

Reforming the Architecture of the International Monetary System: Managing the Impossible Trinity

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I. Introduction

The global financial crisis of 2008-09, the follow-on Great Recession and the Euro area sovereign debt crisis have spurred renewed interest in reform of the international monetary system (IMS). The deficiencies of the IMS are well-known, repeatedly exposed by systemic malfunctions in the form of repeated occurrence of financial crises with systemic spillovers, characterized by global imbalances, exchange rate misalignments and volatility, high mobility and sudden stops in capital flows. Yet in a fundamental sense, the North Atlantic financial crisis of 2008 and its global after effects have brought these issues to a head on account of its sheer complexity, pervasiveness and persistence. Increasing financial market integration and the interdependence of economies have provided a whole new dimension to the IMS, motivating the case for truly ambitious reform. Moreover, the drive for transformation has acquired a global political context, as reflected in the G 20 deliberations.

When the evolution of the IMS is placed in, what stands out is the inertia of governments and international organizations alike to embrace radical changes in the IMS, partly due to ideological concerns and vested interests, and partly due to network externalities associated with existing arrangements (Eichengreen and Sussman, 2000). It has also been argued that the North Atlantic financial crisis of 2008-09, despite all its costs, has not really jeopardized international monetary stability, and the IMS is not on the verge of collapse (International Monetary Fund (IMF), 2010). What the crisis has shown, however, is that the imperfections of the IMS feed and facilitate developments and policies that are ultimately unsustainable and expose the system to risks and severe shocks that are difficult to address. Accordingly, this

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paper attempts to evaluate the proposals on various facets of the IMS that are on the table, and to set out some responses, which reflect an Indian and EMEs standpoint in the debate. Clearly, at this stage, there is little consensus on these issues, either in the burgeoning academic literature or in the deliberations of the national and international bodies dealing with the aftermath of the North Atlantic financial crisis. The issues emerging sit uncomfortably on the trade-off between global governance and national sovereignty.

The rest of the paper is organized into six sections. Section II addresses what exactly is intended by the acronym IMS, its ambit and scope, the legal framework underlying it and what it does not encompass. This will help to situate the rest of the discussion in its appropriate setting. This section also presents various facets of the problems that are at core of the IMS. Section III deals with the recent reform proposals relating to the surveillance function of the IMF. In view of its responsibility of oversight of the IMS, effective surveillance by the IMF is critical to the health of the system. Section IV evaluates new initiatives towards a multilateral approach for the management of capital flows, which have generated considerable heat and dust in the ongoing international debate, and in particular, on the role and *locus standi* of the IMF. Section V explores the recent rapid reserve accumulation in response to perceived imperfections in the IMS, and examines the remedies being discussed, particularly the internationalization of emerging economy currencies so as to develop a risk-diversifying multi-polar world. The role of central banks in fostering financial stability going forward is discussed in Section VI. The concluding section brings these strands together, while recognizing that governance reform of international financial institutions is central to the IMS if it has to have legitimacy, effectiveness and even-handedness.

II. International Monetary System

The term ‘international monetary system’ is often used interchangeably with terms such as ‘international monetary and financial system’ and ‘international financial architecture’. Since the nomenclature involves de jure/de facto jurisdiction, obligations and oversight concerning sovereign nations and multilateral bodies, it is important to be precise and specific.

The objective of the IMS is to contribute to stable and high global growth, while fostering price stability and financial stability. The IMS comprises the set of official arrangements that regulate key dimensions of the balance of payments (IMF, 2009c; 2010a). It consists of four elements: (a) exchange arrangements and exchange rates; (b) international payments and transfers relating to current international transactions; (c) international capital movements; and (d) international reserves. The essential purpose of the IMS is to facilitate the exchange of goods, services, and capital among countries.

By the Articles of Agreement establishing it, the IMF is required to exercise oversight of the IMS through surveillance over the policies of member countries, with a sharp focus on exchange rate policies, as well as over the IMS at large. The obligations of member countries are to direct economic and financial policies and foster underlying economic and financial conditions for orderly economic growth with reasonable price stability ('domestic stability'); avoid manipulating exchange rates; and follow compatible exchange rate policies. In 2007, the IMF sought to broaden the scope of surveillance from the narrow focus on exchange rates to the concept of 'external stability' – "a balance of payments position that does not, and is not likely to, give rise to disruptive exchange rate movements" (Bilateral Surveillance over Members' Policies Executive Board Decision, June 15, 2007) – but the focus on exchange rates as the main objective was retained.

What are the implications of this legalese? First, within the so-called international financial architecture, the IMF as a multilateral institution has a very specific mandate and is expected to make its distinct contribution to human welfare only by and up to ensuring the stability and effective operation of the IMS *i.e.*, balance of payments; exchange rates. This is important to be kept in mind in view of the several areas into which the IMF has been seeking to amorphaously expand its outreach and ambit – poverty; climate change; inequality; financial supervision; capital flows; to name a few. Although the Articles of Agreement define strictly the powers of the IMF, internal efforts are recently underway to apply the doctrine of implied powers of international organizations and interpret the text of the Articles to provide specific content to these powers, and to member countries' obligations (IMF, 2011). This mission creep is most evident in the new proposals being brought to reform the IMF's surveillance mandate, as will be shown in the following section. In our view, these developments warrant caution and vigilance, as they collide with the principles of national sovereignty and specialization.

Second, the IMS is not synonymous with the international financial system. Indeed, the founding fathers may have intended it not to be so. Over the latter, the IMF has no powers of oversight beyond the broad appraisal of domestic policies and conditions that may encompass the financial sector. Since 2009, the IMF has sought to make its Financial Sector Stability Assessment (FSSA) – a component of its technical assistance *i.e.*, the Financial Sector Assessment Program (FSAP) that is jointly owned with the World Bank – mandatory for 25 countries. The pros and cons of this move can be debated, but the IMF seems to be reaching beyond its mandate as defined in its Articles.

Finally, as demonstrated by recent crises and by the North Atlantic financial crisis of 2008-09 most starkly, policies and conditions in systemically important countries can have huge negative externalities for the IMS at large, whether they are transmitted through the balance of

payments, or through other channels such as the confidence channel. Clearly, the responsibility for the stability of the IMS, which can be eroded by the external effects of policies/conditions of systemically important economies, has to be assigned more specifically – with size, comes responsibility. How will oversight be exercised when these countries may consult and confide with the IMF, but not contain and cut back? If countries are required to adjust domestic policies/conditions to address external effects, it would represent a surrender of national sovereignty. Such a situation would also raise the free-rider issue - why have the IMF?

IMS Performance

Over the last century or so, the IMS has evolved continuously reflecting ongoing changes in global economic realities and in economic thought in search for an anchor (Banassy-Quere and Pisani-Ferry, 2011 provide a comprehensive review). In the process, the binding rules that marked its passage through the gold standard and Bretton Woods have fallen by the way side. The gold standard provided the anchor in the pre-World War I period: this period was characterized by free capital flows and fixed exchange rate and hence no independent monetary policy. The inter-war period was marked by confusion, which yielded to the Bretton Woods system of semi-fixed exchange rates and controlled capital flows, which provided scope for an independent monetary policy. The collapse of the Bretton Woods system in the early 1970s led to the introduction of the prevailing system of floating exchange rates, free capital flows and independent monetary policy in the major advanced economies. Within this post-Bretton Woods framework, the monetary policy framework also transited from a monetary targeting regime in the 1970s and the 1980s to inflation targeting type frameworks. Given the preference for open capital account, and the belief in efficient financial markets, financial sector regulation moved from an intrusive framework to a light touch framework.

However, given the recurrent and the increased frequency of financial crises, the IMS appears to be caught in a bind analogous to the impossible trinity (Fleming, 1962; Mundell, 1963) – domestic stability versus external stability versus global stability. The pursuit of sustained growth with price stability may not guarantee a balance of payments position that does not have disruptive effects on exchange rates; domestic and external stability cannot preclude threats to global stability. Neither can global stability assure domestic/external stability at the individual country level.

The performance of the IMS in the post-Bretton Woods era has been mixed when evaluated against relevant metrics. Average global growth has tended to slow and has also become volatile, mainly on account of recent developments in advanced economies (AEs). While it steadily picked up in the emerging and developing economies (EDEs), the latter also

contributed stability to global growth. Inflation moderated globally in both AEs and EDEs, and inflation variability also came down in both set of countries (Table 1). The period of the Great Moderation is generally believed to have begun with the taming of inflation in the early 1980s and extending up to the onset of the slowdown in 2007 before the global crisis struck. This is not discernible in terms of decadal comparisons. While the variability of growth did come down in the 1990s relative to the preceding decade, it was still higher than in the 1970s. Analogously, the lowest variability in inflation seems to have been in the 1970s for the advanced economies and in the 2000s for the emerging and developing economies. This table provides no information on causality. Therefore, it is difficult to infer whether the post-Bretton Woods IMS is responsible for heightened instability, or whether it exists in a period of heightened volatility (Bush, Farrant and Wright, 2011).

Table 1: IMS - Key Metrics

	Average (Percent)					Variability (Percent)				
	1970-79	1980-89	1990-99	2000-2007	2008-2011	1970-79	1980-89	1990-99	2000-2007	2008-2011

Real GDP Growth

World	4.2	3.1	3.5	4.0	2.1	36.5	40.4	19.8	28.2	121.1
AEs	3.6	3.1	2.8	2.6	0.2	52.2	50.0	27.4	33.2	1750.1
EDEs	5.7	3.4	5.0	6.4	5.2	23.5	37.3	35.6	28.1	46.4

CPI Inflation

World	10.3	15.8	15.3	3.8	3.9	35.6	11.7	58.5	9.6	39.8
AEs	8.6	6.5	2.9	2.1	1.9	34.9	53.2	43.8	13.9	75.8
EDEs	15.1	41.7	47.3	6.7	6.9	40.0	21.2	70.5	15.8	26.5

Note: Variability is measured by coefficient of variation. AEs = Advanced Economies. EDEs = Emerging and Developing Economies.

Source: International Financial Statistics, IMF (downloaded from <http://elibrary-data.imf.org/>, accessed on November 19, 2012).

Consistent with the Great Moderation hypothesis, real GDP growth over the Great Moderation period (1984-2007) (3.0 percent) in the advanced economies was almost the same as in the preceding 14-year period (3.1 percent during 1970-83), while the coefficient of variation halved to 32 percent from 63 percent over the period. Inflation declined from 8.9 percent in 1970-83 to 3.0 percent in the Great Moderation phase, although the coefficient of variation was also higher - it increased from 34 percent to 44 percent. However, the Great Moderation period was immediately followed by the North Atlantic financial crisis, with large output losses and volatility. Arguably, the macroeconomic and financial policies followed during the Great Moderation period contributed to the subsequent crisis. Accordingly, we need to consider the Great Moderation and the post-crisis periods together (i.e., 1984 to 2011) to assess macroeconomic outcomes. In this case, real GDP growth in the advanced economies falls to 2.6 percent during 1984-2011 from 3.6 percent during 1970-83, while the coefficient of variation was broadly unchanged (62 percent during 1984-2011 vis-à-vis 63 percent during 1970-83). Thus, growth has been lower and equally volatile in the post-1984 period.

Symptoms of Malfunction

More causal evidence is the increase in the incidence of crises of various types in comparison to past eras of the IMS – a notable feature of the post-Bretton Woods period. In particular, banking crises and currency crises have increased dramatically in their frequency of occurrence, with the period 1973-89 being particularly prone to crises, including to defaults. Even in the subsequent period i.e., 1990-2010, the incidence of all types of crises has remained high by historical standards, with the exception of external defaults (Table 2). Financial crises have not only a short-term but also a persistent and long-lasting adverse impact on output levels. For example, the level of output in the East Asian countries impacted by the 1997 financial crisis is still significantly lower than the levels had these economies continued to grow at the rate they had been growing in the decade prior to the crisis (IMF 2009b). This is also true of the ongoing North Atlantic financial crisis: output levels in the three major advanced economies – the US, the euro area and the UK – are significantly below the levels had growth continued its pre-crisis trend.

Period	Banking Crisis	Currency Crisis	External Default
Gold Standard (1870-1913)	1.3	0.6	0.9
Inter-War Period (1925-1939)	2.1	1.7	1.5
Bretton Woods (1948-1972)	0.1	1.7	0.7
a.1948-1958	0.0	1.4	0.3
b.1959-1972	0.1	1.9	1.1
Post Bretton Woods (1973-2010)	2.6	3.7	1.3
a.1973-1989	2.2	5.4	1.8
b.1990-2010	3.0	2.4	0.8

Source: in Bush, Farrant and Wright (2011) [Table A, p,7].

The latest financial crisis and the concomitant recession have led to historically high and rising level of public indebtedness across the advanced economies. Empirical evidence indicates that episodes of such large public debt overhang are associated with lower growth than during other periods and the cumulative shortfall in output from debt overhang is potentially massive (Reinhart, Reinhart and Rogoff, 2012). These authors find that public debt/GDP levels above 90 percent are associated with an average annual growth rate 1.2 percent lower than in periods with debt below 90 percent debt; the average annual levels are 2.3 percent during the periods of exceptionally high debt versus 3.5 percent otherwise. According to Cecchetti et al. (2009), financial crises are more frequent than most people think, and they lead to losses that are much larger than one would expect. In a sample of 40 financial crises, these authors found that one-fourth resulted in cumulative output losses of more than 25 per cent of pre-crisis GDP and one-third of the crisis-related contractions lasted for three years or more. Thus, it is clear that

the past four decades have seen a significant increase in financial crisis, and are associated with large and persistent output and employment costs. Thus, the post-Bretton Woods system of flexible/floating exchange rates, freer capital flows and the practice of independent monetary policy has not brought financial stability to the global economy.

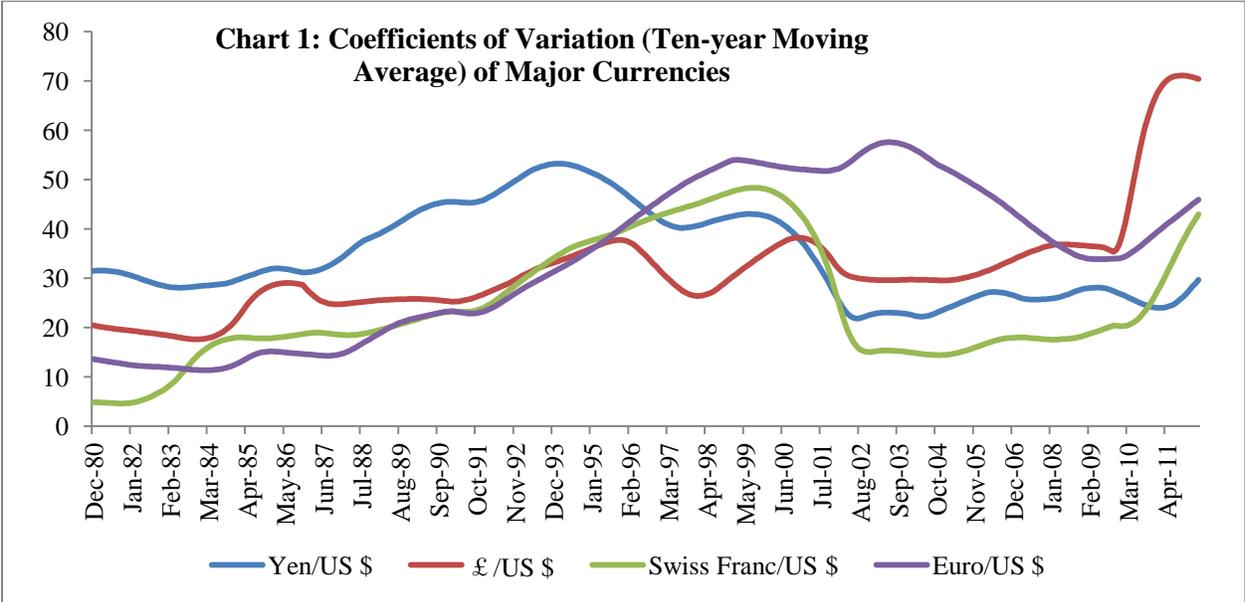
Exchange Rate Flexibility

Perhaps the most intensely debated aspect of the IMS is the evolution of the exchange rates of major international currencies which, in turn, is its most visible fault line. From an early stage, the linkage between the exchange rate, the balance of payments and full employment has been reinforced by the foundations laid for simultaneous analysis of internal and external balance in an open economy (Meade, 1951; Metzler, 1951; Swan, 1963), and the integration of asset markets and capital mobility into open economy macroeconomics (Mundell 1961; 1962; 1963; 1968; and Fleming, 1962). There were several runs on the US dollar in the 1960s. The 'Triffin dilemma' (Triffin, 1960) called into question the credibility of the US dollar as the key reserve currency and ignited strident calls for a post-Bretton Woods system which led to the creation of the SDR (Rangarajan and Patra, 2012).

