.

B. Organizational Impediments

50. An important organizational impediment that hindered IMF performance was its operating in silos, that is, staff tend not to share information nor to seek advice outside of their units. This has been blamed for the IMF failure to "connect the dots" in the run-up to the crisis. The silo behavior is a long-standing problem; and it occurs between departments,

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[27] This problem was widespread in the profession. Krugman (2009) stated that "the economics profession went astray because economists, as a group, mistook beauty, clad in impressive-looking mathematics, for truth." More recently, Rogoff noted that "the mainstream of academic research in macroeconomic puts theoretical coherence and elegance first, and investigating the data second." (Rampell, 2010)

[28] See Reinhart and Rogoff (2009).

within departments, within divisions, and even within Management, adversely affecting the IMF staff's ability to learn lessons from each other's experiences and knowledge.[29]

51. The silo behavior made it difficult to integrate multilateral with bilateral surveillance, to link macroeconomic and financial developments, and to draw lessons from cross-country experience. Discussion of the risks and vulnerabilities that led to the crisis never found its way into the bilateral surveillance of the largest systemic financial centers, even though some of these risks were laid out in *GFSRs*. A survey done for the IEO's research evaluation (IEO, 2011) suggests that almost half of respondents in area departments admitted to seldom or never using the *GFSR;* the most mentioned reason was that its analysis did not lead to country-specific insights.

52. The internal review process failed to "connect the dots" and to ensure follow-up of concerns raised by the Board, Management, and internal reviewers. It did not connect bilateral and multilateral surveillance, or coordinate the analysis of the *WEO* and the *GFSR*. Formal interdepartmental review typically took place at a late stage in the production process of flagship documents, country briefs, and staff reports. In part, this explains its failure to ensure coordination and cross-fertilization. By the time comments were received from other departments, views had already crystallized, and it was often too late to make significant changes. Hence, comments were only minimally addressed.[30]

53. IMF reports rarely referred to work by external analysts pointing at the mounting risks in financial markets. Rather than lack of awareness, it is likely that this was an example of the IMF's insular culture, as this was also common in much of the surveillance-related analytical work, which made little reference to research from outside the IMF (IEO, 2011).

54. IMF macroeconomists, particularly in area departments, did not sufficiently appreciate the skills and experience of financial sector experts. At times there was a "culture clash" between macroeconomists and financial sector specialists and their analytical approaches. In addition, bilateral surveillance missions to systemic financial centers were not always staffed with the most experienced financial sector specialists.

C. Internal Governance Problems

55. Internal governance refers to the incentives and management processes that apply to IMF staff and the organization as a whole. The evaluation found that incentives were not well

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[29] This behavior has been discussed by several internal and external reviews. The McDonough Report explained that "what is needed is an environment that fosters and provides incentives for close collaboration and cooperation between departments, to increase cross-fertilization between the IMF's traditional macroeconomic work and its work on financial and capital market issues, and to overcome the silo mentality that is lessening the overall effectiveness and influence of the institution as a whole."

[30] After the crisis, the IMF attempted to change this approach by switching to shorter policy notes (instead of briefing papers) to be discussed at an earlier stage. It is too soon to judge how this process is operating.

aligned to foster the candid exchange of ideas that is needed for good surveillance—many staff reported concerns about the consequences of expressing views contrary to those of supervisors, Management, and country authorities. It also found lapses in oversight and weak accountability.[31]

56. Staff reported that incentives were geared toward conforming with prevailing IMF views. Several senior staff members felt that expressing strong contrarian views could "ruin one's career." Thus, views tended to "gravitate toward the middle" and "our advice becomes procyclical."[32] Staff saw that conforming assessments were not penalized, even if proven faulty. A lack of accountability was frequently highlighted as a serious obstacle to getting the incentives right.

57. Many area department economists felt that there were strong disincentives to "speak truth to power," particularly in large countries, as there was a perception that staff might not be supported by Management if they disagreed with these authorities. One senior staff member asserted that area departments were "unduly captured by countries" that they worked on. Analytical work was geared to "justify" the authorities' policy proposals. All this was "driven by the agenda of getting on well with" country authorities.

58. High staff turnover was a frequent complaint of country authorities and an issue that has been raised by several previous IEO evaluations. High turnover left mission teams in constant need of getting up to speed on country-specific issues, which made it difficult to come up with alternative views and policy options. Staff working on countries with complex, systemic financial systems reported that they felt uncomfortable raising difficult issues during their first mission.

59. Turnover of Management and senior staff also weakened IMF effectiveness during the run-up to the crisis. In this period, the IMF had three Managing Directors, and an Acting Managing Director who served for three months. This high turnover led to shifting priorities, gaps in attention to the challenges facing the global economy and the IMF, and weak oversight over senior staff. IMF effectiveness also suffered as a consequence of changes in the First Deputy Managing Director, and Economic and Financial Counsellors during this period.

60. Turf battles, closely related to the issue of silos and incentives, were reportedly a major impediment to cooperation and collaboration. These were further evidence of a lack of sufficient oversight and follow through by senior staff and Management. The IMF was often described as a tightly-run, hierarchical organization, with clearly defined boundaries.

[31] While this evaluation touches on governance issues only in regards to the crisis, staff interviews indicate a widespread view that governance problems were a key impediment to the IMF's effectiveness.

[32] A majority of staff who responded to the survey conducted for the IEO research evaluation stated that their research and its conclusions had to be aligned with IMF views.

According to one senior staff, "the Fund operates as little fiefdoms." Staff attributed the failure to integrate bilateral and multilateral surveillance and macro-financial issues in part to such turf battles.

D. Political Constraints

61. What role might political constraints have played in the run-up to the crisis? The answer is multifaceted because political constraints have many dimensions, including requests to alter messages in staff reports, demands by authorities to replace specific mission members, perceptions of pressure from authorities leading to self-censorship, and requests to pursue certain policy initiatives. To varying extents, each of these factors influenced IMF surveillance during the evaluation period. But with the possible exception of self-censorship, they were not a major factor in the IMF performance in the run-up to the crisis.

