IEO
Independent Evaluation Office
of the International Monetary Fund

BACKGROUND PAPER

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

Biagio Bossone
with the collaboration of Roberta Marra

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ABBREVIATIONS

BIS	Bank for International Settlements
CDS	Credit Default Swap
CDO	Collateralized Debt Obligation
FINMA	Financial Market Supervisory Authority
FSAP	Financial Sector Assessment Program
FSSA	Financial System Stability Assessment
GFSR	*Global Financial Stability Report*
REO	*Regional Economic Outlook*
SFBC	Swiss Federal Banking Commission
SNB	Swiss National Bank
WEO	*World Economic Outlook*

I. Purpose, Scope, and Method of the Study

1. As background for the IEO's evaluation of the IMF's performance in the run-up to the global financial and economic crisis, **this study will examine how bilateral surveillance worked during the period 2004–07 in the case of Switzerland**. The study will explore whether the Fund warned Switzerland of the vulnerabilities in its own financial sector, and of the risks of spillover from critical events originating elsewhere.

2. **The case study will focus on the analysis, diagnosis, and recommendations provided as part of Fund surveillance to Switzerland**. Given the nature of the crisis, it will focus on financial sector issues, but it will also assess more broadly whether the Fund considered other issues that eventually have proved to be relevant. The study will focus on Article IV consultations—the cornerstone of Fund surveillance—but it will also examine the Fund's diagnosis and recommendations contained in the Financial Sector Assessment Program (FSAP) and Financial System Stability Assessment (FSSA) reports, and how they were integrated into staff and Executive Board appraisals in the Article IV consultations. The study will assess the extent to which risks were identified by the Fund, and whether the Fund's Board, Management, and staff conveyed these findings clearly to the authorities, and whether there were technical weaknesses or constraints in conveying difficult messages to the authorities.

3. **This study will be based on reviews of internal and Board documents** and on a comparison with documents prepared in other organizations and the private sector. It will compare Fund documents to those prepared by the authorities to assess whether the Fund offered technical value-added and, more importantly, whether the Fund was candid enough with the authorities on the risks and the need for corrective policies. In addition to document review, **the study will benefit from interviews** with the staff working in those countries, with Executive Directors and with relevant authorities, as well as with officials in other organizations. The study will also draw on the IEO evaluation of the FSAP program, as well as the background work done on surveillance for the IEO Evaluation of IMF governance.

4. **The study will address four questions**:

- To what extent did surveillance recognize the signs of an impending crisis, given the available information at the time?
- To what extent did surveillance identify the emerging vulnerabilities and provide appropriate policy advice to mitigate these risks?
- To the extent that the problems were foreseen, how were the Fund views communicated?
- Was bilateral surveillance well supported by, and well integrated with, multilateral surveillance and FSAPs?

5. **The study, in particular, will focus on the extent to which surveillance teams asked the right questions and raised concerns on risks and vulnerabilities such as, but not limited to:**

- the integration of financial stability and macro issues and analyses
- the integration of the FSAP findings into Article IV discussions
- the integration of findings and diagnoses from regional and global reports (including the *WEO* and the *GFSR*)
- the full examination under FSAP/Article IV of emerging financial sector risks (including, but not limited to: CDOs, insurance, housing bubbles, cross-border spread of risks)
- the focus of the FSAP missions on the "right" issues;
- the extent to which findings were clearly conveyed to the national authorities; and
- the extent to which Fund advice was listened to, implemented, and helpful.

6. **For the analysis, a "backward looking" approach will be adopted**, when necessary, using *post-fact* evidence to gauge retrospectively (with the benefit of the hindsight) what Fund surveillance overlooked that it should have not. To this end, documents will be considered that have been issued even after the period of observation of this study.

7. **As a guide to raising relevant questions throughout the evaluation of the Fund's performance, the study will adopt a selected set of key parameters**, grouped in the following four categories: information, analysis, communication, and country response. Annex 1 provides more detail on the questions and issues considered within each of these four categories.

8. **The study will consist of the following sections**. Section II will summarize the economic and financial development of Switzerland during the 2004–07 period, and somewhat beyond to appreciate the unfolding and consequences of the crisis seen *ex post*. Section III will describe the overall performance of Fund surveillance on Switzerland during the period observed, and will assess it using the key performance parameters. Section IV will summarize the main findings of the performance analysis and draw the main line on the strength, weaknesses, and eventual performance failures of Fund surveillance. Section V will close the study with recommendations and concluding remarks.

II. Economic and Financial Developments (2004–07 and Beyond)

9. **In 2004, the Swiss economy had pulled out of recession, but the recovery was fragile and largely dependent on external demand**. Generally weak economic activity caused sluggish labor market conditions. Inflation was subdued, also benefitting from declining import prices, the general economic slack, increasing competition in retailing, and wage moderation. In the following year, the domestic economy gradually picked up steam mainly driven by the export sector, and, in 2006, the economic recovery continued, supported by rising domestic consumption. Reforms in the goods and labor markets increased productivity and facilitated growth. Full-time employment increased in manufacturing, construction, and the financial sector. The latter, in particular—accounting for 5 percent of national employment and 15 percent of the economy's value added—recorded sustained growth, with the two largest banks (UBS and Credit Suisse) being very active in the global markets, and with pension funds and life insurance companies fast recovering from balance sheet pressures, low interest rates, and the earlier downturn in financial asset prices. Real estate prices increased but remained well below their peak before the crisis of the mid-1990s, with no signs of growing price bubbles. In 2007, the economy expanded rapidly: external demand—especially from Germany—turned strong, and private consumption rose with improving consumer confidence and falling labor unemployment.

10. **In the face of these favorable developments, the international financial turbulence hit Switzerland hard in mid-2007**. Liquidity in the interbank market started to dry up, and interest rate spreads rose sharply in the markets for longer maturities.