With the advent of free floating, the role of the exchange rate was widely perceived to be central to the process of external adjustment (Johnson, 1966; Clark and Haulk, 1972; Dornbusch, 1976), which was expected to provide stability to the balance of payments as well as overall economic stability. The actual experience has belied that expectation. Wide gyrations and persistent misalignments characterized the 1970s and 1980s to which the Plaza Accord of 1985 tuned out to be an ineffective response. Volatility of major currencies measured in terms of ten-yearly coefficients of variations appears to have been the highest in these two decades (Chart 1 and Table 3). The 1990s was the decade of currency crises – the UK Pound Sterling (1992); the Mexican Peso (1994); the Asian crisis (1997-98); the collapse of the Russian Ruble and Long Term Capital Management (1998); and to a lesser degree, the Turkish Lira crisis (2000-01), the Brazilian real (2002) and Argentina (2001): whither the Great Moderation?

The introduction of the Euro in 1999 was expected to impart stability to the IMS, in contrast to the roller-coaster ride driven by the US dollar through the decade of the 2000s. Since early 2010, when the modern Greek Tragedy started to unfold, financial markets have battered the assumptions on which the Euro came into existence (IMF, 2012c). As a consequence, questions have begun to arise on the future of the Euro as an international reserve currency. While the US dollar has maintained its dominance in spite of the global financial crisis of 2008, developments since then continue to challenge its pre-eminence. Any disruption of confidence in the sustainability of the US economy, such as the fruition of the fiscal cliff, would make it difficult

for the dollar to play its role as international reserve currency. Like in the 1970s, the Triffin dilemma is back to haunt us again (Rangarajan and Patra, 2012). In fact, the dramatic swings in major currencies and consequent high volatility observed in the 1970s and 1980s appear to have returned in the period since 2000, except for the yen-US dollar rate; these heightened fluctuations seem to get accentuated if data for the years 2010-2012 (up to March) are also taken into account (Chart 1; Table 3). Clearly, contrary to expectations, exchange rate volatility over the past half-century appears to have imparted instability to the balance of payments of nations and to the global economy at large.



Period	Yen/US Dollar	Pound Sterling/US Dollar	Swiss Franc/US Dollar	Euro/US Dollar
1970-79	16.47	13.91	30.62	21.91
1980-89	26.05	13.46	18.90	21.69
1990-99	13.55	6.91	8.46	15.07
2000-09	8.63	14.72	17.90	18.32
2000-12	12.96	24.49	27.92	18.18

Note: Data for Euro/US Dollar prior to 1999 pertain to Deutsche Mark/US Dollar.
Source: International Financial Statistics, IMF.

Exchange and Payment Arrangements

Yet another metric by which the IMS can be assessed is exchange rate and exchange arrangements. Between 1999 and 2010, the proportion of ‘floaters’ amongst the IMF’s membership has declined to 36 per cent – managed floats having risen from 15 percent to 20 percent while freely floating regimes came down from 27 percent to 16 percent. Over the same period, the proportion of hard pegs – no separate legal tender; currency boards – declined from 25 percent to 13 percent while the proportion of soft pegs (conventional pegs; stabilized arrangements; crawling pegs and other crawl-like arrangements; pegged rates with horizontal bands; and other managed arrangements) went up from 34 percent to 51 percent.

As globalization took hold, emerging and developing countries progressively dismantled controls/restrictions on international payments and transfers to participate in the global economy. Between 1970 and 2009, the total number of countries accepting the obligations under Article VIII of the IMF’s Articles of Agreement – agreeing not to impose restrictions on payments and transfers for current international transactions or to engage in discriminatory currency arrangements – steadily increased, while those with transitional arrangements declined quite substantially. Notably, however, the number of countries lifting exchange restrictions on invisibles and transfers increased up to 2000 before it started to fall, with the 1990s being a decade of intensified controls. An interesting feature of developments in exchange and payments arrangements is the steady increase in the number of countries recorded by the IMF as applying controls on capital transactions (Table 4). This includes several advanced economies: Belgium, Canada, Denmark, France, Germany, the UK and the USA.

	1970	1980	1990	2000	2009
	No. of Countries				
Article VIII Status (no restrictions on payments and transfers for current international transactions)	37	54	72	152	167
Article XIV Status (Transitional restrictions)	73	88	83	34	19
Bilateral Payments Agreements	60	42	47	60	68
Controls on Payments for Invisible Transactions and Current Transfers	82	73	87	98	92
Repatriation/Surrender Requirements for Exports and/or Invisibles	100	114	124	107	84
Controls on Capital Transactions	99	110	123	173	180

Source: Annual Report on Exchange Arrangements and Exchange Restrictions (various issues), IMF.

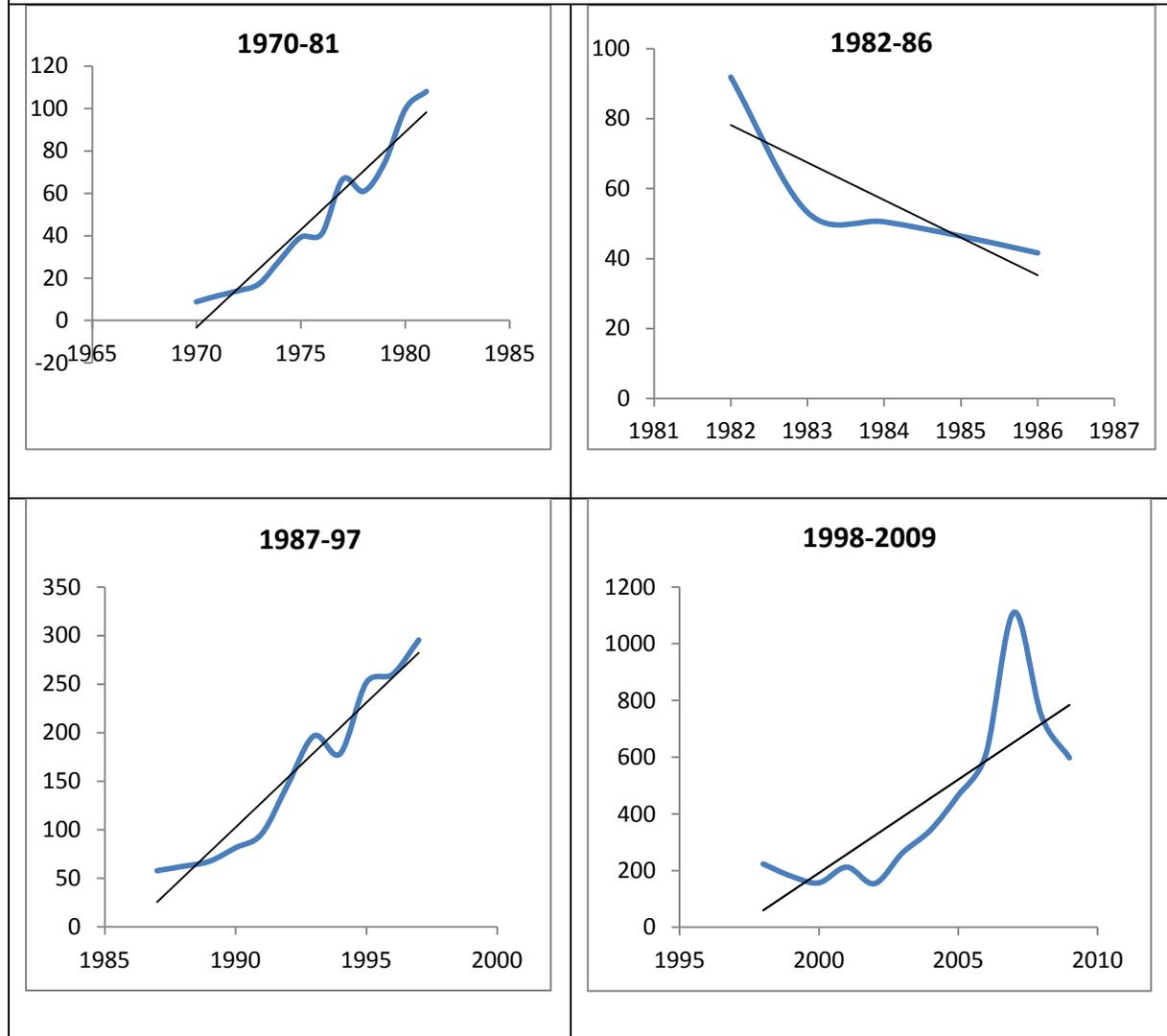
High Flux in Capital Flows

A predominant feature of the post-Bretton Woods IMS, and perhaps its major malfunction, is the massive movement of capital flows across borders, marked by high volatility, surges, sudden stops, reversals and attendant macroeconomic and financial instability, with their concomitant impact on exchange rates. We assess the empirical evidence on the benefits of capital account liberalization in a later section; in this section, we present stylized evidence on the capital flows and their volatility.

In the post-World War II period up to the 1970s, international capital flows were primarily among industrial economies (Mohan, 2004; CGFS, 2009). The US removed restrictions on capital outflows in 1974-75 while Germany retained controls over inflows until the late 1970s. The UK maintained controls until 1979 and Japan completed liberalization of the capital account in 1980. Developing countries persevered with controls, while some Latin American countries did embark on flawed liberalization as part of exchange rate-based stabilization programs in the mid-1970s.

Over the 1970s, private capital flows to developing countries rose strongly as commercial banks furiously recycled oil surpluses until the debt crisis of 1982 burst the bubble. By the end of the 1980s, direct investment inflows to developing countries were only one-eighth of flows to developed countries; portfolio flows to developing countries were virtually non-existent (Chart 2). During the 1980s and the 1990s, several developing countries in Asia undertook capital account liberalization as part of unilateral financial deregulation and wider market-oriented reforms. Investor confidence also returned to the developing world in the early 1990s in the aftermath of the Brady Plan. Notwithstanding setbacks due to the EMS crisis of 1992 and the Mexican crisis of 1994, net capital flows surged to pre-1914 levels by 1996, (Chart 2). The jump in capital flows to the EMEs occurred in an environment when monetary policy was being eased in the US – the US Federal Funds rate fell from 10 per cent in April 1989 to 3 per cent by January 1993. FDI accounted for the bulk of private capital flows to emerging market economies, going through a 6-fold jump between 1990 and 1997. The share of FDI in net capital flows increased from a fourth in 1990 to over a half by 1997. International bank lending to developing countries also increased sharply in this period, and was most pronounced in Asia, followed by Eastern Europe and Latin America.

Chart 2: Capital Flows to Developing Countries (US \$ billion)

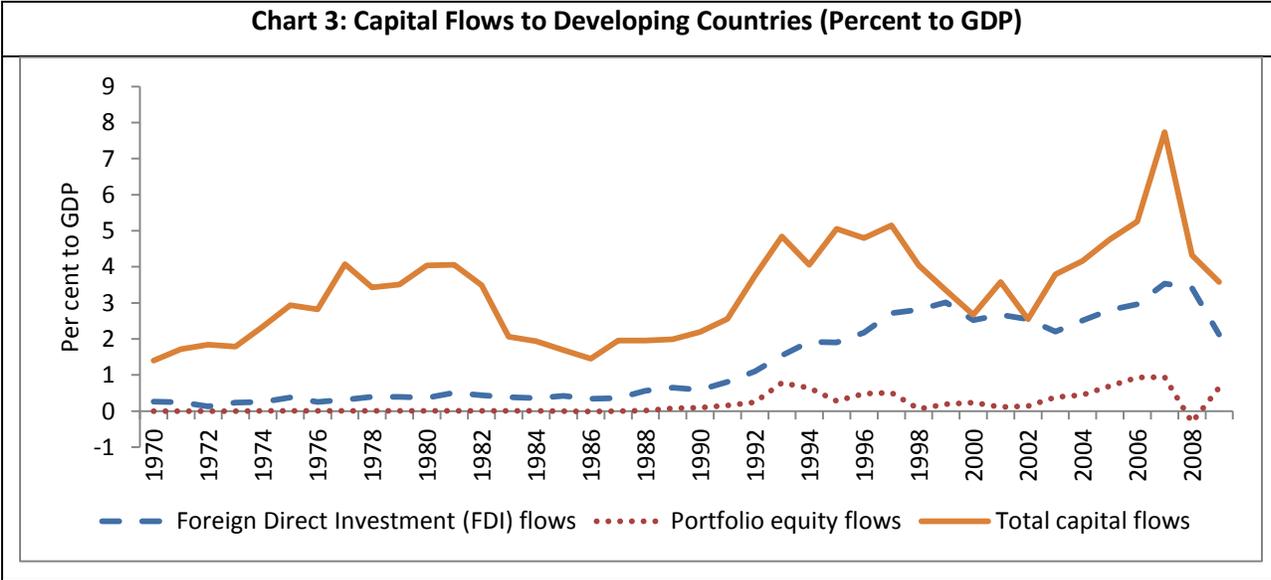


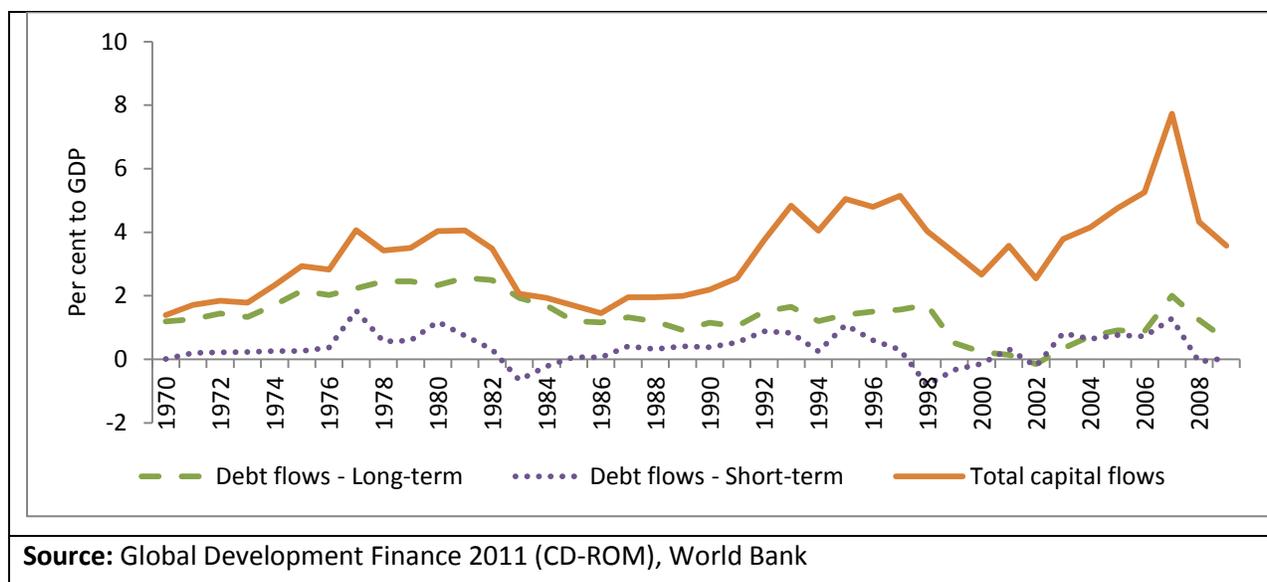
Source: Global Development Finance 2011 (CD-ROM), World Bank.

From the late 1990s onwards, capital flows to developing countries suffered several shocks – the Asian crisis of 1997-98, the turmoil in global fixed income markets, and the collapse of the Argentine currency board peg in 2001 and the spate of corporate failures and accounting irregularities in 2002. Post-Asian crisis, net flows to developing countries declined almost continuously during 1997-2002 (Chart 2). The fall was particularly sharp in the form of bank lending and bonds, reflecting uncertainty and risk aversion. Capital flows to the EMEs again revived beginning 2002 and reached record highs in 2007, reflecting aggressive monetary easing by the US Federal Reserve on the one hand and improved macroeconomic fundamentals in the EMEs on the other. The volatile pattern of capital flows again became evident during the

latest financial crisis. Net capital flows to developing countries increased from US \$ 154 billion in 2002 to a peak of US \$ 1.1 trillion in 2007 but fell to US \$ 744 billion in 2008 and further to US \$ 598 billion in 2009 (Global Development Finance, 2011). Such a large change in the volume of capital flows in short periods leads to excessive volatility in exchange rates, domestic liquidity and monetary conditions, and in asset prices.

