Economic Fragility, Liquidity, and Risk: The Behavior of Mutual Funds during Crises

Graciela Kaminsky[♣]

Richard Lyons

Sergio Schmukler

Preliminary and Incomplete
This draft: January 29, 2000
Comments Welcome

Abstract

A myriad of currency crises have plagued the last decade of the 20th century. These crises were not confined to individual nations, or even regions. The Thai crisis engulfed—within days—Malaysia, Indonesia, and the Philippines. The Russian crisis spread as fast to countries as far apart as Brazil and Pakistan. Even developed countries have been affected, with the Russian default/devaluation reverberating in financial markets in the United States, Germany, and Great Britain. This study examines the role of mutual funds in spreading crises. It focuses on whether funds' flows are linked to emerging economies' degree of fragility, their capital-market openness and liquidity, and their level of country risk. It also examines in particular detail the behavior of U.S.-based Latin-American mutual funds, with special attention to the effects of redemptions on funds' management of their liquid positions. We find that economic fragility is not the only factor that triggers withdrawals. Liquidity is also important. In particular, faced by investor redemptions, mutual-fund managers tend to liquidate their most liquid positions.

[♣] Respective affiliations are George Washington University, UC Berkeley and NBER, and the World Bank. Respective e-mail addresses are: graciela@gwu.edu, lyons@haas.berkeley.edu, and sschmukler@worldbank.org.
We want to thank Andrew Berg and Caroline Van Rijckeghem for helping us in obtaining information on the state of fragility of the countries in the sample, as captured by their estimated probabilities of crises. We also want to thank the World Bank (East Asia and Pacific), Erik Sirri from the SEC, Konstantinos Tsatsaronis from the BIS, Ian Wilson from Emerging Market Funds Research, and Steve Webb for help with the data. For financial support we thank the NSF and the World Bank (Latin American Regional Studies Program and Research Support Budget). Finally, we thank Cicilia Harun and Francisco Vazquez for superb research assistance and Hairong Yu for the help with the political events data base.

I. Introduction

A myriad of currency crises have plagued the last decade of the 20th century. As speculative attacks led to the collapse of many long-standing pegs, the attacked countries were driven into some of the most severe recessions in modern times. Even countries that successfully defended their currencies were scarred by severe recession, due to the tight monetary conditions needed to fight the attacks. These crises have not been confined to national borders, nor have they been confined to a region. The Thai crisis engulfed—within days—Malaysia, Indonesia, and the Philippines. The Russian crisis spread as fast to countries as far apart as Brazil and Pakistan. Even developed countries have been affected, with the Russian default and devaluation reverberating in financial markets in the United States, Germany, and Great Britain.

Naturally, these events have triggered a hot debate about the seemingly contagious nature of crises. Much of this debate centers on the role of financial links, leading to an explosion of theoretical work on topics like investor herding, and the role of cross-market hedging or asymmetric information in propagating crises.[1] Still, empirical evidence on the role of financial links is skimpy at best. Most of the evidence concentrates on the behavior of prices, be it stock market prices, exchange rates, or interest rates. In particular, the focus has been on price comovements, and whether comovement differs across tranquil and crisis times.[2] The results are varied, with some episodes suggesting important spillovers across national borders, but with others mostly confined to an individual country.

To better understand the crises of the 1990s, some authors have concentrated on the behavior of investors. Following the attack of Malaysia's Prime Minister on "rogue international speculators" in September 1997, some studies examined whether foreign investors contribute to financial-market instability. For example, Choe, Kho, and Stulz (1999) studied the investment strategies of domestic and foreign investors in the Korean stock market, while Brown, Goetzman, and Park (1998) focus on the behavior of hedge funds in Malaysia.[3] But these studies cannot

[1] See, for example, Calvo and Mendoza (1998) and Calvo (1998).

[2] See, for example, Forbes and Rigobon (1998).

[3] In a similar vein, Frankel and Schmukler (1996) also study whether domestic and foreign investors behaved differently at the onset of the Mexican crisis and find that domestic investors were the first to attack the Mexican peso.

clarify the possibly contagious effects of investors' behavior because they examine the evolution of investors' portfolios in only a single country. This contagious effect of investors' behavior was brought into the spotlight in Kaminsky and Reinhart (1998), who focus on the role of international banks in the propagation of the currency crises in Latin America during the early 1980s, and in Asia during 1997. But banks are only one type of international investor, and as of late not even the most important one. The growth of portfolio flows to about 45 percent of total private flows to emerging economies in the early 1990s points to the need for understanding the role of other investors, such as mutual funds, pension funds, and hedge funds.

This study takes some first steps in understanding the role of mutual funds in the contagious nature of the crises of the 1990s.[4] In contrast to previous work on contagion that focuses on the behavior of prices (stock prices, interest rates, or exchange rates) around the globe, this paper studies mutual-fund transactions in emerging markets. It quantifies mutual-fund flows to emerging countries in the aftermath of three crises: the Mexican devaluation in 1994, the Thai baht devaluation in July 1997, and the Russian devaluation/default in August 1998. We examine whether funds' flows were linked to emerging economies' degree of fragility, their capital-market openness and liquidity, and their level of country risk. We also examine in particular detail the behavior of U.S.-based Latin-American mutual funds, with special attention to the effects of the stampede out of Latin America on the composition of the funds' portfolios. Did investor redemptions induce managers to liquidate their most liquid positions? The answer is yes.

The rest of the paper is organized as follows. Section II examines the changing nature of private flows to emerging economies and provides information on the importance of mutual funds in emerging markets. Section III examines the behavior of emerging-market mutual funds in crisis times and relates their behavior to market fundamentals in each country. Section IV examines how liquidity squeezes affect the investment strategies of Latin American mutual funds. Section V presents the conclusions.