62. On the messages from surveillance, the perceived degree of explicit or implicit political pressure from authorities varied significantly by country. On the United States, for example, staff and Management indicated that there was no overt pressure to change the mission's messages. In some other large advanced economies, however, staff noted that the authorities took a heavy-handed approach, exerting explicit pressure to tone down critical messages. As one staff member who worked on a large country explained, "it was hard to give difficult messages to the authorities even if the team had the analysis…the concluding meetings were really just negotiation sessions on language." In contrast, teams seemed more comfortable in presenting hard-hitting analysis to smaller advanced and emerging markets, confirming some authorities' belief that there was a lack of evenhandedness in surveillance.

63. Self-censorship appeared to be a significant factor even in the absence of overt political pressure. Many staff members believed that there were limits as to how critical they could be regarding the policies of the largest shareholders—that "you cannot speak truth to authorities" since "…you're owned by these governments." Moreover, staff perceived that in case of disagreement, Management would end up endorsing country authorities' views instead of those of staff. Sometimes country authorities would ask that a mission chief or other mission members be replaced. While at times there might be valid reasons for such requests, for example, a mismatch of skills or even personalities, such changes should be explained clearly and openly to staff or they could have a chilling effect on staff willingness to disagree with country authorities. While there have been few such cases, it is clear that staff across the IMF was aware of them and that this may have led to self-censorship.

64. Pressure to adopt certain initiatives distracted Management from more urgent concerns in the world economy, and their implementation diverted staff's attention. In a multilateral organization like the IMF, it is natural for country authorities to influence the launching and design of policy initiatives. Indeed, there was a perception that the largest shareholders were the driving force behind certain initiatives that are seen as having distracted the institution while the crisis was emerging. The two main examples were the discussions leading to the adoption of the 2007 Decision on Bilateral Surveillance, which directed staff attention to exchange-rate analysis and reinforced the focus on global

imbalances; and the IMF's 2008 downsizing, which absorbed the attention of Management and senior staff at a particularly important time.

65. Many authorities from member countries and other stakeholders pointed at problems in *overall IMF governance* as critical to understanding the institution's performance in the run-up to the crisis. They indicated that to enhance its effectiveness, the IMF needed to clarify the roles of the Board, the Managing Director, and his Deputies, and to establish a clear accountability framework. In a survey conducted in 2007, Board members pointed to the lack of evenhandedness and weak accountability as hindering the capacity of the IMF to react effectively to emerging risks (IEO, 2008).

CHAPTER 5

TOWARD MORE EFFECTIVE IMF SURVEILLANCE

66. In considering recommendations, the aim is not to predict a crisis, as crises and their triggers are inherently unpredictable. It is rather to strengthen the IMF's working environment and analytical capacity to better allow it to discern risks and vulnerabilities and alert the membership in time to prevent or mitigate the impact of a future crisis. The Fund needs to cultivate a culture that is proactive in crisis prevention, rather than primarily reactive in crisis response and management. It needs to take measures to prevent or mitigate future crises, as much as to address the weaknesses that were uncovered by past crises.[33] To this end, it should continuously scan for risks and emphasize vulnerabilities, rather than playing the role of uncritical enthusiast of authorities and the economy.

67. The IMF has already taken steps to address some of the weaknesses that were evident in the run-up to the crisis. Among these are the inclusion of advanced economies in the Vulnerability Exercises, the launching of the Early Warning Exercise, increased research on macro-financial linkages, the preparation of reports that analyze spillovers and contagion from systemic economies, and the recent decision to make financial stability assessments under the FSAP a mandatory part of surveillance for the 25 most systemic financial sectors. These are welcome developments. However, the IMF expressed the need for similar steps after previous crises, but some of them were not implemented at that time and the results of others have not been as positive as had been hoped. Thus, it is critical to establish a process of monitoring reforms and evaluating their impact, as the basis for designing new and corrective initiatives. This is as true for the following IEO recommendations as it is for the ongoing reforms and recommendations from previous studies (Annex 6). The

[33] Most of the following recommendations focus on changes to deal with risks and vulnerabilities in the financial sector. The IMF should also scan for risks and vulnerabilities in other areas that could be at the center of a future crisis. For example, a future crisis could have fiscal and/or debt sustainability origins. If so, a possible response could be developing a comprehensive diagnosis program focused on public finances, perhaps along the lines of the FSAP.

implementation of these initiatives will need close attention by Management and Board oversight, as well as the support of authorities in member countries.

68. A common theme across this report's recommendations is the need to address weaknesses in IMF governance, a recurrent theme in IEO evaluations. In this context, it is critical to clarify the roles and responsibilities of the Board, Management, and senior staff in providing incentives for staff to deliver candid assessments, in overcoming the obstacles of silos and "fiefdoms," and in confronting political constraints. The IMF needs to establish better mechanisms for monitoring implementation and a clear accountability framework.

69. Five general recommendations are each followed by more specific suggestions on how they could be implemented. These suggestions should be seen as a starting point for further reflection; they are not necessarily the only way to follow through, and alternative approaches could have significantly different resource implications.

Create an environment that encourages candor and diverse/dissenting views

- Actively seek alternative or dissenting views by involving eminent outside analysts on a regular basis in Board and/or Management discussions.

- Create a risk assessment unit that reports directly to Management, with the purpose of developing risk scenarios for the systemically important countries and analyzing tail risks for the global economy. This unit should organize periodic Board seminars on the risk scenarios and provide an assessment on whether its analysis was appropriately incorporated into multilateral and bilateral surveillance.

- Change the insular culture of the IMF through broadening the professional diversity of the staff, in particular by hiring more financial sector experts, analysts with financial markets experience, and economists with policy-making backgrounds.

- Ensure that Summings Up of Board discussions better reflect areas of significant disagreement and minority views.