An analysis of capital flows to developing economies (as percent to their GDP) and for major categories of flows reveals clearly the boom-bust pattern as well as the vulnerability of countries receiving large debt flows. Net capital flows to developing countries increased steadily from 1.4 percent of GDP in 1970 to 4.1 percent of GDP in 1977, reflecting the recycling of oil revenues on the one hand and accommodative monetary policy in the US. The oil shock of 1973-74 is also attributed by some observers to the accommodative monetary policy (Barsky and Kilian, 2004) – an observation which applies to the subsequent commodity price booms, including the boom just prior to the North Atlantic financial crisis and the ongoing boom that started in 2010 (Taylor, 2009). Capital flows stagnated between 3-4 percent of GDP during 1978-82, but then collapsed to 1.5 percent by 1986 – reflection of the debt crisis. After stagnating at around 2 percent of GDP during 1987-89, capital flows boomed to 5.1 percent of GDP in 1997, and fell quickly to 2.7 percent in 2000 and 2.5 percent in 2002 as the Asian financial crisis took its toll on investor confidence. The upswing resumed in 2002, coinciding with excessively loose monetary policy in the US, and capital flows more than trebled from their trough to reach an all-time peak of 7.7 percent of GDP in 2007 (CGFS, 2009). The onset of the sub-prime led crisis saw the usual roller coaster of capital flows retrenchment, and capital flows more than halved to 3.6 percent of GDP in 2009 – sharp decline in just two years (Chart 3).





An assessment of capital flows in terms of their major components shows a relatively high degree of stability in net foreign direct investment (FDI) flows: net FDI flows recorded strong increase during the 1990s, but have been range-bound in the 2000s. Major EMEs are now both recipients of inward FDI and sources of outward FDI; these two forces seem to have kept net FDI stable in the recent decade. Interestingly, debt flows received by the developing countries (percent to GDP) are now lower than the peak touched during the 1970s: net debt flows fell from an average of 2.3 percent of GDP during the 1970s to 1.8 percent during the 1990s and 1.1 percent during the 2000s. It appears that developing countries, having learnt from the 1982 debt crisis and the series of financial crisis in the second half of the 1990s, including the Asian crisis, have been pursuing a prudent approach to debt flows. This approach seems to have been successful, as EMEs have largely been able to avoid the crisis during the 2000s. One region that recorded a significant increase in debt flows during the 2000s was the Developing Europe and Central Asia region, and this region indeed fared badly in the 2008 crisis. This region's net debt flows jumped from an annual average of US \$ 14 billion in the 1980s to US \$ 74 billion during 2000-07; in contrast, net debt flows to the East Asia and Pacific region were roughly unchanged at around US \$ 23 billion per annum, while those to the Latin American region fell from US \$ 17 billion to US \$ 8 billion (Table 5). The South Asian region recorded a modest increase in debt flows during the 2000s. This evidence on the vulnerability of large debt flows leading to a potential crisis is consistent with the empirical evidence that is presented in Section IV.

Table 5: Total Net Capital and Debt Flows to Developing Economies: Region-wise
(Annual Averages in US \$ billion)

	1970s	1980s	1990s	2000s
Net Debt Flows				
East Asia & Pacific	4	11	24	25
Europe & Central Asia	3	6	14	71
Latin America & Caribbean	16	17	33	17
Middle East & North Africa	4	6	2	-1
South Asia	2	7	4	15
Sub-Saharan Africa	4	8	4	5
All Developing Countries	32	55	82	131
Total Capital Flows (net)				
East Asia & Pacific	4	15	67	139
Europe & Central Asia	3	6	21	138
Latin America & Caribbean	18	23	80	103
Middle East & North Africa	5	7	4	15
South Asia	2	7	8	42
Sub-Saharan Africa	5	10	11	28
All Developing Countries	36	68	191	466

Source: Global Development Finance 2011 (CD-ROM), World Bank

The most recent financial crisis shows that even advanced economies are not able to cope with such high volatility. Although the North Atlantic financial crisis is attributed to a variety of factors such as global imbalances, loose monetary policy, and lax regulation and supervision, the crisis also exposed the inability of the countries with advanced and sophisticated financial markets to deal with volatile capital flows. Indeed, capital inflows to advanced economies and capital outflows from advanced economies are a multiple of the respective EDE inflows and outflows; for example, in 2006, the pre-crisis year, capital inflows to the advanced economies were almost 8 times those of the EDEs (Table 6). Inflows and outflows of capital in both the AEs and the EDEs have increased exponentially in the past decade. Net inflows by non-residents to the AEs increased from US \$ 799 billion in 1994 to US \$ 9.4 trillion in 2007; net outflows by residents from the AEs increased from US \$ 727 billion to US \$ 9.1 trillion over the same period. Similarly, net inflows by non-residents to the EDEs went up from US \$ 214 billion in 1994 to US \$ 1.7 trillion in 2010, while net outflows by residents from EDEs increased from US \$ 75 billion to US \$ 1.1 trillion (Chart 4). While the patterns of inflows and outflows in both the panels of Chart 4 are broadly similar, the magnitudes are starkly different. Most of the capital flows occur amongst the advanced economies themselves and the volatility in these flows in the advanced economies appears to be more striking relative to the EDEs. For example, net capital inflows (from non-residents) to the advanced economies fell dramatically from US \$ 9384 billion in 2007 to US \$ 4 billion in 2008, reflecting the complete lack of confidence in the financial system

of these economies following the crisis; a similar pattern is mirrored in capital outflows. Net outflows by residents from the AEs turned negative, reflecting repatriation by residents of their overseas assets.

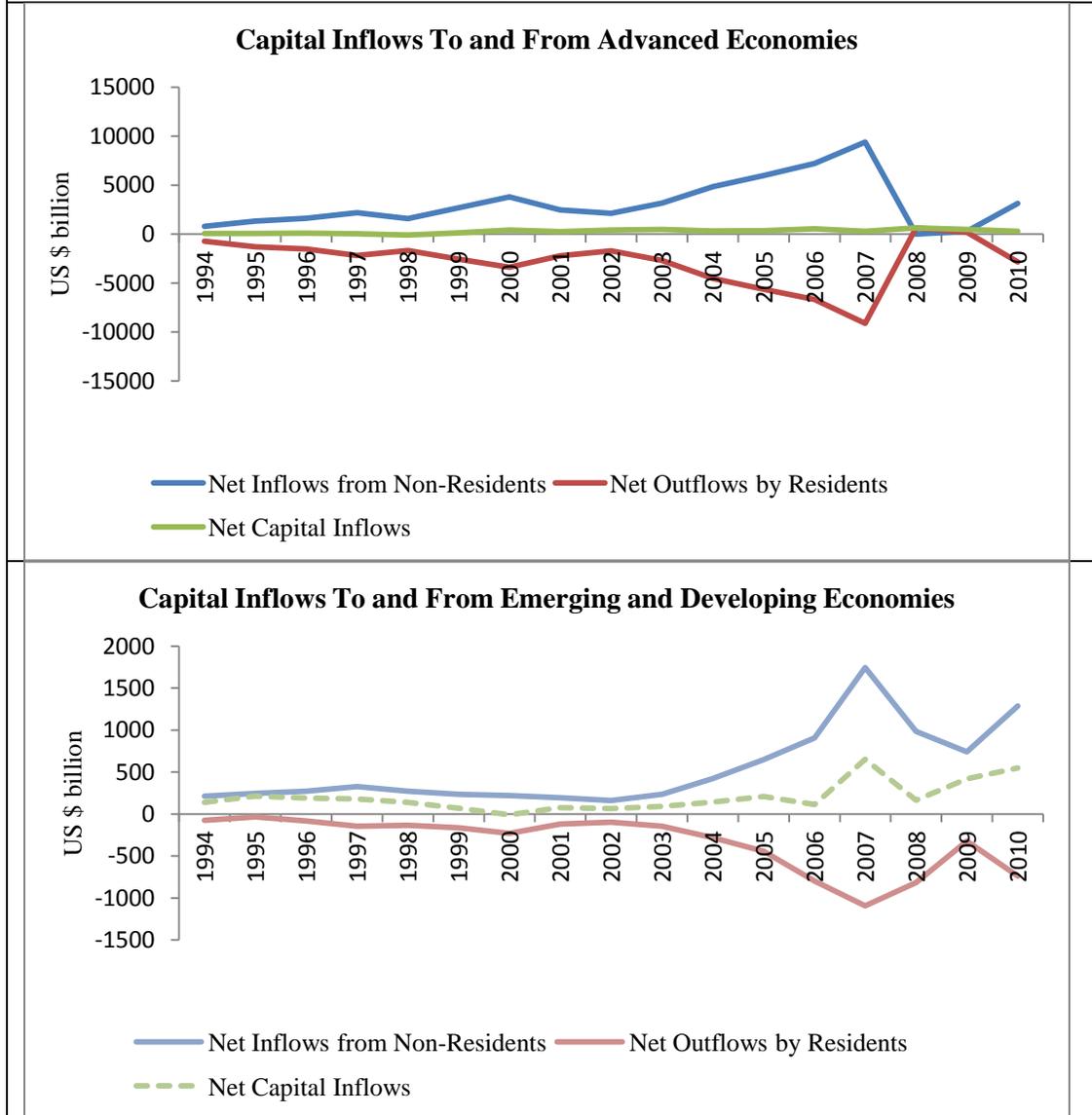
Table 6: Capital Inflows and Outflows: Advanced, Emerging and Developing Economies*(US \$ billion)*

	2003	2004	2005	2006	2007	2008	2009	2010
1 Total Assets (Net Outflows by Residents) (2+3+4)	2881	4838	6137	7461	10293	279	213	3723
2 International Organizations	62	31	61	-2	97	85	88	145
3 Advanced Economies	2676	4528	5634	6667	9104	-623	-196	2841
4 Emerging and Developing Economies (5 to 10)	142	279	442	796	1093	817	321	737
5 Developing Asia	24	20	137	234	250	173	125	294
6 Central and eastern Europe	11	32	20	72	119	88	2	-36
7 CIS	34	63	77	102	164	286	62	125
8 Middle East and north Africa	75	112	113	236	358	154	46	149
9 Sub-Saharan Africa	14	16	17	35	39	23	15	32
10 Western Hemisphere	-16	36	78	117	162	94	71	174
11 Total Liabilities (Net Inflows from Non-Residents) (12 to 14)	3458	5299	6703	8160	11231	1061	1102	4555
12 International Organizations	55	29	60	29	103	74	84	134
13 Advanced Economies	3168	4847	5992	7222	9384	4	277	3132
14 Emerging and Developing Economies (15 to 21)	235	423	651	909	1744	984	741	1289
15 Developing Asia	86	159	265	324	471	256	344	640
16 Central and eastern Europe	54	93	125	195	298	264	78	75
17 CIS	41	61	85	126	286	167	43	101
18 Middle East and north Africa	36	54	73	150	346	90	61	89
19 Sub-Saharan Africa	9	15	17	7	65	42	56	58
20 Western Hemisphere	8	41	86	106	278	164	159	325
21 Net Capital Inflows (11-1)	577	462	566	699	938	782	889	832
22 International Organizations	-7	-1	-1	31	6	-11	-4	-11
23 Advanced Economies	492	319	358	555	280	627	473	292
24 Emerging and Developing Economies (25 to 30)	93	144	208	113	651	167	420	551
25 Developing Asia	62	138	128	90	221	84	219	346
26 Central and eastern Europe	43	62	105	123	179	176	77	111
27 CIS	7	-3	8	25	122	-118	-19	-24
28 Middle East and north Africa	-38	-59	-40	-86	-13	-64	15	-60
29 Sub-Saharan Africa	-5	-1	0	-28	26	20	41	26
30 Western Hemisphere	24	5	8	-10	115	70	87	152

Note: Both inflows and outflows are exclusive of movements in foreign exchange reserves.

Source: Balance of Payments Statistics (BOP), World and Regional Aggregates, IMF (downloaded from <http://elibrary-data.imf.org/> accessed on November 21, 2012).

**Chart 4: Capital Inflows and Outflows:
Advanced, Emerging and Developing Economies**



Note: Both inflows and outflows are exclusive of movements in foreign exchange reserves.
Source: Balance of Payments Statistics (BOP), World and Regional Aggregates, IMF (downloaded from <http://elibrary-data.imf.org/> accessed on November 21, 2012).

Advanced economies are as prone to excesses during the upswing of capital flows as developing economies; and, given the bloated financial sectors and large balance sheets and stocks of assets and liabilities of advanced economies vis-a-vis developing economies, it is evident that they suffer more than developing economies during episodes of capital outflows, as can be seen from the experience of the US, the UK, Spain, Iceland and other European economies in the aftermath of the financial crisis. Capital flows between advanced economies reached unprecedented levels in the years before the global crisis, with the cumulative flows

leading to cross-border asset and liability positions as high as 10-15 times GDP and even beyond for countries such as Belgium, Iceland, Ireland (31 times GDP), Singapore, Switzerland and the UK. Total international assets for the group of the advanced economies have increased from 144 percent of their own GDP in 2003 to 231 percent in 2010; the similar ratio for the EDEs increased, relatively moderately, from 52 percent of their own GDP in 2003 to 66 percent in 2010 (Table 7). International assets/GDP ratio for the advanced economies in 2010 was thus almost three and a half times that of the EDEs. It is this increased interconnectedness between financial sectors across borders due to large gross capital inflows and capital outflows that created channels through which the crisis had a more impact on advanced economies with large financial sectors; risks to domestic financial stability can arise even when resident financial institutions act merely as intermediaries of capital flows, rather than the ultimate users. Large two-way gross capital flows can transfer risk within the IMS, even if the associated net flows are small, given the complex interconnectedness between major financial institutions (William, Thwaites and Wright, 2011).

Table 7: International Assets and Liabilities: Advanced, Emerging and Developing Economies*(US \$ billion)*

	2003	2004	2005	2006	2007	2008	2009	2010
1 Total Assets (1+2)	46897	56632	63171	80391	101701	99041	102461	110043
	(125.1)	(134.3)	(138.5)	(162.8)	(182.5)	(161.8)	(177.1)	(174.2)
2 Advanced Economies	42918	51736	57198	72503	90919	87781	89930	95810
	(143.8)	(156.5)	(164.7)	(198.6)	(227.8)	(208.5)	(226.5)	(231.0)
3 Emerging and Developing Economies (4 to 10)	3979	4896	5973	7887	10781	11260	12531	14233
	(52.0)	(53.7)	(54.9)	(61.3)	(68.2)	(58.9)	(69.0)	(65.6)
4 Developing Asia	1210	1512	1873	2511	3533	4049	4743	5614
6 Central and eastern Europe	242	316	363	541	760	805	850	832
7 CIS	385	477	616	886	1320	1295	1408	1557
8 Middle East and north Africa	937	1131	1451	1915	2591	2659	2766	2958
9 Sub-Saharan Africa	181	237	276	351	433	441	513	592
10 Western Hemisphere	1024	1224	1395	1684	2145	2011	2251	2680
11 Total Liabilities (12+13)	48898	58729	64627	81672	102703	99556	102381	109242
	(130.4)	(139.2)	(141.7)	(165.4)	(184.3)	(162.6)	(177.0)	(172.9)
12 Advanced Economies	43669	52769	57863	73363	91619	89082	89869	94854
	(146.3)	(159.6)	(166.6)	(200.9)	(229.6)	(211.6)	(226.4)	(228.7)
13 Emerging and Developing Economies (14 to 19)	5229	5960	6764	8309	11084	10474	12512	14388
	(68.4)	(65.4)	(62.2)	(64.6)	(70.1)	(54.8)	(68.9)	(66.3)
14 Developing Asia	1500	1546	1767	2181	2733	2906	3666	4501
15 Central and eastern Europe	585	769	879	1212	1720	1714	1905	1967
16 CIS	433	542	705	992	1551	1122	1386	1614
17 Middle East and north Africa	617	690	780	962	1279	1404	1504	1599
18 Sub-Saharan Africa	385	447	476	486	585	525	666	788
19 Western Hemisphere	1709	1965	2156	2475	3216	2803	3386	3919

Note: Figures in parentheses are percentages to respective regional GDP (rows 1 and 11 are with respect to world GDP; rows 2 and 12 are with respect to GDP of advanced economies; rows 3 and 13 are with respect to GDP of emerging and developing economies).

Source: Balance of Payments Statistics (BOP), World and Regional Aggregates, IMF (downloaded from <http://elibrary-data.imf.org/> and accessed on November 21, 2012); GDP data are from the World Economic Outlook Database (October 2012).

