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IMF Concerns and Country Perspectives

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Foreword

Global international reserves grew rapidly over the last decade. In some countries reserves were accumulated for precautionary reasons to insure against shocks, including those from volatile international capital flows, and to preserve financial stability. In other countries, reserves grew as a by-product of the pursuit of policy objectives related to the exchange rate and competitiveness, or from the desire to save the windfall from rising commodity prices and to foster intergenerational equity.

In 2009–10, IMF Management advanced the argument that excessive reserve accumulation was jeopardizing the stability of the international monetary system. This evaluation traces the evolution of this thinking, in particular how it relates to the Fund's longer-standing concern about the risks from global imbalances, and discusses reasons for the shift towards stressing the risks posed by excessive reserve accumulation. It assesses the conceptual framework behind this approach, presents views of country authorities and academics, and discusses why the Fund's arguments have not resonated with much of the IMF's membership. The evaluation also assesses the conceptual underpinnings and quality of the advice on reserve adequacy in the context of bilateral surveillance.

The report argues that the IMF's emphasis on reserve accumulation as a risk for the international monetary system was not helpful in that it stressed the symptom of problems rather than the underlying causes, and thus led to a loss of clarity in discussing options to reduce such risks. The report also notes that a new reserve adequacy metric that was introduced in 2011 and that defines upper and lower bounds for precautionary reserves was received with skepticism by country officials, who worried that it could become a rigid benchmark to limit reserve accumulation at a time of heightened uncertainty in the global economy.

With respect to the IMF's assessment and advice on reserve adequacy in the context of bilateral surveillance, the evaluation argues that no single indicator or model can capture the complex set of factors that determine the adequacy of reserves in an individual country, and that reserve adequacy indicators should be applied flexibly and take into account the multiple trade-offs involved in decisions on reserve accumulation and reserve adequacy. Prior to the recent global financial crisis, assessments and advice on reserve adequacy focused almost exclusively on emerging markets. Going forward, advice should also, when necessary, take into account the concerns in advanced economies that have arisen since the financial crisis.

We hope that the analysis presented in this report will contribute to a better understanding of how international reserves fit into bilateral and multilateral surveillance by the IMF.

Moises J. Schwartz
Director
Independent Evaluation Office

International Reserves: IMF Concerns and Country Perspectives

This report was prepared by an IEO team led by Hans Genberg. The IEO team included Angana Banerji, Sanjay Dhar, Charan Singh, Andrew Martinez, Chris Monasterski, and Roxana Pedraglio. The evaluation benefited from discussions with participants at workshops held in Berlin—organized jointly with the Federal Ministry for Economic Cooperation and Development (BMZ)—Hong Kong SAR, and Washington, and from comments by colleagues at the IEO. Arun Bhatnagar, Annette Canizares, and Mari Lantin provided administrative assistance. Rachel Weaving, Roxana Pedraglio, and Esha Ray provided editorial and production management assistance. The report was approved by Moises Schwartz.

A preliminary draft of this report was discussed at a workshop in Washington in June 2012 with the participation of Mario Blejer, Jack Boorman, Jeffrey Frankel, José De Gregorio, Karen Johnson, Malcolm Knight, Jin Liqun, Yaga Venugopal Reddy, and Shinji Takagi. This version has benefited from their comments and suggestions. However, the final judgments are the responsibility of the IEO alone.

Abbreviations

BIS	Bank for International Settlements
BSA	balance sheet approach
COFER	Currency Composition of Official Foreign Exchange Reserves
ECB	European Central Bank
FCL	Flexible Credit Line
G-20	a grouping composed of major industrial countries and systemically important developing and emerging market countries
GFSR	*Global Financial Stability Report*
IIP	International Investment Position
IMFC	International Monetary and Financial Committee
Management	Managing Director, First Deputy Managing Director, and three Deputy Managing Directors
MAP	Mutual Assessment Process
OECD	Organization for Economic Cooperation and Development
PCL	Precautionary Credit Line
SDDS	Special Data Dissemination Standard
Senior staff	IMF Department Directors, Deputy Directors, and Counsellors
SIP	selected issues papers
SRF	standardized report form
SWFs	sovereign wealth funds
WEO	*World Economic Outlook*

The following conventions are used in this publication:

- In tables, a blank cell or N/A indicates “not applicable,” ellipsis points (…) indicate “not available,” and 0 or 0.0 indicates “zero” or “negligible.” Minor discrepancies between sums of constituent figures and totals are due to rounding.
- An en dash (–) between years or months (for example, 2011–12 or January–June) indicates the years or months covered, including the beginning and ending years or months; a slash or virgule (/) between years or months (for example, 2011/12) indicates a fiscal or financial year, as does the abbreviation FY (for example, FY2012).
- “Billion” means a thousand million; “trillion” means a thousand billion.

As used in this publication, the term “country” does not in all cases refer to a territorial entity that is a state as understood by international law and practice. As used here, the term also covers some territorial entities that are not states but for which statistical data are maintained on a separate and independent basis.

Some of the documents cited and referenced in this report were not available to the public at the time of publication of this report. Under the current policy on public access to the IMF’s archives, some of these documents will become available 3 or 5 years after their issuance. They may be referenced as EBS/YY/NN and SM/YY/NN, where EBS and SM indicate the series and YY indicates the year of issue. Certain other types of documents may become available 20 years after their issuance. For further information, see www.imf.org/external/np/arc/eng/archive.htm.

Executive Summary

This evaluation focuses on two aspects of the IMF's concerns and advice related to international reserves. First, it examines the origin, rationale, and robustness of the IMF's concerns about the effects of excessive reserve accumulation on the stability of the international monetary system. Second, it assesses the conceptual underpinnings and quality of the advice on reserve adequacy in the context of bilateral surveillance.

In 2009, IMF Management and some senior staff began to emphasize the potential for large reserve accumulation to threaten the stability of the international monetary system. The evaluation argues that the focus on reserve accumulation as a risk for the international monetary system was not helpful in that it stressed the symptom of problems rather than the underlying causes, and it did not appear to be different from the longer-standing concerns about risks from global imbalances. Many country officials also felt that the IMF should have placed greater emphasis on other developments relating to the evolution and stability of the international monetary system—in particular the causes and consequences of fluctuations of global liquidity and international capital flows—that they considered to be of more pressing concern than reserves.

The evaluation found a broadly held view that Management's emphasis on excessive reserve accumulation was a response to frustration among some member countries with the IMF's inability to achieve exchange rate adjustments in Asian countries with persistently large current account surpluses.

In parallel with the aforementioned concerns about excessive reserve accumulation, IMF staff developed a new indicator to assess reserve adequacy in emerging market economies. The new indicator defined upper and lower bounds for precautionary reserves. A number of country officials became worried that its use would engender pressures on countries to reduce their reserves at a time of heightened uncertainty in the global economy.

With respect to reserve adequacy assessments in the context of bilateral surveillance, the evaluation centered on a sample of 43 economies that had accumulated the bulk of global reserves during the 2000–11 period. The country sample reflects the evaluation's focus on the possible implications of excess reserves. The evaluation concludes that the IMF's assessments and discussions of international reserves were often pro forma, emphasizing a few traditional indicators and insufficiently incorporating country-specific circumstances. It also identifies cases where the Fund's analysis and advice could have been improved, notably by embedding the assessment of reserve adequacy in a broader analysis of countries' internal and external stability.

The evaluation recommends that:

- Policy initiatives should target distortions and their causes rather than symptoms such as excessive reserves;
- Discussion of reserve accumulation in the multilateral context should be embedded in a comprehensive treatment of threats to global financial stability, one that is informed by developments in global liquidity and financial markets;
- Policy initiatives that are meant to deal with systemic externalities must take into account the relative size of countries' contributions to the externality;
- Reserve adequacy indicators should be applied flexibly and reflect country-specific circumstances; and
- The multiple trade-offs involved in decisions on reserve accumulation and reserve adequacy at the country level need to be recognized, and advice on reserves should be integrated with advice in related policy areas. Advice should not be directed only to emerging markets but, when necessary, take into account the concerns in advanced economies that have arisen since the financial crisis.

CHAPTER

I Introduction

1. Global international reserves grew rapidly over the last decade, mainly in emerging market economies (Figure 1).[1] In some countries reserves were accumulated for precautionary reasons to insure against shocks, including those from volatile international capital flows, and to preserve financial stability. In other countries, reserves grew as a by-product of the pursuit of policy objectives related to the exchange rate and competitiveness, or from a desire to save the windfall from rising commodity prices and to foster intergenerational equity. Since the global financial crisis, reserve accumulation has continued, and is now evident in some economies that have traditionally not emphasized the need for international reserves.

2. In its communiqué of October 2009 (IMF, 2009d), the International Monetary and Financial Committee (IMFC) instructed the IMF to help its members reduce the perceived need for excessive reserve accumulation. Earlier in the same year, IMF Management, supported by some staff analysis, had warned about the risks to the stability of the international monetary system that were posed by what it saw as excessive reserve accumulation. These warnings continued in Management speeches in 2010, and the IMFC in its communiqué of that year (IMF, 2010b) repeated its concerns about the growth of international reserves.

3. In parallel, IMF staff explored several key policy initiatives to enhance the stability of the international monetary system and national economies. New IMF financing facilities were introduced following the onset of the global crisis and were presented in part as an alternative to reserves being held for precautionary purposes (IMF, 2009f). Staff discussed mechanisms to limit countries' precautionary demand for reserves and enhance the supply of international reserve assets (IMF, 2010g), and a new indicator of reserve adequacy for emerging market economies was presented to the IMF's Executive Board for consideration (IMF, 2011b).

4. Management's warnings about excessive reserve accumulation as a threat to the international monetary system appeared at a time when authorities in many countries felt that the reserves they had accumulated before the crisis had served them well. Authorities in several countries, including some advanced economies, had started focusing anew on the role of reserves in crisis mitigation and management. Amid persistent uncertainties in global financial markets, these authorities were re-evaluating the costs and benefits of holding reserves. Thus the authorities in a number of member countries were skeptical about IMF Management concerns and the proposals and initiatives to slow reserve accumulation.

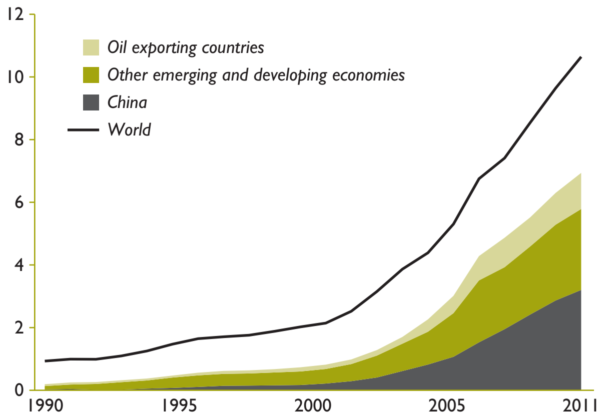
5. The analytical underpinnings of IMF Management's emphasis on the dangers of excessive reserves for the international monetary system were not persuasive. The arguments that were brought forward related mainly to current account imbalances and not to reserves per se. In addition, when seen in the context of the evolution of global financial markets, the size of official international reserves did not appear excessive. Hence, many authorities believe that in analyzing the international monetary system the IMF should have placed greater emphasis on more pressing issues than reserves, for example the growth in global liquidity and capital flow volatility.