- Encourage the staff to be more candid about the "known unknowns," to be more ready to challenge their own preconceptions, and to frankly disclose the limitations of data and technical tools underlying its analysis.

Strengthen incentives to "speak truth to power"

- Management should encourage staff to ask probing questions and challenge Management's views and those of country authorities. Well-founded analysis should be supported by Management and the Board even when the diagnosis might not be shared by country authorities.

- In order to promote more effective bilateral surveillance, consideration must be given to the possibility of issuing staff reports without the need for Board endorsement.

This could be followed by a peer review process structured to give surveillance greater traction.

- Clarify the roles and responsibilities of Board members and Management in ensuring that staff is not unduly constrained by political considerations when conducting surveillance.

- Conduct regular IMF-wide self-assessments to look at the health and functioning of the organization. As is common practice in private corporations and in some other international organizations, this assessment should be managed by an independent external consultant and its results delivered to the Board. In addition to considering factors like staff morale, communication, teamwork, and diversity, the assessment should gauge staff perceptions on their ability to challenge IMF-held views in internal discussions and authorities' policies in conducting surveillance.

Better integrate financial sector issues into macroeconomic assessments

- The recent Board decision to make the financial stability assessment component of the FSAP a mandatory part of the IMF's bilateral surveillance for the world's top 25 financial centers every five years is welcome. It is necessary, however, to ensure that the coverage, periodicity and participation in the mandatory financial stability assessments reflect new developments in the rapidly changing financial markets and institutions. In particular, the coverage of institutional, regulatory, and supervisory issues is critical to ensuring the robustness of these assessments. The Board should also revisit the possibility of conducting mandatory financial stability assessments every three years, once the IMF has collected sufficient information about how quickly assessments become outdated relative to the corresponding financial systems.

- Continue to strengthen the FSAP and address the problems, noted in Annex 5, which limited its effectiveness in the run-up to the crisis.[34] In particular:

  —Develop analytical tools to better integrate the analysis and results of FSAPs into bilateral surveillance;

  —Continue to enhance the analytical rigor of assessments by strengthening the methodology for assessing liquidity risk, spillovers, and contagion;

  —For stress tests and the FSAP analysis, consider more severe shocks, taking into account domestic, global, and regional developments and risks (drawing on the Early Warning Exercise, the *WEO,* and *GFSR*);

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[34] This recommendation builds on "Financial Sector Assessment Program After Ten Years: Background Material" (IMF, 2009b).

—Enhance candor and clarity in the FSSAs, including an explicit discussion of data and methodological qualifications regarding stress test results; and

—Give greater attention to the role of nonbank institutions and markets, and financial conglomerates in the assessment of financial stability.

- The IMF should strengthen its ability to regularly monitor, assess, and warn about stability in global and systemic financial markets and institutions. To this end, it should continue to strengthen its collaboration with the Financial Stability Board, particularly on developing the systems necessary to more effectively monitor financial stability. But the IMF should also build up its own capacity to independently assess risks and vulnerabilities in financial sectors as part of bilateral surveillance.

- Management should report to the Executive Board on a biannual basis on the results of its efforts to strengthen macro-financial integration in bilateral and multilateral surveillance. Higher priority should be given to research on macro-financial linkages.

- Strengthen financial sector expertise in the IMF by updating the staff's knowledge through training and by hiring experienced market participants in both the Monetary and Capital Markets Department (MCM) and area departments.

- Missions to G-20 economies and other financial centers should include experienced financial experts. Moreover, MCM should be given a more prominent role in the surveillance of these economies, for example, by having sign-off responsibility akin to SPR.

Overcome silo behavior and mentality

- Management should clarify the rules and responsibilities for the internal review process, in particular for "connecting the dots." It should hold the corresponding units and senior staff responsible for integrating multilateral and bilateral surveillance, taking account of alternative views, bringing cross-country experience to bear, and having policy consistency across countries/regions on cross-cutting issues.

- Establish interdepartmental collaboration at an earlier stage of the Article IV process and of the development of themes and ideas for multilateral surveillance documents. Ensure that substantive differences in departments' views are addressed as they arise.

Deliver a clear, consistent message to the membership on the global outlook and risks

- Ensure that the assessment of the global economy is consistent and comprehensive, taking a stance on a central scenario with clear specifications of risks and vulnerabilities around this scenario. This assessment should be transmitted to the membership in a clear fashion. One way to do this is by better integrating the analysis and assessments of the *WEO* and the *GFSR*. Alternatively, the IMF could issue a selfstanding global surveillance report—a short, candidly-written document on the macroeconomic outlook, risks to global financial stability, and potential spillovers.

- On issues of systemic importance, the Fund should be ready to err more often in the direction of emphasizing risks and vulnerabilities, rather than focusing on possible benign scenarios. This change in approach would need to be discussed and agreed by the membership at large.

Annex 1. Timeline of Relevant Events

2004

- *U.S.:* Federal Reserve raises interest rates for first time in four years (June)
- Basel Committee on Banking Supervision issues Basel II standards (June)
- *IMF:* Rodrigo de Rato becomes Managing Director (MD) (June)
- *IMF:* Biennial Surveillance Review message: financial sector and markets analysis not integrated into bilateral surveillance (July)
- *U.S.:* Annual rate of increase for home prices peaks at over 20 percent (July)
- *U.S.:* SEC suspends net capital rule for the "big five" investment banks (August)

2005

- *U.S.:* Greenspan notes signs of froth in local markets and calls home prices unsustainable (June)
- *IMF*: Rajan Jackson Hole speech notes financial development has made the world riskier, incentives in financial sector are skewed; paper predicts low probability high-cost downturn (August)