11. **The first effects of the crisis became evident in the investment funds market**. Investors suddenly began to withdraw their money, and banks were forced to suspend repayments due to liquidity shortages and difficulties in liquidating their investments. The most striking examples in this regard were the funds of BNP Paribas ABS and West LB Mellon. In addition to the deferral of repayments, the liquidity problems also led to the creation of side pockets (separation between liquid assets and illiquid assets) and gates (limiting withdrawal possibilities), and eventually to the dissolution of some funds. During the first phase of the crisis, banks and insurance conglomerates operating in the financial markets—such as Swiss Re—suffered significant losses that were largely attributable to portfolio trading for own accounts composed of products created in the United States such as asset-backed securities, mortgage-backed securities, or complex securitization structures like collateralized debt obligations and collateralized debt obligations squared. Insurers suffered considerable losses on credit default swaps and on alternative investments (hedge funds and private equity). As a result, many investors abandoned the structured products and turned to less sophisticated and more secure financial instruments.

12. **Fears of a credit crunch emerged after the financial crisis erupted**. Whereas only about 15 percent of the banks admitted a restriction in their credit conditions, according to a Swiss National Bank (SNB) survey, this did not lead to a real credit crunch, although banks'

assessment of risks became much more cautious, especially in the area of export credits. Investor concerns and the loss of mutual confidence among banks rose sharply during the crisis, so that financial institutions saw their access to money and capital markets severely impaired.

13. **The two large banks felt the full force of the international financial turbulence, and the pressures on these two banks raised broader systemic issues.** After the crisis broke out, the two major banks sought to reduce their exposure and to strengthen their capital base. In fact, Credit Suisse had begun already in the fourth quarter of 2006 to reduce its exposure to the U.S. residential mortgage market, in response to negative signals (i.e., late payments) from its own mortgage service company, and was therefore able to face the crisis under better conditions and with more flexibility than UBS. While UBS was affected the most, both banks reported write-downs and losses. Concerns about their creditworthiness were high, as indicated by the wide spreads on their credit default swaps and the sharp fall in equity prices. Because of its U.S. subprime exposure, UBS was forced to record heavy losses in 2007. With write-downs of about $38 billion, UBS ended 2007 with a loss of $4 billion, and reported a further loss of $12 billion in the first quarter of 2008; its long-term rating was lowered. In the first quarter of 2008, concerns grew with Credit Suisse's mark down of $5.3 billion on structured credit positions, resulting in a loss of $2.1 billion. In 2008, total revenues at the two banks fell by 81 percent, and new money flows into assets under management dropped. Both banks underwent multiple capital injections.

14. **Reflecting the losses and the turmoil in the global markets, the Swiss equity index fell by about 40 percent in 2008**. In the same year, investment and bank financial service income in the balance of payments— a major source of national income—declined by over 80 percent. The economy entered a recession in the second half of 2008. Growth in exports slowed dramatically, as world trade collapsed, and domestic investment spending contracted since the second quarter, as firms scaled back their business plans given the deteriorating outlook. The value added from financial intermediation declined by about 7½ percent from 2007 to 2008.

15. **Internationally, the deteriorating outlook for sales and the tightening restrictions on credit terms induced drastic downward revisions in real sector investment and business plans**. Swiss exports of capital goods felt the brunt of such revisions. The metal, machinery and electronics industries were the first to record large cuts in orders. A marked deterioration in business confidence followed, which dampened domestic investment and job creation; households anticipated job insecurity and, as elsewhere, by year-end their confidence faltered and consumption dropped.

III. Assessment of the Fund's Performance: Evaluation of the Key Performance Parameters

16. **In the 2007 Article IV staff report (issued in April), the Fund found that the Swiss economy was doing well, that the country's growth prospects were positive, and that its risks appeared balanced.** According to the Fund, the Swiss outlook looked favorable, although tail-end risks warranted monitoring. A disorderly and abrupt unwinding of global imbalances or a shock from hedge funds or private equity could have pronounced consequences, given Switzerland's large role in financial intermediation, but were considered low-probability events. Other downside risks included increased currency volatility, linked to Swiss franc carry trades, and the eventuality of external growth slowing significantly. Upside potential, on the other hand, could materialize if the franc were to continue being weak or if migration and employment growth accelerated further.

17. **In the 2007 Financial System Stability Assessment (FSSA) Update (issued in May), the Fund also found that the financial sector was performing well amid a favorable macroeconomic and financial sector environment.** Risks persisted, but stress testing indicated that the system was generally resilient to shocks. The Update noted, however, that bank operations were increasingly complex, involving exotic instruments and high-leveraged counterparties, and that some insurers remained vulnerable to asset price adjustments. The main downside risk, as judged by the Fund, was that healthy balance sheets and profits could be building a degree of complacency, creating vulnerability to increased volatility or shocks. The conclusion was that, due to the complexity of the Swiss financial system, regulatory and supervisory arrangements needed to be first-best, and that the national regulatory agency required some strengthening to this end, especially to evaluate adequately the large banks' operating models and to ensure that liquidity and capital regimes were sufficient. The following sections assess the Fund's surveillance performance more analytically.

A. Information

18. **The availability of updated information on the financial sector during the 2004–07 period for Switzerland was conditioned by the completion of the latest FSAP update**, which took place only in 2007 (the previous FSAP had been done in 2001). Although the Article IV consultation cycle had provided, in principle, opportunities to update periodically the information on the country's financial sector developments, only the FSAP did in fact provide elements to consider more carefully the risks and vulnerabilities associated with the activity of the two large banks (see below). More frequent FSAP updates, in conjunction with the yearly Article IV consultations, might have led to more effective surveillance. In this regard, the Swiss authorities interviewed indicated that, under conditions of general financial stability of a country, a five-to-six year FSAP cycle can be considered adequate, provided that updates were done more frequently, to monitor implementation of earlier recommendations and to offer a new impetus to the reform process, but recommended

a higher FSAP frequency in post-crisis times in order to assess country progress with identified needed reforms and corrective policy actions. They were against a streamlined consultation for Switzerland.