6. Concerns have also been raised that the new reserve adequacy indicator ("reserve metric" hereafter), which defined upper and lower bounds for precautionary reserves, would be used to pressure countries to reduce reserves at a time of heightened global uncertainty, and

[1]International reserves are defined as "those external assets that are readily available to and controlled by monetary authorities for meeting balance of payments financing needs, for intervention in exchange markets to affect the currency exchange rate, and for other related purposes (such as maintaining confidence in the currency and the economy, and serving as a basis for foreign borrowing)." IMF (2009b), paragraph 6.64.

Figure 1. Global Reserves[1]

(In trillions of U.S. dollars)



Source: IMF, *International Financial Statistics*.
[1]Total reserves minus gold.

could influence how the IMF would approach its bilateral policy advice to members on reserves.

7. Against this background the evaluation focuses on two aspects of the IMF's concerns and advice related to international reserves. First, it examines the origin, rationale, and robustness of the concerns about the effects of excessive reserve accumulation on the stability of the international monetary system. Second, it assesses the conceptual underpinnings, nature, and quality of the Fund's advice on reserve adequacy in the context of bilateral surveillance.

8. Because the evaluation focuses on the possible implications of excessive reserves and not on the problems facing economies with insufficient reserves, the sample of countries covered in the evaluation consists principally of those that have accumulated large reserves. The period covered extends from 2000 to 2011.

9. The evaluation addresses the following questions:

(a) What was the nature of the IMF's concerns about reserve accumulation in the context of the international monetary system? What factors brought about these concerns, and were they well grounded from an analytical perspective?

(b) What were the conceptual underpinnings for the IMF's advice to its members on reserve adequacy? What was the nature of the advice provided, and how useful has it been for country authorities?

10. The remainder of this report is organized as follows. Chapter 2 describes the scope of the evaluation and the methods and sources used. Chapter 3 discusses the nature and evolution of IMF concerns about the relationship between excessive reserve accumulation and the international monetary system, and the role of the IMF's new reserve adequacy metric in this context. Chapter 4 describes and assesses the quality of the Fund's analysis and advice on reserves in the bilateral context. Chapter 5 summarizes the evaluation's main conclusions, provides recommendations on how to strengthen the Fund's work in this area, and draws some broader lessons of operational interest to the Fund.

CHAPTER

2 Evaluation Framework

A. Scope

11. The evaluation focuses on analysis and advice on reserves related to two of the IMF's major functions: promoting the stability of the international monetary system and promoting external stability in its member countries.

12. The evaluation covers the period from 2000 to 2011. The beginning corresponds to the start of a substantial buildup of reserves in a number of countries after the Asian financial crisis. The end of the period was chosen to elicit views on reserve accumulation resulting from experiences during the recent financial crisis and to incorporate perspectives on policy initiatives recently proposed by IMF staff on reserve adequacy (IMF, 2011b).

13. The evaluation of the IMF's bilateral advice is based on the experience of 43 economies representing emerging market and advanced countries (Annex 1). Given the concern about excessive reserve accumulation that motivated the evaluation, the sample includes most holders of large international reserves, as determined by the absolute size of reserves and the magnitude and speed of reserve accumulation during the evaluation period.[2,3] The sample also includes a number of other advanced and emerging market economies whose recent experience has a bearing on the IMF's policy advice on reserves. These include countries that have recently increased their reserves, and those that requested access to IMF financing in the aftermath of the crisis. Countries were also chosen to reflect a number of different economic characteristics considered relevant for the evaluation, and to provide for regional balance.

[2]The emphasis on large reserve holders implies that the evaluation's findings with regard to bilateral advice do not necessarily apply to all IMF members, in particular to countries where insufficient reserves have been a policy concern.

[3]Overall, countries in the sample account for a significant amount of global reserve levels and accumulation in the past decade, 89 percent of total global international reserves at end-2011, and 94 percent of the total growth of official reserves during 2008–11. The figures refer to official reserves excluding gold.

B. Methods and Sources

14. The evaluation relied on a broad range of evidence. The evaluation team used information collected during semi-structured interviews conducted on the basis of questionnaires to facilitate comparability and comprehensiveness. It solicited the views of IMF senior staff, former Management, Executive Board members, current and former senior country officials and policymakers, and representatives from other international organizations (Asian Development Bank, Bank for International Settlements (BIS), European Central Bank (ECB), Organization for Economic Cooperation and Development), financial markets, think tanks, and academia.[4]

15. The evaluation team reviewed a wide range of IMF internal and publicly available documents including: IMF Management and senior staff speeches and statements, IMF policy and strategy papers, IMFC communiqués, multilateral surveillance documents (in particular, the *World Economic Outlook (WEO)*, *Global Financial Stability Report (GFSR)*, and documents from the G-20 Mutual Assessment Process); and documents related to the conduct of bilateral surveillance, primarily Article IV country reports and selected issues papers. The analysis relies on triangulation, a common evaluation technique, to examine the information gathered from the different sources. It takes concurrence in findings as validation.

16. The evaluation utilized relevant findings of previous IEO evaluations, notably IEO (2003, 2005, 2007, and 2011). It was also informed by findings and recommendations of background papers prepared for the evaluation.[5]

[4]Altogether the evaluation benefited from the views of more than 300 interviewees.

[5]Aizenman and Genberg (2012), Banerji and Martinez (2012), and Dhar (2012).

CHAPTER

3 Reserves and the Stability of the International Monetary System

17. In 2009–10, IMF Management advanced the argument that excessive reserve accumulation was jeopardizing the stability of the international monetary system.[6] This chapter traces the evolution of this thinking, in particular how it relates to the Fund's longer-standing concerns about the risks from global imbalances, and discusses reasons for the shift towards stressing the risks posed by excessive reserve accumulation. It assesses the conceptual framework behind the Fund's new approach, presents views of country authorities and academics, and discusses why the Fund's recent arguments have not resonated with much of the IMF's membership.[7]

18. The chapter concludes that the IMF has not provided a compelling argument why "excessive" reserves constitute a problem for the international monetary system. Furthermore, the focus on excessive reserves has not provided a substantially different perspective on risks to the system than that already embodied in the longer-standing concerns about risks from global imbalances, and indeed it appears to be less convincing than those concerns. It also tends to distract from the analysis of and responses to other risks to global financial stability that are regarded as more serious by many officials who were interviewed by the evaluation team.

19. Moreover, since a new metric to determine reserve adequacy levels in emerging market economies became associated with the recent emphasis on the dangers of excessive reserve accumulation, a number of country officials became worried that the use of this metric would lead to pressures on countries to reduce their reserves at a time of heightened uncertainty in the global economy. Their reservations were based on the view that reserves provide multiple services, and that a single indicator cannot capture the complexities associated with their costs and benefits which are likely to be weighed differently by each country authority.

[6]This chapter is based primarily on Dhar (2012).

[7]The evaluation does not question whether current account imbalances posed risks for the international monetary system. It simply takes as given that the IMF argued that such risks existed.

A. Excessive Reserve Accumulation as a Concern

20. Through much of the past decade, the IMF was concerned about the impact of large and persistent current account imbalances in major economies and their consequences for the global economy. The main focus of this concern was the widening current account deficit in the United States and growing surpluses in East Asia, especially China. IMF policy advice centered on tightening U.S. fiscal policy; allowing the Chinese currency to appreciate through greater reliance on market forces in determining the exchange rate; promoting structural reforms in Japan and the euro area; and raising domestic spending in oil-producing countries.

21. In its analysis, the IMF did sometimes refer to excessive reserve accumulation. However, the Fund's analysis of what it saw as excessive reserves focused primarily on the domestic costs to the reserve accumulators and the multilateral repercussions of rising global imbalances, rather than on any inherent risk that excessive reserves might pose to the international monetary system. By 2009, Management began making this risk more explicit in a number of speeches (Box 1).[8] The evaluation team could only identify two papers (IMF,

[8]The concerns appeared to be mostly about reserve accumulation rather than the stock of reserves, although in some instances the subject is not clear. For example, perceived risks to the value of the U.S. dollar were expressed both in terms of a reduction in the rate of accumulation of reserves and as a consequence of changes in the currency composition of the existing stock. In this evaluation the term "accumulation" is generally used to refer to the flow and "reserves" is used to emphasize the stock.

Box 1. IMF Management and Senior Staff Speeches and Remarks on Reserve Accumulation and International Monetary Stability

"In the long run, it is difficult to both meet the liquidity needs of the global economy and maintain macroeconomic stability in the reserve issuing country, a problem known as the Triffin dilemma. In effect, to meet the world's ever-increasing demand for international reserves, reserve issuing countries such as the United States need to run external deficits that eventually undermine confidence in their currencies." (IMF, 2009g)

"Such self insurance is costly both at the country level—given the forgone domestic absorption and the complications for monetary and exchange rate policy—and at the international level, where countries wishing to build up their reserves have tended to generate persistent current account surpluses. There is a real danger that in the wake of the current crisis, there could be renewed widespread efforts to add to reserves. It is clear that if such efforts are pursued simultaneously, one result would be to dampen the global recovery." (IMF, 2009a)

"Turning to the issue of an international lender of last resort, it is clear that one of the weaknesses of the existing international monetary system has been reflected in the accumulation of record official international reserve holdings, at least in part in an effort at self-insurance against a sudden stop in capital flows or international financial market illiquidity. It is generally agreed that reserve holdings represent a relatively costly form of crisis insurance, while at the same time the buildup of such reserves potentially could make it more difficult for the country or countries providing reserve assets to achieve fiscal and external balance." (IMF, 2010h)

"However, the dollar's continued dominance as an international reserve asset means that the global demand for reserve assets can only be satisfied if the reserve issuer runs external deficits. And there is no automatic mechanism that would mitigate an ongoing reserve build-up by surplus countries. This problem has been aggravated in recent years as the demand for reserves rose sharply—reflecting in part the desire of many large emerging markets to self-insure against costly capital account crises. Of course, in many cases the reserve build-up has far exceeded any conceivable insurance function." (IMF, 2010f)

"During the last two years, we at the IMF have tried to change the international monetary system, and not only at the margin—I think it is more important than that—by creating the so-called flexible credit line and recently the precautionary credit line, to try to help countries to avoid building up reserves and, by this process, creating more imbalances." (IMF, 2010e)

"But many countries remain to be convinced that the global financial safety net is strong enough to deal with the next crisis—and the costly accumulation of reserves continues well in excess of precautionary needs." (IMF, 2011e)

2009e and 2010g)[9] that provide some analytical basis for this thinking. Discussions about excessive reserves as a possible threat to the international monetary system have not figured in policy debates either in academic or related forums.

