

**International Capital Flows:  
A Blessing or a Curse?\***

**Graciela L. Kaminsky**

*George Washington University and NBER*  
Washington, DC 20052  
phone (202) 994-6686  
e-mail: [graciela@gwu.edu](mailto:graciela@gwu.edu)  
<http://home.gwu.edu/~graciela>

**This Version: June 2004**

**Abstract**

The explosion and the dramatic reversal of capital flows to emerging markets in the 1990s have ignited a heated debate, with many arguing that globalization has gone too far and that international capital markets have become extremely erratic. In contrast, others have emphasized that globalization allows capital to move to its most attractive destination, fueling higher growth. This paper re-examines the characteristics of international capital flows since 1970 and summarizes the findings of the research of the 1990s on the behavior of international investors as well as the short- and long-run effects of globalization on financial markets and growth.

---

\* This paper draws on previous research with Richard Lyons and Sergio Schmukler. I would like to thank Victor Cheng and Nilanjana Sarkar for excellent research assistance.

## **I. Introduction**

The explosion of capital flows to emerging markets in the early and mid 1990s and the recent reversal following the crises in Asia, Latin America, and transition economies have ignited once again a heated debate on the benefits and drawbacks on financial globalization. Many have argued that globalization has gone too far and that international capital markets have become extremely erratic, with “excessive” booms and busts in capital flows triggering bubbles and financial crises and also magnifying the business cycle. In contrast, the most traditional view asserts that international capital markets enhance growth and productivity by allowing capital to travel to its most attractive destination.

Even if international capital flows do not trigger excess volatility in domestic financial markets, it is still true that large capital inflows can spark off inflation in the presence of a fixed exchange rate regime. Moreover, transitory capital inflows may distort relative prices, with the domestic economy losing competitiveness as a result of the appreciation of the real exchange rate. No wonder policy makers have used a variety of tools to manage these flows, especially if they are of the “hot-money” type.

This paper re-examines the evidence on the characteristics of international capital flows since 1970 and summarizes some of the findings of the research conducted in the 1990s on the effects of globalization. It first presents a brief history of international capital flows to emerging markets, paying particular attention to the volatility of bank lending and portfolio flows. Second and to understand more broadly the characteristics of capital flows, the paper reviews the findings of the literature on the behavior of mutual funds specialized in emerging markets as well the lending behavior of European, Japanese, and U.S. banks to emerging markets around the Mexican, Thai, and Russian crises. The results in the literature suggest that episodes of surge in capital inflows do, in fact, end in a sudden stop—whether owing to home-grown problems or contagion from abroad. Third, the paper reviews the evidence on the short- and long-run effects of financial deregulation on financial and real cycles. Interestingly, the stylized evidence suggests that although financial liberalization may trigger excessive booms and busts in the short-run, in the long run financial markets tend to stabilize and growth accelerates. This section also examines the linkages between globalization and institutional reform. Fourth, the paper

reviews the literature on managing international capital flows. The conclusions summarize what we know and we do not know about financial globalization and examine policy options.

## **II. A Brief History of Capital Flows**

The 1970s witnessed a remarkable boom of capital flows to emerging economies. The dramatic surge in international capital flows was triggered by the oil shock in 1973-74, helped by the growth of the Eurodollar market, and amplified by a remarkable spurt of bank lending during 1979-81. Latin America became the main recipient of this heavy capital inflow, with capital flows to the region peaking at 46.2 billion dollars in 1981 (see Figure 1). Overall, capital inflows to this region reached about 6 percent of the area's GDP. In this episode, international capital flows mostly took the form of syndicated bank loans (see Figure 2). The pace of international lending came to an abrupt end in 1982 with the hike in world real interest rates to levels not seen since the 1930s. Suddenly, emerging countries became the pariahs of international capital markets. Not only were they excluded from voluntary capital markets, they were also forced to run current account surpluses to repay their foreign debts.

By the late 1980s, there was a revival of international lending, with Latin America becoming, once again, the darling of Wall Street. Flows to these countries made a tremendous comeback. This time around capital inflows to Asia also surged, with capital flows increasing ten-fold from their averages in the early 1980s. This time, however, the composition of capital flows changed dramatically, with bank lending being replaced by foreign direct investment and portfolio investment. As shown in Figure 2, bank lending to both Asia and Latin America declined from 70 percent of net private capital flows in the 1970s to about 20 percent in the 1990s. While foreign direct investment constituted the largest share of capital flow to Asia and Latin America, portfolio investment (bonds and equity) also increased substantially, accounting for about 40 percent of total capital flows in the mid-1990s. In absolute values, bond and equity flows to Asia (excluding those counted as FDI) increased to 33 billion dollars in 1996 while those to Latin American peaked at 63 billion dollars in 1994.

Again in the 1990s, as in the 1980s, booms were followed by capital flow reversals. The first reversal occurred in the immediate aftermath of Mexico's currency crisis in December 1994. In this case, capital flows resumed for most countries within one year, and returned to their peak

values soon thereafter. Moreover, in the aftermath of that crisis, capital flows to Asian economies were basically not affected, with the crisis being confined to a small number of Latin American countries. The second, more severe reversal came in 1997 during the Asian crisis. This reversal was later aggravated by the Russian default in August 1998 and the Brazilian crisis in 1998-1999. This time, the collapse in capital flows was more pronounced and long lasting. The reversal was similar in magnitude to the one after the Debt Crisis, with total capital flows to Latin America declining about 20 percent in 1999 and further declining 32 percent in 2001. The sudden stop in capital flows to Asia was more pronounced with total capital flows declining from 123 billion dollars in 1996 to 12 billion dollars in 1997. The reversal of short-term portfolio flows to Asia (bonds, equities, and bank lending) was even more brutal, with flows in these categories declining from an inflow of 69 billion dollars in 1996 to an outflow of 104 billion dollars in 1998. In Latin American, short-term capital flows declined from about 30-billion dollar-inflow in 1996 to about 31-billion dollar-outflow in 2001.<sup>1</sup>

Finally, the evidence from transition economies is similar to that of Asia and Latin America. In the early 1990s, capital flows boomed, with a peak in 1995 at 51 billion dollars. Also, as in Asia and Latin America, portfolio bond and equity flows and bank lending suffered a profound reversal in the late 1990s. Only, by 2003 capital flows to all emerging markets had resumed following the decline in interest rates in industrial countries.

### **III. The Behavior of Mutual Funds**

The booms and busts in international capital flows have brought international investors to the limelight. Often, international investors are seen as the main culprits of financial market instability and have even been the subject of attacks of government officials. Many have argued that more often than not, international investors panic and withdraw funds from countries with sound fundamentals. Assessing the behavior of international investors has been a daunting task

---

<sup>1</sup> This paper is restricted to the analysis of portfolio and bank-related flows. Still, it is important to note that in contrast to the booms and sudden stops in portfolio and bank flows, foreign direct investment to emerging markets continuously increased even in the midst of currency turmoil (in part driven by purchases of firms in distress following the crises). This led many to single out FDI as stabilizing flows (see, for example, H. Reisen and M. Soto (2001) and L. Sarno and M. Taylor (1999)) and to support policies encouraging FDI. This reasoning has been challenged by S. Claessens, M. Dooley, and A. Warner (1995), who emphasize that capital-flow labels are meaningless in the presence of derivatives or efforts to circumvent capital controls.

because data on international investors' portfolios is almost non-existent. Only recently, a novel databank on mutual funds portfolios provided by Emerging Market Funds Research, Inc. has become available for research. This databank covers the positions of nearly 1,400 international emerging market equity funds, with an average position of about \$120 billion in 1996. It includes U.S. registered and offshore funds as well as funds registered in Luxembourg, United Kingdom, Ireland, Cayman Islands, Canada, and Switzerland. It includes both open and closed-end funds. The dataset starts in 1995. Kaminsky, Lyons, and Schmukler (2002) and Borensztein and Gelos (2003) have used this dataset to study the behavior of funds specializing in emerging markets. In particular, they study whether domestic fragility is at the heart of portfolio decisions of mutual fund managers or whether mutual funds just herd together. I now discuss their findings.

Kaminsky, Lyons, and Schmukler describe the evolution of mutual funds in Asia, Latin America, and transition economies and then examine the determinants of mutual fund flows to these regions. Figures 3-4 and Table 1 reproduce their findings. Figure 3 shows the average quarterly net flows to these regions from 1995 to 1999. Mutual fund flows to emerging markets peaked in the second quarter of 1997, reaching about 8 billion dollars. Overall, booms in mutual fund flows were followed by reversals. Reversals were not persistent after the Tequila crisis. Outflows from Latin America reached about 4 billion dollars in 1995, but mutual funds increased their positions in Latin America by about 2 billion dollars just in the first half of 1996. The Tequila crisis did not have any spillovers in Asia or in Transition Economies. In fact, flows to Asia ballooned to almost 11 billion dollars in 1996, while flows to transition economies remained stable throughout 1995-96. The picture changes after the Asian crisis. This time, mutual funds pulled out not only from Asia but from Latin America as well, with net outflows in this last region reaching about 1 billion dollars in the six months following the collapse of the Thai baht. Mutual funds withdrawals took a turn for the worse in 1998 reaching about 4 billion dollars in Asia and also in Latin America, with substantial outflows from transition economies after the Russian crisis.

Figure 4 assesses the problem of the sudden stops in times of financial turmoil. It reports the average quarterly flows (as a percent of mutual funds' initial positions) to countries in Asia and in Latin America, as well as to transition economies in the two quarters following three

crises. The top panel looks at the aftermath of the Mexican devaluation in December 1994, the middle panel examines the aftermath of the collapse of the Thai baht in July 1997, and the bottom panel studies the aftermath of the Russian devaluation and moratorium in August 1998. To capture the magnitude of the sudden-stop syndrome, this figure reports total flows relative to the average flow (also in percent of their initial positions) during the whole sample (1995-1999). For example, following the Mexican devaluation, mutual funds sold about 5 percent of their Brazilian positions (relative to their average quarterly buying/selling during 1995 to 1999). Thus, as shown in the first panel in Figure 3, Brazil experienced unusual withdrawals of about 5 percent in the aftermath of the Mexican devaluation. As shown in the last panel, Malaysia was the country most affected in the aftermath of the Russian crisis, with abnormal outflows of approximately 30 percent.

As discussed in Kaminsky, Lyons, and Schmukler (2002), the extent of the mutual fund sudden stop in the aftermath of the three crises was substantially different. The so-called Tequila Crisis was circumscribed to Latin America. Moreover, “abnormal” mutual fund withdrawals in the aftermath of the collapse of the Mexican peso were confined to a handful of Latin American countries, with only Brazil and Venezuela –besides the crisis country: Mexico– suffering average withdrawals of 5 and 2 percent in the two quarters following the devaluation. In contrast, mutual funds increased their exposure to Asian countries and transition economies, with (above-trend) flows oscillating around 4 percent for Asia and 11 percent for the transition economies.

The aftermath of the collapse of the Thai baht presents a different picture of the international mutual funds industry. It is in this episode that we first observe signs of a more general retrenchment of mutual funds in emerging markets. Mutual funds flows to Asian economies were basically all well below trend in the two quarters following the collapse of the Thai baht. Only flows to China, Pakistan, and Sri Lanka were above average. Interestingly, after the collapse of the Thai baht, we observe substantial withdrawals from Hong Kong, Singapore, Taiwan, with average quarterly withdrawals oscillating at about 12 percent above average in the case of Singapore and Taiwan and about 7 percent for Hong Kong. The retrenchment this time also reached Latin America and the transition economies, with withdrawals reaching about 6 for Colombia and 4 percent for the Czech Republic during the two

quarters following the outbreak of the Thai crisis. Colombia, the Czech Republic, Chile, Hungary, and Peru were the countries most affected in this episode, with sales averaging about 3 percent above average.