19. **References to inputs from multilateral surveillance were at best implicit.** In the Fund reports on Switzerland, whenever the staff considered multilateral surveillance issues in relation to the country, references to the *WEO*, *REO,* or *GFSR* documents were not explicitly made. The staff did consider—already in 2005—the possibility that a disorderly unwinding of global imbalances (indeed, one of the major concerns the Fund had long been focused on, under its multilateral surveillance) could create severe real and financial disturbances to the Swiss economy. However, the lack of a systematic approach to analyzing the potential implications at the country level of the most critical international economic and financial developments, discussed under multilateral surveillance, left bilateral surveillance without a regular method for assessing the country economy within the appropriate global context, and from all the angles reasonably conceivable. This was recognized by the time of the 2008 Article IV consultation, which devoted specific attention to the influence of international shocks on the Swiss economy.[1] Fund surveillance of Switzerland during 2004–07 did reflect the general positive tone of multilateral surveillance, which may have undercut deeper discussions of risk issues, and may have given rise to the idea of declining risks over time.

20. **No inputs from external analyses appear to have been used in the staff reports on Switzerland**. The lack of references to views or warnings from other institutions on financial risk issues may have deprived staff analysis of otherwise useful hints on important country risk and vulnerability factors, such as the increased risk-taking of financial institutions, the capacity to assess risks in the face of the complexity of financial instruments, the concentration and buildups of risks, the heightened risk of cross-border shock transmission or contagion effects, and whether and how these factors would apply to countries with advanced financial systems. Consideration of their relevance from the Fund staff might have brought within surveillance a greater focus on some critical financial sector issues. The BIS had raised these issues in the years prior to the crisis (see Annex 2 (i), (ii)). They would have been relevant for a case like Switzerland.

B. Analysis

21. **As regards the macro–financial linkages and integration of financial sector analysis indicator, progress was achieved by the Fund in surveillance on Switzerland, especially over the more recent years**. In the Swiss case, the analysis of the financial sector represented a core component of Fund surveillance, as was also testified by the growing attention that this analysis received from the Executive Board. The discussion at Board

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[1] See the Staff Report for the 2008 Article IV Consultation with Switzerland, in particular Box. 1, p. 4, April 2008.

meetings, most notably in 2007, focused on various critical financial sector issues, solicited by remarks and questions by Board members followed by extensive responses from the staff. The list of issues discussed ranged from the risk of a sudden unwinding of global imbalances to the exposure of financial institutions to carry trade-related risks, the relaxation of bank lending standards, bank exposure to hedge funds and, in general to highly-leveraged counterparties, the pricing of new complex financial instruments, and the possible channels of systemic risk transmission. In the Board, questions were also raised on the risk modeling capacity of the Swiss banks with exposure to the U.S. subprime market and on the safety of the settlement procedures of derivatives transactions.

22. **Considerable effort was devoted by the Fund to the analysis of how financial phenomena may assume systemic relevance and produce macro (economy-wide) effects**. The crisis, however, pointed to ample scope to further enhance the understanding of the interconnections between the financial sector and the real economy. The Article IV and FSAP reports for the period under observation still tended to deal with financial and real sector issues separately, a tendency that is reflected also in most of the Executive Director statements to the Board and the Chair's Summings Up, where remarks—likely for convenience of presentation—are reported according to a rigid separation of issues by sectors.

23. **Moreover, the treatment of financial sector issues in the context of the Article IV reports appears to be confined mainly to incorporating the FSAP findings into the former**, without attempting to re-evaluate their implications in light of the broader scope of the consultation exercise. Much more often than in the past, increasing pressure on the staff to achieve a better integration of real and financial sector analyses has come from the Executive Directors themselves, through their technical comments and questions addressed to the staff during the Board meetings.

24. **In interviews, the Swiss authorities suggested that more could and should be done, within the Fund, to induce the various units of the organization to take an integrated approach to macro-financial issues**. The authorities noted that, still to a large extent, the institution suffers from a "silo" mentality, which keeps the staff from connecting the dots effectively across the institution. They noted as well that, while ample knowledge and resources are available within the Fund, the nature of the relationships between the units may be such as to hinder the staff's ability to shape a holistic view of the problems under discussion.

25. **Regarding cross-border spillover effects and risks of contagion, the 2007 Article IV report devoted specific attention to the issue**, and recognized that they could take different forms, although it was unclear what the repercussions could be for the Swiss banks. The origin of such risks was mainly traced to carry trade activities, and in particular to the risks of downturn caused by the high volatility of foreign exchange markets. The attempt by the Fund to identify possible channels of spillovers and contagion in the case of

Switzerland was pretty much on the mark. The risk factors and the vulnerabilities identified were the most reasonable ones. In early 2007, the staff gave signals of increasing concern about the exposure of the Swiss large banks (see below). As also recognized by the Swiss authorities in interviews, it is not realistic to expect that the staff could have inferred the timing and the extent of the liquidity freeze resulting from the U.S. contagion. On a general level, the authorities indicated that a major source of value-added from Fund surveillance rests on the identification and analysis of potential spillover effects and risks of contagion. They noted that the Fund's stress testing exercises, in particular, could become more effective through a better identification of cross-border financial linkages and risk contagion mechanisms.

26. **The authorities also emphasized that domestic policymakers stand to benefit greatly from the Fund's broad knowledge of other countries' experience with specific policy issues**, which the Fund can bring to bear in the discussions. This, in the authorities' view, can significantly contribute to expanding the perspective of national policymakers on critical problems, and may enhance the options available to them to cope with given challenges.

