

Accumulation of Foreign Exchange Reserves & The Reform of the International Monetary System

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October 4, 2010

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Executive Summary

The global financial crisis and its impact on the world economy have revived important discussions about global macroeconomic imbalances and their roots in the current international monetary system (IMS). This study aims to understand that relationship and the costs incurred by developing countries, which in many cases have devoted substantial resources to build up reserves as a consequence. It also provides an overview of proposed remedies to the problem. With political momentum for reform, politicians, officials, civil society groups and others must begin to deal with the question of what could be accomplished by new reforms.

The U.S. dollar is the world's reserve currency and the means of payment for international transactions. The euro and other currencies are unable to compete with the U.S. dollar as the leading reserve, since no other currency shares the dollar's desired characteristics in terms of yield, liquidity and safety. As a result, the U.S. enjoys an "exorbitant privilege": world seigniorage power and the access to cheap financing in its own currency. The IMS has allowed the U.S. to follow a pattern of growth characterized by large current account deficits, permanent capital inflows, and rising public sector debt.

The large U.S. current account deficit has been matched by a rising aggregate surplus sustained by emerging economies accumulating massive foreign exchange reserves. International reserve accumulation reached 13 percent of global GDP in 2009 – a threefold increase over ten years. For developing countries, reserves reached almost 10 months of imports and 475 percent of short-term external debt in 2008. Many analysts stress that the most important cause for the huge size of reserves has been demand from countries seeking 'self-insurance'. Countries want to mitigate their vulnerability to sudden shifts of short-term capital and avoid International Monetary Fund intervention in times of crisis. The recent global financial crisis may have reinforced this strategy. Meanwhile, low-income countries accommodate the IMF's policy recommendations on exchange rate regimes and reserve accumulation, constricting both policy and fiscal space to the detriment of the full absorption of external funds on core public expenditures.

Moreover, the global macroeconomic imbalances that the IMS generates are not only unstable but also inequitable. The current system has three main flaws: 1) the "Triffin dilemma": the U.S. must avoid an accumulation of fiscal and/or current account deficits in order to preserve confidence in the dollar while providing international liquidity to avoid a deflationary bias and allow trade expansion; 2) it is tilted against deficit countries and in favor of surplus countries, tending to generate global deflationary bias; and 3) it is inequitable, as the accumulation of reserves transfers resources from poor to rich countries.

The outstanding increase in reserve accumulation in recent years, although rational from an individual country perspective, further worsened global imbalances and highlighted the need for a reform to the IMS. There are different proposals to reform the current system. Some only focus on diminishing the

imbalance between deficit and surplus countries, while others go further and suggest a complete overhaul of the IMS.

For example, UNCTAD and the IMF propose two different approaches to deter reserve accumulation and solve some of the risks posed by financial shocks. UNCTAD suggests the use of a ‘constant real exchange rate’ rule to be put into practice within a multilateral framework, while the IMF seeks the implementation of a ‘global stabilization mechanism’ (GSM). According to the IMF, the GSM would be an alternative to ‘self-insurance’, since it would allow fast and sufficient provision of financing to all its members during a systemic crisis, to stem contagion.

The main proposals for reform of the global monetary system as a whole include: an SDR-based reserve system, a multi-currency system, and regional agreements. Many analysts suggest that a well designed SDR-based global reserve system would help correct the main flaws of the current IMS. Even though countries would have to give up some seigniorage power, the general benefits of using SDRs as a global reserve currency would be that SDRs already exist and would be a global reserve for a global system, disconnected from the domestic monetary policy of a single country. The practical problems of adopting an SDR-based system, however, are significant and should be addressed if the SDR is to become a global currency.

A multi-currency monetary system seems the most immediately feasible, since countries would be simply encouraged to hold reserves in other currencies than the U.S. dollar. Countries could diversify the composition of their reserve assets and thus offset instabilities derived from fluctuations of a single reserve currency. However, this system may cause further exchange rate volatility, to the detriment of growth and investment. A fixed exchange rate regime (at least for the reserve-issuing countries) may be required, cancelling the benefit of flexibility the system offers. Most importantly, a multi-currency monetary system would not solve the main flaws of the system, since developing countries would continue to accumulate reserves and transfer resources to reserve-issuing countries.

Proposals for regional agreements have also drawn interest, perhaps because they seem more politically feasible, and several arrangements that could serve as vehicles are already in place. A group of countries could create reserve associations in which resources could be pooled to protect the regional members. If the association proves successful, other members may be encouraged to join or form their own association.

Those who favor a new international monetary system must recognize that a complete reform may be a longer-term goal that requires political vision, multilateral efforts, and significant commitments. Short-term objectives, however, may include the recognition by the international community that the current system needs reform and that a collaborative, global effort is mandatory to achieve any progress.

Introduction

The global financial crisis and its impact on the world economy have revived important discussions about global macroeconomic imbalances and their roots in the *de facto* international monetary system (IMS) the world has used since the 1970s. This study aims to understand that relationship and the costs incurred by developing countries, which in many cases have devoted substantial resources to build up reserves as a consequence. It also provides an overview of the most prominent proposed remedies to the problem. With the flaws of the current international monetary system more evident than ever and the pledge by French President Nicolas Sarkozy to highlight the need for monetary reform at the G20 next year, civil society groups and others must begin to question what could be accomplished by new reforms.

The first section of the paper explains how the current monetary system and its reliance on the U.S. dollar encourage global instability and macroeconomic imbalances. Emerging economies try to adapt with a massive accumulation of reserves, but the global economic system remains structurally inequitable. Meanwhile, low-income countries accommodate the IMF's policy recommendations on exchange rate regimes and reserve accumulation, constricting both policy and fiscal space to the detriment of the full absorption of external funds in core public expenditures. The second section of the paper focuses on different proposals to reform the current system. It begins by explaining two different approaches to deter reserve accumulation and solve some of the risks posed by financial shocks. The first approach is proposed by UNCTAD and suggests the use of a 'constant real exchange rate', while the second approach is presented by the IMF, which seeks the implementation of a 'global stabilization mechanism'. The section continues with an overview of the main proposals for reform of the global monetary system as a whole: an SDR-based reserve system, a multicurrency system, and regional agreements.

I. Current International Monetary System

The U.S. dollar as a reserve currency

Under the 1944 "Bretton Woods" accords, the international monetary system required countries to have a fixed exchange rate that established parity of their currencies in terms of gold within a plus or minus 1 per cent band. To keep market exchange rates within the band, countries pegged their currencies to the U.S. dollar. The U.S. linked the dollar to gold at a rate (initially \$35 per ounce), which in turn was used by foreign central banks to exchange dollars for gold. The dollar acted as an international means of payment across the world, providing a unit of account and a medium of exchange for cross-border trade and financial transactions.

