6. Liberalization and regulation of capital flows: lessons for emerging market economies

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6.1 INTRODUCTION

Since the early 1990s, there has been a large trend increase in the volume of private capital flows to and from emerging market economies (EMEs). This increase can be attributed to EMEs' growing degree of financial openness, the perception of continuing strong growth prospects, increasing productivity, growth in the overall profitability of firms, positive interest differentials in favor of these economies and, sometimes, the expectation of continuing currency appreciation. However, capital flows are not necessarily the outcome of domestic developments alone in recipient countries; they also reflect the role of push factors emanating from source countries. The stance of monetary policy and the state of financial markets in major advanced economies have led to the emergence of comparatively low interest rates and overall low returns in these economies, giving rise to the search for yields. These factors again came to the fore in 2010 following unprecedented quantitative easing by the central banks in major advanced economies and the likelihood of such policies being pursued for an extended period of time. With near zero interest rates in these countries likely to continue into 2011, EMEs are attracting large capital flows. The consequent rapid appreciation of exchange rates has generated concerns over potential 'currency wars', with a number of EMEs resorting to capital controls. Issues related to capital flows and their management have, therefore, re-emerged as a key concern for EMEs.

The traditional pattern of capital flows to EMEs has been the result of the need to finance current account deficits. However, during recent years, even as capital flows to EMEs have increased manyfold, current account balances, in aggregate, have actually moved from modest deficits to substantial surpluses. These surpluses have led to increasing foreign reserves in these countries. The external financing constraint that existed

until the 1990s is now no longer an issue for most EMEs. Large capital flows emerged as a problem of plenty during 2003–2007 for major EMEs, creating significant new challenges for macroeconomic management and financial stability.

Boom periods in capital flows have been frequently followed by periods of reversal of these flows resulting from both push and pull factors (Committee on the Global Financial System, CGFS, 2009). Such large swings in capital flows in a short period typically give rise to serious challenges for macroeconomic management and often impose serious costs on the real economy. Capital flows that are well above their financing requirements are a relatively new phenomenon for EMEs. If such unrequited flows are not managed actively and appropriately, they can be associated with real exchange rate misalignment, credit and asset price booms, inflationary pressures, overheating and financial imbalances culminating in a financial crisis and capital outflows. Real appreciations, not depreciations, generally worry policymakers the most outside crisis periods (Obstfeld 2009; Grenville 2008). Since the 1980s, about 15 percent of the episodes of large capital inflows have ended in crisis (Schadler 2008). Thus, in order to insulate their economies from undue volatility, most EMEs actively manage their capital accounts to varying degrees, while also intervening in foreign exchange markets accompanied by sterilization. This policy response has been the norm among EMEs, despite much advice to the contrary.

Against this backdrop, this chapter undertakes a critical review of lessons for the capital account management of EMEs. Section 6.2 assesses the theoretical and empirical literature on the benefits of capital account liberalization on growth; section 6.3 discusses lessons for the sequencing of capital account liberalization; section 6.4 reviews country experiences in regard to the management of large capital flows; section 6.5 describes the impact of the global financial crisis on Asian emerging markets; and section 6.6 assesses the efficacy of capital controls. Concluding observations and key lessons are set out in section 6.7.

6.2 CAPITAL FLOWS TO EMES: THEORETICAL PERSPECTIVES AND EMPIRICAL EVIDENCE

6.2.1 Theoretical Debate

There has been a very active, contentious and continuous academic debate on the benefits of capital account liberalization in terms of economic performance. In principle, the free flow of capital across borders should lead to

a more efficient allocation of resources between savers and investors across the world. Capital should flow from countries with abundant capital (and low returns) to capital-scarce countries (with higher risk-adjusted returns), and this, along with technical know-how, should increase growth in recipient countries. The availability of external capital should also help smooth consumption and investment in response to exogenous shocks. Thus, one should expect capital account liberalization to be associated with higher growth and lower volatility in consumption and investment.

