

Making the Poor Pay for the Rich: Capital Account Liberalization and Reserve Accumulation in the Developing World

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ABSTRACT *Since the 1990s emerging market and developing countries (EMDCs) have been accumulating massive amounts of international reserves. The fundamental factor behind this reserve hoarding is financial in nature rather than trade-related, stemming from the widespread adoption of capital account liberalization in EMDCs, the resulting exposure to heightened financial volatility, and the consequent need to accumulate reserves as a self-insurance against potential disruptions in capital flows. Precautionary reserve hoarding, however, follows a circular logic that not only imposes heavy opportunity costs on EMDCs but also defeats the very purpose of capital account liberalization. When EMDCs accumulate reserves to hedge against capital account shocks, they are essentially recycling privately incurred short-term capital inflows into publicly incurred capital outflows, engaging in a reverse carry-trade that neither makes any economic sense nor results in any net transfer of financial resources from abroad. The net effect of this circular logic behind financial openness and precautionary reserve accumulation is a regressive and inequitable shifting of the costs of financial volatility from richer to poorer countries.*

Keywords: capital account liberalization, international reserves, capital flows, emerging markets, global finance

Since the early 1990s virtually all emerging market and developing countries (EMDCs) have embraced financial openness, implementing far-reaching domestic financial market deregulation and capital account liberalization on the standard neoliberal premise of market efficiency. Contrary to this benign premise, however, one of the most evident consequences of capital market

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opening in EMDCs has been a sharp increase in both the number and severity of financial crises in the South. Beginning with the Mexican peso crisis of 1994, or what Michel Camdessus famously called the ‘first crisis of the twenty-first century’, financial instability brought down nearly every major EMDC to its knees, proving Camdessus’s prescience in foreseeing the Mexican crisis as the first of many crises to come.

In the aftermath of these crises came myriad post-mortem analyses over their causes and the inevitable debate over the merits and demerits of financial deregulation in general and capital account liberalization in particular. While earlier analyses tended to focus on the domestic variables, given the systemic nature of these crises, it became increasingly more difficult to view them as isolated incidents stemming from purely domestic factors. Tolstoy’s opening sentence in *Anna Karenina* proved to be a poor page from which to read emerging-market crashes: every unhappy family, as it turned out, was not unhappy in its own way. The evidence marshalled by the critics of financial openness was so overwhelming that even the IMF, which had pushed to amend the Articles of Agreement to bring capital account liberalization under its purview even as the Asian crisis was in full swing, grudgingly came to recognize its drawbacks (see Kose, Prasad, Rogoff, and Wei, 2006; Prasad, Rogoff, Wei, and Kose, 2003; and more recently, Ostry et al., 2010). This change in attitude, however, has been only cosmetic and produced no fundamental change in the policy stance of either the IMF or EMDCs.

Indeed, all but a tiny number of EMDCs have found it impossible or unwise to rewind the clock of capital account liberalization and clamp down on the spigots of hot money to any substantial degree.¹ Yet, the memory of the devastation brought by past crises lingers around long after recovery is made, while the risk of another financial crisis looms large constantly, as reminded by the fallout from the global financial crisis of 2008. Since reversing the tide of financial opening has been ruled out so far in most EMDCs, in many cases by the very measures implemented under the terms of IMF-imposed adjustment programmes, they have had to find some other way to make themselves more resilient and less vulnerable to the vagaries of global finance. As Martin Feldstein (1999) observed on the heels of the Asian crisis, the first principle in attaining financial resilience was self-help, and the key cornerstone of self-help has been enhanced liquidity.

The most significant of such self-help measures adopted to bolster the liquidity position of EMDCs has been their massive accumulation of foreign exchange (FX) reserves. Both the absolute amount and the relative share of reserves held by EMDCs have grown exponentially to reach a historically unprecedented level, far exceeding the traditional benchmark associated with current account transactions and the aggregate share of developed market economies (DMEs). This shift in the pattern of reserve holdings and its implications have garnered increasingly more attention, but often in relation to the large global imbalances generated by the persistent US current account deficits and the matching surpluses in a number of mostly Asian countries, of which China is the most prominent case (Ahrend and Schwellnus, 2012; Edwards, 2005; Eichengreen, 2007; Obstfeld and Rogoff, 2007; Vermeiren, 2013). Although the growth of the reserve holdings of EMDCs is partially explained by increasing trade activities and surpluses generated by some of them, this does not provide the full picture as reserve holdings have been rising across all EMDCs including those with chronic deficits.

A better explanation is found at the intersection of capital account liberalization implemented in the 1990s and the many financial crises that followed in the aftermath: to cope with heightened financial volatility attendant with capital market opening, EMDCs have had to accumulate ever more reserves as a hedge against a sudden reversal in capital inflows. To the extent that larger reserve holdings should in theory make EMDCs less vulnerable to capital account shocks, this

can be seen as a positive development. However, as a number of studies have pointed out, amassing FX reserves is not cost-free (Bird and Rajan, 2003; Cruz and Walters, 2008; Ocampo, 2007; Rodrik, 2006; Stiglitz, 2006; Teunissen and Akkerman, 2007). As reserves are principally held in low-yielding government bonds of DMEs, predominantly of the US, a very large opportunity cost is borne by EMDCs resulting in a regressive transfer of financial resources from the latter to the former at highly unfavourable terms.

The purpose of this article is to engage critically the circular logic behind capital account liberalization and precautionary reserve accumulation in EMDCs, and the inequities resulting from this dynamic. I begin by documenting and explaining reserve hoarding by EMDCs as a financially induced phenomena, a form of self-insurance underwritten with the endorsement of the IMF. In the second section, I examine the economic cost of reserve accumulation and the various methods by which existing studies have approached this issue. The third section discusses the inequities resulting from precautionary reserve accumulation necessitated by capital market opening. When EMDCs accumulate reserves to hedge against potential shocks in capital flows, they are essentially engaged in a reverse carry-trade to borrow dollars at high costs only to lend them straight back to the US at much cheaper rates. This not only defeats the very purpose of capital account liberalization championed by its supporters, but it also has the net effect of making poorer countries pay for the spending habits of richer countries.

Capital Account Liberalization and Reserve Hoarding in EMDCs

The aggregate amount of global reserve holdings has been increasing rapidly for the past two decades, reflecting the large global imbalances generated by the persistent and growing external deficits of the US. In a sharp departure from the preceding decades, however, the majority of these increases have taken place in the South. In both absolute and proportional terms, EMDC's reserve holdings have grown precipitously to far surpass those of DMEs, amounting to almost \$8.2 trillion and 71.7% of total global reserves by 2012 (see Figure 1).² The massive scale of accumulation is also clearly evident in relation to the size of the economy, import demand, and total trade volume (Figures 2–4). Whereas the reserves held by EMDCs ranged only around 6–8% of GDP in the 1980s, the ratio has increased steeply in the 1990s and beyond to reach a peak of 31.4% in 2009 before falling slightly to 28.1% in 2012.³ Importantly, this trend is not repeated in DMEs, whose reserve holdings have remained relatively flat as a percentage of GDP. A similar pattern is found when reserves holdings are measured as ratios of monthly imports and total trade. In the 1980s, EMDCs held reserves that were equivalent to three to four months of imports and 15–17% of total trade, following the traditional rule of thumb prescribing sufficient reserves to cover three months of imports. This has changed radically since the 1990s, with reserve holdings climbing up sharply to reach 12 months of imports and 48.9% of total trade by 2012. In contrast, the trend in DMEs once again shows a very different picture: the rich countries have kept their reserve holdings within a close range of the rule of thumb, fluctuating between two to four months of imports and hovering around 12% of total trade until very recently.