[4] In a companion paper "Managers, Investors, and Crises: The Role of Mutual Funds in Emerging Markets" (Kaminsky, Lyons, and Schmukler (1999)), we examine the investment strategies of U.S. based Latin American mutual funds. See Frankel and Schmukler (1998) for another approach to studying mutual funds contagious behavior in the aftermath of the Mexican crisis. Interestingly, these authors find that the Mexican crisis spread to Asian economies via a financial center: New York stock exchange. See, also Borensztein and Gelos (1999).

II. A Brief History of Capital Flows and the Role of Mutual Funds

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 $41 billion 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 late 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.[5] While foreign direct investment constitutes the largest share of capital flow to Asia and Latin America, portfolio investment (bonds and equity) has also increased substantially, accounting for about 40 percent of total capital flows in the 1990s. In absolute values, bond and equity flows (excluding those counted as FDI) to each region increased from $1 billion in 1990 to $40 billion in 1996, with bond flows exceeding equity flows since 1994.

Again in the 1990s, as in the 1980s, booms have been 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 inflows resumed for most countries within six months, and returned to

[5] Data on capital flows are from the World Bank databases and from the World Bank publications *Private Capital Flows to Developing Countries* and *Global Development Finance*.

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 capital flows collapsed to a trickle. The reversal was similar in magnitude to the one after the Debt Crisis, with total capital inflows to Latin America declining about 35 percent and capital flows to Asia falling also about 35 percent.[6] The reversal of short-term portfolio flows (bonds, equities, and bank lending) was even more brutal, with flows in these categories declining about 60 percent in Latin America in 1998. Overall, bond and equity flows to Latin America declined from about 44 billion in 1996 to about 15 billion dollars in 1998. Bond and equity flows to Asia collapsed to 9 billion in 1998 from their peak of 38 billion in 1996.

Though net equity flows have declined from their peak in 1993 of about 27 billion dollars to Latin America and 21 billion dollars to Asia, the relative importance of mutual funds has grown substantially. For example, as shown in Table 1, dedicated emerging market equity funds held $21 billion in Latin American stocks by the end of 1995. By December 1997, their holdings had increased to $40 billion. Their participation in stock markets in Latin America (as a percentage of stock market capitalization) oscillates between 3 and 12 percent, which is comparable to the level of mutual funds' participation in developed markets.[7] While mutual funds growth in Asia has been less pronounced, the presence of mutual funds is also very important in a large number of countries. Overall, dedicated emerging market mutual funds held $77 billion in Asia at the onset of the crisis in December 1996. While mutual funds investment in transition economies is not comparable to that in Asia and Latin America, mutual funds growth in these latter countries has been remarkable. Mutual funds have even become big players in these markets with their positions reaching 20 percent of the market capitalization in Hungary and Poland. Interestingly, not all the countries have the same representation in mutual fund portfolios. Brazil, Mexico,

---

[6] During the Debt Crisis, capital inflows declined about 24 percent in the first year of the crisis and 53 percent in the second year.

[7] This is, in fact, a conservative estimate since we have included only the holdings of dedicated emerging market equity funds. This data base excludes the holdings of global funds, which account for a substantially larger share of the stock market capitalization of emerging markets (We are currently constructing a new data base that includes holdings of global mutual funds). In the U.S., the total holdings of mutual funds stands at about 15 percent of market capitalization

Hong-Kong, Korea, Malaysia, and Taiwan are the ones that are the most highly represented in mutual funds portfolios. On the opposite side of the spectrum, Colombia, Venezuela, and China are barely represented in the mutual funds portfolio.

III. The Behavior of Mutual Funds during Crises

Crises in the 1990s have not been confined to a country or even a region. In fact, the only consensus reached in the profession about the nature of crises is that crises are of a contagious nature, with currency turmoils engulfing countries as far apart as Argentina, the Czech Republic, and South Africa. Crises in the past have also been of a contagious nature, witness the debt crisis in 1982. But until very recently, contagion was more of a regional character. The 1990s changed that. While the Asian flu was mostly confined to south East Asia, it also triggered currency turmoils in Argentina, Mexico, and Chile. Moreover the speculative attack against the Hong Kong dollar in October 1997 rumbled around the globe, with even the stock market in the United States suffering sizable losses following the 15 percent fall of the Hang Seng index. The epidemic became more widespread following the Russian default in August 1998, with stock market prices in all industrial countries declining between 20 and 50 percent.

This section examines aggregate data of emerging markets mutual funds to evaluate their behavior in crisis times. This data set (provided by Emerging Market Funds Research, Inc) tracks the net cash flows of nearly 1,400 international emerging market equity funds, with an average position of about $120 billion in 1996. It covers both 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. Our data starts with the Mexican crisis and ends in March 1999. Thus, it includes observations on the major currency crises of the 1990s. Our goal is to examine the behavior of mutual funds after the outburst of speculative attacks against one country. We will study whether, following the initial crisis, mutual funds sell stocks in the countries with the most fragile economies or whether withdrawals are mostly associated with the desire of mutual fund managers to reduce their exposure to the crisis region even selling shares in countries with healthy economies. We will pay particular attention to the role of liquidity of financial markets in triggering mutual fund withdrawals from neighboring

countries. Our analysis will also focus on the role of capital account restrictions in fueling or restraining the extent of the financial market spillovers.

