



# Large Capital Flows

## Causes, Consequences, and Policy Responses

Large capital inflows can bring considerable economic benefits to developing countries but, if not properly managed, can also cause economies to overheat, increase exchange rate volatility, and lead eventually to large outflows. How can governments maximize the benefits from capital inflows while minimizing the risks?

*Alejandro López-Mejía*

**D**URING the 1990s, net capital flows to developing countries increased markedly. In 1996, net private capital flows were \$190 billion, almost four times larger than in 1990. During 1990–97, annual net private capital inflows were also larger than those preceding the 1982 debt crisis, and more heavily concentrated. Five countries accounted for more than 50 percent, and a dozen countries accounted for 75 percent, of total inflows (Chart 1). Most of the surge was concentrated in Asia and Latin America. Consequently, 140 of 166 developing nations collectively accounted for less than 5 percent of total inflows.

The composition and sectoral destinations of capital flows during the recent surge were

different from those during the surge that preceded the 1982 debt crisis. In the 1970s, bank lending was the larger component of capital flows, the most important recipient of which was the public sector. In the 1990s, by contrast, the surge was dominated by bonds, foreign direct investment, and portfolio investment, and the private sector did most of the external borrowing.

The heightened interest of foreign investors in some developing countries has led to their increased integration into the global financial system, with benefits for those countries and for the global economy. However, large capital inflows can be a mixed blessing. They can lead to overheating, greater exchange rate volatility, and—eventually—to large outflows because of

changes in expected returns on assets, investor herding, and contagion effects. To address these problems, policymakers have used a combination of countercyclical and structural policies, as well as other measures designed to reduce net capital inflows or change their composition or maturity and decrease their volatility.

## Causes of capital flows

What were the reasons behind the capital inflows into various countries in the 1990s and the causes of major reversals? And what can explain the contagion effects recently observed in capital flows?

**Causes of capital inflows.** The responsiveness of private capital to opportunities in emerging markets started to improve in the 1990s because of both internal and external factors. Internal factors improved private risk-return characteristics for foreign investors through three main channels. First, creditworthiness improved as a result of external debt restructuring in a wide range of countries. Second, productivity gains were obtained from structural reform and the establishment of confidence in macroeconomic management in several developing countries that had undertaken successful stabilization programs. Third, countries adopting fixed exchange rate regimes became increasingly attractive to investors owing to the transfer of the risk of exchange rate volatility—at least in the short run—from investors to the government.

In addition, because of both cyclical and structural forces, external influences played a significant role in the capital inflow surge of the 1990s. Cyclical forces were the dominant explanation in the early 1990s, when the decline in world real interest rates “pushed” investors to emerging markets. The persistence of private capital flows after the increase in world interest rates in 1994 and the Mexican crisis of 1994–95 suggests, however, that structural external forces were also at work.

The structural external forces started to work when two developments in the financial structures of capital-exporting countries increased the responsiveness of private capital to cross-border investment opportunities. First, falling communication costs, strong competition, and rising costs in domestic markets led firms in industrial countries to produce abroad to increase their efficiency and profits. Second, institutional investors became more willing and able to invest in emerging market countries because of their higher long-term expected rates of return, wider opportunities for risk diversification owing to their broader and deeper securities markets, and greater feasibility of investing as their capital accounts were liberalized. Nonetheless, investments in emerging markets account for only about 2 percent of total mutual fund assets in the United States, 3–4 percent in the United Kingdom, and almost none in the rest of Europe and Japan. The importance of structural forces gives rise to optimism about the volume of capital flows that developing countries can attract in the medium term. With the growing importance of private capital flows to these economies, however, has come the threat of major reversals.

**Understanding reversals of capital flows.** Major reversals of capital flows occurred in a number of developing countries even before the 1990s. Chart 2 shows the magnitude of the reversals (that is, the sum of inflows and outflows) for a number of episodes.

A common reason for the reversals has been a lack of confidence in domestic macroeconomic policies, leading to speculative attacks on currencies and balance of payments crises. Balance of payments crises can also result from financial vulnerabilities or other factors that make macroeconomic policy less credible. In particular, if a country’s banking sector is weak, its authorities might prefer to devalue rather than to increase interest rates. Moreover, as shown by the Mexican experience, the maturity and currency composition of the

