

Managing Capital Inflows: What Have We Learned

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Executive Summary

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At the beginning of the 1990s, the development of a global capital market with a larger role for capital flows to developing countries was a major objective of international economic policy. In fact, consideration was being given to making an open capital account a condition of IMF membership. However, a decade of frequent and very costly financial crises throughout Latin America and Asia has led to a reconsideration of that advice. The experience also promoted an explosion of economic research to reexamine the tradeoff between the benefits and risks of international capital flows.

The objective of this paper is to review that research and the policy advice that flows from it. The paper provides a brief review of the recent pattern of capital flows to developing countries before turning to three substantive issues: (1) the impact of capital inflows on growth, (2) the role of domestic financial structure, and (3) the interaction between open capital markets and the exchange rate regime.

First, it is surprisingly difficult to produce robust evidence of a strong relationship between integration with the global financial system and large net benefits to the participating countries. The benefits accrue very gradually and can be wiped out for many years by the occurrence of a financial crisis. The link between financial liberalization and crises is the major reason for the finding of limited net gains.

Second, there is much greater appreciation of the linkage between domestic and external financial liberalization. The two reforms need to be coordinated, but some analysts would go further in suggesting that external liberalization should be conditional on the achievement of certain minimal standards of liquidity and oversight in the domestic financial system.

Third, the coordination of liberalization with changes in the exchange rate regime remains an area of significant dispute. There is agreement that a simple fixed rate system is too exposed to speculative pressures and leads to excessive levels of risk-taking in cross-border financing. However, there is no agreement that the adoption of a flexible rate is sufficient to resolve the problems. The level of foreign-currency debt is high even in flexible exchange rate regimes. The issue of currency risk is also not adequately addressed in the Basel accords on bank supervision.

The liberalization of the capital account is an inevitable by-product of economic growth and involvement in the global trading system. The increasing complexity of international transactions will make controls ineffective, and their complexity will impose costs on other cross-border transactions. However, the historical experience does suggest that countries are right to proceed with caution, and as an integral part of an overall program of reform of the domestic financial system and the exchange rate regime.

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The globalization of financial markets has proceeded at a rapid pace over the past quarter century, but it has been largely a phenomenon of increased interactions among the industrial countries. Capital inflows to industrial countries peaked at \$4 trillion in 2000, and are currently averaging in excess of \$3 trillion per year. Meanwhile capital flows to developing countries amounted to only a little over \$400 billion at their peak in 1997, prior to the Asian financial crisis, and averaged less than \$300 billion annually in 2001-2003 (figure 1).

The disparity of capital flows in the 1980s and 1990s between industrial and developing economies led to an advocacy of a global market for financial capital and pressures on developing economies to speed up the process of removing controls on cross-border flows. At one time, consideration was being given to making an open capital account a condition of IMF membership. However, a decade of frequent and very costly financial crises throughout Latin America and Asia has led to a reconsideration of that advice. The experience also promoted an explosion of economic research to reexamine the tradeoff between the benefits and risks of international capital flows. This is an opportune time to review the results of the research and the policy advice.

The case for expanding cross-border financial transactions is largely drawn from analogy to cross-border trade in goods and services. By breaking the constraint that domestic investment is limited to the volume of national saving, capital inflows can be used to finance a more rapid pace of growth than a country could achieve on its own. And certainly there are historical examples, such as the United States, Canada, and Australia that achieved large gains from the use of foreign capital inflows. In addition, it

has been suggested that cross-border capital flows can be used to smooth the normal cyclical fluctuations in domestic demand.

However, the examination of a broader set of experiences suggests that the social benefits of capital inflows to emerging markets are surprisingly limited, and the gains can be easily offset by the risks that they impose. Because the costs are born by a few, there is also a divergence of interests among national governments in their advocacy of unfettered financial flows. A group of industrial countries with highly sophisticated financial systems have pushed capital account convertibility on a number of countries who are still unprepared for such a step. For example, the OECD imposes capital account convertibility as a condition of membership, and the United States held up the accession of China to the WTO until it could achieve a side agreement on a time table for U.S. financial firms' access to China's markets.

The paper begins with a brief review of the recent growth performance of developing countries and the pattern of capital flows. The first substantive objective of this paper is to provide a summary of the empirical research aimed at assessing the benefits and costs of capital flows to developing countries. Second, the paper examines the role of domestic financial market structures and the exchange rate regime in accounting for the frequent association of capital account liberalization and financial crises. The paper concludes with a discussion of some policy issues that arise in management of the process of opening an economy to foreign capital inflows.

In summary, it is surprisingly difficult to produce robust evidence of a strong relationship between integration with the global financial system and large net benefits to the participating countries. I do not believe, however, that we should conclude that financial integration should not be an objective of national policy. The liberalization of the capital account is an inevitable by-product of economic growth and involvement in the global trading system. The increasing complexity of international transactions will make controls ineffective, and their complexity will impose costs on other cross-border transactions. However, the historical experience does suggest that countries are right to approach the process with caution, and with a clear recognition of the importance of integrating the liberalization of the external financial account with a program of domestic

financial reform and liberalization. They also need to recognize that an open capital account will have important implications for sustaining various exchange rate regimes. The OECD countries spread the process of liberalization over decades and experienced several large and costly failures. The developing countries should learn from the historical experience and adopt a program of gradual and sequenced liberalization.

Recent Performance

It is useful to precede the discussion of international financial reform with a brief review of recent economic developments and trends in international financial markets. For more than a decade, the economic reform agenda has emphasized the importance of improved macroeconomic policies, both in the industrial and developing economies. Considerable progress has been made in reducing the magnitude of fiscal deficits, and inflation has declined substantially in most countries. However, there is a perception that the benefits in terms of accelerated growth have been less than promised (Montiel and Servén, 2005).

The economic growth performance of the high-income OECD countries and 80 developing countries are compared in figure 2. First, as shown in the top panel, a general slowing of economic growth since 1960 is a common phenomenon; but the 1980s were truly a lost decade from the perspective of most developing countries. Growth did recover somewhat in the 1990s, but most developing countries are failing to narrow the gap with the rich economies. One important qualification is that the picture of growth performance is significantly altered if we focus on the number of people rather than countries. Growth accelerated dramatically after 1980 in China and the Indian economy has been doing significantly better, and these are the world's two most populous countries.