What is driving EMDCs to accumulate such large reserves? One plausible answer is that it is simply a reflection of the large current account surpluses that EMDCs have been posting for over a decade now. These surpluses, however, fall well short of accounting for the much larger increases in reserves. As Figure 5 shows, reserve accumulation has exceeded current account surpluses by a substantial margin in all but two years in 1999–2012, indicating clearly that

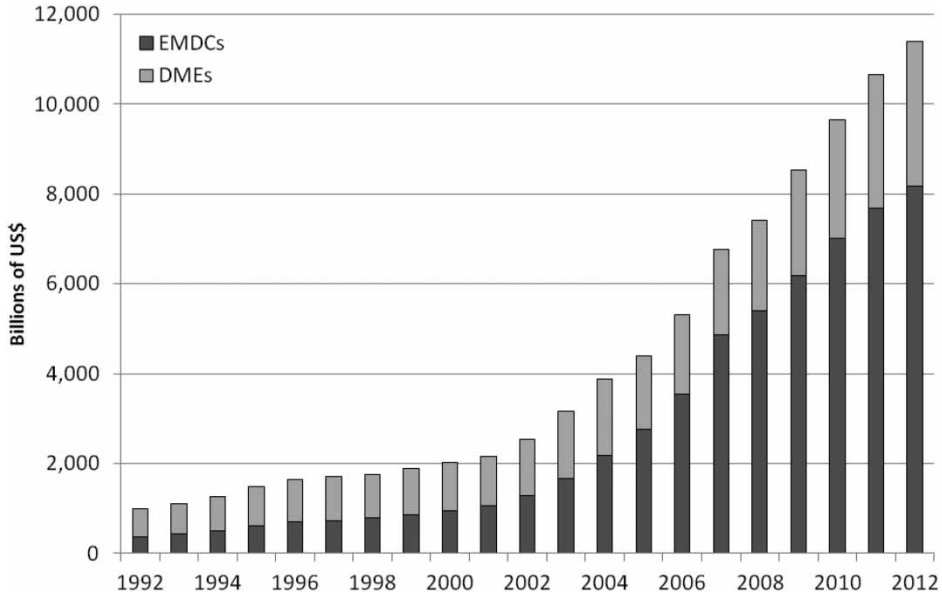


Figure 1. Global reserve holdings, 1992–2012. *Source:* IMF (n.d.).

the current account can provide only a partial window to explaining the scale of the reserve build-up.

The limits of focusing on the current account to explain reserve accumulation in EMDCs are further revealed by the striking fact that it is not a phenomenon restricted to just surplus countries, but it is evident even among countries with chronic current account deficits. [Figure 6](#) plots reserve

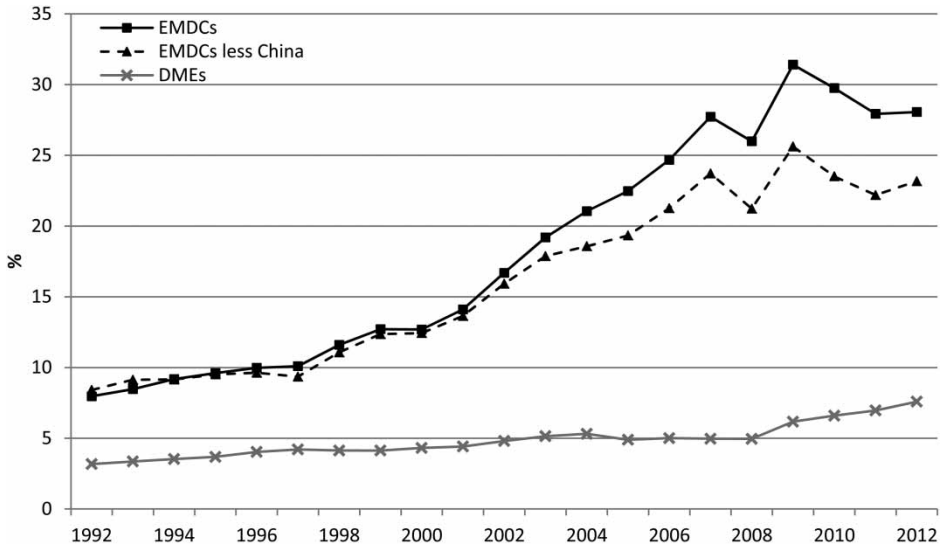


Figure 2. Reserves as a percentage of GDP, 1992–2012. *Source:* IMF (n.d.).

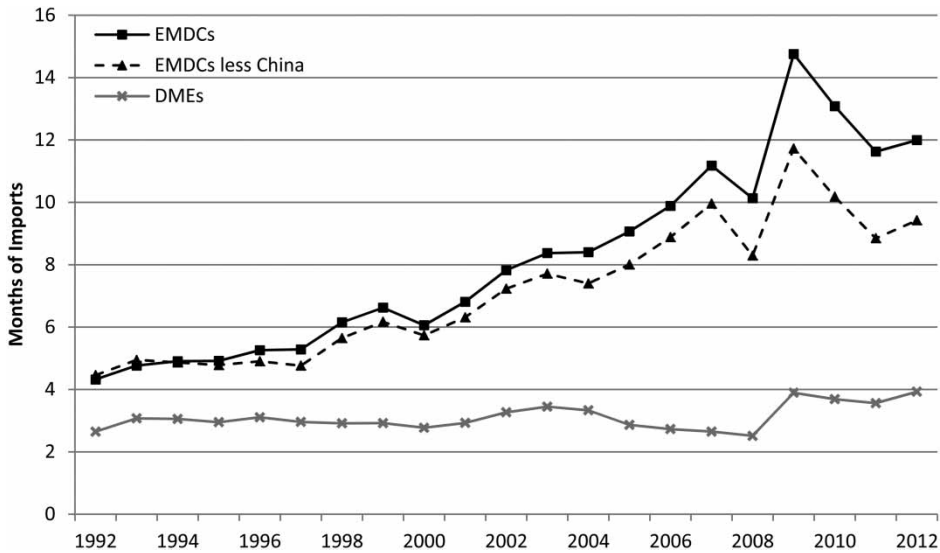


Figure 3. Reserves in months of imports, 1992–2012. Source: IMF (n.d.).

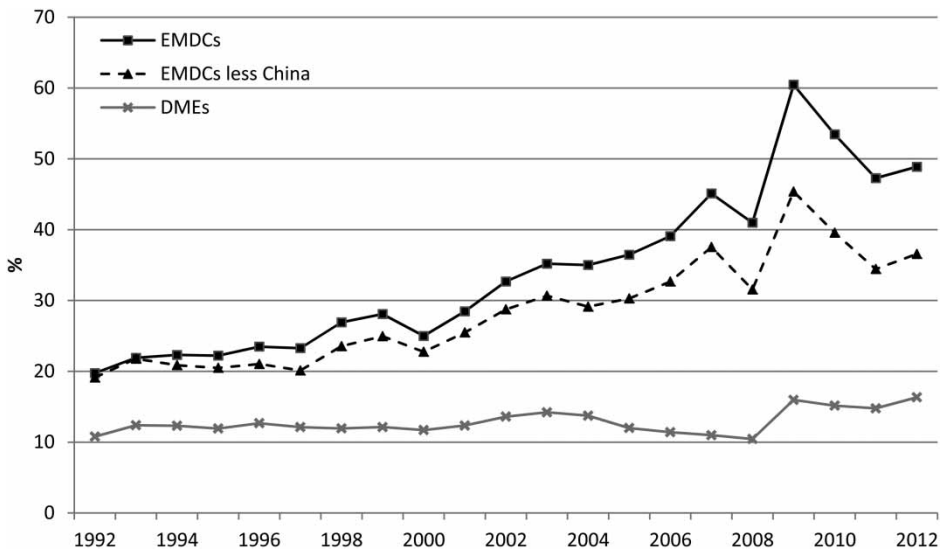


Figure 4. Reserves as a percentage of total trade, 1992–2012. Source: IMF (n.d.).

accumulation by a sample of 15 deficit countries selected from various regions. On a weighted basis, these countries posted an average current account deficit of 2.4% of GDP in 1992–2012. Yet, despite the persistent nature of the deficit, their reserve holdings have increased dramatically from just \$50 billion in 1992 to over \$810 billion in 2012, surging from 3.9% of GDP to 14.9%. Obviously, for these deficit countries none of their \$801 billion reserves came from trade surpluses; rather, the sizable war chest has been scabbled together on borrowed money.