Whereas there is widespread agreement among economists about the desirability of open trade in goods, there is much disagreement with respect to the virtues of financial openness. Even strong proponents of free trade, such as Bhagwati (1998), have expressed considerable doubts about the gains to be had from unfettered trade in assets. In his recent comprehensive review of capital account liberalization, Obstfeld (2009: 71) noted that: 'concrete evidence of gains from financial globalization – at least gains of the type traditionally claimed on the basis of simple economic theory – has proved hard to document in any definitive way'. Thus, although a good portion of mainstream economists continue to support a broad opening of the capital account, many – including Bhagwati (1998), Rodrik (1998), Cooper (1999), Stiglitz (2003), Obstfeld (2009) and Rodrik and Subramanian (2009) – have expressed reservations. Much of this thinking was induced by the Asian financial crisis of 1997–1998, and the global financial crisis will no doubt give rise to further questioning of the merits of financial globalization. What is also of interest is that a review of actual policies followed shows that full capital account opening has been viewed with caution by almost all Asian EMEs.

The theoretical benefits expected from financial globalization are predicated on the assumption that, with the opening of the capital account, resources will flow from developed, capital-abundant economies to less-developed, capital-scarce economies. Capital should then flow toward activities exhibiting higher returns and higher productivity. As EMEs move toward the global production possibilities frontier, they should show higher productivity, higher profitability and higher growth. The recent experience of Asian economies has been the opposite: their saving rates have exceeded their investment rates, so resources have been flowing in the 'reverse' direction. In such situations, traditional gains expected from a full opening of the capital account in terms of greater investment and growth are clearly absent. In the presence of relatively high investment rates, it is difficult to argue that such benefits would have accrued if the exchange rate had adjusted enough to create a current account deficit, leading to absorption of capital flows, from which all the expected benefits would then follow. The evidence relating to the increase in two-way flows

does, however, suggest that there could be some microeconomic gains to market participants through improved access to global capital markets, as long as the authorities can manage the macroeconomic effects of such excess flows.

6.2.2 Empirical Evidence

Empirical evidence does not seem to support the theoretical propositions of the expected benefits of opening the capital account (CGFS 2009). Prasad et al. (2007) found a positive correlation between current account balances and growth among non-industrial countries – a reduced reliance on foreign capital is associated with higher growth. This result could be attributed to the fact that even successful developing countries have a limited absorptive capacity for foreign resources, either because their financial markets are underdeveloped or because their economies are prone to overvaluation resulting from rapid capital inflows. In a similar vein, Rodrik and Subramanian (2009) argue that developing economies are more likely to be constrained by investment opportunities than by the availability of savings. In such circumstances, foreign finance can often aggravate existing investment constraints by appreciating the real exchange rate and reducing profitability and investment opportunities in the traded goods sector, resulting in adverse long-run growth consequences. Given the existence of relatively high levels of investment and growth in Asian economies, even this argument is difficult to sustain.

In view of the failure to find empirical evidence of the beneficial effects of capital account liberalization on growth, some have argued that the benefits of financial globalization may be indirect. 'Collateral' benefits of financial opening could be in the form of better financial sector development, institutions, governance and macroeconomic stability, which then help growth prospects. Such indirect effects are likely to be far more important than any direct impact via capital accumulation or portfolio diversification (Kose et al. 2009). According to Kose et al. (2009), the indirect benefits of financial opening could collectively show in productivity growth. However, it is difficult to understand how there could be positive effects on productivity growth without corresponding positive effects on overall growth.

The indirect benefits are not straightforward, however; they are dependent upon certain 'threshold' levels of financial and institutional development. The thresholds are lower for foreign direct investment (FDI) and portfolio equity liabilities than for debt liabilities (Kose et al. 2009a). There is an important issue of causality here: is it the opening up of the capital account that leads to indirect benefits, or is it the gradual

development of domestic financial markets that allows the benefits of subsequent opening of the capital account to be reaped? A coordinated and calibrated approach to movement in financial market and sector development, combined with a gradual opening up of the capital account, might be expected to lead to higher growth in an environment of macroeconomic and financial stability. As such, unless the strengthening of local financial institutions and improvements in macroeconomic policies are in place, the liberalization of capital flows can entail dangers.