On August 15, 1971, the United States terminated convertibility of the dollar to gold. This action changed the international monetary system from a gold-exchange standard to an informal fiduciary dollar

standard. As a result, the U.S. dollar became not only the means of payment for international transactions, but also the *de facto* reserve currency of the rest of the world.

The U.S. currency is also the main store of value for savers, since no other currency provides the asset classes that the U.S. dollar has in terms of liquidity, safety, and yield. No other country offers the market volume of U.S. Treasury low-risk securities or the number of transactions in U.S. assets. As highlighted by Cooper (2010), it is like a common language, enjoying “network externalities” – ‘the greater the number of agents who use and accept it, the more useful it is to everyone and the more entrenched it becomes’.

As of now, the euro is unable to compete with the U.S. dollar as the leading reserve currency (Cooper, 2010; McKinsey Global Institute, 2009). There is significant outstanding euro-denominated public debt, but the market is much more fragmented and much less liquid. Euro-denominated securities are different amongst each other, meaning there are big differences depending on which government issues them. For example, central banks will be more prone to hold securities issued by the German government than those issued by, say, Greece or Italy. Moreover, Germany’s government debt is around \$1.6 trillion, but it only holds 30 per cent as short term debt, making the available liquid assets scarce. As for the Japanese yen, even though short term debt is substantial, according to Cooper (2010), it poses two significant deterrents: the yield is below one percent in short term securities, and among the developed countries it has the highest ratio of debt to GDP. As long as the U.S. capital market remains open and its monetary and fiscal policies do not lose credibility, the U.S. dollar will continue to be the reserve and transaction currency of the world, unless the international monetary system is reformed.

The U.S. enjoys several advantages by issuing the world’s reserve currency. The U.S. benefits from what French Finance Minister Valéry Giscard and President Charles De Gaulle called in the 1960s an “exorbitant privilege”. This privilege refers to the gain from seigniorage, issuing non-interest bearing currency held worldwide, and to the access to low interest rates, especially on government debt, given international holdings on government securities. The U.S. borrows abroad at a lower cost and in its own currency, never facing the risk of a balance of payment crisis. In addition, the U.S. is the only country that enjoys true monetary independence (Ocampo, 2010a). U.S. Treasury bills are perceived and used as the safest assets in the world, which allows the Federal Reserve to set interest rates levels independently of the U.S. exchange rate.

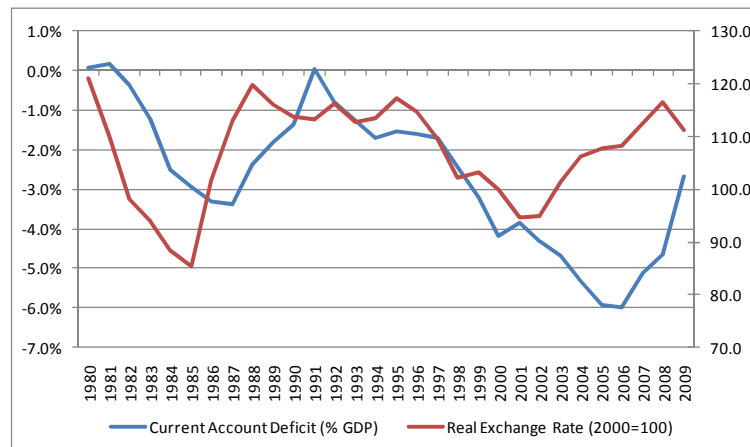
Recently, however, the McKinsey Global Institute (MGI) conducted a cost-benefit analysis to quantify the privilege the United States enjoys and question how exorbitant it really is. The study concluded that the net gains in a normal year are between \$40 billion and \$70 billion (0.3-0.5 percent of U.S. GDP). The benefits are derived from i) seigniorage revenue and ii) access to cheaper capital. The first is calculated as the effective interest-free loan generated by issuing additional currency to non-

residents who hold U.S. dollars, which they estimate at \$10 billion. The second benefit is calculated as the reduced cost of borrowing derived from the large purchases of U.S. Treasury securities by foreign governments. They estimate that the U.S. borrowing rate has been reduced by 50 to 60 basis points in recent years, generating a financial benefit of \$90 billion. The only cost is the loss of export competitiveness that arises from the appreciation of the U.S. exchange rate, estimated to be 5 to 10 percent higher than it would otherwise be if the U.S. dollar was not the world reserve currency. The net cost is calculated to be between \$30 billion to \$60 billion.

MGI estimated that the net financial benefit in an atypical year, such as one in crisis, is significantly lower. From January to June of 2009, the net financial benefit fell to between \$5 billion and \$25 billion, because the dollar appreciated by an additional 10 percent due its status as a "safe haven." Cooper (2010) further suggests that the net gains may be lower, since funds are increasingly reallocated to higher-yielding assets outside the U.S. through carry trade. The MGI study concludes that the United States may not be inclined to tighten its fiscal and monetary policy to safeguard its dominant reserve currency position, even if it perceives that status to be at genuine risk.

Regardless of the net gains the system affords to the U.S., it has allowed the country to follow a pattern of growth characterized by large current account deficits, permanent foreign capital inflows, and rising public sector debt, without experiencing important inflation. In fact, in the 2000s, the U.S. has experienced the sharpest widening of its current account deficit in history. Even though the deficit has its counterpart in the deterioration of public and private domestic deficits, the magnitude of the deficit also reflects important changes in the rest of the world. The increasing current account deficit was matched by rising aggregate surpluses in many countries, particularly in East Asia, commodity exporter countries, and Japan. As a consequence, the U.S. dollar depreciated slowly but steadily (see Figure 1).

Figure 1. U.S. current account deficit and real exchange rate



Source: International Monetary Fund, *International Financial Statistics*.

During the global recession of 2008-2009, however, the current account deficit did begin to narrow. The surpluses of countries were significantly eroded as commodity prices dropped and trade collapsed. The dollar remained strong due to the “flight to quality” in financial markets and the demand for liquidity in U.S. dollars as part of the de-leveraging process worldwide.

Even though U.S. current account deficit has begun to narrow as a result of the recession, the aggregate surpluses in many countries, fueled by precautionary demand for reserves, will continue to grow once recovery begins. In order for this demand of U.S. dollars to be met by a supply, the U.S. would have to continue expanding its current account deficit. Helleiner (2010) points out that, in the wake of the crisis, ‘there is no great enthusiasm in the U.S. for this scenario’ and that people within President Obama’s administration are beginning to speak in favor of ‘global rebalancing’—which may be a first step to acknowledge the problem. Fred Bergsten, an influential analyst, argues that U.S. policymakers now ‘must recognize that large external deficits, the dominance of the dollar, and the large capital inflows that necessarily accompany deficits and currency dominance are no longer in the United States’ national interest’ (Helleiner, 2010).