Interconnectedness and Shadow Banking System

The massive two-way movement in capital flows documented above has increased interconnectedness across financial institutions and countries, which then magnifies and propagates risks and shocks across the globe, as happened during the North Atlantic financial crisis. The vulnerabilities arising from the growing interconnected across financial system have strengthened from light touch financial regulation and the sharp growth in the shadow banking system.

While the shadow banking system - credit intermediation involving entities and activities outside the regular banking system - can have advantages, it can also become a source of systemic risk if it is structured to perform bank-like functions (e.g. maturity transformation and leverage) and it has strong interconnectedness with the regular banking system (Financial Stability Board (FSB), 2012). According to the Global Shadow Banking Monitoring Report 2012 (FSB, 2012):

- The global shadow banking system grew rapidly before the crisis, rising from US \$ 26 trillion in 2002 to US \$ 62 trillion in 2007; it declined slightly in 2008 but increased subsequently to reach US \$ 67 trillion in 2011 (equivalent to 111 percent of the aggregated GDP of all jurisdictions).
- The shadow banking system's share of total financial intermediation is around 25 percent, marginally lower than the pre-crisis peak of 27 percent in 2007.
- The aggregate size of the shadow banking system is around half the size of banking system assets.

As the FSB notes, interconnectedness risk tends to be higher for shadow banking entities than for banks, as shadow banking entities seem to be more dependent on bank funding and are more heavily invested in bank assets, than vice versa. The significant increase in two-way capital inflows and outflows, the massive increase in the shadow banking system and the general tendency towards light touch financial regulation have increased overall global connectedness, especially in advanced economies, which then has adverse consequences for domestic stability in the emerging and developing economies. Given the still low income levels in many emerging and developing economies, the ability of these economies to absorb large exogenous shocks is limited. Accordingly, most of these economies manage the exogenous shocks through active management of capital flows and reserve accumulation. While the emerging and developing economies area acting prudently, it is also necessary to minimize such exogenous shocks from the advanced economies in the first place. This requires: continuation of banking sector reforms through tighter regulation and supervision; better measurement of risks that accompany financial innovations; and, building of a forward-looking national risk accounting system (Gorton, 2012).

Reserve Accumulation

In the aftermath of the Asian financial crisis, the EMEs accelerated the accumulation of international reserves as a first line of defense against occurrence of future shocks. This was also in reaction to the stigma associated with the IMF lending and the associated conditionality. Between end-March 2000 and end-June 2012, the global level of reserves recorded a six-fold

increase. By contrast, this level rose only 1.7 times over the 1990s. Reserve levels in EDEs have been the driving force, going up ten times between March 2000 and June 2012, as compared with the three-fold increase in advanced economies (Table 8). The currency composition of allocated reserves – the reserves for which currency composition has been identified - has remained concentrated in US dollars. However, over the last decade, the share of the US dollar has actually declined by 10 percentage points, almost matched by a corresponding 8 percentage points gain in the share of the Euro. The yen has lost ground by about 2.5 percentage points, while pound sterling has gained almost one percentage point in share. Interestingly, the switch out of the US dollar is largely by the EDEs with 14 percentage points decline in the US dollar’s share in their reserves and 7 percentage points gain in the share of the Euro. For advanced economies, the shedding of US dollar is about 7 percentage points with an equivalent gain in the Euro’s share. These data are subject to the caveat that the currency composition of only 56 percent of the total global reserves is identified.

Table 8: International Reserves: Key Facts

	Total Reserves (US \$ billion)	Allocated Reserves (US \$ billion)	Currency Composition of Allocated Reserves (Percent)					
			US Dollar	Pound	Yen	Swiss Franc	Euro	Other
June 2012								
1. World	10,523	5,845 (55.5)	61.9	3.8	3.8	0.1	25.1	5.3
2. Advanced Economies	3,542	3,152 (89.0)	64.1	2.5	4.5	0.1	24.5	4.3
3. Emerging and Developing Economies	6,982	2,694 (38.6)	59.3	5.4	3.0	0.1	25.8	6.4
March 2000								
4. World	1,809	1,401 (77.4)	71.5	2.9	6.3	0.3	17.5	1.5
5. Advanced Economies	1,132	1,019 (90.0)	70.7	2.9	7.2	0.3	17.2	1.7
6. Emerging and Developing Economies	677	382 (56.5)	73.5	2.9	3.9	0.3	18.3	1.2

Note: Allocated reserves refer to foreign exchange reserves, whose currency composition has been identified. Figures in parenthesis are ratios (in percent) of allocated reserves to total reserves.

Source: Currency Composition of Official Foreign Exchange Reserves (COFER), IMF (available at <http://www.imf.org/external/np/sta/cofer/eng/index.htm>, accessed November 19, 2012).

At the end of 1970, AEs accounted for about three-fourths of global reserves; by end-2011, their share was down to a third. All emerging regions have partaken in the surge in reserve accumulation since the 1980s, but there are interesting nuances embedded in these trends. For instance, developing Asia's level of reserves was a little lower than that of sub-Saharan Africa at end-1970. Asia had overtaken the latter by 1980, and all other emerging regions by 1990. By 2011, Asia's share in global reserves was a dominant 38 percent, accounting for more than half of the reserves of all emerging economies taken together. In the 1990s, emerging Europe's reserves shot up five-fold, faster than all other emerging regions, even relative to Asia which recorded a four-fold increase. In the 2000s, it was the oil exporting Middle-East and North Africa countries which experienced a fast pace of reserve accumulation with levels rising nine-fold during 2000-2011, second only to Asia which witnessed a twelve-fold increase, and followed closely by emerging Europe which recorded an eight-fold increase (Table 9).

	(US \$ billion)				
End of	1970	1980	1990	2000	2011
World	97.6	461.2	990.0	2070.3	10705.1
AEs	72.6	273.6	628.7	1325.8	3744.9
EDEs	20.6	162.2	201.5	739.4	6954.6
Sub-Saharan Africa	3.0	14.8	13.3	36.1	178.1
Developing Asia	3.5	27.7	68.1	324.5	4058.0
Emerging Europe	0.6	4.7	5.4	19.3	870.6
Middle East & North Africa	5.5	74.0	51.7	117.5	1108.1
Western Hemisphere		40.3	49.0	157.2	740.1
Memo:					
World Reserves with Gold at Market Prices	100.1	1089.0	1373.5	2314.3	12186.3
@: comprising foreign exchange, reserve position in the IMF, SDR holdings and gold valued at SDR 35 per ounce.					
Source: International Financial Statistics, IMF (downloaded from http://elibrary-data.imf.org/ , accessed on November 19, 2012).					

III. IMF Surveillance: What Gives with the Anchor?

The IMF, with its near-universal membership of 188 countries, is mandated to oversee the international monetary system and monitor the economic and financial policies of member countries. In this way, it is expected to ensure the effective functioning of the IMS so that it can serve its essential purpose of facilitating the exchange of goods, services, and capital among countries, thereby sustaining sound economic growth. Thus, the function of surveillance has a critical preemptive purpose in detecting vulnerabilities facing the system and its constituents wherever they may lie, to warn about them before they materialize and pose a threat to individual countries and to systemic stability. Surveillance is intended to drill into crisis

configurations even as they develop, provide specific early warnings and set out preventive policy advice. In contrast, the lending function of the IMF, for instance, has only a crisis-mitigation role – reducing the adverse effects of crises after they have struck.

The crisis of 2008-09 has revealed large gaps in the conduct of the IMF’s surveillance and placed it under close scrutiny. As early as 2009, there was considerable introspection within the IMF on the shortcomings of surveillance in the run-up to the crisis, especially the strength and focus of warnings prior to the crisis. It was recognized that the warnings were too scattered and unspecific to attract even domestic—let alone collective—policy reaction. The IMF’s surveillance was adjudged to have significantly underestimated the combined risk across sectors, and the importance of financial sector feedback and spillovers. The result was optimistic bottom line messages, especially on ‘core’ economies like the US and UK. While the IMF warned about global imbalances, it missed the key connection to the looming dangers in the shadow banking system (IMF 2009a, 2011a).

In response to this criticism, the IMF has moved significantly in its attempt to close the gaps in the quality of its surveillance. In the recent period, the IMF has also sought to engage its membership in a discussion on the adequacy of the legal framework for surveillance on the assumption that framework impediments are key hindrances to the conduct of effective surveillance, notwithstanding the fact that several innovations referred to above have all taken place within the existing legal framework. Accordingly, the case for changes in the legal framework of surveillance, the instrumentation for bringing about this change, all need to be carefully and critically evaluated lest in the process we produce a more intrusive IMF but with the same degree of ineffectiveness as in the run-up to the crisis.

Surveillance in the Post-Crisis Period

The stark lesson of the crisis was that systemic vulnerabilities emanated from advanced economies, whereas earlier it was assumed that financial sectors and markets in the AEs were developed enough to not lead to financial instability in the global economy. Despite flexible and market determined exchange rates and interest rates, the shocks did not get absorbed: in fact, increasing interconnectedness of countries allowed shocks to spread faster. Accordingly, the IMF began to step up work on enhancing the quality and effectiveness of its surveillance. Overall, improvements were sought through increasing the synergies among various products that are produce by the IMF; enhancing the integration of multilateral macro-financial analysis in the WEO and the GFSR, supplemented by the introduction of an Early Warning Exercise, the Fiscal Monitor, the Spillover Report, the Pilot External Sector Report, and the G-20 Mutual Assessment Process. Improvements in bilateral surveillance were undertaken, including

providing Article IV reports with multi-country/cross-country/cluster analyses, and improvements in timeliness. The Financial Sector Stability Assessment (FSSA, a major component of FSAP) was made mandatory through an Executive Board decision for 25 countries with systemically important financial sectors (India included). Closer and more effective cooperation with standard setting bodies was also given high priority, including the ongoing engagement with the Financial Stability Board (FSB). It is critical to note that all these initiatives have been undertaken within the ambit of the existing legal framework of surveillance.

In the context of FSAP, it is worth considering how this exercise can be made more effective and internalized within countries. In order to promote understanding of financial standing and to build internal capacity for such exercises on an ongoing basis, India undertook a self assessment of its financial sector through the Committee on Financial Sector Assessment (CFSA) set up by the Government of India and the Reserve Bank (RBI, 2009). The self assessment was motivated by the desire to ensure compatibility of the Indian financial sector with international standards and assess its overall stability, building upon past experience of the IMF/World Bank Financial Sector Assessment Program (FSAP) for India. To ensure independent and impartial assessment, a two-step process was followed. First, four independent Advisory Panels were appointed, supported by staff from the RBI, the Government of India and other regulatory bodies. The reports put forward by these Advisory Panels, inter alia identified gaps in adherence to international standards and codes and suggested possible policy actions. Second, these advisory panel reports were peer reviewed by reputed international experts in the field. The self-assessment was also motivated by the objective of internalizing the process of FSAP within the Government, the RBI and other regulatory bodies. The process, an investment in human resources, helped enhancing the skill-sets within the financial sector, leading to significant capacity building. Given the Indian experience, the IMF should encourage other countries to undertake independent and impartial self-assessments on similar lines, with the objective of capacity building and contributing to financial stability.

Integrated Surveillance Decision

Since 2010, the legal framework for surveillance has been extensively discussed within the IMF and also outside it (Palais Royal Initiative, 2011; Truman, 2010). The main basis for seeking integration of all surveillance work seems to be the growing interconnectedness of the global economy. Accordingly, on July 18, 2012, the Executive Board of the IMF adopted a new “Decision on Bilateral and Multilateral Surveillance” (the “Integrated Surveillance Decision (ISD)”), which will take effect six months after its adoption.

According to the Fund, the ISD is aimed towards modernizing the foundations of Fund surveillance and part of a continuous effort to ensure that surveillance remains relevant and effective amidst the changing global economic landscape; it underscores the collaborative nature of surveillance, the importance of dialogue and persuasion, and the need for candor and evenhandedness; and “provides the basis for more effective and relevant surveillance in a highly integrated world economy” (IMF, 2012b).

While oversight of members’ exchange rate policies remains at the core of Fund surveillance under the Articles, the new Decision will provide a basis for the Fund to engage more effectively with members on domestic economic and financial policies. The new Decision does not change the scope of members’ obligations, which could only be done by amending the Fund’s Articles of Agreement. It also maintains a strong focus on issues relevant to the stability of individual members’ economies. It preserves the emphasis of bilateral surveillance on exchange rate policies, while at the same time elevating the focus on domestic policies. In addition, it retains the key modalities for surveillance set out in the 2007 Decision and extends them to apply also to multilateral surveillance.

According to the Fund, the ISD enhances the legal framework for surveillance in a number of important ways: first, it lays out a conceptual link between bilateral and multilateral surveillance and clarifies the importance for multilateral surveillance to focus on issues relevant to global economic and financial stability. It makes Article IV consultations a vehicle not only for bilateral surveillance but also for multilateral surveillance, allowing the Fund to discuss with a member country the full range of spillovers from its economic and financial policies onto global stability. Second, in the area of bilateral surveillance, the ISD builds on the existing principles for the guidance of members’ exchange rate policies by adding guidance on the conduct of members’ domestic policies that are relevant to domestic stability. Third, it clarifies the scope of multilateral surveillance and, in that context, encourages members to be mindful of the impact of their policies on global stability. It also clarifies the modalities for conducting multilateral surveillance, including by laying out a framework for possible multilateral consultations (IMF, 2012b).

Our Views

In our view, the modernization of surveillance has until now been and in the future can be achieved within the provisions of the Articles of Agreement, as shown by the development of new products and the enhanced focus on spillovers, interconnectedness, macro-financial linkages and financial sector risks in the recent period. The issue is one of effective implementation.

As regards multilateral surveillance, the voluntary nature of engagement between the IMF and members with the IMF Fund as trusted policy advisor needs to be emphasized. As demonstrated in the recent period, the critical input of research and development can be conducted under the existing mandate and should be pursued actively. Research and development should focus on positive and negative global externalities arising from policies of systemically important countries, which should be reflected in the flagship multilateral surveillance products. It should also explore the early warning content of this work, with specific and prescient policy messages that gain traction with policy makers.

While the recent crisis and its aftermath has brought forward the urgency of strengthening multilateral surveillance, bilateral surveillance is at the core of the IMF's mandate. Our immediate concern is that the overlay of multilateral considerations sought to be brought into Article IV Consultations under the guise of integration of bilateral and multilateral surveillance in the new ISD should not compromise the pursuit of robust and evenhanded bilateral surveillance and better peer review with symmetric treatment of all countries. Quality should not be sacrificed at the altar of expediency. While there is merit in integrating top-down multilateral analyses with country-level surveillance, it is important to further improve the incisiveness and traction of bottom-up approaches as they deliver granularity to monitoring and policy advice.

We do not agree that the scope of surveillance, whether bilateral or multilateral or integrated, can encompass capital flow management and rules governing the regulation of international capital movements when discussions on the subject of a comprehensive, balanced and flexible approach to capital flows is still at a nascent stage of discussion and research, and we are still far away from a possible approach that will guide staff's surveillance work.

The success of the surveillance is ultimately contingent upon the underlying analytical framework. The proposed refinements in the surveillance to bring the bilateral and multilateral aspects together are unlikely to be effective if the underlying analytical framework of efficient financial markets used by the staff and the Fund continues to believe strongly in capital account liberalization and financial sector liberalization. If the factors flagged by the Independent Evaluation Office (IMF, 2011a) - a high degree of groupthink, intellectual capture, ideology (eg, infallibility of financial markets), a general mindset that a major financial crisis in large advanced economies was unlikely, inadequate analytical approaches, weak internal governance, lack of incentives to work across units and raise contrarian views, and a review process that did not "connect the dots" or ensure follow-up - are not adequately addressed, the ISD is not going to facilitate more effective surveillance.

Finally, it is important to recognize that traction, the final objective of surveillance - the translation of succinct and sharp policy advice into concrete policy actions - depends on trust and the perception of even-handedness without any sacrifice of candor. This is inextricably woven into the IMF's governance structure. Modernizing surveillance must flow from and cannot precede reforms in governance. As governance reforms progressively reflect the changing global economic realities, so also will the IMF's surveillance gain legitimacy, incisiveness and traction.