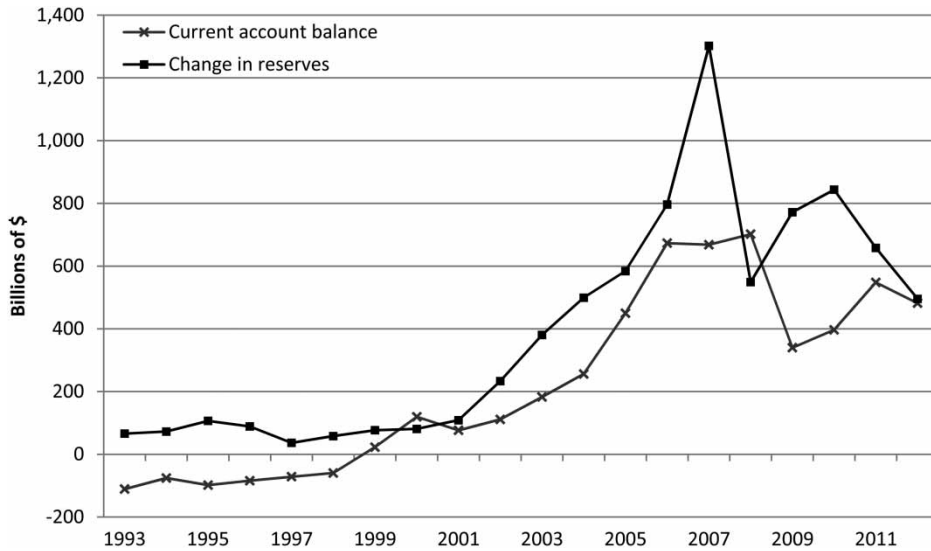


Figure 5. Current account balances and reserve changes in EMDCs, 1993–2012. *Source:* IMF (n.d.).

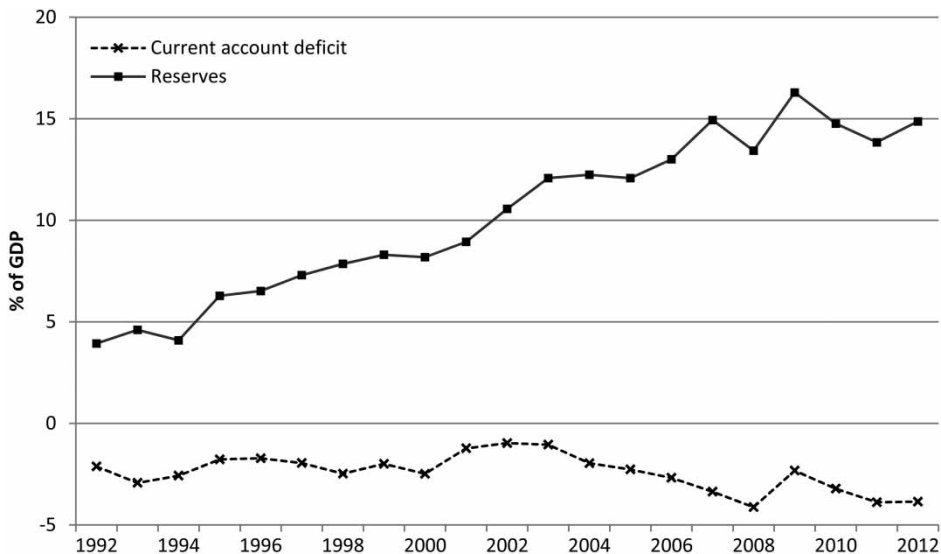


Figure 6. Reserve holdings of selected deficit EMDCs, 1992–2012. *Source:* IMF (n.d.). Countries included are Colombia, Hungary, India, Jordan, Kenya, Mali, Mexico, Nicaragua, Niger, Poland, South Africa, Tanzania, Turkey, Uganda, and Vietnam.

Another trade-related explanation for reserve accumulation comes from the ‘second Bretton Woods’ hypothesis positing that mercantilist motivations are the primary factors driving EMDCs’ reserve accumulation, particularly in reference to China and other Asian emerging markets (Dooley, Folkerts-Landau, and Garber, 2003, 2009; Dooley and Garber, 2005; Hall

and Tavlas, 2013). In essence, EMDCs today are said to be emulating the European and Japanese practice of relying on undervalued currencies as part of an export-led strategy of economic growth under the old Bretton Woods system, hoarding reserves to prevent exchange-rate appreciation of their currencies for trade purposes. This suggestion is not entirely without merit, especially when China is considered. The continuing unwillingness of the Chinese government to revalue the exchange rates of the renminbi is at least partly explained by its desire to maintain the competitiveness of China's tradable sectors, and this, in turn, is a significant factor behind the huge reserves piling up on its coffer (Corden, 2009; Goldstein and Lardy, 2009).

Allegations of such exchange-rate manipulations are nothing new, of course. The underlying conflict goes back to the 1960s' transatlantic dispute between the Europeans and the Americans over the adjustment necessary to correct the growing imbalances that ultimately led to the collapse of the Bretton Woods monetary system, and the allegations also ring familiar to anyone who remembers the clumsily named Joint Japan–US Ad Hoc Group on Yen–Dollar Exchange Rate established in 1983 under the Reagan administration, or the more elegantly named Plaza Accord of 1985. It may very well be the case that the colossal size of China's reserves, now hovering around \$3.3 trillion, is a mirror image of its strategic decision to follow in the footsteps of the Germans and the Japanese in resorting to exchange-rate manipulations to sustain its export competitiveness. However, China is but one country among many EMDCs. Even more remarkable than the gigantic size of Chinese reserves is the fact that practically all EMDCs have enlarged their reserve holdings to historically unprecedented levels. As Figures 2–4 show, despite some recent divergences, the secular trend of reserve hoarding for the rest of EMDCs does not change much even when China is removed. Further evidence of the near uniformity of reserve accumulation in EMDCs is found when they are disaggregated into regions. Again, despite some variations, Figure 7 shows that reserve hoarding is not a country-specific phenomenon limited to China or even a regionally specific behaviour confined to Asia, but it is a nearly *universal* phenomenon across all regions. In fact, Africa's reserve holdings, which had barely amounted to two months of imports in the 1980s, have increased to almost eleven months of imports in 2012, exceeding not only those of Latin America but also those of Asia, excluding China. Clearly, there is something much more going on than just exchange-rate manipulations by the Chinese or other Asian countries.