Henry (2007) argues that the empirical methodology of most existing studies is flawed because these studies look for permanent effects of capital account liberalization on growth, whereas the neo-classical growth model posits only a temporary impact on the growth rate. Once such a distinction is recognized, opening the capital account within a given country is found to generate economically large and statistically significant effects, not only on economic growth, but also on the cost of capital and investment. The beneficial impact, however, is discernible only from the liberalization of equity flows. The free movement of debt flows is not found to be associated with any positive impact on growth. Instead, the liberalization of debt flows – particularly short-term, foreign-currency-denominated debt flows – may cause problems. On the other hand, empirical evidence indicates that countries derive substantial benefits from opening their equity markets to foreign investors (Henry 2007). FDI and portfolio liabilities boost productivity growth, whereas debt liabilities have a negative impact (Kose et al. 2009b). However, as Kose et al. (2009c) argue, the significant positive impact of equity market liberalization on growth could be masking the impact of other supportive reforms because equity market liberalization typically takes place only when governments are sure that supportive conditions are in place.

Large volatility in sudden and substantial exchange rate movements constitutes an important channel through which capital flows can potentially have an adverse impact on the domestic economy. The impact of exchange rate changes on the real sector is significantly different for currency of invoicing countries than for other countries. For reserve currency countries, which specialize in technology-intensive products, the degree of exchange rate pass-through is low, enabling exporters and importers to ignore temporary shocks and set stable product prices despite large currency fluctuations. Moreover, mature and well-developed financial markets in these countries help to absorb the risk associated with exchange rate fluctuations with negligible spillover to real activity. On the other hand, for the majority of developing countries that specialize in labor-intensive and low and intermediate-technology products, profit margins in the intensely competitive markets for these products are very thin

and vulnerable to the pricing power of large retail chains. Consequently, exchange rate volatility has significant employment, output and distributional consequences (Mohan 2004; Aghion et al. 2009).

In the context of substantially large capital flows to EMEs from 2003 to 2007, it is generally argued that deep financial markets would be helpful for channeling such capital flows efficiently. The merit of such an argument is subject to doubt in light of recent experience. If capital flows reach levels as high as 10 percent of GDP or more per annum, as they did for some countries during 2007, it is arguable whether even a highly advanced financial system could have intermediated such capital flows efficiently and in a stable manner. For such a large volume of capital flows to be fully absorbed, an equivalent current account deficit, a large real appreciation or any combination thereof would be the immediate consequence. These outcomes would in turn be manifested in asset price and credit booms and financial imbalances. All these options are clearly unsustainable and can lead to future fragility, as revealed by the developments in some Asian economies during the Asian financial crisis of 1997–1998 and in Eastern European nations and Baltic States in the recent global financial crisis.

On balance, an assessment of the available empirical literature suggests that full capital account liberalization does not in itself lead to higher growth in EMEs. Instead, it can impart avoidable volatility and have an adverse impact on EME growth prospects. A majority of historical crises have been preceded by financial liberalization. Since 1800, if not before, surges in capital inflows have often preceded external debt crises at the country, regional and global levels (Reinhart and Rogoff 2008). Available evidence is strongly in favor of a calibrated and well-sequenced approach to the opening of the capital account and its active management by authorities, along with complementary reforms in other sectors and the taking into account of country-specific features (Mohan 2007a; CGFS 2009; Obstfeld 2009; Grenville 2008).

6.3 CAPITAL ACCOUNT LIBERALIZATION: SEQUENCING

There is a broad consensus about the appropriate sequencing of the opening of the capital account among economists and practitioners (Obstfeld 2009; Kim and Yang 2008; Yu 2008; among others). FDI flows should be the first to be liberalized because they are among the most stable flows and also provide enhanced management and technical know-how. Next to be liberalized should be portfolio equity inflows.

Greater caution is needed in the liberalization of debt flows. Most

studies have found that debt flows have an adverse impact on growth, especially in economies with underdeveloped financial markets. However, even if the domestic financial markets in EMEs were well developed, it is not apparent that a fully free regime in regard to debt flows would be stabilizing. Given the relatively higher growth rates, as well as higher inflation rates in EMEs, interest rate differentials favor EMEs. Such growth- and inflation-induced interest rate differentials are likely to continue. During periods of low interest rates and yields in advanced economies – the source countries for capital flows – a freer regime could potentially lead to large volumes of capital inflows to EMEs, which could reverse as monetary policy becomes normalized in advanced economies. This can impart large volatility to capital flows and induce macroeconomic and financial instability. As Grenville (2008) noted, capital inflows reflect an ongoing structural disequilibrium: foreign capital will be attracted by the higher returns and the prospect of currency appreciation. In such an environment, the exchange rate will be poorly anchored by fundamentals, thereby threatening the stability of the financial system. With the intensification of capital inflows and the consequent exchange rate appreciation, even greater inflows will take place in the short term, putting more upward pressure on the real exchange rate. With this overshooting of the exchange rate, the trade and current account deficits will eventually begin to rise, leading to a subsequent fall in international confidence and a consequent sudden reversal of capital flows. Thus, as long as interest rate differentials favor EMEs on a structural and sustained basis, a more cautious approach to liberalization of debt flows, especially short term, is warranted. In particular, investments by foreigners in government securities should be subject to some ceilings to avoid excessive arbitrage-led flows.