IV. Capital Flows: Do We Need a Multilateral Framework?

The continued volatility in capital flows in the aftermath of the global crisis of 2008-09 has renewed the debate on whether or not there should be some widely accepted 'rules of the game' – a multilateral framework for regulating policies for the management of capital flows, akin to the WTO framework for international trade in goods and services. With the widely held perception that capital flows are important conduits for the transmission of global shocks, and given the divergent approaches adopted by capital receiving countries, the IMF has sought a central role in the ongoing debate. Since 2010, it has been asking its membership to endorse an institutional view and a consistent framework for managing capital flows as an integral element of IMS reform. Five perceived challenges associated with cross-border capital flows – volatility; interconnectedness or shock transmission; size; global drivers (aging populations in advanced or capital sending economies; growth/potential differences between advanced and emerging economies; global liquidity driven by low interest rates and monetary policy accommodation in financial centres; asset-liability management practices of systemically important financial institutions; market microstructure reflected in say herd behaviour or even regulatory arbitrage; declining home bias); information gaps – have been cited in the case for collective action on the assumption that none of these challenges can be handled exclusively at the recipient country level (IMF, 2010c).

Capital Account Liberalization: Empirical Evidence

The received wisdom has been that capital flows can benefit both source and recipient countries by improving resource allocation. The more efficient global allocation of savings can facilitate investment in capital-scarce countries. In addition, in principle, liberalization of capital flows can promote risk diversification, reduce financing costs, generate competitive gains from entry of foreign investors, and accelerate the development of domestic financial systems. The empirical evidence on the beneficial effects of CAL, however, is rather weak (CGFS, 2009 and IMF, 2012a provide a comprehensive review).

Evidence suggests a positive correlation between current account balances and growth among non-industrial countries, i.e., a reduced reliance on foreign capital is associated with higher growth (Prasad et al., 2007). Developing economies are more likely to be constrained by investment opportunities rather than by the availability of savings (Rodrik and Subramanian, 2009); in such circumstances, foreign finance can often aggravate existing investment constraints by appreciating the real exchange rate and reducing profitability and investment opportunities in the traded goods sector, which have adverse long-run growth consequences.

Given the weak empirical evidence on the direct benefits, some have argued that benefits of financial globalization may be indirect - rather than direct - in the form of better financial sector development, institutions, governance, and macroeconomic stability, which then help growth prospects (Kose et al. 2009a). The indirect benefits are dependent upon certain 'threshold' levels of financial and institutional development (Kose et al. 2009b). But, this raises the issue of causality: is it the opening up of the capital account that leads to indirect benefits or is it the gradual development of the domestic financial markets that allows the benefits of subsequent opening up of the capital account to be reaped (CGFS, 2009)?

Free movement of debt flows is not found to be associated with any positive impact on growth, but there are benefits from opening their equity markets to foreign investors (Henry, 2007). But, the significant positive impact of equity market liberalization on growth could be masking the impact of other supportive reforms since equity market liberalization typically takes place only when governments are sure that supportive conditions are in place. Emerging market economies with greater restrictions on capital inflows (especially on debt liabilities) fared better during the recent global crisis, and those with higher economy-wide capital inflow restrictions in pre-crisis years experienced smaller growth declines when the crises occurred. Even financial FDI is associated with greater vulnerability, as such FDI may reflect lending from a parent bank to a branch or local affiliate, which may be more in the nature of debt flows than greenfield FDI (Ostry et al., 2010; 2011).

Overall, there is strikingly little convincing documentation of a direct positive impact of financial opening on the economic welfare levels or growth rates of developing countries (Obstfeld, 2009). Available evidence is strongly in favour of a calibrated and well-sequenced approach to the opening of the capital account and its active management by authorities, along with complementary reforms in other sectors and taking into account country-specific features (CGFS 2009; Obstfeld 2009). A new strand of the literature on the welfare theory of capital controls argues that under certain circumstances, full capital mobility may not be desirable (Korinek, 2010), the principal cost being the vulnerability to financial crises (Ranciere and

Tornell, 2008; Reinhart and Reinhart, 2008; Mendoza and Terrones, 2008; Furceri, Guichard and Rusticelli, 2011).

In principle, capital flows benefit countries if they are running current account deficits; in such a case, capital flows add to domestic savings and enhance domestic investment. However, in practice, a number of emerging economies are running current account surpluses. In such circumstances, capital account liberalization is not going to enable absorption of external savings and hence not to any benefits.

New Proposals and Pitfalls

Drawing on select country experiences, the IMF has proposed a possible framework for its policy advice on the spectrum of measures available to manage inflows, liberalize them and manage outflows (IMF, 2012**). The IMF recognizes the benefits as well as risks associated with capital flows. The Fund sees some role for capital controls, but stresses these should be temporary and as a secondary recourse. However, the Fund view downplays risks (the empirical evidence on which is stronger) and overplays benefits (the evidence on which is rather weak and subject to certain thresholds and other appropriate policies). The “institutional view” framework approach proposed by the Fund pre-supposes a consensus in the literature, but we are years away from such a consensus. Such an approach runs the risk of the Fund staff using the “view” as a check-list and applying it rigidly and mechanically in Article IV surveillance.

In the absence of an in-depth understanding and articulation of the drivers of capital flows to emerging economies, formalizing bilateral surveillance principles on capital account policies runs the danger of a one-size-fits-all approach. The emphasis needs to be on managing capital flows for domestic and systemic stability with appropriate tools, differentiated by country-specific circumstances, and the right policy mix rather than the *ad hoc* pursuit of liberalization. Policymakers must have flexibility and discretion to adopt policies that they consider appropriate to mitigate risks through macroeconomic, prudential and capital account management policies. The stigma attached by the IMF to capital controls is not justified in view of their usefulness during several past episodes of capital flows. Measures for managing capital flows may well be the first line of defence, giving authorities time to fashion more durable responses in terms of adjustments to macroeconomic and prudential policies. Furthermore, there should be the flexibility to re-impose or persevere with them, if warranted. Some controls may have to be retained after all the pre-conditions/concomitants are in place for prudential reasons. Capital account management does not mean less openness.

It also needs to be recognized that fast-growing EMEs have significantly higher growth rates than those in the advanced economies; at the same time, inflation rates in the EMEs are somewhat higher than those in the advanced economies. Given these growth and inflation differentials, interest rates in the EMEs remain above those prevailing in the advanced economies. Moreover, the demographic profile and the relatively low income levels suggests that the growth, inflation and interest rate differentials between the EMEs and the advanced economies can be expected to persist for many years to come. In the absence of any controls on debt flows, these interest rate differentials run the risk of the EMEs attracting large debt flows, which can be disruptive and result in severe crisis down the line. The interest rate differentials thus reflect structural factors; of course, cyclical factors can widen or narrow the gap over the cycle, but the structural gap will remain. Accordingly, controls on capital flows, especially debt flows, may have to be long-lasting, at least till the growth, inflation and interest rate differentials remains. Therefore, the notion that controls or CFMs should be temporary or as a last recourse is fundamentally flawed. Capital controls should be seen as macroprudential instruments, with a cyclical character – tightening of controls during episodes of large capital inflows and relaxation in the controls during episodes of reversals. It is also not acceptable to treat the so-called CFMs on outflows only as crisis-time or temporary measures.

Every effort needs to be made to ensure even-handedness, and to dispel the asymmetry of treatment between countries that originate capital flows and those receiving them. It is necessary to recognize that monetary policy in advanced economies can potentially generate destabilizing capital flows to EMEs. On the other hand, there are also other factors at play that have ambiguous effects as, for instance, the confidence channel. Periods of robust growth and low and stable inflation in advanced countries engendered by monetary policy could actually stimulate a stronger search for yields in EMEs, whereas macroeconomic and financial stress in advanced economies may provoke a home bias or safe haven tendencies leading to the evacuation of capital flows from EMEs. The overarching issue is that monetary policy has a strong domestic orientation, irrespective of the country in which it is conducted. It is inconceivable that the mandate of the US Federal Reserve can be re-written to require it “ to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates” for the global economy! Multilateral considerations are least likely to be factored into monetary policy decisions. This certainly makes a strong case for active, or more appropriately, reactive capital flows management by countries which have to contend with flux in these flows.

The G 20 has called for a *comprehensive, balanced and flexible approach* for managing capital flows. We are a long way from this goal; the ongoing debate is divided by unsettled and conflicting positions.

The drive to establish a multilateral framework for managing capital flows with the IMF as an arbiter appears to flow from flawed understanding of the phenomenon and their dynamics. While capital flows have become internationally mobile on a scale and speed that has signified the end of geography, there has been a preoccupation with costs and benefits, patterns – pro-cyclical surges, stops and reversals –and surveys of country-level policy responses. In the absence of an in-depth and eclectic view of the interaction of drivers of capital movements with national goals and market confidence, and clear and effective communication of this view, there is a strong likelihood that the IMF’s role will remain peripheral and that the world is destined to continue with country-specific responses. It is in this context that we would emphasize the following priorities:

- Incisive analysis of the push and pull factors, the sources of volatility of capital flows irrespective of where they lie, the externalities associated with capital flows and how best to deal with them without compromising sovereign aspirations and global stability;
- Provide a forum for the cross-fertilization of country experiences and peer exchanges with a view to foster a better understanding of what is going on; fostering collaboration among members in the design and implementation of capital controls when they become necessary, ensuring that negative spillovers are avoided; and
- Better monitoring through improved mapping of cross-border capital flows - developing a common framework for the reporting of data by national authorities as well as securing access to databases of entities such as the BIS; improving access to balance sheet data of large financial institutions that are key conduits of global financial flows.
- Recognize CFMs as part of the regular toolkit in macroeconomic management along with conventional macroeconomic policies (monetary and fiscal policy). CFMs should be seen as complements, not substitutes, to the traditional macroeconomic policies.

Against this backdrop, the preference at the current juncture is for an advisory role for the IMF rather than *de jure* jurisdiction over the capital account. Within this advisory role, even-handed treatment is a priority in the sense that sources of volatility in capital originating countries are given as much emphasis as the issue of capital controls in destination countries. The Articles of agreement place no restriction on the IMF commenting on capital account-related issues. Accordingly, the need for any amendment to the Articles, given the preferred advisory role for the IMF, does not arise. In particular, there should be no dilution of Article VI Section 3 which ensures that there are no restrictions on the rights of members to impose such capital controls as they need to.

V. Self Insurance and Internationalisation: Peering into the Future

As set out in Section II, the past two decades have witnessed massive reserve accumulation, primarily by EMEs. The stocks of reserves have also increased relative to a variety of metrics such as GDP, imports, gross capital formation and short-term debt, especially for emerging and developing economies (Table 10). These numbers exclude substantial foreign assets of the official sector invested in liquid, dollar denominated financial instruments but not recorded as reserves, including in sovereign wealth funds (SWFs), that have grown even more in recent years.

Close to 60 percent of global reserve holdings are in US dollars. This reflects the currency's continued preponderance as an international unit of account and medium of exchange for cross-border trade and financial transactions with extremely desirable characteristics of the dollar in terms of liquidity, safety and yield (Chart 5). The U.S. Treasury market volumes far outstrip those of other reserve currencies such as the yen and euro. More widely, the depth of U.S. capital markets, offering a large variety of products and high volumes of trading, can reduce diversification and portfolio management costs (Rangarajan and Patra, 2012).

Table 10: Reserves in Relation to Selected Metrics

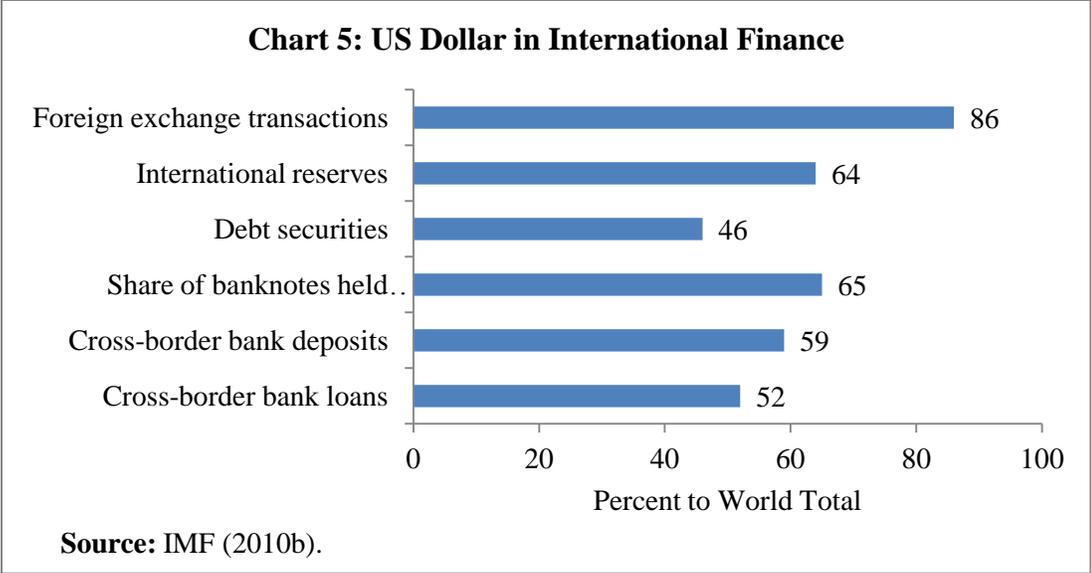
	1990	2000	2010	2011
Global				
Months of Imports	4.4	5.2	13.5	13.2
Percent of GDP	5.2 @	6.9	17.1	17.0
Percent of Gross capital Formation	23.4 @	30.9	75.2	n.a.
Percent of International Liabilities	n.a.	7.1 #	9.9	n.a.
Percent of Short-term Debt	n.a.	n.a.	n.a.	n.a.
Emerging and Developing Economies				
Months of Imports	5.6	6.2	16.3	15.7
Percent of GDP	6.6 @	11.3	28.7	26.9
Percent of Gross capital Formation	25.7 @	47.1	89.1	82.0
Percent of International Liabilities	n.a.	23.1 #	40.1	n.a.
Percent of Short-term Debt	107.5 @	229.5	556.5	n.a.
Advanced Economies				
Months of Imports	4.2	4.8	10.2	10.6
Percent of GDP	5.0 @	5.9	11.6	12.0
Percent of Gross capital Formation	22.9 @	26.9	62.8	n.a.
Percent of International Liabilities	n.a.	5.2 #	5.3	n.a.
Percent of Short-term Debt	n.a.	n.a.	n.a.	n.a.

Note: @: Data pertain to 1992; #: Data pertain to 2003; n.a. = not available.

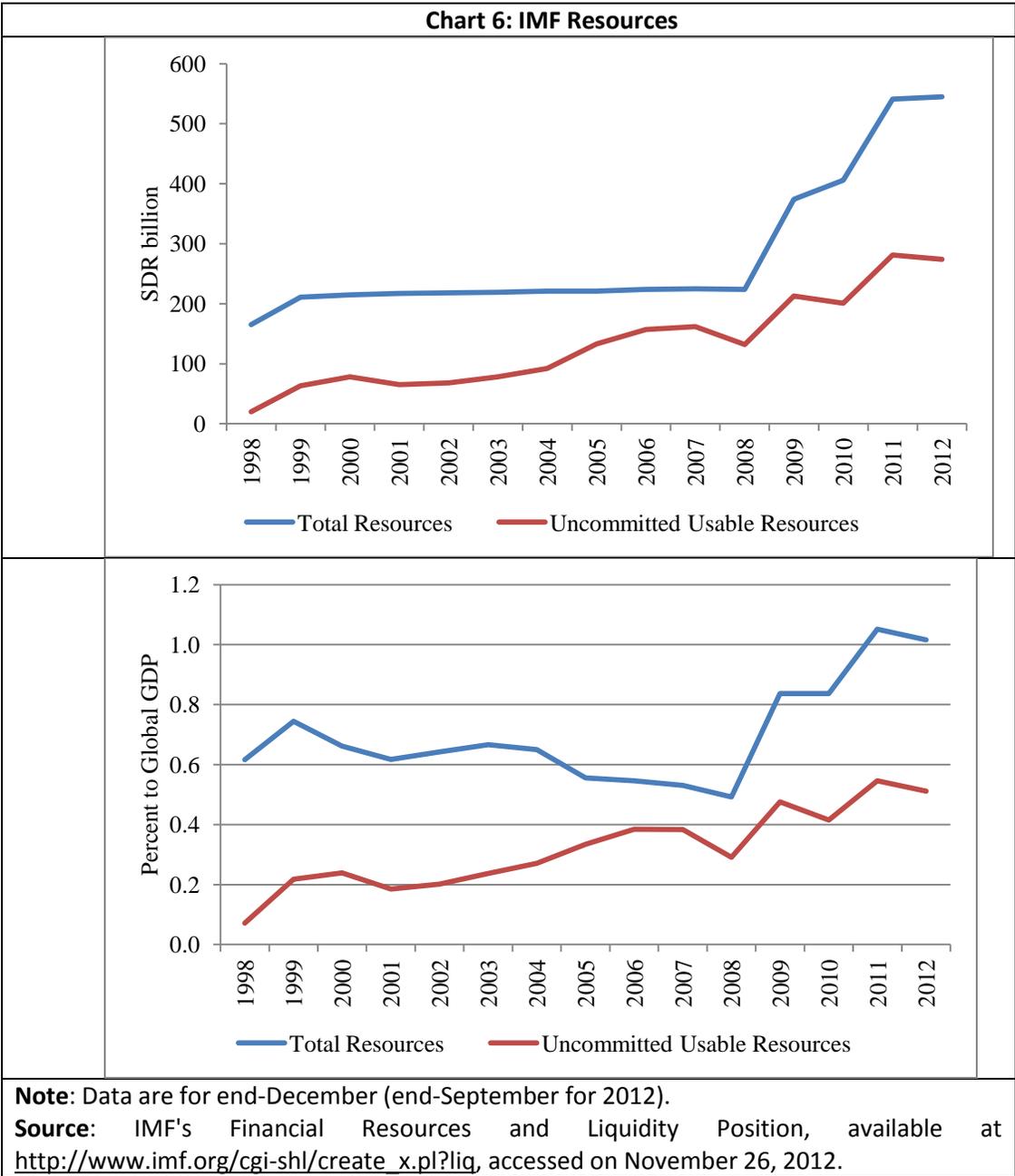
Total reserves comprise holdings of monetary gold, special drawing rights, reserves of IMF members held by the IMF, and holdings of foreign exchange under the control of monetary authorities. The gold component is valued at year-end (December 31) London prices.

