

## INTERNATIONAL MONETARY FUND

### **Strengthening the International Monetary System: Taking Stock and Looking Ahead**

Prepared by the Strategy, Policy, and Review Department, in consultation with the Finance, Legal, Monetary and Capital Markets, and Research Departments

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- Intensified interest in the problems and reform of the international monetary system (IMS) has been manifest around the world in a number of recent and upcoming events, working groups, and ministerial discussions.
- This paper does not seek to cover new ground as much as to pull together the growing strands of work on the IMS, both within and outside the Fund. The goal is to inform the upcoming debate and forge a common understanding of the reform agenda ahead.
- The current IMS has survived for over forty years, underpinning strong growth in GDP and in the international exchange of goods and capital, one of its core objectives. As a result, interdependence among the world's economies has grown dramatically, making the existence of a sound system ever more important.
- At the same time, the system has exhibited many symptoms of instability—frequent crises, persistent current account imbalances and exchange rate misalignments, volatile capital flows and currencies, and unprecedentedly large reserve accumulation.
- These symptoms have come to a head since the 2008 crisis and brought renewed international momentum to the idea of attempting to reform the IMS. Yet the debate so far suggests little consensus on the underlying problems, let alone on the solutions.
- This paper identifies four root causes to these problems: inadequate global adjustment mechanisms to prevent inconsistent or imprudent policies among systemic countries; lack a comprehensive oversight framework for growing cross-border capital flows, covering both source and recipient countries; inadequate systemic liquidity provision mechanisms; and structural challenges in the supply of safe assets.
- Accordingly, the reform avenues emphasized here comprise strengthened policy collaboration; monitoring and management of capital flows; global financial safety net; and structural strengthening of the system through financial deepening and reserve asset diversification. All four would contribute both to prevent crises and to contain the costs of residual ones. An IMS reformed along those lines might lessen policy discretion for individual countries, but should yield a more stable system.

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## I. WHY REFORM THE IMS?<sup>1</sup>

1. **Introduction.** The 2008 global crisis put an abrupt end to the so called “Great Moderation”—a near decade of seemingly healthy growth widely shared across the globe. In the background however, external and financial imbalances had been building up. Do these developments in themselves make a case for an overhaul of the IMS? Arguably not. The macroeconomic policies of a handful of countries, together with inadequate financial supervision in many advanced countries, bear much of the responsibility for the built-up of imbalances and the crisis. Perhaps it would be simpler to address these issues directly. However, it is also true that, since its birth, the “post-Bretton Woods” system has undergone a number of crises. The growing complexity of the system, and the associated risk of larger adverse outcomes that sets back globalization, motivates the case for IMS reforms. The goal is to reduce the sources of instability and deal more effectively with residual volatility, without introducing excessive moral hazard. While there has been some progress since the crisis, more ambitious reforms need to be considered to durably strengthen the system.

### A. Important Successes to Preserve Despite Growing Instability

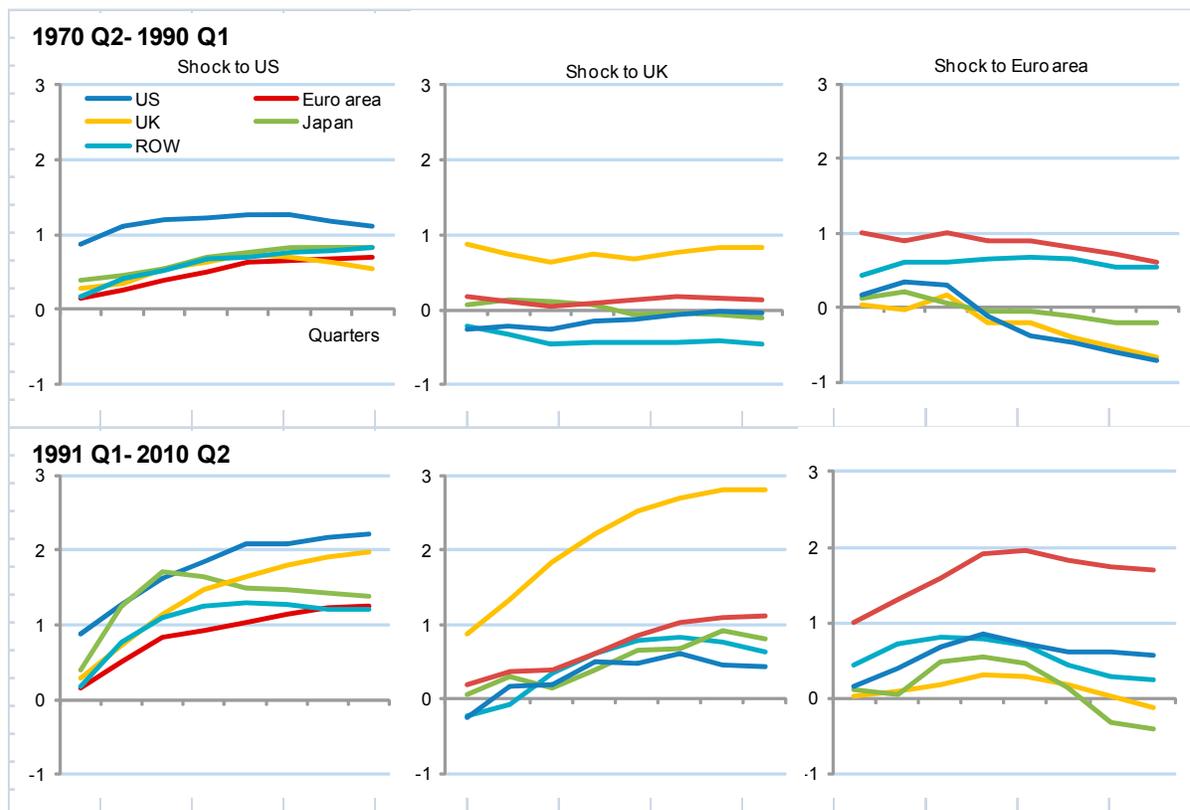
2. **Growth and integration.** The past 40 years have seen very rapid growth in global per capita GDP growth, as well as in trade and gross capital flows. As a result, the different parts of the system have become highly integrated, with external assets and liabilities exceeding four times the size of global GDP, and average trade flows (exports plus imports) exceeding half of GDP for most advanced and large emerging market economies. Links among economies have also become much more complex, both in trade, where supply chains are now global, and in finance, where many networks of interconnectedness are superimposed and systemic nodes have emerged that act as shock transmitters across the networks. Accordingly, output shocks to the largest economies have large and lasting repercussions throughout the system, much more so than 40 years ago (see Figure 1). Appendix 1 elaborates.

3. **Symptoms.** Crises have been a recurring theme throughout the post-Bretton Woods period (see Figure 2), with some of these crises taking on a systemic dimension, particularly in recent years. These have been predominantly among emerging markets, but several advanced economies have also suffered, especially during systemic crisis events such as the most recent one. Moreover, in the run up to the 2008 crisis and since, a number of symptoms of system malfunction were observed, such as persistent current account imbalances and

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<sup>1</sup> This paper was prepared by a team comprising Irena Asmundson, Bikas Joshi, Isabelle Mateos y Lago (lead), Samar Maziad, Alvaro Piris, Narayanan Raman, and Stephanie Segal, with inputs from Lorenzo Giorgianni, Manuela Goretti, Trung Bui, and Uma Ramakrishnan, under the guidance of Ranjit Teja. Graphics support from Dustin Smith and Janyne Quarm, and administrative support by Kate Jonah are gratefully acknowledged.

Figure 1. Accumulated impulse responses to a one-standard deviation growth shock  
(In percent of GDP)

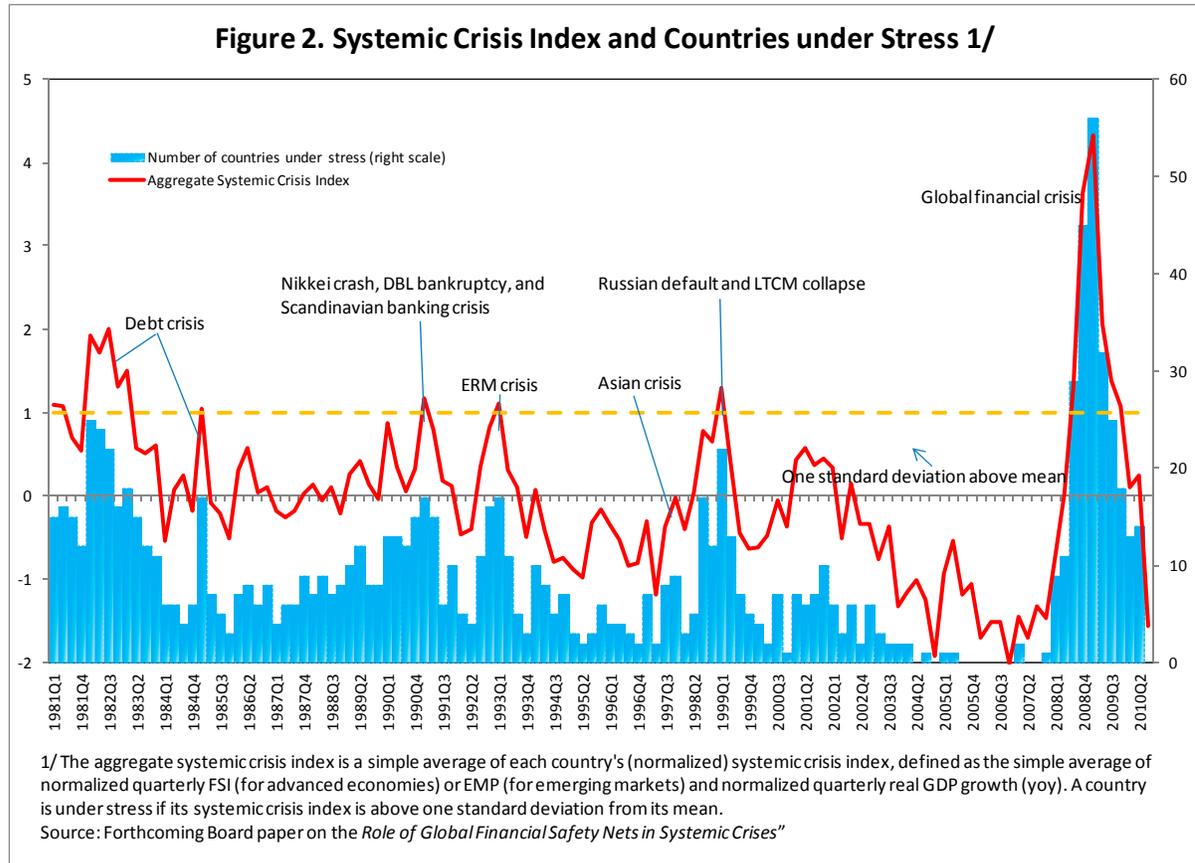


Source: Staff estimates.