Regarding debt flows, *ceteris paribus*, the policy preference could be in favor of local-currency-denominated liabilities relative to foreign-currency-denominated liabilities. In terms of the various categories of resident entities, there may be merit in more stringent prudential restrictions on the access of financial intermediaries, especially banks, to external finance relative to corporates. Whereas the failure of a non-financial corporate entity does not have any systemic implications, bank failures do result in substantial systemic consequences. The adverse implications for financial stability of the boom-and-bust pattern associated with capital inflows are created and exacerbated by the banking system. In boom periods, excess liquidity generated by capital inflows, if not sterilized effectively by the central bank, can lead to a relaxation of lending standards, and generate credit and investment booms and financial imbalances. Thus, a liberal regime in regard to banks' access to foreign capital can be destabilizing and lead to huge fiscal costs. A related issue is foreign ownership

of domestic banks. A larger presence of foreign banks can increase the vulnerability of the domestic economy to foreign shocks. Significant liquidity and capital shocks to the parent foreign bank can force it to scale down its operations in the domestic economy, even as the fundamentals of the domestic economy remain robust.

Regarding the liberalization of outflows, restrictions can be relaxed for corporate entities, institutional investors and individuals – in that order. The difficulty is that during periods of rising capital inflows resulting from the perception of higher financial returns in EMEs, including arbitrage flows, the liberalization of outflows can actually result in even greater net inflows. Domestic residents tend not to take advantage of the diversification opportunity offered in the light of higher expected returns domestically. Speculative inflows are strengthened by the increased confidence in repatriating these flows. Thus, it is important to liberalize outflows carefully, in terms of both timing and the categories of outflows.

6.4 MANAGING LARGE CAPITAL INFLOWS

Most EMEs, including Asian EMEs, have used a judicious menu of options in trying to modulate the volume of net capital inflows, manage currency volatility, intervene in the market and sterilize interventions, while simultaneously going ahead with structural reforms. Increasing the flexibility of the exchange rate as the only tool to manage capital inflows is likely to be ineffective, even though it is desirable in and of itself. Major Asian EMEs have continued with the gradual and calibrated liberalization of capital outflows, while retaining restrictions on some categories of inflows, along with greater exchange rate flexibility.

In December 2006, Thailand imposed unremunerated reserve requirements on fixed income flows – the only country in the Asian region to do so. These requirements were withdrawn in March 2008 as foreign capital flows moderated. Unremunerated reserve requirements on portfolio equity flows were also imposed in December 2006, but were immediately withdrawn as a consequence of the immediate and extremely adverse market reaction. In India, access norms to external commercial borrowing were tightened in August 2007 in the wake of heavy inflows, but were relaxed in 2008 following the onset of the global financial crisis. Interest rate ceilings on non-resident deposits with the banking system were reduced during 2006–2007 to moderate inflows and were raised again in 2008, when inflows had reversed. In April 2007, foreign banks in the Republic of Korea (hereafter Korea) were advised not to respond to strong arbitrage incentives to swap United States dollars for Korean won. Limits

on lending in foreign currency to Korean firms were also reimposed. The non-taxable amount that foreign bank branches can borrow from their parent companies was reduced from six times capital to three times capital (the 'thin capitalization rule'), starting in January 2008. The use of foreign exchange loans by banks was limited to real demand (that is, for financing imports and real investment), beginning in August 2007. McCauley (2008) found that these restrictions on capital flows were effective in the case of Korea, the People's Republic of China (PRC) and Thailand.