Chart 1

### Selected developing countries: Concentration of net private capital flows, 1990–97

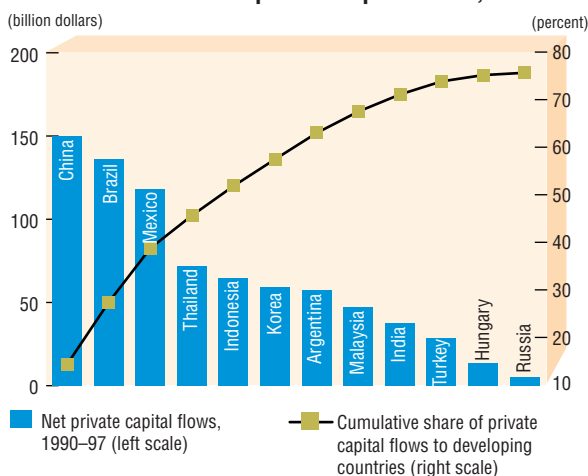
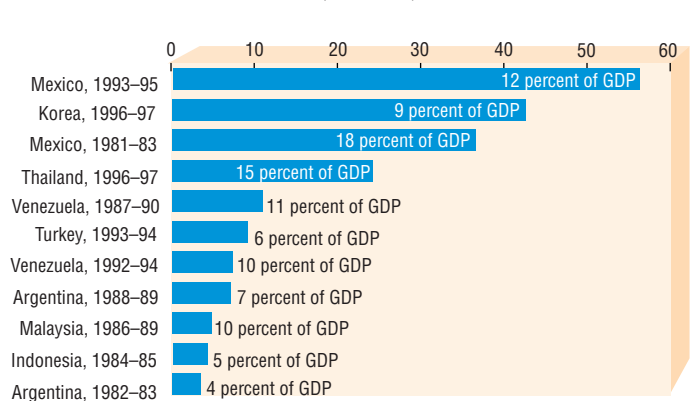


Chart 2

### Large reversals in net private capital flows (billion dollars)



Source: IMF, World Economic Outlook database.

public sector's liabilities relative to those of its assets are particularly relevant. In fact, even if a country's public sector is solvent, it might be vulnerable to short-run liquidity crises if creditors prove reluctant to refinance the government's short-term liabilities. Finally, the role of contagion is particularly important for understanding the recent volatility of international capital markets.

*Causes of contagion.* As countries become more integrated and the distribution of information in markets remains asymmetric (highly unequal), the possibility of contagion increases.

The contagion effects associated with private capital are likely to occur through five channels. First, trade arrangements and exchange rate pressures contribute to volatility and contagion. Second, there is the "wake-up call" phenomenon, whereby the collapse of one country's currency alters investors' perceptions about other countries' economic fundamentals. Third, institutional investors' herding behavior induces common outcomes in countries with very heterogeneous fundamentals. Fourth, there are financial links between countries. For example, the pattern of financial holdings can lead to shocks spilling over into other countries, regardless of those countries' fundamentals. Fifth, liquidity-management practices of open-end mutual funds can create contagion effects as leveraged investors facing margin calls need to sell their asset holdings, which, because of information asymmetries, they may do at below-market prices.

### Consequences of capital inflows

As noted above, investors' interest in developing countries has led to their increased financial integration. Large capital inflows, however, might also imply an excessive expansion of aggregate demand and have negative effects on the financial sector. In addition, microeconomic distortions can amplify capital flows and their impact on the economy.

*Overheating.* Capital inflows may lead to excessive expansion of aggregate demand or macroeconomic overheating. This expansion is likely to be reflected in inflationary pressures, real exchange rate appreciation, and widening current account deficits.

A recent study (World Bank, 1997) using a sample of 20 developing countries that received capital inflows shows that they avoided most symptoms of macroeconomic overheating. Even if a particular economic variable moved in a direction consistent with upward pressures on aggregate demand, such behavior could not necessarily be attributed to capital inflows. For example, growth accelerated sharply in Argentina, Hungary, Peru, and Poland because of changes in their policy regimes that also contributed to dramatic declines in inflation. Moreover, little or no acceleration of inflation was

**“A careful  
sequencing of  
appropriate policies  
... is important in  
mitigating the risks  
associated with  
capital inflows.”**

seen in the sample countries when capital inflows surged, and the exchange rate appreciations observed in Latin American countries were related to the use of the exchange rate as a nominal anchor. Indeed, attempts to achieve rapid disinflation using a nominal anchor—which imposes discipline on domestic monetary and fiscal policies—were characterized by the slow convergence of inflation to the inflation rate in the anchor country, leading to an appreciation of the currency.

A widening current account deficit was the symptom of overheating that most countries in the sample experienced. As predicted by open-economy

models, the current account deteriorated owing to increases in the ratios of both investment and consumption to GDP. In this regard, the Asian crisis has shown that overconsumption is as problematic as overinvestment. Low-quality investment causes severe economic vulnerabilities because it does not contribute to future productive capacity or repayments of external debt. The low productivity of investment resulted from weakly supervised and regulated financial sectors characterized by poor risk management and lending problems. In these circumstances—and because of weak corporate governance and moral hazard in the financial and corporate sectors—capital inflows and high domestic savings were not invested and managed efficiently (Adams and others, 1998).

*Effects of capital inflows on financial sector and boom-bust cycles.* Capital inflows affect the financial system that intermediates them. They have two major effects on the domestic banking system. First, under a pegged exchange rate regime, the quasi-fiscal deficit—which includes financial transactions undertaken by central banks and other public financial institutions that play the same roles as taxes and subsidies—increases as a result of a sterilization policy that sells high-yielding domestic bonds and buys foreign exchange holdings earning lower interest rates. Second, the financial system might become more vulnerable because of a rise in lending that exacerbates the maturity mismatch between bank assets and liabilities and reduces loan quality. The increases in bank credit were a generalized outcome of capital inflows, and the vulnerability of the financial sector was usually heightened by a surge in asset prices that, in the end, proved unsustainable.