The flight away from emerging markets became more pronounced during the Russian crisis, with about half of the countries in the sample experiencing abnormal sales of about 10 percent or even larger. In some cases, withdrawals were massive. For example, average mutual funds sales (relative to trend) in Malaysia reached 30 percent and in the Czech Republic were in the order of 16 percent. Some Latin American countries were also dramatically affected in the aftermath of the Russian collapse. For example, Colombia and Venezuela suffered average quarterly outflows of about 8 percent. Mutual funds investments in Mexico and Peru were the only ones that did not suffer following the worldwide turmoil triggered by the Russian default. In fact, inflows to Mexico were 5 percent above the average observed in the 1995-99 period.

Kaminsky, Lyons, and Schmukler (2002) also examine in detail why some countries were severely affected by mutual-fund withdrawals but others were left unscathed. Three factors are examined: economic fragility, liquidity of financial markets,<sup>2</sup> and economic and political risk. Fragility is captured using a composite leading indicator of crises from Kaminsky (1998). A total of 18 indicators are combined according to their forecasting accuracy to capture financial, external, and real vulnerabilities in each country. A country is classified as fragile if the probability of a crisis (conditional on the information of the composite indicator) is larger than 50 percent and healthy, otherwise. Liquidity is captured with four indicators. The first two are the volume traded in the stock market and the share of the mutual funds portfolio in each country at the onset of the crisis. These two indicators provide two different pictures of liquidity of financial markets. The first one provides an overall measure of size and depth of the stock market. The second one is related to mutual funds liquidity in each country, since investors cannot sell in countries in which they have basically no exposure. The third indicator dates the time when firms in emerging markets start to trade in mature and more liquid financial markets. The fourth indicator captures the ability of investors to rapidly change their portfolio in a particular country. In particular, this last indicator evaluates the extent of restrictions to capital

---

<sup>2</sup> Liquidity may have an important effect on investors' portfolio allocations since investors may want to avoid illiquid markets to minimize the price collapses always present when there is no ready market.

mobility in each country. Restrictions could be adding “sand in the wheel” of capital markets and thus are curtailing liquidity.<sup>3</sup> Finally, the risk indicator captures both political and economic uncertainty. The political risk indicator captures uncertainty due to expected changes of authorities or to future policy actions. It also identifies when there is widespread social unrest. The indicator also captures economic risk such as imposition of restrictions to capital mobility in response to crises. A country is classified as risky when there is at least either political or economic risk.

Table 1 shows the characteristics of countries that suffer abnormal withdrawals and injections in the aftermath of the three crises.<sup>4</sup> The table groups the countries in three regions, Asia, Latin America, and transition economies. As shown in the first column, countries with fragile economies constitute the bulk of the countries that suffer withdrawals. For example, during the Mexican crisis, Latin America was the only region that suffered withdrawals. Interestingly, sixty-seven percent of the countries that suffered withdrawals in this episode were also countries with deteriorated fundamentals. Again, during the Thai crisis, at least seventy-five percent of the countries that suffered withdrawals in the transition-economies group and Latin America were countries with economic vulnerabilities. Similarly, forty-three percent of the Asian countries affected by abnormal withdrawals had also deteriorated economies. For example, Korea, Colombia, the Czech Republic and Chile suffered high withdrawals in the aftermath of the Thai crisis and both the Czech Republic and Korea were among the top two most vulnerable countries in the sample of twenty-five countries during the Asian crisis

---

<sup>3</sup> To identify liquid markets, Kaminsky, Lyons and Schmukler (2002) first rank countries by region according to their volume traded and according to their share in the mutual funds portfolio at the onset of the crisis. The dummy variable related to volume traded takes a value of one if the country ranks among the top 30 percent most liquid countries in the region in that category and zero otherwise. Similarly, countries are classified as liquid (i.e., the dummy variable takes a value of one) if they rank among the 30 percent of the countries with the largest share in mutual fund portfolio for the region. A third dummy is created to capture whether emerging market firms are trading in mature financial markets. The variable takes the value of one if they do and zero, otherwise. Finally, the variable capturing restrictions to entry and exit of foreigners in the stock market of emerging economies takes the value of one if there are no restrictions and zero, otherwise. All this information is collapsed into a liquidity variable that is the average of the four univariate liquidity dummy variables. Thus, the general index of liquidity, the average of the four components, can take five values: 0, 1/4, 2/4, 3/4, and 1, with a value of one indicating a highly liquid market. I classify a country as having liquid financial markets when this dummy takes a value of 0.5 or higher.

<sup>4</sup> See Kaminsky, Lyons, and Schmukler (2002) for a country-by-country detail on fragility, liquidity, risk, and mutual fund withdrawals.



(Thailand ranked fourth), and Colombia ranked sixth. In contrast, those that did not experience mutual fund withdrawals were overall less fragile.<sup>5</sup>

But domestic fragilities were not the only explanation of the sudden-stop syndrome. For example, China did not suffer even a mild hiccup in the midst of the Asian crisis even when devaluation fears were widespread among investors and the vulnerability of its financial system was widely known. In contrast, Singapore, Taiwan, and Hong Kong suffered pronounced capital-flow reversals even when their economies looked far healthier than that of China. These countries have the most liquid financial markets in the region. Overall, eighty-six percent of the countries in the Asian-Pacific region that suffered withdrawals were countries with quite liquid financial markets. In contrast, all the countries in that region unaffected by the Thai crisis had illiquid financial markets. Finally, risk had also an important role, with forty percent of the countries most affected by withdrawals also experiencing political and economic risk. For example, in 1994, in the midst of the banking crisis, Venezuela abandoned convertibility. Far from discouraging capital outflows, the implementation of restrictions to capital mobility seems to have also contributed to the fire sales of Venezuelan assets. Malaysia was the country that suffered substantial losses in the aftermath of the Russian crisis. Interestingly, the withdrawals may have been triggered by the increased risk—perceived or real—associated with the country. It was in the aftermath of the Russian crisis that Malaysia introduced outright controls on capital outflows.

Borenzstein and Gelos (2003) provide us with complementary results to fully characterize the behavior of mutual funds in emerging markets. The authors examine whether mutual funds follow herding strategies using Lakonishok, Shleifer, and Vishny (1992) measure of herding. This measure allows an assessment of whether funds move in the same direction more often than one would expect if they traded independently and randomly. Borenzstein and Gelos' results suggest that mutual funds do herd together. In particular, they find that, for a given country, the number of funds moving in the same direction was approximately 8 percent larger than one would have expected if they acted independently. Herding is less pronounced among closed-end funds, suggesting that herding behavior might be traceable to the behavior of individual investors rather than fund managers. Finally, herding in some crisis episodes was also

---

<sup>5</sup> See Goldstein, Kaminsky, and Reinhart (2001).

more pronounced. For example, at the onset of the Brazilian crisis, herding on Brazilian assets increased to 15 percent.

#### **IV. The Behavior of Banks**

As shown in Section II, bank-related lending has been quite volatile in the last three decades. This section examines the role of European, Japanese, and U.S. banks in spreading the crises of the 1990s. I use BIS Consolidated Banking Statistics to examine the role of the three international banking clusters. In particular, I look at international claims of reporting BIS banks in emerging economies. I should note that it is not possible to isolate total cross-border claims. International claims include both total cross-border claims and local claims in foreign currency booked by foreign offices. The difference between total cross-border claims and international claims is quite wide for countries with highly dollarized economies and with an important presence of foreign banks, such as Latin American countries.

As shown in Figure 5, throughout most of the early 1990s, bank flows were pouring into Asia and accelerated following the Mexican crisis. Bank loans to emerging Asia expanded by 89 percent from June 1994 to June 1997. Part of the rise in lending owed to the European banks goal to achieve a higher profile in emerging markets, particularly, in South Korea. Also, much of the lending boom, especially in the case of Thailand, Indonesia, and South Korea, was owing to a rapid expansion in credit from Japanese banks. Faced with a slumping economy and little domestic loan demand, Japanese banks increasingly looked overseas to the rapidly growing economies of Southeast Asia as potential borrowers. In contrast, U.S. banks lending to Asia was modest throughout the eve of the crisis. By June 1997, the U.S. banks' positions in emerging Asia had only reached 32 billion dollars and only accounted for 20 percent of all U.S. bank lending to developing countries. In contrast, by the onset of the Thai crisis, Japanese banks had an exposure to Asia four times as much as U.S. banks (124 billion dollars). European bank lending to Emerging Asia was also significant and by the onset of the Thai crisis, the exposure of European banks to Asia had already surpassed that of Japanese banks, reaching 161 billion dollars. European banks' exposure to emerging Asia accounted for about a half of all their lending to emerging markets; South Korea alone accounted for 40 percent of their lending to the developing world.

Japanese banks, heavily exposed to Thailand, were the first to pull out of emerging Asia. Between June and December of 1997, lending by Japanese banks fell by 8 percent. Instead, European banks, heavily exposed to Korea, only started to pull out following the beginning of the crisis in Korea in November 1997. On net, European bank lending to Asia continued to increase from June to December 1997. By June 1998, however, the reduction in lending to emerging Asia was across the board. Bank lending to Asia fell by 46 billion dollars, with European banks recalling 12 billion dollars, Japanese banks 25 billion dollars, and US banks 9 billion dollars, respectively.

Figure 5 also reports bank lending to Latin America and transition economies. Exposure to these regions increased sharply in the mid 1990s (in large part driven by the purchase of domestic banks in these regions by European banks), with claims on these regions increasing about 50 percent from June 1994 to June 1998, immediately before the onset of the Russian crisis. During the 1990s, European banks had the largest exposure to these regions, 67 percent to Latin America and 84 percent to transition economies. The Russian crisis led to some withdrawals of Japanese and U.S. from both regions. That was not the case of European banks that acquired local banks. Still, lending to Latin American by European banks peaked in December 2000 and has not recovered since.

Figures 6 to 8 tally country-by-country bank flows originating in European, Japanese, and United States banks in the aftermath of the Mexican, Thai, and Russian crises. Each figure focuses on the year following the crisis. Figure 6 shows that with the exception of Mexico and Venezuela that had a banking crisis of its own making, Latin American countries did not suffer reversals in bank lending following the Mexican crisis. Moreover, within a year of the crisis lending to Latin America recovered and even surpassed the levels observed before the crisis. Brazil was the prime beneficiary of bank flows during 1995, with lending from European and U.S. banks reaching 15 billion dollars. Even in the case of Mexico and Venezuela, withdrawals were not across the board. Only U.S. banks recalled loans from these countries. Figure 6 also shows that in Asia, the major recipients of capital flows in 1995 were South Korea, Thailand, and Indonesia.

Figure 7 shows the behavior of bank lending in the aftermath of the Thai crisis. In contrast to the Tequila crisis, the Thai crisis triggered major reversals in bank flows from banks

in Europe, Japan, and the United States. Thailand, South Korea, Indonesia, and Malaysia were the countries that suffered major withdrawals. Still, contagion was only regional in nature, with basically all Latin American countries and to a lesser degree transition economies continuing to have uninterrupted access to bank lending.