Concurrent with the preceding inference, recent econometric studies have found little empirical support for the mercantilist thesis. Aizenman and Lee (2007), for instance, find that the significance of mercantilist concerns for reserve hoarding is 'close to zero' (p. 212). Much more robust evidence is found for the precautionary rationale instead, indicating that the growth of the reserve holdings of EMDCs has been predominantly influenced by their desire to avoid future financial crisis, essentially turning to reserve hoarding as a self-defensive strategy to guard against a sudden reversal in capital flows. These findings are corroborated by a large number of other studies reaching the same conclusion: reserve accumulation in EMDCs has been driven by the self-insurance motivation, correlated with the huge growth of cross-border financial assets and liabilities resulting from capital account liberalization, the wave of emerging-market crashes that plagued the developing world in the 1990s and beyond, and the accompanying volatility of global financial markets (Aizenman, 2006; Calvo, Izquierdo, and Loo-Kung, 2012; Mendoza, 2004; Obstfeld, Shambaugh, and Taylor, 2010; Steiner, 2013; Ghosh, Ostry, and Tsangarides, 2012).

This pattern of precautionary reserve accumulation is also largely in line with the policy recommendations of the IMF for EMDCs, derived from the so-called 'Guidotti–Greenspan'

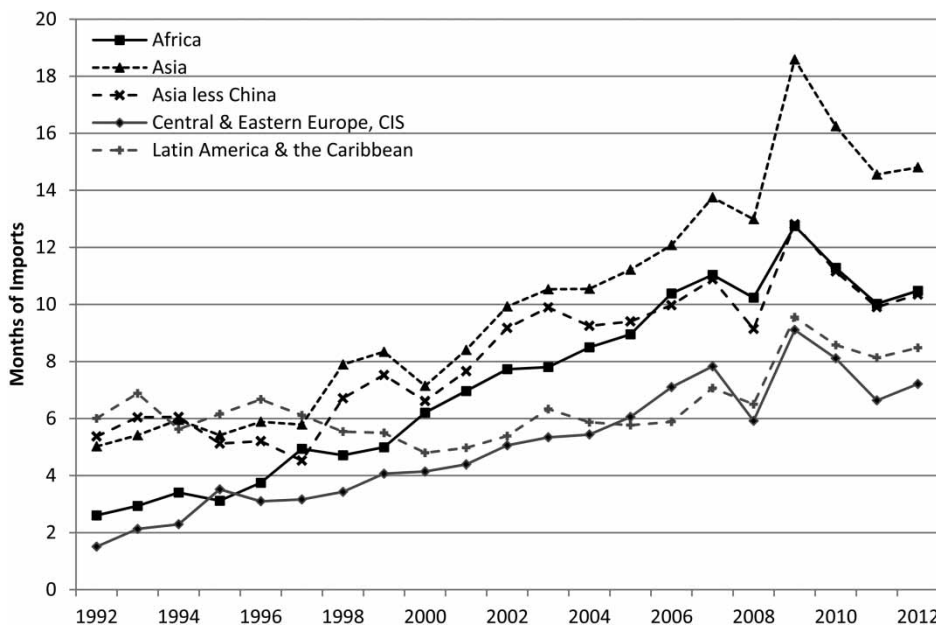


Figure 7. Reserves by region, 1992–2012. *Source:* IMF (n.d.).

principle redefining the appropriate level of reserves as an amount equal to a given EMDC's total short-term liabilities rather than just three months of imports (Fischer 2001; Greenspan 1999). The rationale behind this new rule is undoubtedly based on the 1990s' experience with the panic-driven, self-fulfilling dynamics of emerging-market crashes, whose origins were, unlike the balance-of-payments crises of the 1980s, located firmly in the capital account rather than the current account—that is, the most important factor behind these crises was the EMDCs' exposure to a sudden, large-scale reversal in short-term capital flows.

The Guidotti–Greenspan rule is by no means a settled principle, however. Fundamentally, the optimum level of reserves remains a nebulous and imprecise concept, as it is no easy task 'to estimate the adjustment costs and output losses that reserves may enable a country to avoid' on a priori basis (Bird and Mandilaras, 2005, p. 86). Importantly, the IMF's endorsement of the Guidotti–Greenspan rule is qualified by Fischer's (2001) observation that 'it is only a starting point'. If the optimum level of reserves is meant to cover the flow of the most mobile and therefore unstable form of capital flows, the rule should be modified to include foreign portfolio investment (FPI) since it can be recalled just as easily as any short-term debt. Indeed, in a country with an open capital market, even foreign direct investment (FDI) should be considered as a potentially unstable form of capital inflow as FDI can be made liquid and siphoned off abroad (Chang, 2008). For that matter, with an open capital account foreign investors and creditors are not the only ones who can move their money out; residents are equally able to shift their money abroad. Obviously, there is no end to this exercise if the aim of reserve accumulation is to make an EMDC invulnerable to any swings in capital flows: a central banker in an emerging market can never have enough reserves. Thus what we have with the Guidotti–Greenspan rule is a line drawn in the sand, one that is not entirely without base but not entirely satisfactory either.

For the proponents of capital account liberalization forced to concede some of its disadvantages (namely, increased financial instability leading to disastrous crashes on a regular basis), but still unwilling to sacrifice its elusive advantages to mitigate the former, reserve accumulation in the South provides them an easy way out of a difficult dilemma (see Bernanke, 2005). With EMDCs insuring themselves, capital mobility can be preserved and the stability of global financial markets protected. From the perspective of the EMDCs determined to avoid the recurrence of the 1990s' financial meltdowns, larger reserve holdings are also comforting since they provide a substantial cushion to absorb external shocks, as well as boost investor confidence. However, the EMDCs are paying a stiff price for the added protection provided by their increased reserve holdings.

The Cost of Precautionary Reserve Hoarding

Calculating the cost of reserves is a challenging exercise riddled with conceptual murkiness and empirical difficulties. For one, the lack of precise definition of the optimum level of reserves presents itself as a difficult issue rendering calculation of the cost of excessive reserves an equally imprecise exercise. As with the Guidotti–Greenspan rule, one is resigned to rely on a rule of thumb rather than precise criteria. For estimating the cost of *financially* induced reserve accumulation, a useful baseline can be found with the old rule of thumb measuring reserves in terms of monthly imports, as it isolates the cost of current account-related reserve accumulation from the cost of precautionary, capital account-related reserve accumulation. The former is a cost borne by every country except the issuer of the reserve currency, whereas the latter—that is, the cost of reserves in excess of three months of imports—is the cost of additional reserve accumulation required by capital account liberalization, one that has been borne almost exclusively by EMDCs.⁴

Even with this baseline, estimations can still vary significantly depending on the metrics used and the underlying assumptions guiding one's analysis. The existing literature identifies at least three types of the economic costs of reserve accumulation: (i) the quasi-fiscal cost of reserves, borne by the central bank as the cost of sterilization and FX-related losses; (ii) the opportunity cost of forgone consumption or investment for the whole economy; and (iii) following the Guidotti–Greenspan principle, the difference between the returns generated by reserve assets and the cost of short-term external borrowing.

As a cost showing up in the balance sheet of the central bank, the quasi-fiscal cost of reserves is incurred when the monetary authorities engage in open market operations to sterilize the expansionary impact of reserve accumulation on the money supply. Because the prevailing interest rates in a typical EMDC are significantly higher than the reserve-issuing country, the central bank in this instance is facing a rather large reverse margin—that is, the interest rates on the government bonds sold to sterilize currency market interventions are much higher than the yields on reserve assets. This loss can be made worse by the central bank's exposure to FX-related risks in its reserve portfolio, as was indeed the case throughout the 2000s with the weakening of the US dollar.