22. As expressed in IMF (2010g), a key concern was that investment of large reserves in government debt instruments could lower the cost of government borrowing and undermine reserve currency issuers' incentive to undertake fiscal adjustment. Another was that reserve accumulation in the form of claims on a small number of reserve-currency countries would make it more difficult for these countries to achieve external balance, and that this could heighten debt sustainability concerns and undermine the store-of-value characteristic of reserve assets. Lower yields could also cause the underpricing of risk, encouraging excessive risk taking and asset price bubbles. A rapid switch out of a specific reserve asset could disrupt the smooth functioning of international payments, with large and disruptive effects on exchange rates and wealth.

23. Each of these concerns had been expressed previously by the IMF in its pre-crisis discussions of global imbalances. Thus, while the emphasis on the dangers of excess reserve accumulation represented a shift in discourse, the underlying concerns were not different from the perceived risks associated with global imbalances cited on many prior occasions. However, the change in emphasis had different policy implications which created concerns in the membership (see the section "C. Emphasis on Reserves and the IMF's New Reserve Adequacy Metric" below).

24. Interviewees—from among senior IMF staff and former Management, as well as country officials—considered that the views of influential shareholders regarding the IMF's inability to influence China's exchange rate policy in the last decade were an important factor explaining why concerns about the stability of the international monetary system were expressed in terms of excessive reserve accumulation. Some officials

[9] IMF (2010c) also discusses the issue briefly, but focuses principally on exchange rate regimes.

and staff members also suggested that the emphasis on excessive reserves could have been influenced by a desire to draw attention to the potential benefits of the IMF's new credit facilities, the Flexible Credit Line (FCL) and Precautionary Credit Line (PCL), as alternatives to building reserves.[10]

B. Focus on Reserves: A Perspective Too Narrow

25. International reserves remain small relative to the global stock of financial assets under private management, and the fear that they could be used to destabilize the international monetary system seems misplaced.[11] Moreover, international reserves are the assets of governments and central banks, which have an interest in maintaining both international monetary stability and the value of their official assets.[12] These features do not preclude the possibility that in attempting to safeguard the value of their assets, official reserve managers could adversely affect financial stability, for example by withdrawing assets from a troubled or downgraded commercial bank or by selling a specific security. But this is not a problem associated with excessive reserve accumulation as such, since it could occur even when reserves are not excessive. This suggests that the manner in which reserves are managed may be an appropriate topic for monitoring, including by the IMF.

26. From this perspective, officials interviewed for the evaluation thought that the nature of incentives facing the managers of the much larger stock of private financial assets warranted closer policy attention. There is considerable historical precedent and economic analysis to suggest that concerns about global financial stability should focus more closely on trends in private asset accumulation and capital flows.[13] Country officials and private sector representatives also noted that the IMF should be more attentive to the accumulation of the private foreign assets that are the consequence of persistent current account surpluses, and which from a historical perspective have arguably been more destabilizing than official reserve accumulation.

27. Concerns about reserve accumulation have arguably been overstated. IMF (2010g) illustrated the implications of reserve accumulation with an extrapolation showing that if reserves continued to grow more rapidly than U.S. GDP and if their composition did not change appreciably, then the debt-to-GDP ratio in the United States would eventually become unsustainably large. While such extrapolations may have a certain pedagogical value, they are fraught with difficulties related to the rigidity of the underlying assumptions, a fact acknowledged by the Fund. Indeed, it would seem that as reserves grow relative to what reasonably can be considered prudent for precautionary purposes, they are increasingly likely to be invested at the margin in assets other than U.S. government securities.

28. Although a common understanding of global liquidity remains elusive,[14] the perception of reserve accumulation becomes more nuanced if it is benchmarked against other relevant capital market indicators. Figure 2 illustrates that notwithstanding their growth, global reserves remain small relative to global banking assets which themselves have experienced a leverage-induced "global banking glut" (Shin, 2011). The size of reserves falls to insignificance if compared to the sum of bonds, equities, and bank assets. The right-hand panel of Figure 2 illustrates that while international reserves grew relative to the outstanding stock of government securities of the main reserve-currency economies until 2007, the ratio has since stabilized. Hence, the growth of official reserves does not seem outsized in relation to the growth of other financial instruments and markets.[15]

[10]The PCL was subsequently replaced with the Precautionary and Liquidity Line.

[11]In 2010, assets under the global fund management industry were estimated at $117 trillion (The CityUK, 2011), compared to less than $10 trillion of official international reserves. The IMF (*GFSR*, April 2012) estimated global banking assets at $105 trillion in 2010, and the sum of bonds, equities, and bank assets at $257 trillion.

[12]Indeed, with the benefit of hindsight it can be argued that since the assets of a number of sovereign wealth funds (SWFs) were mobilized to invest in distressed financial institutions at the height of the global financial crisis, these government-linked institutions proved to be a stabilizing force at least in this instance. This has been acknowledged by the IMF (*GFSR*, September 2011).

[13]For example, Borio and Disyatat (2011) argue that "[t]he focus on global current account imbalances misses the role of European banks in supporting the boom in US housing credit and the subsequent collapse of such financing."

[14]See, for example, Bank for International Settlements (2011); Domanski, Fender, and McGuire (2011); and IMF (2011c).

[15]These comparisons should by no means be interpreted as the "right" yardstick against which to measure reserves. However, they suggest that some broader considerations might be useful in judging whether the size of official reserves constitutes a danger for the international monetary system. It should also be noted that including assets held by SWFs in the reserve calculations would not change the picture significantly.

Figure 2. Reserve Accumulation: How Excessive?
(In trillions of U.S. dollars)

Sources: World Federation of Exchanges; Bank for International Settlements; IMF, *International Financial Statistics*; and ©2012 Bureau van Dijk Electronic Publishing-Bankscope. For more information, see IMF, *Global Financial Stability Report*, April 2012, Statistical Appendix, Table 1.

[1]Bonds, equities, and bank assets is the sum of stock market capitalization, international and domestic debt securities, and total commercial bank assets.

[2]Reserve currency government securities include securities from the euro area countries, Japan, the United Kingdom, and the United States.

29. Moreover, from a domestic perspective, reserves may not have grown excessively if compared to a broad measure of external liabilities. For example, in the major economies of East Asia other than China—which include some of the largest reserve accumulators of the past decade—reserves remained relatively stable if measured against external liabilities over the past decade (He, 2011).[16] This is consistent with the view, expressed by many country authorities, that the rising precautionary demand for reserves was due in large part to rising private capital inflows that were viewed as volatile and reversible (see Chapter 4 below).

30. Most country officials interviewed for this evaluation also felt that in a discussion of the stability of the international monetary system, there were more pressing issues to be considered. These included the fluctuating leverage in global financial institutions and its impact on global liquidity conditions and hence capital flows and exchange rate volatility; the role and effectiveness of prudential regulations and supervision in mitigating risks associated with cross-border finance; and the difficulty in managing capital flows in recipient countries. While the Fund has begun to address some of these issues, the discussion of reserves has not yet been placed in the broader context of the various potential risks to global financial stability, of which reserves constitute a marginal component.

31. In addition, a number of interviewees, from among country officials and former IMF Management, were of the opinion that the IMF's analysis of capital flows—and by extension of reserve accumulation, a large part of which they regard as a consequence of such flows—has not been evenhanded, in the sense that the Fund's policy attention and advice have focused on the options available to the recipients of private capital flow surges, whereas the factors driving such surges at source have not been addressed as comprehensively. The latter factors were thought to reflect the loosening of financial regulation and shifts in monetary policy in reserve-currency countries, and the interaction between regulatory and monetary policies. In this view, understanding these interactions and their policy ramifications is important, especially since from the recipients' perspective there are no costless ways of dealing with capital flow volatility.

32. Similarly, several country officials regarded reserve accumulation as a symptom and not the cause of potential instability. In particular, they thought the threats to stability originated not from reserve accumulation per se but from the policies underlying the accumulation, which included the fiscal, monetary, regulatory, and exchange rate policies of major deficit and surplus economies. For many other emerging markets, even those inclined towards a flexible exchange

[16]With external liabilities defined as the sum of foreign direct investment, portfolio equity, debt, and derivatives liabilities.

rate regime, intervention and hence reserve accumulation were considered legitimate responses to surges in capital inflows on the one hand, and to the competitive pressures from countries adopting more rigid exchange rate targeting, on the other.

33. In some cases of particularly noteworthy rates of reserve buildup, IMF staff also implicitly recognized that reserve accumulation was primarily a symptom of deeper structural factors and policies. Illustratively, in the cases of China, Japan, and Switzerland—countries which accounted for a significant proportion of world reserve growth during the period under consideration—Article IV discussions did not focus on reserves as such but on the more fundamental issues involved, appropriately so in the view of the evaluation team.

34. For example, when international policy issues were raised in discussions with China, the IMF focused mainly on China's large current account surplus.[17] Substantial discussions took place on the causes of the surpluses, on the respective contributions of exchange rate developments and a number of domestic structural and macroeconomic factors. There was, of course, recognition that the exchange rate regime had implications for reserve accumulation, which in turn created difficulties for monetary management. Staff used this line of reasoning to argue that greater exchange rate flexibility would be beneficial for the Chinese economy and would at the same time contribute to reducing global imbalances.[18]

35. In the cases of Japan and Switzerland, the IMF also engaged the authorities in discussions focusing on the underlying policy issues directly, instead of invoking reserves per se. For example, when the Swiss authorities intervened heavily during 2009–10 to counter deflationary pressures and to prevent excessive appreciation of the Swiss franc, the IMF supported the use of interventions as a quantitative easing strategy. Staff did not invoke any threat to the stability of the international monetary system from large-scale reserve accumulation as a reason to eschew interventions. Similarly, when the Japanese authorities intervened in the foreign exchange market during 2010 and 2011, Fund staff did not object. In both these cases, had the focus been on reserves, the IMF would have found it more difficult to acquiesce in the interventions which were seen as justified on domestic stability grounds.

36. The evaluation team came to the view that the IMF had focused on the appropriate issues in its discussions with the above-mentioned countries, and that bringing up the issue of excessive reserves would not have been helpful. Even those country officials who sought a tougher line with China considered the main issue to be about current account rebalancing and exchange rate adjustment, and not reserve accumulation as such.

37. This is not to say that indiscriminate reserve accumulation should be ignored or encouraged, or that it has been. Indeed, IMF staff have pointed to domestic costs of reserve accumulation in terms of quasi-fiscal costs and the implications for monetary management. Staff have also pointed out that interventions in the foreign exchange market can constrain needed adjustments in current account imbalances. In the illustrative cases mentioned above Fund surveillance appropriately focused on the costs and benefits of the policies that lead to reserve accumulation as a byproduct, rather than focusing on the byproduct itself. These examples illustrate that the emphasis on reserves as a focus of policy attention has been unnecessary.