Microeconomic distortions can exacerbate the negative impacts of capital flows on the economy, implying that a developing country can shift from a path of reasonable economic growth before a financial crisis to one of sharply declining activity after a crisis. In particular, the boom-bust cycle can be amplified by price and wage rigidities, asymmetric information in the domestic banking sector or internationally, inadequate supervision and regulation of

financial institutions, shallow capital markets, and reforms, whether or not they are credible.

Finally, it should be stressed that some countries have been able to avoid most of the symptoms of macroeconomic overheating; not all countries that experienced a credit boom ended up with weaker financial systems; and the size of the boom-bust cycle has differed in each country. It is thus important to analyze how these countries avoided the alleged consequences of capital inflows.

### Policy responses and lessons

Policymakers have at their disposal countercyclical measures (monetary policy, nominal exchange rate flexibility, and fiscal policy), structural policies (trade policy, banking supervision, and regulation), and capital controls (including the encouragement of gross outflows). However, no policy recipes can ensure the best use and the most sustained inflow of capital. Successful policy responses have varied across countries and have not relied on a single instrument. Several factors determine the appropriate policy response in a particular country, including its record in fighting inflation, the openness of its economy to foreign trade, the state of public finances, the size and liquidity of the domestic bond market, the health of domestic banks, the flexibility of fiscal policy, and the quality of the regulatory and supervisory framework designed to oversee the financial sector.

The experiences of several countries show that individual policies interact in significant ways. First, they can produce unintended effects on the composition of capital inflows. In particular, a combination of a pegged exchange rate, sterilized intervention, and the absence of capital controls on financial flows will probably maximize the volume of short-term capital inflows. Mexico's experience during 1990–93 and Thailand's during the period leading up to the 1997 crisis are good examples of how this policy mix can have unintended effects. Second, interaction among policies can undercut their individual effectiveness. For example, the high interest rate differentials that usually accompany sterilization might produce an incentive to circumvent capital controls that could offset the contractionary effects of the sterilization efforts (Reinhart and Reinhart, 1998).

A careful sequencing of appropriate policies, therefore, is important in mitigating the risks associated with capital inflows. Successful policy responses used monetary policy in the early stages of the inflow period. However, as inflows persisted and the costs associated with the different types of sterilization were realized, countries began to rely on nominal exchange rate flexibility. In several cases, the costs of the real exchange rate appreciation were mitigated by the imposition of capital controls to moderate the volume of inflows and lengthen their maturities. Although the evidence is not



Alejandro López-Mejía is an Economist in the IMF Institute's Western Hemisphere Division.

conclusive, it seems that capital controls had the desired effect of lengthening maturities in Chile, Colombia, and Malaysia. This is an important policy outcome, because the short maturity of debt was identified as a main determinant of the volatility and reversals of capital flows in the Mexican and Asian crises.

In the presence of structural forces driving capital inflows, the role of fiscal restraint becomes crucial. It avoids the costs associated with the different types of sterilization policies. It is also a substitute for exchange rate flexibility and thus limits the appreciation of the real exchange rate. Few countries have relied on fiscal policy, however, because it is usually too inflexible to be an effective tool for responding to fluctuations in capital movements. Still, in countries where the fiscal stance was tightened,

the real exchange rate depreciated and faster economic growth was observed.

Fiscal contraction can play a beneficial role as an instrument for short-run stabilization, and a conservative fiscal stance should play a central role in countries undergoing increased financial integration. During extensive financial integration, the direction and magnitude of capital flows become very sensitive to investors' perceptions of domestic public solvency and limit fiscal flexibility during inflow periods. Moreover, during periods of volatile capital flows, preemptive tightening of fiscal policy can help insulate core revenues and expenditures from alteration following macroeconomic shocks. In addition, even if the fiscal stance has to be tightened further in the face of large and volatile capital flows, the required changes will be smaller if the government has already preemptively tightened fiscal policy. This will help the government to avoid having to make significant adjustments to taxes and expenditure programs that could hamper the achievement of its economic and social objectives. **F&D**

---

*This article is based on the author's recent study, "Large Capital Flows: A Survey of the Causes, Consequences, and Policy Responses," IMF Working Paper 99/17 (Washington: International Monetary Fund, 1999).*

#### References:

Charles Adams, Donald Mathieson, Garry Schinasi, Bankim Chadha, and others, 1998, *International Capital Markets: Developments, Prospects, and Policy Issues* (Washington: International Monetary Fund).

Carmen Reinhart and Vincent Reinhart, 1998, "Some Lessons for Policy Makers Who Deal with the Mixed Blessing of Capital Inflows," in *Capital Flows and Financial Crises*, ed. by Miles Kahler (Ithaca, New York: Cornell University Press).

World Bank, 1997, *Private Capital Flows to Developing Countries: The Road to Financial Integration* (New York: Oxford University Press).