2006

- *IMF:* MD directs that analysis of financial sector and balance sheet vulnerabilities be integrated into staff reports (March)
- *IMF:* DMD says Fund work moving to less of firefighter and more of (preventive) doctor (June)
- *U.S.:* Home prices peak (July)
- *U.S.:* Federal Reserve maintains interest rates for first time after two years of increases (August)
- *U.K.: Daily Telegraph* predicts credit crunch (September)
- *IMF:* ICM/MFD merger effective to form new department, MCM (December)

January–June 2007

- *U.S.:* Subprime mortgage market collapses
  —Freddie Mac announces no purchase of risky subprimes/MBS (February)
  —Beginning of forced sale of Countrywide and other mortgage lenders (February)
  —New Century Financial Corp. files Chapter 11 (April)
- *IMF:* Multilateral Consultation on Global Economic Imbalances (April)
- *IMF:* Executive Board reviews 1977 Decision on Surveillance (January–June)
- *U.S.:* Moody's downgrades 100 sub-prime backed bonds (June)
- *U.S.:* Bear Stearns suspends redemptions in hedge funds (June)

July–December 2007

- *U.S.:* Financial sector under stress
  - —S&P credit watch on 612 securities backed by subprime mortgages
  - —Bear Stearns liquidates two MBS hedge funds (July)
  - —American Home Mortgage Invest. Corp. files Chapter 11 (August)
- Global financial markets show signs of stress; diminished liquidity in interbank markets (August–September)
  - —BNP Paribas halts redemptions on three funds
  - —European Central Bank (ECB) injects €95 billion into market
  - —U.S. Federal Reserve reduces discount rate (August), federal funds rate (September)
- *U.K.:* Bank of England liquidity support for Northern Rock
- *IMFC*: strong fundamentals, robust emerging markets/developing country growth (October)
- *IMF:* Dominique Strauss-Kahn becomes MD (November)
- *U.S.* FOMC initiates temporary swaps for six months (ECB, SNB) (December)
- *MD:* Messages (December)
  - —External: Fund has key role to play in "credit crunch"
  - —Internal: cut $100 million, move ahead with downsizing effort

January–August 2008

- *IMF:* Working Group on Financial Crises of the Future headed by FDMD (January)
- *U.K.:* Northern Rock taken into state ownership by U.K. Treasury (February)
- *U.S.*: Federal Reserve announces financing for JPMorgan Chase to acquire Bear Stearns (March)
- *IMF:* Executive Board discusses turmoil; approves new income model (March), administrative restructuring/downsizing (April)
- *U.S.:* Government auctions, existing swap lines increased (May)
- *IMF:* Public release of MD statement noting shift from internal issues to focus on key global economic and financial concerns (July)
- *U.S.:*
  - —Office of Thrift Supervision places IndyMac into receivership (July)
  - —Temporary authorization to purchase Fannie/Freddie equity if needed (July)
  - —FOMC announces "downside risks to growth have increased appreciably" (August)

September 2008

- *U.S.:* Critical financial market events
  - —Fannie/Freddie placed in government conservatorship (September 7)
  - —Lehman Brothers files for bankruptcy (September 15)
  - —Government provides emergency loan to AIG (September 16)
- Money market run begins/credit markets freeze (September 16–17)

Annex 2. Factors that Contributed to the Crisis According to IMF Staff

This annex is drawn from the IMF's own ex post analysis. According to IMF staff, the following factors contributed to the crisis:[35]

Macroeconomic forces. A long period of high growth, low real interest rates, and limited volatility led to excessive optimism about the future, pushed up asset prices and leverage, and prompted a search for yield and an underestimation of risks.

- **Monetary policy.** Short-term interest rates were low, reflecting accommodative monetary policy. Central banks and financial regulators largely focused on inflation and aggregate activity, thereby paying insufficient attention to the buildup of systemic risk associated with rapid asset price increases (particularly in housing markets) and growing leverage.

- **Global imbalances.** These too played a role in the buildup of systemic risk. High saving in Asia and oil-surplus countries had as their counterpart large capital inflows to the United States and Europe. This contributed to low long-term interest rates, underpinning the rise in asset prices, leverage, a search for yield, and the associated creation of riskier assets.

Global architecture. A fragmented surveillance system compounded the inability to see growing vulnerabilities/risks. Multilateral coordination and collaboration lacked sufficient leadership to achieve the needed response to systemic risks. On financial regulation, there were no ex ante rules governing cross-border resolution or burden sharing. The absence of broad liquidity insurance implied an inadequate international response when interbank markets around the world froze up.

Financial system. New structures and new instruments were riskier than they appeared. A presumption that these instruments dispersed bank risk ignored the larger fact that risk remained concentrated in entities linked to the core banking system. Market discipline failed amid the prevailing optimism, due diligence was outsourced to credit rating agencies, and a financial sector compensation system based on short-term profits reinforced risk-taking.

- **Regulatory perimeter.** A lightly regulated and generally unsupervised shadow banking system in the United States had grown as large as the formal banking system. Banks evaded capital requirements by pushing risk to affiliated entities in the shadow system. Regulation was not equipped to see risk concentration and the flawed incentives behind the financial innovation boom. There were shortcomings in consolidated supervision and underwriting standards.

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[35] IMF (2009c); "The Recent Financial Turmoil—Initial Assessment, Policy Lessons, and Implications for Fund Surveillance," April 9, 2008.

- **Market discipline.** Due diligence—in assessing counterparties and collateral—failed. Supervisory and regulatory incentives led to too much reliance on credit ratings whose methodologies were inadequate and inappropriate when applied to complex structured products, and thereby failed to capture the risks. Ratings agencies were also subject to conflicts of interest. Market discipline was eroded by the "too big to fail" nature of the largest most interconnected institutions. The complexity and opacity of structured credit instruments undermined market discipline. Risk management practices of many financial institutions were deficient, reflecting shortcomings in judgment and governance: the users of risk management models used poor business judgment, and warnings by risk managers were sometimes ignored or underestimated by senior management.