Source: World Development Indicators Online, World Bank (downloaded from <http://databank.worldbank.org/ddp/home.do> accessed on November 20, 2012).

Balance of Payments Statistics (BOP), World and Regional Aggregates, IMF for data on international liabilities (downloaded from <http://elibrary-data.imf.org/> and accessed on November 21, 2012)



While EDE reserves have increased in proportion to the various metrics, the IMF resources were declining (relative to global GDP) prior to the 2008 financial crisis. Since the crisis, the IMF has more than doubled its resources from SDR 225 billion in 2008 to SDR 545 billion by September 2012 (Chart 6). The IMF resources still remain modest: 1.0 percent of global GDP in 2012. These are modest in terms of global capital flows. The Fund's resources were 6 percent of global capital inflows and outflows (sum of net capital inflows by non-residents and net capital outflows by residents) in 1998; this ratio fell to 1.6 percent in 2007. Reflecting the higher Fund resources, but mainly the collapse in global capital flows from US \$ 22 trillion in 2007 to US \$ 8 trillion in 2010 (see Table 6), this ratio increased to 7.6 percent in 2010.



Underlying Risks

The significant concentration of global reserves in US dollars brings in its train two possible threats to IMS stability. First, significant global demand for US government debt lowers yields below the pure market equilibrium. This can affect risk-return calculations on marginal public projects, creating incentives for higher deficits and debt. Sustained US government deficits may eventually bring public debt sustainability into question, undermining the *store of value*

characteristic of reserve assets and creating conditions akin to the Triffin dilemma – a turn in confidence can induce a rapid switch out of US dollars, with large and disruptive exchange rate and wealth effects, disruption to the smooth functioning of international payments and possibly implications for global financial stability. Second, lower benchmark yields may also lead financial intermediaries to underprice all risk. Excessive credit creation may ensue, resulting in misallocated capital and poor investment decisions. To the extent that arbitrage conditions apply, this phenomenon would apply globally. Furthermore, there may be a link between availability of cheap credit and volatility of capital flows, notably through encouraging carry trade investments funding speculative positions. Thus, reserve concentration in US government debt introduces idiosyncratic risks to the IMS stemming from conditions and policies in the US. Policies designed to meet domestic concerns typically do not consider effects on the wider world. Moreover, the IMS is left vulnerable to policy errors. Monetary policy, financial regulation, supervision and practice in the US thus become one of the chief determinants of how international financial flows are intermediated and thus of the safety of the IMS.

Against this backdrop, the future ability of the US to meet the emerging demand for reserves needs to be specifically taken into account. Ten of the top 18 reserve holders are from Asia – an obvious response to the IMF's failed response to the Asian financial crisis of the late 1990s. Five top reserve holders are also major oil exporters. The fact that the major reserve holders have current account surpluses suggests that these holdings could be non-precautionary - the desire to boost public savings to ensure intergenerational equity in the context of eventual depletion of oil reserves for oil exporters, and the counterpart to an export-led growth strategy in the case of some Asian economies (Subramanian, 2009). In some cases, large reserves may reflect export-oriented mercantilist policies, but in others, however, large reserve holdings could reflect a response to the volatility in capital flows. They would then fulfill the need for accumulating liquidity as a backstop for capital flow stops/reversal and ensuing financial crises, and also for boosting credibility with financial markets against these events materializing. According to some estimates, such insurance motives account for about two thirds of current reserve holdings, or over half of the increase over the past decade (Obstfeld, Shambaugh, and Taylor, 2009), though much of the commentary is focused on the mercantilist motive.

Central Banks, Monetary Policy and Reserves: Some Extrapolations

The pace of reserve accumulation is recovering after the global crisis of 2008-09². The IMF projects that even if global reserves growth falls steadily to 8.5 percent per year by 2035 from an average of 15.4 percent in 1999-2008, their level will reach 690 percent of US GDP. Shorter-term extrapolations suggest reserve levels approaching 120 and 200 percent of U.S. GDP in 2015 and 2020, respectively (IMF, 2010b).

The IMF's approach to reserve accumulation has been to distinguish between precautionary and non-precautionary motivations among EMEs and LICs and to derive metrics that define the demand for reserves for precautionary purposes for these sets of countries (IMF, 2011). Recognizing the generalized uncertainty surrounding global economic prospects and the need to cushion against unforeseen high-intensity shocks, the distinction between precautionary and other motivations driving reserve accumulation is somewhat blurred, especially as the experience with the global crisis of 2008-09 demonstrated. Accordingly, for the purpose of this paper, we adopt an eclectic approach. The dynamics of growth in an EME context entails the need for expansion of central bank balance sheets to match the demand for money consistent with 7 percent-plus real GDP annual growth (nominal growth of 12 percent plus) over a sustained period. Base money needs to grow at some similar rate and hence central bank assets too. If the EME is practising prudent fiscal policy, the supply of domestic securities may not be adequate for expanding the central bank balance sheet: hence the demand for foreign securities and foreign exchange reserves. When this happens with a large economy like China, the whole world feels the consequences. As large EMEs like India and Indonesia, among others, join China in such a growth mode over the next couple of decades, the demand for such assets can only expand further and faster.

What is the likely demand for foreign exchange reserves by EMEs, viewed from this perspective? Selecting the seven major EME reserve holders of the world in 2011, we estimate their likely demand for foreign assets to back the expansion of base money and money supply consistent with their growth trajectories. The IMF's World Economic Outlook (April 2012) database provides projections for real GDP growth and inflation for the period 2012-17. Juxtaposing these projections with trends in implicit income elasticity of demand for money observed during the 2000s, we project nominal money demand/supply (assuming an equilibrium approach, i.e., money demand equals money supply). Application of the implicit money multiplier to projections of money supply obtains projections of reserve money

² Data from the IMF's International Financial Statistics indicate that between end-2008 and end-2010, global reserves increased by almost 30 percent. Reserve accretion by advanced economies during this period was of the order of 31.2 percent, faster than the global rate and that of emerging and developing countries (29.4 percent).

(monetary base) stock. As noted above, domestic securities may not be enough for the central banks in the selected countries as assets to back this reserve money expansion, given the fiscal constraint; moreover, it may also not be prudent for the central bank of an EME to rely solely on domestic securities to meet the demand for primary liquidity. Furthermore, in the face of surges of capital flows to which EMEs are particularly prone, monetary management may also necessitate central bank intervention to ensure stability in the domestic foreign exchange market. Accordingly, we generate three scenarios under which central banks in EMEs inject primary liquidity through a mix of domestic and foreign assets: the first scenario (scenario A) assumes the ratio of net foreign assets (NFA) to reserve money (RM) during the projection period (2012-17) remains at the same level as it was at end 2011, i.e., around 1.1 for Brazil, China and India, 1.8 for Russia, 2.0 for China, 4.4 for Korea and 9.4 for Saudi Arabia (Table 11). The next two scenarios (scenarios B and C) assume that contribution of net foreign assets to the expansion of reserve money falls in the coming years: we assume that net foreign assets contribute 50 per cent and 25 per cent to the expansion of reserve money, respectively, during 2012-17.

Table 11: Net Foreign Assets of Major EMEs

Country	(Percent to Reserve Money)					
	2001	2005	2008	2009	2010	2011
Brazil	0.3	0.7	2.3	1.8	0.9	1.1
Hong Kong	3.6	3.1	2.5	1.9	2.0	2.0
China	0.5	1.0	1.3	1.3	1.2	1.1
India	0.7	1.2	1.3	1.3	1.0	1.1
Korea	4.3	5.3	3.9	4.7	4.5	4.4
Russia	1.0	1.8	2.2	2.0	1.8	1.8
Saudi Arabia	2.8	6.2	11.3	9.3	9.4	9.4

Source: International Financial Statistics, IMF.

Assuming the exchange rates that prevailed at end-2011, the calculations show that outstanding NFA of the major EME central banks need to increase from US \$ 6.0 trillion at end-2011 to US \$ 14.9 trillion (Scenario A) by end-2017, and to US \$ 9.5 trillion (Scenario B) and US \$ 7.8 trillion (Scenario C) – an increase of US \$ 1.8-8.9 trillion (Table 12). These projections, it may be stressed, focus on the seven major foreign exchange reserve holding EMEs – some of the key EMEs like oil exporters are not included in this exercise and hence the potential demand for foreign assets would be higher.

Table 12: Net Foreign Assets: Requirements of Major EMEs

Country	US \$ billion			
	2011 Actual	2017 Scenario A Scenario B Scenario C		
Brazil	349	883	591	470
Hong Kong	280	479	329	305
China	3776	9510	6483	5129
India	286	665	460	373
Korea	309	500	330	319
Russia	491	1456	755	623
Saudi Arabia	547	1393	592	569
Total	6036	14886	9540	7788

Source: Authors' Calculations (see text for methodology) based on IFS, IMF data.

Next, we turn to the supply side. The foreign currency reserves likely to be demanded by the EMEs can be supplied by the central banks of the reserve issuing currencies i.e., 60 percent in terms of the US dollar, 27 percent in terms of the Euro and a little over 4 percent each in terms of the pound sterling, the yen and other currencies, respectively . In the case of the US, assuming a unitary income elasticity of money demand, and a money multiplier of 3.6 (the level at end-2011), the US monetary base would increase from US \$ 2.7 trillion at end-2011 to only US \$ 3.5 trillion by end-2017, an increase of US \$ 0.8 trillion compared to an increase of at least US \$ 1.8-8.9 trillion emerging from the demand side. The supply side estimate is, however, subject to the caveat that quantitative easing (QE) policies followed by the US Fed since 2008 will continue over the projection period. The US monetary base more than trebled from US \$ 0.8 trillion in end-2007 to US \$ 2.7 trillion by end-2011 and consequently, the money multiplier collapsed from around 9 to 3.6 over the same period. If the US Federal Reserve were to reverse its QE policies going forward, the US monetary base may not expand at all over the projected period and this would further widen the gap between the EME requirements and availability of reserve assets.

Currency Internationalization: The Phenomenon

In the context of the widening gap between the demand and supply of reserve assets over the medium term, the phenomenon of currency internationalization of EME currencies has generated widespread attention on ongoing debate of IMS reform. Hitherto, the use of currencies of EMEs beyond their borders has been extremely limited, if at all. Yet, as these economies get increasingly integrated into the global economy and their contribution to global growth, trade, and financial flows expands rapidly, their access to international capital markets expands as they sustain credit-worthiness and as a consequence, the depth and activity of their

own financial markets increases, there is a growing expectation that the role of their currencies in the IMS is set to change (Table 13). This new interest in EME currencies appears to be driven as much by strong fundamentals as by a desire for greater diversification of risk and assets, and there are growing signs of their usage in international transactions (IMF, 2011e). Furthermore, local currency denominated assets in these countries' bonds and mutual funds is a slowly but steadily expanding dimension in the evolution of global finance.

Table 13 : Selected Macro and Financial indicators of Select Currencies with Internationalization Potential 1/

Indicator	Brazil	China	Hong Kong	India	Indonesia	Korea	Mexico	Russia	Singapore	S
Macroeconomic Indicators										
GDP size 2/	3.6	10.9	0.4	2.8	1.3	3.2	1.7	1.7	0.4	0
Economic growth 3/	4.2	9.5	4.4	8.1	6.7	4.2	3.6	4.3	4.4	4
Inflation 4/	4.9	2.6	3.4	5.2	4.8	3.3	3.1	7.2	2.5	5
Sovereign ratings 5/	BBB-	AA-	AAA	BBB-	BB+	A	BBB	BBB	AAA	B
Capital account openness 6/	0.4	-1.1	2.5	-1.1	1.1	0.4	1.1	0.2	2.5	-
Total trade 7/	1.3	11.0	2.7	2.3	0.9	3.1	1.8	2.3	2.6	0
Exchange rate flexibility 8/	Floating	Crawl-like arrangement	Currency board	Floating	Floating	Floating	Floating	Other managed	Other managed	F
Financial Indicators										
Financial depth 9/	1.6	7.2	1.6	1.1	0.3	1.2	0.5	0.8	0.5	
Intl. debt securities 10/	0.1	0.1	0.2	0.0	0.0	...	0.1	0.1	0.1	
FX market turnover 11/	0.3	0.4	1.2	0.5	...	0.8	0.6	0.5	0.7	
FX bid-ask spreads 12/	8.6	1.7	1.2	6.7	...	11.6	7.2	7.9	6.7	

1/ Selection based on shares of global and regional GDP, and trade among EMs and NIEs.

2/ Share in nominal global GDP, projected 2011-16 average, WEO.

3/ Real GDP growth, projected 2011-16 average, WEO.

4/ CPI inflation, projected 2011-16 average, WEO.

5/ Standard & Poor's sovereign ratings, August 2011.

6/ Index number in 2009, Chinn and Ito (2009).

7/ Share in total world exports and imports of goods and services, projected 2011-16 average, WEO.

8/ De facto exchange rate arrangement, IMF AREAER 2010.

9/ Share in global financial depth in 2009.

10/ Share in total international bonds and notes issues (December 2010).

11/ Share in global FX turnover (April 2010).

12/ 2006-10 average of bid-ask spread in basis points.

Source: IMF (2011e).

Prerequisites for Internationalization

Yet, do these emerging trends, as exciting as they might be, indicate the scope for internationalization of EME currencies? Trading in these countries' currencies in global foreign exchange markets as well as their share in global reserves remains insignificant. The establishment of stability and liberalization of international transactions is still an evolutionary process. In this context, therefore, it is worthwhile to assess their potential for internationalization as part of a still nascent continuum. Currency use for international purposes or as an international reserve asset is reinforced by economies of scale or "network externalities" (Kiyotaki and Wright 1989). Once a currency is widely used, it retains incumbency advantages that make it hard to displace. The supply of international currencies is influenced by the actions of governments to allow international use. This is closely linked to the provision of institutional and policy underpinnings that encourage the development of financial markets and produce macroeconomic stability (Tavlas 1991). Without the existence of markets in various financial instruments and a reasonable amount of investor confidence in accessing them, the currency's usefulness in the international realm is limited. If those underpinnings exist, the supply of international currencies can be considered to be close to perfectly elastic: demand can be satisfied through facilities offered by banks and by issuance of domestic and foreign securities denominated in the currency. Conversely, attempts to stimulate international use of a particular currency will be unsuccessful in the absence of demand.

Thus, drawing from history and practical usage in financial markets, the key characteristics of a reserve currency, can be summarized as the following:

- Deep and liquid financial and foreign exchange markets, facilitating the conduct of foreign exchange policies, managing foreign exchange reserves, managing currency risks effectively, as also supporting financial asset transactions denominated in the reserve currency.
- Prerequisites: currency convertibility and a credible commitment to an open capital account to facilitate financial flows with minimal transactions costs (Galbis, 1996); liquidity (narrow bid offer spreads in normal and stress times); a full yield curve (to be able to manage duration and curve positioning); depth – offering a range of products across different credit qualities (to achieve the desired level of credit risk).
- Wide use in private sector transactions: a currency with a large share in world GDP, trade, and finance attracts more users and establishes network externalities – by being a large exporter and importer, the country issuing the reserve currency could have a bargaining power to impose use of its currency; the more trading partners such a country has, the more familiar its currency becomes (Iwami 1994). Also, such an economy typically enhances the breadth and depth of domestic financial markets.