27. **The Staff gave great attention to the consequences of an abrupt resolution of global imbalances**. Other **low-probability/high-cost events** were contemplated (including, for instance, non-economic external shocks impinging on growth and the Swiss franc exchange rate), although they were not subjected to specific analyses. Risks relating to the international exposure of the domestic financial system did not come to the attention of the staff until well into 2007, when the latest FSAP was completed in May 2007.[2] A higher frequency assessment of the financial sector might have sounded an earlier alert on underlying vulnerabilities and potentially growing challenges. Also, a more systematic integration of multilateral surveillance and external inputs into bilateral surveillance, as discussed above, would have given the staff greater latitude to identify potentially damaging events.

28. **The Fund was not oblivious to the vulnerabilities that were emerging within the financial sector, especially those relating to the highly leveraged domestic banks**. In March 2007, the staff informed management that "the two large banks, UBS and Credit Suisse Group, were highly leveraged and had significant operations in new market segments such as the credit derivatives market (among the top ten globally) and with hedge funds. In view of these exposures and the potential speed with which market reversals can occur—as seen in recent financial market turbulence—the FSAP update mission recommended that supervision of these banks become more proactive."[3] In an internal document prepared for a

[2] Internal Fund documents indicate that the risks of the two large banks received particular attention from the staff, and were the subject of sensitive discussions with the Swiss authorities.

[3] Office Memorandum to the Managing Director, March 19, 2007.

meeting with the Swiss authorities, the staff indicated as one of the key issues for discussion that "[t]he financial sector is performing well but requires close monitoring. Healthy balance sheets and profits may be breeding complacency, and the authorities should closely monitor the two large banks' hedge fund and derivatives exposures, and require regular strong stress testing to stay alert on any potential downside risks"[4]

29. **Stress tests and scenario analysis, however, underestimated the impact of various shocks on the banks**. They indicated that the Swiss banking sector was resilient to most relevant macroeconomic shocks, and that the effect of the worst-case international scenario wiped out the sector's profits but its impact on the sector's capitalization level was negligible (see Annex 2 (iii)).

30. **Progress in the scope and depth of the Fund's financial sector surveillance is particularly evident in the assessment of financial supervisory capacity and regulatory adequacy.** In the case of Switzerland, whereas until 2006 references in the staff reports and Executive Directors' statements to the performance of the country supervisory authorities and the effectiveness of their regulatory framework were rather general and superficial, in 2007 they began to receive much greater attention. The 2007 FSAP, in particular, provided to date the broadest and deepest analysis in this area, identifying strengths and weaknesses to be addressed. The Article IV discussion reflected the growing interest of the Board in these issues. In addition, consideration of the degree of the country's cooperation with the Fund recommendations became more intensive and scrupulous. Finally, attention was devoted by the Fund to supervisory and regulatory adequacy in respect of the activities of the Swiss large banks, in particular in connection with the Fund's heightened concern with their business risk prospects.

31. **The FSAP led the staff to conclude that there was scope to strengthen the draft law establishing the Financial Market Supervisory Authority (FINMA)**, the agency that would unify banking, insurance, securities, and anti-money laundering supervision. The FINMA would become operational in 2008. The staff felt that the draft law could be strengthened through additional budgetary and policy independence, and by granting the supervisory office independent authority to impose civil money penalties. The staff also recommended dealing with concerns about the costs of regulation in the market guidelines, rather than explicitly in the law itself, as a way to avoid regulatory capture—a risk that was seen with less concern by the authorities.

32. **On the implementation of the Basel II capital adequacy rule, the Fund saw that additional efforts were needed to bolster liquidity supervision**. The two large banks were adequately capitalized, even though stress tests would push the Basel II ratio for one bank to the regulated minimum. The Fund recommended that supervisors keep an ongoing dialogue

[4] Brief for meeting with a member of the Governing Board of the Swiss National Bank, March 21, 2007.

with the banks on Basel II, and that internal risk-evaluation models be continuously evaluated given the banks' high risk profile and the risks that were not evaluated by the stress tests including systemic events in hedge funds and the derivatives markets.

C. Communication

33. **From a communication standpoint, the recommendations from the Fund staff to the Swiss authorities were effective in terms of carefully reflecting the conclusions drawn from the analysis**. This was confirmed by the authorities in the interviews for this study. The staff did not backtrack from underscoring the limitations observed in the way the authorities had carried out their own risk analysis, nor did it avoid warning the authorities of the perceived risks being run by the two large banks, including contagion from external shocks. In this regard, the FSAP recommended that the authorities strengthen the regulatory and supervisory framework and, in particular, enhance the supervision of the two large banks, including reviewing their capital adequacy and tightening the monitoring of their liquidity risks (see Annex 2 (iv)). The staff did not hide the potentially damaging consequences for the Swiss economy, and for the reputation of Switzerland as an international financial center, that could derive from the materialization of the perceived risks.

34. **As to the recommendations from the Executive Board, two aspects should be noted.** First, the indications from the Executive Board to the Swiss authorities as summarized in the Chair's Summings Up did not seem to add much to the views expressed by the staff in the Article IV reports. This aspect calls into question the long-dated issue on the adequacy of the current format of the Article IV consultation, in particular concerning the contribution of the Executive Board to the effectiveness of the consultation exercise. Such contribution appears to be, generally, belated because of the long lapse of time between the ending of the staff mission to the country—which is when the main outcomes of the staff work are reported to the authorities—and the Executive Board's discussion, which formally concludes the consultation. Also, the Chair's Summings Up often fail to reflect the wealth, breadth, and depth of the statements from individual Executive Directors to the Board.

35. **During the Board discussions on Switzerland, preceding the crisis, in the face of the Board's prevailing confidence in the resilience of the Swiss financial sector, some Executive Directors raised concerns on possible risk factors** and asked questions on issues that, in their view, had not been fully investigated by the staff; they, therefore, called for greater consideration of such risks. Yet, these observations remained isolated elements of the discussion, and did not become part of the Fund's official communication to the Swiss authorities. The Chair's Summings Up, on the contrary, did not reflect any of the problematic points made by the Executive Directors, and expressed an overall reassuring sentiment. In fact, in the Summing Up for the 2006 Article IV consultation, the paragraph on the financial sector replicated almost literally the one written the year earlier. The current format of the consultations may deprive surveillance of some potentially relevant elements of policy

analysis coming from the Board, despite the very considerable resources devoted by the Executive Directors to Article IV consultation discussions.