Second, developing countries have achieved a greater degree of economic stability, as illustrated in the lower panel. The opportunity to use financial markets to smooth aggregate output and consumption spending is seen by some as an important motivation for more open international financial markets. Unfortunately, it is not evident that a more open global system is the source of reduced volatility: many observers blame

external imbalances for many of the financial crises that have plagued the developing world in recent decades. Volatility has receded from the instability of the 1970s, but it remains about twice as high among developing compared to industrial countries.

Inflation slowed among the developing countries, but again by less than in the industrial economies. Fiscal deficits also declined across all groups of countries in the 1990s. In general, macroeconomic policies were less extreme, but the improvements in real income growth have been marginal.

In contrast to the performance of output, financial flows to developing countries continue to be highly variable. The balance of payments classifies capital inflows into three primary categories of foreign direct investment, portfolio capital, and other inflows. It is evident from figure 3 that the composition of inflows differs substantially between developing and industrial countries. Foreign direct investment (FDI) is large in both cases, but it plays a far more dominant role in developing economies where it has accounted for about two-thirds of capital inflows over the past decade. Portfolio investments also expanded in the 1990s, but stagnated after the 1997 Asian financial crisis. Other loans, principally bank lending and trade credit, have historically been important to developing countries, but such loans have also been the dominant source of instability. After the 1997 financial crises, this category of lending to developing countries switched from a net inflow of \$100 billion to a net outflow of an equal magnitude, and remained negative until 2003.

A focus on private capital flows in the top panel of figure 4 more clearly highlights the dominant role of FDI, the declining significance of bank lending, and the gradual emergence of a significant amount of portfolio capital inflows. All forms of investment however, were significantly curtailed by the Asian financial crisis. A revival of gross inflows began in 2003 and has continued to the present.

The regional distribution in the bottom panel shows the dominant role played by Latin America in the 1990s. The three large countries of Argentina, Brazil, and Mexico were the primary destination countries, until the Argentine crisis of 2001, which had strong contagion effects on all the other countries in the region. The large inflow of FDI to China, beginning in the mid-1990s, camouflages the near complete termination of

foreign capital flows to other countries in that region after 1997. However, because of high domestic saving rates, East Asia has never been as dependent as Latin America on capital inflows. Most recently, the region of Eastern Europe and Central Asia has emerged as a third significant recipient of capital inflows.

Finally, the following discussion focuses on the potential benefits of resource transfers from the high-income economies to the developing world. Yet, we cannot help but note that the discussion takes place against the backdrop of a large resource transfer that is the reverse of the underlying assumption of this survey. As shown in table 1, the United States is both the worlds richest economy and the net recipient of a resource transfer – a current account deficit -- that is now in excess of \$700 billion and that is matched by a surplus in virtually every other major region of the world economy. At present, the resource transfer is operating counter to the underlying assumption of much of the economic growth literature.

Capital Inflows and Growth

The frequency and magnitude of recent financial crises has opened a major debate about whether the benefits of international financial market integration are sufficient to offset the risks of severe financial disruption that can result with the sudden termination of capital inflows. The benefits to developing countries are perceived to be concentrated in four areas. First, by breaking the constraint of domestic saving as the limitation on investment, access to global financial markets expands the supply of capital. By taking advantage of a more diversified international market, developing countries ought to obtain lower-cost financing of investment than is available in a closed domestic market. Growth can be enhanced without the need to reduce domestic consumption.

Second, access to international markets allows domestic savers to achieve a higher level of risk diversification than is available locally and to smooth consumption by borrowing in ‘bad’ times and lending in ‘good’ times. Obstfeld (1994) provided one perspective on the potential magnitude of these benefits by comparing the variability of national stock market returns with that of an optimally diversified international fund, suggesting that the gains could be very large. At the same time, access to the

international market may promote more risky domestic investments and lead to increased volatility of output changes. Thus, several authors have suggested that it is important to distinguish between the volatility of consumption and output.

Third, some advocates of liberalization perceive a particularly beneficial role for FDI. By facilitating the transfer of managerial and technological knowledge, it may have additional positive effects on growth beyond the effects of greater capital accumulation (Grossman and Helpman, 1991). However, in some interpretations, the promotion of FDI is viewed as somewhat divorced from the issues of full capital account convertibility since most countries make special accommodations for providers of FDI.

Finally, foreign capital inflows can enhance the domestic financial system by expanding the breadth and liquidity of markets and promoting greater competition among financial institutions (Levine, 2001). In part, liberalization presumes that countries will permit the operation of foreign financial institutions in domestic markets.

On the other side, the costs of financial integration primarily take the form of a greater risk of financial crisis. One perspective was provided by Krugman (1979) who suggested that speculators could more easily exploit non-sustainable macroeconomic policies – fiscal-monetary policies that are inconsistent with a given exchange rate peg. The net effect could be a shifting of risk from foreign investors to domestic taxpayers and consumers with a consequent increase in consumption volatility. In effect, policymakers are induced to follow policies that lead to large current account deficits that cannot be financed on a sustained basis. Alternatively, Obstfeld (1986) and others pointed to the dangers of induced liquidity crises due to a mismatch between short-term foreign liabilities and long-term domestic investments.

Since the net benefits of financial integration appear ambiguous from a purely conceptual perspective, a substantial number of studies have attempted to evaluate the issue empirically. Most recently, two studies review parts of the empirical literature to determine if any consensus has emerged about the net benefits: Edison and others (2004), and Prasad and others (2003). Table 2 provides a list of the major studies as provided by Prasad and others (2003), plus two papers that were completed after their review, Eichengreen and LeBlang (2003) and Garcia and Santana (2004). These studies

concentrate on using large cross-national data sets to construct formal empirical tests of the correlation between variations in the degree financial integration and economic growth.

The Prasad and others study concluded that the evidence of a positive association between financial integration and economic growth was weak and highly variable, a finding that was also supported by the review of Edison and others. They also found little or no evidence that financial market integration has helped developing countries to stabilize fluctuations in consumption, and they argue that some of the evidence suggests capital flows to these countries may actually be pro-cyclical. The situation stands in significant contrast to assessments of empirical work on trade liberalization, where the consensus argues that liberalization has promoted growth. The weak supporting evidence is one factor that has led the IMF and others to back off on their prior strong advocacy of a rapid opening of capital accounts.