- Macroeconomic and political stability: Policymaking institutions with credibility and a track record of maintaining price stability are a critical ingredient to sustain confidence in the currency's long-term purchasing power.

The attractiveness of a currency on an international plane depends on both its ability to retain its value in terms of other currencies and its purchasing power. In addition, it must be usable with low transaction costs. Thus, the various characteristics of a truly international reserve currency are interdependent and reinforcing. Wider political considerations (including military alliances and security) also play a role.

The Stylized Evidence

The actual evolution of international currencies over the past century suggests that economic size is an important determinant of currency internationalization, although trade network, depth and liquidity of financial markets and openness of the capital account also contribute. Illustratively, economic size may have worked towards limiting the international usage of the pound sterling and the swiss franc, but the existence of major financial centers in these economies played a positive role. Nevertheless, history shows that the largest and leading global economic and political powers typically provide global currencies, as in the case of the UK in the 19th century and the US in the 20th century. It is also observed that large economic size is supportive of developed financial markets (Eichengreen and Flandreau, 2010). While the EDEs collectively account for 50 per cent of global GDP (at PPP exchange rates) in 2012 [38 percent of global GDP at market exchange rates], and this share is expected to be more than 54 per cent in 2017 [43 percent at market exchange rates], only a few EDE currencies such as the Brazilian real, the Chinese renminbi, the Indian rupee, the Russian ruble and the South African rand appear to be supported by economic weight and regional importance (Table 14). High rates of growth in these countries notwithstanding, catch-up with the US is not envisioned until 2035-50.

Table 14: Share in World Gross Domestic Product (GDP) based on Purchasing-Power Parity
(Per cent)

Country	1980	1990	2000	2005	2010	2011	2012 P	2017 P
Brazil	3.9	3.3	2.9	2.8	2.9	2.9	2.9	2.9
China	2.2	3.9	7.1	9.4	13.6	14.3	15.0	18.3
Hong Kong SAR	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4
India	2.5	3.2	3.7	4.3	5.5	5.7	5.8	6.8
Indonesia	1.0	1.2	1.2	1.2	1.4	1.4	1.5	1.6
Korea	0.8	1.4	1.8	1.9	2.0	2.0	2.0	1.9
Mexico	3.0	2.6	2.5	2.3	2.1	2.1	2.1	2.0
Russia	n/a	n/a	2.7	3.0	3.0	3.0	3.0	3.0

Singapore	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4
South Africa	1.0	0.9	0.7	0.7	0.7	0.7	0.7	0.7
Turkey	1.0	1.2	1.2	1.3	1.3	1.4	1.3	1.3
All EDEs	31.0	30.8	37.2	41.4	47.9	48.9	49.9	54.3
	(23.5)	(20.1)	(20.3)	(23.9)	(34.3)	(36.2)	(37.7)	(42.5)

Note: Figures in parentheses are shares in world GDP based on market exchange rates.

Source: World Economic Outlook Database (April 2012), IMF.

Similarly, the share of EMEs in global exports and particularly global capital flows is quite small (Table 15). Amongst candidate currencies, barring China, their shares in exports of goods and services and financial flows is minuscule in relation to the dominant reserve currency economies. Accordingly, their importance, even in the regional economic context, remains subdued, again barring perhaps China, Brazil and Russia.

Table 15: Exports of Goods, Services and Financial Flows: Share of Top 20 Countries*(Per cent)*

Country	Exports of goods and services		Exports of goods and services and financial flows	
	2001-2005	2006-2010	2001-2005	2006-2010
Euro area	24.1	23.6	25.3	24.6
US	18.5	16.8	22.4	19.1
China	8.8	12.0	7.5	10.4
UK	9.1	7.7	12.7	11.7
Japan	8.3	6.9	7.2	6.0
Canada	4.7	3.7	3.8	3.3
Korea	3.2	3.4	2.5	2.7
Singapore	2.9	3.2	2.3	2.6
Russia	2.3	3.2	1.9	2.8
Switzerland	2.8	2.7	2.4	2.8
Mexico	2.5	2.0	2.0	1.7
India	1.3	2.0	1.1	1.8
Sweden	2.0	2.0	1.7	1.9
Saudi Arabia	1.5	1.9	1.1	1.5
Australia	1.4	1.7	1.6	1.9
Malaysia	1.6	1.5	1.2	1.2
UAE	1.0	1.5	n.a.	n.a.
Norway	1.4	1.5	1.3	1.5
Brazil	1.2	1.4	1.1	1.5
Thailand	1.3	1.4	1.0	1.1
Total	100.0	100.0	100.0	100.0

Memo:

	<i>(SDR billion)</i>			
Total Exports	5588	9204	7940	13102

Note:

1. Data for the euro area adjusted to exclude intra euro area trade.
2. Data for China include Mainland China and Hong Kong SAR. For exports of goods and services, excludes intra-trade of goods.

@: Sum of trade of goods and services and the absolute values of direct investment in the reporting economy, portfolio investment liabilities, and other investment liabilities.

Source: IMF (2011c).

Secondary potential financial indicators such as financial depth, capital account framework, and forex market turnover in spot as well as derivative markets also weaken the case for EMEs acquiring the status of international currencies. In order to be a reserve asset, a currency has to be widely traded - it should be readily available for sale or purchase, at minimal transaction cost and without the transaction causing prices to move significantly. The US dollar share in global foreign exchange turnover is still dominant; the US dollar and the Euro together constitute 60 percent of global spot forex turnover. Individually, EME currencies constitute less than 1 percent of the global turnover, although in levels, there has been a sharp increase during the

decade of the 2000s with Hungary, Turkey, China and India recording the biggest jumps. In this context, in addition to the general factors driving international usage, national policies appear to be playing a role, as demonstrated in the case of China's promotion of the use of renminbi in cross-border trade (Table 16). These developments need to be seen in conjunction with movement in spreads which have generally narrowed, but remain higher than for the more freely usable currencies. Bid-ask spreads, however, need to be interpreted with caution in view of size of transactions handled and limits of access that are prevalent, which may obscure an accurate reflection of market liquidity.

Table 16 : Global Foreign Exchange Market Average Daily Turnover: Currency-wise

Currency	<i>(Per cent)</i>			
	Share in Global Turnover			
	2001	2004	2007	2010
US dollar	44.9	44.0	44.9	42.4
Euro	19.0	18.7	19.0	19.5
Japanese yen	11.8	10.4	11.8	9.5
Pound sterling	6.5	8.2	6.5	6.4
Australian dollar	2.2	3.0	2.2	3.8
Swiss franc	3.0	3.0	3.0	3.2
Canadian dollar	2.2	2.1	2.2	2.6
Hong Kong dollar	1.1	0.9	1.1	1.2
Swedish krona	1.2	1.1	1.2	1.1
New Zealand dollar	0.3	0.5	0.3	0.8
Korean won	0.4	0.6	0.4	0.8
Singapore dollar	0.5	0.5	0.5	0.7
Norwegian krone	0.7	0.7	0.7	0.7
Mexican peso	0.4	0.6	0.4	0.6
Indian rupee	0.1	0.2	0.1	0.5
Russian rouble	0.2	0.3	0.2	0.5
Chinese renminbi	0.0	0.0	0.0	0.4
Polish zloty	0.2	0.2	0.2	0.4
Turkish lira	0.0	0.1	0.0	0.4
South African rand	0.5	0.4	0.5	0.4
Brazilian real	0.2	0.1	0.2	0.3
Others	4.6	4.4	4.6	3.8
<i>Memo:</i>				
	<i>(US \$ billion)</i>			
Total global turnover (all currencies)	1239	1934	3324	3981

Source: IMF (2011c) (based on 2010 Triennial Central Bank Survey, Bank of International Settlements).

It is important for an internationally used currency to be effectively and efficiently hedged so as to manage the exchange rate and interest rate risks. The volume of transactions in foreign exchange derivatives provides a possible indicator of the ability to hedge in a particular currency. The main derivatives comprise exchange traded and over-the-counter forwards, swaps and options, with over the counter (OTC) accounting for the bulk of the transactions. Data available with the BIS on turnover of foreign exchange market derivatives and amounts outstanding of OTC derivatives indicate that the US dollar and the euro continue to account for a large share of foreign exchange derivatives transactions (Table 17). By contrast, the individual shares of EME currencies are below 1 percent of the total turnover, indicative of the perception of currency risk. Only the Korean won, the Singapore dollar, the Mexican peso and the Indian rupee exceed/reach 0.5 percent. These require a careful assessment of foreign exchange markets subject to restrictions, to ensure that the market is accessible to non-residents. Furthermore, the BIS data on derivatives include turnover of non-deliverable forwards that provide only partial hedging capabilities.

Table 17: Global Foreign Exchange Derivatives Market Turnover: Currency-wise*(Per cent)*

Currency	Share in Global Turnover in 2010
US dollar	44.0
Euro	17.3
Japanese yen	9.1
Pound sterling	6.0
Australian dollar	3.8
Swiss franc	3.2
Canadian dollar	2.7
Hong Kong dollar	1.5
Swedish krona	1.4
New Zealand dollar	0.8
Korean won	0.8
Singapore dollar	0.8
Norwegian krone	0.8
Mexican peso	0.6
Indian rupee	0.5
Russian rouble	0.4
Chinese renminbi	0.5
Polish zloty	0.5
Turkish lira	0.4
South African rand	0.4
Brazilian real	0.4
Others	4.1
<i>Memo:</i>	
	<i>(US \$ billion)</i>
Total global turnover (all currencies)	2488

Source: IMF (2011c) (based on 2010 Triennial Central Bank Survey, Bank of International Settlements).

Currency denomination of international debt securities provides an indicator of currency use in financial transactions that is a broader reflection of currency choice compared to official reserves and cover both the private and the public sector. The BIS international debt instruments statistics cover amounts outstanding of bonds, notes, and money market instruments that are issued by non-residents in local currency, issued by residents in a foreign currency, or issued by a resident in local currency *if* the issuance is targeted at non-resident holders. These data illustrate the continued dominant role of the US dollar and the euro with a combined share in the 75 to 80 percent range that has remained broadly stable over the 2000s. Data for more recent years indicate that the share of EME currencies in the denomination of

international banking liabilities has increased marginally – for the countries given in Table 18, their share has gone up from 1.4 percent of the global total in 2001-05 to 3.2 percent in 2010.

Table 18: International Bond Issuance in Emerging Market Currencies

<i>(Per cent)</i>	
Currency	Share in Total EM Issuance in 2010
Hong Kong dollar	18.0
Brazilian real	10.9
South African rand	10.8
Singapore dollar	10.2
Chinese renminbi	5.8
Russian rouble	4.5
Korean won	0.5
Indian rupee	0.4
Total	61.1

Source: IMF (2011e).

Costs and Benefits of Currency Internationalization

At the country level, benefits from internationalization include potentially lower transaction costs and reduced exchange rate risk, and the ability to issue international debt at more competitive terms (IMF, 2011e). There are however, attendant costs on which a careful consideration is warranted. Currency internationalization may complicate monetary management and strain the domestic financial system’s ability to absorb capital flows due to potential for increased volatility and large shifts in portfolio flows. Reserve currency status might reduce international competitiveness for individual countries, as higher currency demand appreciates their currencies (Chinn, 2012). Given the growth and inflation differentials, interest rates in the EMEs are expected to remain higher than those in the advanced economies, encouraging large capital flows on a sustained basis. In such a scenario, a nearly fully open capital account – a pre-requisite for the currency to be accorded the status of international currency – can play havoc with their exchange rates and destroy their export sectors, and endanger external sector and financial sector stability.

There is thus the issue of incentive compatibility. Arguably at the IMS level, internationalization may allow better reflection of global economic realities, enable currency risk diversification, and preventing malfunctions in the dominant currency economies from turning systemic. But does it confer net benefits to the EMs that internationalize their currencies? History tells us that the story of internationalization is also a story of failures, because other forces work in the form

of Malthusian preventive and positive checks. Policy actions for EMs wanting to internationalize may perhaps be necessary conditions but there are by no means sufficient. There are broader forces that define the flow of history and determine the rise and fall of nations and their currencies. Even these so-called necessary conditions are in the distant horizon and will require substantial ground to be covered by the interested EMs. It is therefore necessary to caution against policy-driven internationalization or “managed internationalization” with governments acting alone to promote international use of their currencies. Internationalization is better earned by winning confidence in transactions, in invoicing and settlement, and in holding value. The approach should be to maintain a high bar for ensuring the stability of the IMS. Including not-so-usable currencies in the basket just to facilitate a greater role for their economies in the IMS has pitfalls: it could increase complexity and transaction/hedging/risk management costs; central banks may not be willing to hold them as reserve assets; and most importantly, even one failure to honor convertibility, for instance, could lead a multi-polar IMS to collapse. In the final analysis, internationalization of a currency comes with costs - willingness to sacrifice domestic monetary and financial stability, run deficits, and the return of the Triffin dilemma.

VI. Financial Stability, IMS and Role of Central Banks

In this milieu of large and volatile capital flows, recurrent financial crises, and the large costs of the financial crises on output and employment, maintenance of financial stability at the national and global levels is critical. While the previous sections have focused on the role of the IMS in fostering global financial stability, we now turn to the issue of financial stability at national levels. In this context, central banks have a key role to play in ensuring macroeconomic and financial stability, while contributing to growth. It is interesting that central banks were initially set up with the explicit objective of fostering financial stability. Thus, many central banks were entrusted with multiple responsibilities – price stability, currency management, financial regulation and supervision, payment and settlements system regulation, and public debt management – to facilitate them in having a holistic approach towards the overall objective of having high and stable growth along with financial stability.

The past two decades have, however, witnessed a significant dilution in the responsibilities assigned to central banks towards narrower defined mandate of price stability since the late 1980s. This truncation of the central banks’ role and responsibilities in the financial system and the real economy has been an important contributory factor underlying the recurrent financial crises in the global economy. Beginning the late 1980s, central banks, starting with the Reserve Bank of New Zealand, however, veered towards narrower mandates - that of price stability – reflected in inflation targeting frameworks. The underlying premises were: first, price stability would ensure financial stability; second, a conflict of interest was seen between financial

regulation and public debt management on the one hand and monetary policy on the other hand; and third, efficiency gains were seen by having regulation of the entire financial sector – banks, insurance companies, pension and provident funds, mutual funds, and securities markets – with a single financial regulator outside the central bank. Thus, central banks shed many of their traditional responsibilities to other agencies and began concentrating on monetary policy and price stability. Financial sector regulation also moved towards light-touch. Public debt management moved from central banks to debt management offices outside the central bank.

The North Atlantic financial crisis has shown that price stability is a necessary but not a sufficient condition for financial stability. With major central banks increasingly focusing on price stability, and financial regulators focusing on the health of individual financial institutions and markets and adopting a light-touch approach, the focus on systemic stability was lost. Thus, even as price stability was achieved along with high growth – the Great Moderation – asset price imbalances and financial sector excesses were building up. As noted in the previous sections, volatility in capital flows and exchange rates contributed as well as added to the financial excesses, culminating in the 2007 financial crisis, which remains with us five years later having grown in complexity and virulence. The Great Moderation has now yielded to the Great Recession. Government efforts to stabilize the financial system and the real economy with countercyclical fiscal policy bore some results for some time, but large fiscal deficits and still growing public debt/GDP ratios have now led to question marks over the sustainability of public finances. With monetary policy already constrained by near zero policy rates in the major advanced economies, fiscal policy has also no levers to support economic activity in these economies. Thus, we are witnessing a period of sub-par growth and this period can be expected to long-lasting, consistent with the findings of Reinhart, Reinhart and Rogoff (2012).

A key lesson from the crisis, therefore, is that central banks ought to move back from the simplistic inflation targeting frameworks towards the multiple responsibilities framework to ensure both price and financial stability along with growth (Eichengreen and others, 2011). Financial regulation and supervision ought to move back to the central bank – the UK's decision to return financial regulation and supervision responsibilities to the Bank of England is a step in the right direction, as is the move to entrust the European Central Bank with financial regulation and supervision. The notion that markets are efficient also stands discredited in the aftermath of the crisis. Financial markets and sectors are as prone to excesses in advanced economies with well-developed and sophisticated markets as are these in EMEs with relatively underdeveloped and missing financial markets.