To have a broad perspective on the role of mutual funds in emerging markets, we first examine the dedicated-emerging market mutual funds net flows to Asia, Latin America, and transition economies. Figure 3 shows the average quarterly net flows to these regions from 1995 to 1999. On balance, mutual fund flows to emerging markets since 1995 have been muted, reaching about $ 20 billion, with booms in the capital flows being followed by pronounced reversals. Reversals were not persistent after the Tequila crisis. Outflows from Latin America reached about $4 billion in 1995, but mutual funds increased their positions in Latin America by about $2 billion 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, while flows to Transitions Economies remained stable throughout 1995-96. The picture changes after the outburst of currency turmoils in Asia. 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 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 in Asia and also in Latin America, with substantial outflows from transition economies

Figure 4 provides a higher resolution picture of the behavior of mutual funds in crisis times. 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 isolate the behavior of mutual funds in crisis times, we subtract the mean flow (also in percent of their initial positions) during all the 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. To convey more clearly the extent of the contagion across regions following the initial speculative attack, we organized the country data according to the degree of

severity of the outflows. Thus, for example, Malaysia was the country most affected in the aftermath of the Russian crisis, with abnormal outflows of approximately 30 percent.

As we discussed before, the repercussion of the three episodes of crises was dramatically 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 are basically all well below trend in the two quarters following the collapse of the Thai baht. Only flows to China, Pakistan, and Sri Lanka are 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 reaches 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 are the countries most affected in this episode, with sales averaging about 3 percent above average.

The flight away from emerging markets becomes 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 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.

III.1 On the Causes of Contagion

The financial crises of the 1990s in Europe, Mexico, Asia, Russia, and Brazil spread rapidly across countries. These events spawned a literature to make sense of the seeming "contagion." From the outset, however, it was clear that authors were using that term quite differently. While some authors have tried to uncover the fundamentals triggering contagion, others have tried to unmask the non-fundamental nature of contagion, be it rational or not. Fundamental-spillover contagion is the rapid transmission of an inside disturbance to multiple, economically interdependent countries. Among the fundamental-spillover contagion literature, some authors also include common-cause contagion. This is a case of an outside disturbance that is transmitted rapidly to multiple countries, for example, a hike in interest rates in industrial economies. Non-fundamental contagion is instead the rapid transmission of a disturbance to multiple countries beyond what is warranted by fundamentals (or after controlling for fundamentals). This second type is sometimes referred to as pure or true contagion.

Many authors focus on the first two types of contagion, those driven by fundamentals. For example, Eichengreen, Rose, and Wyplosz (1996) examine whether contagion is more prevalent among countries with either important trade links or similar market fundamentals. In the first case, devaluation in one country reduces competitiveness in partner-countries, prompting devaluations to restore competitiveness (fundamental-spillover contagion). In the second case, devaluation acts like a wake-up call: investors seeing one country collapsing learn about the fragility of “similar” countries, and speculate against those countries' currencies (common-cause contagion). The Eichengreen et al. (1996) evidence points in the direction of trade links rather than similar fundamentals. Corsetti et al. (1998) also claim that trade links drive the strong spillovers during the Asian crisis. Kaminsky and Reinhart (1998) focus instead on financial-sector links. In particular, they examine the role of common bank lenders and the effect of cross-market hedging (a type of common-cause contagion). They find that common lenders were central to the spreading of the Asian crisis (as they were to the spreading of the Debt Crisis of 1982).

The non-fundamental category of contagion has also attracted a lot of attention. On the theoretical side of this portion of the literature, the focus is on models of rational herding. For example, in the model of Calvo and Mendoza (1998), the costs of gathering country-specific information induce rational investors to follow the herd. In the model of Calvo (1998), uninformed investors replicate selling by liquidity-squeezed informed investors because the uninformed mistakenly (but rationally) believe these sales are signaling worsening fundamentals. Kodres and Pritsker (1999) focus on investors who engage in cross-market hedging of macroeconomic risks. In that paper, international market comovement can occur in the absence of any relevant information, and even in the absence of direct common factors across countries. For example, a negative shock to one country can lead informed investors to sell that country's assets and buy assets of another country, increasing their exposure to the idiosyncratic factor of the second country. Investors then hedge this new position by selling the assets of a third country, completing the chain of contagion from the first country to the third.

We now examine in detail this received wisdom, naturally, with particular attention to mutual funds behavior. To study why some countries were severely affected by mutual funds withdrawals but others were left unscathed, we catalogue different classes of fundamentals. Naturally, we expect that withdrawals will be larger in those countries with fragile economies. However, vulnerability is not necessarily the only factor influencing investors withdrawals from emerging markets. 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 flows reversals even when their economies looked far healthier than that of China. The explanation of this apparent paradox could run as follows. In the midst of turmoils, the liquidation of assets in an illiquid market, such as China, can dramatically magnify capital losses. That is why China's stock market did not suffer and Hong Kong, with deeper financial markets, had to fight a severe speculative attack when investors risk tolerance sharply declined as the economies in Asia fell like dominoes. Policy actions can also alert investors of future risks and prompt them to sell their portfolio in different countries. For example, the Malaysian Prime Minister attack against "rogue speculators" in 1997 alerted investors of future restrictions to capital mobility in Malaysia. These restrictions were in fact implemented in September 1998.

Even the implementation of restrictions to capital mobility may not deter and, in fact, may accelerate capital flight from a country. In what follows, we describe how we capture the effects of economic fragility, liquidity, and risk.

Economic Fragility

There is a burgeoning literature on measuring economic distress at the onset of crises. We follow Kaminsky (1998) and implement her measure of vulnerability. This measure is the probability of crisis conditional on the state of the economy and captures the presence of anomalous developments in the real, financial, and external sector, which have been shown to trigger currency crises. More precisely, the probability of crisis captures five different symptoms of crises:

First, this statistic captures vulnerability of the financial sector, which has been shown to trigger currency crises in Latin America in the 1980s, the Nordic countries in 1992, in Mexico in 1994, and more recently in Asia in 1997. There are two possible connections between banking and currency crises. One, discussed in Diaz Alejandro (1985) and Velasco (1987) argues that if central banks finance the bail-out of troubled financial institutions by printing money we have the classical story of a currency crash prompted by excessive money creation. Another possible link going from banking fragility to currency turmoils indicates that financial fragility may prevent the monetary authorities from implementing an interest rate defense of the peg so as not to precipitate a systemic bankruptcy of an already defunct banking sector. Again, according to this view, banking problems go hand in hand with devaluations and the depletion of foreign exchange reserves of the central bank. Since many of the banking problems have been linked to overlending cycles which generate consumption and asset market booms, as well as, exaggerated current account deficits (see, for example, McKinnon and Pill (1996)), stock market prices and banking credit are some of the indicators used in predicting crises.