India and the PRC raised cash reserve ratios (CRRs) from 2004 to mid-2008 to moderate the expansionary impact of large capital inflows on domestic monetary and credit aggregates and prevent overheating (Mohan 2008a). The increases in these ratios were rolled back in late 2008 and early 2009 as capital flows reversed. The domestic banking systems of these two countries were thus largely insulated from both the large influx and the subsequent reversal of capital flows. CRRs provided these central banks with a liquidity 'cushion' that could be released when the banks faced greater funding difficulties in October and November 2008. Banks could be given back their own liquidity, and there was thus no need for any dilution of collateral to be accepted by the central banks to inject liquidity into the system. In Indonesia, Malaysia and the Philippines, reserve requirements were cut in the aftermath of the global financial crisis and capital flow reversals to provide the banking system with adequate liquidity. Central banks in the PRC and Korea also issued their own bills to sterilize capital inflows, while India introduced (in 2004) an innovation in the form of the Market Stabilisation Scheme for sterilization.

To absorb enduring surplus liquidity, a policy choice exists between the central bank issuing its own securities and the government issuing additional securities purely for sterilization purposes. A large number of countries, such as Chile, the PRC, Colombia, Indonesia, Korea, Malaysia, Peru, the Philippines, Russia, Sri Lanka, Thailand and Taipei,China, have issued central bank securities. However, central banks in some of these countries have faced deterioration in their balance sheets. As such, there is merit in issuing sterilization bonds on a government account. Moreover, in cases where an already well-established government debt market exists, the issuance of new central bank bills or bonds of overlapping maturity could cause considerable confusion and possible market segmentation. Such confusion could obfuscate the yield curve, reduce the liquidity of the instruments and make monetary operations that much more difficult.

In India, the Market Stabilisation Scheme has considerably strengthened the Reserve Bank of India's ability to conduct capital account and monetary management operations (Mohan 2008b). Apart from using monetary policy instruments such as policy rates and the CRR,

in 2005–2007 India also tightened prudential norms (for example risk weights and provisioning norms) for certain sectors such as real estate and stock markets, in which relatively high credit growth was being witnessed. The prudential norms were rolled back in late 2008 in the face of the global financial crisis.

Such an approach to financial regulation helps to throw sand in the wheels of sectors witnessing high growth, possibly fueled by the availability of abundant liquidity arising from excess capital flows, and helps to foster financial stability. The integrated approach combining monetary and prudential instruments used in India was facilitated by the fact that both monetary policy and financial regulation responsibilities are entrusted to a single agency: the Reserve Bank of India (Mohan 2007b, 2009). It is also important to strengthen financial regulation to avoid regulatory arbitrage. Thus, in India, the regulatory regime with regard to non-banking financial institutions has been gradually tightened since 2004 so that weaknesses do not emerge in sectors that are poorly regulated. This use of prudential measures suggests that the management of capital inflows can also be done through such an approach, in addition to the more conventional use of sterilization instruments. In the case of India in 2007–2008, almost all possible instruments were used in the face of exceptional excess capital inflows, amounting to almost 10 percent of gross domestic product (GDP), which can now be seen as an outlier in the world.

The issue of capital controls has taken center stage in the aftermath of the global financial crisis. Capital flows to EMEs plummeted in 2008 and the first quarter of 2009 due to massive deleveraging by financial market participants in advanced economies and extreme risk aversion. Since the second quarter of 2009, capital flows to EMEs have resumed, gathering momentum in 2010. This reflects both pull and push factors, including near zero interest rates in the United States and other major advanced economies, ultra accommodative policy in these advanced economies (and promises to pursue this type of policy for an extended period), search for yield, and the growing recognition that EMEs have weathered the crisis well and the fundamentals in these economies remain robust. In view of the large volume of capital inflows and their adverse impact on exchange rates, countries have again started imposing controls on capital flows to ensure domestic stability. The most notable of these was the imposition by Brazil of a Tobin-like financial transaction tax of 2 percent on all capital inflows (except FDI flows) in October 2009.[1] The tax rate was increased in two stages to 6 percent in October 2010. In November 2009, Taipei,China barred foreign investors from parking their money in time deposits after bringing funds into the country. Foreign investors are not allowed to extend the deposit maturity beyond three months. In

June 2010, Korea undertook macroprudential measures to curb excessive volatility of capital flows through ceilings on foreign exchange derivatives, positions of banks, regulations on foreign currency bank loans and prudential regulations for improving the foreign exchange soundness of financial institutions. In October 2010, Thailand reintroduced a withholding tax of 15 percent on interest and capital gains by foreign investors on Thai bonds. In addition, measures were undertaken to liberalize capital outflows.