exchange rate misalignment, subject to abrupt adjustments, volatile capital flows and exchange rates, and very large build-up of international reserves. Appendix 1 provides a more detailed overview of these issues, examined in previous papers (e.g., *Reserve Accumulation and International Monetary Stability*, <http://www.imf.org/external/np/pp/eng/2010/041310.pdf>).

4. **Risks.** While views differ as to the relative seriousness of these problems, they have been a source of international concern and tensions. In particular, these imbalances are not sustainable indefinitely, raising the possibility of episodic destabilizing adjustments (see Obstfeld and Rogoff, 2009, or Caballero and Krishnamurthy, 2009, for arguments linking the crisis with IMS problems). Policy choices leading—intentionally or not—to depreciated currencies have generated tension and raised the risk of a protectionist backlash. In the current context, lower global growth outcomes are also possible, e.g., if countries in deficit adjust (e.g., through the effects of deleveraging, or macro policies), while countries in surplus do not, leading to a decline in global aggregate demand (see Blanchard and Milesi-Ferretti, 2009 and 2011 for a more comprehensive discussion). In the main though, there is growing recognition that these are just symptoms, and that any meaningful reform of the IMS

should focus on trying to address the root causes of the problems. The following sections elaborate on key suspects.



## B. Inadequate Global Adjustment Mechanisms

5. **Global adjustment.** At the core of the international monetary system's ability to deliver rising integration and sustainable growth are global adjustment mechanisms. These are needed for two reasons: to allow the global economy to respond to exogenous shocks, or internal transformations; and to ensure that at the end of the day, the policies of countries making up the system add up in the sense of delivering sustainable growth and external deficits. A good global adjustment mechanism would be one where adjustment occurs smoothly rather than through crises or high inflation, and with the smallest impact on growth.

6. **Available mechanisms.** At the individual country level, current external imbalances must either be resolved through a change in domestic savings/investment balance typically requiring a change in relative prices (real effective exchange rates); or they must be financed through financial flows (official or private). Similarly, imbalances in capital flows (i.e., non zero net flows) must be made up for through a combination of adjustment in the current account, reserves, and official lending/borrowing. Because at the global level these adjustments must add up, how each country adjusts—or fails to do so—directly impacts others. One might expect therefore that a core component of an IMS would be agreement on

how adjustment should occur in different circumstances, including the respective role to be played by the different adjustment channels (e.g., prices versus quantities, or domestic versus external variables) and the relative burden to be borne by different parties to the needed adjustment. In the absence of such an understanding, the adjustment channels may vary, but it is usually the deficit countries that are forced by markets to adjust—unless their status as an issuer of a reserve currency allows them to defer that adjustment. This has been a constant feature of international monetary systems over the ages.

7. ***Current IMS peculiarity.*** Under the Gold standard and the first phase of Bretton Woods, fixed exchange rate parities (to gold or to the U.S. dollar) were the rule for all countries; they effectively ascribed external adjustment to domestic policies (subordinated as they were to the maintenance of the exchange rate parity), with cross-border capital flows also contributing to the extent they were allowed—i.e., widely under the gold standard, more scarcely after WWII. By contrast, the current system leaves to each country the choice of its exchange rate and capital account regimes, but also limits obligations on domestic policies to aiming for domestic stability. This considerably raises the risk of inconsistent regime or policy choices, both across and within countries. This is not to say that previous systems were a panacea. Indeed, both eventually broke down.

8. ***Inconsistency risks and other externalities.*** While the system effectively rests on a presumption that if every country keeps its own house in order, the system will be conducive to stable growth, the reality is different. Examples of inconsistencies and externalities are many, *even when each country pursues policies geared to domestic stability.* To name a few:

- If all systemic countries seek to pursue export-led growth by compressing domestic absorption, ex post the only possible outcome is lower global growth.
- If *all* countries are free to choose their exchange rate regime, and some decide to fix their currency to others (“anchors”), then it logically follows that any rigidity in the relative price between one pair of currencies translates into misalignments in other currency pairs (i.e., if one relative price is “wrong”, so are the remaining ones). If the underlying rigidity relates to a small country, the effect is arguably minor. If both players are systemic, so might be the consequences.
- If a floating exchange rate country with a current account deficit wishes to rebalance without sacrificing domestic absorption, it must seek higher net exports and may therefore loosen monetary policy. With an open capital account, this will trigger capital outflows that will impact the rest of the system.
- If these capital outflows are large relative to the size of the recipient economies, their financial or macroeconomic stability may be adversely affected. Such a situation is more likely to occur in a situation where fewer economies have open capital accounts.

- If several countries with any exchange rates and capital account regimes (even identically floating and open) undergo idiosyncratic shocks or have different preferences regarding the mix of policies (e.g., exchange rate, macro, and structural) to use to bring about adjustment, and the timeframe of that adjustment, imbalances could keep building up to a dangerous level.

Besides the examples above, it is clear that given the degree of interdependence across economies, any systemic country not “keeping its own house in order” will create an imbalance in the system whose effects will be felt by all others. What this suggests is that the current IMS is underdetermined. Moreover, while the large degree of discretion afforded to countries on running the whole gamut of policies at their disposal is *nationally* convenient, it may also be *globally* suboptimal. Conversely, reducing this discretion, whether through collaboration agreements or rules, would increase the likelihood of good outcomes.

### C. No Global Oversight Framework for Cross-border Capital Flows

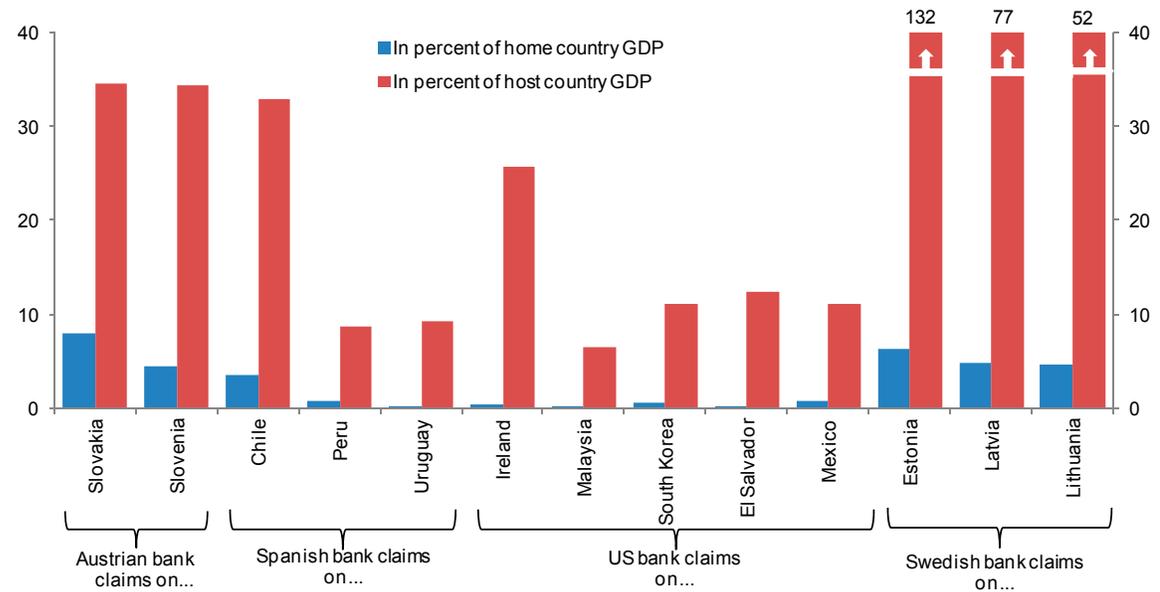
9. **Impact.** Cross-border capital flows enhance countries’ access to financing for productive domestic activity and, in principle, improve global resource allocation, thereby fostering higher levels of income and development. Increased exposure to international capital flows can also induce competition and deepen domestic capital markets, and overall generate efficiency gains. However, as the recent crisis and its aftermath have made clear, because of capital flows’ size—both absolute and relative to recipient countries’ economies—and the complex networks they establish across countries’ financial sectors, surges in capital inflows and outflows can carry macroeconomic and financial stability risks, increasing vulnerabilities and transmitting shocks across borders (see *The Fund’s Role Regarding Cross-Border Capital Flows* (<http://www.imf.org/external/np/pp/eng/2010/111510.pdf>)). They have also been an important source of exchange rate volatility, above and beyond helping correct exchange rate misalignments (see Appendix 1).