Finance and Growth

In the aftermath of the global financial crisis and large output, employment and fiscal costs, the role of finance needs to be critically evaluated. Is more finance always good for growth? Do bloated financial sectors in certain economies have a beneficial impact on the rest of the world? Recent research shows that bigger financial systems indeed have a negative impact on growth (Arcand, Berkes and Panizza, 2012; IMF, 2012c; Cecchetti and Kharroubi, 2012). According to the IMF's October 2012 GFSR (IMF, 2012c), bigger financial systems, *inter alia*, are associated with a higher degree of financial stress: credit/GDP ratios above 100 percent are found to have a negative effect on consumption and investment volatility. Arcand, Berkes and Panizza (2012) and Cecchetti and Kharroubi (2012) find similar thresholds. Cecchetti and Kharroubi (2012) also find that when the financial sector represents more than 3.5 percent of total employment, further increases in financial sector size tend to be detrimental to growth; the negative impact comes as the financial sector competes with the rest of the economy for scarce resources, especially highly skilled workers who could have been more productively employed as scientists etc. Accordingly, the evidence, together with recent experience during the financial crisis, shows a pressing need to reassess the relationship of finance and real growth in modern economic systems. "More finance is definitely not always better" (Cecchetti and Kharroubi, 2012).

Similarly, the time is apposite to revisit the separation of debt management from the central bank, especially given the high debt and deficit levels. As Goodhart (2010) notes:

"Debt management can no longer be viewed as a routine function which can be delegated to a separate, independent body. Instead, such management lies at the crossroads between monetary policies (both inflation targets and systemic stability) and fiscal policy. When markets get difficult – and government bond markets are likely to do so – the need is to combine an overall fiscal strategy with high-calibre market tactics. The latter is what central banks have as their *métier*. During the coming epoch of central banking, they should be encouraged to revert to their role of managing the national debt" (Goodhart, 2010, pp.12).

Overall, there is a broader recognition that the narrowly defined central banking paradigm that was seen as the gold standard during the 2000s prior to the financial crisis needs significant reforms (Mohan, 2009, 2011). Eichengreen and the 15 co-authors in their report "Rethinking Central Banking" (Eichengreen and others, 2011), analyze the issues from academic and practical policy-oriented perspectives, recommend:

“central banks should go beyond their traditional emphasis on low inflation to adopt an explicit goal of financial stability. Macroprudential tools should be used alongside monetary policy in pursuit of that objective. ... There is substantial pressure on central banks to acknowledge the importance of still other issues, such as the high costs of public debt management and the level of the exchange rate. Central banks are more likely to safeguard their independence and credibility by acknowledging and explicitly addressing the tensions between inflation targeting and competing objectives than by denying such linkages and proceeding with business as usual”.

Central Banking: The Indian Experience

The Indian experience as well as of many other EMEs - which persisted with the traditional central banking concept of multiple responsibilities and multiple instruments during the 2000s despite strong advice and pressure to move to narrow and simplistic frameworks - is interesting. In India, the Reserve Bank of India (RBI) is responsible for price stability, regulation and supervision of banks and non-bank financial companies, development and regulation of key financial markets (the money market, the Government securities market and the foreign exchange market) and public debt management. In the years preceding the 2007 financial crisis, the RBI had questioned the single-minded inflation targeting approach to monetary policy that had become the received wisdom of best practice internationally; it consciously adopted a multiple indicator approach, looking as much at various monetary and credit aggregates as at conventional price-related indicators. As much of the world tended to increasingly insulate the central bank from financial sector and banking regulation, regulation was consciously viewed as an integral tool of monetary policymaking, broadly interpreted, which also focused on financial stability. The barrage of financial innovations were viewed with caution and introduced on a gradual basis. On the external side, the opening of the capital account had been pursued with great circumspection, though much of professional economic advice was to the contrary. Exchange rate management focused on containing volatility in the foreign exchange market, with growing flexibility in exchange rate movements over time (Mohan, 2009, 2011). The consequence of this overall policy stance was that India escaped the worst consequences of this international crisis, as it had also done during the Asian crisis.

VII. Concluding Observations and Way Forward

This paper reviewed the evolution of the IMS over the past six decades. The sine qua non of this evolutionary process has been the quest for an anchor to provide stability to the world's monetary system, and the paper draws on the recent experience to underscore the need for significant reform in the IMS in order to secure global monetary and financial stability on an enduring basis. The period since the mid 1980s, has been characterized by the occurrence of

repeated financial, banking, and external sector crises right up to the ongoing North Atlantic financial crisis: hence the urgent need for reform.

Critical to this reform is a careful scrutiny and evaluation of the existing IMS governance arrangements, which are essentially centered on the IMF. In this context, the ability of the IMF to shoulder this responsibility effectively in a complex and interdependent world in which a rebalancing of global economic power is underway is questionable. Gaps and infirmities in its surveillance as well as in the analytical and predictive underpinnings thereof were exposed in the 2008-09 crisis that arose in the financial sector and then metamorphosed into an all encompassing fiscal crisis and recession. Its weakness in coping with and managing the current European sovereign debt crisis is being demonstrated on a daily basis, as it is inextricably trapped into 'kicking the can down the road' by its troika partners - the ECB and the European Union – at considerable reputational cost which does not augur well for the IMS over which it has oversight.

Will the current political momentum, best embodied in the G 20 processes, be able to produce the critical mass needed to reconstruct an IMS that can prevent the repetitive occurrence of crises? Or at least make the IMS resilient enough to mitigate the fall-out of crises if they slip through early warning lines and hit the global economy? Only time will tell.

Review of the evolution of the IMS over the past six decades undertaken in this underscores the need for significant reform in order to secure global monetary and financial stability on an enduring basis.

Central Banks and Domestic Stability

Domestic macroeconomic and financial stability is a necessary condition for global stability. In this context, central banks have a significant role to play in ensuring domestic macroeconomic and financial stability. The pre-crisis tendency for central banks to focus on narrow price stability oriented monetary policy frameworks – while eschewing their hitherto traditional responsibilities of financial sector development, regulation and supervision - has been a major factor leading to the North Atlantic financial crisis. Success with price stability was accompanied with financial sector excesses, and credit and asset price booms. Post-crisis, we are seeing a welcome reversal of the trend of hiving off the responsibilities: central banks are again getting involved with financial regulation and supervision as, for example, the UK or are being assigned more clear-cut responsibilities (for example, the European Central Bank and the US Federal Reserve). Moreover, given the sharp increase in fiscal deficits and public debt ratios in the major advanced economies in the aftermath of the crisis, central banks have been actively

involved in debt and liquidity management operations. Given that these deficit and debt levels are likely to persist in the medium-term, close coordination between central banks and governments would be essential to ensure adequate liquidity and stability in financial markets. Concomitantly, governments should undertake credible medium-term measures to rein in deficits and debt levels and anchor expectations.

IMF and Exchange Rate Stability

Moving to arrangements for global stability, the Fund's articles state that its purpose is, inter alia, to "promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive exchange depreciation" [Article 1 (iii)]. These objectives raise a number of questions. What do we mean by 'stability' of the exchange rate and has the present system of floating/flexible exchange rates complied with the Fund's Articles? Financial crisis have increased in frequency and virulence in the past couple of decades, partly attributable to growing cross-border capital flows. The Fund has recently undertaken a lot of work on capital flows. Although the recent Fund work recognizes pitfalls of a totally free and open capital account, it remains skeptical of the efficacy of capital controls.

Available evidence indicates that countries that had put prudential controls on capital flows fared much better in the recent North Atlantic financial crisis as in the previous financial crises. Countries with controls had comparatively moderate growth deceleration, while also avoiding the massive fiscal costs. Capital account management does not mean lower openness of the external sector and should be seen an integral part of the macroeconomic toolkit.

Capital Flows

Capital flows reflect both push and pull factors. Push factors have been quite conspicuous in the aftermath of the North Atlantic financial crisis, since central banks in major advanced economies – the US, the euro area and the UK - have pursued unprecedentedly accommodative monetary and liquidity policies – near zero interest rates accompanied with abundant liquidity through quantitative easing. These policies may be appropriate from the perspective of these advanced economies, given the large unemployment levels and extremely fragile economic activity, although the effectiveness of these policies in stimulating domestic activity is arguable. These policies have large externalities in the form of volatile capital flows to the EMEs as well as elevated global commodity prices. The bottom line, therefore, is the EMEs have to manage these negative externalities to maintain domestic stability, including through the use of prudential capital controls.

Going forward, we also need to factor in the evolving demographics across both advanced and emerging economies and their impact on savings, investment and capital flows. Over the next half-century, the population of the world, especially the advanced economies, will age faster than during the past half-century as fertility rates decline and life expectancy rises. The phenomenon of global ageing is likely to be associated with a progressive decline in saving rates and growth. In the interregnum, regional patterns of global population ageing are expected to bring about fundamental alterations in saving-investment balances which would be reflected in the magnitude and direction of international capital flows with implications for the conduct of future monetary policy (Mohan, 2004). Projections suggest a turning point between 2010 and 2030 when the EU, North America, and Japan will experience a substantial decline in saving rate relative to investment which would be reflected in CADs. These regions will switch to importing capital and there could thus be a change in source and recipient countries.

Most of the high performers of East Asia and China are in the second stage of the demographic cycle. East Asia could increasingly become an important supplier of global savings up to 2025; however, rapid population ageing thereafter would reinforce rather than mitigate the inexorable decline of global saving. Increasingly it would be the moderate and the low performers among the developing countries – India and others - which would emerge as exporters of international capital. The key challenge for macroeconomic policies would be to ensure that the anticipated expansion in saving in developing countries is productively utilized within the economy and not exported abroad. Indeed, given their existing levels of urbanization and physical infrastructure, investment can be expected to increase significantly in low and moderate income economies. It is vital to ensure that the investment rate rises in close co-movement with the saving rate. However, the historical evidence suggests that countries undergoing large growth in urbanization levels typically attract external savings to satisfy the massive financing needs for infrastructure investment during this period. Thus, we might see a simultaneous decline in savings rates in the advanced economies and an increase in the investment rates in the emerging and developing economies. There would then be tightening of liquidity in world capital markets with increased competition for resources and implications for the stability of the IMS.

International Reserves

A related issue in the IMS and its stability is that of acquisition of foreign exchange reserves by the central banks in EDEs. Typically, the acquisition of reserves by EDE central banks has been viewed from the prism of the precautionary motive of dealing with volatile capital flows. Acquisition of foreign assets by the central banks is, however, also important from the perspective of meeting the monetary and credit requirements of a growing economy. Since money multipliers are a function of slow-moving behavioral variables like currency-deposit ratios, expansion of central bank balance sheets is the predominant channel through which credit and monetary requirements of a growing economy can be met. Central banks normally acquire through high-quality assets like domestic government securities or foreign assets (AAA rated government securities). Assuming that EDE governments follow a prudent fiscal policy, central banks in these economies will need to rely on acquisition of foreign assets to meet the economy's credit and monetary requirements. The issue then is: which reserve currency issuing countries will supply the needed liquidity? Given the developments in the euro area and even questions over its viability, can the US dollar satisfy the global needs? But, then it leads to Triffin's dilemma. Or, can the major EME currencies supplement the US dollar?

Currency Internationalization

Currency internationalization of EME currencies is currently attracting attention that is intensifying beyond the purely academic plane. This new interest is being driven as much by their rising contribution to global growth, trade, and financial flows as by evidence of increasing depth and activity in their own financial markets, besides the search for diversification of risk and assets among international investors. It is prudent to regard currency internationalization for these countries as part of a still nascent continuum. Attempts to stimulate or 'manage' international use of a particular currency by leapfrogging over the process of establishment of the necessary prerequisites of a reserve currency are likely to be unsuccessful, and even dangerous from the point of view of the stability of the IMS. In terms of economic size, financial depth and openness, notwithstanding high rates of growth in these countries, catch-up with reserve currency economies is not envisioned until 2035-50, at the very least. Moreover, there is distance to be traversed in earning international credit-worthiness. Most importantly, there are costs of currency internationalization to be considered along with potential benefits. The resilience and preparedness of the economy and its financial sector to absorb them becomes the key. In particular, currency internationalization may complicate monetary management and strain the domestic financial system's ability to absorb heightened volatility and large shifts in capital flows. History tells us that the story of internationalization is also a story of failures and painful revisits of the Triffin dilemma.

Financial Sector Regulation and Supervision

The North Atlantic financial crisis has forcefully shown the adverse consequences of a weak financial sector. The financial crisis has also highlighted the fact that the so-called well-developed financial systems and markets can quickly turn brittle in the face of large shocks and amplify the impact of the shock on the real economy and the public finances through a vicious circle. Moreover, the larger the size of the financial sector, the more damaging are its consequences on the real economy. Larger financial sectors impede growth as they compete for resources with other sectors. The crisis has thus raised serious questions on the type of the financial sector development witnessed in the past two decades as well as on the light-touch regulation that has been recommended and practiced during this period. The financial crisis, as noted before, has also highlighted the weaknesses of the central banking framework which divested the central banks from financial sector regulation and supervision. Financial sector regulation and supervision needs to be treated as an integral component of monetary policy. Such an integrated approach allows the central bank to use a judicious combination of the interest rate tool with countercyclical prudential tools and is the best way to guarantee high and stable growth in an environment of macroeconomic and financial stability. The recent move in the UK to entrust financial regulation and supervision back to the Bank of England is a positive development and the move needs to be carried forward in other countries. Moreover, given the sharp growth in the shadow banking system and its role in exacerbating the financial crisis, the perimeter of regulation needs to be widened to better regulate and supervise the shadow banking system.

Given the growing complexity of the financial sector and the large costs of the financial sector in the event of a crisis, an independent assessment of their health on a regular basis is important. The IMF-Worlds Bank's FSAP is useful, although it missed various signs of the impending crisis in the pre-2007 period. These external FSAP's, however, don't contribute to capacity building in the EDEs. In this context, the Indian approach of self-assessment, which included peer review by reputed international experts to ensure independent and impartial assessment, is well considering. The self-assessment facilitated enhancing the skill-sets within the financial sector, leading to significant capacity building.

IMS and IMF

Critical to this reform is a careful scrutiny and evaluation of the existing IMS governance arrangements, and the ability of the IMF to shoulder this responsibility effectively in a complex and interdependent world in which a rebalancing of global economic power is underway. The nature of crises is changing – crisis propagation takes diverse forms and conduits which are radically different from the traditional exchange rate-balance of payments transmission channels with which the IMF has so far been involved. Moreover, instead of originating in the periphery, as received wisdom has always held, it is the systemically important countries that threaten the stability of the IMS, and the IMF seems powerless in its surveillance over their policies that produce large negative externalities, as the recent experience has shown. In the interregnum, the balance of power in the global economy appears poised to undergo tectonic shifts. There is, therefore, need for greater diversity and representativeness in IMS governance and, thereby, greater legitimacy and effectiveness. The ascendancy of large emerging economies such as the BRICs over the next half century is irreversible. It will bring with it additional responsibilities in global governance for which the IMS needs to be adequately refashioned. New institutional actors such as the Financial Stability Board (FSB), the G-20, the European Union and other regional institutions are emerging as potential partners of the IMF as governors of a new IMS. Accordingly, it would be better to focus on achieving agreement on objectives of IMS, rather than on the means or instruments for achieving them.

Regional Arrangements

In the aftermath of the North Atlantic financial crisis and following the sudden drying up of liquidity in the financial markets, the US Federal Reserve extended huge swap lines to the central banks in major advanced and select economies to meet the short-term funding markets requirements. Subsequently, with the emergence of the European sovereign debt crisis, and given the large funding needs in view of the high interconnectedness, the European Financial Stability Fund (EFSF) was set up in 2010 to supplement resources available from the IMF. The EFSF which was a temporary structure yielded to a permanent structure – the European Stability Mechanism (ESM) – in 2012. The BRICS are also discussing a regional currency arrangement.

While the regional arrangements in the Europe after the 2008 financial crisis seem to have been welcomed, it is interesting that similar arrangements after the 1997 Asian financial crisis did not see such positive response. The proposal for an Asian Monetary Union (AMU) found stiff opposition on the grounds that a regional fund could undermine the IMF by lending money with weak or inconsistent policy conditions. “Some Western and IMF officials also feared that an AMU would threaten their roles in the region and encourage policies disadvantageous to

non-Asian economies” (Ciorciari, 2011). While the initial proposal for an AMU did not take off, the regional efforts initially led to the institution of bilateral swaps under the Chiang Mai Initiative (CMI). In 2010, the CMI expanded to the US \$ 120 billion multilateral swap facility under the Chiang Mai Initiative Multilateralization (CMIM) to provide lifelines to participating economies in need.

These arrangements have come at a time when the IMF resources have barely kept pace with global GDP. How will the alternative regional funding arrangements and developments impact the IMS? Will a number of regional funding arrangements contribute better to global financial stability vis-à-vis the IMF?

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