The accumulation of foreign exchange reserves by developing countries

The traditional reasons that explained the demand for foreign exchange reserves typically included the management of demand and supply that derived from current account transactions. For example, Carvalho (2010) states that countries need to accumulate reserves to guarantee payment for imports. A country may pay for its imports derived from 1) the capital inflows generated by exports of goods and services and 2) by the import of capital, which is typically volatile. If a country heavily depends on a few agricultural exports or mining commodities, capital inflow generated by exports may also be volatile, and thus one should expect that the central bank will accumulate reserves to guarantee the payment for normal imports. According to Rodrik (2006), the rule of thumb for central banks was that foreign exchange reserves should be equivalent to three months of imports.

Another common source of demand for international reserves may be financial (Carvalho, 2010). For a developing country, the launching of a large-scale investment plan may create an extra demand for international means of payment. A country may borrow in the foreign financial markets or accumulate reserves in advance to cover such payments.

In recent years, analysts have argued that many export-oriented industrializing countries, particularly in East Asia, accumulated reserves to prevent exchange rate appreciation (Helleiner, 2010). In the same line of argument, Greenwald and Stiglitz (2010b) suggest that after the Uruguay Round, developing countries were deprived of ways to prevent their farmers from being undersold by subsidized farmers in

industrialized countries and thus pursued low exchange rates with the consequent accumulation of international reserves.

However, these reasons do not explain why foreign exchange reserves have increased so dramatically in the last 15 years, nor explain why countries that do not pursue an export-oriented growth model (such as poor countries in Africa) have also followed the same reserve accumulation strategy. International reserve accumulation reached 13 percent of global GDP in 2009 – a threefold increase over ten years, mostly in U.S. dollars. For developing countries, reserves have reached almost 10 months of imports and 475 percent of short-term external debt in 2008. Emerging markets holdings rose to 32 percent of their GDP (26 percent excluding China) (IMF, 2010a). These reserves represent an important part of the aggregate surpluses that counter the magnitude of the U.S. current account deficit, shown in Figure 1.

Reserve accumulation has particularly increased in middle income countries and to a lesser extent in low-income countries (LICs). High income countries have maintained levels below 5 percent in the past 30 years, Japan being the only exception (see Figure 2). Asian countries have accumulated the most reserves as a percentage of GDP, followed by Sub-Saharan Africa (see Figure 3).

Figure 2. International Reserves (% GDP)

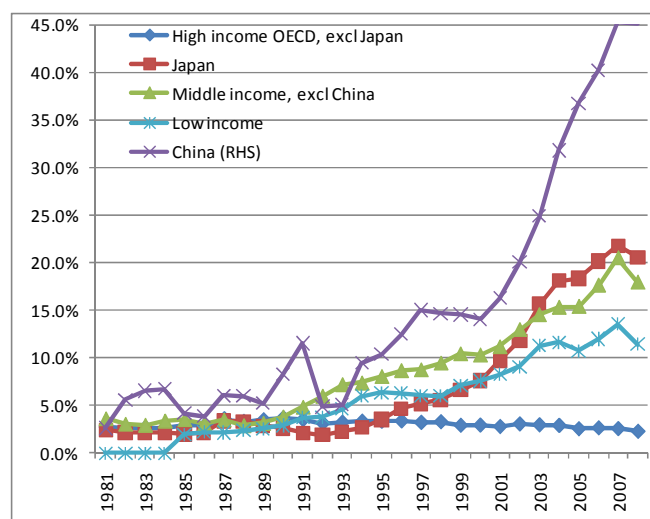
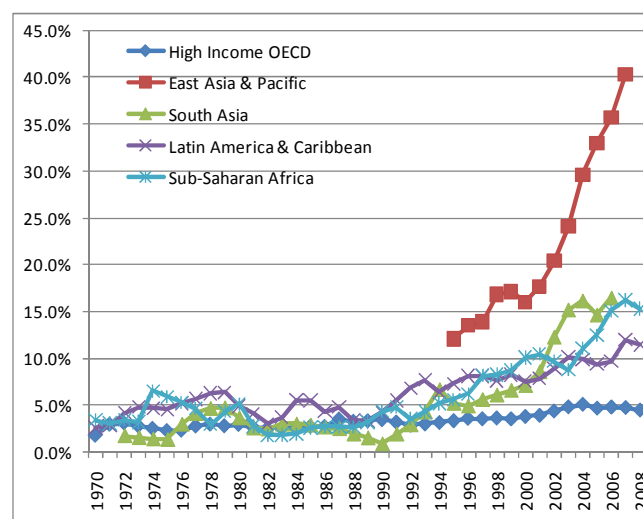


Figure 3. International Reserves by geographic area (% GDP)



Source: World Bank, *World Development Indicators*

Many analysts stress that the most important cause for the recent outstanding size of reserves has been demand from countries seeking ‘self-insurance’² after the painful experiences of financial crises in Latin America and the Asian crisis of 1997-1998 (Carvalho, 2010; Greenwald and Stiglitz, 2010a;

² The definition of ‘self-insurance’ is still open to debate. Some may argue that countries are insuring against sudden stops of capital inflows, but this may be a too narrow definition, as countries may also accumulate reserves to mitigate the impact surges of capital inflows have in exchange rate and current account deficit (Ocampo, 2010b).

Helleiner, 2010; Ocampo, 2010a). During these crises, countries were vulnerable to the sudden shifts of short-term capital movements and many had to rely on International Monetary Fund (IMF) financing with strict conditionality, experiencing reversals in economic growth and development.

Moreover, the volume of global net private capital flows going to emerging markets has increased sharply in the last decade, despite the crises in emerging markets—from \$90 billion in 2002 to \$600 billion in 2007 (IMF, 2010a). Even though capital inflows provide financing to countries with limited savings, surges of capital inflow complicate macroeconomic management. The pro-cyclical nature of the flows may fuel a boom in domestic demand lending that can lead to accelerated inflation and/or a widening of the current account deficit through the appreciation of the real exchange rate. Past crises indicate that current account deficits are a strong predictor of economic recessions when the capital account cycle declines (Ocampo, 2010b). Since many emerging markets have small financial systems compared to the large inflows they can attract, and many have embraced policies that allow free capital flows (e.g. elimination of capital controls, floating exchange rate regimes), the alternative way to protect their countries from a sudden shift in capital flows or a balance of payment crisis is to accumulate reserves.