C. Emphasis on Reserves and the IMF's New Reserve Adequacy Metric

38. IMF Management's emphasis on excess reserves as a problem for the international monetary system turned out to be a source of controversy, because it became associated with a strategy to "attenuate the demand for international reserves…by collaborating on reserve adequacy" (IMF, 2010g). One element of this strategy would be "agreeing on an adequate level of reserves for precautionary purposes." This would be underpinned by Fund "guidance on desirable ranges of precautionary reserve levels given country circumstances" to which "countries could agree to align their reserve accumulation policies." Subsequently, this guidance was developed in the form of a new metric for reserve adequacy in IMF (2011b) (see Box 2).

39. Country officials perceived the Fund's introduction of the reserve adequacy metric as a strategy to limit reserve accumulation, and as such they worried that it could become a rigid benchmark to assess members' compliance with obligations vis-à-vis the IMF at a time

[17] The 2011 Article IV Report also makes reference to possible consequences for interest rates in advanced and emerging markets of a hypothetical reallocation of China's reserves from U.S. government liabilities to claims on emerging markets. As already mentioned, this is not an issue specific to excess reserves as such, since it could arise even if reserves are not excessive.

[18] Some interviewees believed that the IMF's message to China should have been tougher and that its analysis of the impact of China's exchange rate policy on global imbalances was deficient, in particular because it did not take sufficient account of its influence on the exchange rate policies of other countries in East Asia.

Box 2. The IMF's New Reserve Adequacy Metric

The reserve adequacy metric developed by the IMF in 2011 is a refinement of the ratio-of-reserves-to-short-term-debt indicator that had been proposed a decade earlier. It explicitly recognizes that drains on reserves can originate elsewhere than in the obligation to service short-term debt. Specifically, the new metric combines short-term debt, other (medium- and long-term debt and equity) portfolio liabilities, the stock of broad money, and exports in a composite gauge of potential foreign exchange pressure. The relative weights of each of the factors are determined by the size of the drains in past periods of stress in the foreign exchange market.

The new metric received mixed reviews from staff and country officials. The more granular approach to thinking about sources of drains on reserves was welcomed as an improvement over the simple reserves-to-short-term-debt ratio. However, the lack of country specificity in the approach came in for criticism. In particular, the fact that the weight attached to each of the components in the metric is common across all countries was viewed as a drawback. In addition, since weights are estimated based on historical patterns they may need to be adjusted as the structure of financial linkages evolves over time. Moreover, the level of reserve coverage the authorities view as "comfortable" depends on many factors that cannot be captured in a single indicator.

Assessments of reserve adequacy based on the new metric have been facilitated by an internal IMF website promoting its use, and have already been incorporated in several Article IV consultations as an additional indicator in the analysis of external stability.[1] Indeed, several IMF staff members mentioned in interviews that they believe the new metric has become an integral part of reserve adequacy assessments. In some cases, country-specific information has been incorporated in the computations of the new reserve adequacy metric. There are differences of opinion on whether such modifications are appropriate. Country officials and some staff felt that adjusting the "risk weights" to reflect country-specific circumstances would make the metric more useful and relevant in country contexts. Other staff were of the opinion that such adjustments are not warranted if the objective is to use the metric as a tool for cross-country comparisons.

[1]It has also been included in the recently launched Pilot External Sector Report (IMF, 2012).

of heightened uncertainty in the world economy. As noted above, they were uneasy about the potentially prescriptive assessments of reserve adequacy based on this indicator, either as a stand-alone measure or in combination with other indicators, and they saw a risk that the indicator could become a one-size-fits-all measure applied in a pro forma manner. Their reservations were based on the view that reserves provide multiple services, and that a single indicator cannot capture the complexities associated with their costs and benefits which are likely to be weighed differently by each country authority.[19] The lack of a solid analytical framework explaining why reserve accumulation should pose a threat to the international monetary system further diminished many members' enthusiasm for any IMF strategy to set upper limits on countries' reserve levels.

40. Even if a solid framework could be articulated, the ability to implement a strategy to "attenuate the demand for international reserves" would depend on finding solutions to several additional issues. In particular, most country officials interviewed did not consider their own countries' reserves to be systemic. While some agreed that their countries' reserves were larger than their precautionary needs, they did not think that they were large enough in a global context to pose a threat to international monetary stability. IMF staff working on those countries tended to agree. This implied that the IMF would need to identify at what point the reserves of a country—or of a group of countries—become large enough to be considered systemic. In addition, any indicator of the systemic impact of excessive reserves would need to take into account the size of a country's excess reserves not relative to the size of the country's own economy but relative to the size of global excess reserves.

41. Country officials also drew attention to the fact that if advice on reserves at the country level was motivated by concerns about the stability of the international monetary system, it would have fallen outside the scope of the IMF's bilateral surveillance. This is

[19]The discussion of the new reserve metric at the IMF's Executive Board revealed differences of opinion regarding its usefulness. Some Directors welcomed it as an improvement over previous indicators, while others raised doubts about its ability to capture country-specific reasons why countries accumulate reserves. Directors ". . . looked forward to further clarification on how the new risk-weighted metric fits into the Fund's surveillance and policy discussions" (IMF, 2011d).

because the authority of staff to engage member countries in a dialogue about cross-border implications of their reserves policies was limited.[20] Therefore, the IMF would need to have a compelling argument to convince authorities that they should forgo some of the benefit they perceive to be associated with holding reserves in order to reduce the alleged risks they create for the rest of the world. In the case of international reserves and the international monetary system the Fund has not provided such an argument.

[20]In practice, however, the IMF has discussed international spillovers from its members' policies on an ad hoc and voluntary basis, with the permission of its members, for example, in spillover reports for a select group of countries in 2011 and 2012 and in the 2006–07 multilateral consultation with a set of five member countries. A new Integrated Surveillance Decision was approved by the IMF's Executive Board in July 2012. This decision encompasses both bilateral and multilateral surveillance and clarifies how international spillover effects may be addressed in the course of IMF surveillance.

CHAPTER

4 Reserve Adequacy Assessments: Theory and Practice

42. The precautionary motive was an important reason for the buildup of reserves in a number of emerging markets in the early 2000s following the balance of payments and banking crises of the previous decade. The lessons and experiences from these crises were incorporated in analysis and assessments of reserve adequacy carried out at the IMF and in academia. At the time, much of the emphasis was on ensuring that countries had sufficient reserves to deal with potential shocks. As the decade wore on, and as reserves in many countries grew rapidly, advice by Fund staff became increasingly concerned with the financial cost of large reserve holdings, and models subsequently highlighted the trade-off between the insurance benefits of reserves and the financial costs they implied. The cost-benefit calculus was altered as a result of the global financial crisis: the precautionary benefits of reserves were perceived to have increased not only in emerging economies but also in some advanced countries, in recognition of new sources of vulnerability that were highlighted during the crisis.

43. Against this background, this chapter assesses the analytical basis for the IMF's assessment of reserve adequacy as well as the content and quality of advice given in the context of Article IV surveillance during the period covered by the evaluation. The analysis of IMF policy advice has the benefit of hindsight, taking into account country experiences during the global financial crisis. It considers the focus and soundness of the Fund's advice in relation to what turned out to have been needed in view of the vulnerabilities that were revealed.[21]

[21]Bilateral Surveillance Guidance Notes issued during the period covered by the evaluation focused primarily on standard indicators. See, for example, IMF (2005, 2009c, and 2010a). Ideas that emphasized the importance of anchoring reserve analysis in a broad assessment of micro- as well as macroeconomic factors that influence the vulnerabilities of the economy, and that stressed the need to assess reserves in relation to the asset and liability structure of the economy as a whole, were developed early in the 2000s. See IMF (2000a, 2001a, 2001b, and 2004).

44. While research on reserve adequacy by Fund staff has been on par with "best practice" in academia, one should not expect it to yield indicators or models that can substitute for judgment based on in-depth knowledge of data, institutions, and objectives at the country level. This chapter concludes that IMF reserve-adequacy assessments and advice in the context of bilateral surveillance seemed often to have been pro forma, emphasizing a few traditional indicators and insufficiently incorporating country-specific circumstances. Authorities felt that the IMF's analysis on reserves often did not add much value to their own. They called for a more inclusive approach to advice on reserves that would integrate it with advice on related policies and take into account a number of other factors they considered important but which are difficult to quantify.

A. IMF Research on Reserve Adequacy: High Quality but with Practical Limitations[22]

45. Research at the IMF has contributed significantly to the analytical underpinnings of external vulnerability and reserve adequacy assessment. On international reserves, the IMF's research has contributed more than a third of the top-cited scholarly papers since 2000. A comparison with research carried out in academia concludes that IMF staff have frequently identified key developments and puzzles, prompting—with a short lag—both "in-house" and academic research. Advances in research on international reserves have often occurred as a result of extensive interaction between the IMF and the academic community.

[22]This section is based on Aizenman and Genberg (2012).

46. Research influenced the analytical approaches that the Fund used in practice. For example, use of the ratio of reserves to short-term debt was endorsed in IMF policy papers in part based on evidence showing that this ratio had predictive power as an early warning signal of exchange market pressure in emerging markets.[23] More formal research-based models, such as the regression-based estimates of reserve demand presented in IMF (2003) and the optimal reserves framework of IMF (2006), were also applied in the context of bilateral surveillance. The usefulness of these models in providing advice turned out to be relatively limited, however, because it was difficult to adapt them to country-specific circumstances. But they nevertheless played a significant role in that they hinted that a change in emphasis was taking place in reserve adequacy assessment, away from pointing to the minimum prudential level of reserves and towards emphasizing explicitly the cost to the economy of excessive reserves.

47. While conceptual research has been influential in the development of frameworks for identifying vulnerabilities and assessing reserve adequacy, its limitations have also been clear. A central lesson from a large body of empirical research is that models of the demand for reserves do not capture very well the idiosyncrasies of reserve holdings across countries.[24] This implies that the search for a model or simple formula for reserve adequacy that would fit all countries is likely to be futile.

48. This assessment applies with equal force to the new reserve adequacy metric proposed by IMF staff in 2011 (Box 2). While this indicator is an improvement over the short-term debt indicator introduced a decade earlier, it should be applied with care in country contexts. The amount of reserves that a country ought to hold ultimately depends on its policymakers' degree of risk aversion, the manner and extent to which they choose to adjust to external shocks (e.g., the tolerance for exchange rate volatility), the availability of alternative sources of liquidity, and the myriad of country-specific characteristics that are difficult to incorporate into models or common cross-country criteria, no matter how sophisticated.

[23]See IMF (2001a).

[24]The inapplicability of available models of precautionary demand for reserves becomes most apparent in the case of the largest reserve accumulators. These countries have typically not accumulated reserves for precautionary reasons. Rather, their fiscal, monetary, and exchange rate policies conducted in the pursuit of other objectives have resulted in heavy accumulation as a by-product. They may well be concerned about the quasi-fiscal costs of accumulating "excess" reserves, or the possibility that they might experience heavy capital losses on their reserve holdings. Yet, in practice, since the aforementioned economic policies dominate their reserve accumulation, it is doubtful that their reserve holdings can be said to be the consequence of a "demand" for reserves.