Figure 8 presents the spillovers from the Russian Crisis. As it was the case with mutual funds, the reversal in bank lending following the Russian default was not restricted to Russia or neighbor countries. This time, the reversal was more widespread and affected countries as far apart as Brazil, South Africa, and Russia. While Japanese banks continued to recall loans from Thailand, Indonesia, and South Korea, reversals were not just restricted to these countries. Japanese banks also recalled loans from Brazil, Mexico, India, and South Africa. So did U.S. banks.

While the evidence just presented suggests that international banks were at the center of financial contagion in the late 1990s, more formal evidence is presented in Kaminsky and Reinhart (2000), Caramazza, Ricci, and Salgado (2000), and Van Rijckeghem and Weder (2001). Kaminsky and Reinhart (2000) examine contagion during the Debt Crisis in 1982, the Mexican crisis in 1994, and the Asian crisis in 1997. They examine whether countries that borrow from a common creditor were prey to contagion. Overall, they find that U.S. banks were at the core of the contagion during the Debt crisis while Japanese Banks spread the Thai crisis to Indonesia, Korea, and Malaysia. Van Rijckeghem and Weder (2001) examine the Tequila, Asian, and Russian crises. These authors examine the flows to thirty-one emerging countries from seventeen BIS country-creditor banks. Again the evidence in this paper supports the idea that the degree to which countries compete for funds from common bank lenders is a fairly robust predictor of the incidence of contagion. The extent of contagion was more pronounced during the Asian crisis. During this episode, the estimates indicate that Japanese banks reduced by 30 percent their exposure to emerging markets. Finally, Caramazza, Ricci, and Salgado (2000), extend earlier work on indicators of vulnerability to currency crises by examining the role of financial linkages while controlling for the roles of external and internal macroeconomic imbalances and trade spillovers. Their results indicate that financial links do matter while exchange rate regimes and controls on capital flows do not seem to matter.

## V. Globalization and Volatility

As discussed in the introduction, the views on the effects of financial globalization could not be more extreme, with ardent defenders of capital controls as Rodrick (1998) and Stiglitz (1999) and those that maintain that capital should be allowed to move freely to its most attractive destination (Dornbusch, 1998). The rationale for restricting international capital flows is grounded in the belief that market failures and distortions pervade capital markets around the world. One of the most often cited distortions is that of information asymmetries, which are more rampant in international capital markets where geographical and cultural differences make harder the task of obtaining information. Moreover, imperfections in international markets are magnified by the difficulties in enforcing contracts across borders.<sup>6</sup> With imperfect information, investors may overreact to shocks, withdrawing massively from countries at the first signs of economic problems, or they may become euphoric and pour on capital in quantities beyond those justified by “good” fundamentals. Instead those that consider that international capital markets are efficient favor unrestricted capital movements. It is claimed that financial liberalization helps to improve the functioning of financial systems, increasing the availability of funds and allowing cross-country risk diversification. Moreover, it is also claimed financial integration tends to greatly facilitate economic growth.

This section will summarize some of the findings in the literature on the effects of globalization on financial markets and the real economy, paying particular attention to the evidence on these conflicting views. In particular, the section will focus on the evidence on short- and long-run effects of financial integration on real and financial volatility.

### A. *Financial Markets*

The evidence from the crises of the 1990s suggests that crises are preceded by “excessive” capital inflows that, in turn, fuel large expansions in domestic credit and bubbles in financial markets.<sup>7</sup> There is also evidence that most episodes of banking crises are preceded by

---

<sup>6</sup> For an excellent discussion on the effects of asymmetric information in assets markets, see Eichengreen and Mussa (1998).

<sup>7</sup> See, for example, Sachs, Velasco, and Tornell (1996).

financial liberalization.<sup>8</sup> To reconcile the evidence that globalization is at the heart of financial crises jointly with the hypothesis that international capital markets allow capital to move to its most attractive destination and promote more stable financial markets, in joint work with Schmukler (Kaminsky and Schmukler, 2002) we examine the possible time-varying effects of financial liberalization on cycles in stock market prices.<sup>9</sup> Figure 9 reproduces some of the results in that paper. The figure shows the average amplitude of booms and crashes for fourteen emerging markets<sup>10</sup> during recession times (the orange bars), the short-run effects of liberalization (the blue bars), and the long-run effects of liberalization (the yellow bars). The evidence in this figure seems to point out to excessive cycles: with larger booms followed by larger crashes in the immediate aftermath of financial liberalization. But liberalization does not trigger more volatile financial markets permanently: If liberalization persists, stock markets in emerging countries become more stable. One possible explanation examined in the paper (using a variety of measures of law and order) is that financial liberalization triggers institutional reforms that make financial markets function better. Interestingly, the evidence for the fourteen emerging countries indicates that deregulation indeed preceded institutional reforms. This sequencing may owe to the actions of domestic investors, with access to international capital markets following deregulation, requiring better enforcement rules to continue to invest in domestic financial markets. Also as suggested by Stultz (1999), the liberalization and the gradual integration of emerging markets with international financial markets may help to fortify the domestic financial sector as foreign investors have overall better skills and information and can thus monitor management in ways local investors cannot. Liberalization, moreover, allows firms to access mature capital markets. Firms listing on foreign stock markets are also in the jurisdiction of a superior legal system and have higher disclosure standard. This will promote more transparency in the management of the firm and can trigger improvements in corporate governance.

---

<sup>8</sup> See, for example, Kaminsky and Reinhart (1999) and Demirguc-Kunt, A. and Detragiache.(1999).

<sup>9</sup> In order to date the episodes of financial liberalization, we construct a chronology of financial liberalization in the domestic financial sector, the capital account, and the domestic stock market. The chronology allows for episodes of partial and full liberalization.

<sup>10</sup> The fourteen emerging economies are Argentina, Brazil, Chile, Colombia, Hong Kong, Indonesia, Korea, Malaysia, Mexico, Peru, the Philippines, Taiwan, Thailand, and Venezuela

## ***B. Business Cycles and Growth***

The previous section examined the short- and long-run effects of globalization on financial markets. The evidence was suggestive of excessive booms and busts in financial markets in developing countries following globalization but of more stable financial markets in the long run if globalization persisted. But, how do financial cycles affect the economy? This section will examine what we know and what we do not know about the relationship between globalization and business cycle fluctuations and growth.

I first examine the business cycle characteristics of international capital flows. Figure 10 shows international capital flows to emerging markets as well as annual output growth rates. The figure examines separately three regions: Asia, Latin America, and transition economies. The panels suggest that capital flows have been procyclical, with large inflows in good times and outflows during recessions. For example, Latin America growth rates oscillated around 4.5 percent in episodes of capital inflows while growth rates were about 1 percent in episodes of sudden stops. Similarly, Asia's economic activity collapsed to about 5.5 during the sudden stop in capital flows in the late 1990s but it grew at an annual growth rate of 8.5 percent in episodes of large capital inflows. This evidence contrasts sharply with the prescription that international capital markets should allow countries to smooth out the business cycle. In contrast, countries seem to have lost access to international credit markets during recessions on a systematic basis. This non-optimal behavior of international capital flows has also been studied by Calvo and Izquierdo (2003), who observe that sudden reversal in capital flows to emerging economies lead to large real depreciations and profound downturns. Perhaps what makes these sudden reversals even more devastating is that they seem to trigger contractionary macropolicies. For example, as shown in Figure 11, Peru introduced Draconian austerity programs in the early 1980s and in the late 1980s in the aftermath of debt and currency crises. In contrast, the United Kingdom could pursue countercyclical policy in the aftermath of the 1992 EMS currency crisis when the pound was allowed to float. While Peru lost access to international capital markets, the United Kingdom did not. These are not isolated cases. As reported in Kaminsky, Reinhart, and Végh (2004), macropolicies tend to be procyclical in developing countries while they are countercyclical or acyclical in industrialized countries. That is, macropolicies tend to smooth

out the business cycle in industrial countries but tend to magnify it in developing countries as shown in Table 2. This table summarizes Kaminsky, Reinhart, and Vegh (2004) results. The left panel reports the correlation between the cyclical components of fiscal and monetary policy with the business cycle. The right panel shows the correlations of the cyclical components of fiscal and monetary policy with net capital inflows. Interestingly, the evidence suggests that international capital flows to developing countries may trigger procyclical macropolicies. For example, government expenditure (inflation tax) is positively (negatively) correlated with net capital inflows indicating that periods of capital inflows are associated with expansionary fiscal policies and periods of capital outflows with contractionary fiscal policies. In such countries, therefore, when it rains, it does indeed pour. While more research is needed, the stylized evidence suggests that international capital flows may trigger more volatile business cycles in emerging economies.

While this evidence points to links between financial integration and output instability over the business cycle, the evidence on the long-run effects of globalization on economic activity suggests that financial integration promotes growth. A variety of authors have examined the effects of domestic and external deregulation of financial markets in emerging economies and found that they overall trigger sustainable growth in the long run. For example, Bekaert, Harvey, and Lundblad (2002) examine the effects on growth of the opening of the stock market to foreign investors in a sample of about 90 developing countries and find that, overall, liberalization triggers an increase in growth of approximately 1 percentage point higher. They find that investment to GDP increases in the aftermath of liberalization and that factor productivity increases significantly as well. The authors conclude that the effects of liberalization are so strong because not only they reduce financing constraints but also because foreign investors may insist on better corporate governance that indirectly reduces the cost of external financing. Similarly, Galindo, Micco, and Ordoñez (2002) study whether financial liberalization promotes economic growth by analyzing its effect on the cost of external financing to firms. In particular, the hypothesis is that the liberalization of domestic and external financial markets reduces the cost of external funds faced by firms by reducing the impact of problems associated with moral hazard and adverse selection. From this perspective the impact of financial development must differ according to the needs of particular firms for external funds.



Firms that rely more on external funds will be more impacted by financial development than those that require little capital. The results suggest that industries that depend on external finance grow almost 1 percent faster, relative to industries with low external financing dependence in episodes of globalization compared to episodes of repression.

Both the paper by Bekaert, Harvey, and Lundblad (2002) and the paper by Galindo, Micco, and Ordoñez (2002) conclude that financial liberalization cannot be the sole reason of new growth opportunities and suggest that financial liberalization also triggers institutional reform. This theme, also discussed in Kaminsky and Schmukler (2002), is further explored by Gourinchas and Jeanne (2002). These authors distinguish two classes of benefits of financial globalization. The first category includes the benefits in terms of international allocative efficiency, such as consumption smoothing in response to shocks or the possibility to accelerate domestic capital accumulation with the help of foreign capital. The second class of benefits encompasses incentives to good policies or reform that are generated by an open capital account. This includes the market discipline on domestic macroeconomic policies induced by the threat of capital flights. More broadly, it can also include the incentives to reform the domestic economic system in a way that reduces unproductive activities (diversion, rent-seeking), or secure better guarantees of property rights. To examine the relative importance of the benefits of international allocative efficiency, the authors calibrate a simple neoclassical growth model of a small open, capital-scarce economy with data on post WWII emerging economies. While they find the financial openness increases domestic welfare by allowing households to smooth consumption and by the possibility of acceleration of domestic capital accumulation, the benefits are not very large when compared to the benefits of alternative policies that reduce domestic distortions or increase domestic productivity.<sup>11</sup>

## **VI. Managing International Capital Flows**

The evidence seems to suggest that in the short run, globalization triggers bankruptcy of the financial systems and protracted recessions. Even if capital inflows do not trigger excess

---

<sup>11</sup> The evidence in Arteta, Eichengreen, and Wyplosz (2001) also suggests that the positive growth effects of liberalization are stronger in countries with strong institutions, as measured by standard indicators of the rule of law.

volatility in domestic financial markets, it is still true that they trigger inflation in the presence of a fixed exchange rate regime. Moreover, transitory capital inflows may distort relative prices, with the domestic economy losing competitiveness as a result of the appreciation of the real exchange rate. No wonder policy makers have used a variety of tools to manage these flows, especially if they are of the “hot-money” type. While in some cases they have introduced capital controls, they have also resorted to sterilized intervention or have introduced fiscal austerity to help “sterilize” the expansive monetary effects of foreign exchange purchases. The menu of instruments does not end here. Governments have also allowed more exchange rate flexibility to avoid a burst of inflation during the episodes of capital inflows figuring that if the appreciation of the real exchange rate is unavoidable, it is better that it takes place through a nominal appreciation rather than domestic inflation.