10. **Drivers.** The key driver of cross-border capital flows is of course expectations of rates of return, which particularly for portfolio flows depend crucially on interest rate differentials adjusted for credit and currency risk. Thus, in the main, capital flows are just a part of the external adjustment mechanism, at least between countries that do not restrict them, and as such a stabilizing rather than destabilizing force. That said, the domestic focus of macroeconomic, financial, and capital account policies of both source and recipient countries has tended to amplify waves of inflows, undercutting the stability of the international monetary system as a whole. For instance, monetary policy of advanced countries can have a significant impact on the size and composition of flows to emerging market countries. The onus of adjustment to inflow surges and reversals however has usually rested on recipient countries. At the same time, policies of recipient countries geared to maintaining a closed capital account or introducing “capital flow management measures” to limit potentially

destabilizing impacts of rapid inflows have the potential to divert these flows to other countries, thus displacing the instability elsewhere.

11. **No global framework.** Despite the complex interdependencies created by capital flows and related capital account policies, and unlike most other cross-border transactions of much smaller sizes (including trade in goods and related payments), there is no universal framework that addresses cross-border global flows. Existing frameworks are mainly regional and bilateral, and do not approach capital account issues from the perspective of global stability (see *The Fund’s Role Regarding Cross-Border Capital Flows* ). The effectiveness of existing regulation is uneven (see *Recent Experiences in Managing Capital Inflows—Cross-Cutting Themes and Possible Policy Framework* <http://www.imf.org/external/np/pp/eng/2011/021411a.pdf>). This gap leads to risk externalities from large cross-border financial institutions (see Figure 3), regulatory arbitrage facilitated by discrepancies between domestic regulations, procyclicality, herd behavior, excessive risk taking, and contagion—all of which contribute to making cross-border flows a destabilizing influence on the IMS.

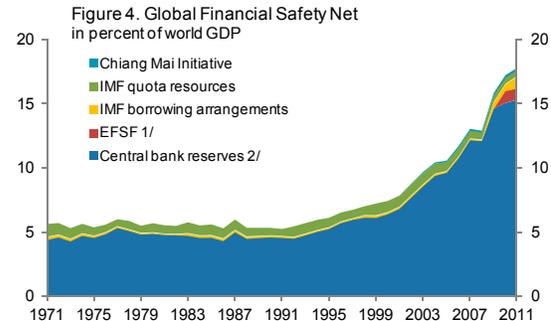
Figure 3. Cross-border claims of BIS reporting banks, selected countries December 2009



Source: BIS Consolidated banking statistics, ultimate risk basis

## D. No Systemic Liquidity Provision Mechanism

12. **Collective safety net.** In the current system, the size of the collective financial safety net (IMF resources and regional arrangements) has remained broadly constant as a share of global GDP (see Figure 4), but has declined massively compared to the size of global capital flows, which determine the size of the external shocks to which countries with open capital accounts might find themselves exposed. This known drawback is an incentive for markets to bet against a country at the first sign of liquidity pressure.



Source: WEO, IFS, country authorities, and EFSF.  
 1/ The European Financial Stability Fund can place up to €440 billion in bonds, guaranteed by Euro area member states.  
 2/ To avoid double-counting, reserves of the Chiang Mai Initiative participants are taken net of the aggregate size of the swap agreements and, after 2010, their commitments to the multilateralized CMI.

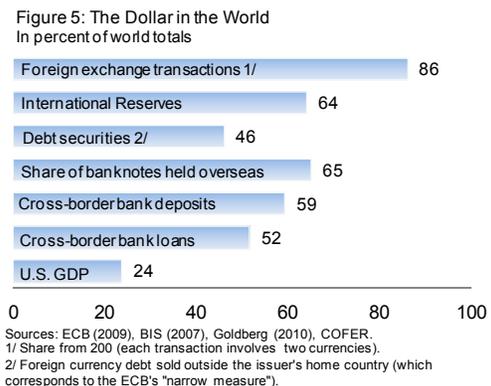
13. **Systemic liquidity.** As the recent crisis made clear, stabilizing market conditions in a systemic liquidity crisis requires the availability of potentially substantial resources.

There is at present no mechanism to ensure this function at the global level. Rather, access to global liquidity has occurred through the ad hoc actions of key central banks, with the U.S. Federal Reserve alone deploying over \$600 billion (more than twice the IMF's resources at the time).

14. **National safety net.** Against this background, most countries exposed to the threat of capital outflows have sought and succeeded in building large buffers of international reserves, which now dwarf the amount of collective insurance available (see Figure 4). Clearly this motive is not the only driver of large reserve accumulation—the lack of agreed external adjustment mechanism and smoothing the impact of capital flows are other important ones, but it is by most estimates significant.

## E. Structural Challenges

15. **Role of the U.S. dollar.** The U.S. dollar is preeminent as a unit of account and medium of exchange for international trade and financial transactions, denomination of international debt securities, commodity pricing, anchor for monetary regimes, and as a store of value (see Figure 5). Attractive characteristics—liquidity, widespread acceptance, and success as a store of value—have buttressed the dollar's predominant role, as was evident at the peak of crisis when safe haven demand for U.S. dollars sharply appreciated its exchange rate even though the crisis erupted at the core of the U.S. financial system. However, concentration of many functions

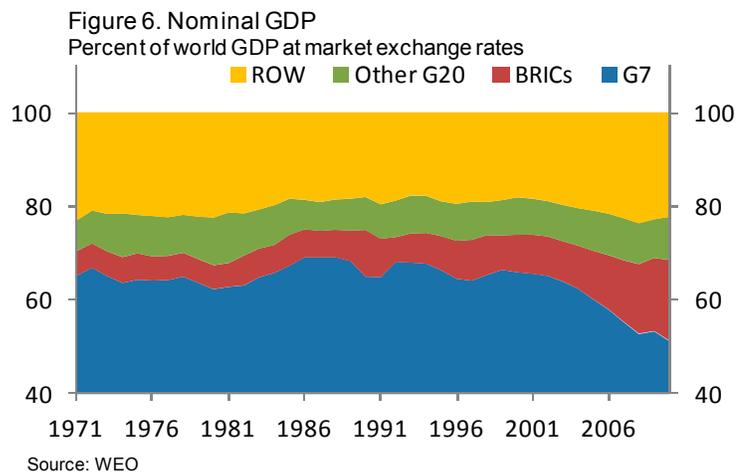


of the IMS in the currency of one nation leaves the IMS exposed to risks stemming from idiosyncratic shocks or policy decisions in that country that may not be appropriate for the rest of the world (a point discussed for example in Zhou, 2009).

16. **Global safe assets.** It has been argued (seminally in Caballero, 2006) that global imbalances have been driven in large part by a structural gap between the ability of its constituent parts to generate highly liquid safe assets, especially fixed income ones—in practice concentrated in the U.S., particularly government paper—and a rising demand for such assets, particularly coming from fast growing high savings emerging market economies with financial sectors lacking the depth they need to provide a diversified menu of stores of value. Large official reserve accumulation is one aspect of this phenomenon, which also applies to private savings.

17. **The changing “core.”** The large growth differential between rapidly growing emerging markets and developed countries means that the former now account for half of global output, up from just over a quarter in 1971 (see Figure 6). The share of the G7 fluctuated around 65 percent of global output from 1971 to 2002, then falling to 51 percent by 2010, a historically large and rapid shift (see Carney, 2011). As the large emerging markets newly at the core of the IMS develop, there are likely to be large shifts in global savings and investment behavior. Initially, as the share of global income of these high savings countries rises, so too will global savings. Over time, further adjustments are to be expected. These will respond to factors as diverse as the possible decline in precautionary household savings as social safety nets are extended, rising productivity and infrastructure needs, and increasing financial depth (see Landau, 2010). Complemented by the effects of aging in the advanced economies, further large shifts in asset allocations—and their relative prices—are likely. In previous instances where an established core added a new country or group,

the emergent country also tended to share the key characteristics of the core, in particular, in terms of exchange rate and capital account regime (e.g., U.S. at the turn of 20<sup>th</sup> century, Japan in the 1960s). However, the current global system faces the unprecedented challenge of trying to integrate highly dissimilar countries into the core.



18. **Transition to multipolarity.** As global GDP and financial assets become more broadly diversified, the view is widely held that the dollar’s preeminence will over time be eroded and give room to a more multi-polar system, with several currencies playing a key

and broadly comparable role globally (e.g. Bergsten, 2011, Cohen, 2009 and Eichengreen, 2011). The speed at which this transition takes place will have a critical bearing on the stability of the system. In particular, if a point were reached where not only flows but also stocks of assets were widely perceived as in need of currency diversification, a disorderly adjustment would likely ensue.

## II. IMS REFORM: KEY AVENUES

19. **Reform paths.** The diagnosis above suggests reform should ideally proceed along four complementary paths: policy collaboration; monitoring and management of capital flows; global financial safety net; and structural strengthening of the system through financial deepening and reserve asset diversification. All four would contribute both to prevent crises and to contain the costs of the ones that will inevitably arise.<sup>2</sup>

### A. Policy Collaboration

#### Progress to date

20. **Crisis-time Collaboration.** Global policy collaboration is in principle a pillar of the IMS, embedded in the purposes of the Fund laid out in the Articles of Agreement. However, the members' specific undertaking to collaborate with each other and with the Fund under Article IV limits the objectives of such collaboration to "assuring orderly exchange arrangements" and "promoting a stable system of exchange rates" rather than defining as the objective the stability of the IMS as a whole. Moreover, beyond regular dialogue opportunities among top policy-makers, for example, at the twice-yearly meetings of the IMFC, there was little policy coordination in recent decades. The 2008 crisis however changed this dynamic radically, as key countries saw their interests aligned in each supporting domestic demand to avert a global depression. Under the auspices of the G20, and following the Fund's advice, they embarked in a coordinated global stimulus. With the global recovery under way, it is important to preserve and consolidate the spirit of cooperation that prevailed during the crisis (see, e.g. King 2011).