B. IMF Policy Advice on Reserve Adequacy: Mostly in Emerging Markets and Using Traditional Indicators[25]

49. The topic of reserve adequacy was broached only very rarely in IMF consultations with advanced countries. In the sample of advanced countries covered by the evaluation during the pre-crisis period from 2000 to 2007, there was no discussion of reserve adequacy. Reserves were simply not high on the agenda of issues to be discussed. Most country authorities and IMF staff did not believe these countries needed to hold reserves, either because they had floating exchange rates or because they could borrow from international capital markets in case of a need for foreign exchange liquidity. But the malfunctioning of these markets during the global financial crisis was to prove otherwise, and several small advanced countries have since taken a new look at their need for reserves in relation to the international exposures of their financial systems. Reflecting this change in sentiment, since 2008 there has been more discussion of reserves in Article IV reports on advanced countries.

50. Reserve adequacy assessments were more frequent in emerging market countries, in recognition of these countries' greater historical tendency to experience balance of payments difficulties. But even here the assessments often appear to have been perfunctory, perhaps because, as was often the case, reserves were greater than what could be considered adequate using conventional indicators. A common message emanating from IMF surveillance was that reserve holdings were "comfortable" or "high." In several instances, the Fund suggested that reserve accumulation could be reduced in view of the costs of holding high reserves. The evaluation team also found cases where IMF staff refrained from discussions due to the sensitivities of the authorities, and where country officials preferred to avoid such discussions because they considered them to be an indirect way of discussing exchange rate policy.

[25]The findings referred to in this and the subsequent section are drawn from Banerji and Martinez (2012).

51. Reserve adequacy assessments were conducted mainly using traditional indicators. Discussions with emerging market economies placed special emphasis on the short-term debt indicator, reflecting the lessons from crises of the 1990s and the emphasis on the reserve coverage of short-term debt as an early warning signal of exchange market stress. Import coverage and reserves as a ratio to a monetary aggregate were also used, the former reflecting a traditional concern about the need to be able to finance current payments in the case of export shortfalls, and the latter a more recent awareness that capital flight by domestic residents could become a drain on reserves. Comparisons of reserve levels with those of peers were used in about a third of the cases. Assessments of reserves based on formal models were relatively infrequent.

C. Reserve Adequacy Assessments in Practice: Room for Improvement

52. Given the experience with the recent global financial crisis, a more thorough assessment of external vulnerabilities and reserve needs could have been beneficial. Such an assessment would have built on an analysis of the financial linkages in the economy, paying particular attention to the structure of balance sheets in the private and official sectors and to the soundness of domestic institutions.

Too complacent at times

53. In hindsight, the IMF did not pay enough attention to external liabilities and the precautionary need for reserves in several emerging market economies. In a number of cases, the crisis revealed large external exposures that took both the country authorities and the IMF by surprise, and led to actual or potential concerns about the lack of sufficient reserves. In several emerging markets, the Fund did not draw attention to the heightened vulnerability associated with a steady decline in the reserve coverage of short-term liabilities—a concern that needed to be addressed, albeit not necessarily through rebuilding reserves. The IMF could also have shown itself more cognizant of the potential risks associated with the burgeoning short-term external liabilities in the financial sector of some advanced countries, which partly reflected significant cross-border inflows of wholesale funding. Some staff who were interviewed for the evaluation believed that the failure to assess reserve adequacy in advanced countries had been due to a "lack in imagination" on their part; they now recognize that these countries too could be subject to sudden stops of capital inflows—traditionally considered to be an emerging-market phenomenon—and that a flexible exchange rate and access to international capital markets do not obviate the need for reserve adequacy analysis.

54. There was a common view among country authorities that the IMF tended to underestimate the benefits of reserves. Thinking about the trade-off between costs and benefits of reserves, country officials often mentioned a range of benefits that they considered important but were not easily incorporated into either single indicators or formal models. In addition to precautionary self-insurance (also emphasized by the Fund), they mentioned other important advantages: reserves provide a country with reliability of access and the policy autonomy to act quickly, flexibly, and countercyclically, and, as was evident during the global crisis, they inspire confidence. Reserves have also allowed authorities to avoid the stigma associated with approaching the Fund for resources—an issue that is very much alive in a number of countries.

Differences of views on the benefits of a flexible exchange rate

55. On occasion authorities and Fund staff tended to hold different views about the relative merits of exchange rate adjustment versus changes in reserves in response to shocks. The IMF placed greater emphasis on exchange rate flexibility as an adjustment mechanism, as conducive to the development of financial markets, and as discouraging excessive risk taking and speculative capital inflows. Country authorities were more reluctant to let the exchange rate take the full brunt of capital flow volatility. They preferred to intervene selectively in the market to limit sharp appreciations of their currencies, even if selective intervention led to reserve accumulation that could be viewed as excessive in relation to precautionary needs. They were concerned that large capital inflows could undermine competitiveness, especially in a context where major trading partners target their nominal exchange rate, in effect shifting the burden of adjustment to countries that permit more exchange rate flexibility. Some authorities thus felt that the Fund should be more receptive to the view that the tolerance for exchange rate volatility tends to vary across countries.

A need for a deeper assessment of the access to liquid foreign assets

56. Reserve adequacy indicators reported in Article IV reports were most frequently stated in terms of gross reserves, but this is not necessarily the most appropriate indicator against which to judge a country's overall needs for foreign exchange liquidity. An assessment of reserve adequacy should also consider the ease and speed with which other available sources of liquidity, including those held in sovereign wealth funds (SWFs), can be accessed. The components of these resources are likely to differ in this respect: some parts may be earmarked for particular purposes, and others may be available only with some delay or at some loss in value.[26]

57. In this context, while country officials considered the Flexible Credit Line (FCL) as an alternative source of liquidity, they did not share the views of IMF Management that the FCL would help countries avoid the need to build up precautionary reserves.[27] While they thought credit lines such as the FCL could be supportive of market confidence, they emphasized that owned reserves possessed important attributes that credit lines did not. Most important of these were accessibility, speed, and reliability.

58. Bilateral swaps were thought of in similar terms: when compared to reserves, these sources of finance were considered less certain, less flexible, and not immediately available. In addition, unlike credit lines and swaps, reserves play the dual role of providing insurance and being available to smooth exchange rate volatility, if desired.

Need for greater awareness of country perspectives and practices

59. Country authorities noted that the IMF's advice on reserves often did not add much to analysis already carried out in the country. They pointed to areas where the IMF's analysis, assessments, and advice could be improved, notably with respect to country specificities. They called for the Fund to adopt a more inclusive approach that would integrate advice on reserves with advice on related policies such as monetary policy, management of capital flows, and the development of foreign exchange and financial markets, and to take into account factors that may not be easily quantifiable but that they considered important—for example, the ability of the economy to absorb volatility in the exchange rate and capital flows; the uncertainty of access to bilateral swaps or multilateral facilities; the impact of the level of reserves on "market confidence," and the lingering stigma associated with having to approach the IMF for assistance. In this context these authorities expressed a desire for more comprehensive dialogue with Fund staff.

60. A particular area in which country officials thought the IMF's analysis could have been more helpful was the use of cross-country comparisons of reserves. Comparisons with peers can be informative as a guide to reserve adequacy, especially when market practitioners and rating agencies use them to assess countries' relative vulnerability or creditworthiness. The evaluation team found that the IMF's cross-country comparisons were not always informative, because they were sometimes based on countries with significant differences in economic circumstances or on information that was not comparable. Country authorities argued for a more country-specific approach and comparisons that pay more attention to country characteristics.

Consider financial stability issues also in advanced economies

61. Issues related to financial stability have come to the fore in advanced countries as a result of the financial crisis of 2008–09. A number of central banks had to step in to provide foreign exchange liquidity to internationally active commercial banks in order to limit negative repercussions on the domestic financial system. Some central banks have since incorporated international reserves along with prudential regulation into their analysis of how to deal with external financial exposures of the private sector.

[26]The IMF has taken several initiatives to expand the provision of data on international liquidity and the composition of reserves (Annex 2). The majority of these initiatives have been incorporated into the Special Data Dissemination Standard (SDDS) which was developed and implemented in the 1990s. The IMF's work on reserve-related statistics, particularly the design of the reserve template, received high praise from both staff and country officials. Annex 3 describes the main features of SWFs.

[27]On several occasions during 2010, IMF Management suggested in speeches that "if countries had access to better financial insurance, the need to build up precautionary reserves could be lessened. The IMF's Flexible Credit Line, which provides upfront financing with no subsequent conditionality, tries to meet this need" (IMF, 2010d).

CHAPTER

5 Conclusions and Recommendations

A. Conclusions

62. The emphasis on reserve accumulation as a risk for the international monetary system has led to a loss of clarity in discussing options to reduce such risks. Moreover, factors other than reserve accumulation—notably the leverage-induced fluctuations in global liquidity, inadequate financial sector regulation, and capital flow volatility—are more pertinent sources of concern for systemic resiliency.

63. A common view among interviewees for this evaluation was that the IMF's recent attempts to cast excessive reserve accumulation as a risk for the international monetary system reflected some shareholders' interest in ensuring greater exchange rate flexibility in key Asian economies.

64. The IMF has not presented a persuasive analysis of why excessive reserves constitute a major problem for the international monetary system, nor has it explained how it would identify when a country's or a group of countries' reserves are large enough to pose such a problem. The IMF has also not presented a compelling argument to convince authorities to reduce their reserves for the benefit of the rest of the world.

65. The new reserve adequacy metric that appeared at the time when Management emphasized reserves as a problem for the international monetary system was received with skepticism by country officials, who worried that it could become a rigid benchmark to limit reserve accumulation, and to assess members' compliance with obligations vis-à-vis the IMF. Many authorities were uneasy about potentially prescriptive assessments of reserve adequacy based on this indicator, especially at a time of heightened uncertainty in the global economy.

66. While research has identified a number of sources of vulnerability that shape authorities' decisions about the level of reserves to hold, it has also shown that no single indicator or model can capture the complex set of factors that determine the adequacy of reserves in an individual country or across a group of countries. When they assess the adequacy of their reserves, country authorities in practice consider a number of factors. Some of these are difficult to quantify—for example, the resilience of the economy to exchange rate volatility, the effect of reserves on market confidence, and the robustness of the domestic financial system including the regulatory framework. The importance of each of these factors varies across countries and evolves over time.

67. In its consultations with advanced countries, the Fund very rarely broached the topic of reserve adequacy, and though in emerging market countries its reserve adequacy assessments were more frequent, its policy advice on reserves was frequently seen as pro forma and of limited value added for its members. Interviewees for this evaluation identified some weaknesses in the Fund's analysis of reserve adequacy in the context of bilateral surveillance, noting that often this analysis was insufficiently embedded in country-specific information and too narrow in scope. In hindsight, IMF's policy advice did not adequately take into account the sources of risk associated with the foreign currency liquidity needs that arose as a result of the global financial crisis.