Since I have already examined the effects of capital controls, I now focus on the effects of sterilized intervention and exchange rate policy in the presence of large capital inflow episodes and describe some of the evidence reported in Reinhart and Reinhart (1998). As documented extensively by Calvo and Reinhart (2000), emerging markets mostly peg their domestic currency, floating only in the immediate aftermath of crises. With fixed exchange rate regimes, capital inflows trigger an accumulation of reserves by the central bank and an explosion of the monetary aggregates. To avoid inflation, monetary authorities have to sterilize the effects of the intervention in the foreign exchange market by selling securities in the domestic open market. Naturally, sterilization can only be effective if domestic and foreign assets are not close substitutes. The evidence for emerging markets suggests that, at most, sterilization has only short-run effects (See, Reinhart and Reinhart (1998)). Still many countries have resorted to sterilized intervention. For example, Colombia during most of 1991, Indonesia during 1991-1992, and Malaysia during 1991-1993 implemented open market operations on a vast scale to fully sterilize capital inflows. Less strongly but still forcefully, the central banks of Chile, Korea, Mexico, the Philippines, and Thailand sterilized in part the capital inflows of the early and mid 1990s. In most cases, domestic short-term interest rates rose when sterilization began, suggesting that policy had an impact, at least in the short run. Interestingly and at odds with the central banks’ initial purpose, strong sterilized intervention, by triggering large hikes in domestic interest rates, also triggered an increase in the volume of aggregate capital flows, mostly of the

“hot money” type.<sup>12</sup> Another disadvantage of sterilized intervention is that the hikes in domestic interest rates it triggers also increase the cost of capital to the government as central banks acquire relatively low-yield foreign exchange reserves and issue high-yield sterilization bonds. In practice, these quasi-fiscal losses are non-trivial. For example, the central bank losses associated with the sterilization effort in Colombia in 1991 reached about 0.6 percent of GDP (See, Rodriguez (1992)). Similarly, the losses in Chile due to the sterilization attempt during 1990 to 1992 amounted to about 1.4 percent of GDP (See, Kiguel and Leiderman (1993)).

The explosion of capital inflows to emerging markets in the early and mid 1990s were at first counterbalanced through sterilized intervention. This intervention did manage to avoid nominal appreciations or a hike in inflation. But as the inflows persisted and the foreign exchange reserves continued to accumulate, these policies became quite costly. At this point, central banks in Asia and Latin America allowed the exchange rate to move more freely so that the real appreciation was effected through a nominal appreciation rather than through a hike in domestic inflation. As described in Reinhart and Reinhart (1998), Chile and Colombia allowed several appreciations in the midst of the capital inflow episode. For example, in January 1992 Chile allowed its currency to appreciate by 5 percent. Again in November 1994, the Central Bank of Chile allowed the peso to appreciate, this time by 9.5 percent. Similarly, Colombia allowed its currency to appreciate by 5 percent in January 1994 and by 7 percent in November 1994. Chile and Colombia as well as the Czech Republic and Mexico also allowed the currency to float somewhat more freely. All these countries widened their exchange rate intervention bands in the early 1990s.

## **VII. Conclusions**

The explosion of capital flows to emerging markets in the early and mid 1990s and the recent reversal following the crises around the globe have ignited once again a heated debate on how to manage international capital flows. Capital outflows worry policy makers, but so do capital inflows as they may trigger bubbles in asset markets and foster an appreciation of the domestic currency and a loss of competitiveness. Policy makers also worry that capital inflows

---

<sup>12</sup> See, Montiel and Reinhart (1999) for a study of fifteen sterilization episodes in Africa, Asia, Latin America, and transition economies.

are mostly of the “hot money type,” that is why capital controls have mostly targeted short-term capital inflows. While capital controls may work, at least in the very short-run, the introduction of restrictions to capital mobility may have undesirable long-run effects. In particular, capital controls protect inefficient domestic financial institutions and thus may trigger financial vulnerabilities.<sup>13</sup> Capital controls may also delay improvements in corporate governance of non-financial firms because as countries liberalize their capital accounts, domestic corporations start participating in international capital markets, mainly through cross listing in major world stock exchanges, with higher disclosure standards and under the jurisdiction of a superior legal system. This certainly promotes more transparency in the management of the firm and can trigger improvements in corporate governance.<sup>14</sup> Thus, regulation of capital flows may even provoke not only financial vulnerabilities but also lower economic growth. Policy makers have also resorted to sterilization of capital flows to regain control of monetary policy. While sterilization may provide some relief, it may also be quite costly to central banks. Moreover, the ability of governments to control international capital flows or to sterilize them diminishes with globalization.

To conclude there is not an optimal policy to deal with the risks of volatile international capital flows, with policies that may work in the short-run having adverse effects in the long run. Still, there is massive evidence that currency and banking crises tend to occur in economies with deteriorated fundamentals suggesting that conservative macro policies should be at the heart of dealing with volatile capital flows.

---

<sup>13</sup> Claessens, Demirgüç-Kunt, and Huizinga (1998) present evidence that liberalization of the capital account and foreign bank entry lead to improvements in banking system efficiency.

<sup>14</sup> See, for example, Stultz (1999).

## References

- Arteta, C., B. Eichengreen, and C. Wyplosz, 2001, "When Does Capital Account Liberalization Help More than it Hurts?" NBER Working Paper No. 8414.
- Bekaert, G., C. Harvey, and C. Lundblad, 2001. "Does Financial Liberalization Spur Growth?" NBER working paper No. 8245.
- Borensztein, E. and Gelos, G, 2003, "A Panic-Prone Pack? The Behavior of Emerging Market Mutual Funds," IMF Staff Papers, April.
- Calvo, Guillermo and Alejandro Izquierdo, 2003, "On the Empirics of Sudden Stops," Inter-American Development Bank, mimeo, May.
- Caramazza, F., L. Ricci, and R. Salgado, 2000, "Trade and Financial Contagion in Currency Crises," IMF WP/00/55.
- Claessens, S., M. Dooley, and A. Warner, 1995, "Portfolio Capital Flows: Hot or Cold?" *World Bank Economic Review*, 9, pages 153-174.
- Demirguc-Kunt, A. and E. Detragiache, 1999, "Financial Liberalization and Financial Fragility." In *Annual World Bank Conference on Development Economics*, World Bank, DC, pp. 303-31.
- Dornbusch, Rudiger, 1998, "Capital Controls: An Idea Whose Time is Past." In *Should the IMF Pursue Capital-Account Convertibility?*, 20–27. Essays in International Finance 207, International Finance Section, Department of Economics, Princeton University (May).
- Eichengreen Barry, and Michael Mussa, with Giovanni Dell'Ariccia, Enrica Detragiache, Gian Maria Milesi-Ferretti, and Andrew Tweedie, 1998, "Capital Account Liberalization: Theoretical and Practical Aspects." International Monetary Fund Occasional Paper 172. Washington.
- Goldstein, M., G. Kaminsky, and C. Reinhart, 2000, *Assesing Financial Vulnerability: An Early Warning System for Emerging Markets*, Institute for International Economics.
- Galindo, A. A. Micco, and Guillermo Ordoñez, "Financial Liberalization and Growth: Empirical Evidence," paper presented at Conference *Financial Globalization: A Blessing or a Curse*, World Bank, Washington, D.C. 2002.
- Gourinchas, P. and O. Jeanne. 2002. "On the Benefits of Capital Account Liberalization for Emerging Economies." Mimeo, Princeton University.

- Kaminsky, G., 1998, "Currency and Banking Crises: The Early Warnings of Distress," International Finance Working Paper, Federal Reserve Board.
- Kaminsky, G. and C. Reinhart, 2000, "On Crises, Contagion, and Confusion," *Journal of International Economics*, June.
- Kaminsky, Graciela, and Sergio Schmukler, 2002, "Short-Run Pain, Long-Run Gain: The Effects of Financial Liberalization," World Bank Working Paper.
- Kaminsky, Graciela, Richard Lyons, and Sergio Schmukler, 2002, "Fragility, Liquidity, and Risk: The Behavior of Mutual Funds During Crises," mimeo.
- Kaminsky, G., C. Reinhart, and C. Végh, "When it Rains, it Pours: Procyclical Capital Flows and Macro Policies," June 2004.
- Kiguel, Miguel and Leonardo Leiderman, 1994, "On the Consequences of Sterilized Intervention in Latin America: The Case of Colombia and Chile," mimeo, Tel Aviv University.
- Reinhart, C. and V. Reinhart (1998), "Some Lessons for Policy Makers Dealing with the Mixed Blessing of Capital Inflows," in M. Kahler (ed) *Capital Flows and Financial Crises*, (New York: Council on Foreign Relations), pages 93-127.
- Reisen, H. and M. Soto, 2001, "Which Types of Capital Inflows Foster Developing-Country Growth?" *International Finance* 4:1, pages 1-14.
- Rodrik, D. 1998. "Who Needs Capital Account Convertibility?" In S. Fischer and others, eds., *Should the IMF Pursue Capital-Account Convertibility?, Essays in International Finance* No. 207, Department of Economics, Princeton University, May.
- Sachs, J, A. Tornell and A. Velasco, 1996, "The Collapse of the Mexican Peso, What Have we Learned?" Brookings Papers on Economic Activity.
- Stiglitz, J. 1999. "Bleak Growth for the Developing World." *International Herald Tribune*, April 10-11, pp. 6.
- Stultz, R, 1999, "Globalization of Equity Markets and the Cost of Capital," The Ohio State University, Dice Center, Working Paper.