Second, the Latin American style crises of the late 1970s point to fiscal and monetary problems. In this case unsustainable money-financed fiscal deficits lead to a persistent loss of international reserves and ultimately ignite a currency crash. Thus, a measure of loose monetary policy is also used as an indicator.

Third, current account problems are part and parcel of currency crises as investors fly emerging markets worried about the inability of emerging economies to pay back their mounting external debt. Thus, the real exchange rate, the trade account, and terms of trade data are included in this statistic of fragility of the economy.

Fourth, capital account problems are also at the core of financial crises. For example, a potential source of instability is that of sudden reversals in capital flows which trigger liquidity squeezes. Naturally problems complicate further in the presence of a large foreign debt. Mexico 1994 comes as an obvious example of the problems triggered by a concentration of the foreign debt at short maturities.

Fifth, recessions and the burst of asset price bubbles precede financial crises. See, for example, Calomiris and Gorton (1991). Thus, indicators related to the state of the business cycle are also included among the leading indicators of crises.

A total of 21 indicators are used following Kaminsky (1998) to capture economic distress. These univariate indicators are combined into a composite indicator of crises, which ranks univariate indicators according to their forecasting accuracy. Table 2 summarizes the symptoms observed at the onset of crises as well as the indicators on which this paper will focus to assess the dangers of financial crises.[8]

In order to identify those countries that are bound to have a crisis we use the conditional probabilities of crisis obtained in that paper. In particular, we classify a country as fragile if the probability of a crisis (conditional on the information of the composite indicator) is larger than 50 percent and healthy otherwise. Thus, the fragility variable dummy takes a value of one if the conditional probability is larger than 50 percent and zero, otherwise.

Liquidity

While the liquidity of markets has not been at the center of the discussion on currency crises, the finance literature has long recognized the importance of quite developed asset markets and many have studied the price effect of the liquidity premium. Most of the literature studying these effects has concentrated in the experiences in mature financial markets. So, for example,

many authors have examined the behavior of the on-the-run (newly-issued) versus off-the-run U.S. Treasury bond yields. Similar interest has not arisen in the literature on crises until lately. The collapse of the LTCM hedge fund in September 1998 and the closing of operations of the emerging market desk of several market makers following the Russian default brought to the spotlight the dangers of illiquid markets. For example, the vulnerability of LTCM was exacerbated because some of its portfolio consisted of illiquid financial instruments with no ready market. At that time, it became clear that any attempt by LTCM to contain its losses by liquidating its positions would put heavy pressure on prices and expose LTCM to even larger losses.[9]

To examine whether foreign investors may prefer to sell in liquid markets when they are reducing their exposure in emerging markets, we collect information on four measures. 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. Moreover, they may not care to sell in those countries since little of their portfolio is tied to the performance of that particular country. The third indicator dates the time when firms in emerging markets start to trade in mature financial markets. For example, volume traded in Latin America has sagged in the 1990s because major domestic firms are trading in the New York Stock exchange. Naturally, the liquidity of this market has also permeated the market for Latin American shares traded in New York.[10]

The fourth indicator captures the ability of investors to rapidly change their portfolio in a particular country. The more restrictions there are to capital mobility either in the form of

---

[8] Detailed definitions of all the variables and their sources are provided in Kaminsky (1998).

[9] See Edwards (1999) for an excellent analysis of the events of the fall of 1998 with particular attention to the collapse of LTCM.

[10] This indicator does not capture very well the depth of the ADR market for each country. While basically all Latin American and Asian countries have firms trading in the New York Stock Exchange, the number of Latin American firms trading in foreign markets far outweighs that of Asian firms. In the future draft of the paper, the indicator capturing trading in mature financial markets will try to capture the intensity of this trade.

outright prohibition to sell assets or a mere need to obtain an official approval to make a transaction, the smallest the odds of timing the market and of reacting to news, either fundamental or just rumors. Restrictions could be adding "sand in the wheel" of capital markets and thus are curtailing liquidity. To capture this measure of "lack of liquidity," we evaluate the restrictions of foreigners in accessing the stock markets in the countries in our sample. We look at whether there are restrictions to purchase domestic shares by foreign investors. We also look at the regimes concerning the repatriation of capital and dividends by foreign investors.

To identify liquid markets we 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 we classify countries 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. We create a third dummy that follows 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.[11] We collapse all this information 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. When this dummy takes a value of zero, it indicates illiquid markets and widespread restrictions in transactions in the stock market.

Risk

As mentioned, we also try to capture the political risk associated with a particular country. Expected changes in the government and uncertainty about the possible economic program to be implemented by the new authorities increase risk. That was the case in Indonesia in the aftermath

---

[11] We are still completing our data set on liquidity and restrictions to capital mobility. The information on capital restrictions is from Kaminsky and Schmukler (2000).

of the collapse of the Thai baht. Riots in the main cities in Indonesia were common in 1997 and 1998, with street demonstrations having the common goal of ousting the government. But risk is not just related to political instability. The inflammatory rhetoric of government officials against foreign investors may alert about future restrictions to repatriation of capital. Sometimes words are put into action, with governments imposing outright prohibitions to capital outflows in the midst of a crisis. Thus, we capture both manifestations of risk with two dummy variables: political risk and economic risk. The first risk dummy variable takes a value of one when it is expected a change of authorities and the financial press reports assessments of uncertainty about future policy actions. This dummy also takes a value of one if there is widespread social unrest. The second risk dummy takes a value of one if restrictions to capital mobility are imposed in response to the crisis. The information on political risk was obtained from Europa Yearbook. The information on capital account restrictions is from Kaminsky and Schmukler (2000).