One should expect that the ‘self-insurance’ strategy is followed more by middle income countries, which attract significant private capital inflows, than by low-income countries, whose capital inflows are predominantly official flows (e.g. government loans, foreign aid grants). However, recent studies by Singh et al. (2008) and Dorsey (2008) found that capital inflows to LICs increased from about 4 percent of their GDP in the 1980s to more than 10 percent of GDP by 2006, and that they were mostly driven by private inflows in the form of foreign direct investment and remittances. The studies associate the rise in capital inflows to the overall improvement in current account balances and sustainable debt. Interestingly, these findings apply to all LICs, as private flows have surged in Africa, India, and other South-East Asian LICs in broadly similar proportions in terms of GDP. Since private inflows have increasingly become an important source of external vulnerability for LICs, it is plausible that reserve accumulation by low-income countries also follows a ‘self-insurance’ policy.

The recent global economic recession may have proven the value of the ‘self-insurance’ reserve accumulation strategy. Many countries had to use their international reserves to protect their currencies against aggressive and sudden capital outflows and to provide liquidity in their domestic markets. Maintaining immediate liquidity is particularly crucial for LICs, as they are dependent on external funds to finance core public expenditures (Ambrose and Muchhala, 2010b). As Figures 4 and 5 show, the accumulation of international reserves by developing countries dropped significantly in August 2008 and recovered in the first quarter of 2009. In 2008, world capital inflows moved back to 16 percent of their

2007 volume. The flows consisted primarily of portfolio equity and fixed-income investment (IMF, 2010b).

Figure 4. Variation of International Reserves, 2000-2010

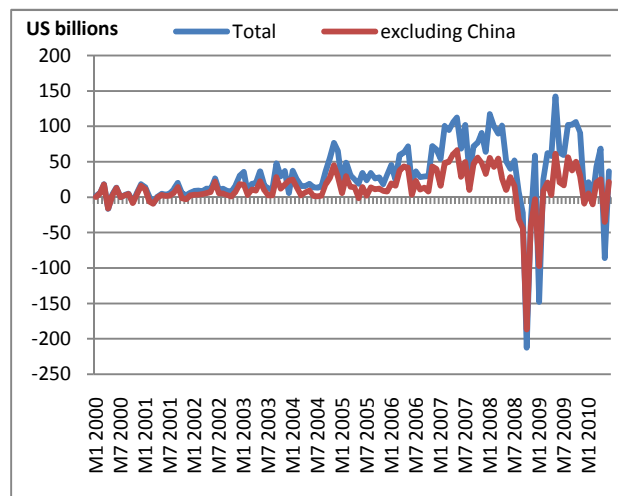
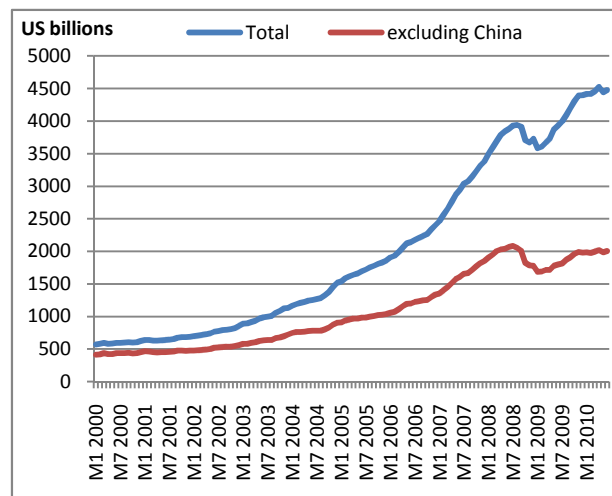


Figure 5. Total International Reserves, 2000-2010



Source: International Monetary Fund, *International Financial Statistics*.

Note: "Total" includes a sample of 20 countries: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Hungary, India, Indonesia, South Korea, Malaysia, Mexico, Peru, Philippines, Russia, South Africa, Thailand, Turkey, Venezuela, and Vietnam. Countries cover all geographic regions and were selected based on their contribution to developing countries' GDP and population.

A final explanation for reserve accumulation, which may be reinforced as a result of the recent financial crisis, is that countries accumulate reserves as a way to demonstrate their creditworthiness compared to other emerging markets with a similar risk profile, in order to compete for capital (IMF, 2010a). This may be rational, as studies have shown that Credit Rating Agencies use the ratio of non-gold foreign exchange reserves to imports as an important determinant of credit ratings for developing countries (UNCTD, 2008). It is difficult to calculate how this drives reserve accumulation, and to analyze whether this behavior applies solely to middle income countries. However, as capital inflows to low-income countries begin to follow a pattern similar to the one observed in middle income countries, further research to understand the rationale behind reserve accumulation in LICs should be conducted.

IMF policy recommendations regarding foreign exchange reserves

IMF policy recommendations regarding foreign exchange reserves are not specific in the adequate level of reserves all countries should maintain, but they do encourage reserve accumulation to mitigate the volatility of capital flows, although not for the purposes of maintaining competitiveness. The Independent Evaluation Office (IEO) for the IMF has recently stated that it might evaluate the soundness of IMF staff recommendations regarding reserve accumulation in the medium term. As a motivation for the study, the

IEO staff argued that many countries maintain reserves well in excess of what appears optimal, based on models of current account transactions as well as liquidity and capital account considerations. They suggest that persistent intervention in the foreign exchange markets may undermine monetary policy objectives and exacerbate global imbalances (IEO, 2010).

Even though the IEO has not conducted a world-wide, in-depth evaluation on the issue, it has published two studies with interesting findings. In a 2007 evaluation titled ‘IMF and Aid in Sub-Saharan Africa’, the IEO concluded that PRGF-supported macroeconomic policies generally mandated the use of incremental aid in higher stocks of reserves than needed, and in some countries additional aid was forced to be saved to increase reserves. They also found that the threshold determining whether the increased aid should be used to expand current account deficits or to increase reserves was two to three months of imports.

As shown in Figure 6, for countries with reserves below a threshold of 2.5 months of imports, absorption of incremental aid was nearly zero; those countries had to use aid to build their reserves. For countries with reserve levels above the threshold, absorption averaged 100 percent of incremental aid. For countries with high stock reserves, 79 percent of the countries with inflation below 5 percent were allowed to implement a net fiscal expansion. Most countries with inflation above this threshold were asked to reduce domestic debt (see Figure 7).