**Table 1**

**The Behavior of Mutual Funds During Crises**

| <b>The Mexican Crisis</b>   |                                  |                                     |             |
|-----------------------------|----------------------------------|-------------------------------------|-------------|
| <b>Region</b>               | <b>Percent of Countries with</b> |                                     |             |
|                             | <b>Fragility</b>                 | <b>Liquid<br/>Financial Markets</b> | <b>Risk</b> |
| <b>Asia</b>                 |                                  |                                     |             |
| With MF Withdrawals         | n.a.                             | n.a.                                | n.a.        |
| Without MF Withdrawals      | 0                                | 42                                  | 25          |
| <b>Latin America</b>        |                                  |                                     |             |
| With MF Withdrawals         | 67                               | 33                                  | 67          |
| Without MF Withdrawals      | 0                                | 67                                  | 33          |
| <b>Transition Economies</b> |                                  |                                     |             |
| With MF Withdrawals         | n.a.                             | 0                                   | 0           |
| Without MF Withdrawals      | 33                               | 75                                  | 50          |

| <b>The Thai Crisis</b>      |                                  |                                     |             |
|-----------------------------|----------------------------------|-------------------------------------|-------------|
| <b>Region</b>               | <b>Percent of Countries with</b> |                                     |             |
|                             | <b>Fragility</b>                 | <b>Liquid<br/>Financial Markets</b> | <b>Risk</b> |
| <b>Asia</b>                 |                                  |                                     |             |
| With MF withdrawals         | 43                               | 86                                  | 29          |
| Without MF Withdrawals      | 25                               | 0                                   | 25          |
| <b>Latin America</b>        |                                  |                                     |             |
| With MF withdrawals         | 75                               | 50                                  | 25          |
| Without MF Withdrawals      | 0                                | 100                                 | 0           |
| <b>Transition Economies</b> |                                  |                                     |             |
| With MF Withdrawals         | 100                              | 100                                 | 33          |
| Without MF Withdrawals      | 0                                | 50                                  | 0           |

| <b>The Russian Crisis</b>   |                                  |                                     |             |
|-----------------------------|----------------------------------|-------------------------------------|-------------|
| <b>Region</b>               | <b>Percent of Countries with</b> |                                     |             |
|                             | <b>Fragility</b>                 | <b>Liquid<br/>Financial Markets</b> | <b>Risk</b> |
| <b>Asia</b>                 |                                  |                                     |             |
| With MF Withdrawals         | 40                               | 40                                  | 60          |
| Without MF Withdrawals      | 0                                | 100                                 | 0           |
| <b>Latin America</b>        |                                  |                                     |             |
| With MF Withdrawals         | 50                               | 100                                 | 0           |
| Without MF Withdrawals      | 20                               | 60                                  | 0           |
| <b>Transition Economies</b> |                                  |                                     |             |
| With MF Withdrawals         | 50                               | 33                                  | 0           |
| Without MF Withdrawals      | 100                              | 0                                   | 100         |

Note: This table relates the mutual fund withdrawals (injections) of funds to the emerging markets shown in Figure 4 with indicators of fragility, liquidity of financial markets, and economic and political risk in those economies.

Source: Kaminsky, Lyons, and Schmukler (2002)

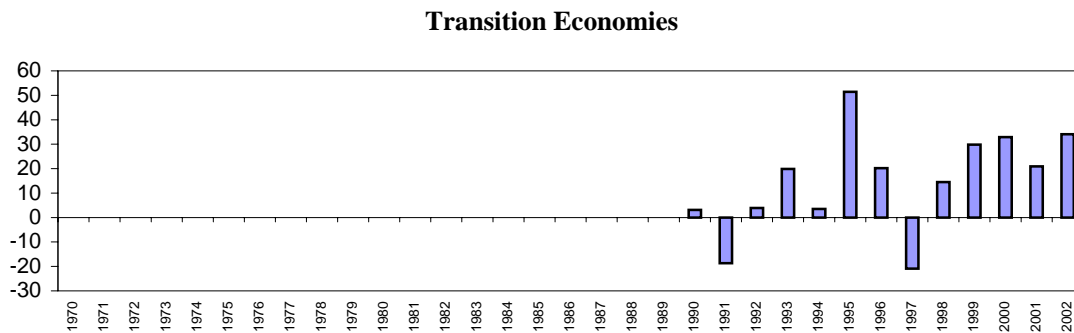
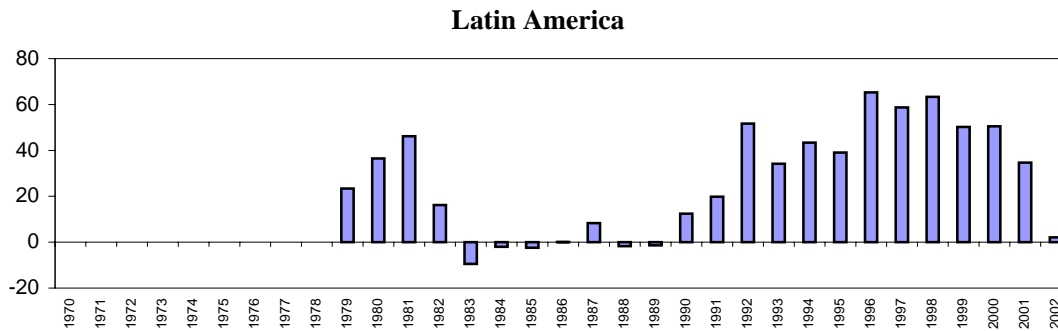
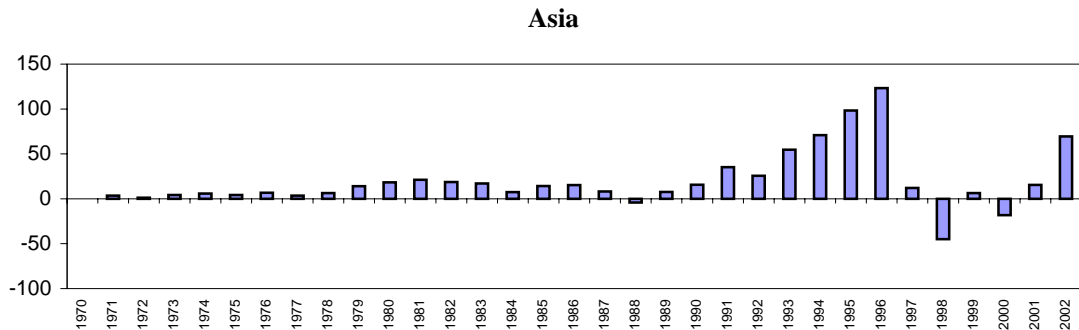
**Table 2**  
**Correlations between the Cyclical Components of Macro Policies, Real GDP, and Net Capital Inflows**

| Countries | Correlations with Real GDP |               |                       | Correlations with Net Capital Inflows |               |                       |
|-----------|----------------------------|---------------|-----------------------|---------------------------------------|---------------|-----------------------|
|           | Fiscal Policy              |               | Monetary Policy       | Fiscal Policy                         |               | Monetary Policy       |
|           | Government Expenditure     | Inflation Tax | Lending Interest Rate | Government Expenditure                | Inflation Tax | Lending Interest Rate |
| OECD      | -0.13                      | 0.16          | 0.23                  | 0.03                                  | 0.04          | 0.19                  |
| Non-OECD  | 0.33                       | -0.15         | -0.05                 | 0.20                                  | -0.16         | -0.06                 |

Notes: A positive (negative) correlation between government expenditure (inflation tax) and real GDP indicates procyclical fiscal policy. A negative correlation between lending interest rates and real GDP indicates procyclical monetary policy. A positive (negative) correlation between government expenditure (inflation tax and lending interest rates) and net capital inflows indicate that contractionary macropolicies are linked to episodes of low net capital inflows. The cyclical component of the various indicators was obtained using the HP filter.  
Source: Kaminsky, Reinhart, and Vegh (2004).



**Figure 1**  
**Private Capital Flows to Emerging Markets**  
**(Billions of U.S. Dollars)**



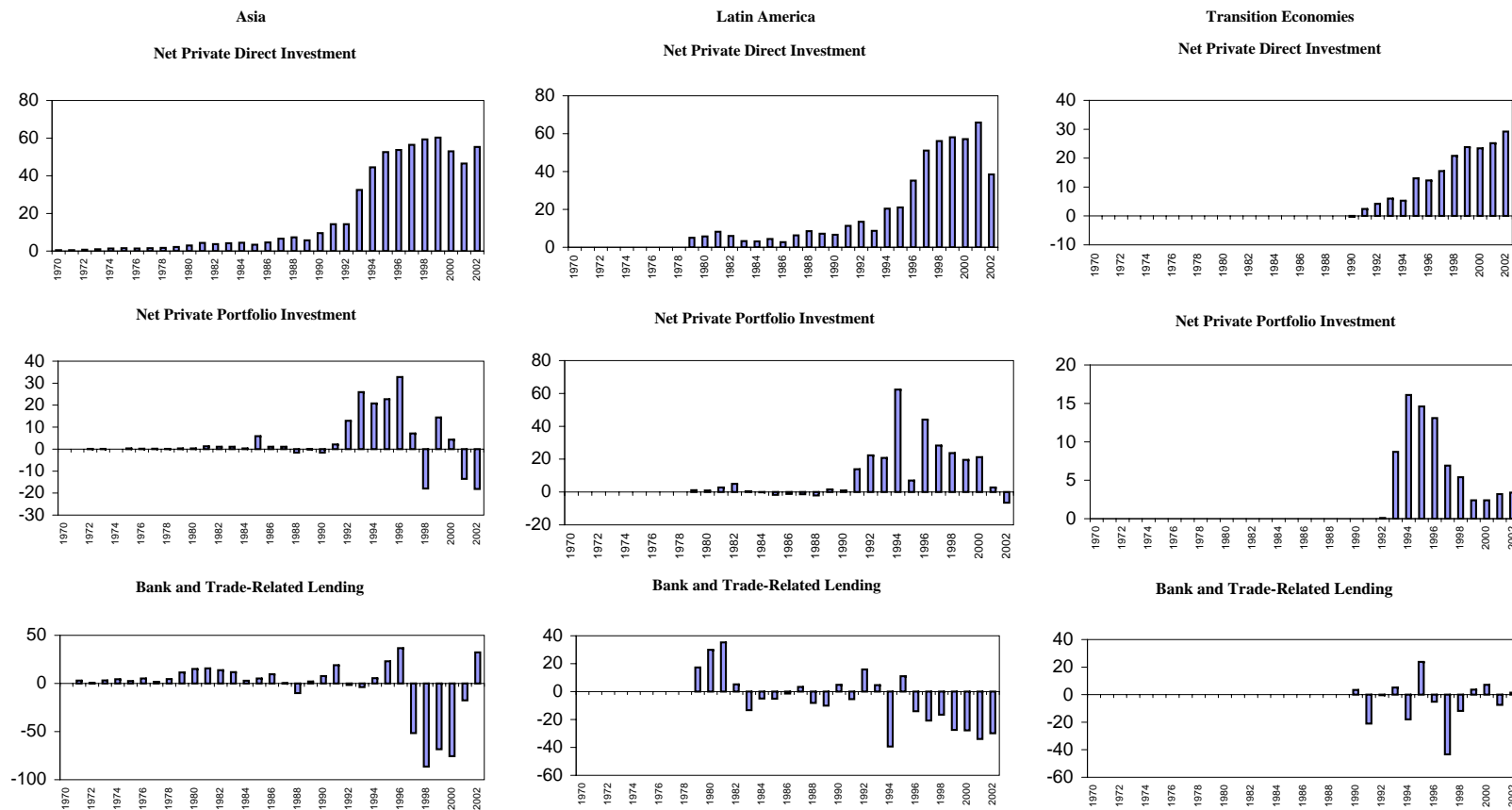
Note: The countries comprising Asia are Bangladesh, China, Hong Kong SAR, India, Indonesia, Korea, Malaysia, Pakistan, the Philippines, Singapore, Taiwan Province of China, Thailand, and Vietnam.

The countries comprising Latin America are Argentina, Brazil, Chile, Colombia, the Dominican Republic, Ecuador, Guatemala, Mexico, Peru, Uruguay, and Venezuela.

The countries comprising the Transition Economies are Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, the Kyrgyz Republic, Latvia, Lithuania, Macedonia (former Yugoslav Republic of), Moldova, Mongolia, Poland, Romania, Russia, Serbia and Montenegro, the Slovak Republic, Slovenia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.