36. **Regarding the quality of the message to the country—in particular its timeliness—the Swiss case is best illustrative of a serious limitation of the Fund's current bilateral surveillance mechanism, based on periodic (discontinuous) consultations.** The 2007 Article IV consultation with Switzerland happened to fall early in the year, and was completed in April. As a result, the Fund's concerns on the large banks' risks could be discussed with the authorities a few months ahead of the crisis outbreak. On the one hand, this happened to be a good timing since there was a window of opportunity to potentially act on the situation. On the other hand, if the consultation had been conducted a few months earlier, the same vulnerabilities might have been detected and discussed with the authorities much ahead of time. The point is that, absent a continuous mechanism of surveillance, the timeliness of the Fund message is bound to be randomly dependent on the timing of the annual consultation in the face of the necessities raised by real world events. Presumably, a different timing of the Article IV Consultation-FSAP with Switzerland would have implied a different timing for bringing the bank risk issue to the authorities' attention.

37. **There are other questions on the effectiveness of the Fund message from the Swiss case.** The Fund staff had engaged the Swiss authorities on the risk exposures of the large banks while preparing the FSAP: would the Article IV consultation still have picked up the issue even in the absence of the FSAP? What if the FSAP had been run a year earlier or a year later: would the staff still have brought the issue to the authorities' attention? The experiences with other advanced countries raise reasonable doubts. Finally, if the Fund staff had hypothetically detected those risks earlier on, ahead of the Article IV consultation calendar, would there have been channels for the Fund to discuss them with the authorities even outside of the periodic consultations and assessments?

38. **Regarding the forcefulness of the Fund's message to Switzerland on the bank risk issue, the Fund's voice was feeble**. In the 2007 Article IV report, the Fund's basic messages on this were: "Supervisors need to keep an ongoing dialogue with the banks on Basel II, and internal models need to be continuously evaluated given their high unweighted leverage ratios, and other risks not evaluated by the stress tests including systemic events in hedge funds and the derivatives markets" and "The FSAP update found that the financial sector is performing well, but risks persist. While stress testing indicates that the financial sector is generally resilient to shocks, bank operations are increasingly complex, involving exotic instruments and high-leveraged counterparties."

39. **The risks were identified, but the message did not express any serious concerns:** "while stress testing indicates that the financial sector is generally resilient to shocks, bank operations are increasingly complex, involving exotic instruments and high-leveraged counterparties (...) The main downside risk is that healthy balance sheets and profits may be building a degree of complacency, creating a vulnerability to increased volatility or shocks."

40. **As regards the coherence and clarity of the Fund message, inconsistencies were observed in the staff reports**. Comparing the 2007 Article IV report with the same-year FSAP report shows that the former took a more upbeat tone and tended to downplay the concerns with system-wide financial sector risks expressed in the FSSA. Moreover, the Article IV report did not make any reference to the FSAP's recommendation to strengthen the supervision of the two large banks, in particular on their liquidity risk. Such asymmetries may reflect existing difficulties across units within the Fund to integrate financial sector and macroeconomic analyses, or they might be suggestive of failures to reconcile different views at the staff level. Both problems may cause inconsistencies in the Fund communication, blur the content of the Fund's message to the country, and ultimately impair the effectiveness of surveillance.

41. **In 2006, the staff pointed to vulnerabilities of the Swiss large banks to a potential abrupt unwinding of the global imbalances, but did not elaborate on their possible implications.** At the Board discussion, some Executive Directors demanded some deeper analysis of the problems and risks detected by the staff, and expressed concern. The staff answered that the analysis required a complicated exercise, which would be left for the FSAP (planned for the end of 2006) to look at in detail. There were talks with the country's supervisors and the central bank, and it was decided that they would prepare some macro scenarios that could simulate the possible effects of a disorderly unwinding of global imbalances. The staff said that the earlier full FSAP had considered this issue, and the findings were that the banking system was quite resilient and well supervised. The final message to the authorities did not incorporate the concern expressed by some Executive Directors. It therefore failed to deliver what might have been a useful warning signal. This episode reflects a more general limitation of the current consultation format, whereby useful inputs from the Board come at a stage of the exercise that is too late for them to be relevant both to the analysis and the message that draws on it.

D. COUNTRY RESPONSE

42. **In interviews, the Swiss authorities particularly appreciated the Fund's role as an external advisor providing an independent view on the economy of the country**, which they valued as a very useful contribution to the domestic policy debate, and as way to improve the quality of their policies. The authorities also indicated that, when they and the Fund agree on policy options, the considerable weight that the Fund carries in the eyes of the Swiss public opinion adds strength to the government's policy propositions in the context of the national economic policy dialogue. On public occasions, the authorities have commended the surveillance of the Fund, and have stressed that the role of the Fund's member countries—through their cooperation with the Fund and their implementation of Fund recommendations—is critical to making surveillance effective globally.

43. **Consistent with this view, the Swiss authorities have always taken seriously the inputs from the Fund's bilateral surveillance**. They have scrupulously considered the

Fund's advice and carefully pointed to areas of agreement and disagreement with the Fund on specific policy recommendations. In the financial sector area, the Fund and the Swiss authorities have broadly agreed on the most important issues on the table during the period under consideration by this study. It also appears that, with only few exceptions, the authorities have implemented policies and reform measures that were supported by the Fund, in particular those concerning financial regulation and supervision (see Annex 2 (v)). The 2007 FSAP report confirms a generally satisfactory implementation of the 2001 FSAP recommendations. In 2007, the authorities also accepted the Fund's advice on financial sector risks and vulnerabilities.