While the quasi-fiscal cost has been large enough in some EMDCs to generate heated debates over the question of excessive reserve accumulation, from a macro, national perspective, it is not the most relevant measure.⁵ In most EMDCs the primary purchasers of the government bonds sold in open market operations are the residents, and therefore any cost borne by the central bank is tantamount to a transfer of income from the public to the private sector (Rodrik, 2006, p. 260). And although exchange rate-related losses can and have been large, these are

'book' losses that are not realized until the underlying reserve assets are sold. As such, although the quasi-fiscal cost raises a thorny question to central bankers, it is not the most pertinent window into the cost of reserves borne by the whole economy (Wijnholds and Sondergaard, 2007, pp. 24–7).

From a macro perspective, the most relevant metric is the opportunity cost of holding reserves, the broadest of which is forgone consumption or investment. The premise here is that the financial resources used to purchase reserve assets are either consumed for more urgent needs faced by EMDCs, or invested as additional capital formation to generate higher returns (see Baker and Walentin, 2001; Cruz and Walters, 2008; Singh, 2006). As Rodrik (2006) cautions, however, 'the social opportunity cost of capital is a slippery concept that is hard to implement empirically' (p. 260). Putting a monetary value on the benefits of forgone consumption is next to impossible, while estimating marginal product of capital is fraught with its own set of difficulties. As a result, most studies on the broadest opportunity cost of reserves rely on a 'heroic assumption' (Hauner, 2005).

A third, narrower way to estimate the cost of reserves is based on the Guidotti–Greenspan principle and its rationale. Since the new rule of thumb recommends EMDCs to match every dollar of short-term external liabilities with a dollar in reserves, the narrowest opportunity cost can be conceived as the difference between the privately incurred costs of short-term borrowing on the one hand, and the yields on publicly held reserve assets on the other. Approaching from a national angle, this metric provides a conceptually clearer and more logically grounded measure than the quasi-fiscal cost of reserves; and with fewer empirical difficulties, it is also less slippery than the broad opportunity cost of reserves measured as forgone consumption or investment.⁶ However, before turning to what is arguably the best of the three approaches, it is worth noting several limitations that have led existing studies to understate the actual cost of reserve accumulation.

Measuring the spreads between the yields on reserve assets and the cost of private short-term foreign borrowing is not as straightforward as it seems, as there is no reliable, systematic way to obtain the latter. While the spreads for sovereign bonds issued by major emerging markets can be attained from benchmark indices such as the Emerging Market Bond Index (EMBI), no such indices exist for private cross-border loans, and consequently, most existing studies rely on sovereign spreads as a proxy for estimating the private sector's cost of external borrowing. In the absence of better data, the EMBI does provide some useful guidance, but there are at least three reasons why calculations derived from the index significantly underestimate the true cost of reserves for EMDCs as a whole, and, as such, should be seen as the very minimum threshold.

First, since government bonds carry a much lower risk premium than the liabilities incurred by private banks and firms, the cost of borrowing for the former is much lower than the latter. Second, the EMBI covers only a limited number of EMDCs, all of whom face significantly lower costs of borrowing than the remaining EMDCs excluded from the index, as the former are considered more creditworthy and therefore face lower premiums. Third, as noted earlier, short-term external liabilities are not the only source of capital drain, nor is the extent of precautionary reserve accumulation exhausted by the Guidotti–Greenspan principle—recall how it is merely a 'starting point'. At the least, FPI must be brought into the picture, given its track record of volatility and propensity for flight. Once this is done, the appropriate metric for any reserve accumulation in excess of meeting the Guidotti–Greenspan rule is not sovereign spreads, but the returns on foreign investors on their FPI, which are typically much higher than returns on government bonds.

Sovereign spreads for emerging markets have remained fairly high despite many ups and downs over the years, averaging around 7% since the early 1990s. This figure alone is enough to show that reserve accumulation entails a very large cost for EMDCs. In light of the qualifications noted above, moreover, this cost should be taken as the bare minimum; the true cost of reserve accumulation, based on the private sector's cost of borrowing and the returns to foreign investors on FPI, is likely to be significantly higher than just a 7% spread. Precisely how much higher this cost is remains an open question due to the factors outlined previously. By necessity some 'heroic assumptions' must be made to extrapolate from this benchmark to arrive at the opportunity cost of reserve accumulation, and the conclusion depends on how heroic one is willing to be. Accordingly, cost estimates of reserve accumulation vary across different studies. For instance, Stiglitz (2006), using a 'conservative' estimate of 10% as the average spread, concludes that the annual cost of reserve holdings for developing countries had exceeded \$300 billion by the mid-2000s, a figure representing 2% of their combined GDP. In contrast, Rodrik (2006) uses an even more conservative spread of 5% and puts the cost of reserves at close to 1% of GDP.

Figure 8 plots the cost of excess reserves (above the traditional rule of three months of imports) in both absolute amount and as a percentage of GDP, using three sets of spreads: the more conservative rate of 5% used by Rodrik, a midpoint rate of 7% approximating the average EMBI spread, and Stiglitz's less conservative rate of 10%. As the data show, EMDCs have been paying an increasingly onerous price for their reliance on reserve accumulation against financial volatility. At the higher end of the range, the estimated cost has increased from \$10.4 billion in 1992 to a whopping \$602 billion in 2012, jumping from 0.2% of GDP to 2.1%. Even the lower-end cost estimate is far from being a negligible cost. As Rodrik (2006) points out, 1% of GDP (\$301 billion in 2012) 'is a large number by any standard' (p. 262). Moreover, given the limitations of relying on sovereign spreads noted above, it is reasonable to infer that the difference in the rates of return would be 7% or higher, which translates into a price tag

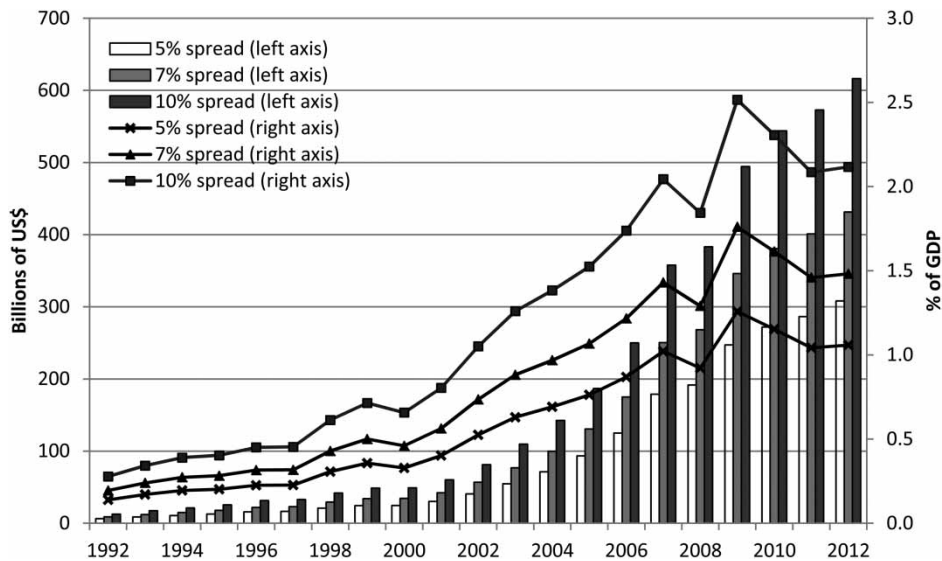


Figure 8. Estimated costs of excess reserves, 1992–2012. Source: Calculated from IMF (n.d.).

of \$422 billion or 1.5% of GDP for 2012. This is a huge cost for any country, rich or poor. The glaring inequity, of course, is that the rich have managed to avoid this bill, while for the poor the bill has continued to grow larger and larger with every passing year.