However, the empirical studies do face considerable statistical problems. First, it is difficult to agree on a measure of capital account openness. *De jure* measures are intended to capture the existence (and degree) of capital controls – in other words, a measure of each country’s official policy towards capital flows. These indicators rely on information collected by the IMF on the existence of controls on capital flows. The empirical studies have relied on two versions. The first is a simple categorical value of whether inflows were subject to restrictions. A more nuanced measure was developed by Quinn (1997) and attempts to report degrees of openness. Some critics have pointed out that the *de jure* measures sometimes do not reflect the reality of a country’s situation. As such, they are measured with considerable error and impart a bias in the statistical studies toward a finding of no association.

In contrast, *de facto* measures are intended to capture the actual amount of financial integration, using various indicators of capital flows. The *de facto* measures do identify the countries that do or do not receive capital inflows; however, they are clearly endogenous to the process determining capital inflows, making it difficult to establish the direction of causation. Do countries grow faster because of the capital inflows or does capital flow to the fast-growing countries? The choice between the *de jure* or *de facto*

measures has had an important influence on the empirical results, with the *de facto* measure providing less unanimity of the results than suggested by the Prasad and others study.

Most of the studies have been based on cross-national data sets in which the average rate of output growth over a period of time (decade) is related to the degree of capital market openness. However, cross-national differences in economic growth also reflect differences in a large number of other determinants, such as physical and human capital accumulation, institutions, and openness of the trade regime, while the studies include measures of these other factors, it can be very difficult to discern the influence of any one, particularly if it is measured with error.

An alternative approach relies on the development of panel data sets that include the variations over time in output growth and its determinants within each country as well as the cross-national differences. Such multi-dimensional data sets are time-consuming to construct, and have been attempted in only a few cases. However, by excluding the cross-national variations with its complexity of determinants, it is possible to examine changes in growth and the degree of capital openness over many years and for many countries.

The Garcia and Santana study is the most recent to use panel data. Their sample was based on 51- industrial and emerging market countries over the period of 1970-2000. They used the Quinn measure of capital openness and a variety of different estimation measures to deal with the statistical problems. Their study provides more favorable evidence about the positive benefits for economic growth of an open capital account. More specifically, they found that the positive contribution of FDI exceeded that of a rise in domestic saving, supporting the notion of significant spillover effects.

A contrasting study by Eichengreen and Leblang analyzed the performance of 21 countries over a period extending back to 1880, and 47 countries over the interval of 1975-95. They find that countries with capital controls actually grew faster than with open capital accounts. They argued for an interpretation in which the benefits of capital; account liberalization are likely to dominate when the domestic financial system is robust and the international financial system is not prone to costly and disruptive crises. Thus,

their support for opening the capital account is conditional on the development level of the domestic financial system. However, the conflicting conclusions of the studies illustrate the ambiguity of the evidence and its sensitivity to variations in data and specifications.

Given the previously-mentioned complexity of the growth process and the lags between changes in some of the determinants and their impact, it may be that the effects of capital inflows are lost amidst all the noise. Since the primary effects of the inflows on growth are expected to operate through the support for higher rates domestic investment, some studies have carried out a more limited agenda of exploring the link between the various forms of capital inflows and domestic investment. Bosworth and Collins (1999) found a positive and significant correlation between FDI and domestic investment, and between bank lending and investment, but no correlation with inflows of portfolio capital. The World Bank (2001) reported similar finding, but also reported a stronger relationship between longer-term capital inflows and investment.

Other assessments of the costs and benefits of financial market openness have relied on case studies of individual countries or detailed reviews of the role of cross-border capital flows in specific financial crises. These studies often yield a more nuanced conclusion in which the effects of external financial liberalization are conditional upon the state of the domestic financial markets. The result is that the opening of financial markets is now put in the context of a sequence of financial reforms that assigns a priority to the establishment of stable domestic financial markets and institutions.

Overall, the major impact of the empirical studies of the last decade has been to scale expectations with regard to the benefits of financial market integration and to inject a note of greater caution. In a large number of past situations, the costs of a resulting financial crisis overwhelmed the benefits. The confirmation of positive benefits is strongest for FDI, and the empirical tests do suggest that it augments national saving and leads to a higher level of domestic investment. The interaction between multinational and local firms is an important part of the gains – access to global markets, linkages to improvements in business practices, and use of advanced technologies.

However, evidence of the benefits of private portfolio inflows is more tenuous. There is a weaker association with investment and growth, but some evidence that portfolio inflows expand the liquidity of domestic financial markets. The most problematic net benefits are associated with bank lending. While there is a positive association with increased investment in normal times, it has become clear in the aftermath of the Asian financial crisis that bank loans – particularly, those that were denominated in a foreign currency – play a central role in encouraging excessive risk. Cross-border bank loans tend to be very pro-cyclical and most prone to flight in the aftermath of a crisis. There are normally denominated in a foreign currency and appear to generate the greatest expectation of a government bailout in the event of a crisis.

The Order of Financial Liberalization

Over the past two decades, the most costly currency crises -- those that involved substantial output losses -- were linked to serious problems in the domestic financial system. In fact, there are relatively few currency crises with serious output losses that did not involve an associated financial crisis. Kaminsky and Reinhart (1999) found that banking crises were much more likely in the period following financial liberalization programs, and in more than half the cases a banking crisis was followed by a currency crisis.

The disruption of Asian currency markets was not preceded by widespread bank runs: but the most severely impacted economies had experienced problems with their banking systems for years, and they were in the midst of significant programs of financial reform and liberalization, associated with the move to full convertibility for the capital account. Liberalization of the system also creates opportunities for excessive risk taking by inexperienced bankers supervised by inexperienced regulators. Even in the absence of a crisis, a weak banking system is likely to limit the ability of the central bank to raise interest rates to defend the currency. In this respect, the interest rate increases in the affected Asian economies were surprisingly modest relative to prior crises in other countries: they put up only a limited battle before allowing their currencies to depreciate.