44. **It was noted above that the Fund's voice on the crisis impact on the Swiss large banks was feeble.** At the same time, as the authorities recognized in interviews, the prevailing mood at that point in time was one where nobody wanted to take the chance "of killing the chicken that lays the golden eggs," referring to the huge and seemingly unshakable contribution of the banking system to domestic wealth and fiscal revenue. In that context, moreover, there was a widespread belief (within the Fund and elsewhere) that the then dominating model of finance would ensure an optimal allocation of risks to institutions that were best placed to handle them safely. As a result, the policy environment was less than responsive to signals alerting them to potential risks. In consultations between the Fund staff and the Swiss authorities, in February-March 2007, the staff noted that the authorities were not concerned by the sharp drop in Credit Suisse's capital adequacy ratios, and that they did not foresee cliff effects, to the point of even appearing "to be indifferent."[5] As one very high-ranking Swiss official recognized, complacency was building up regarding the banking system, that would leave Switzerland exposed to a "small country/big bank problem" that would be very hard to ring-fence.

IV. Assessment of the Fund's Performance: Summary and Conclusion

45. **In light of the significant role of the Swiss banking system in the global financial markets, the Fund had long been sensitive to risks to the financial system.** In particular, they considered the risks deriving from a disorderly unwinding of the international macroeconomic imbalances—although the staff did not go far enough in analyzing their potential impact on the domestic economy. In 2007, the Fund recognized that the Swiss financial system was under stress. The Fund noted with concern the increasing international exposure of the Swiss large banks, and the excessively rapid expansion of their trading portfolios and securitization activities. The Fund saw a need for supervisors to keep an ongoing dialogue with the banks on Basel II, and was aware that the large banks were running high (unweighted) leverage ratios and expressed concern about risks that had not

[5] The authorities replied that they were not complacent, and that Credit Suisse had never breached the intervention margin. They saw, however, the market downturn as an outlier. (From internal staff documents on the 2007 Article IV Consultation with Switzerland, February 24 to March 5, 2007.)

been evaluated by the stress tests, including systemic events in hedge funds and the derivatives markets. While recognizing the efforts of the national authorities to strengthen their financial supervision system, the Fund pointed out that supervision relied too much on external auditors and insufficiently on on-site inspections, noting the weak sanctioning power of the supervisory authorities and their still incomplete independence. However, the Fund detected these vulnerabilities with some delay and only partially. The Fund underestimated the risks associated with the exposure of the Swiss large banks to the securitized U.S. subprime mortgage market. The Fund also underestimated the risk of fast rising interest rates in the interbank markets, and the potential repercussions for the Swiss banks.

46. **The 2007 FSAP added an important dimension to the Fund's bilateral surveillance with Switzerland.** In spite of the FSAP, however, the integration of financial sector surveillance with macroeconomic analysis remained wanting until after the crisis.

47. **The Fund's communication with the Swiss authorities during the observed period reveals two gaps in the management of information within the organization**, which may have had negative implications for the quality of surveillance. One of the gaps involves the relations across the units of the organization, whereby different views drawing on analyses run by different staff teams may not find sufficient coherence internally, thereby resulting in inconsistent Fund messages to the authorities. In the case of Switzerland, the findings of the 2007 FSAP, which raised warnings about financial sector risks and vulnerabilities, were not adequately reflected in the same-year Article IV report, especially in so far as the overall tone of the Fund message to the authorities is concerned.

48. **The other gap refers to the lack of relevance of the Executive Board discussions to bilateral surveillance**. In Article IV consultations, as Board discussions take place only after the staff has completed its report and conveyed its views to the authorities, important remarks from individual Executive Directors on critical issues come at a stage that is too late to solicit deeper analysis from the staff. Many of such remarks do not find their way into the Chair's Summings Up and, thus, fail to shape the overall communication of the Fund to the authorities. As a result, some critical views on sensitive issues may not reach the authorities at the conclusion of the consultation. This happened in the case of Switzerland.

V. Recommendations and Concluding Remarks

49. **A few recommendations can be drawn from the evaluation of bilateral surveillance in Switzerland**. There is no question, for instance, that broadening and deepening the coverage of cross-border spillover effects and contagion risks, macro-financial linkages, and assessment of regulatory and supervisory regimes, or enhancing the quality of Fund communication, would all make bilateral surveillance more effective in helping national policymakers anticipate critical events.

50. **Making surveillance, especially of the financial sector, a more continuous and flexible exercise would strengthen the Fund's performance**. Complementing the

Article IV consultations with higher-frequency checks by the Fund on systemically relevant economies, and activating (even on an ad-hoc basis) effective and timely consultation procedures with the authorities on specific problem issues, whenever warning signals arise, could be a way to overcome the inevitable discontinuity of the Article IV Consultation. Of course, the activation should work both ways, and could be started on the initiative of the staff or the country authorities as soon as one side sees problems potentially to emerge.

51. **The contribution of the FSAP to the quality of surveillance is very important**. But with a view to adding to the continuity and flexibility of surveillance, there is a need to integrate the FSAP with more frequent and, if necessary, ad-hoc and focused updates, depending on country economic and financial developments and circumstances. The Article IV Consultation process was designed when the financial dimension of economies was small and the economic developments took place at a slower pace: macroeconomic stability requires gradual intervention; financial stability requires prompt corrective action.[6] Fund surveillance should be reformed to take this fundamental difference into account.