21. **Sustaining collaboration.** Two processes are under way to sustain collaboration beyond the crisis.

- One is the Mutual Assessment Process set up in late 2009 by the G20 as cornerstone of its Framework for Strong, Sustainable, and Balanced Growth. This process involves extensive information sharing on respective policy plans, along with analysis by the Fund of the combined effect on the global economy of these policies, together with suggestions of global policy mix that would improve the growth outcome. Broad indicators have been agreed to help gauge the consistency of each country's policies with strong, sustainable, and balanced global growth; assessment guidelines are in the process of being defined.

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<sup>2</sup> Unless otherwise stated, the "Additional ideas for possible consideration" discussed in this section have not been formally considered by the Executive Board.

- Separately, the Fund has launched, experimentally, “spillover reports” on the five most systemic economies (China, Euro Area, Japan, U.K., and the U.S.). These reports will articulate the concerns of policymakers on impacts from other countries’ policies, and bring to bear staff’s analysis on the size and implications of such spillovers.

The hope is that both processes, through more systematic analysis of interdependencies and strengthened policy dialogue, will give peer review of the largest countries’ policies greater influence on actual policies pursued.

### **Additional ideas for possible consideration**

22. ***Multilateral commitment.*** A key weakness of the current global policy framework is the exclusive focus of firm obligations under the IMF Articles of Agreement on exchange rate policies and the absence of obligation for countries to take into account the impact of their other policies on other members or the system. In a world where 63 percent of global output comes from countries with floating exchange rates (i.e., without exchange rate policies) and spillovers often due to domestic policies, this hardly seems appropriate. Possible options for changes to ensure the legal framework is supportive of Fund surveillance will be considered in the context of the upcoming Triennial Surveillance Review and the Review of the 2007 Decision. As discussed in the context of the Review of the IMF Mandate, this problem could be mitigated by the adoption by the Fund of a framework that recommends members take into account potential systemic spillovers from their policies and gives greater emphasis to domestic policies. A more ambitious approach, recommended e.g., by Palais Royal Initiative (2011), would involve amending Article IV to introduce an obligation for IMF member countries to gear their domestic policies toward the achievement of global as well as domestic stability, thereby providing a stronger basis on which to press for globally consistent macroeconomic policies. King (2011) favors a more voluntary commitment, with the Fund playing a role in identifying measures and monitoring progress. Further changes in the organization of surveillance and its outputs may be desirable to support such change toward greater emphasis on systemic impact of countries’ policies.

23. ***Strengthened accountability:*** Some observers have also suggested consideration of fundamental changes to strengthen accountability.

- ***Policy norms.*** It has been argued that surveillance in its current form is weakened by the absence of an objective or widely agreed criteria by which to judge whether a policy stance is detrimental to domestic and global stability. This thought is clearly behind the G20’s effort to adopt guidelines to assess its members’ policies. It has been suggested for example by Truman (2010) and Dorucci and McKay (2011) that a similar approach be adopted in the context of Fund surveillance, as reducing discretion would make it harder for the Fund to avoid tough or critical assessments in the face of political resistance, both from the country concerned and occasionally the rest of the membership acting as peer reviewers. Of course judgment would still be needed to reach a conclusion, but the breach

of a norm would serve as a trigger for intensified scrutiny and dialogue (e.g. Weber, 2011, argues structural factors underlying some imbalances would need to be considered). Experience with an indicator-based approach in the context of exchange rate surveillance since 2007 suggests, however, that there are considerable difficulties in making such an approach work in practice in the absence of broad acceptance by the membership (Schenk, 2010, comments on difficulties in applying a rules-based approach in the 1970s).

- **Incentives.** Finally, it is sometimes argued that no strengthening of obligations or processes would make a material difference unless incentives—positive or negative—were attached to compliance with the agreed rules of the road. The WTO legal framework, which authorizes sanctions to induce compliance with WTO rules, is mentioned in support of this view as an alternative model that has been reasonably successful in avoiding uncooperative trade policies. Accordingly, Palais Royal Initiative (2011) and Truman (2010) both suggest a set of “carrots and sticks” (some as mild as elevation of the examination of a country’s policies to a ministerial-level body, or publication of critical assessments) that could be deployed in support of effective policy collaboration. They argue that material sanctions may not need to be implemented if serving as effective deterrents, while recognizing strong governance safeguards would need to be designed for them to be acceptable by sovereign member states. Even so, the fact is that the Fund, unlike the WTO, does not have a culture or tradition of enforcing sanctions against its members, but rather one of multilateral cooperation. It would be radical change with repercussions far beyond the realm of surveillance.

## B. Monitoring and Management of Capital Flows

### Progress to date

24. **Analysis and guidance.** Following discussion of *The Fund’s Role Regarding Cross-Border Capital Flows* in December 2010, the Executive Board agreed on the need to strengthen the Fund’s role regarding international capital flows, including developing a more coherent Fund view on capital flows and the policies that affect them.<sup>3</sup> To that end, the IMF’s work on capital flows has proceeded on both fronts.

- **Analysis.** The rebound of inflows to emerging markets in the wake of the crisis has propelled efforts to re-assess the drivers of capital inflows to these countries. At the same time, the bulk of cross-border capital flows take place between advanced economies and, as the crisis has shown, can pose an even greater challenge to systemic stability (see Bernanke, 2011). Combining a greater understanding of global

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<sup>3</sup> The Public Information Notice on *The Fund’s Role Regarding Cross-Border Capital Flows* (<http://www.imf.org/external/np/sec/pn/2011/pn1101.htm>).

liquidity conditions with identification of transmission channels promises to improve Fund surveillance and crisis preparedness at the bilateral and multilateral levels. These efforts are being advanced through a targeted research agenda and evaluation of data adequacy to track global liquidity developments,<sup>4</sup> complementing ongoing analysis in the context of bilateral and multilateral surveillance (see Box 1).

- **Guidelines.** Fund analysis has the potential to support the development and application of broadly accepted guidelines on policies to deal with capital flows both in recipient and source countries. Work regarding measures to deal with inflows is already well advanced, including in the 2010 Staff Position Note, *Capital Inflows: the Role of Controls* (<http://www.imf.org/external/pubs/ft/spn/2010/spn1004.pdf>); a Board paper on *Recent Experiences in Managing Capital Inflows—Cross-Cutting Themes and Possible Policy Framework*, and the Staff Discussion Note, *Managing Capital Inflows: What Tools to Use* (<http://www.imf.org/external/pubs/ft/sdn/2011/sdn1106.pdf>). It will be complemented with a broader agenda encompassing analysis and guidance related to countries at the source of cross-border capital flows, management of outflows, and capital account liberalization. The advisory framework from these strands of work, as endorsed by a majority of the Board,<sup>5</sup> signify first-round attempts to articulate an institutional view on various aspects of capital flows and could help achieve more consistency and evenhandedness in policy advice to members, including those with open or partly open capital accounts or that seek guidance on how to safely open the capital account. Over time, the framework could be adjusted based on experience and deeper analysis, including of the multilateral consequences of policy responses to capital flows. However, there was a diversity of views among Directors as to how the framework could be incorporated into Fund surveillance.

### **Additional ideas for possible consideration**

**25. *Evenhanded and effective oversight.*** Beyond advisory guidelines, consideration could be given at a later stage, e.g., once the future broader work mentioned in the previous paragraph has been completed, to incorporating this institutional view into Fund surveillance, to provide guidance on the scope of the members' obligations under Article IV.

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<sup>4</sup> The FSB and IMF are working together on the G20 Data Gaps Initiative. Reports on this initiative are available at <http://www.imf.org/external/np/g20/pdf/102909.pdf> (October 2009) and <http://www.imf.org/external/np/g20/pdf/053110.pdf> (May 2010).

<sup>5</sup> See the Public Information Notice (<http://www.imf.org/external/np/sec/pn/2011/pn1142.htm>).

### Box 1. Recent IMF Work on Drivers and Characteristics of Capital Flows

*IMF work on capital flows has intensified in recent years, responding in large part to the rapid rebound in capital inflows to emerging markets that has characterized the recovery. Recent work includes Staff Position and Discussion Notes, formal Board papers, and country-specific, regional, and global analysis in the context of bilateral and multilateral surveillance*<sup>1/</sup>. Selected findings of this work include:

- **Net flows have become slightly more volatile for all economies over time**, with volatility in emerging markets (EM) measurably higher than in advanced economies (AE). Across all types of flows, debt creating net flows are somewhat more volatile and less persistent than equity-creating inflows.
- **Temporary tides in capital flows to EMs appear to be strongly correlated with changes in global financing conditions**, with net flows to EMs rising and falling sharply around periods with relatively low global interest rates and relatively high tolerance for risk.
- **In addition, a tightening of U.S. monetary policy** has a negative marginal effect on net flows to elsewhere, an effect that is sharper for EMs that are more integrated with global financial and foreign exchange markets but smaller for economies with greater financial depth and relatively strong growth performance. In addition, net flows respond more sharply to a tightening in U.S. monetary policy in economies with nonpegged exchange rate regimes as opposed to those with pegged regimes.
- **Inflow episodes start at different times for different countries, but often end together.** Different “start” times likely reflect country-specific circumstances and “pull” factors, while similar “endpoints” suggest the reversal of “push” factors (e.g., an increase in global risk aversion) is dominant in ending periods of large capital inflows (see in particular *Recent Experiences in Managing Capital Inflows*).