The Asian financial crisis has highlighted the importance of integrating measures to liberalize the external financial account with a program of domestic financial reform and prudential oversight. Domestic financial institutions are often unprepared to deal with the volatility, complexity, and risks inherent in cross-currency transactions. While prior discussions had emphasized the importance of the financial system for mobilizing saving and efficiently allocating it among alternative investments, the more recent research highlights its role in the provision of information, corporate control, and the management of risk. This suggests greater emphasis on promoting the development of financial markets rather than relying solely on banks.

Much of the research on the interaction between the state of the domestic financial system, capital account liberalization and economic growth has been based on individual country studies – particularly countries that have been through a crisis. One exception has been the work of Kaminsky and Reinhart (1999) who explored the interaction between domestic banking crises and currency crises. They found that currency crises were often preceded by a banking crises, and that the currency crises often deepened the banking crises, creating a vicious spiral. In addition, actions to liberalize capital flows often preceded the banking crisis.

While there has been considerable discussion of the relative merits of bank-based versus market-based financial systems, much of the empirical research suggest that the distinction is not critical, and the benefits to growth are associated with higher levels of overall financial sector development, rather than its composition. This conclusion is emphasized by Levine (2000) who analyzed the relationship between differences in cross-national growth rates and a wide range of indicators of financial market development. At the same time, rising levels of economic development will lead to a gradual shift to greater reliance on markets. Markets are seen as a mechanism for enhanced liquidity and transparency, crucial aspects of the effort to improve financial stability and avoid crises, even if they don't contribute directly to growth. Furthermore, the development of the financial system is often a proxy for other aspects of the institutional environment that influences growth – the legal system, absence of corruption, good government. The interpretation of the empirical correlation between growth and finance is not very clear.

There is also a greater appreciation of the importance of developing expertise in the supervision and regulation of financial institutions. Effective regulation requires a focus on the provision of information to market participants, a commitment to the enforcement of contracts, and effective procedures for resolving insolvencies. This implies the existence of disclosure and accounting standards as the primary basis for a credible information system. By focusing on the promotion of greater transparency and information, government regulators will find that private agents provide much of the enforcement.

Recognition of the importance of a strong domestic financial system and effective regulatory oversight does not translate, however, into agreement on the sequencing of external liberalization and domestic financial reform. Some observers draw the conclusion that external liberalization should be conditional upon progress in reform of the domestic system. Others suggest that the process of creating an effective regulatory environment is highly problematic and likely to involve long lags. They propose instead that the external liberalization should be accelerated in order to import a more efficient domestic system by encouraging the participation of foreign institutions.

Finally, some analysts view the financial crises as reflections of a weak policy commitment in countries where the authorities move too quickly to provide liquidity and protect domestic firms in a crisis, creating significant problems of moral hazard among those who anticipate a bailout. They suggest the need to import external discipline by such measures as currency boards or the formal adoption of the dollar as a substitute for the national currency. A few even suggest the purposeful promotion of foreign short-term debt, strengthening the commitment of officials by raising the costs of failure. Such a proposal is at sharp variance with those who see short-term foreign debt as a primary cause of the crises.

All of these concerns have lead many of the researchers who are focused on the international economy to qualify their prior strong support for open capital markets. It is now perceived as a beneficial goal that should be carefully staged and coordinated with growth in the domestic financial system. Countries should not open their external capital account until they have achieved certain minimum standards of performance with respect to the quality of the domestic financial institutions.

Capital Inflows and the Exchange Rate Regime

A substantial portion of the risk or costs of an opening of the capital account arise out of interactions between external capital flows and exchange rate policies in increasing the potential for financial crises. For example, during the 1980s and 1990s, some Latin American countries used exchange-rate targeting as part of an anti-inflation policy. An over-valued exchange rate was the frequent result, and officials would delay corrective action because of fears of reigniting inflation. High domestic interest rates, associated with the anti-inflation program, encouraged capital inflows, but investors were also intent on trying to predict the timing of the exchange rate correction. The result was the frequent emergence of unsustainable combinations of interest rates and exchange rates in which the primary focus of investors/speculators was to guess the timing of the adjustment.

Asian governments also chose to tie their currencies to the dollar both as anchor for their own price level and out of concern for their competitive position vis-à-vis neighboring countries. In addition, domestic interest rates were well above international levels. When combined with fixed exchange rates, interest rates differentials create a strong incentive to borrow abroad and lend domestically: banks believe that they have found a ‘money machine.’ The option was particularly tempting to Korean institutions in the mid 1990s with access to extremely low interest rates in Japan.

Developing countries find it virtually impossible to borrow in their own currency, creating a larger risk. Eichengreen and others (2005) document that less than one percent of the international bonds of developing countries are denominated in their own currency, compared to over 50 percent for the major financial-center countries. McKinnon (2005) published data on cross-border bank liabilities showing that 75 percent of the loans were denominated in the Dollar or the Euro and 90 percent was denominated in just five currencies. Goldstein and Turner (2004) produced a more complete measure of the currency mismatch by taking account of the currency denomination of other elements of countries’ balance sheet. Mismatched and unhedged currency positions of both banks and enterprises were a major factor behind the East Asia crisis. It is also very reminiscent of

the fundamental problem behind the collapse of the Chilean financial system in 1982. Governments can offset the currency exposures by hold larger volumes of reserves in the foreign currency, but that is a costly policy that eliminates any net inflow of resources.

The risks were made even greater when foreign lenders, responding to their own risk concerns and what they believed to be the lessons of lending in Latin America in the 1980s, insisted on short maturities and often included provisions allowing them to recall loans on short notice. On the basis of data from the Bank for International Settlements (BIS), outstanding bank loans to Asia increased from \$110 billion at the end of 1990 to \$190 billion in 1993; but then surged to over \$360 billion by the end of 1996. Of total loans outstanding of \$390 billion in mid-1997, two-thirds had a maturity of one year or less. Dadush and others (2000) also documented the volatility of the loans when they found that an inflow of short-term debt to developing countries of \$44 billion in 1997 turned into an outflow of \$85 billion in 1998. In some cases, nonfinancial firms also viewed foreign currency loans as a lower-cost alternative to domestic borrowing. The result was the buildup of a large amount of foreign-currency debt of which the supervisory authorities were unaware.