B. Recommendations

68. *Target perceived policy distortions directly*. In discussing remedies for potential instabilities of the international monetary system, the focus should be on underlying causes of instability and not on symptoms. If the main problem is persistent current account imbalances, then the most direct way to address it would be to emphasize policies that have predictable impacts on current accounts: namely traditional expenditure-changing and expenditure-switching policies. Attempting to articulate a solution based on excess reserve accumulation leads to a loss of clarity.

69. *Embed the discussion of reserve accumulation in the multilateral context in a more comprehensive treatment of threats to global financial stability that is informed by developments in global liquidity and financial markets.* The Fund needs to present a robust and comprehensive analysis of the multifaceted risks afflicting the international monetary and financial system before it assesses the risks, if any, from reserve accumulation. Such an analysis would include the nature and drivers of global liquidity, the factors that have led to rising and more volatile capital flows, and the role of financial regulation in this context.

70. *Policy initiatives that are meant to deal with systemic externalities must take into account the relative size of countries' contributions to the externality.* If a sound analytical basis were found as to why excessive reserves at the global level pose a threat to international monetary stability, then the appropriate measure of the contribution of a specific country to this threat would be the size of its excess reserves relative to global excess reserves and not the size of its excess reserves relative to the size of the country's own economy.

71. *Reserve adequacy indicators should be applied flexibly and reflect country-specific circumstances.* Evidence has shown that countries accumulate reserves for many reasons that cannot be captured in single indicators or models, and sources of vulnerability evolve over time. Reserve adequacy assessments and advice therefore need to rely on a broad range of indicators which should be adjusted when circumstances change. Standard indicators of external debt need to be complemented with other measures of potential sources of foreign exchange drain and relevant financial sector exposures. Country authorities and staff should be encouraged to adapt the IMF's new reserve adequacy metric to country-specific circumstances in order to render it applicable and useful in bilateral surveillance. In constructing indicators of reserve adequacy, in addition to relying on gross reserves at the central bank, the Fund should take into account other sources of liquidity such as the potential availability of bilateral swaps and multilateral credit facilities, the accessibility of funds under the management of sovereign wealth funds, and the potential access of the economy to credit from international financial markets.[28]

72. *Recognize the multiple trade-offs involved in decisions on reserve accumulation and reserve adequacy at the country level, and integrate advice on reserves with advice in related policy areas. Advice should not be directed only to emerging markets but, when necessary, should also take into account the concerns in advanced economies that have arisen since the financial crisis.* Country authorities regularly need to assess the trade-offs associated with policy measures in different areas of the economy. International reserves are involved in a number of these cases, for example in decisions related to: regulatory policies versus building up reserves to deal with cross-border exposures in the domestic financial system; allowing the exchange rate to adjust freely versus intervening in the market to moderate such adjustments in response to surges of capital flows; implementing capital account measures versus building reserves to insure against sudden stops in capital flows; building reserves to preserve independence versus relying on uncertain bilateral swaps and multilateral facilities; holding reserves that ensure speedy and secure access and foster market confidence versus bearing the fiscal costs of holding liquid reserves. Authorities' views on these trade-offs determine their attitude toward reserve accumulation. The Fund needs to be cognizant of their importance in each country and to calibrate its analysis and advice accordingly.

[28]The Data Template on International Reserves and Foreign Currency Liquidity (Reserves Template) already incorporates many of these items.

ANNEX

I Countries and Economies in the Evaluation Sample

Algeria	Denmark	Israel	Norway	Sweden
Argentina	Estonia	Japan	Peru	Switzerland
Australia	Euro area	Korea	Philippines	Thailand
Botswana	Germany	Latvia	Poland	Ukraine
Brazil	Hong Kong SAR	Libya	Romania	United Arab Emirates
Chile	Hungary	Malaysia	Russia	United Kingdom
China	Iceland	Mexico	Saudi Arabia	United States
Colombia	India	New Zealand	Singapore	
Czech Republic	Indonesia	Nigeria	South Africa	

ANNEX 2

IMF Initiatives on Data on International Reserves and International Liquidity

Since the 1990s the IMF has taken several initiatives to expand the provision of data on international liquidity and the composition of reserves. Most of these initiatives have been incorporated into the Special Data Dissemination Standard (SDDS) which was developed and implemented in the 1990s. However, substantial country coverage is still lacking in many cases. The IMF's work on reserve-related statistics, particularly the design of the reserve template, received high praise both from staff and country officials.

Data Template on International Reserves and Foreign Currency Liquidity (Reserves Template): In 1999 the IMF created the Reserves Template to increase disclosure of foreign currency derivatives, liabilities, and other potential claims on reserve assets. By mid-2011, 71 countries plus the ECB and euro area reported data using this template (accounting for slightly over 57 percent of global reserves in 2010).

Composition of Foreign Exchange Reserves (COFER): In 2005 the IMF launched a quarterly publication of aggregated information on the currency composition of official foreign exchange reserves. This information had previously been made available in IMF annual reports. By mid-2011, 139 countries reported to this database on a voluntary and confidential basis. Their reserves represented about 55 percent of global foreign exchange reserves at the end of March 2012.[29]

International Investment Position (IIP): Since the mid-1990s countries have been reporting their IIP to the IMF, showing the stock of external financial assets and liabilities for the whole economy. In mid-2011, 97 countries reported IIP data to the IMF. Recently, the IMF acknowledged that it is important to increase both the number of reporting countries and the frequency of reporting from an annual to quarterly basis. To this end, IMF staff has developed additional datasets such as the "External Wealth of Nations Database."[30]

Balance Sheet Approach (BSA): Since the early 2000s the IMF has had an ongoing initiative to collect information on foreign currency assets and liabilities for the financial sector in each country in standardized report forms (SRFs). Following the global financial crisis, the IMF recognized that there is a need to increase the use of the BSA which examines the balance sheets of key sectors of an economy in a framework that facilitates the identification of foreign currency mismatches and other vulnerabilities. The SRF data can be used to populate a large part of the BSA dataset with a high level of detail to provide an up-to-date analysis comparable across countries (by mid-2012, 133 countries reported data in SRF format). For remaining intersectoral relationships, other data sources, such as the International Investment Position (IIP), Quarterly External Debt (QEDS) and Coordinated Portfolio Investment Survey (CPIS), can be used.

[29]COFER is not part of SDDS. However, a recent proposal to include COFER as part of "SDDS Plus" was generally endorsed by the IMF Board and the IMF is expected to finalize a proposal for "SDDS Plus" by end-2012. If endorsed, countries that participate would not be obliged to report these data until end-2019.

[30]The "External Wealth of Nations Database" is an updated and extended version of the Lane and Milesi-Ferretti (2007) dataset, covering all countries, with a historical series to help fill in some of the gaps in international investment position data.

ANNEX 3

Sovereign Wealth Funds

A country's assets managed by sovereign wealth funds (SWFs) are closely related to its foreign exchange reserves, because these assets are generally carved out from existing reserves or built from foreign exchange earnings emanating from exports of nonrenewable commodities. SWFs have been receiving increased attention since 2007, though they have existed in different forms for more than six decades. There is still a lack of agreement on the number of SWFs and the size of their assets. According to the latest data available in the IMF, there are 31 SWFs in 29 countries estimated to hold between US$2.2 trillion and US$3.1 trillion of foreign assets as of February 2008.[31] SWFs' holdings were nearly a third of total global foreign exchange reserves as of end-February 2008.

A SWF can formally be defined as an entity that manages specially designated state-owned financial assets, and is legally structured as a separate fund or fund manager owned by the state. The management of SWFs is not always transparent and among the cases that are known, different practices have been followed in different countries. In some countries, international reserves allocated to SWFs are held in the balance sheet of the central banks and in many instances are also managed by the central bank itself. In others, SWFs are separated from the central bank but hold and manage reserves on behalf of the central bank. In still some other cases, SWFs are totally separate from the central bank and managed by the ministry of finance.

SWFs have been established with one or more of the following objectives: insulate the budget and the economy from excess volatility in revenues; help monetary authorities sterilize unwanted liquidity; build up savings for future generations; promote economic and social development; and improve returns on investment. The investment strategies followed by some SWFs are not in the public domain.[32]

The nontransparent structure of some SWFs and different country practices regarding the treatment of SWF assets in relation to reserves can make it difficult to assess reserve adequacy and to compare reserve levels across countries.[33] Also, the availability of SWF assets for intervention purposes during times of crisis is not always clear, rendering reserve adequacy assessments difficult. Furthermore, in view of their large size, SWFs are likely to have a significant impact on a country's public finances, monetary conditions, balance of payments, and balance sheet linkages.

[31]See IMF (2008).

[32]Some SWFs transparently declare their investment strategies. SWFs generally follow heterogeneous investment policies reflecting their different objectives. Some SWFs invest solely in publicly listed financial assets (bonds and equities), while others invest in all major asset classes. Some SWFs invest relative to market indices, while others aim at maximizing absolute returns over a specified time horizon.

[33]The Santiago Principles are expected to result in improved transparency in the objectives and accounting principles underpinning the operations of SWFs (IWG, 2008).

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Statement by the Managing Director

Staff Response

IEO Comments on Management and Staff Responses

The Acting Chair's Summing Up

Statement by the Managing Director on the Independent Evaluation Office Report on International Reserves: IMF Concerns and Country Perspectives

Executive Board Meeting
December 7, 2012

I would like to thank the IEO for this report and acknowledge the substantial effort that has gone into its preparation. As recognized by the IEO team, research by Fund staff on reserve accumulation and related issues has been at the forefront of the academic debate and, despite the complexities involved, good progress has been made by staff in developing the theoretical framework and concrete methodologies to ascertain reserve adequacy. This work has certainly been successful in influencing the policy debate. I also take comfort from the report's praise of the Fund's bilateral surveillance of the largest reserve holders.

Nonetheless, I believe the evaluation errs when it considers the rationale of the Fund and its membership, through the Board and IMFC, in undertaking work on reserves. This work was cast in the broader workstream on the international monetary system (IMS), and the approach to reserve issues was broad and multipronged, with emphasis placed on the development of a strong global safety net, the articulation of adequate policies to manage volatile capital flows, and the integration of the discussion of reserves with other external sector policies. Within the IMS, the demand for reserve assets matters in the context of their limited supply. Hence, the motivation was to make progress in assessing the right level of reserves for *precautionary* purposes given the need to balance their insurance benefits (demonstrated in this and past crises) with the fact that holding excessive reserves is subject to diminishing returns and can be costly both to the domestic and global economy.

With regard to the methodology employed, the report's findings may not be representative of the views of the Fund's entire membership considering the highly selective sample of country views employed by the IEO.

The specifics of these, as well as some additional, reservations are detailed in the staff response.

Nevertheless, I find myself in agreement with most of the IEO's formal recommendations, which are remarkably congruent with a number of recent Fund policy positions and new surveillance initiatives.