- **Pro-cyclicality.** A constellation of regulatory practices, (fair value) accounting treatment of structured products, ratings, and incentives magnified the credit boom and exacerbated market turbulence. Some recent regulatory initiatives (such as Basel II) may have also intensified pro-cyclical behavior.

- **Information gaps.** Financial reporting was inadequate, understating the risks borne by the reporting entities. There were extensive gaps in regulators' and markets' data and understanding of underlying risks. These included risks embedded in complex structured products, the degree of leverage and risk concentration in systemically-important financial institutions, the difficulty of assessing liquidity and counterparty risk, and on-balance-sheet risks and links with off-balance-sheet risks. Shortcomings in valuation models and practices played a role.

- **Crisis management.** Cross-border differences in emergency liquidity frameworks and inadequacies in crisis management frameworks, including deposit insurance, played a role in propagating the crisis.

Annex 3. Country Coverage

The countries/economies covered by the evaluation are: Argentina, Australia, Austria, Belarus, Bosnia and Herzegovina, Brazil, Canada, China, Colombia, Costa Rica, El Salvador, European Union, France, Germany, Guatemala, Hungary, Iceland, India, Indonesia, Ireland, Italy, Jamaica, Japan, Republic of Korea, Latvia, Luxembourg, Mexico, Poland, Romania, Russia, Saudi Arabia, Serbia, Seychelles, South Africa, Spain, Switzerland, Turkey, Ukraine, United Kingdom, and United States.

This list includes the G-20, and those countries (excluding low-income countries) that initiated a new IMF arrangement, including contingent commitments under an FCL, in the aftermath of the crisis (through 2009). Also included are financial centers such as Luxembourg and Switzerland, and countries such as Ireland and Spain that had vulnerabilities similar to those that precipitated the crisis in the United States and the United Kingdom.

Annex 4. Early Analysis and Diagnosis of Factors Leading to the Crisis

A number of analysts outside the IMF pointed to the vulnerabilities and policy shortcomings that eventually led to the crisis. The following briefly reviews some of these contributions through 2006.

Warning about the prospect of a housing market collapse:

- Illustrating the entrenched nature of home price speculation by viewing the ongoing appreciation in historical perspective (Shiller, 2005);
- Predicting recession via asset price adjustment (Krugman, 2006; Richebacher, 2006);
- Linking unsustainable household balance sheets to a dramatic reversal of household spending (Parenteau, 2006).

Forecasts linking a housing market collapse to financial implosion:

- Recognizing that an asset bubble backed by unsupportable subprime mortgages could not endure (Burry, 2005, as described in Lewis, 2010),
- Probing where the mortgage risk was located and the repercussions for the institutions holding it after the prospective housing bust (Roubini, 2006).

Highlighting regulatory shortfalls and ensuing risks:

- Warning about the need to strengthen disclosure requirements and oversight over OTC derivatives (Commodity Futures Trading Commission, 1998)
- Warning about the risks and conflicts of interest inherent in using private credit ratings to measure loan quality as the basis for lowering capital requirements (Shadow Financial Regulatory Committee, 2000).
- Highlighting an array of risks arising from the evolving nature of structured finance (summary of proceedings from conference organized by the IMF Institute, 2005)

Urging monetary policy to take account of its impact on credit expansion and asset prices and warning of the drawbacks of not doing so (Borio and Lowe, 2002; Borio and White, 2003).

But some within the IMF also were quite prescient regarding the evolving risks and vulnerabilities, as evidenced by the contributions below through 2006.

Pointing to risks in the evolution of financial markets:

- The IMF's Economic Counsellor warned in his personal capacity that the evolution of financial development and the nature of compensation incentives for investment managers were driving the financial system toward increased risk, which ultimately could freeze the interbank market and lead to a full-blown financial crisis (Rajan, 2005 a, b);

- "Liquidity shortage as a potential amplifier for market price shocks was a major 'blind spot' and will need to be at forefront of all future effort to further improve the global financial architecture" (*GFSR*, 2005);

- "Historically the most important risk for financial markets in good times is complacency. Current risk premiums leave little or no room for asset valuation errors" (*GFSR*, 2005);

- The cyclical and structural shift in global financial markets could "become hazardous to financial stability" (*GFSR*, 2005);

- A combination of low risk premiums, complacency, and untested risk management systems dealing with complex financial instruments could become hazardous to financial markets. The proliferation of complex, leveraged financial instruments (such as credit derivatives and structured products) made liquidity risk increasingly relevant (*GFSR*, 2005).

Highlighting regulatory shortfalls and ensuing risks:

- From unregulated OTC derivatives, including those relating to the liquidity consequences of the unraveling of derivative contracts. "There could be a tsunami of credit evolving into a perfect storm…," as he warned of counterparty risk and evaporating liquidity (Schinasi, 2006);

- "… credit risk which appears to have left the banking system may in fact turn out not to have done so" (Executive Board member's statement on the *GFSR*, 2006).

Forecasts linking a housing market collapse to financial implosion:

- The "longer [asset bubbles unjustified by fundamentals] persist, the greater the potential for disruptive corrections" (*GFSR*, 2004).

Warning about the prospect of a housing market collapse:

- "particularly concerned" about buoyant property prices in the United Kingdom, Australia, Ireland, and Spain, and to a lesser degree in United States and New Zealand (*WEO*, 2004);

- "heightened concerns" about an asset price bubble and a sharp correction thereof (*WEO*, 2004);

- Concern about the possibility of a synchronized downturn with significant adverse effects (*WEO*, 2004).

Sketching out the contours of a systemic financial crisis in the context of global imbalances (background paper for the multilateral consultation by team of IMF financial experts, 2006)**:**

> "… the adjustment of the global imbalances poses financial sector risks. Global imbalances have counterparts in the sectoral balance sheets and the portfolios and risk exposures of financial institutions. A disorderly adjustment would likely impact on the sectors where the banks are most heavily exposed.… Assessing the behavior of capital markets under a disruptive scenario is…challenging…as it entails financial products and markets that have yet to be tested under global systemic distress. These effects have not been factored into the subsequent analysis of risks to the banking systems, but merit attention during the multilateral consultations."