The study of Eichengreen and others (2005) also demonstrated an increased level of foreign-currency debt for countries that maintain fixed exchange rate regimes. The data suggest that a fixed-exchange rate regime leads the borrowers to underestimate the risk of foreign-currency debt, although it is equally plausible that high levels of foreign debt exposure make governments less willing to allow exchange rate changes. However, the shift in recent decades toward more flexible exchange rates has not been enough to eliminate the problem. Countries with highly flexible exchange rates continue to rely on foreign-currency denominated debt.

Goldstein and Turner suggest that a move to a more flexible exchange rate system would create greater awareness of the currency risk and private incentives to limit it. However, they also recommend the collection and regular publication of data on currency mismatches for major sectors of the economy, and an active supervision and monitoring of the currency exposure of banks and their customers. They would like to discourage

government borrowing in a foreign currency and propose that the IMF adopt a harsher policy of limiting the extension of credit in such cases.

The research has demonstrated that the combination of a fixed exchange rate regime and open capital flows can create severe hazards of currency mismatches in private and public financial arrangements. However, there is no consensus that the adoption of a flexible exchange rate policy alone is an adequate response. Most analysts see a continuing need for an active monitoring program and advocating a more managed exchange rate system combined with substantial reserve holding.

The Policy Implications

The Asian financial crises of 1997-98 had profound effects on the debate over financial policy. On the one hand they vividly illustrated the importance of getting it right, but they also pointed to problems with some of the doctrinaire approaches to financial liberalization. There has been a strong turn away from 'big bang' notions of liberalization; but there is also a clearer understanding that the older policies of financial repression, the fixing of interest rates below market levels and controlling the allocation of credit, are also not sustainable. Both the World Bank and the IMF have greatly expanded their financial sector research programs to provide greater guidance on optimal reform policies and the appropriate sequencing. On the domestic side, they emphasize the development of private financial institutions and expanded competition. In addition, the regulatory system should seek to expand the role of the market and avoid the elements of financial repression. In large measure this translates into an emphasis by the regulators on transparency and expansion of information to market participants. Finally, they have stressed the establishment of oversight systems to monitor and report currency mismatches.

On the external side, the move to more open financial markets will push countries toward more flexible exchange rate regimes to increase the private sector awareness of the risks of currency mismatches and to create incentives to reduce them. However, during the transition, some countries have combined a policy of larger reserve accumulation with direct controls on foreign-currency debt.

In their efforts to manage capital inflows, emerging market economies will have to choose among three policy options: (1) a larger current account deficit through

trade liberalization or exchange rate appreciation; (2) restrictions on the inflows either through direct controls, a tax, or a widening of the exchange rate band; or (3) offsetting capital outflows either through reserve accumulation or the promotion of private-sector outflows.

Capital flows from the high-income countries to developing economies are usually advocated as part of a growth strategy in which larger flows of capital to the latter will support a faster rate of economic growth. However, not all developing countries believe that they need additional capital inflows – that capital is a constraining influence on their growth. Many East Asian economies have been able to generate adequate rates of saving domestically and fear the excessive pressure on asset markets that might accompany additional inflows. China is an example of a high-saving country that struggles to absorb the foreign capital inflows. Low-saving rate countries, however, can potentially benefit from using a current account deficit to sustain a higher rate of domestic investment and growth.

Concern with excessive magnitudes of capital inflows has led some countries to recycle the surplus funds back into the global market. In the short run, the simplest means of achieving that objective has been to accumulate reserves and invest the funds back into the financial markets of the major currency centers. That is the current policy of China and India, for example. It is also evident from figure 5 that the developing countries have substantially increased their reserves since the early 1990s and the trend appears to have accelerated after the 1997-98 financial crises. In part, this may reflect an unwillingness to accept the implication for trade of allowing the inflows to pass through into a larger current account deficit. But it also reflects a desire to hold a larger level of reserves as protection against the currency crises and sudden stoppages of the inflows that became so common in the 1990s. Traditionally, countries assumed that the IMF would provide such protection; but the Fund's repeated failure to provide sufficient assistance in a timely fashion, and the imposition of an increasing number of conditions on the support that it did offer have led countries to accumulate their own reserves. The policy can be costly, however, as countries are unlikely to earn a return on the reserves sufficient to cover the cost of obtaining the funds.

Alternatively, countries can gradually loosen restrictions of capital outflows by private investors. This is part of the general move to full capital convertibility, but there is a concern that the outflows may become excessive in times of crisis. An intermediate policy is that of Singapore, where the authorities nationalized the national saving system (provident funds) and managers invested the funds in a diversified range of foreign investments (McKinnon, 2005). Singapore approach has the advantage of deflecting much of the political criticism associated with reserve accumulation.

The third option is to impose restrictions on capital inflows and divert the potential capital inflows. This is the position discussed earlier in which the authorities judge that the costs of a potential currency crisis exceed the potential benefits, and reject capital account convertibility. It is likely to be only a transitional policy, useful during the period of developing a more efficient and liberalized domestic financial system. The controls become increasingly ineffective as the financial system grows in sophistication. Most of the proposals for capital controls envision that they will be temporary; and that they will focus on foreign-currency denominated debt, on the grounds that FDI and equity investment raise fewer issues of instability. But also, some allowance must be made for trade credit. As a result, it can be difficult to distinguish among financial transactions.