<sup>1/</sup> This box draws on IMF Staff Position Note, *Capital Inflows: the Role of Controls* (February 2010); *Recent Experiences in Managing Capital Inflows—Cross-Cutting Themes and Possible Policy Framework*; Staff Discussion Note, *Managing Capital Inflows: What Tools to Use*.

26. **Global financial regulation.** While significant strides have been made at the global level to strengthen the regulation of *domestic* finance, ample scope remains to strengthen multilateral collaboration among national regulators, reduce the scope for regulatory arbitrage, and seek to tackle sources of excess volatility in an integrated way between source and recipient countries. The Fund, in collaboration with other institutions, notably the FSB, could usefully take a much more active stance in promoting such collaboration, identifying sources of systemic risk and suggesting steps that national regulators might take to address them. At the more ambitious end of the spectrum, there have been proposals for setting up a World Financial Organization with supranational supervisory powers (see Eichengreen, 2008 for example). While this is probably not a realistic proposal in the foreseeable future, harmonization of regulatory regimes may bear examination, and recent developments in the financial regulatory landscape in the European Union constitute an ambitious experiment that could offer lessons for the multilateral level.

27. **Amending the Articles.** Another possible step would be to amend the IMF's Articles of Agreement to better reflect the critical role of capital flows in the functioning of the IMS. In particular, Article IV could be amended to broaden the definition of systemic stability, currently limited to the stability of the system of exchange rates, to give more weight to financial stability. As discussed in *The Fund's Role Regarding Cross-Border Capital Flows*, there could also be merit in amending the Articles so as to provide a more complete framework to address the complex issues related to international capital flows.<sup>6</sup> Options include establishing an obligation to ultimately liberalize the capital account subject to appropriate safeguards and exceptions, similar to the one that exists for the current account—a suggestion made, for example, by the Palais Royal Initiative (2011), albeit previously dismissed by many Executive Directors last December; or introducing a specific obligation under Article IV, Section 1, related to capital account policies; or replacing the existing Article VI, Section 3, with an obligation of members to collaborate with the Fund and other members on capital account policies, similar to the current obligation to collaborate in the chapeau of Article IV, an option also discussed in the *Fund's Role* paper, and received more favorably. Another amendment inspired by the same objective would be to introduce into the purposes of the Fund (in Article I of the Articles of Agreement) a reference to global *financial* stability (alongside monetary).

### C. Financial Safety Nets

#### Progress to date

28. **Strong crisis response.** Realization of the magnitude of the global shock led to a major revamp of the Fund's lending tools, including especially the introduction of a new Flexible Credit Line, to enable members with very strong policy fundamentals and frameworks to gain access to contingent financing without conditionality beyond the initial qualification, (ex ante conditionality), subject to review in two-year arrangements; and the Precautionary Credit Line for members with sound economic fundamentals and frameworks but moderate vulnerabilities, which combines ex ante qualification requirements with focused ex post conditionality. Support for a tripling in resources of the Fund at the G20 Leaders' Summit in London in April 2009 also contributed to restoring global market confidence. Agreement on a doubling of the Fund's quota resources further strengthened its ability to act as a global safety net.

29. **Reserve adequacy.** In addition, analytical work was undertaken to help determine what constitutes an adequate level of reserves for precautionary, or self-insurance, purposes.<sup>7</sup> This could contribute to avoiding costly excessive reserve accumulation. While consensus is still elusive, there is broad agreement that for emerging market countries whose balance of

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<sup>6</sup> For Directors' views see the Public Information Notice (<http://www.imf.org/external/np/sec/pn/2011/pn1101.htm>).

<sup>7</sup> See *Assessing Reserve Adequacy* (<http://www.imf.org/external/np/pp/eng/2011/021411b.pdf>) and the Public Information Notice (<http://www.imf.org/external/np/sec/pn/2011/pn1147.htm>).

payments is dominated by capital account flows, going beyond traditional metrics to approaches encompassing a broad range of potential drains on reserves, including a sudden stop of new financing, withdrawal of foreign portfolio investments, capital flight, and current account vulnerabilities could be useful. A risk-weighted metric was proposed by Fund staff as a potential yardstick against which to measure reserves, with a range of 100–150 percent of the new metric intended as a reasonable basic test of adequacy across countries. While a full assessment of adequacy at the individual country level would require a more detailed examination of potential vulnerabilities and resources available to meet them, this new metric suggests significant scope in most countries for suspending and possibly reversing reserve accumulation, although coordination and signaling considerations may complicate the process. The extent to which countries will be comfortable doing so depends importantly on the reliability of the insurance provided by the global safety net.

### **Additional ideas for possible consideration**

30. *Understanding past crises.* Ongoing work at the Fund is attempting to clarify how systemic crises are propagated and identify policy measures that proved successful to defusing the stress, especially regarding liquidity. Key emerging messages are that systemic crises, though rare, tend to propagate shocks rapidly, affecting innocent bystanders in large numbers and raising the ultimate cost of such crises. Liquidity provision helps mitigate these costs, with the speed of financing a key consideration. Following an informal Board seminar, further work could identify characteristics of measures, or a mechanism encompassing a menu of measures, that may be deployed proactively to address systemic funding stress in the global economy.

31. *Global swap network.* During the recent crisis, by extending swap lines to countries in need of international liquidity, key central banks acting in concert effectively played the role of a global lender-of-last resort, and in doing so contributed greatly to stabilizing market conditions at the peak of the crisis. Looking forward however, the lack of clear qualification criteria or trigger conditions may limit predictable use and even potential availability of such tools to deal with future crises. Moreover, the narrow use of central bank liquidity to address bank funding problems (and the need to preserve central bank independence) may reduce the efficacy of this instrument to deal with government funding problems. The Fund, with its global reach and flexible instruments for the use of its resources might be well placed to complement these central bank tools during a crisis by standing ready to consider approval of financial assistance that would cover on a broad and even-handed basis its members' liquidity needs, including through pre-qualification, under existing or possibly additional lending facilities. A global swap network, whereby the Fund would work with relevant governments, central banks, and regional pools to facilitate provision of liquidity could be a logical option to fund such an undertaking, suggested e.g., by Cordella and Levy-Yeyati (2010) and Palais Royal Initiative (2011). It would also mutualize the benefits of currently very skewed national safety nets (reserve holdings).

32. **Regional tier.** Development of an effective network of crisis-resolution and crisis-prevention mechanisms requires efforts at multiple levels. The recent financial turbulence in the Eurozone has been notable in the role played by regional safety nets. But it has also highlighted the benefits arising from the expertise and financial resources of a global institution like the Fund. Such benefits tend to be larger the more crises take on a regional dimension. Given this, promoting further synergies between the Fund and regional financing arrangements in surveillance, lending activities, as well as precautionary crisis-prevention measures would be welcome.

33. **Resources.** A more secure and flexible global safety net might require mobilization of additional resources. The scope of the need would depend on the availability of alternatives, such as for example swap lines with central banks, partnerships with regional arrangements, or SDR allocations (discussed below). But there may be circumstances where it is either necessary, or preferable on effectiveness grounds, to augment significantly the Fund's own resources. While in 2009–10 it was possible to do so by turning to member countries, the process took time and may not always be politically feasible. Thus, establishing the modalities for the Fund to borrow from the markets at short notice to supplement its existing resources could be worth exploring. This could have the added advantage of offering a relative safe haven asset during times of global market stress.

34. **Risk management.** Expansion of the global safety net reduces the stability costs of crises, but may contribute to excessive risk taking that will increase the risk of crises happening in the first place. It is therefore essential that improvements in the global safety net be accompanied by precautions to contain moral hazard. These could include, for example, stronger regulations on borrowing/leverage in the financial system. Strengthened surveillance and prudent lending policies including tailored use of ex ante and ex post conditionality are key, as is enhanced financial regulation and supervision. Further reflection may be needed on how to make sure the private sector effectively bears responsibility for any excessive risk taking on its part, through more predictable procedures for involving the private sector in liquidity runs.

#### **D. Financial Deepening and Currency Internationalization**

##### **Financial deepening**

35. **Financial development and the IMS.** Countries with deeper domestic financial markets are presumed to allocate capital and diversify risk better, potentially allowing them to cope more effectively with surges and flights of capital (Bénassy-Quéré and Pisani-Ferry, 2011), and therefore strengthening systemic stability. For instance, the existence of liquid, long-term domestic currency bond markets for EMs may enhance opportunities to hedge risk and reduce the need to borrow in foreign currencies. Though the global financial crisis showed that financial depth is no guarantee against the underpricing of risk, a better understanding of financial depth, its relationship to the absorption, volatility and

management of capital flows, and policy choices (for instance, reserve accumulation, and exchange rate policy) has the potential to sharpen the quality of Fund advice with the goal of attenuating some of the weaknesses in the IMS.

36. **Promoting financial depth.** Building on past efforts to facilitate development of domestic financial markets, analytical work has begun to endeavor to make more explicit the links between domestic financial development and stability of the IMS. These include links between financial depth and financial integration (globalization) and factors that may contribute to both, ranging from macro policies (e.g., exchange rates) to micro determinants (e.g., regulatory and institutional quality). Given the many and varied paths to achieving financial depth, and the ultimate goal of enhancing the quality of policy advice to members, this work will draw on cross-country experiences as well as to the extent possible select case studies of successful and unsuccessful experiences with financial deepening across countries and income levels, and sequencing of policies.

### **Currency internationalization**

37. **Issue.** Only a few currencies are truly global; this is efficient—given the network externalities that are generated when economic agents agree to use the same currency to carry out international transactions. But, as discussed above, it also contributes to systemic fragility. Currently, only four currencies are recognized by the Fund to be freely usable, that is, in fact, “widely used to make payments for international transactions and widely traded in the principal exchange markets,” the U.S. dollar, Euro, British pound, and the Yen. Those four currencies make up the bulk of global international reserves—96 percent in 2010.