52. **Integrating financial sector analysis with traditional (macroeconomic and structural) surveillance has required a huge effort from the Fund since the Asian crisis of the late nineties.** Significant progress has been accomplished, but formidable challenges remain. Difficulties persist within the Fund in the way area and functional departments (and, in general, staff with different expertise on finance and macroeconomics) mutually interact on surveillance activities, integrate their knowledge and expertise, and try to understand each other. At the root of their difficulties rests the most fundamental problem of all, without whose resolution it is hard to expect that much progress can be made: the inadequacy of mainstream macroeconomic theory to accommodate financial phenomena, an inadequacy that has been well illustrated in some recent commentaries.[7] While a complete model to analyze macro-financial interactions will have to wait for new theoretical developments, the Fund can perhaps offer member countries tools to assist in this analysis, much like it did in the fifties when its economists developed the IMF Monetary Model, which integrated monetary, income, and balance of payments analysis.[8] A step in this direction would be encouraging authorities to adopt the balance sheet approach.[9]

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[6] See Perotti, E. (2010), "The Governance of Macro-Prudential Taxation," VoxEu, April 7.

[7] See Buiter, W. (2009), "The Unfortunate Uselessness of Most 'State of the Art' Academic Monetary Economics," VoxEu, March 6; Spaventa, L (2009), "Economists and Economics: What Does the Crisis Tell Us?," CEPR Policy Insight No. 38, August; Laijonhufvud, A. (2009), "Macroeconomics and the Crisis: A Personal Appraisal," CEPR Policy Insight No. 41, November.

8 See Polak, J. J. (1997), "The IMF Monetary Model at Forty," IMF Working Paper, WP/97/49, April 1997.

[9] See Allen, M., C. Rosenberg, C. Keller, B. Setser, and N. Roubini, (2002), *A Balance Sheet Approach to Financial Crisis*, IMF Working Paper, WP/02/210, December.

ANNEX 1. KEY PARAMETERS FOR CONDUCTING THE EVALUATION

The following parameters were used to read through and analyze the selected documents, with a view specifically to assessing the Fund's performance against the questions and the focus issues identified in Section I above.

Information

Availability of updated information on the financial sector: This indicator refers to country information and analyses produced by the Fund during the period under study. When were the latest Article IV Consultation and FSAP reports issued prior to the crisis? What was the frequency of consultations and assessments? Where there financial sector assessment updates? Was the frequency adequate for the Fund to catch and follow the critical events of the crisis and its repercussions on the country under surveillance, and to provide useful and timely advice to the authorities? Have there been informal exchanges between the staff and the authorities in anticipation of, or during, the crisis?

Inputs from multilateral surveillance: This indicator seeks to capture the extent to which bilateral surveillance integrates elements from multilateral (global or regional) surveillance. This is especially important at a time of increasing interconnections among national economic and financial systems. In some instances, domestic problems may originate or may be triggered by outside events, and should thus be identified and discussed in bilateral consultation reports. In other cases, the multilateral (global or regional) analysis may point to problems that might be worth investigating at the country level for surveillance purposes. During the period under study, was the country analysis under bilateral surveillance explicitly placed in the proper global, or regional, economic and financial context? Was the country considered in the ways its economies affects and is affected by other economies and markets? Are there references in the staff reports to financial issues raised by the Fund in the context of its multilateral surveillance activity (*WEO, REO, GFSR*)? Were these issues discussed by the Executive Board at the meetings on Article IV consultations, in terms of their relevance for the country under discussion?

Inputs from external analyses (from public and/or private institutions): This indicator refers to information (studies, reports, speeches) produced by institutions other than the Fund on (domestic or international) financial issues that could, or should, have received attention from the Fund staff prior to the crisis. Did the staff make use of analyses developed outside of the Fund in the context of country surveillance? Did staff reports make reference to external sources? Were there external views that the staff could have considered, which could add to Fund internal discussions, prompt analyses, or offer alternative perspectives, and would prove useful to assess the risks and vulnerabilities of the country under surveillance?

Analysis

Macro-financial linkages and integration of financial sector analysis: This indicator seeks to reflect the extent to which surveillance looks at how financial phenomena interact with the real economy, potentially generating vulnerabilities and risks to be identified and monitored. Do staff reports integrate financial stability and macroeconomic issues and analyses? Do they identify the channels of interactions between the macroeconomy and the financial sector? Do they integrate the FSAP findings into Article IV discussions? Do they attempt to evaluate the aggregate *implications* of the identified financial risk factors? Do they see the financial sector as potentially originating or amplifying shock to the economy? Do they assess the role of the financial sector in supporting growth?

Cross-border spillover effects and risks of contagion: This indicator reflects the staff's attention to *international*, economic and financial, interconnections potentially causing transmission of shocks and contagion effects. Were these issues analyzed by the staff and discussed with the authorities? Were cross-border linkages identified, which could act as transmission channels of shocks and contagion effects to and from the national economy? In a broader sense, this indicator is here also used to gauge if surveillance was exploited as an opportunity to improve country access to, and sharing of, cross-country knowledge and policy experience.

Identification of low-probability/high-cost events: This indicator aims to ascertain whether the policy dialogue between the staff and the authorities in the period under observation focused attention on tail events. To what extent low-probability events with potentially seriously damaging implications (even though unquantifiable) were identified in the staff reports, or were *discussed* with the authorities? Did the policy dialogue with the authorities lead to evaluate such risks, and to consider measures or action plans to guard against worst-case scenarios? Were relevant "what if" questions asked by the staff to the authorities?

Assessment of financial sector supervisory capacity and regulatory adequacy: This is typically one of the main subjects of the FSAP. FSAPs, however, have a low frequency. The question is *whether* the staff was able to draw updated information on the regulatory and supervisory regime even in the absence of an FSAP.

For all the above analytical indicators, attention will be devoted to the contributions provided to Fund *analysis* from members of the Executive Board, typically in the form of remarks and questions raised to the staff during Board meetings on Article IV Consultation discussions. Were these contributions noted? Were the questions raised by Board members answered by the staff? Did questions prod the staff to further elaborate on their analysis? Did Board members' remarks and questions influence the Board discussions?

Communication

Recommendations from the Executive Board: Did the Board take a position on financial issues, especially where *major* risks and vulnerabilities had been detected? Was its position delivered to the country authorities? Did the Board add any significant views or advice to those expressed by the staff?