Source: World Economic Outlook

**Figure 2**  
**Composition of Private Capital Flows to Emerging Markets**  
 (Billions of U.S. Dollars)



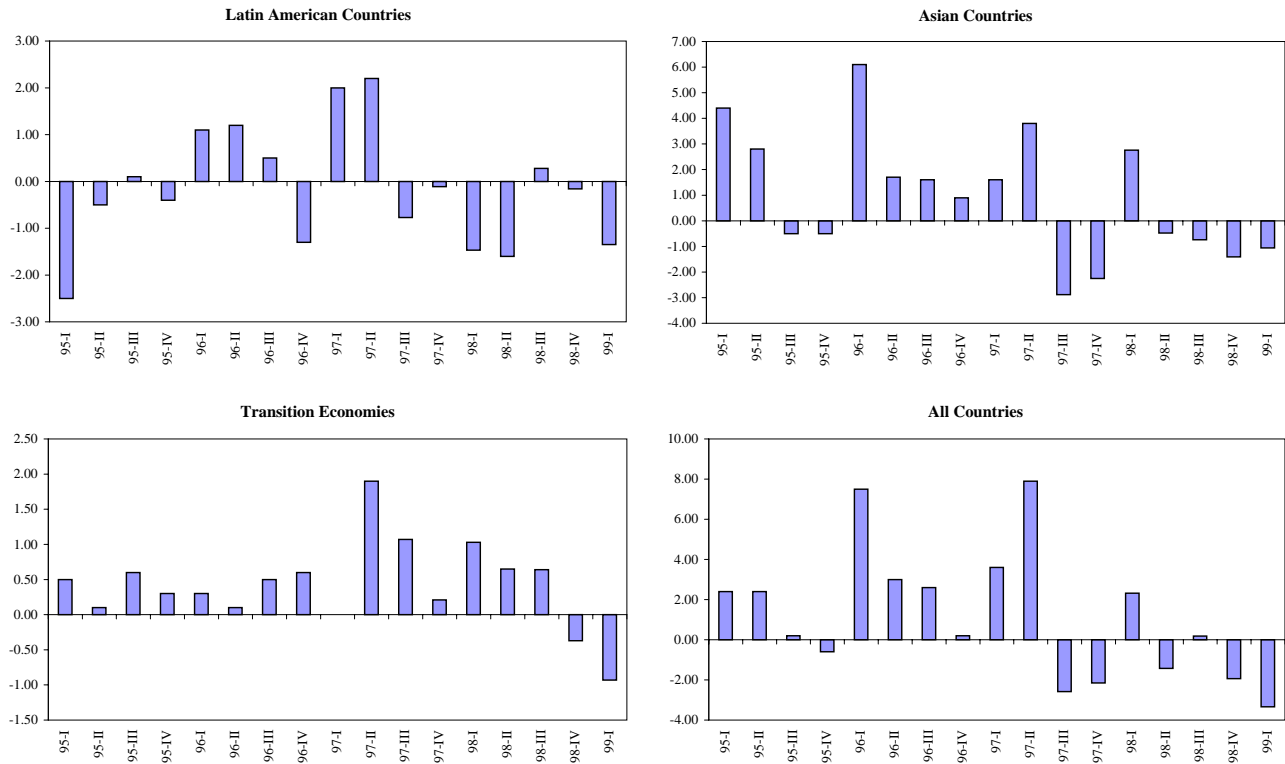
Notes: The countries comprising Asia are Bangladesh, China, Hong Kong SAR, India, Indonesia, Korea, Malaysia, Pakistan, the Philippines, Singapore, Taiwan Province of China, Thailand, and Vietnam.

The countries comprising Latin America are Argentina, Brazil, Chile, Colombia, the Dominican Republic, Ecuador, Guatemala, Mexico, Peru, Uruguay, and Venezuela.

The countries comprising the Transition Economies are Albania, Armenia, Azerbaijan, Belarus, Bosnia, and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, the Kyrgyz Republic, Latvia, Lithuania, Macedonia (former Yugoslav Republic of), Moldova, Mongolia, Poland, Romania, Russia, Serbia and Montenegro, the Slovak Republic, Slovenia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.

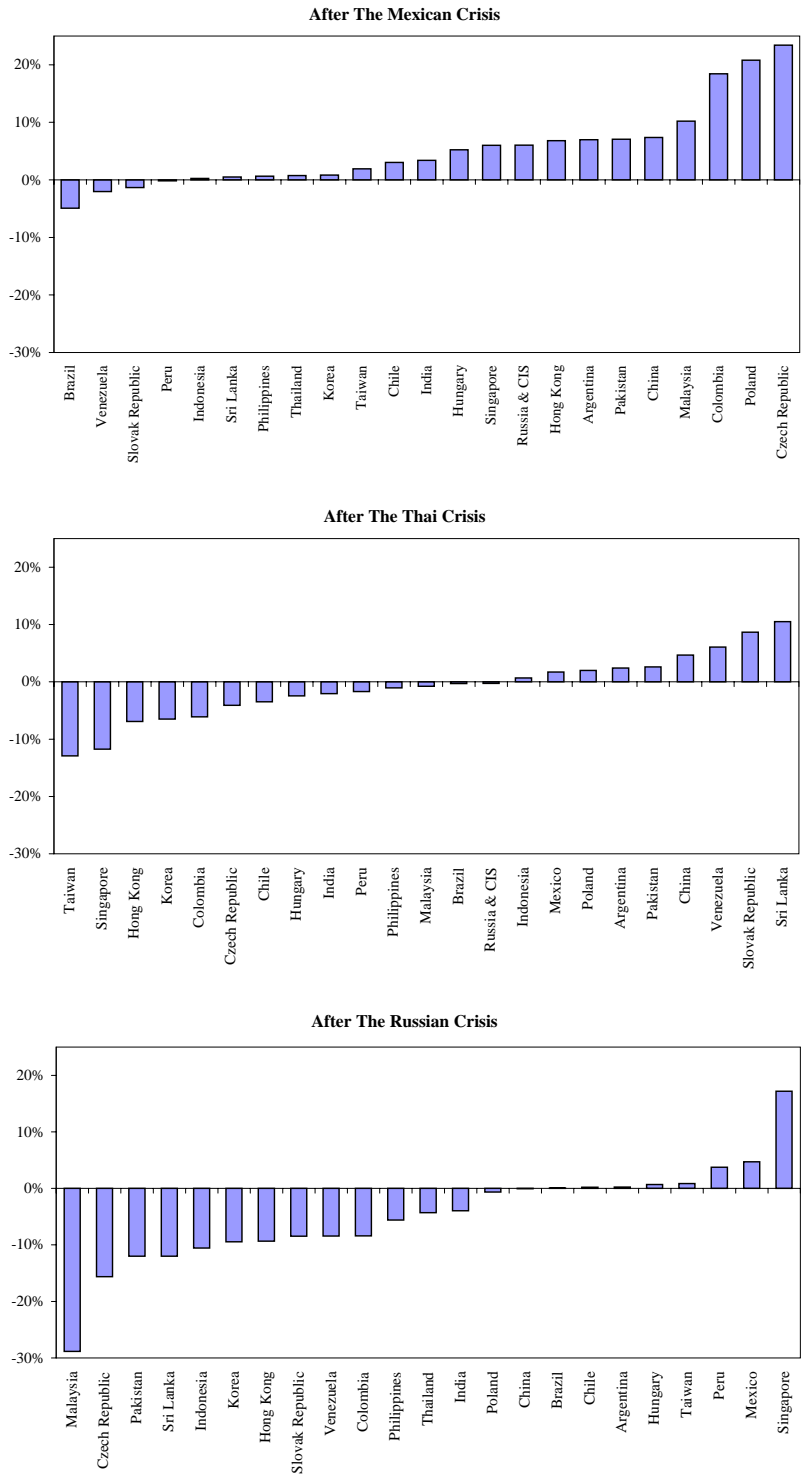
Source: World Economic Outlook.

**Figure 3**  
**Mutual Funds: Quarterly Flows to Emerging Countries**  
**(Billions of U.S. Dollars)**



Notes: Latin American countries include Argentina, Brazil, Chile, Colombia, Mexico, Peru, Venezuela.  
 Asian countries include China, Hong Kong, India, Indonesia, Korea, Malaysia, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand.  
 Transition economies include Czech Republic, Hungary, Poland, Russia & CIS, Slovak Republic.  
 Source: Kaminsky, Lyons, and Schmukler (2002).

**Figure 4**  
**Mutual Fund Flows: Global Spillovers**

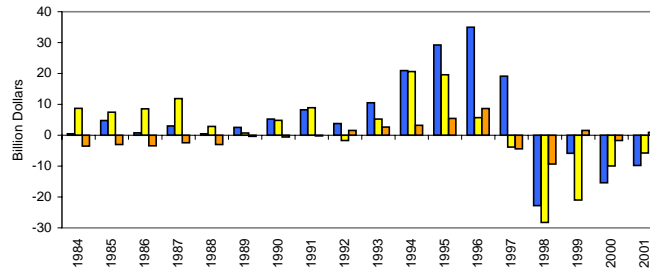


Notes : The Mexican crisis happened in late December of 1994. The Thai crisis erupted in July 1997. The Russian crisis began in August 1998. Mutual funds flows are the average net buying/selling (as percentage of the end of the preceding quarter holdings) in the two quarters following the outbreak of the crisis, relative to the sample average.

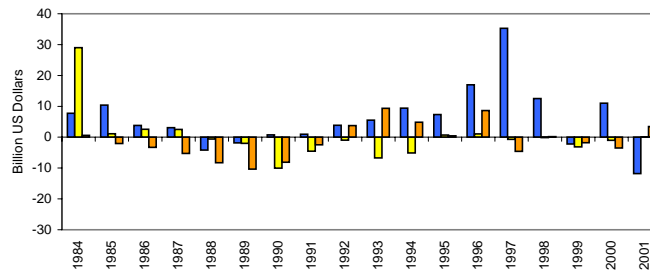
Source: Kaminsky, Lyons, and Schmukler (2002).

Figure 5

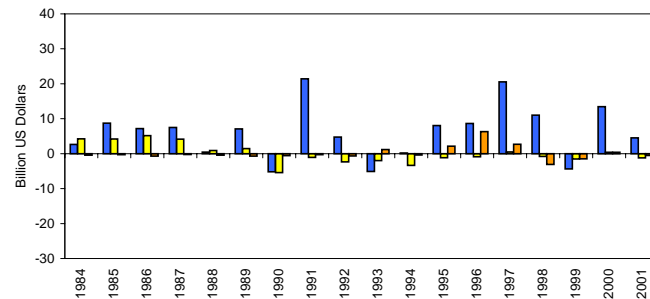
Bank Lending to Asia



Bank Lending To Latin America



Bank Lending to Transition Economies



■ European Banks   
 ■ Japanese Banks   
 ■ US Banks

Notes:

Asia includes Afghanistan, Armenia, Azerbaijan, Bangladesh, Bhutan, British Overseas Territories, Brunei, Cambodia, China, Fiji, French Polynesia, Georgia, India, Indonesia, Kazakhstan, Kiribati, the Kyrgyz Republic, Laos, Macau, Malaysia, the Maldives, Mongolia, Myanmar, Nauru, Nepal, New Caledonia, North Korea, Pakistan, Papua New Guinea, the Philippines, the Solomon Islands, South Korea, Sri Lanka, Taiwan, Tajikistan, Thailand, Tonga, Turkmenistan, Tuvalu, U.S. Pacific Islands, Uzbekistan, Vietnam, Wallis Futuna, and Western Samoa.

Latin America includes Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, The Dominican Republic, Ecuador, El Salvador, the Falkland Islands, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Paraguay, Peru, St. Lucia, St. Vincent, Surinam, Trinidad and Tobago, Turks and Caicos, Uruguay, and Venezuela.