Mutual Funds and Fundamentals in Three Episodes of Crises

Table A1 in the Appendix summarizes the fundamentals of the twenty-four countries in our sample from 1994 to 1998. The first column in this table provides the name of the country, the second column provides the state of fragility of the economy as summarized by the probability of crises.[12] The probability of crisis is the largest monthly probability of crisis in each year. So, for example, the probability of crisis of Thailand in 1997 peaked at 99 percent. The next four columns provide information on the liquidity of the stock market in each country. Column 2 provides information on the volume traded in billions of dollars, column 3 reports the share of each country in the mutual funds portfolio, column 4 indicates the time at which the shares of the domestic firms started to trade in foreign stock markets, and column 5 summarizes the restrictions of foreigners to access (entry and exit) the domestic stock market. Columns 6 and 7 summarize information on country risk: political instability (column 6) and economic risk as captured by the

---

[12] Our main source of information for the probabilities of crises is Kaminsky (1998). However, the sample countries in that paper does not span our sample. For the transition economies, Pakistan, and China we use the probabilities of crises estimated by Berg, Borensztein, and Patillo (1999). For Hong Kong, Singapore, and Taiwan, we use the estimates of vulnerability from Osband and Van Rijckeghem (1999). Also, all the assessments of fragility in 1998 are from the Berg, Borensztein, and Patillo or Osband and Van Rijckeghem .

adoption of new restrictions to capital mobility (column 7).[13] Each column also provides information on the dummy variable we create to assess the fundamentals of each country in the aftermath of each episode of crisis.

Tables 3-5 link the characteristics of the countries in the sample and mutual fund flows in the aftermath of the Mexican, Asian, and Russian crises. As we did in Figure 4, we organize the countries by the degree they were affected by mutual fund withdrawals. We do this by regions. So, for example, in the aftermath of the Russian crisis, Malaysia was the country that suffered the most drastic abnormal mutual fund outflows (mutual funds abnormal sales averaged about 30 percent of their portfolio). Thus, Malaysia is the top country among the countries in Asia in Table 5. The other columns report our dummy variables described in Table A1 as well as the average value of the liquidity indicator, the risk indicator, and the indicator characterizing the fundamentals of the economy at the onset of the crisis (that is the general average of the previous three dummy variables).

As we discussed before, the so-called Tequila crisis was confined to Latin America. The two countries that were severely affected by mutual funds withdrawals were Brazil and Venezuela. Interestingly, these were the only two countries in Latin America with vulnerable economies. Both countries had full blown-up banking crises, Venezuela had the classic symptoms of the overlending syndrome, with both domestic credit and the money multiplier growing substantially above the normal rates, and Brazil was starting to experience current account deterioration triggered by a substantial real exchange rate appreciation. These symptoms were similar to those observed in Mexico in 1994. Interestingly, in 1994, in the midst of the banking crisis, Venezuela abandons 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. We should also point out that Brazil, the country most affected by mutual funds withdrawals in this episode, has the most liquid financial market in the region. While it is extremely difficult to conclude that this was a fundamental factor affecting the flow reversal, it might certainly have influenced investors decisions on what assets to sell first when trying to reduce exposure to risk in Latin America.

---

[13] For 1994, column 7 summarizes information on initial restrictions as well as on any changes to those restrictions implemented in that year.

The aftermath of the Thai collapse is witness to more substantial flow reversals, with about seven countries suffering abnormal withdrawals of about 5 percent or more of their portfolio. The three countries most severely affected are Taiwan, Singapore, and Hong Kong, by far the economies with the most liquid and unrestricted financial markets. These economies did not show at that time any signs of fragility, yet, they were the worst performers when compared on the basis of mutual funds withdrawals. This evidence reinforces our previous analysis that the liquidity of the Brazilian financial markets may have been at the root of the mutual funds sales in the midst of the Tequila crisis. The next four most affected countries are Korea, Colombia, the Czech Republic and Chile. Interestingly, both the Czech Republic and Korea are among the top two most vulnerable countries in a sample of 25 countries during the Asian crisis (Thailand ranked fourth), and Colombia ranked sixth.[14] Again then, liquidity and economic fragility seem to be the triggers of mutual funds withdrawals.

The retrenchment from emerging markets following the devaluation and default in Russia was substantially broader-based compared to the two previous episodes. The picture, however, becomes more blurred. During the Tequila crisis and the Asian Flu, economic fragility or liquidity of financial markets were the key traits of the most adversely affected countries, not this time. While some liquid markets continue to suffer important withdrawals (like Hong Kong), other countries with liquid markets such as Taiwan and Brazil did not suffer losses. Identical phenomenon is observed in relation to economic vulnerability. Malaysia, Indonesia, Korea, and Thailand were still showing many signs of financial and real fragility. But while Thailand was not severely affected by the retrenchment from emerging markets, Malaysia suffered catastrophic losses. A perhaps common ingredient in those countries suffering the largest withdrawals was the increased perceived risk associated with the country. Reversals in the liberalization of the capital account (as in Malaysia in September 1998) or signs of political and social instability (as in Pakistan and Indonesia) may have fueled investors concerns of further threats to the safety of their investments. Naturally, the thought of even more future Russias triggered the liquidation of mutual fund position in those countries in which the rules of the game in international capital markets were thought about to change. At this point, however, this still remains a mere speculation and awaits more evidence from the behavior of other institutional investors.

---

[14] See, Goldstein, Kaminsky, and Reinhart (2000).