Figure 6. Absorption of Aid Increases

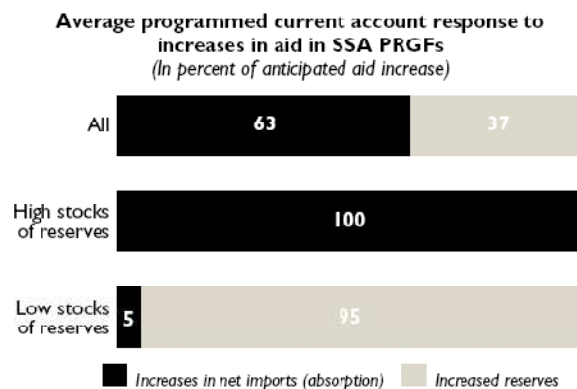
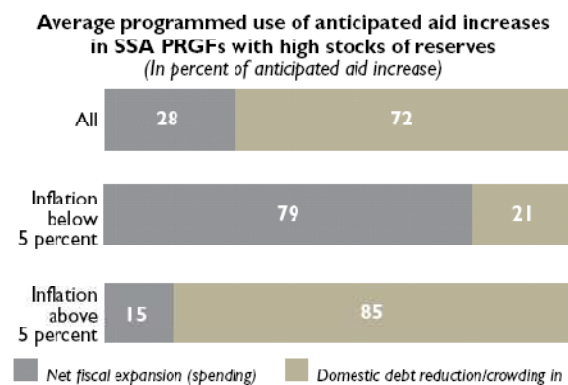


Figure 7. Spending of Aid Increases



Source: Independent Evaluation Office Report on IMF and Aid in Sub-Saharan Africa, 2007.

In response to the allegation that required reserves are in excess of what is optimal, IMF Board members have argued that models of optimal reserve accumulation appear to ignore other important considerations, like the ones highlighted in the section above. For example, countries with higher reserves are often better prepared to weather crises, as demonstrated in the recent global recession. Moreover, the

costs of a balance of payment crisis are so great that IMF staff considers it is ‘better to err on the side of caution in building reserves beyond what may be optimal’ (IEO, 2007a).

An additional evaluation in 2007 by the IEO on the IMF’s advice regarding exchange rate policy for the period of 1999-2005 concluded that IMF staff generally supported a country’s accumulation of reserves. About half of the sample of 30 economies³ covered in the review accumulated significant reserves in the evaluation period, especially in recent years. Their motives, according to the IEO report (2007b), included: (1) ‘self-insurance’; (2) intergenerational and Dutch disease considerations (in countries with large natural resources or aid flows); and (3) concerns about competitiveness and export/industrial performance. IMF staff generally endorsed the accumulation of reserves on precautionary grounds and in countries with large natural resource endowments. But they have advised against accumulating reserves aimed at slowing the appreciation of the exchange rate to support export competitiveness (including in low-income countries once international reserves had reached a prudent level). However, the IEO argues that explicit analysis of an adequate level of precautionary reserves (linked to the exchange rate regime, nature of shocks, and country conditions) was often absent, and thus the assessments of the appropriateness of such policy measures were highly subjective.

The IEO report included several case studies to support this evidence. For example, it states that IMF staff—with support from the board—advised against reserve accumulation in South Korea once they determined that the country had sufficiently rebuilt its reserves after the crisis, and argued that intervention should only be undertaken in disorderly market conditions. In Peru, IMF staff was supportive of higher reserves until about 2004, when they began to argue for limiting the reserves buildup and for following greater flexibility of the exchange rate. Finally, in Tanzania, IMF staff supported authorities’ stance on building reserves by using only a portion of aid receipts to limit the monetary impact of increased government spending. From 2002, the staff did not see a problem with the level of the exchange rate and called for a greater absorption of foreign assistance.

The IMF continues to advise in favor of reserve accumulation for precautionary purposes. In its recent Global Financial Stability Report (2010), the IMF suggests policies for liquidity-receiving economies to mitigate the risks related to capital inflows fluctuations. The first one is to have a flexible exchange rate, since it provides a natural buffer against surges in global liquidity. The report acknowledges, however, that appreciation of the exchange rate may affect the tradable sector, and thus advises to intervene in the foreign exchange market to slow appreciation if the exchange rate is not

³ The countries and/or regional monetary unions selected were WAEMU, Australia, Bulgaria, Egypt, Brazil, Guinea, China, Euro area, Morocco, Ecuador, Rwanda, Hong Kong, Iceland, Saudi Arabia, El Salvador, South Africa, Japan, Lithuania, Jamaica, Tanzania, Korea, Norway, Mexico, Malaysia, Russia, Peru, Singapore, Ukraine, United States, United Kingdom. The criteria of selection included, among others, systemic importance, size of current account imbalance, volatility of exchange rate and chance in international reserves.

undervalued. The second policy recommendation is to accumulate reserves, using sterilized or unsterilized intervention as appropriate, to protect the country from a financial shock.

Note that the IMF does not advise in favor of any type of capital control intervention, such as the ones implemented by Brazil or Taiwan in 2009 to curb capital inflows. Academics such as Arvind Subramanian and John Williamson question the IMF's lack of support to capital account intervention by individual countries. They argued in the *Financial Times* that 'by recognizing that in some instances sensible curbs on inflows might be a reasonable and pragmatic policy response, the Fund could eliminate the market-unfriendly stigma that actions of the Brazilian type might otherwise risk incurring.' They suggest that, 'the world needs a less doctrinaire approach to foreign capital flows' (Bretton Woods Project, 2009).

Why the current system is unstable and unfair

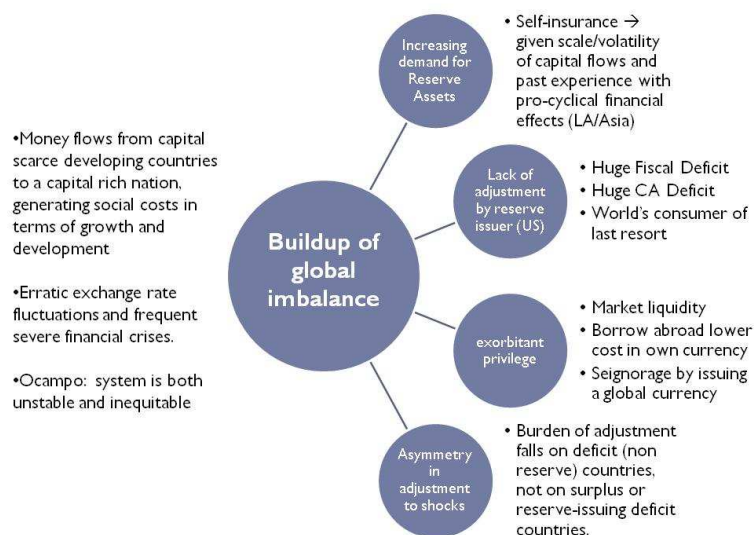
The current international monetary system is not governed by a specific institution with a mandate to support the demand of international means of payment, as a national monetary system is established. International liquidity is provided by the U.S. dollar, as a byproduct of U.S. domestic monetary policies, which are decided exclusively with domestic goals in mind.