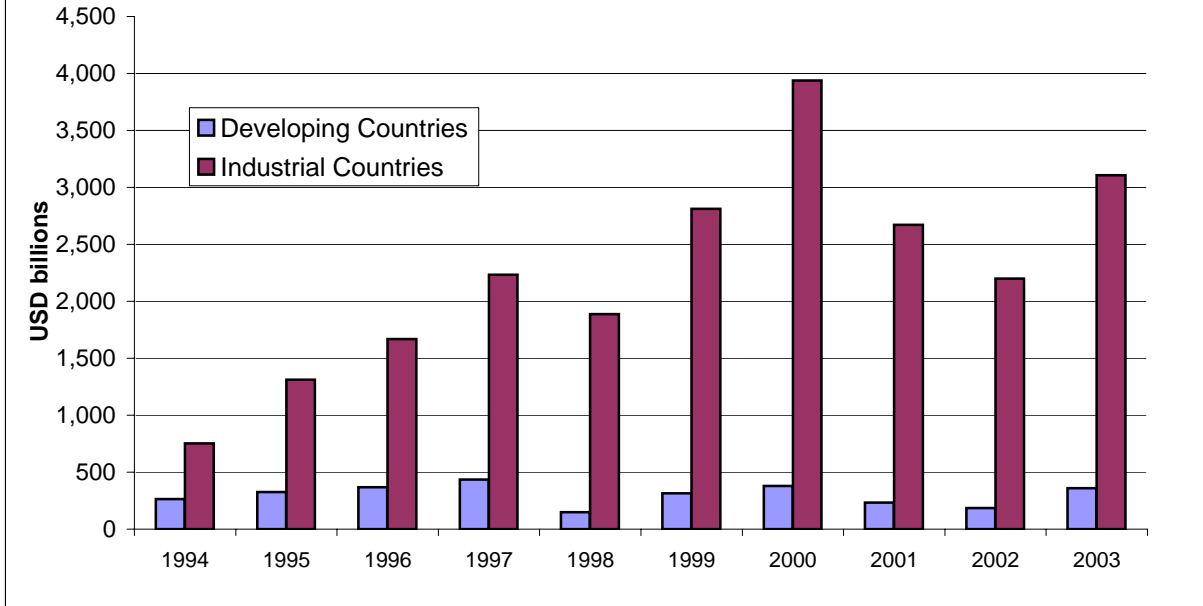
At present, the international analysis does not provide strong answers about what combination of policies is best for managing capital inflows. It is likely that the appropriate mix will be unique to the individual national situation. At the same time, the lack of strong evidence concerning the economic benefits of capital inflows suggests that countries can afford to be cautious and ensure that the move to capital convertibility is integrated with the reform and liberalization of the domestic financial system.

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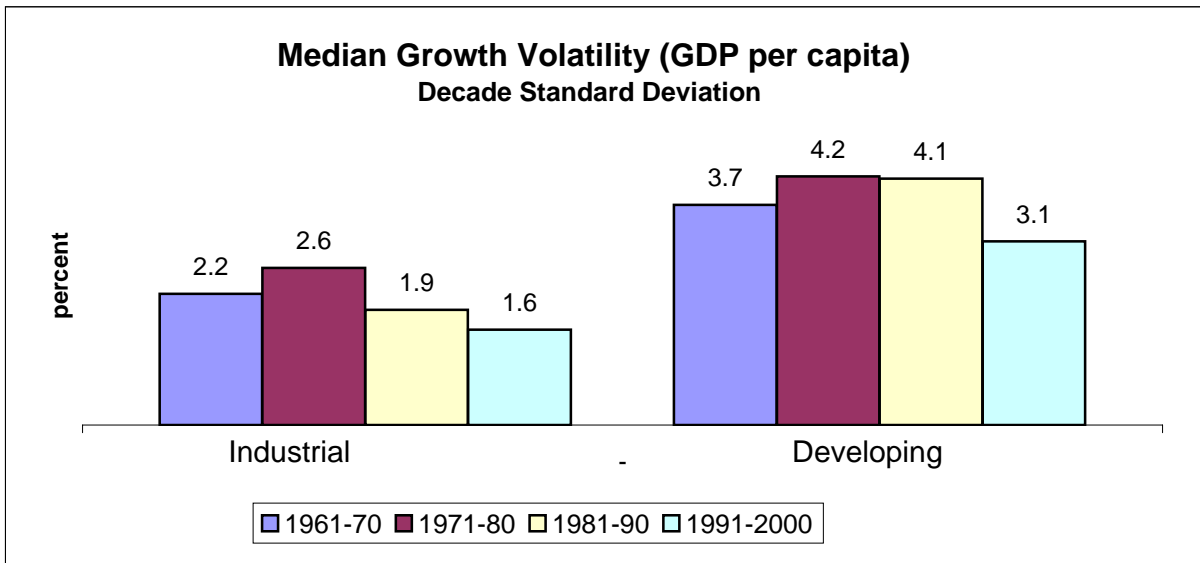
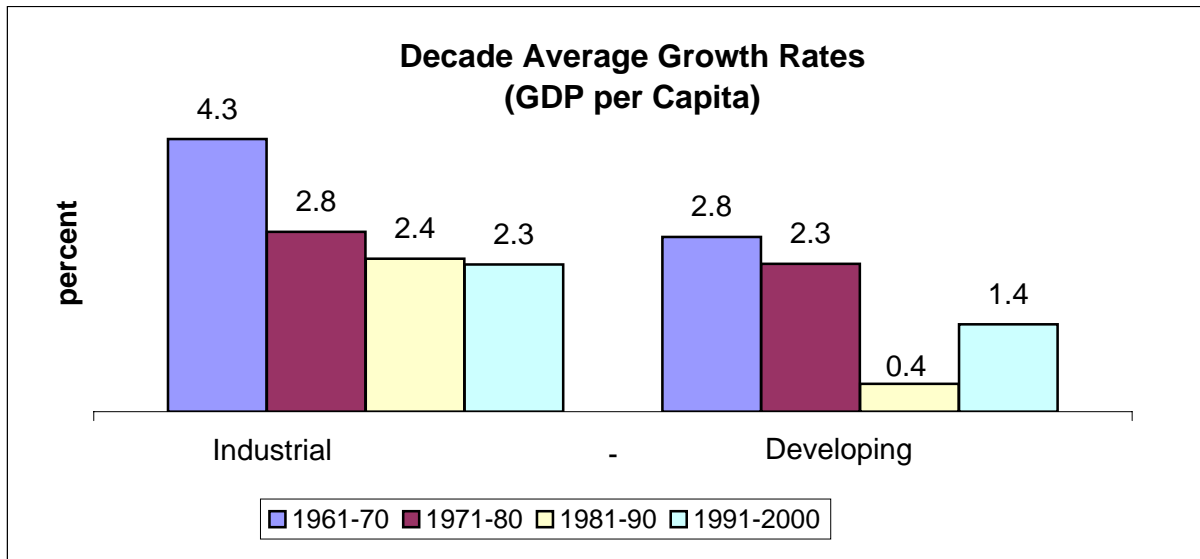
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Figure 1. Capital Inflows, Industrial and Developing Countries



Source: International Monetary Fund, Balance of Payments, 2005.