The Circular Logic of Capital Market Opening and Precautionary Reserve Hoarding

Given the precautionary rationale behind reserve accumulation, its cost may at first glance seem like one worth bearing despite its heftiness. Indeed, there appears to be a straightforward logic here: EMDCs have been paying 1–2% of GDP a year as an insurance premium because financial crisis imposes far greater costs. The output loss from currency crisis is estimated in a range of 8–25% of GDP (Hutchison and Noy, 2005); against this kind of cost, the price of reserve accumulation may not seem so egregious.

There is one big problem with this logic, however: it defeats the very purpose of capital account liberalization espoused by its advocates, which is inducing capital inflows to EMDCs to finance productive investment and foster economic growth. Yet, abiding by the Guidotti–Greenspan rule essentially means that poorer countries are borrowing money at high costs from richer countries only to lend it straight back to the latter at much lower rates. As numerous studies have pointed out, when EMDCs match every dollar of short-term capital inflows with a dollar in the central bank's coffer, there is no net resource transfer from abroad (Grenville, 1999; Ocampo, 2007; Rodrik, 2006; Stiglitz, 2000). The central bank in this situation is doing little more than recycling privately incurred short-term capital inflows into publicly incurred capital outflows, engaging in a reverse carry-trade that makes no economic sense at all. From a macro perspective, it is no different from a household taking out an expensive loan from a bank and putting the proceeds back into a demand-deposit account that bears little interest, just in case the bank wants its money back suddenly. There is neither additional consumption nor productive investment resulting from this transaction; instead, the household ends up subsidizing the bank.

This is essentially what has been going on for the past 15 years: despite the large increases in private capital inflows to the South, they have been offset by even larger public capital outflows resulting from reserve accumulation. Since the onset of the Asian crisis in 1997, net financial resource transfer has been consistently running in the opposite direction of the neoliberal case, from poor to rich countries rather than vice versa, skyrocketing from \$2 billion in 1997 to over \$1 trillion in 2011 (Figure 9). The cumulative amount of net financial resource transfer over the same period reaches well in excess of \$7.7 trillion.

This is nothing less than a regressive transfer, a deeply inequitable development that reveals as much about the unbalanced nature of the current global reserve system as about the vacuity of the case for capital account liberalization. What appears to have been a straightforward logic is actually a deeply problematic circular logic: to reap the dubious benefits of short-term capital inflows, EMDCs have opened up their capital markets, but to hedge against financial instability, the very source of which goes straight back to capital account liberalization, they have had to accumulate ever more reserves to fend for themselves. The result of this logic is not only a massive transfer of financial resources from capital-starved countries to capital-abundant countries, but the poor are actually paying a hefty price for this privilege of financing the rich.

These paradoxical, if not quite perverse, inequities are the results of three fundamental structural distortions in the global economy. First, the global reserve system is based on the use of a national currency, which renders it hostage to the whims of the country issuing the reserve assets, the US. Despite some diversification in recent years, the reserve currency of choice for the world

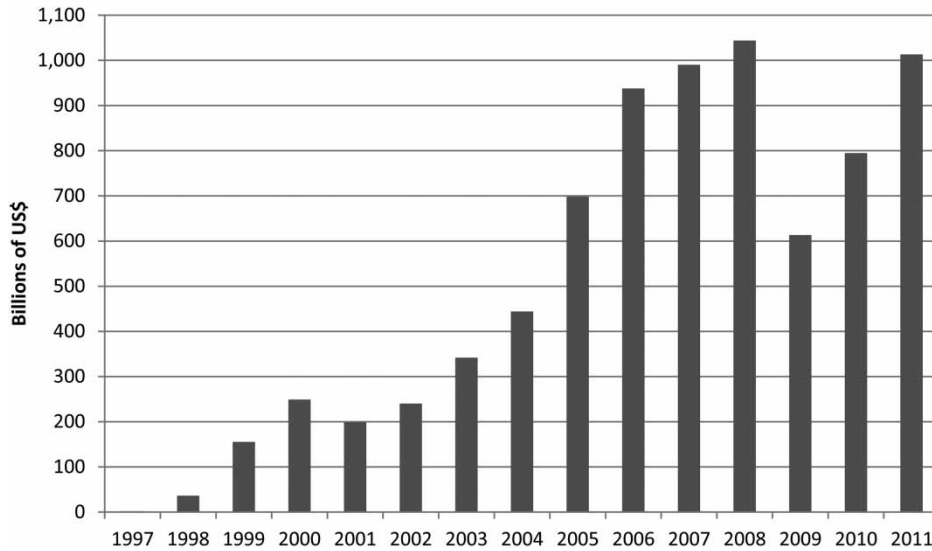


Figure 9. Net financial resource transfer from EMDCs to DMEs, 1999–2011. Source: UN (2010, 2012).

continues to be the US dollar, as dollar-denominated assets still account for an overwhelming majority of reserves.⁷ This use of a national currency as the reserve currency of the world is at the heart of the ongoing global imbalances generated by the US: it has been able to sustain its huge twin deficits without any significant external constraints precisely because it can issue IOUs denominated in its own currency, which are then purchased by the rest of the world as reserve assets (Andrews, 2006; Eichengreen, 2007, 2011; Kirshner, 2008). Indeed, this is just a continued manifestation of what the French used to call an ‘exorbitant privilege’ 50 years ago, the unique liberty of the US to finance its immense deficits to a staggering proportion by borrowing from abroad in a currency it can print. In this sense the ‘second Bretton Woods’ thesis has one aspect of the current situation right: the US continues to enjoy exorbitant privileges just as it had in the 1960s. Importantly, however, it misses a crucial aspect of the current imbalances: whereas 50 years ago the burden of financing American deficits had fallen on the relatively prosperous European countries and Japan, now the burden is disproportionately borne by much poorer countries, including the poorest of all.

Second, with the conspicuous lack of any serious international regulatory structures and safeguards in place, financial globalization has proceeded in fits and starts, turning international capital markets into the Wild West of the global economy. Due to the perception-driven nature of the pricing of financial assets, financial markets are inherently prone to produce episodes of boom and bust, bubbles and crashes, manias and panics.⁸ In a domestic setting, however, there are at least a number of institutional safeguards grafted into the financial system to tame the wild gyrations in the market and, in the event a panic breaks out, instil sufficient confidence in the system to reduce the likelihood of a systemic collapse. These safeguards range from deposit insurance schemes to prudential regulatory oversight, streamlined bankruptcy procedures, and, most important of all, a lender of last resort that provides liquid relief to distressed financial institutions. In contrast, the global financial system has none of these confidence-building measures. Investors and creditors may employ various hedging tools to

minimize their risks, but there is no publicly funded, system-wide insurance to prevent them from succumbing to a self-fulfilling panic.⁹ International regulatory structures are at best a feeble patchwork of a few agreements here and there, leaving the bulk of responsibility to each country's regulatory authorities.¹⁰ Nor is there any institutionalized bankruptcy procedure to work out instances of national default and facilitate debt restructuring in an orderly and transparent manner; instead, only ad hoc measures are scraped together from time to time on a case-by-case basis, from which creditors and debtors are to hammer out a deal without any adjudication.¹¹ Most significantly, there is no international lender of last resort, at least not in its true sense. The institution that comes closest to fulfilling this missing role is the IMF, and to a certain degree, the Fund has increasingly functioned as a quasi-lender of last resort for the world, as illustrated by the many lifeboats it has launched in the past. Fundamentally, however, the IMF cannot function as a global lender of last resort as unlike central banks, it is straitjacketed by its inability to create money at will (Fischer, 1999; Goodhart, 1999).