One of the problems that arise with the current system is called the "Triffin Dilemma", after the work of Robert Triffin in the 1960s. The fact that a national currency is given the role of an international currency creates a dilemma. For the U.S. to provide means of payment for international transactions, other countries must have access to dollars. This is only possible if the U.S. generates deficits in its balance of payments. With global economic growth, the value of transactions increases and so the balance of payments deficits must increase to continue providing international liquidity. The growth of deficits undermines confidence in the stability of the dollar, jeopardizing its role as the international store of value. The dilemma: avoid an accumulation of fiscal and/or current account deficits in order to preserve confidence in the dollar while providing international liquidity to avoid a deflationary bias and allow trade expansion.

A second flaw of the current system is that it is tilted against deficit countries. This tends to generate global deflationary bias: the adjustments that deficit countries must adopt to balance their external accounts when financing is not available in sufficient amounts will not be matched by expansionary policies in surplus countries, which do not feel the pressure to adjust (Ocampo, 2010a). As Greenwald and Stiglitz (2010) put it, the United States has thus become the consumer of last resort—making up for the deficient in aggregate demand elsewhere, a problem that has become worse as other countries have learned to follow prudent monetary and fiscal policies. At the same time, as other countries strive to make sure that they do not have large trade deficits, the U.S. has also become the deficit of last resort.

A third important flaw of the system is that it is inequitable, as the accumulation of reserves transfers resources from developing countries who demand reserves to developed countries who issue reserves. As Ocampo (2010b) explains it ‘is nothing other than lending to rich countries at low interest rates’. According to Carvalho (2010), developing countries face two different types of costs associated with the accumulation of reserves. In the case of reserves that result from capital account surpluses in excess of current account deficits, the cost of holding such reserves is the spread between the rates of interest paid to service external debt and the rates received as interest securities used as reserves. Since reserves are held in highly liquid, low-yield securities, the spread is negative. For reserves that derive from current account surpluses, it is the opportunity cost of maintaining those resources invested in low-yielding securities. The following chart (Figure 8) summarizes the flaws of the current system.

Figure 8. Flaws of current International Monetary System



Given the difficulty of calculating the second type, Rodrik (2006) calculates the first type of cost associated with holding reserves (the spread between the external cost of funds and the yield on liquid reserve assets). From the total amount of reserves per country, he excluded the component that is held for traditional, current-account financing purposes, which he assumed to be 3 months of imports. He concluded that the cost of excess reserves was approximately 1 percent of developing countries' GDP. In his words: ‘It is a multiple of the budgetary cost of even the most aggressive anti-poverty programs implemented in developing countries and it is roughly the same order of magnitude as the projected gains for developing nations from a successful conclusion of the Doha round of trade negotiations’.

Even though it is understandable that developing countries accumulate reserves, one must ask if the benefits of reserve accumulation are worth 1 percent of their GDP. Rodrik and Velasco (2000) explain

that if a country complies with a denominated Guidotti-Greenspan rule of holding reserves equal to at least its short-term debt, it reduces the annual probability of experiencing a sharp reversal in capital flows by 10 percent on average. If the output cost of a financial crisis is approximately 10 percent of GDP, then the expected value of holding reserves ($0.10 \times 0.10 = 1$) equals their cost (1 percent of GDP).

However, as Rodrik (2006) also points out, this argument overlooks the fact that liquidity could be achieved in other ways. He argues that policy makers remain reluctant to pursue capital account management. Perhaps measures such as taxing or controlling capital inflows could diminish the need for developing countries to increase reserve accumulation, but such measures would not address the rest of the flaws of the current international monetary system.

II. Proposals to reform the International Monetary System

Concerns related to the deficiencies of the system have gained momentum in the last two years given the rising fiscal deficits and the unprecedented monetary expansion that the U.S. implemented to avoid a world financial meltdown in 2008-09 (Ocampo, 2010a). The outstanding increase in reserve accumulation in recent years, although rational from an individual country perspective, further worsened the global imbalances and highlighted the need for a reform to the IMS. In the years leading to the crisis, the demand for reserves in U.S. dollars grew rapidly despite the widening of U.S. deficits, allowing the U.S. to maintain low benchmark yields. This was a source of vast, cheap money that allowed financial agents to underprice risk and misallocate capital. It has thus been suggested that this, coupled with financial deregulation and the fact that reserve holding countries reinvested their dollar reserves back in U.S. assets, may have been important drivers of the financial crisis (Helleiner, 2010). This section first presents the proposals by UNCTAD and the IMF to deter developing countries from increasing reserve accumulation and in general to improve the current international monetary system. It then explains different proposals for an overhaul of the IMS, highlighting their key costs and benefits.

Proposals to deter reserve accumulation and reform current IMS

In a recent policy brief, UNCTAD (2010) calls for a multilateral response to address the volatility and misalignment of exchange rates. It states that countries should have policy space to limit the speed of capital flows and be able to change their direction when appropriate. UNCTAD proposes a ‘constant real exchange rate rule’ (CRER) that will, as its name reads, maintain constant real exchange rates⁴. CRER could be maintained if nominal exchange rates strictly follow inflation differentials; higher inflation would be automatically offset by the devaluation of the nominal exchange rate.

⁴ Several academics have proposed different forms of fixed exchange rate regimes, following the same concern of exchange rate volatility and financial shocks. For example, see Williamson (1987) and Cooper (2006).

The policy brief highlights that some of the benefits a CRER policy could bring are: i) curbing excessive currency speculation of carry trade, ii) preventing unsustainable current account deficits and debts, and iii) minimizing the need to hold international reserves, since with symmetric obligations to all countries to apply the constant real exchange rate rule, no country will have to hold reserves to defend its currency. Countries will only intervene in the foreign exchange markets to compensate for potential volatility of export returns (particularly for economies dependent on commodities).

Even though the report recognizes the significant political commitments and technical difficulties the policy will require, it stresses the importance of implementing a multilateral, coordinated response as opposed to encouraging individual country responses. Further discussions to assess the benefits and feasibility of this policy are needed, but a multilateral framework such as this could reduce ‘mutual recrimination over exchange-rate management and the threat of trade wars’, as the brief suggests.

On the other hand, in a recent publication titled ‘Reserve Accumulation and International Monetary Stability’ (2010a), the IMF considers three separate routes to diminish global reserve accumulation: i) agreeing on an “adequate” level of reserves for precautionary purposes; ii) trying to tackle directly the key factor underlying precautionary demand (capital flows); and iii) options to reduce accumulation of non-precautionary reserves. It also states that providing alternatives to ‘self-insurance’ should be considered to complement the other three routes.

First, the IMF stresses that better and more frequent monitoring and collection of data is needed, and that the Fund should be the one consolidating such information, which should be reported on a common framework set out by the IMF. Second, in order to agree on an “adequate” level of precautionary reserves and to tackle sudden shifts of capital flows, the IMF stresses the need for a multilateral framework. The concerted framework would agree on capital account liberalization for all countries, while acknowledging the need for measures such as capital controls only under specific circumstances. The conditions that the IMF highlights as necessary to allow the implementation of capital controls are: i) consensus at a global level of when the use of the controls is appropriate (e.g. ‘when a sharp increase in capital flow volatility was triggered by an easing of global monetary conditions rather than by policy issues in destination countries’); and ii) implementation of concerted actions to limit volatility of capital flows, such as the adoption of pro-cyclical capital charges based on global economic cycles rather than domestic cycles.