> "… concern[ed] about the increased use of nontraditional mortgage products for which default histories were limited…while the historical loss experience on mortgages has generally been low, the growth of innovative mortgage instruments has increased potential risks. A significant correction in house prices combined with a slowing economy could result in a significant increase in delinquencies on loans to households as well as commercial real-estate loans. To the extent that nontraditional mortgage products may not be completely understood by borrowers, an environment of higher interest rates may trigger reputation and litigation risks to banks."

> "… In several countries, banks and other financial institutions are heavily exposed to the housing market, including to the U.S. mortgage market through investments in mortgage backed securities. Since the ultimate effects of risk transfer across institutions and sectors are largely unknown, it is also possible that counterparty risk and unwarranted risk concentrations could lead to financial contagion, amplifying the costs of a disruptive scenario."

Annex 5. Weaknesses in FSAPs in Advanced Economies

This annex describes the main factors that contributed to a mixed record in the quality and usefulness of FSAPs in advanced countries. It draws on the FSAPs of advanced countries during 2004–08 and staff's 10-year retrospective of the FSAP (IMF, 2009b)

Lack of candor and clarity. This seems to have been more of a problem in the FSAPs for advanced than for other countries, as some of the IMF's assessments for emerging markets were pointed and direct about risks and vulnerabilities. According to IMF (2009b), lack of candor and clarity "might be symptomatic of a desire of team members to avoid conflict with national officials." The typical tendency was to present a "balanced" view, beginning with a positive statement before acknowledging any risks.

Inadequate or lack of coverage on topics relevant to the crisis. Coverage of liquidity risks, crisis preparedness, bank resolution, and external funding risk seemed less consistent in the FSAPs for advanced countries than for emerging markets. To assess liquidity risks, for example, FSAPs sometimes reviewed only the central bank's liquidity management instruments. Some aspects of capital markets that should have received attention in advanced countries—asset securitization, commercial paper, and short-term funding markets—were not routinely covered.

Stress test weaknesses. According to IMF (2009b), "stress tests…did not provide significant insights regarding the crisis." Reasons include: specifying shocks that were not sufficiently severe (reflecting, in part, the sensitivity of country authorities and the difficulty in "thinking the unthinkable"); missing important sources of instability—liquidity risks, concentration of exposures in real estate, off-balance-sheet exposures; working with inadequate data, particularly regarding off-balance-sheet exposures and balance-sheet interconnectedness; as well as methodological challenges in modeling liquidity risk, contagion channels, second-round effects, nonlinearities, and correlation across portfolios.

Failure to integrate multilateral perspectives. The FSAPs for most countries did not discuss the global macroeconomy nor the developments taking place in countries with strong economic ties to the subject country. They typically focused on domestic issues and scenarios and did not look at cross-country risks or spillovers, crosscutting issues, or global economic risks. In fact, in those instances where global risks were considered, the scenario was the impact from a disorderly collapse of the dollar in line with the IMF's focus, which is not the way the crisis impacted financial sectors.

Reassuring messages that induce complacency. Among the key messages from advanced county FSAPs in the run-up to the crisis were: "the outlook for the financial system is positive;" "financial institutions have sufficient cushions to cover a range of shocks;" " the diversification of sources of foreign wholesale funding is a source of strength;" "stress tests…suggest that the financial system as a whole is well positioned to absorb a significant fall in housing prices;" "the financial sector is generally sound and should be resilient to large, but plausible shocks;" "no weaknesses that could cause systemic risks were identified."

Annex 6. Conclusions/Recommendations from Previous Reports and Evaluations

Whittome Report on Fund Surveillance of Mexico (1995)

- IMF culture does not encourage frank discussion of risks. Staff in habit of second-guessing Management and Board.

- Managing Director must insist that analysis be pertinent, pointed, and take responsibility for degree of "political" understanding that should be allowed to affect the staff's conclusions.

External Evaluation of Fund Surveillance (1999)

- Fund should place greater emphasis in surveillance on financial sector and capital markets issues.

- Need greater linkage between bilateral and multilateral surveillance.

- The Board, Management, and senior staff should attempt to alter the incentive structure by making it clear that they will, if necessary, back up staff who give frank advice.

- Surveillance should devote more time to identification and analysis of alternative policy options.

- More financial sector expertise; more policy expertise (such as through secondment or interchange programs); and more outside experience in general to mitigate against insularity, conformity, and lack of hands-on experience.

Lipsky Report (2001)

- Focus, expertise, and support on financial sector/capital markets issues should be enhanced.

- Weak linkages between multilateral surveillance of capital markets and the Fund's core bilateral surveillance activities.

- More effort needed by area departments to follow financial market developments in countries.

- Active role of Fund Management in making financial sector work more effective. Requires "clear-cut support of senior management" to overcome "natural institutional inertia."

McDonough Report (2005)

- Provide incentives for interdepartmental collaboration to increase cross-fertilization between traditional macroeconomics and financial/capital market issues; overcome silo mentality that is reducing the IMF's overall effectiveness and influence. Requires clear direction from Management and Executive Board.

- Fundamental change of orientation and mind-set required for all departments, Management, and Executive Board with incentive structures to reward collaboration and penalize silo behavior, set clear objectives on what is expected in terms of integrating financial issues into surveillance. Sustain follow-up to ensure accountability.

- Clear guidance, continuous monitoring, and direct, regular, continuous, and visible engagement and leadership by the Managing Director and the Fund's senior leadership are required.

- Fundamental mind-set change in how the Fund thinks about financial issues. Put financial issues at the center rather than the periphery. Area departments yet to fully embrace the need to change the traditional macro focus and elevate financial issues to a central role in their work. Teams still comprise traditional macroeconomists who lack the necessary comfort level or expertise on financial issues.