38. **Benefits.** The ability to trade, borrow, and invest internationally in domestic currency reduces exchange rate risk for domestic economic agents. Thus, expanding the use of emerging market currencies internationally could provide a less uneven distribution of exchange rate risk across countries (instead of countries issuing reserve currencies bearing none and the rest of the world all of it). In the process, domestic financial markets gain depth and liquidity, as demand for domestic currency and financial assets denominated in it increases. Enhancing the depth and range of investment options available would, over time, create alternatives to channel domestic savings and may create alternative sources of reserve assets. Augmenting the supply and diversity of globally traded assets could also improve capital allocation and risk sharing, contributing to reducing global imbalances and enhancing the system’s resiliency to shocks. And while efficiency issues are important, it is not clear that the system could not handle efficiently a somewhat larger number of international currencies (see Eichengreen, 2011 and Eichengreen and Flandreau, 2010, in support of this view).

39. **What does it take?** The size of the economy, its trade volume, and depth and liquidity of its capital market, as well as the stability and convertibility of its currency are the main determinants that support the internationalization of a currency (Cohen, 2009). While

government initiatives can help, the process is ultimately market driven, and some currencies have failed to achieve much international use in spite of authorities' efforts, while others have achieved such status in spite of officially-created disincentives. The process of currency internationalization is therefore gradual and depends on the interplay between free access to the domestic currency and capital markets, and the willingness (and ability) of foreign agents to issue, hold, and actively trade assets denominated in that currency. It is also a process that involves a number of risks to domestic financial stability and control over monetary policy.

40. **Further study.** Given the potential benefits of counting on a broader set of international currencies, there would be merit in encouraging this, with adequate safeguards. Further work by staff is under way to distill lessons from cross-country experience in internationalizing their currencies through policy initiative and the application of those lessons to emerging market currencies to assess their potential as reserve currencies.

### **E. Role of the SDR**

41. **Potential contribution.** As discussed recently by the Board (see <http://www.imf.org/external/np/pp/eng/2011/010711.pdf> and <http://www.imf.org/external/np/sec/pn/2011/pn1122.htm>), the SDR could potentially make a positive contribution toward greater IMS stability in the following ways:

- Expanding the stock of SDRs through regular allocations could meet some of the need for precautionary reserves, thus contributing to alleviate the global safe asset shortage, and thereby global imbalances.
- Encouraging the use of the SDR as a unit of account to price global trade and denominate financial assets could mitigate the impact of exchange rate volatility and create natural demand for official SDR or SDR-denominated assets as an alternative store of value.
- Sovereigns and IFIs could kick start the development of a market for SDR-denominated assets by issuing and investing in those assets to enhance their liquidity and create the impetus for a private market to develop. The Fund could also issue such assets strictly to meet a need to supplement its resources.
- Expanding the SDR basket composition from the current four currencies, to include the most widely used emerging market currencies would reflect the increasing weight of emerging markets in global trade and finance and could facilitate the internationalization of those currencies,<sup>8</sup> while supporting an enhanced role for the SDR.

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<sup>8</sup> The issue of whether the currency is determined by the Fund to be freely usable would have to be addressed in this context.

42. *Next steps.* For the SDR to play a more useful role a number of technical challenges must be addressed and a great deal of consensus-building and policy coordination will be needed. Further work is also under way in a number of areas, including: i) safeguards to ensure that the use of regular SDR allocations does not undermine macroeconomic stability or put an undue burden on the voluntary SDR market, as discussed in <http://www.imf.org/external/np/pp/eng/2011/010711.pdf>; ii) development of a private market for SDR-denominated assets and wider consultation with relevant stakeholders in this area; and iii) reviewing the SDR valuation methodology with a view to enhancing the role of the SDR and to assessing the potential for expanding the basket to include currencies of large emerging market economies in line with their growing role in global trade and finance, as well as interest rate setting issues.

### III. CONCLUSION AND ISSUES FOR DISCUSSION

43. *In a nutshell.* The paper has identified a number of shortcomings in the architecture and functioning of the current IMS, along with four complementary reform paths. Arguably, none of the shortcomings identified is lethal on its own; but together they add up to significant disturbances, that could derail sustained global growth and, in adverse states of the world, lead to major crises. On the other side, there are few, if any, “low hanging fruits” left in reforming the IMS. The bulk of the ideas on the table for further reform require significant advances in the degree of multilateral collaboration, which inevitably entails at least a perception of diminished sovereignty. In addition, some will require a relatively long time frame to be implemented.

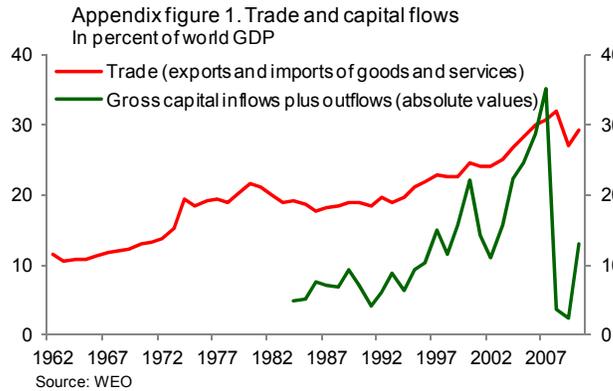
44. *Issues for discussion.* At this stage, Directors may wish to focus their remarks on the following questions:

- What are the most critical problems requiring fixing in the architecture or functioning of the IMS?
- Is there a case for further strengthening macroeconomic policy collaboration? How can Fund surveillance best contribute? In the short run? In the longer run?
- How can the Fund best help maximize the benefits of cross-border capital flows? Is explicit emphasis on cross-border financial flows in the Fund’s mandate desirable?
- Is the current balance between global, regional, and national safety nets appropriate? If not, what reforms should be given priority to improve it?
- Are financial deepening in emerging markets and, for the largest ones, internationalization of their currencies promising avenues to explore further? Should the international community seek to facilitate such developments?
- Does the recently agreed work program on the role of the SDR remain adequate? Which strands should be prioritized?

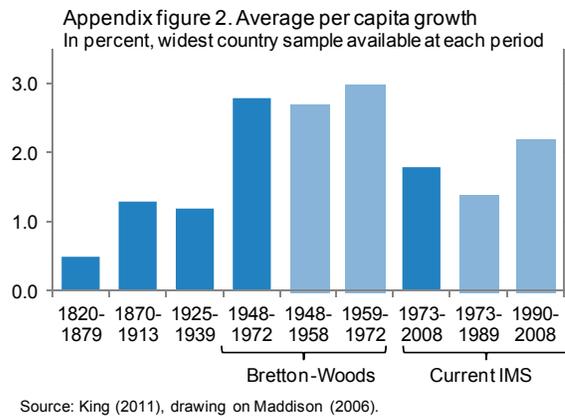
**Appendix 1. Key Successes and Symptoms of Malfunction in the IMS**

**A. Some Important Successes**

1. **Exchange of goods, services, and capital.** Article IV, Section 1 states that “the essential purpose of the international monetary system is to provide a framework that facilitates the exchange of goods, services, and capital among countries ...” In this respect, system in place since the end Bretton Woods regime has success. Global trade and flows have grown much more than overall activity (see Appendix Figure 1).



2. **Sustainable growth.** A objective of the IMS according Article IV is to “sustain sound economic growth.” Historical show that global growth has higher and less volatile since 1973 than under pre-War II arrangements, but lower more volatile than under the Bretton Woods period (see Appendix Figure 2). Of course, other factors (such as post-war reconstruction or the oil shock) underlie differences.



**B. Growing Interdependence**

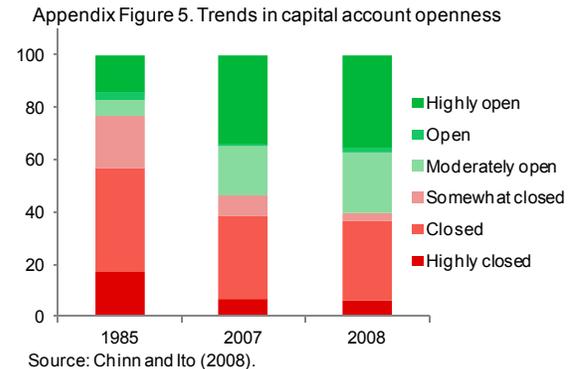
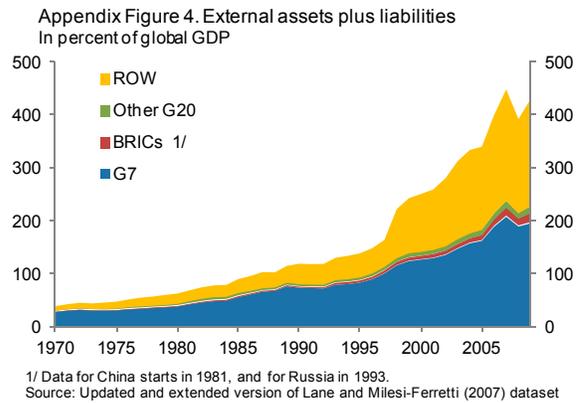
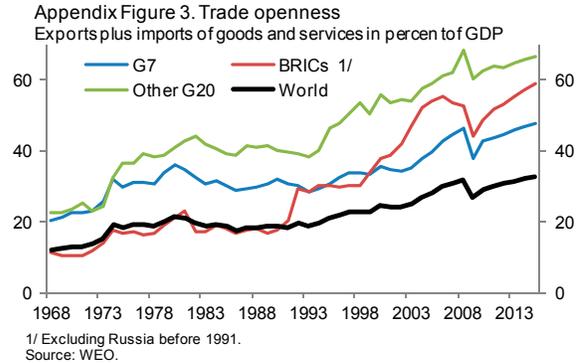
3. **Openness.** As a result of the IMS’s success, the global economy has become much more open and interconnected over time. Trade openness has grown—tripling under the current IMS for the largest emerging markets—and the largest economies at the core of the IMS are significantly more open than the world as a whole (see Appendix Figure 3). Total external assets and liabilities of the largest economies rose sevenfold between 1971 and 2009, to about 2½ times global GDP. This was driven by an explosion of cross-border financial relationships between advanced countries in the sample, whose average total external assets and liabilities rose from 60 percent of own GDP to close to 500 percent (see

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Appendix Figure 4). While for the largest emerging markets the ratio has quintupled from 20 percent of own GDP to 100 percent over the same period, they represent a small fraction of the total given their still shallow domestic capital markets. And, while emerging markets are still far from fully integrated into global financial markets (60 percent of BRIC external assets are held in the form of reserves), their increasing linkages with global markets and more open capital accounts (see Appendix Figure 5) means that global shocks can carry significant implications for the financial stability of emerging markets.