To reduce accumulation of non-precautionary reserves, the IMF proposes two approaches. The first is ‘a gradual process in which, for instance, countries adopt in a systematic way flexible exchange rate regimes with reduced foreign exchange intervention (away from pegs to other currencies), while reserve issuers agree to adopt a macro-economic policy framework (fiscal rules) to sustain credibility in their currencies.’ The IMF is indirectly suggesting that countries such as China adopt a free floating exchange

rate regime, while the U.S. should agree to adopt a medium-term fiscal policy established and approved well in advance by the multilateral framework.

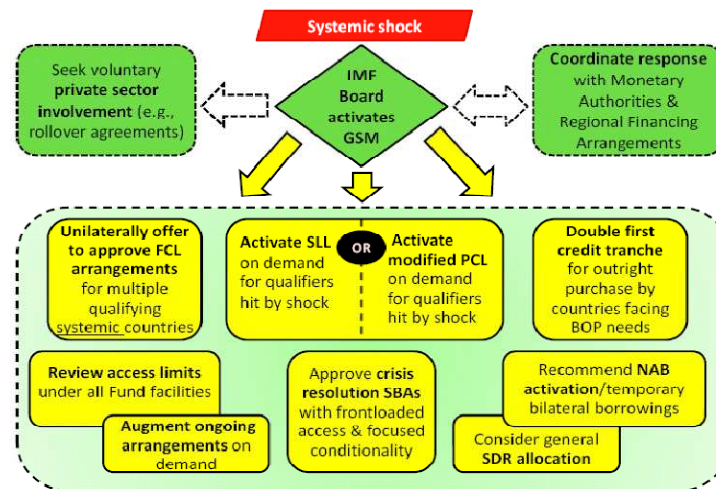
The second proposed approach is to impose penalties or a reserve requirement on “excess” reserves that are above acceptable level of reserves. Another suggestion is an automatic tax on countries with persistent current account imbalances beyond a certain threshold, regardless if the imbalance is derived from a surplus or a deficit. This would be similar to the global imbalance tax initially envisioned by Keynes.

As for the alternatives to ‘self-insurance’, which the report says should be considered to complement the routes explained above, the Director of Strategy, Policy, and Review Department, Reza Moghadam, explains that the IMF is considering a ‘Global Stabilization Mechanism’ (GSM), a framework that would ‘allow proactive provision of financing during a systemic crisis to stem contagion’ (IMFdirect, 2010).

The IMF has been working with South Korea (current G20 chair) on this proposal and is expected to be widely discussed at the G20 summit in South Korea in November 2010. According to the IMF, the ‘Global Stabilization Mechanism’ policy would enable the Fund to provide financing to its members, expand the resource base, and boost liquidity (IMF, 2010c). The idea is to make consensual and simultaneous multi-country offers to approve Flexible-Credit-Line-type arrangements that would be initiated automatically during systemic crisis. The GSM policy would include modalities for coordinating the IMF’s response with relevant monetary authorities and regional financing arrangements, and for seeking voluntary private involvement. The GSM would be a Board-centered process, to reinforce the credibility of the response, and the Board would activate the mechanism when it determines that a “systemic event” has occurred. Figure 9 (next page) summarizes how the IMF envisions the mechanism would work.

However, former chief economist of UNCTAD, Yilmaz Akyüz, raises a fundamental criticism to the GSM proposed by the IMF: ‘After almost every major financial crisis the IMF seeks a new role. This is almost always construed in terms of expansion of its crisis lending capacity. But the IMF’s main business is the prevention of instability and crises, not crisis financing. It has so far missed, not just failed to prevent, every major crisis of its lifetime’ (Bretton Woods Project, 2010b). Akyüz further suggests that ‘it would be better to respond to crisis by combining mandatory debt work-out mechanisms, including temporary debt standstills and exchange controls, with emergency lending rather than to keep on bailing out international creditors.’

Figure 9. The Global Stabilization Mechanism



Source: IMF, 'The Fund's Mandate-The Future Financing Role: Reform Proposals', 2010

Further discussion and analysis will be needed to explore the elements of the GSM proposal and its feasibility to provide the necessary liquidity to contain a crisis. The analysis could include the possibility of creating a global safety net in an incremental way, perhaps beginning with low-income countries that are more dependent on external funds to meet fundamental expenditures in time of crisis.

An SDR-based reserve system

The proposals by UNCTAD and the IMF detailed above concentrate on improving the current international monetary system, focusing on mitigating the impact financial flows and crisis have on countries. However, the proposals do not address the rest of the flaws the current system has, explained in Section I. In different publications, Ocampo (2002, 2007/8, 2010a, 2010b) and others such as China's Central Bank governor (Zhou, 2009), Clark & Polak (2004), Cooper (2010), and Kenen (2010), among others, have stated that a properly designed SDR-based global reserve system would help correct the main flaws of the current international monetary system. In fact, this is even stated in IMF's Article of Agreement No. 22: '*...each participant undertakes to collaborate with the Fund and with other participants in order to facilitate the effective functioning of the Special Drawing Rights Department [...] and with the objective of making the special drawing right the principal reserve asset in the international monetary system*'.

SDRs, or Special Drawing Rights, are a "reserve asset" created by the IMF Board; the first allocation in 28 years, totaling over \$283 billion, was initiated by the G20 in 2009 in response to the global financial and economic crisis. Ocampo (2010a, 2010b) proposes issuing SDR allocations in a counter-cyclical way, concentrating them in periods of financial stress and possibly cancelling them once conditions normalize. Another approach is to issue regular allocations that reflect the global demand for reserves. Ocampo

points out that a simple reform such as the latter would correct some of the flaws of the IMS by partly mitigating the Triffin dilemma and the inequities of the system, and if the counter-cyclical component is added, it could mitigate the deflationary bias.

Ocampo further suggests, however, that comprehensive reform should include additional features, such as making SDRs the only mechanism for IMF financing and adopting allocation rules for SDR issuances that meet the world demand for international reserves. To guarantee sufficient demand for SDRs, countries should commit to maintain an increasing proportion of their foreign exchange reserves in SDRs or intervene to counter depreciation pressures of their currencies. In turn, the IMF would have to create overdraft facilities that could be used unconditionally by all IMF members up to a certain cap and for a pre-established time period.