Lord Adair Turner, chairman of the Financial Services Authority in the United Kingdom, has spoken in favor of Tobin-type taxes. Former British prime minister Gordon Brown argued for a global financial levy – such as a tax on transactions or an insurance fee – to build up a resolution fund as a buffer against future bailouts. Although these proposals have not been mooted from the perspective of capital controls, they are akin to putting sand in the wheels of global finance.

6.5 GLOBAL FINANCIAL CRISIS AND ITS IMPACT ON ASIAN EMES

All the economies in the Asian region witnessed a significant slowdown in late 2008 and 2009 because of the global financial crisis. The downturn in growth that occurred in the wake of the global financial crisis can largely be attributed to external causes. This is in contrast with the Asian financial crisis of 1997–1998, when internal weaknesses – large current account deficits, exchange rate misalignments, external sector vulnerability, and weaknesses in corporate and financial sector balance sheets – led to the currency and banking crisis, culminating in severe output losses and an overall crisis of confidence. In response to the lessons of the Asian crisis, the external and financial sectors of the major Asian EMEs have seen significant strengthening. Policies encompassing enhanced exchange rate flexibility and current account surpluses, in conjunction with a cautious approach to full capital account opening and an accumulation of foreign exchange reserves, have characterized the overall macro and monetary management of these economies in the period prior to the current crisis. Large foreign exchange reserves have acted as effective buffers in the face of reversals in capital flows.

This time, the domestic financial sectors of Asian EMEs did not exacerbate the crisis in these economies, unlike those of advanced economies. In general, the banking sectors of Asian economies have been strengthened considerably: capital adequacy ratios are above the international norm and non-performing loans have witnessed a significant decline from their

Table 6.1 Liquidity ratios in banks in Asian EMEs (end 2008) (%)

Country	Loans to domestic deposits	Loans to total liabilities	Foreign liabilities to domestic deposits
China, People's Rep. of	0.69	0.68	0.01
Hong Kong, China	0.50	0.28	0.78
India	0.82	0.79	0.07
Indonesia	0.80	0.75	0.07
Korea, Rep. of	1.36	1.05	0.30
Malaysia	0.96	0.86	0.11
Philippines	0.78	0.69	0.14
Singapore	0.85	0.51	0.66
Taipei,China	0.77	0.71	0.08
Thailand	0.98	0.94	0.04
Viet Nam	0.98	0.91	0.07

Sources: Asian Development Bank (2009); Reserve Bank of India (2009).

post-Asian crisis levels. Direct exposures of Asian EMEs to subprime assets were negligible. Corporate balance sheets are also reported to have been robust. These features provided a certain degree of resilience to these economies. Nonetheless, as the governments of major advanced economies and emerging economies in other regions proceeded to enhance their coverage of deposit insurance and guarantees of other bank liabilities in the face of faltering public confidence in the banking systems, many governments in the region, with the exception of India and the PRC, were also forced to extend similar sorts of guarantees and insurance.

Another factor that minimized the adverse impact of the global financial turmoil on Asian EMEs is that banks in the region rely more on domestic funding to finance their domestic loans than on international sources of funding. The ratio of loans to domestic deposits is typically less than one in most of Asia (Table 6.1). A ratio of less than one indicates that domestic deposits are sufficient to fund the banking system's loans and, therefore, that problems in global financial markets will not have any direct impact on domestic lending. A ratio above one suggests a reliance on foreign sources of funding. In such cases, a global credit crunch could cause liquidity problems for banks. The only major Asian country in which the loan-to-deposit ratio is high enough to cause some concern is Korea, which indeed experienced some financial instability, especially evident in the foreign exchange markets. A further factor indicating Korea's greater vulnerability during the crisis was its exceptionally open capital account (Asian Development Bank 2009).

6.6 CAPITAL CONTROLS AND EFFICACY

Despite the widespread and relatively successful practice of active capital account management by many EMEs, particularly those in Asia, some economists continue to question its efficacy. It is argued that capital controls are ineffective, except over a short time horizon, and that capital controls are often leaky with potential capital flows even showing up as current account flows or as permissible capital flows. For instance, an International Monetary Fund (IMF) working paper (Cardarelli et al. 2009) observed that episodes of large capital inflows are often associated with real exchange rate appreciation, deteriorating current account balances and a significant drop in subsequent growth. It concluded that resisting nominal exchange rate appreciation through sterilization is likely to be ineffective when the influx of capital flows is persistent, and tightening capital controls has not, in general, been associated with better outcomes. Instead, the paper suggests that keeping expenditure growth steady is helpful for limiting currency appreciation and fostering better growth.