IV. Liquidity Squeezes and the Behavior of Latin American Mutual Funds

In the previous section, we examined the behavior of mutual funds in emerging markets. However, we only looked at the country-composition of mutual fund positions in three different regions and whether they were affected by the idiosyncracies of each country. In that section, we did not try to unravel mutual managers' decisions from investors' decisions. Obviously, the decision about from which country to withdraw is the managers' decision.[15] However, the size of the withdrawals is influenced by investors' decision about whether to invest or not in emerging markets. The size of the withdrawals is also affected by mutual fund managers. Mutual funds hold part of their positions in liquid assets, such as U.S. Treasury bills and bonds. These holdings of highly liquid assets allow managers to meet redemptions without the need to liquidate profitable assets in emerging markets. However, managers' actions can also reinforce the effect of investors' actions in emerging markets if managers increase their holdings of liquid positions in times of general retrenchment from equity markets in emerging markets. In this last case, volatility in emerging markets may be far more pronounced compared to the situation in which managers used liquid positions as a buffer stock. These issues are going to be the focus of this section. One caveat: Our data will not allow us to have a full blown up picture of liquidity squeezes and mutual fund managers behavior because we do not have information on mutual funds credit lines with banks and whether mutual funds mired in redemptions did resort to use those credit lines.

To examine these issues, we now look at the reports on holdings of individual mutual funds. Since our previous data bank on emerging markets mutual funds does not provide this information, we restrict our study to U.S. based Latin American mutual funds[16]. Our data on mutual-fund holdings come from two sources. The first source is the U.S. Securities and Exchange Commission (SEC). Mutual funds are required to report holdings to the SEC twice a year. The second source is Morningstar. Morningstar conducts surveys of mutual fund holdings at

[15] Investors obviously determine the withdrawals in country funds.

[16] For a detailed analysis of the investment strategies of U.S. based Latin American mutual funds see Kaminsky, Lyons and Schmukler (1999).

a higher frequency: quarterly surveys are the norm for most funds. For our purposes, quarterly data are available from Morningstar for about 50% of the funds we examine.

Our sample includes the holdings of 13 Latin America equity funds (open-end) from April 1993 to January 1999 (24 quarters). Those funds are Fidelity Latin America, Morgan Stanley Dean Witter Institutional Latin America, Van Kampen Latin America (formerly Morgan Stanley), BT Investment Latin America Equity, TCW Galileo Latin America Equity, TCW/Dean Witter Latin America Growth, Excelsior Latin America, Govett Latin America, Ivy South America, Scudder Latin America, T. Rowe Price Latin America, Merrill Lynch Latin America, and Templeton Latin America.[17] Not all of these funds existed from the beginning of our sample; on average we have about 10 quarters of data (out of a possible 24) per fund.

Figure 5 shows the evolution of the net asset position of the 13 mutual funds. Three of the mutual funds in the sample are quite large, with holdings reaching about $500 million in 1997. These funds are Fidelity, Merril Lynch, and Scudder. There are two funds of intermediate size, T. Rowe Price and TCW/Dean Witter, with holdings peaking at about $200 million. The other nine funds are much smaller in size with net assets peaking at most at $50 million. For most of the funds, the value of total assets peaks in 1997. From their peak, the value of assets of most funds drop to about a half towards the end of 1998. The net asset position of these funds only starts to recover in the last quarter of our sample, QI 1999.

The protracted fall in the net asset positions of mutual funds reflects the pronounced decline in stock prices in emerging economies since July 1997. Still a large part of this decline is not explained by prices alone. Investors' massive withdrawal from emerging markets starting in 1997 is also behind the fall in asset holdings as mutual fund managers had to liquidate assets to meet redemptions. Figure 6 reports the evolution investors injections/redemptions into/from mutual funds. Injections (redemptions) are measured by the percentage increase (decline) in the number of shares of each mutual fund. The fortunes of mutual funds were quite different over the course of the 1990s. In one extreme, Morgan Stanley did not suffer major redemptions until 1998. Merril Lynch suffered pronounced redemptions even in 1996 and 1997. In some quarters

[17] There are 25 U.S. based Latin American mutual funds in total. The mutual funds in our sample hold 80 percent of all the assets of the universe of mutual funds.

redemptions for some of the mutual funds reached about 70 percent (Morgan Stanley). Overall, 1998 was a year of severe drain of liquidity for the Latin American mutual funds industry.

Table 6 examines managers decisions about short-term positions. The first row shows average short-term positions for all mutual funds. On average, all mutual funds hold approximately 5 percent of their assets in liquid positions in the period examined. Interestingly, short-term positions do not change as funds experience redemptions or injections. The next three rows examine in more detail short-term positions according to the size of the mutual fund. Again, we also examine whether the size of the liquid positions changes according to whether mutual funds suffer redemptions or experience injections. For the period examined, it is the large funds the ones that hold a larger share of their positions in liquid assets. This evidence is somewhat unexpected because these are the funds that are likely to have better access to bank credit lines and thus do not need to hold large liquid positions. With respect to the funds behavior in times of redemptions and in times of injections, both large and small mutual funds hold smaller liquid positions in times of redemptions, indicating that fund managers' behavior has helped to smooth the effects of investors' withdrawals on equity markets in Latin America. In contrast, medium-size funds hold more liquid assets in times of redemptions, thus magnifying investors withdrawals from emerging markets.

V. Conclusions

The crises of the 1990s have spawned a vigorous literature on the contagious nature of financial crises. Most of this literature has focused on financial-market imperfections, and how these imperfections lead to herding behavior and financial cycles that are unrelated to market fundamentals. Surprisingly little empirical research attempts to link the actions of investors to country-specific characteristics. Our research addresses this gap in the literature. In contrast to studies that emphasizes herding behavior unrelated to market fundamentals, we find that mutual-fund managers take account of the characteristics of countries' economies and financial markets when deciding whether to adjust their exposure to those countries. Interestingly, economic fragility is not the only factor triggering withdrawals from emerging economies—the decision to withdraw depends crucially on liquidity. Thus, the countries most affected by financial-market

turmoil either had vulnerable economies or had highly liquid financial markets. Brazil (1994), Colombia (1997) and (1998), the Czech Republic (1997), Mexico (1994), Malaysia (1997), and Korea (1997), were in the first category. In all cases the odds of crisis skyrocket in the months preceding the flow reversals. Brazil (1994), Hong Kong (1997) and (1998), Singapore (1997), Taiwan (1997) are in the second category. These countries have the most liquid markets in the region. As investors began to pull out of emerging markets, these were the countries that suffered the most.