Third, global financial markets are much more inefficient in resource allocation than what the neo-liberal orthodoxy presumes, especially when it comes to EMDCs. Information asymmetries are pervasive, positive feedback rampant, the tendency for herding pronounced, and the direction of capital flows markedly pro-cyclical (Banerjee, 1992; Calvo and Mendoza, 2000; Scharfstein and Stein, 1990), all of which can only result into a highly inefficient allocation of capital resources. The many financial crises of the past two decades that beset EMDCs are testaments to this inefficiency. The egregious cost of reserve accumulations imposed by the consequent need to shield against such irrational swings in capital flows is another. In the context of the enduring imbalances in the global economy and the reserve system, it certainly cannot be described as an efficient allocation of capital resources for the poorer countries of the South to have transferred over \$7.7 trillion to the far richer countries in the North in the past 15 years—or, for that matter, for Africans to have financed the Bush administration's tax cuts and the Obama administration's stimulus spending.

The imbalances and inequities of the global reserve system are built-in features of the current global economic order in which the US dollar continues to dominate as the reserve currency of the world, capital mobility is singularly prioritized with an almost religious zeal, and financial intermediation remains highly inefficient and volatile for EMDCs. Certain aspects of these inequities are unavoidable in a world where, in an Orwellian parlance, all states are equal in principle but some states are more equal than others. The exorbitant privilege enjoyed by the US is a reflection of its power, and this is something even the French could not do much about despite their bitter complaints. There is, however, one element in these inequities that is clearly too onerous but also rectifiable. Capital account liberalization is the root cause behind the egregious cost of reserves borne by EMDCs, and it is also what has led them to engage in a reverse carry-trade to subsidize the richest and the most powerful country in the world. A fundamental rethinking of the merits of financial openness will not only reduce the self-help motivation of EMDCs for reserve accumulation, and thus the cost of reserves, but also introduce some constraints upon the US to mitigate its propensity to indulge itself in over-consumption and over-spending on the back of far poorer countries.

Conclusion

This article has argued that the phenomenon of reserve hoarding by EMDCs is more of a financially driven outcome resulting from excessive capital market opening than a trade-related outcome. There is a clear link between the heightened financial instability following capital account liberalization on the one hand, and the precautionary need for EMDCs to hoard reserves

to lessen their exposure to capital account shocks on the other. At the most fundamental level, an open capital account is what has compelled EMDCs to accumulate so much reserves, and the unwarranted cost as well as the accompanying inequities of this arrangement show that in a global financial system where a national currency is used as the reserve currency and financial intermediation to the South remains highly imperfect, volatile, and not all that efficient, capital account liberalization offers very little of substance to EMDCs while exacting a heavy toll from them. It is, ultimately, an uncanny way of making the poor pay for the rich by imposing a harsh and inequitable cost, whose scale of burden is now verging on that of an imperial tributary tax. This is not only a strike against the current global reserve system, but it is yet another strike against capital market openness in EMDCs.

Perhaps more disturbingly, the global financial crisis of 2008–2009 and its virulent impact on EMDCs suggest that even massive amounts of reserve holdings may not offer them that much protection against the sheer volatility of global financial markets. Despite the large war chest built at such a heavy cost, one emerging market after another once again found themselves teetering on the brink of collapse, falling victim to the implosion of the US banking system. From the Korean won to the Mexican peso and the Brazilian real, emerging-market currencies around the world plummeted as a collateral damage to the massive reversal in capital flows triggered by the outbreak of a system-wide panic. While financial conditions in these countries have stabilized since then, the glaring fact that their central banks had to set up and draw from emergency swap facilities with the US Federal Reserve Board in spite of their huge reserve holdings raises some troubling questions about the appropriateness and adequacy of costly reserve accumulation as a self-help strategy. Given this rather revealing episode, one must wonder about the wisdom of amassing so much reserves at such a stiff cost only to have to seek external assistance. A more appropriate, truly self-defensive strategy ought to go beyond blindly hoarding reserves at all costs and carve out a meaningful, national regulatory space for substantive restrictions on volatile short-term capital flows that bring no tangible benefit but only woes to EMDCs.

Notes

- 1 Following the 2008 global financial crisis, a handful of EMDCs have introduced limited capital controls, such as Brazil's imposition of tax on short-term FPI, South Korea's restrictions on currency forward positions, and Taiwan's limits on foreign purchase of time deposits. These are, however, minor relative to both the historical pervasiveness of capital controls in these countries and the range of available options.
- 2 This article follows the IMF's definition of EMDCs, except for the Czech Republic, South Korea, and Taiwan. Although the IMF classifies these countries as advanced countries, I classify them as EMDCs as they are still included in the vast majority of emerging-market indices.
- 3 The noticeable dip in 2008 shown in [Figures 2–4](#) reflects the reserve loss sustained by many EMDCs as a result of the large-scale capital outflows triggered by the global financial crisis, while the sharp rebound in 2009 is due to the contractionary impact of the crisis on the denominators (output and trade).
- 4 Among DMEs, Japan and Switzerland are the two exceptions.
- 5 In South Korea, for instance, the controversy over the huge book losses suffered by the Bank of Korea led to the creation of a sovereign wealth fund, Korea Investment Corporation, to invest part of the central bank's reserves in higher-yielding assets.
- 6 This method also takes care of the monetary benefits of reserve accumulation in terms of lowering the overall risk premium and the cost of borrowing for a given EMDC, since these are already taken into account.
- 7 According to the IMF's Currency Composition of Official Foreign Exchange Reserves database, reserve assets denominated in US dollars have hovered around 65–70% of the total. To the extent that the remaining reserves are held in equally low-yielding government instruments in euro and yen, currency composition itself has only a marginal impact on the opportunity cost of reserves.

- 8 The 2008 global financial crisis has generated a cottage industry on this issue, but Kindleberger's work remains seminal. See Eatwell and Taylor (2000), Kindleberger (1978), Krugman (1995), and Reinhart and Rogoff (2011).
- 9 There are some public insurance schemes, typically provided by official export credit agencies to cover trade financing, but the scope is extremely limited. The World Bank, through its Multilateral Investment Guarantee Agency, also provides insurance for private foreign investment in EMDCs, but again its scope is negligible.
- 10 The Basle Capital Adequacy Accord of 1988 and its recent expansion are the most prominent examples.
- 11 The idea of a sovereign bankruptcy procedure was floated by the IMF in the 2000s, but it died quickly at US objection.