These findings deserve some comment. First, it is not clear what is meant by 'persistent' flows. It is not possible in real time to determine with certainty whether capital inflows are permanent or temporary. With hindsight, it is possible to conclude that the unprecedented surge in capital inflows to EMEs during 2003–2007, especially in 2007, was not permanent, although at the time it was considered by many commentators to be so. Many policymakers, on the other hand, appear to have treated the capital flows boom as temporary, uncertain and subject to reversal by intervening in the markets.

Second, the case for fiscal restraint is based on the assumption that it will contain aggregate demand and hence reduce interest rates. Therefore, fiscal restraint may be useful if capital inflows are made up entirely of debt flows looking for interest rate arbitrage. Even then, however, fiscal prudence may turn out to be ineffective if private demand replaces government demand in the economy such that aggregate demand is unchanged. If the surge in capital inflows reflects push factors (for example low interest rates and yields in advanced economies), it is not clear whether fiscal restraint would be of much help. Fiscal policy decision making is subject to long decision lags, while capital flows are highly volatile. By the time fiscal contraction is implemented, capital inflow surges may have given way to outflows, and the policy response may be destabilizing (Kim and Yang 2008).

Third, the IMF paper discussed the hazards of preventing nominal appreciation, but in practice, major EMEs have permitted growing flexibility in the nominal exchange rate. The relevance of the IMF paper's

observations is, therefore, questionable given the present circumstances in Asian countries.

Finally, most studies are handicapped by the use of binary or similar indices to capture capital controls. Furthermore, information on such measures is available on an annual basis, whereas policy actions are taken more continuously and also undergo intrayear fluctuations. Existing measures of cross-country differences are crude and misleading in many cases, often leading to incorrect conclusions. Available measures of capital controls on inflows, therefore, may not successfully capture the nuances of policy measures and their level of efficacy.

In regard to firm-based micro studies reaching the conclusion that capital controls hurt corporates, this should be true by definition: such controls, if effective, would indeed raise the cost of financing for affected firms. The key issue, however, is not the micro impact, but the macro impact. Capital controls tend to moderate the influx of foreign capital so that domestic macroeconomic and financial stability can be maintained. Thus, while individual firms may be hurt by controls, the economy may reap benefits at the aggregate level, which are rather harder to capture. As Rodrik and Subramanian (2009: 126–127) point out, studies based on individual firms:

> cannot address the counterfactual question of what would have happened to aggregate investment in the absence of the controls, especially once the induced real exchange rate changes are factored in. It is entirely possible for aggregate investment to be higher in the equilibrium with restricted capital mobility (and therefore a more competitive real exchange rate) than in the equilibrium with full capital mobility, even though some firms are in effect facing higher costs of finance in the latter equilibrium.

It is also often argued that financial market development can enable firms to minimize the adverse impact of volatility in exchange rates through hedging. Whereas this may indeed benefit individual firms, the macroeconomy can still suffer because hedging transfers the risk to other domestic players only if it is mostly done in domestic financial markets (Grenville 2008).

The quasi-fiscal and other costs of sterilization are likely to be outweighed by benefits from the maintenance of domestic macroeconomic and financial stability. With hindsight, the large build-up of foreign exchange reserves by the major EMEs since 1998 (and especially since 2003) appears to have been a useful first line of defense in the current episode of reversal of capital flows.

A prolonged period of large-scale intervention, as the sole policy response to managing a large and growing volume of capital inflows, can

create expectations of future exchange rate appreciation and runs the risk of creating distortions in the local financial system. There are, however, good grounds for believing that such dangers can be reduced when foreign exchange intervention is combined with allowing currency flexibility over a medium-term perspective in conjunction with continuous development and strengthening of the domestic financial sector.

The IMF, which hitherto was not in favor of capital controls, now seems to see some role for them: 'Recognizing that capital inflows can be very large and partly transitory, depending on circumstances, macro-prudential policies aimed at limiting the emergence of new asset price bubbles, some buildup of reserves, and some capital controls on inflows can be part of the appropriate response' (IMF 2010: 5).