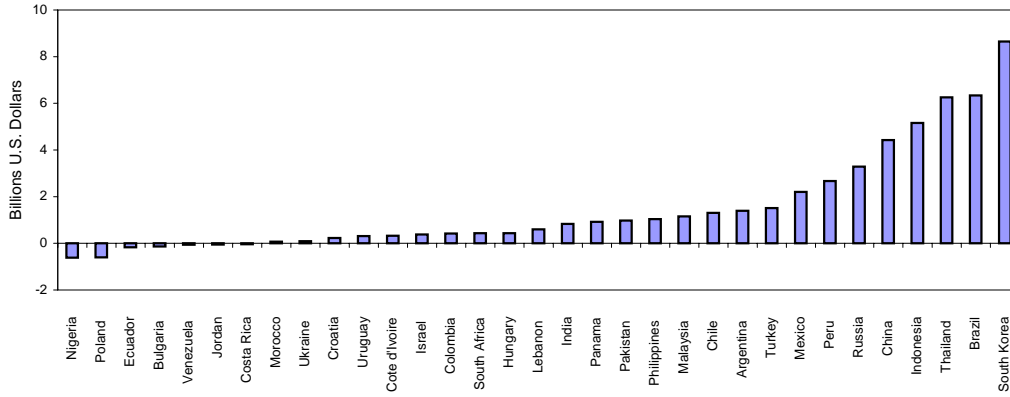
Transition Economies include Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, The Czech Republic, Czechoslovakia, Estonia, German Democratic Republic, Gibraltar, Hungary, Latvia, Lithuania, Macedonia, Malta, Moldova, Poland, Romania, Russia, the Slovak Republic, Slovenia, the Soviet Union, Turkey, the Ukraine, and Yugoslavia.

Source: Bank of International Settlements.

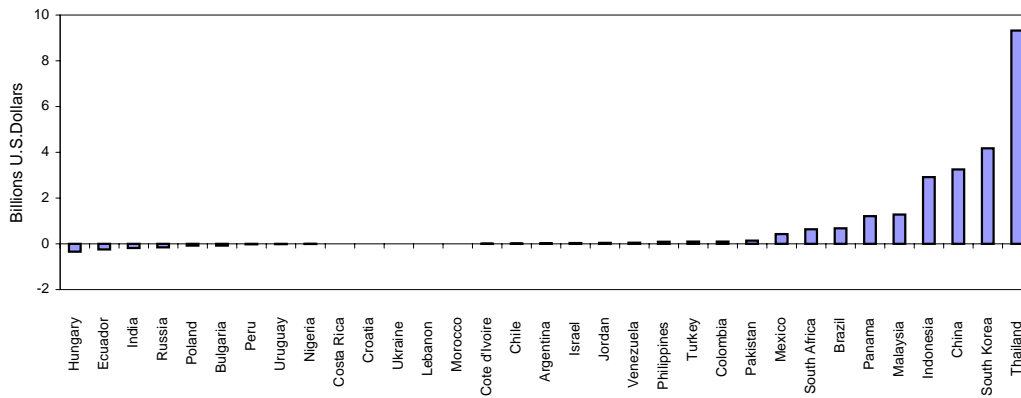
Figure 6

**Bank Flows: Global Spillovers  
After the Mexican Crisis: December 1994 - December 1995**

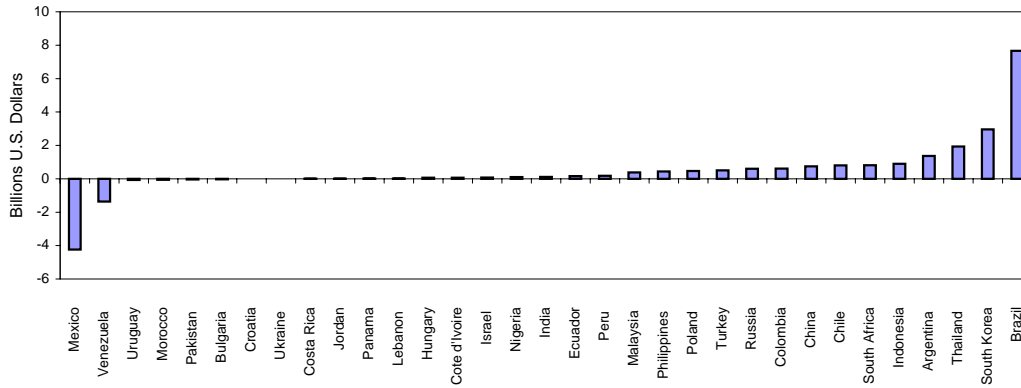
**European Banks**



**Japanese Banks**



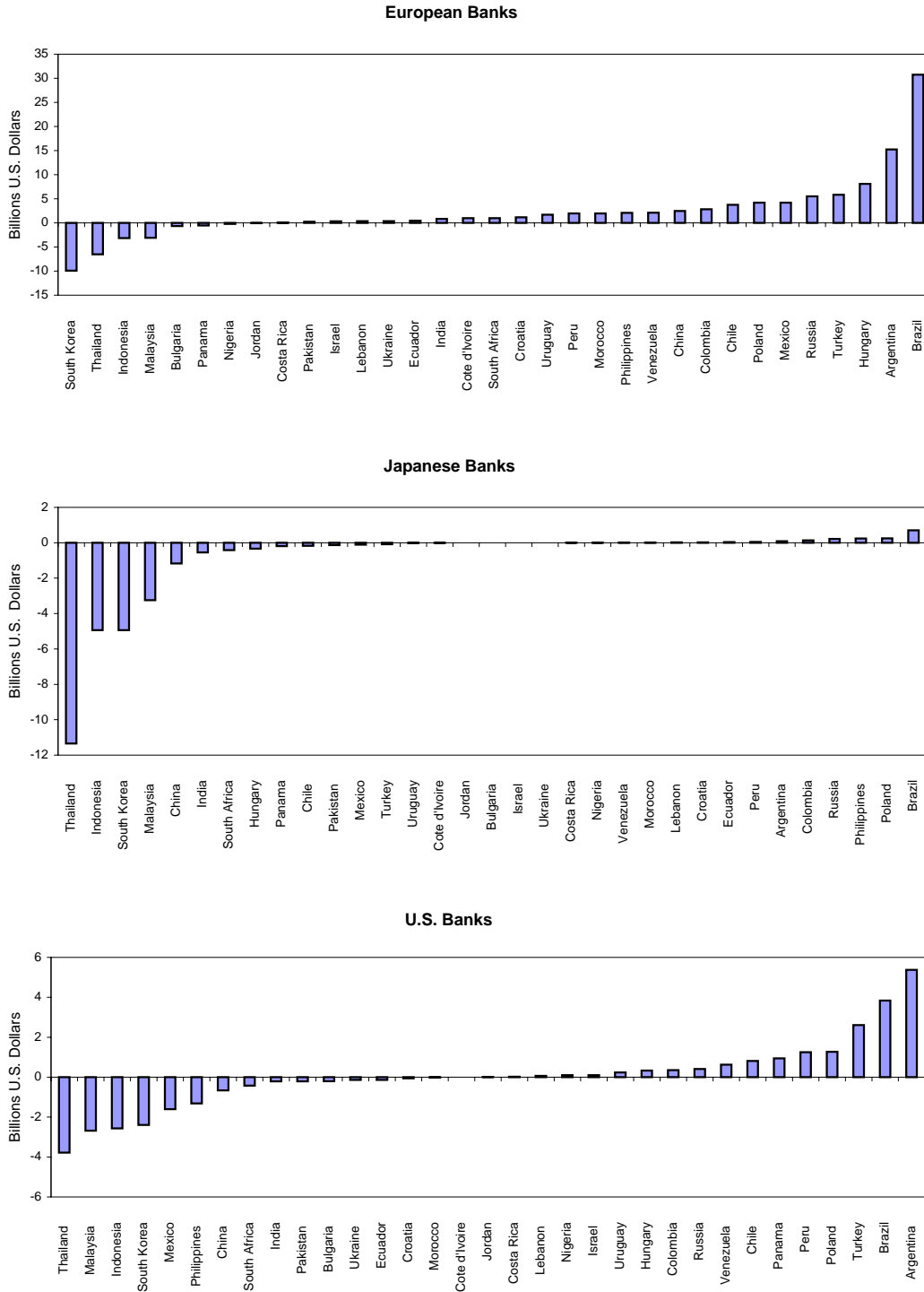
**U.S. Banks**



Source: Bank of International Settlements.

Figure 7

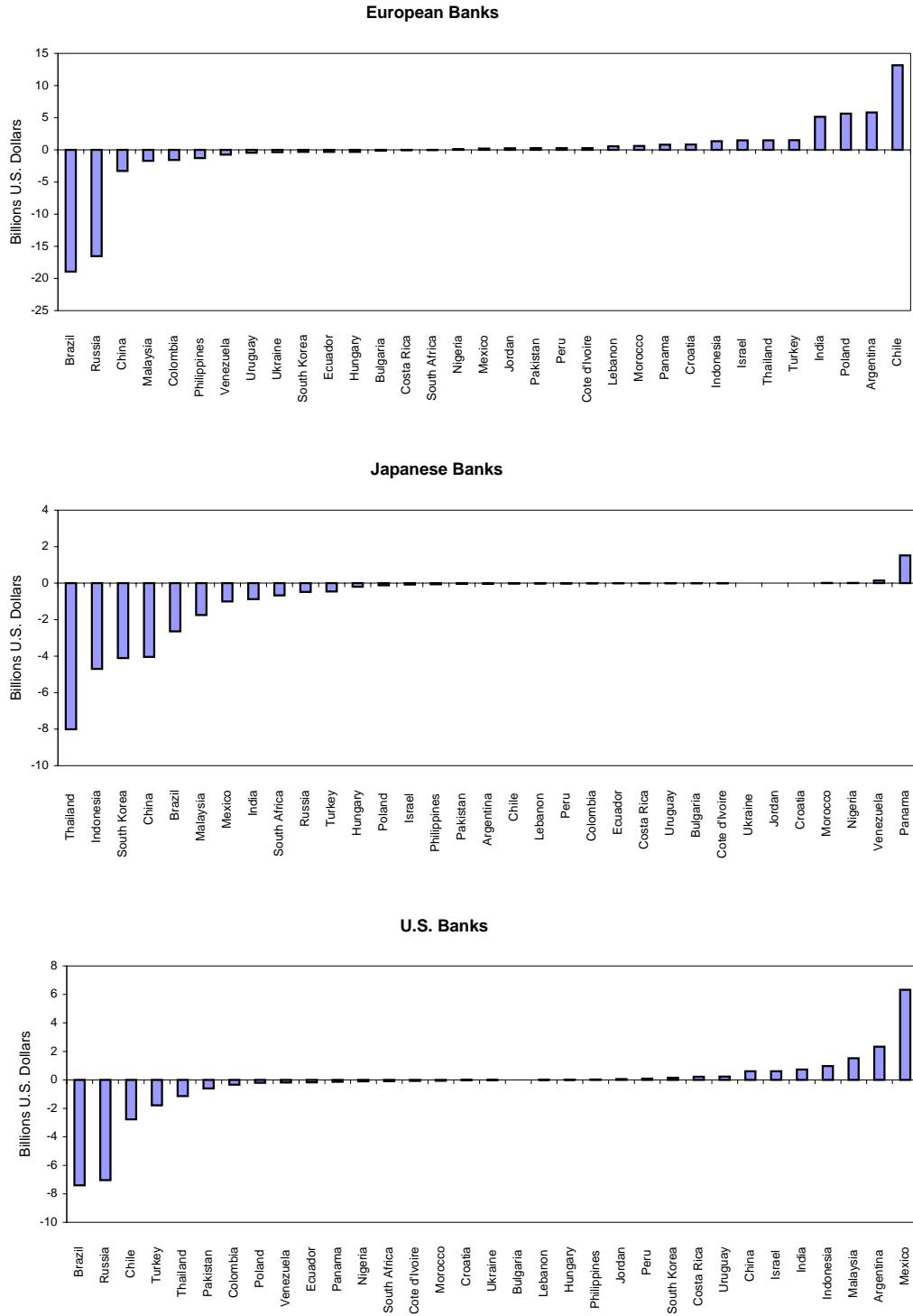
**Bank Flows: Global Spillovers  
After the Thai Crisis: June 1997 - June 1998**



Source: Bank of International Settlements.