The allocation rules for SDRs issuance could be distributed on the basis of GDP, or SDRs could be invested in multilateral banks bonds, as the Stiglitz Commission and Helleiner (2010) suggests. Ambrose and Muchhala (2010a) further add that distribution could be linked to ‘development indicators, relative poverty levels, or more specific macroeconomic factors such as shortfalls in a country’s foreign exchange reserve levels’.

Even though countries would have to give up some seigniorage power, the general benefits of using SDRs as a global reserve currency would be that SDRs already exist and would be a global reserve for a global system, disconnected from the domestic monetary policy of a single country. The IMF (2010a) highlights that using SDRs as reserves would generate stability, since ‘with a value defined in terms of a basket of major currencies, the SDR diversifies the currency and interest rate risks of its constituent currencies’. Ocampo points out that the benefit of providing only-SDR funded IMF lending is that the Fund could overcome the deficiencies associated with quotas and “arrangements to borrow” as ways to provide resources. Quotas force the IMF to manage multiple currencies, most of which cannot be used, while arrangements to borrow give extra power to countries that provide funds. Finally, to avoid moral hazard derived from unconditional IMF financing facilities, there is a proposal to set up an international debt workout mechanism (Akyüz, 2005).

Some experts have suggested that in order to transform the SDR into a major world reserve asset, SDRs should also be the international means of payment and used in private transactions. However, this would make the transition more complicated and costly, and would likely face more resistance from the U.S than only making SDRs a reserve currency.

China’s Central Bank governor, Zhou Xiaochuan, has called for a global reserve currency, even suggesting a SDR-based reserve system to safeguard global economic and financial stability. Zhou (2009) called for a world currency that is disconnected from an individual nation’s economic and sovereign interests. Moreover, he strongly suggests the world currency be anchored to a stable benchmark and

issued according to a clear set of rules that ensure orderly supply, in a flexible way that allows adjustments of demand. He even suggested that SDRs be used as means of payment in international trade and financial transactions by setting up a settlement system between the SDR and other currencies. Creating SDR-denominated assets would, he adds, would increase the appeal of the plan.

However, the practical problems of adopting an SDR-based system are significant and should be addressed if the SDR is to become a global currency. For example, Cooper (2010) mentions that the current decision-making arrangement for creation of SDRs is ‘inappropriately cumbersome and time-consuming’. He points out that the use of SDRs (through the IMF) takes several days, when central banks need to decide to intervene in foreign exchange markets within hours. The political will and coordination needed to implement measures that can discourage the use of the U.S. dollar will be significant.

Greenwald and Stiglitz (2010a, 2010b) and Stiglitz (2006) consider a variation of the SDR-based system explained above. They suggest that gradually, a group of countries should join a system in which they agree to only hold a new reserve currency. If enough countries join such “club”, there would be an incentive for any country that currently is a reserve currency to join as well. Every year, each of the members would contribute a stipulated amount to the global reserve fund (GRF), and at the same time the GRF would issue “global greenbacks” of equivalent value to the country, which they would hold in their reserves—a kind of swap of claims for assets. This would allow a country to obtain an asset it can use in times of emergency, and at the same allows other countries to call upon it in times of need. Since each country is holding global greenbacks as reserves, there is no need to hold dollars or euros as reserves.

The proposed global reserve fund offers the same benefits as the SDR-based system in terms of reducing the global imbalance and providing liquidity for countries in time of crisis to avoid excessive reserves accumulation. However, its main drawback is that a high level of political coordination would be required to set up a new global monetary governance infrastructure to manage the global reserve fund.

Multiple currencies

At first glance, a multi-currency monetary system seems the most feasible, since countries would be simply encouraged to hold reserves in other currencies than the U.S. dollar. The advantages would be that countries could diversify the composition of their reserve assets and thus offset instabilities derived from fluctuations of a single reserve currency, while maintaining authority over their exchange rate regime. However, as highlighted in Section I, as of now there is no other currency that provides the desirable characteristics for a reserve currency better than the U.S. dollar.

Moreover, even if the euro or yen or other currency such as the yuan becomes more attractive as a reserve currency, none of the other deficiencies of the current monetary system would be addressed (Ocampo 2010b). The system would continue to be inequitable, as developing countries would continue

to accumulate reserves and transfer resources to reserve-issuer countries, and the system would do nothing to reduce the asymmetry that forces deficit countries (more so than surplus countries) to adjust.

A multi-currency system poses an additional important cost: exchange rate volatility. The McKinsey Global Institute (2009) conducted a survey among executives questioning the cost of exchange rate volatility. Results show that ‘both the level of exchange rates and exchange rate volatility have a large, and growing, negative effect on profits and investment decision making’. Therefore, a multi-currency reserve system may require some form of fixed exchange rate among reserve currencies, which in the end would eliminate the virtue of flexibility that the system provided.

Regional agreements

While a global monetary system may be the ideal and optimal solution, proposals for regional agreements have also drawn interest, perhaps because they seem more politically feasible, and several arrangements that could serve as vehicles are already in place. The Stiglitz Commission noted that group of countries at a regional level could create reserve associations in which resources could be pooled to protect the regional members. The reserves could be held in a new common currency. If the association proves successful, other members may be encouraged to join or form their own association.

Regional attempts are already underway. For example, the ASEAN+3 formed the Chiang Mai Initiative (CMI) after the Asian financial crisis in 1997 as an initiative to manage regional short-term liquidity problems. In turn, Bolivia, Colombia, Costa Rica, Ecuador, Peru and Venezuela have formed a multilateral organization called the Latin American Reserve Fund, with the participation of their respective central banks. Moreover, prompted by the debt crisis in Greece, Daniel Gros and Thomas Mayer proposed a European Monetary Fund for a similar purpose. As the Bretton Woods Project (2010a) highlights, ‘the main point of difference between the regional approaches is the role of the IMF, although IMF involvement is explicitly required for certain levels of lending under the Chiang Mai Initiative.

Concluding remarks

The global financial crisis of 2008-2009 underscored the important flaws of the current monetary system, and although reform proposals were already on the table, concerns arose as the continuing fiscal and current account deficits of the U.S., the uncertain confidence on the U.S. dollar as a store of value, and the persistent volatility of capital flows created momentum for significant reform.

Even though the IMF, through different publications and reports, has acknowledged the need to reform the system, they favor an “enhancement” of the current system, focusing on modifying facility arrangements, strengthening their role as supervisor and provider of liquidity, and implementing measures to mitigate volatility of capital flows. Even though they explore coordinated, multilateral efforts such as

the ones detailed above to allow some form of capital controls, they do not favor a complete overhaul of the international monetary system.

Those who favor a new international monetary system must recognize that a complete reform may be a long-term goal that requires 'extraordinary political vision and courage', as Zhou (2009) puts it. However, short term objectives may include the recognition by the international community that the current system needs reform and that a collaborative, global effort is mandatory to achieve any progress.

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