To sum up, modulating the volume of capital inflows, through active capital account management, can at least reduce the amplitudes of the various economic variables in both the upswing and downswing of the capital flows cycle, while also contributing to domestic stability. Authorities need to respond symmetrically and keep their options open when managing the volatility in capital flows and any subsequent consequences to the domestic economy. If capital flows are found to be persistent and unidirectional over a long time period, policies will have to respond to such a development. If such persistent flows are not deemed to be disruptive, there is little need for intervention. In principle, the objective of capital account management is to manage the departures from fundamentals that such flows may entail. Flows are 'persistent' or 'permanent' only if they are responding to economic fundamentals. The fact that capital account management can be leaky has to be recognized. When excess flows exist, they are the result of perceived potential gains to be reaped from such flows. It is then axiomatic that both residents and non-residents will attempt to circumvent any attempts to curb the flow, including through current account transactions.

6.7 CONCLUDING OBSERVATIONS

A good deal of discussion on the management of capital accounts and foreign exchange intervention has been influenced by the concept of the open economy trilemma, that is, that no country can simultaneously enjoy free capital mobility, operate a fixed exchange rate, and practice independent monetary policy directed at managing domestic objectives. Most Asian countries have actually managed to overcome this open economy trilemma successfully since the crisis of the 1990s. Although they have operated managed exchange rates, they have also allowed increased flexibility (that

is, their exchange rates no longer exhibit rigidity). Similarly, although many Asian countries have actively managed their capital accounts, they have been neither totally open nor totally closed at any time. This middle ground of managed but flexible exchange rates and managed but mostly open capital accounts has enabled Asian EMEs to operate independent monetary policies despite high volatility in external capital flows during the post-Asian crisis period. By and large, Asian countries have been able to set their own policy interest rates even in the presence of persistent interest rate differentials with advanced countries. The practice of adequate sterilization has been successful in preventing the unwarranted growth of base money and other monetary aggregates in the face of rising foreign exchange reserves. Hence, they have also been successful in containing inflation.

Capital account management can be made more effective by the appropriate use of prudential regulation, given that it is financial sector weaknesses that ultimately cause financial crises. Some countries have, therefore, used prudential regulatory measures to limit the intermediation of foreign inflows through domestic banks and financial institutions (Reddy 2009). Restrictions on the use of capital flows in speculative activities, such as real estate, can also be helpful. Thus, capital account management and prudent regulation of the financial sector go hand in hand, and countries following such an approach can minimize the adverse impact of exogenous shocks.

The flow of capital between nations, in principle, brings benefits to both capital-importing and capital-exporting countries. But the historical evidence, reinforced by the current global financial crisis, shows that it can also create new exposures and bring new risks. The failure to analyze and understand such risks, excessive haste in liberalizing the capital account, and inadequate prudential buffers to cope with the greater volatility in more market-based forms of capital allocation have at one time or another compromised financial or monetary stability in many EMEs. On the other hand, rigidities in capital account management can also lead to difficulties in macroeconomic and monetary management. Although theory has much to say on the conditions desirable for an end state equilibrium, it has little guidance to offer on the sequencing of capital account liberalization.

Overall, as the CGFS (2009) concludes, it is a combination of sound macroeconomic policies, prudent debt management, exchange rate flexibility, effective management of the capital account, accumulation of appropriate levels of reserves as self insurance, purposive use of prudential regulation, and development of resilient domestic financial markets that provide the optimal response to the large and volatile capital flows to

EMEs. Individual countries have used different combinations of measures from time to time. If the pressure of excess flows is very high, as it was in India in 2007, it becomes necessary to use almost all the possible measures available. Thus, how these elements can be best combined will depend on the country and on the context: there is no 'one size fits all' solution.

Such a discretionary approach does put great premium on the skill of policymakers in finance ministries and central banks. It also runs the risk of markets perceiving central bank actions as uncomfortably unpredictable. If the actions of the authorities result in the virtuous circle of high growth, low inflation, and financial stability (as has been the case in many Asian countries in recent years), however, such an approach has much to commend it.

NOTE

1. Brazil had earlier imposed a tax of 0.38 percent on fixed income flows, which was raised to 1.5 percent in March 2008. The tax was removed in October 2008 as the global financial crisis intensified. In the latest move (in October 2009), the tax net was widened to include portfolio equity inflows.

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