Figure 8

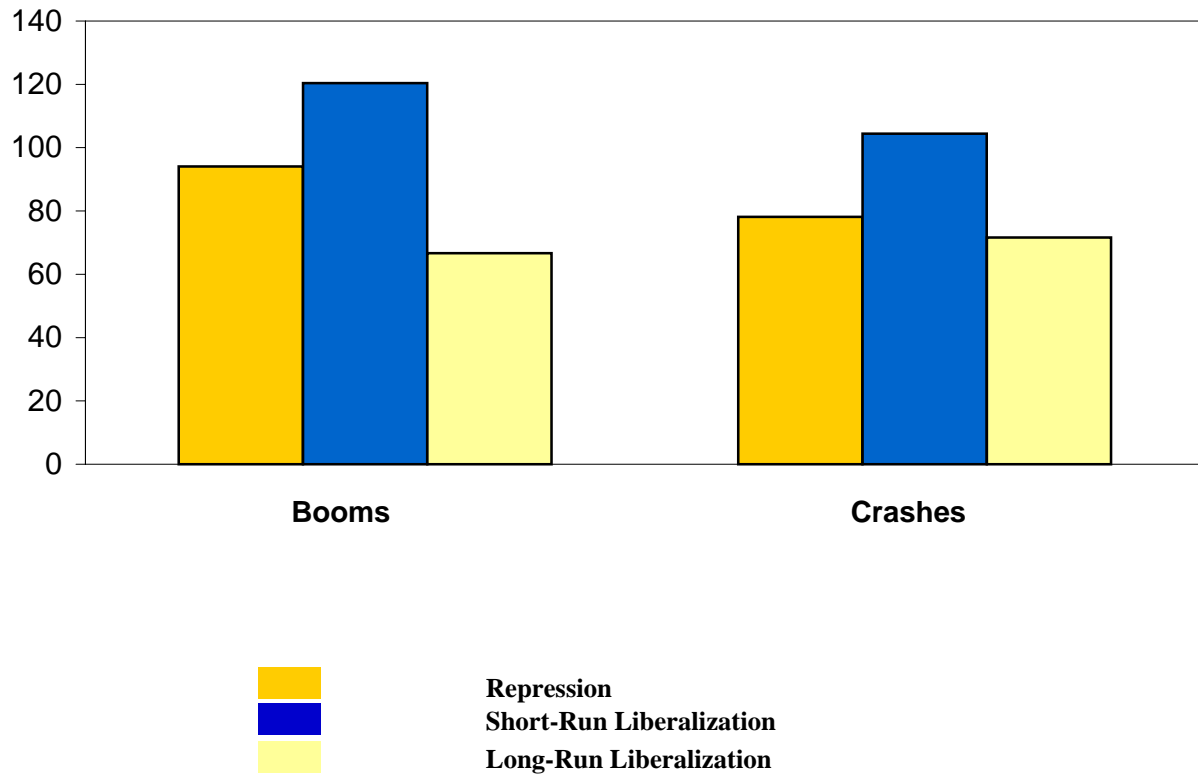
Bank Flows: Global Spillovers  
After the Russian Crisis: June 1998 - June 1999



Source: Bank of International Settlements

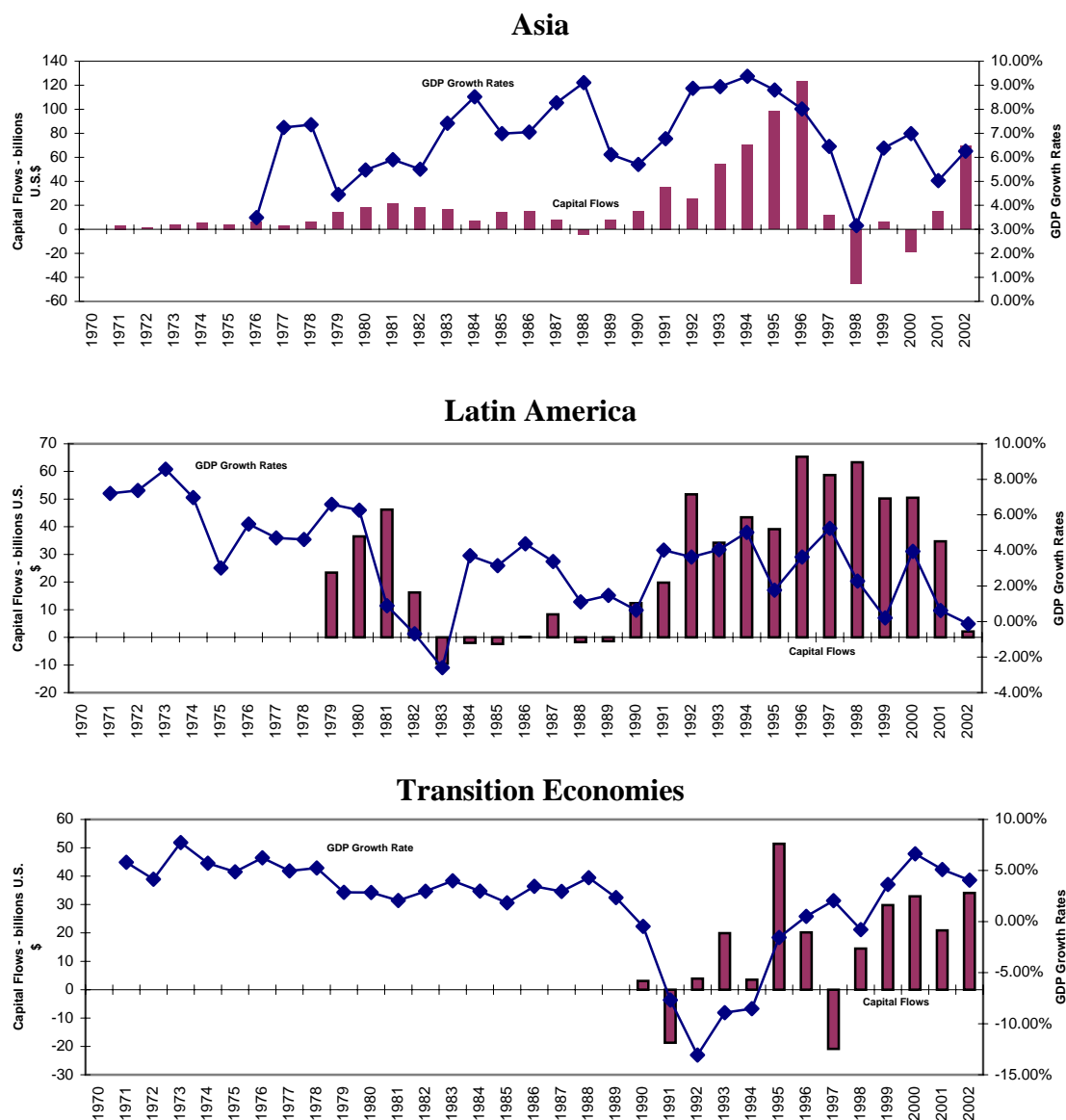


**Figure 9**  
**Average Amplitude of Booms and Crashes in Stock Prices in Emerging Markets**  
**(in percent)**



Source: Kaminsky and Schmukler (2002).

**Figure 10**  
**Private Capital Flows to Emerging Markets and GDP Annual Growth Rates**



Note: The countries comprising Asia are Bangladesh, China, Hong Kong SAR, India, Indonesia, Korea, Malaysia, Pakistan, the Philippines, Singapore, Taiwan Province of China, Thailand, and Vietnam.

The countries comprising the Transition Economies are Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, the Kyrgyz Republic, Latvia, Lithuania, Macedonia (former Yugoslav Republic of), Moldova, Mongolia, Poland, Romania, Russia, Serbia and Montenegro, the Slovak Republic, Slovenia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.

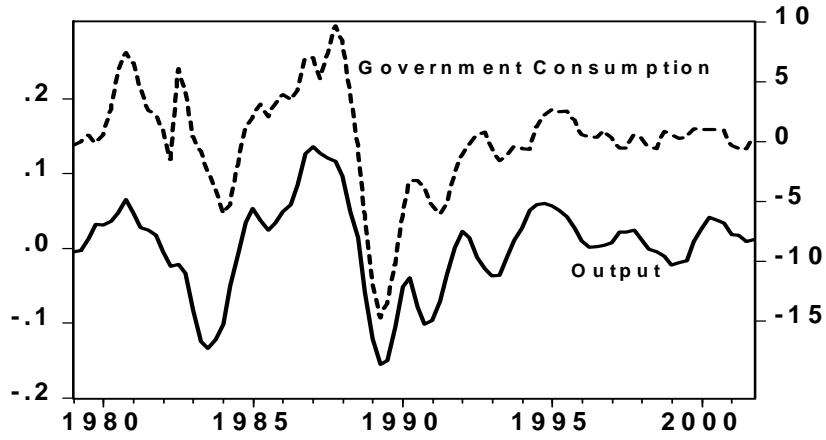
The countries comprising Latin America are Argentina, Brazil, Chile, Colombia, the Dominican Republic, Ecuador, Guatemala, Mexico, Peru, Uruguay, and Venezuela.

Source: World Economic Outlook

Figure 11

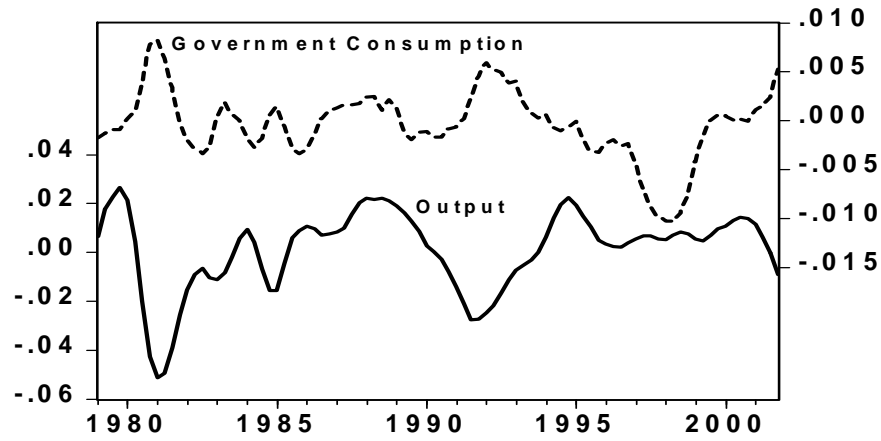
# Fiscal Policy and the Business Cycle

## Peru



Correlation: 0.83

## United Kingdom



Correlation: -0.44

Notes: These figures show the cyclical component of government consumption and GDP obtained using the band-pass filter. The correlations are the sample correlations.