There is still much research ahead, relating in particular to fund managers' decisions about their most liquid positions. We are in the process of collecting additional data on fund portfolios and emerging-economy characteristics that should help complete this important dimension of the crisis picture.

References

Borensztein, E., A. Berg, G. Milessi-Feretti, and C. Patillo, 1999, "Anticipating Balance of Payments Crises: The Role of Early Warning Systems," IMF Occasional Paper.

Borensztein, E. and Gelos, 1999, "A Panic-Prone Pack? The Behavior of Emerging Market Mutual Funds," IMF.

Brown, S., W. Goetzmann, and J. Park, 1998, "Hedge Funds and the Asian Currency Crisis of 1997," NBER Working Paper 6427, February.

Calomiris, C. and G. Gorton, 1991, "The Origins of Banking Panics: Models, Facts, and Bank Regulation," in Hubbard, R. Glenn, ed., Financial markets and financial crises, *University of Chicago Press*, pp. 109-73.

Calvo, G., 1998, "Capital Market Contagion and Recession: An Explanation of the Russian Virus," University of Maryland working paper.

Calvo, G., and E. Mendoza, 1998, "Rational Herd Behavior and the Globalization of Securities Markets, University of Maryland working paper.

Choe, H., B. Kho, and R. Stulz, 1999, "Do Foreign Investors Destabilize Stock Markets? The Korean Experience in 1997," typescript, Ohio State University, January

Corsetti, G., P. Pesenti, N. Roubini, and C. Tille, 1998, "Structural Links and Contagion Effects in the Asian Crisis: A Welfare Based Approach," New York University working paper. University of Michigan, Business School.

Diaz Alejandro, 1985, "Good Bye Financial Repression, Hello Financial Crash," *Journal of Development Economies.*

Edwards, F., 1999, "Hedge Funds and the Collapse of LTCM," *Journal of Economic Perspectives,* October.

Eichengreen, B., and D. Mathieson, 1998, "Hedge Funds and Financial Market Dynamics," Occasional Paper No. 166.

Eichengreen, B, A. Rose, and C. Wyplosz, 1996, "Contagious Currency Crises," NBER working paper No. 5681.

Forbes, K., and R. Rigobon, 1998, "No Contagion, Only Interdependence: Measuring Stock Market Co-movements," typescript, MIT Sloan School, November.

Frankel, J. and S. Schmukler, 1996, "Country Fund Discounts and the Mexican Crisis of December 1994: Did Local Residents Turn Pessimistic Before International Investors?" *Open Economies Review,* Vol. 7.

Frankel, J., and S. Schmukler, 1998, "Crisis, Contagion, and Country Funds," in R. Glick, ed., *Managing Capital Flows and Exchange Rates* (Cambridge University Press).

Glick, R., and A. Rose, 1998, "Contagion and Trade: Why are Currency Crises Regional?" NBER Working Paper 6806, November.

Goldstein, M., G. Kaminsky, and C. Reinhart, 2000, "Assessing Financial Vulnerability: An Early Warning System for Emerging Markets," IIE.

Kaminsky, G., 1998, "Currency and Banking Crises: The Early Warnings of Distress," International Finance Discussion Paper No. 629, Board of Governors of the Federal Reserve System.

Kaminsky, G. and C. Reinhart, 1999, "On Crises, Contagion, and Confusion," George Washington University Working Paper, forthcoming *Journal of International Economics*.

Kaminsky, G. and C. Reinhart, 1999, "The Twin Crises: Causes of Banking and Balance of Payments Problems," *American Economic Review*, June.

Kaminsky, G., R. Lyons, and S. Schmukler, 1999, "Managers, Investors, and Crises: Mutual Fund Strategies in Emerging Markets," December.

Kaminsky, G. and S. Schmukler, 2000, "Domestic and External Financial Liberalization: A Chronology for 28 Emerging and Mature Financial Markets, 1973-1999," in progress.

Kodres, L., and M. Pritsker, 1999, "A Rational Expectations Model of Financial Contagion," typescript, International Monetary Fund and Board of Governors of the Federal Reserve System, May.

McKinnon, R., and H. Pill, 1997, "Credible Economic Liberalizations and Overborrowing." *American Economic Review*.

Osband, K. and C. Van Rijckeghem, 1999, "Safety from Currency Crashes," manuscript IMF.

Rigobon, R., 1998, "Informational Speculative Attacks: Good News is No News," typescript, MIT, January.

Velasco, A., 1987, "Financial Crises and Balance of Payments Crises," Journal of Development Economics, 27:263-83.

World Bank, 1997, *Private Capital Flows to Developing Countries*, World Bank Policy Research Report.

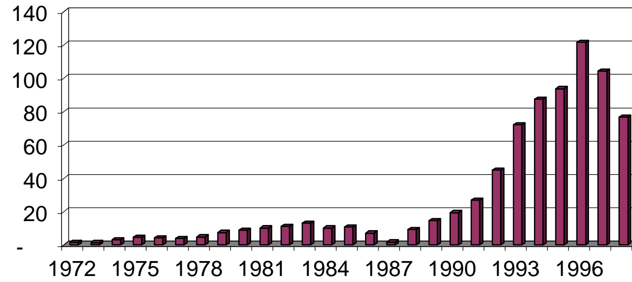
World Bank, 1998, *East Asia: The Road to Recovery*, Washington, DC.