Figure 2. Trends in Growth and Volatility, 1961-2000



Source: World Development Indicators, 2005. Developing Country measures based on 80 countries with data extending back to 1961.

Figure 3a. Composition of Financial Inflows, Industrial Countries

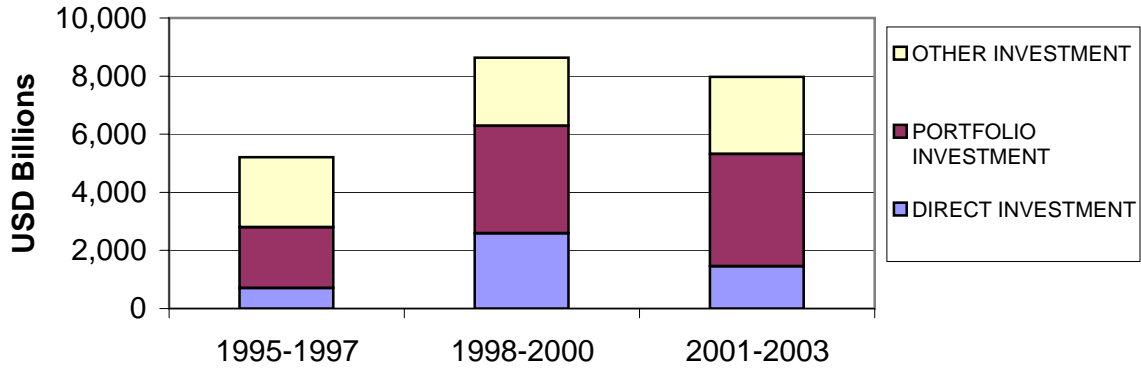
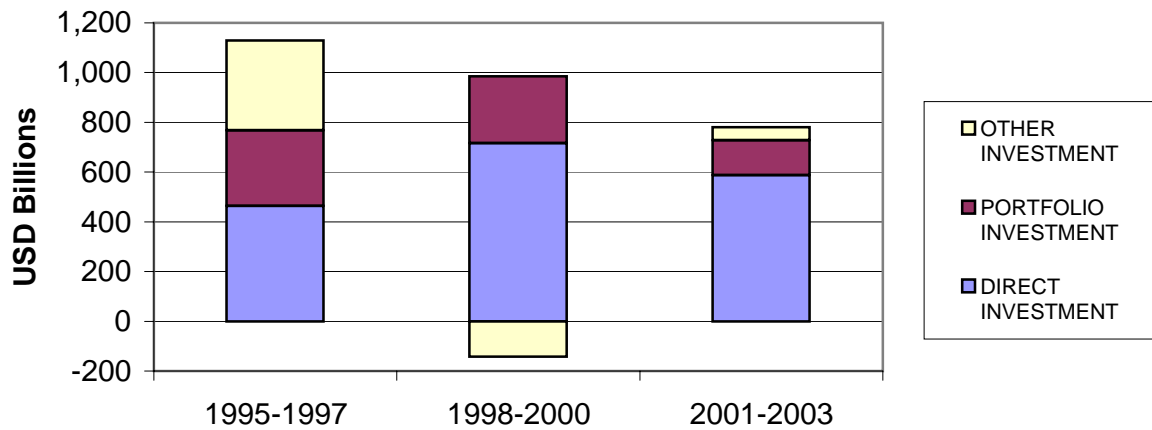
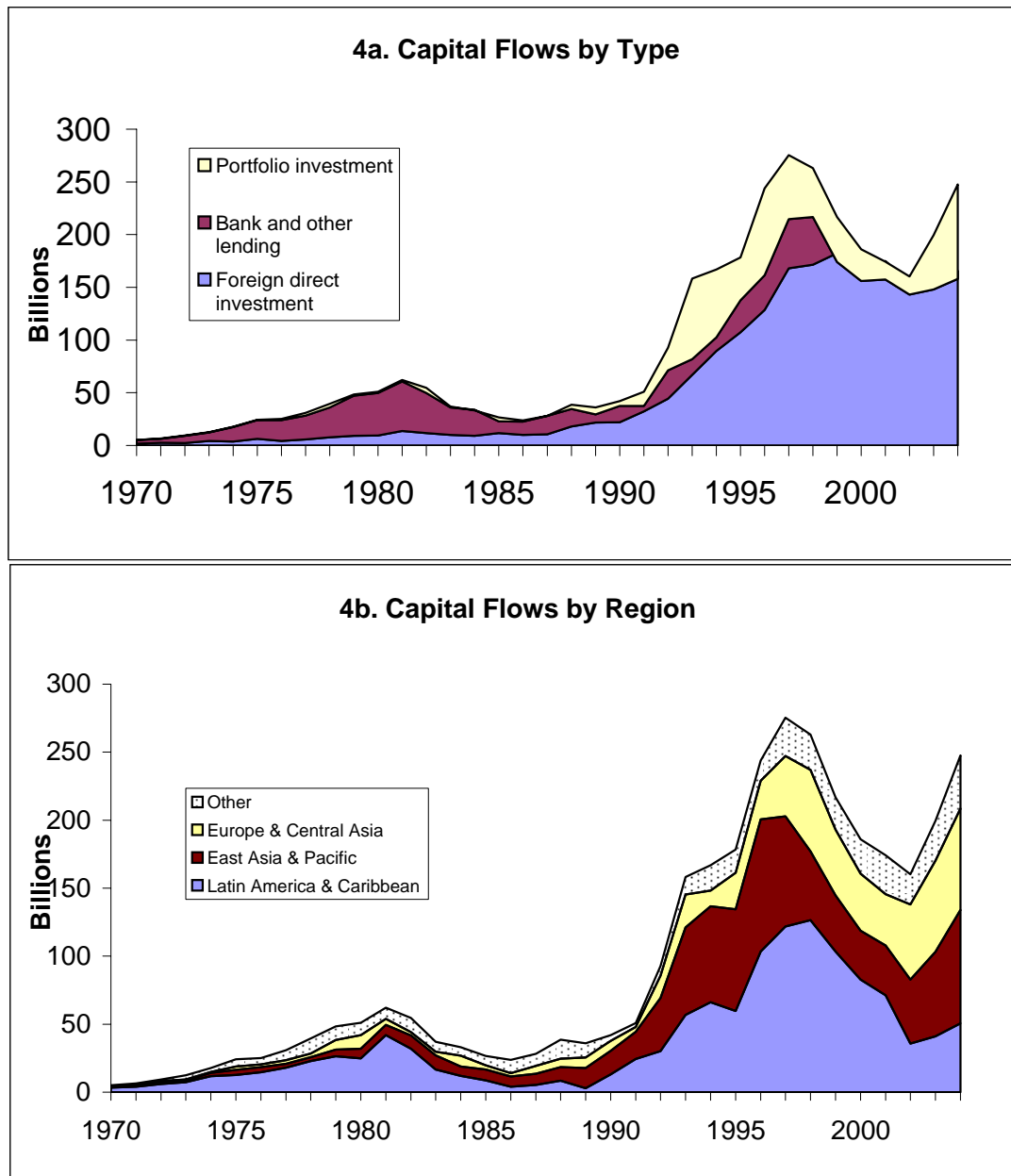