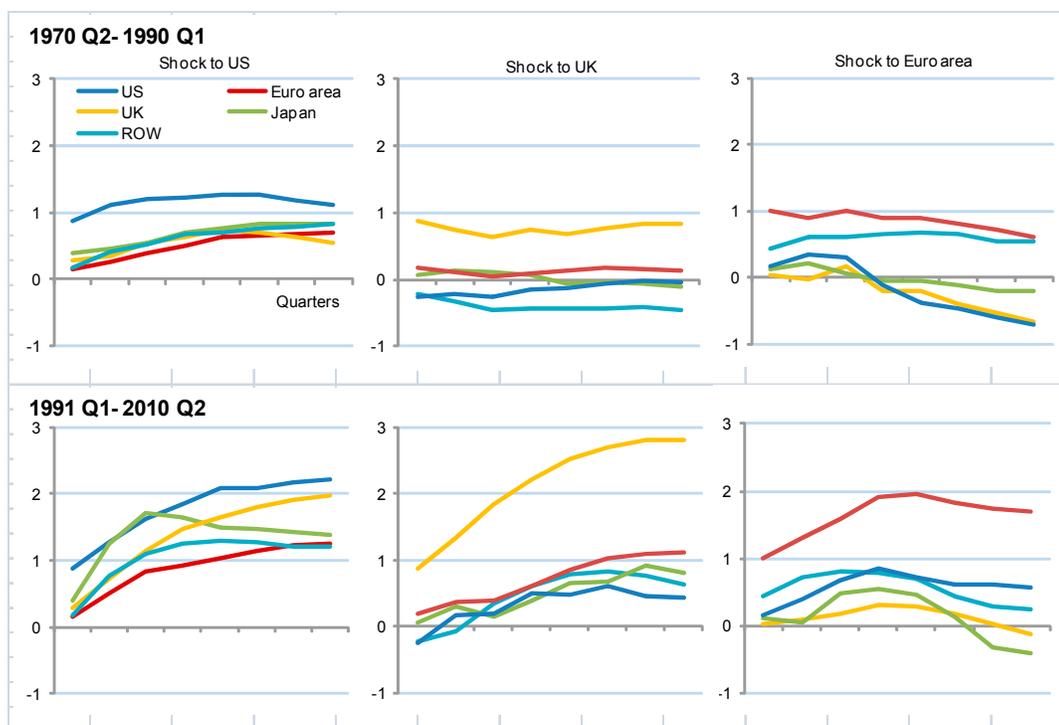
4. **Tied fates.** Accordingly, new econometric techniques developed by Bayoumi and Bui (WP/10/139) point to significant macro-financial spillovers among major economies and to the rest of the world, which have grown significantly over the past two decades. Shocks from the U.S., Euro Area, and U.K. generate the largest impact with an increasing role of financial spillovers especially once the analysis is extended to the global crisis period (see Appendix Figure 6). These channels of interdependence will be discussed extensively in upcoming Spillover Reports.

5. **Complexity.** These linkages have also become increasingly complex: global supply chains have greatly increased intermediate goods, trade, and the range of source countries for manufactures, information technology has extended the range of services that can be traded, and large and complex cross-holdings of financial claims have emerged. The emergence of “systemic nodes”—economies with a



central role on the functioning of these networks—have accompanied these developments (see *Understanding Financial Interconnectedness* <http://www.imf.org/external/np/pp/eng/2010/100410.pdf>). These nodes serve as shock transmitters across the networks, and events in the nodes quickly propagate across the globe.

Appendix Figure 6. Accumulated impulse responses to a one standard deviation growth shock  
(In percent of GDP)



### C. Symptoms of Malfunction

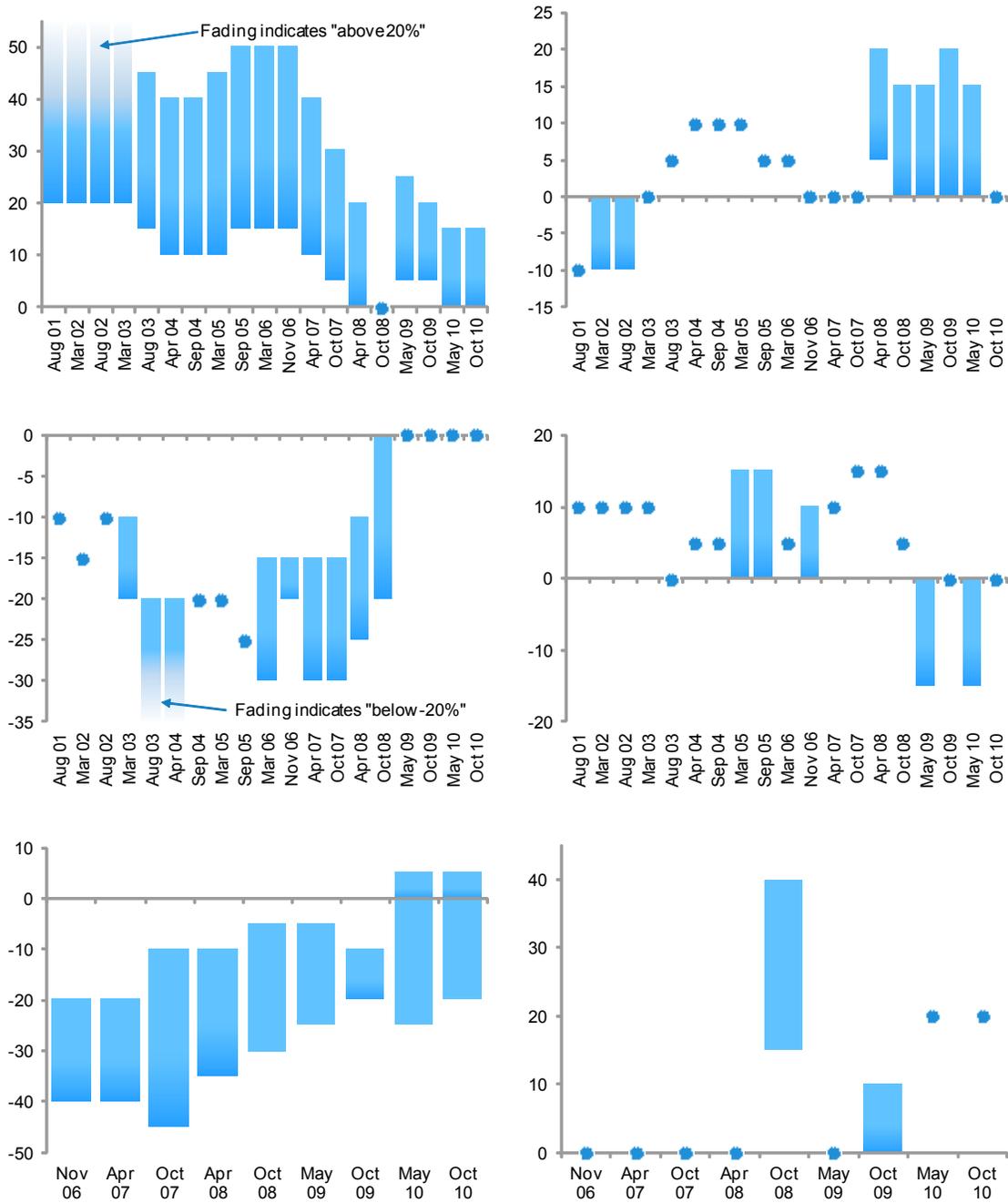
6. ***Elusive stable underlying conditions.*** These closed ties and complex interconnections among its parts make it all the more important for the system itself to be conducive to stable cross-border relations. As the next section elaborates, this objective has largely been elusive.