I look forward to the Board discussion.

Staff Response to the Independent Evaluation Office Report on International Reserves: IMF Concerns and Country Perspectives

Executive Board Meeting
December 7, 2012

We welcome the opportunity to discuss the IEO's evaluation of this critical policy area, and its findings that Fund research on the topic is at the frontier, and that Fund surveillance of the largest reserve holders was commendable. However, this report fails to acknowledge that many of its general recommendations are already reflected in Fund policy papers and other initiatives. We are also concerned that the report misconstrues the motives of the Fund in undertaking this work.

International Monetary System Issues

The IEO mischaracterizes the objectives and contributions of the International Monetary System (IMS) and reserve adequacy workstreams. Specifically, there was never a narrow focus on reserves as suggested in the report. The IMS work was very broad based and designed to make the system more resilient to shocks. The buffer provided by adequate reserves is but one aspect of this. A strong global safety net, adequate policies to manage volatile capital flows (both inward and outward), and an understanding of the externalities associated with the multiple aspects of external sector policies—including the interplay of large demand and limited supply of reserve assets—are key to ensuring the resilience of the IMS. All these aspects have been important parts of the Fund's IMS agenda, which was directed by the IMFC, and implemented by the Board through numerous meetings and decisions. As such, the Fund has not ignored "more pressing issues," and its focus on reserves was not "too narrow," as suggested by the IEO.

Reserve policies are relevant to the stability of the IMS. The report suggests that since reserves are relatively small when measured against the global stock of financial assets under private management, they are not really relevant. This seems misplaced. The bulk of reserves are invested in highly liquid government fixed income securities, mostly denominated in U.S. dollars. This would be the appropriate comparison, and reserves are now about the equivalent of a, non-negligible, one-third of advanced country bond markets. Moreover, the smaller size of transactions that can be carried by market-makers becomes increasingly relevant as the size of reserves grows relative to market-making ability and market liquidity. The IEO report thus misses the point that *excessive* reserve accumulation could have detrimental effects on reserve currency issuing economies, or on the IMS as a whole, by distorting the price of risk.

The IEO report incorrectly suggests that the discussion on reserves was merely a way to reopen the debate on global imbalances, or that it was focused on symptoms of problems rather than the causes. The large and unrelenting rise in global reserves holdings is a fact not in dispute, and the IMS workstream explicitly presented this accumulation as a symptom of other distortions, as well as a cause, of potential instability. The causes and consequences of the rapid growth in reserves would thus seem perfectly valid questions for the staff of the IMF to address. Moreover, the *Assessing Reserve Adequacy* paper made clear that it was approaching reserve adequacy purely from a *precautionary* perspective, that is, reserves for smoothing consumption during crises and enabling countries to manage large crisis-related outflows. It was *not* trying to address the separate question of exchange rate and intervention policies that might have implications for global imbalances or the demand for reserves from a non-precautionary (e.g., mercantilist) perspective. Such policies are properly covered by separate workstreams in the Fund, including CGER/EBA and other surveillance products.

The IEO report should have acknowledged that reserve accumulation can be costly, and may impose externalities, thus reflecting a collective action problem. Appropriate reserve holdings can deliver sizable benefits. However, staff analysis suggests that beyond a certain level, the precautionary benefits of additional reserves diminish rapidly, while costs rise at an increasing pace. Further, even if individual members see benefits from very high reserves, or the intervention policies that lay behind them, these policies could be collectively detrimental, particularly if the rise in the reserve holding in one country leads other to ratchet up their reserves. This could arise through increasing systemic risks and/or potential policy spillovers resulting from the need for large countries to manage high or increasing reserve portfolios. As noted above, reserves already account for a large share of the limited supply of advanced country sovereign assets in which reserves are usually held, and the prices of these assets are critical to all other asset prices. Focusing on individual country authorities' views of the costs and benefits of their own reserve accumulation misses this point, particularly as large reserve holders are heavily represented in the IEO's sample of country authorities.

The *Assessing Reserve Adequacy* paper and the facilities reform workstream were simply not created to limit reserve holdings. Rather the reserve adequacy work sought to address a need to update guidance on reserve adequacy, as well as motivate more thorough coverage of reserve issues in Staff Reports, a need also pointed to by the IEO. Similarly, the lending reforms work was aimed at providing an effective form of country insurance tailored to the strength of countries' fundamentals and policies with a view to reducing the stigma sometimes associated with Fund arrangements. Indeed, since the new instruments required adequate reserves for normal times, they cannot form a substitute for member reserves, only temporarily complement them. Finally, reserves can constitute a distortion in their own right—grossly inadequate reserve coverage, for instance, potentially create externalities on others.

Recommendations

We welcome the report's positive findings on surveillance and research, but most of its recommendations are already part of Fund policy and practice (see Annex). Many of the recommendations either repeat (without attribution) the views expressed in recent IMF staff work or have already been tackled through recent Fund initiatives. Specifically, recent Fund work has sought to (i) provide simple and flexible guidance on precautionary reserve needs; (ii) account for multiple policy tradeoffs facing authorities and cover all types of economies and balance sheet risks; and (iii) better integrate advice across related policy areas. This can be seen through the new initiatives taken to broaden the discussion of the IMS and strengthen the integration between bilateral and multilateral surveillance. The work undertaken on managing capital flows (which contrary to the IEO's assertion has considered both push and pull factors), and the *Spillovers* and *External Sector* reports specifically integrate the discussion of multiple aspects of external policies and their potential externalities in large countries. That said, we cannot support the IEO recommendation 3 to design Fund policies based on the relative size of countries' contribution to generating externalities as this would be at odds with the uniformity of treatment across members built into the Fund's Articles.

Although invisible in the IEO report, the *Assessing Reserve Adequacy* paper did look beyond EM reserve needs and called for flexibility in applying the proposed metric. The paper's contribution includes a substantive development of new methods for thinking about reserve adequacy for LICs, thinking on the post-crisis needs for reserve coverage of advanced economies, and a discussion of the appropriate measures of the cost of reserve holdings. The paper is also clear that the proposed metric is but one approach to think about reserve adequacy, especially emphasizing the role that scenario analysis can play. Flexibility was also emphasized, although there are limits to the desirability of ad hoc adjustments, so that the metric is kept simple and transparent, with country-specific circumstances principally brought in to explain measured adequacy or where the class of economy is clearly distinct (e.g., commodity producer). Otherwise, there is a risk of "over-fitting" the metric to explain whatever a country had decided to do.

The IEO's advocacy of peer comparison for reserve adequacy assessment is questionable and points to inconsistencies in the report. Peer comparison, in the form of reserve demand regressions, have their place in illuminating the factors behind the accumulation of reserves by countries, but they cannot themselves provide a measure of adequacy since they ignore the fact that fundamentals matter in assessing vulnerability to crisis. Peer comparisons with countries that have built high reserves for non-precautionary motives will not correctly inform an adequacy assessment from a precautionary perspective. Peer comparison with those holding inadequate reserves also cannot help. This would then seem to show the inconsistency between the IEO's view that several advanced economies had too few reserves before the global financial crisis (a view we share), and an advocacy for peer comparison, since a pre-crisis peer comparison would not have indicated any problem. Moreover, we cannot support the implication of much of the analysis in the IEO report that countries should feel free to accumulate reserves in a manner consistent with "keeping up with the Joneses," ignoring any potential consequences for others.

Annex. IEO Recommendations and Existing Fund Work

IEO Recommendation 1: *Target perceived policy distortions directly* (paragraph 68).

Staff Reaction: *The Fund's advice has always been focused on policy distortions*, with exchange rate assessments playing a critical role in all Article IV assessments. In addition, the 2011 *Triennial Surveillance Review* called for a broadening of external stability assessments encompassing an analysis of balance sheets and including coverage of exchange rates, capital flows and reserves policies—this has been implemented as an operational priority for surveillance and is set out in revised surveillance guidance. Furthermore, the pilot *External Sector Report* contains a comprehensive discussion of the underlying causes of global imbalances and potential policy actions. Finally, reserve policies may form a policy distortion in their own right. For instance, inadequate reserves clearly pose externalities on other members.

IEO Recommendation 2: *Embed the discussion of reserve accumulation in the multilateral context in a more comprehensive treatment of threats to global financial stability that is informed by developments in global liquidity and financial markets* (paragraph 69).

Staff Reaction: *The Fund has already developed products to address this recommendation.* This is particularly the case for the new *External Sector Report*. Further, the metric developed in the *Assessing Reserve Adequacy* paper also goes towards addressing this concern. Specifically it incorporates the vulnerabilities associated with the structure of private and public external balance sheets. For instance, if there is a rise in the extent of portfolio liabilities, whether associated with global liquidity or any other factor, then the metric would suggest a higher need to hold reserves for the associated vulnerabilities. More generally, the Fund has a vast array of work, including the GFSR, Spillover Reports, the Vulnerability and Early Warning Exercises, which looks at threats to global stability, including those originating from global liquidity and financial markets. Obviously reserves are only a limited part of these risks, but when they are a stability concern, they are raised as an issue in these exercises. In addition, recent Fund work on interconnectedness and the *Spillovers Reports* have advanced the understanding of financial inter-linkages.

IEO Recommendation 3: *Policy initiatives that are meant to deal with systemic externalities must take into account the relative size of countries' contributions to the externality* (paragraph 70).

Staff Reaction: *The Fund's multilateral surveillance and analysis routinely focuses on the impact of policies in countries that are likely to be systemically important.* This was the exact motivation of the *Spillover Reports*, but is also a feature WEO and GFSR analysis, as well as initiatives such as the *G20 MAP*. Nonetheless, there are limits on the extent to which the Fund can focus its policies and activities on only a subset of the membership, given the need to maintain the uniformity of treatment across all members. For instance, the issue of reserve adequacy is important for all economies, big and small, and rightly forms a necessary part of bilateral surveillance.

IEO Recommendation 4: *Reserve adequacy indicators should be applied flexibly and reflect country-specific circumstances* (paragraph 71).

Staff Reaction: *The Assessing Reserve Adequacy paper already proposes a flexible and country-specific approach. Flexibility was also shown in pilot ESR assessments*. In paragraph 42, the paper states "Considerable judgment would be required in application to individual countries. […] Adjusting the metric in this way can be seen as a first step towards the full scenario analysis approach that is needed for a complete assessment of potential liquidity buffers […] And given a strong premium on simplicity and ease of use, it is probably better to maintain a highly simplified metric against which judgment can be transparently applied according to a country's particular circumstances." Paragraph 71: "Analysis of reserve adequacy should rely on country characteristics, directly exploring pressures against which reserves are held." Paragraph 72: "In addition to the approaches presented in the paper, country specific factors should be taken into account by considering additional measures of analyses. As relevant, country authorities and teams may wish to supplement adequacy assessments with alternative metrics and scenarios reflecting the relevant risk profiles. The latter is likely to be especially relevant for countries that face different vulnerabilities than the ones on which the proposed metric focuses." Nonetheless, there are limits to the desirability of ad hoc adjustments, so that the metric is kept simple and transparent, with country-specific circumstances principally brought in to explain measured adequacy or where the class of economy is clearly distinct (e.g., commodity producer). Otherwise, there is a risk of "over-fitting" the metric to explain whatever the country had decided to do.