Figure 3b. Composition of Financial Inflows, Developing Countries



Source: International Monetary Fund, Balance of Payments, 2005.

Figure 4. Private Capital Flows to Developing Countries by Type and Region, 1970-2004



Source: World Bank, [World Development Indicators](#) and [Global Development Finance](#)

Table 1. Summary of Payments Balances on Current Account
(Billions of US dollars)

Country/Region	2004	2005
United States	-668.1	-759.0
Advanced economies (excl. U.S.)	444.3	290.8
Euro area	46.7	23.7
Japan	172.1	153.1
Other advanced economies	135.3	36.0
Newly industrialized Asian economies	90.2	78.0
Emerging market countries	227.7	410.1
Africa	0.6	12.5
Central and Eastern Europe	-50.1	-35.1
Commonwealth of Independent States	63.1	105.3
Developing Asia	93.0	109.7
China	68.7	115.6
India	-0.8	-13.5
Middle East	102.8	217.6
Western Hemisphere	18.3	21.5
Residual	3.9	-58.1

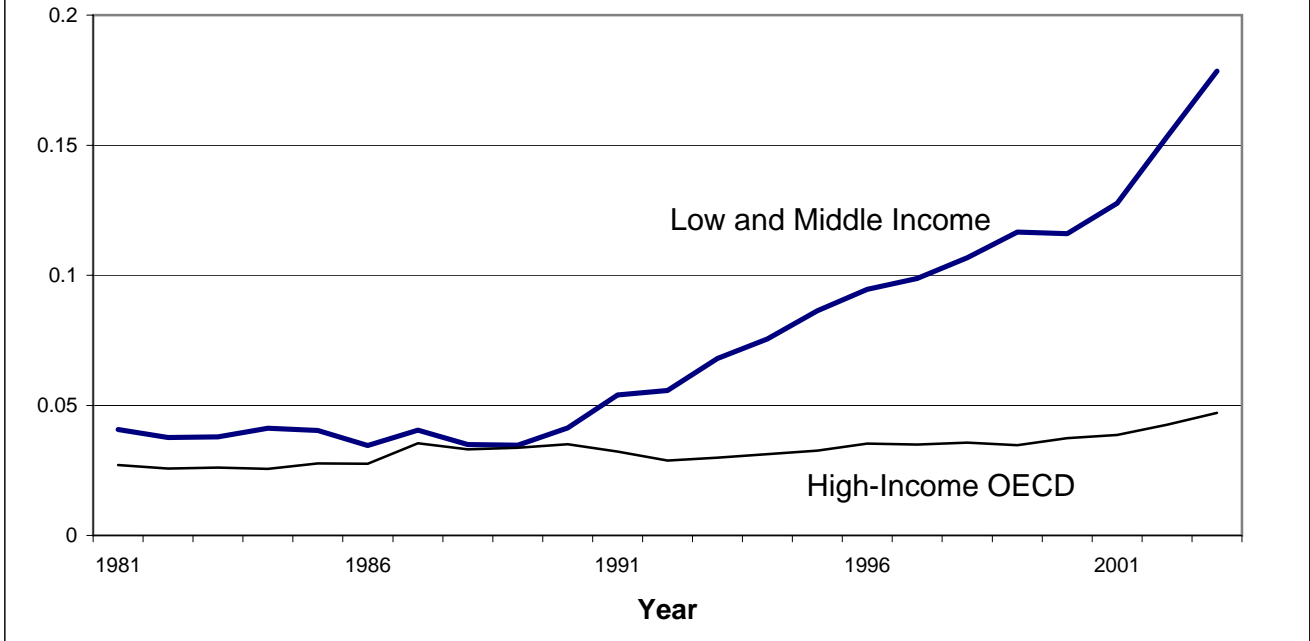
Source: World Economic Outlook, September 2005, IMF

Table 2. Summary of Recent Research on Financial Integration and Economic Growth

Study	Number of Countries	Years Covered	Effect on Growth
Alesina, Grilli, and Milesi-Ferretti (1994)	20	1950-89	No effect
Grilli and Milesi-Ferretti (1995)	61	1966-89	No effect
Quinn (1997)	58	1975-89	Positive
Kraay (1998)	117	1985-97	No effect / mixed
Rodrik (1998)	95	1975-89	No effect
Klein and Olivei (2000)	Up to 92	1986-95	Positive
Chanda (2001)	116	1976-95	Mixed
Arteta, Eichengreen, and Wyplosz (2001)	51-59	1973-92	Mixed
Bekaert, Harvey, and Lundblad (2001)	30	1981-97	Positive
Edwards (2001)	62	1980s	No effect for poor countries
O'Donnell (2001)	94	1971-94	No effect, or at best mixed
Reisen and Soto (2001)	44	1986-97	Mixed
Edison, Klein, Ricci, and Sløk (2002)	Up to 89	1973-95	Mixed
Edison, Levine, Ricci, and Sløk (2002)	57	1980-2000	No effect
Eichengreen and Leblang (2003)	21	1880-97	Negative
Garcia and Santana (2004)	51	1970-2000	Positive.

Source: Prasad and others (2003), and author's additions.

Figure 5. The Ratio of Reserves to GDP



Source: World Bank, [World Development Indicators, 2005](#).