Recommendations from the staff: Did the staff issue recommendations on financial problems, especially *where* it had detected major risks and vulnerabilities? Were recommendations consistent with the analysis of the country situation, and commensurate to the identified problems?

Quality of the Fund message to the country: Was the Fund message clear, candid, coherent, and effective? Did the message effectively reflect inputs from the Board discussions? In cases where important critical remarks were expressed by individual Executive Directors at Board meetings, *were* these remarks conveyed to the authorities? Did they become part of the Board's message to the authorities? Were the messages from the Board (reflected in the Chair's Summings Up) useful to the authorities, in addition to the staff reports?

Country Response

Country cooperation with Fund recommendations: This indicator aims broadly to reflect the relationship of the member country (its cooperation) with the Fund, the strength of which clearly lies at the heart of *the* effectiveness of surveillance. Did the country authorities heed the Fund's advice during to the period under study? Did the country have a tradition of good cooperation with the Fund? Were there areas of major disagreement between the authorities and the staff? Did the authorities commit to a policy response based on, or consistent with, the Fund's recommendations? Is it the case that, had the Fund been able to anticipate critical events, this would have prompted the authorities to undertake a consistent policy response?

ANNEX 2. REFERENCED QUOTES

(i) BIS, Committee on the Global Financial System CGFS Papers, No 26, Housing finance in the global financial market January 2006, pp. 32–33:

"The rapid growth of sub-prime markets in some countries raises the issue of the extent to which a highly competitive housing finance environment has led to increased risk-taking (...) The rapid growth of sub-prime lending in new markets, combined with the introduction of new and complex loan types, could raise some issues for financial markets. One question is whether lenders and investors are able to assess accurately the risks of this lending, given a lack of previous experience. Another question is whether the risk of contagion from larger domestic housing finance markets via bond markets has increased. As investors create diversified global housing finance-based portfolios, it is likely to become less clear who ultimately bears which risks and whether new risk concentrations are emerging. For central banks, regulators and policymakers more broadly, assessing linkages as well as potential build-ups of risk will become more challenging. It is possible, though unlikely, that these risks, if not checked by prudent oversight, could offset the diversification benefits from having access to a broader set of mortgage bond markets."

(ii) BIS, 2005 Annual Report, p. 118:

"Along with the many benefits deriving from recent innovations come potential risks, particularly given the early stage of market development. Two areas of concern stand out: product complexity and market functioning under stress. First, structured credit products are very complex securities and the risks involved might not be fully appreciated by all market participants. (...) Second, it remains to be seen how the CDS and CDO markets would handle a string of credit blow-ups or a sharp turn in the credit cycle. The strong credit conditions that have fostered the development of these markets may not continue into the future."

(iii) 2007 Financial System Stability Assessment Update, pp. 11–14:

"Stress tests and scenario analysis indicate that the Swiss banking sector is resilient to the most relevant macroeconomic shocks (...) The tests were conducted in a top-down exercise on the whole banking sector, carried out by the SNB, and bottom-up stress tests, carried out by the two large banks using their internal models. Top-down stress tests indicated that the effect of the international scenario on the banking sector was the most significant. (...) The international scenario wiped out the sector's profits but its effect on the sector's capitalization level was negligible since the banking sector suffered only minor losses. Sensitivity analysis to evaluate banks' resiliency to market risk in view of the high share of fixed-rate mortgages indicate that banks continue to be adequately hedged against such a shock.

Bottom-up results from stress tests performed by the two large banks also show their resiliency to stress presented in the international scenario. Overall, the results indicate that while the stress event has a significant effect on the two banks (as indicated by the large effect on excess capital), the two banks remain above the regulatory minimum for capital (…)

Liquidity stress tests indicate that the two banks are highly liquid. Stress tests incorporating a combined scenario of asset illiquidity and liability withdrawals were also conducted by the two large banks. The results indicate that the two banks are resilient to a liquidity shock (…)"

(iv) 2007 Financial System Stability Assessment Update:

"The SFBC should review in depth the capital adequacy of the two large banks and pillar II capital requirements in the context of Basel II implementation. Given the complex nature of these two institutions and their systemic importance, care will be needed to understand and evaluate their complex models and risk exposures and management. Pillar II capital requirements should reflect both institution-specific and systemic risks.

Strengthen the regulatory and supervisory framework: in the medium term, strengthen the resources and expertise of the supervisors, that is continue to increase the SFBC's staff resources and expertise given the global nature of the two large banks and the systemic risks they pose. Enhance the supervision of the two large banks:

(a) Review in depth the capital adequacy of the two large banks as part of Basel II implementation (…)

(b) Strengthen supervision of the two large banks' liquidity risks to include advanced analysis of potential risks such as contingency funding plans, disruptions in cross-border funding, and incremental default risk.

(c) Conduct focused audits to evaluate the two banks' risk management vis-à-vis hedge funds.

(d) Further improve oversight of bank external auditors."

(v) 2007 FSAP—Factual Update: Basel Core Principles for Effective Banking Supervision, pp. 5–12:

"The SFBC has addressed most of the areas in the Recommended Action Plan—Basel Core Principles" from the 2001 FSAP and the mission commends the SFBC for its efforts (…)

As per the earlier FSAP recommendation, the SFBC developed an early warning system for small- and medium-sized banks, which was recently implemented.

One of the major changes since the 2001 FSAP has been the addition of the Audit Firms Department, which evaluates external auditors' work performed in the small and medium sized banks. This has been working well (...)

Since the last FSAP, on-site visits by host supervisors have been conducted in Switzerland by seven different regulators (...)

Since the earlier FSAP, the SFBC has issued circulars addressing a number of prudential areas such corporate governance, internal controls, large bank supervision, supervisory reporting, audit, audit companies, anti-money laundering and self-regulation. Swiss banks will be subject to modified versions of Basel II (...)

As per the earlier FSAP recommendation, the SFBC developed an early warning system for small- and medium-sized banks, which was recently implemented (...)"

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