- Departments set their own agendas and priorities. Systematic collaboration is exception rather than rule, and largely limited to calendar-driven events. Problems symptomatic of broader "silo" mentality across departments impeding cooperation, and incentive structure rewards looking up (to Management and the Board) rather than across the institution. Internal silos can only be overcome with strong management.

- Having two separate publications (*WEO* and *GFSR*) raises questions of overlap and efficiency, and does little to reinforce an integrated view of the links between global macro and financial developments. The *GFSR* is not widely read or used by staff within the organization, and does not play a significant role in country work.

IEO Evaluation on the Financial Sector Assessment Program (2006)

- Improve the quality and impact of FSAPs through clearer prioritization of recommendations; improved stress-testing analysis; and more systemic inclusion in the analysis of cross-border, financial sector linkages.

- Strengthen links between FSAPs and Article IV surveillance by mainstreaming FSAPs and follow-up work into regular surveillance activities. Strengthen the internal review process to ensure that key messages on macro-financial stability are fully reflected in Article IV.

- Management should clearly signal to the Board those countries that it sees as the highest priorities for FSAPs and Updates, irrespective of whether these countries have volunteered.

- Utilize financial sector expertise (especially in MFD and ICM) more effectively in the surveillance process.

IEO Evaluation of Multilateral Surveillance (2006)

- Enhance role of Board and IMFC in multilateral surveillance.
- Improve content/form of multilateral surveillance outputs through streamlining and more focus on key issues.
- Strengthen multilateral surveillance by clarifying operational goals, organizational strategies, and accountability. Clarify scope of regional surveillance.
- Integration between *WEO* and *GFSR* and bilateral and multilateral surveillance (silo structure; bottom-up approach; too many products, too little focus).

2008 Triennial Surveillance Review (September 2008)

- Need to strengthen risk assessment (connect dots), highlight unknowns, think unthinkable), guard against tail risks, incorporate risks at multilateral/regional level.
- Better integrate macroeconomic and financial sector surveillance.
- Do better cross-border inward/outward spillover analyses, cross-country analyses, exchange rate analyses.
- Pay attention to effective communication; preserve existing strength.

Annex 7. How Did Country Authorities View the IMF's Performance?[36]

The country authorities who were interviewed were almost unanimous in the view that the Fund failed to warn sufficiently about the risks and vulnerabilities that led to the crisis.[37] However, few of them blamed the Fund or the individual mission teams for this failing. They admitted that most observers (including themselves and their fellow authorities) had also been overly comforted by the prolonged benign global environment. As one interviewee put it, "Neither we nor the IMF staff exercised imagination." The few outside voices that had expressed grave concerns (William White and Nouriel Roubini were among the most frequently cited) were typically not heeded in this seemingly "new paradigm" of a more stable global financial system, underpinned by innovation and risk dispersion.

Despite the Fund's failure to warn of the impending crisis, country authorities, in most cases, had much positive to say about the Fund and the bilateral surveillance process. Among the positives were a high general regard for Fund staff competency and analysis. The authorities felt that discussions with mission teams were usually candid, constructive, and of high quality, bringing useful and independent third-party views to the policy debate. Furthermore, most of those interviewed believed that the Fund's financial sector analysis had improved significantly over the years, and they had a generally high regard for the Financial Sector Assessment Program (FSAP) in particular. FSAPs had often been the catalyst to strengthen countries' financial sector policies, including spurring countries to do their own stress testing and move toward international best practices in supervision and regulation.

At the same time, country authorities provided many criticisms regarding the Fund's performance prior to the crisis. The subjects ranged from analytical weaknesses to political biases, the surveillance process, and organizational problems.

On the analytical front:

- The Fund's *general mindset that markets know best* and financial innovation reduces risks would have made it difficult for the staff to see the build-up of systemic risks.

- Bilateral surveillance typically *focused primarily on domestic policies* and vulnerabilities, offering little analysis of spillovers and contagion (even in the case of

[36] The views expressed here are based on interviews with country authorities as well as some regional and international institutions.

[37] The results from the survey undertaken for IEO's evaluation of *IMF Interactions with Member Countries* (IEO, 2009) indicate that only a minority of advanced and emerging market officials thought the IMF did a good job of alerting member countries about imminent external risks. While a majority of the country authorities rated the IMF's performance highly on various aspects of interactions, two areas stood out in which only a minority thought the IMF had performed well: (i) presenting alternative scenarios and addressing "what if?" questions and (ii) bringing quickly to the authorities' attention the implications of changing external conditions.

small, open economies).[38] Where there was some discussion on spillovers or contagion, the Fund usually saw the problems as arising from emerging markets, not from the advanced economies.

- Notwithstanding improvements over the past decade, *the Fund still had not adequately linked macroeconomic with financial sector analysis*. This inadequacy was reflected in the heavy reliance on models that to date have been unable to adequately capture macro-financial linkages.[39]

- *Balance sheet analysis* was infrequently employed. Furthermore, when it was used, it was sometimes done incorrectly.

- While the IMF had performed no worse than others in foreseeing the crisis, it *had not used its comparative advantage* in analyzing cross-cutting global issues and identifying risks.

- More use of *cross-country analysis* (particularly on countries that were facing similar issues) might have helped in identifying common vulnerabilities.

On political biases:

- A repeated theme was the apparent *lack of evenhandedness* in how the Fund treats its largest shareholders versus all others. Many country authorities believed that the Fund offered much more hard-hitting critiques of the policies of emerging markets and smaller advanced countries. Meanwhile, even when there were obvious commonalities in vulnerabilities with smaller countries, the large advanced countries were given the benefit of the doubt that their policymakers, supervisors, and regulators would be able to steer their economies through any rough patches. The 2007 Decision on Bilateral Surveillance only heightened this sense of unequal treatment. This perception also came out clearly in the survey of country authorities for the IEO's evaluation of *IMF Interactions with Member Countries*; for example, 86 percent of survey respondents from large emerging markets said that surveillance was in the interest of the "largest IMF shareholders." In particular, some felt that the IMF was insufficiently critical of the policies of a major shareholder.