IEO Recommendation 5: *Recognize the multiple tradeoffs involved in decisions on reserve accumulation and reserve adequacy at the country level, and integrate advice on reserves with advice on related policy areas* (paragraph 72).

Staff Reaction: *Over the past two years the Fund has undertaken several efforts to address this concern*. The policy framework articulated in the *Recent Experiences in Managing Capital Inflows* paper (February 2011), as well as many other papers by Fund staff, place reserve accumulation squarely within the broader policy framework (including the monetary-fiscal policy mix and the use of capital flow measures). In addition, the new *External Sector Report* integrates reserve adequacy at a country level with advice on other external sector areas.

IEO Recommendation 6: *Advice should also not be directed only to emerging markets but, when necessary, take into account the concerns in advanced economies that have arisen after the crisis* (paragraph 72).

Staff Reaction: *This recommendation is already reflected in the Fund's thinking on reserves, as expressed in the IMF's Assessing Reserve Adequacy paper.* Paragraph 65 states: "Relatively little attention has been paid to reserve adequacy in AMs until very recently." Paragraph 66: "However, the recent global crisis and ensuring stress in some European countries has generated considerable interest in revisiting reserve adequacy in AMs." Paragraph 67: "Full insurance against financial stress in AMs could imply impracticably high levels of reserves." Paragraph 68: "AMs may rely on central bank swap lines instead of reserves, especially for systemic events." Paragraph 70: "Thus the metrics developed for EMs might—in some modified form—have relevance for some AMs, but for most, reserve needs depends on detailed country-specific factors. […] In the end, there may be no alternative to scenario analysis based on detailed attention to country circumstances for most AMs."

Independent Evaluation Office Comments on Management and Staff Responses to the Evaluation of International Reserves: IMF Concerns and Country Perspectives

Executive Board Meeting
December 7, 2012

The IEO would like to thank the Managing Director for her statement, and especially her agreement with most of the IEO's recommendations that follow from its analysis. Noting, as the Managing Director also does, that these recommendations are congruent with a number of recent Fund policy positions, the IEO trusts that they will be reflected in the Fund's future surveillance activities.

However, the response by IMF staff misunderstands the main messages of the evaluation. Therefore, rather than responding point by point to staff's interpretation of the IEO's report (Report hereafter), we think it is more constructive to bring the debate back to the central areas of contention, namely the importance of excess reserve accumulation as a threat to the international monetary system (IMS) and the appropriate attention that should be given to the views of country authorities on the issues of reserve accumulation and reserve adequacy.

Reserves as a threat to the IMS

The Report argues that the IMF's discussion of risks to the IMS from reserve accumulation focused on the symptom of reserve accumulation rather than on the underlying factors driving that accumulation. The IEO is well aware of the IMF's post-crisis work on the IMS, and welcomes its wide-ranging scope. The Report calls for incorporating that often rich body of analysis into its discussion of reserve accumulation.

The Report found that the IMF has not presented a persuasive analysis of why excessive reserves constitute a major problem for the IMS. Nor has it explained how it would identify when a country's or a group of countries' reserves are large enough to pose such a problem. The Report argues that without a clear understanding of the threat of reserves to the IMS, one cannot expect countries to reduce their reserves, which they see as a critical element of a strategy to insure against shocks. An answer to these fundamental questions is essential for the Fund's success in addressing the alleged problem.

The Report and background papers, which contain more elaborate analysis, indicated that the IMF's concerns about excessive reserve accumulation did not add value to its discussion of global imbalances frequently expressed earlier in the decade. Moreover, rising and more volatile capital flows have also generated concerns in a number of member countries and resulted in higher reserve demand. The Report therefore concluded that policy measures to deal with these concerns should be targeted at the underlying causes of current account imbalances and capital flow volatility, rather than at one of their symptoms.

This point can be illustrated by addressing the staff's assertion that large demand and limited supply of reserve assets constitutes a source of distortion in the IMS. It appears more fruitful to engage the IMF membership on the fundamental policy distortions that lead to large imbalances and excessive capital flow volatility from which the high reserve demand derives, rather than focusing on the excessive reserve accumulation as the source of the distortion in isolation. Yet this was the approach adopted in the papers and speeches the Report was critical of.

Bilateral Surveillance

The Report noted that surveillance of the largest reserve accumulators was generally appropriate *specifically* because it did not focus on international reserves as such, but on the more fundamental issues involved, thus implicitly recognizing that reserve accumulation was primarily a symptom of deeper structural factors and policies. In other words, the evaluation's positive assessment of surveillance of the large accumulators is integral to the IEO's critique of the IMF's recent attempts to cast excessive reserve accumulation as a risk to the IMS.

On the other hand, the Report drew attention to several shortcomings in the bilateral surveillance of reserve adequacy in other economies. In particular, a number of these assessments were complacent, pro forma and emphasized a few traditional indicators without taking a broader holistic look at the risks to a country's external and domestic stability.

In this context we take this opportunity to address a misunderstanding by staff of the Report's conclusions regarding the role of peer comparisons in forming judgments about appropriate reserve levels. The response by staff contains an inaccurate characterization of the arguments in the Report which simply stated that for such peer comparisons to be useful they need to pay attention to relevant country-specific circumstances.

The Report also argues that academic research has not provided a solid basis for placing upper limits on reserve levels based on the impact of excessive reserves on the IMS, and that research is unlikely to provide more than approximate guidelines for minimum precautionary reserve levels. Hence, the Report concludes that the reserve adequacy metric which defines upper and lower bounds for precautionary reserves should be adapted to country-specific circumstances and be used as one element in a broad range of indicators that take into account the multiple tradeoffs involved in decisions on reserve accumulation and reserve adequacy.

Methodology

In its response staff argued that the IMF's rationale for focusing on reserve accumulation and the IMS was neither motivated by a wish to limit the level of reserves held by any country nor to actively pressure countries to reduce existing reserve levels. The IEO welcomes this clarification, but notes that the statement seems at odds with Board documents dealing with this issue, with the perceptions of many of the country authorities interviewed for the evaluation, as well as with the views of some Executive Directors and senior IMF officials who were also interviewed.

With regard to the representativeness of the country sample, the evaluation was based on the experience of 43 economies representing emerging-market and advanced countries. Given the concern about the relationship between reserves and the IMS that motivated the evaluation, the sample includes most holders of large international reserves, as determined by the absolute size of reserves and the magnitude and speed of reserve accumulation during the evaluation period.

In other words, countries were chosen on the basis of their contribution to the size and growth of global reserves, and not on the basis of their reserve holdings relative to conventional measures of domestic precautionary needs. We believe that this manner of determining the country sample ensures that it is representative for the issue at hand.

Looking ahead

The global crisis has not ended and the issues highlighted by this evaluation are pertinent to how the IMF formulates policy responses to ensure domestic and international stability. In particular, the findings and recommendations of this evaluation have a bearing on how the IMF conducts external stability assessments for countries and implements the recently adopted Integrated Surveillance Decision.

The IEO finds comfort in the fact that there have been encouraging developments with regard to several recommendations it has made, but notes that more can be done. At the bilateral level, the analysis and advice on reserves could be better integrated with the analysis of financial stability more generally, including, where relevant, in advanced economies. While the response of staff mentions that work has begun in these areas, numerous emerging country officials interviewed for the evaluation felt that much still remains to be done both at the analytical level and in the context of Article IV consultations. Several officials from advanced countries also noted that the Fund has yet to provide an analytical basis for the assessment of reserve adequacy in their countries.

In the context of multilateral surveillance, the precise nature of the externality posed by excessive reserves (as opposed to inadequate reserves mentioned in the response of staff) needs to be clarified if it is to be used as an indicator to be monitored.

The IEO hopes that the analysis, conclusion, and recommendations contained in this report will serve to enhance the work already begun at the Fund on these important issues.

The Acting Chair's Summing Up
International Reserves: IMF Concerns and Country Perspectives

Executive Board Meeting 12/113
December 7, 2012

Executive Directors reaffirmed their appreciation for the useful role the Independent Evaluation Office (IEO) plays in the international policy debate. They generally supported its recommendations while recognizing that the Fund has already made progress in many of the areas highlighted in the report in the broader context of the workstream on the international monetary system (IMS). Directors, however, held different views on the analytical underpinnings of the report, in particular on whether the membership is adequately represented in the sample chosen by the IEO.

Directors welcomed the IEO's findings that the Fund staff's research on the adequacy of official reserves is at the forefront of the field. They noted that this research has provided a rich set of tools to inform reserve assessments at the country level. Directors also noted that Fund surveillance of systemically important countries has struck the right balance in deploying those tools, taking into account other factors that affect external conditions for these countries.

Directors noted with satisfaction the broad congruence between the IEO's recommendations and current Fund policies and practices. In particular, the latest *Triennial Surveillance Review* calls for widening the scope of external stability assessments in bilateral surveillance, and the recently launched *External Sector Report* lays out, in a multilaterally-consistent manner, the evolution of external imbalances across the largest economies, integrating advice on reserve adequacy with that on related policy areas.

Directors considered that there is a need to better understand the risks to the IMS arising from a reserves buildup beyond precautionary motives. Many Directors shared the IEO's view that excessive reserve accumulation is only a symptom of underlying distortions, and stressed the importance of other factors like developments in global liquidity and capital flows. A number of other Directors agreed with staff that it is justified to highlight that, in addition to being a symptom, reserve accumulation can be a potential cause of instability for the IMS, given the limited availability of reserve assets. Directors agreed that Fund surveillance, particularly multilateral surveillance, is well positioned to identify such risks and propose remedial action.

A number of Directors noted that the IEO's report pointed to the need for more clarity in the Fund's view on precautionary reserve holdings. In particular, they saw room for the Fund to better explain its work on reserve adequacy and external sector risks in its external communication and in its policy dialog with country authorities.

Directors agreed on the desirability of a comprehensive assessment of reserve adequacy, including for advanced economies, and urged staff to build on their earlier work in the *Assessing Reserve Adequacy* paper. In this regard, most Directors saw room for making Fund guidance on reserve adequacy more alert to country-specific conditions, but in a consistent manner across countries with similar features. At the same time, a significant minority of the Board disagreed, noting that tailoring the reserve assessment too specifically to any particular member would undermine its usefulness.

As regards global spillovers from excessive reserve accumulation, a number of Directors supported the IEO's recommendation that the relative contribution of a country to such externality be taken into account, without prejudice to the principle that all Fund members should be treated evenhandedly. This approach is already being applied in the Fund's multilateral surveillance products, including the *Spillover Reports*.

In line with established practices, Fund management will continue its dialog with the Executive Board in following up on the implementation of the IEO recommendations.