- ***Persistent imbalances and misalignment.*** With the end of formal exchange rate parities of the Bretton Woods system and the subsequent opening of capital accounts, adjustment of external imbalances has primarily reflected market forces. While often swift and harsh for smaller economies in deficit, these pressures have been relatively nonexistent for countries with external surpluses and weak for countries in deficit issuing international reserve currencies. For the latter group, this is because their financial liabilities are in high demand, leaving them more leeway to pursue domestic policy aims, financed by

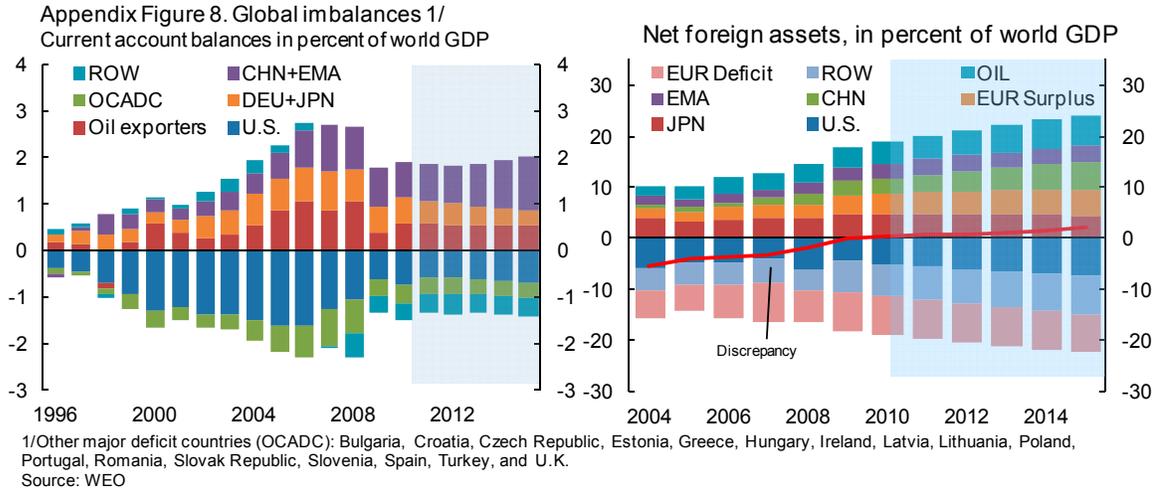
external borrowing in their own currency. The result has been large and persistent real exchange rate misalignments (see Appendix Figure 7) and current account imbalances (see Appendix Figure 8).

### Appendix Figure 7. CGER Exchange Rate Misalignment Estimates

Selected large advanced and emerging economies. Bars show ranges, dots point estimates, in percent

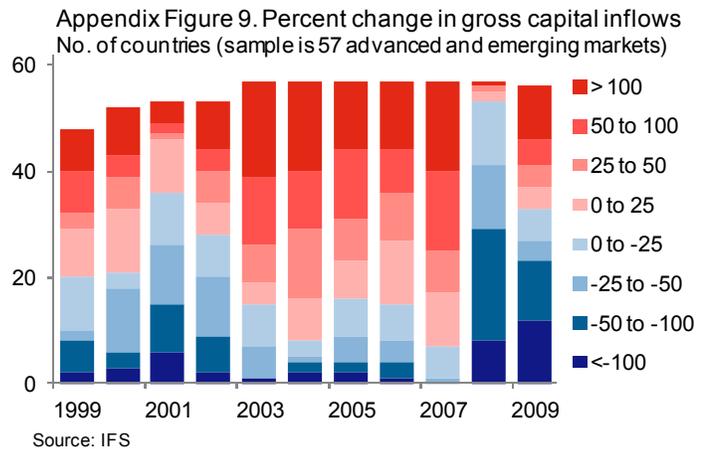


Source: CGER



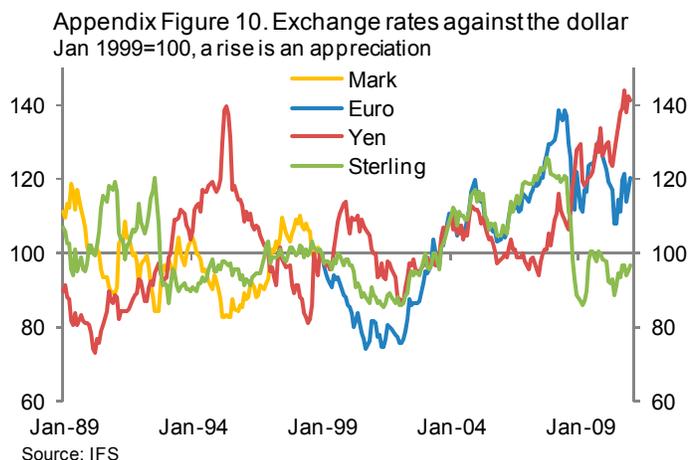
- **Excess demand for reserve assets.** Current accounts are mirrored by large net capital flows—in many cases, *official* capital flows resulting from reserve accumulation and sovereign wealth funds. These are concentrated in a narrow range of reserve assets, notably U.S. Treasury debt—and given the magnitude of the flows, this demand may have contributed to durably loose financial conditions in the core reserve issuers. Private savings from emerging markets with shallow financial markets directed to “safe” assets produced in the main international financial centers may have had similar effects. (See Bernanke, 2011 and Warnock and Warnock, 2009).
- **Volatile capital flows.** Cross-border capital flows have often been very volatile (see Appendix Figure 9). This has made cross-border capital flows a key component in many emerging market crises, and globally in the 2008 crisis.

**Volatile exchange rates**—by which is meant high standard deviations of nominal or real rates (see Appendix Figures 10 and 11). Nominal price volatility reflects a process of “price discovery” by which markets clear, allowing exchange rates to act as a buffer to shocks and facilitate necessary adjustments in relative prices. However, the question arises whether volatility that helps to clear *financial* markets is sometimes



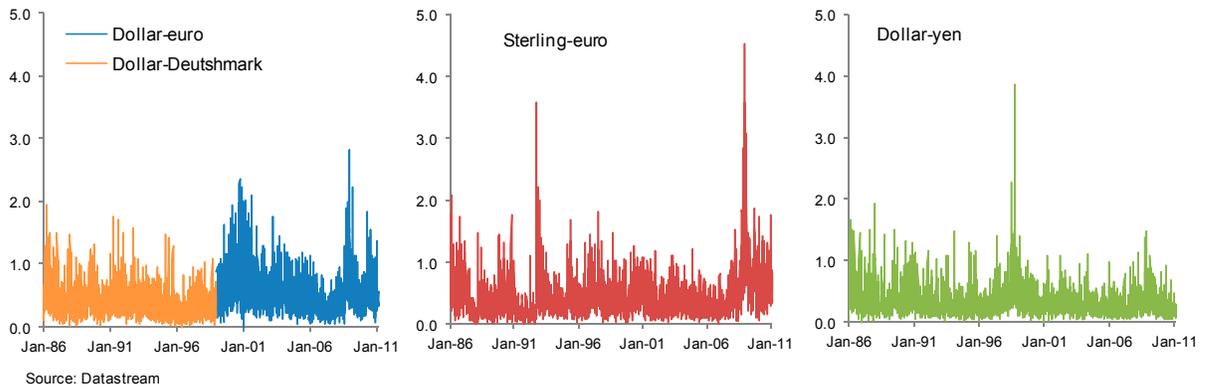
unhelpful in facilitating *real sector* adjustment and long-term investment. Features of financial investment—“momentum” investments in existing trends, or passive investment against a benchmark, for instance—

could generate persistent deviations from or swings around long-term fundamentals, as could market imperfections such as bubbles and “accelerator” effects in upswings (rising asset prices increase shareholder equity or collateral value and perceived creditworthiness, allowing investors to borrow—and invest—yet more). This could have real economic costs:

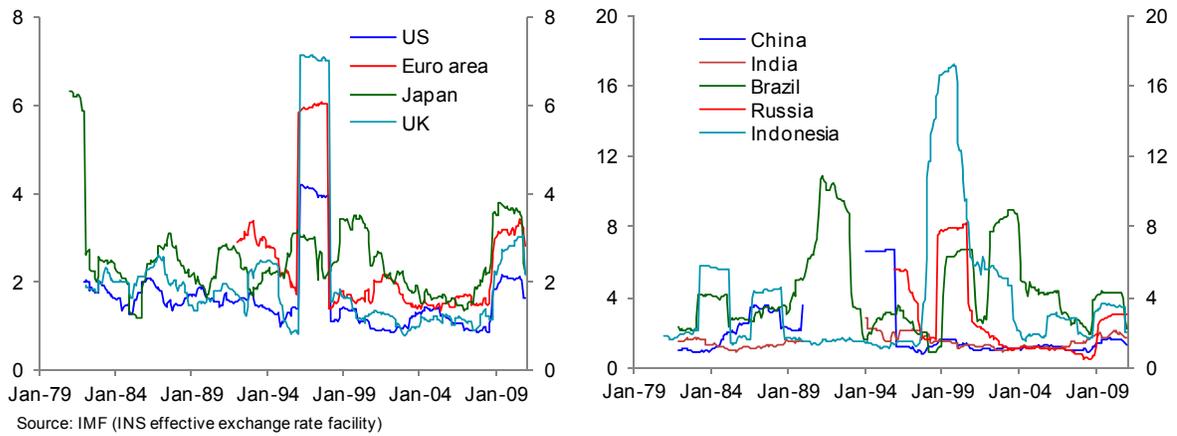


- At short time horizons volatility can be hedged, but this is not cost-free—the greater the volatility, the greater the hedging costs;
- Volatility is also present at longer horizons, with bilateral and effective nominal and real exchange rates drifting widely, or swinging back and forth at wide amplitudes, including over periods where structural change would not seem to warrant significant realignments (see Appendix Figures 10 and 12). With little certainty over the rates of return in domestic currency on projects yielding returns in foreign currencies, this may complicate real investment decisions and limit the appetite for international exchange for all but the largest global companies (Cooper, 2006; Campa and Goldberg, 1999; or Goldberg and Klein, 1998; are examples of papers arguing—theoretically or empirically—that exchange rate volatility can affect real sector economic decisions).
- Whether there are overall costs of volatility—in terms of lower output resulting through, for example, higher costs or altered investment decisions—is not clear in the empirical literature. This must be balanced against the benefits noted above in terms of shock absorption and the costs and benefits of alternatives to market-based exchange rate determination.

Appendix Figure 11. Exchange rates indices: rolling five-day standard deviations



Appendix Figure 12. Real effective exchange rates: rolling 24-month standard deviations of monthly growth rates



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