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[38] Similarly, in the IEO evaluation of *IMF Interactions with Member Countries* (IEO, 2009) a majority of respondents to a survey of country authorities wanted a greater IMF contribution to spillover analyses, yet did not rate the IMF highly for its effectiveness in this area.

[39] The survey of country authorities undertaken for the IEO's evaluation of IMF research (IEO, 2011, forthcoming) found that while a majority of country authorities thought that IMF selected issues papers were somewhat or very useful in informing the policymaking process, in those instances where they were not deemed "very useful," the most frequently cited reasons were that the analytical framework was not suited to the realities of the country or that the research was too theoretical with little practical applicability.

On the surveillance process itself:

- A number of country authorities recognized that the Fund had identified many of the risks and vulnerabilities but typically presented these in a "laundry list of warnings, with no prioritization." That is, all Fund staff reports had the usual economist approach of "on the one hand (with list of economic positives first—which sets the tone), followed by on the other hand (with list of downside risks)." They asked how one should respond to such a wide-ranging list of risks, listed with no sense of probabilities nor urgency.

- Policy recommendations were often obvious (e.g., tighten fiscal policy, pursue a credible and sound monetary policy, or strengthen supervision) but lacked specificity about how to implement them. According to one interviewee, "interactions on the Article IV often feel like just any other meeting I have with all those international institutions, too formulaic."

- As for the value added by the Executive Board to bilateral surveillance, nearly all felt this was minimal at best, as the Board's contributions were usually very belated (coming months after the mission team's concluding statement had been presented to the country authorities) and often superficial (e.g., Summings Up were typically a fairly generic reiteration of the staff report).

On organizational problems:

- The high turnover of staff on mission teams was often cited. This implied a considerable loss of country knowledge and a constant training of new mission members to understand country specifics, history, and culture, all of which are very important for providing relevant policy advice and gaining traction.

- The turnover problem was worsened by the IMF's restructuring exercise, which was conducted precisely when the crisis was taking hold. In some cases, the restructuring caused countries to experience a complete turnover of mission members or even periods with no mission chief.

- Finally, the more general issue of staff resources was also reflected in the very infrequent FSAP updates. More continuous follow-up on financial sector issues might have better illuminated the problems ahead of time.

Interviewees also raised some issues that could be interpreted as having aspects which were both positive and negative regarding the Fund's performance:

- In almost everyone's view, the Fund must *walk a very fine line between highlighting the risks of a crisis and actually precipitating one*. For this reason, more sensitive messages would sometimes be communicated privately and orally to the authorities.

However, on occasion, the authorities on the receiving end of such messages admitted that they did not remember what was said, because the only documented views of the mission were in the concluding statement.

- Many of the authorities agreed that the Fund teams clearly highlighted the domestic vulnerabilities and risks…but said that those were *obvious to everyone*.

- Finally, while the *WEO* and *GFSR*[40] pointed to many of the pertinent risks and vulnerabilities and were generally held in high regard, policymakers did not notice any warnings regarding an impending crisis. This was widely attributed to the *overall upbeat banner messages* that typified these documents in the run-up to the crisis.

[40] Many of the interviewees admitted that they only had time to read the documents' Executive Summaries. While many did not read the *GFSR* due to its more technical nature, those involved with financial stability issues did read it.

Annex 8. Area Department Survey of Staff

In a self-evaluation of what went wrong, one of the area departments whose countries were most affected by the crisis conducted a survey of staff in October 2009. The following highlights the staff's views on some of the issues most relevant to this evaluation.

On the substance of country work, just under half the staff members thought that the area department was strong or very strong in assessing vulnerabilities. The toolkit for macro-financial analysis was often cited as an analytical impediment.

On where the area department should place the priority in country work, a staggering 98 percent of staff thought it important or very important to prioritize work on vulnerabilities and crisis risks, more so than even fiscal or monetary policy. Write-in responses to the question of priorities repeatedly stressed the need to do more work on cross-country linkages, spillovers, and integration of regional with country-specific perspectives.

On the main problems in the area department's surveillance work and ways to fix them:

- "relations with the authorities. We do not have the incentives to be too critical, especially publicly and to differ substantially. More support from the front office/management, less pressure to make authorities happy, more consistent 'ruthless truth telling' across all countries, not just a few."

- "more formal and informal communication with functional departments, mainly MCM…" "The main problem is how to bring value added to large economies, which have large staffs of highly trained economists. The solution is to focus on the Fund's comparative advantages, namely cross-country work, spillovers, and global consistency."

- "no courage to take on countries, especially G7. For years we praised [a large systemic country] for its policy framework and now we have egg on our face"

On leadership and communication, just under half the economists agreed with the statement "your ideas and opinions are considered and listened to."

On incentives, fewer than a third agreed that the area department gets its voice heard in the interdepartmental review process for policy papers, the *WEO*, the *GFSR*, etc. As for why this is the case, almost half believed that incentives (e.g., one gets little credit for good comments) were a serious hurdle. Meanwhile, almost three-quarters of respondents agreed with the statement that "cross-country work faces several constraints, including managerial complexity, incentives, resources, and priority of bilateral relations." Incentives, for example, were cited by about 85 percent of respondents as a hurdle to producing cross-country work.

On the silo nature of the Fund, only one-fifth of survey respondents agreed that there was sufficient learning from peers across country teams (and this lack of collaboration within a department bodes poorly for across-department collaboration).

On intellectual leadership, well over half the respondents felt that department managers had not provided the intellectual leadership to get the job done to a high standard. Some respondents felt that the Fund's downsizing exercise had impeded the ability to provide intellectual leadership. For example, one respondent wrote that "the [conjuncture] of the restructuring and the crisis has had disastrous consequences on the leadership provided by the department."

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