References

- Ahrend, R. & Schweltnus, Y. (2012). International capital mobility and financial fragility: Part 2. The demand for safe assets in emerging economies and global imbalances. OECD Economics Department Working Papers, 903.
- Aizenman, J. (2006). International reserves managements and the current account. National Bureau of Economic Research (NBER) Working Paper 12734.
- Aizenman, J. & Lee, J. (2007). International reserves: Precautionary versus mercantilist views, theory and evidence. *Open Economies Review*, 18(2), 191–214.
- Andrews, D. (2006). *International Monetary Power*. Ithaca, NY: Cornell University Press.
- Baker, D. & Walentin, K. (2001). Money for nothing: The increasing cost of foreign reserve holdings to developing nations. Center for Economic and Policy Research (CEPR) Briefing Paper.
- Banerjee, A. (1992). A simple model of herd behavior. *Quarterly Journal of Economics*, 107(3), 797–817.
- Bernanke, B. (2005). The global saving glut and the US current account deficit. Sandridge Lecture, Virginia Economics Associations, 10 March.
- Bird, G. & Mandilaras, A. (2005). Reserve accumulation in Asia: Lessons for holistic reform of the international monetary system. *World Economics*, 6(1), 85–99.
- Bird, G. & Rajan, R. (2003). Too much of a good thing? The adequacy of international reserves in the aftermath of crises. *World Economy*, 26(6), 873–91.
- Calvo, G. & Mendoza, E. (2000). Rational herd behavior and the globalization of the securities market. *Journal of International Economics*, 51(1), 79–113.
- Calvo, G., Izquierdo, A. & Loo-Kung, R. (2012). Optimal holdings of international reserves: Self-insurance against sudden stop. NBER Working Paper, 18219.
- Chang, H.-J. (2008). *Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism*. New York: Bloomsbury Press.
- Corden, W. (2009). China's exchange rate policy, its current account surplus and the global imbalances. *Economic Journal*, 119(541), 430–441.
- Cruz, M. & Walters, B. (2008). Is the accumulation of international reserves good for development? *Cambridge Journal of Economics*, 32(5), 665–681.
- Dooley, M. & Garber, P. (2005). Is it 1958 or 1968? Three notes on the longevity of the revived Bretton Woods system. *Brookings Papers on Economic Activity*, 2005(1), 147–210.
- Dooley, M., Folkerts-Landau, D., & Garber, P. (2003). An essay on the revived Bretton Woods system. NBER Working Paper, 9971.
- Dooley, M., Folkerts-Landau, D. & Garber, P. (2009). Bretton Woods II still defines the international monetary system. *Pacific Economic Review*, 14(3), 297–311.
- Eatwell, J. & Taylor, L. (2000). *Global Finance at Risk: The Case for International Regulation*. New York: New Press.
- Edwards, S. (2005). Is the US current account deficit sustainable? If not, how costly is adjustment likely to be? *Brookings Papers on Economic Activity*, 2005(1): 211–271.
- Eichengreen, B. (2007). *Global Imbalances and the Lessons of Bretton Woods*. Cambridge, MA: MIT Press.
- Eichengreen, B. (2011). *Exorbitant Privilege: The Rise and Fall of the Dollar and the Future of the International Monetary System*. Oxford: Oxford University Press.
- Feldstein, M. (1999). A self-help guide for emerging markets. *Foreign Affairs*, 78(2), 93–109.
- Fischer, S. (1999). On the need for an international lender of last resort. *Journal of Economic Perspectives*, 13(4), 85–104.
- Fischer, S. (2001). Opening remarks at the IMF/World Bank International Reserves: Policy Issues Forum, Washington, DC, 28 April.
- Ghosh, A., Ostry, J., & Tsangarides, C. (2012). Shifting motives: Explaining the buildup in official reserves in emerging markets since the 1980s. IMF Working Paper, WP/12/34.

- Goldstein, M. & Lardy, N. (2009). *The Future of China's Exchange Rate Policy*. Washington, DC: Peterson Institute for International Economics.
- Goodhart, C. (1999). Myths about the lender of last resort. *International Finance*, 2(3), 348–352.
- Greenspan, A. (1999). Currency reserves and debt. Remarks before the World Bank Conference on Recent Trends in Reserves Management, Washington, DC, 29 April.
- Grenville, S. (1999). Financial crises and globalisation. *Economic and Labour Relations Review*, 10(2), 260–277.
- Hall, S. & Tavlas, G. (2013). The debate about the revived Bretton-Woods regime: A survey and extension of the literature. *Journal of Economic Surveys*, 27(2), 340–363.
- Hauner, D. (2005). A fiscal price tag for international reserves. IMF Working Paper, WP/05/81.
- Hutchison, M. & Noy, I. (2005). How bad are twins? Output costs of currency and banking crises. *Journal of Money, Credit, and Banking*, 37(4), 725–52.
- IMF (n.d.). *International Financial Statistics* [Data set]. <http://elibrary-data.imf.org>.
- Kindleberger, C. (1978). *Manias, Panics, and Crashes: A History of Financial Crises*. New York: John Wiley & Sons.
- Kirshner, J. (2008). American power and dollar primacy: What's at stake? *Review of International Political Economy*, 15(3), 418–439.
- Kose, A., Prasad, E., Rogoff, K., & Wei, S-J (2006). Financial globalization: A reappraisal. IMF Working Paper, WP/06/189.
- Krugman, P. (1995). Dutch tulips and emerging markets. *Foreign Affairs*, 74(4), 28–44.
- Mendoza, R. (2004). International reserve holding in the developing world: Self-insurance in a crisis-prone era. *Emerging Markets Review*, 5(1), 61–82.
- Obstfeld, M. & Rogoff, K. (2007). The unsustainable US current account revisited. In R. Clarida (Ed.), *G7 Current Account Imbalances: Sustainability and Adjustment* (pp. 339–375). Chicago: University of Chicago Press.
- Obstfeld, M., Shambaugh, J. & Taylor, A. (2010). Financial stability, the trilemma, and international reserves. *American Economic Journal: Macroeconomics*, 2(2), 57–94.
- Ocampo, J. (2007). The instability and inequities of the global reserve system. UN Department of Economic and Social Affairs (UN/DESA) Working Paper, 59.
- Ostry, J., Ghosh, A., Habermeier, K., Chamon, M., Qureshi, M., & Reinhart, D. (2010). Capital inflows: The role of controls, IMF Staff Position Note, SPN10/04.
- Prasad, E., Rogoff, K., Wei, S-J & Kose, A. (2003). The effects of financial globalization on developing countries: Some empirical evidence, IMF Occasional Paper, 220.
- Reinhart, C. & Rogoff, K. (2011). *This Time Is Different: Eight Centuries of Financial Folly*. Princeton, NJ: Princeton University Press.
- Rodrik, D. (2006). The social cost of foreign exchange reserves. *International Economic Journal*, 20(3), 253–266.
- Scharfstein, D. & Stein, J. (1990). Herd behavior and investment. *American Economic Review*, 80(3), 465–479.
- Singh, C. (2006). Should India use foreign exchange reserves to finance infrastructure? *Economic and Political Weekly*, (43), 517–525.
- Steiner, A. (2013). How central banks prepare for financial crises: An empirical analysis of the effects of crises and globalization on international reserves. *Journal of International Money and Finance*, (33), 208–234.
- Stiglitz, J. (2000). Capital market liberalization, economic growth, and instability. *World Development*, 28(6), 1075–1086.
- Stiglitz, J. (2006). *Making Globalization Work*. New York: W.W. Norton.
- Teunissen, J. & Akkerman, A. (2007). *Global Imbalances and Developing Countries: Remedies for a Failing International Financial System*. The Hague: Forum on Debt and Development.
- UN. (2010). *World Economic Situation and Prospects*. New York: UN.
- UN. (2012). *World Economic Situation and Prospects*. New York: UN.
- Vermeiren, M. (2013). The crisis of US monetary hegemony and global economic adjustment. *Globalizations*, 10(2), 245–259.
- Wijnholds, J. & Sondergaard, L. (2007). Reserve accumulation: objectives or by-product? European Central Bank Occasional Paper Series, 9730.

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