World Bank, 1998, *Global Development Finance*, Washington, DC.

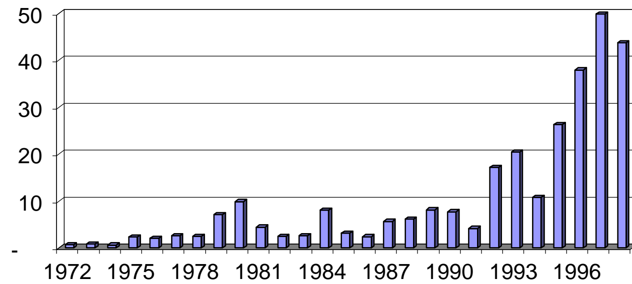
World Bank, 1998, *Global Economic Perspectives*, Washington, DC.2

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

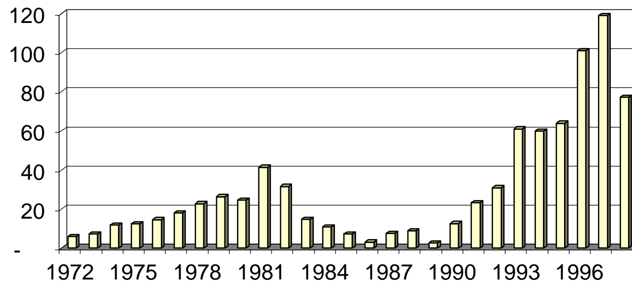
East Asia & Pacific



Eastern Europe & Central Asia



Latin America & Caribbean



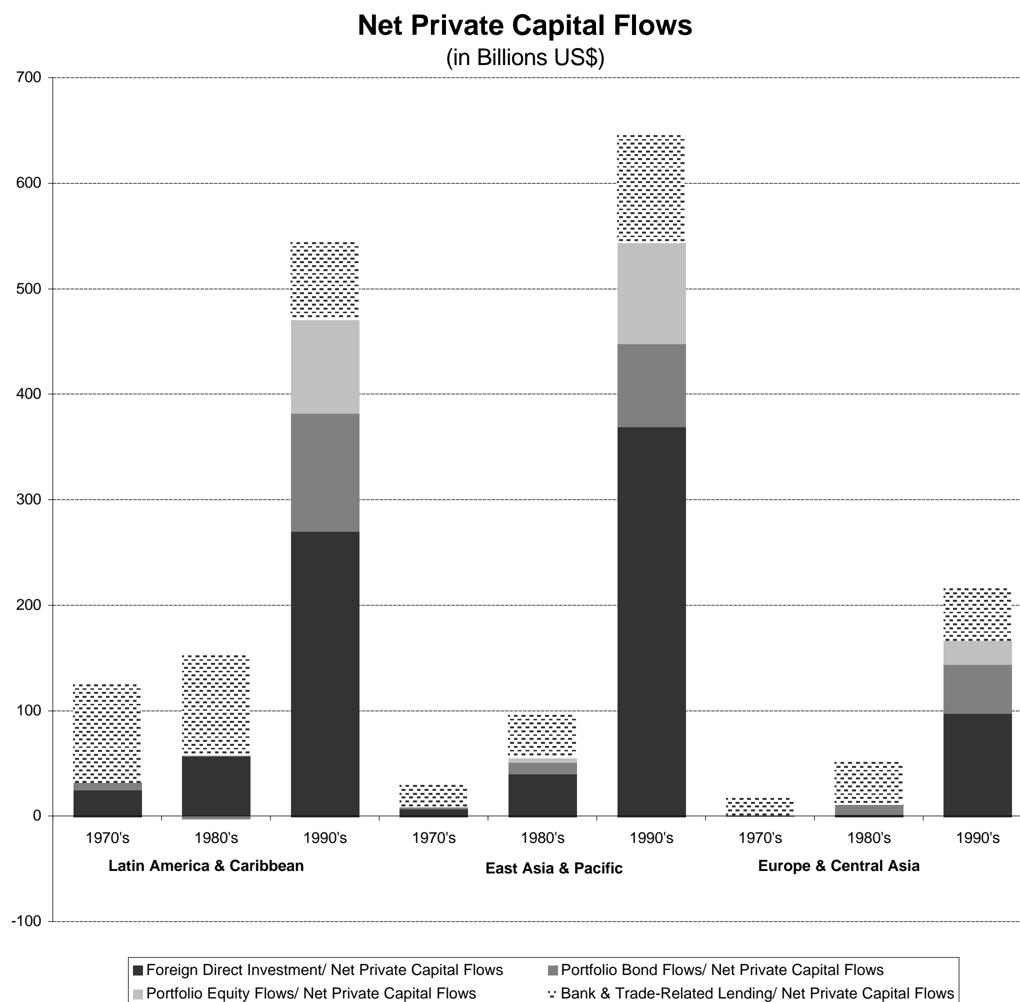
Note: The countries comprising Latin America & Caribbean are Antigua and Barbuda, Argentina, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guadeloupe, Guatemala, Guyana, Ha Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela

The countries comprising East Asia & Pacific are American Samoa, Cambodia, China, Fiji, Indonesia, Kiribati, Korea, Dem. Rep., Lao PDR, Malaysia, Marshall Islands, Micronesia, Fed. Sts., Mongolia, Myanmar, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Thailand, Tonga, Vanuatu, Vietnam

The countries comprising Europe & Central Asia are Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Cro Czech Republic, Estonia, Georgia, Hungary, Isle of Man, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Macedonia FYR, Moldova Poland, Romania, Russian Federation, Slovak Republic, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan, Yugoslavia FR (Serbia/Montenegro)

Source: The World Bank

Figure 2
Net private capital flows to developing countries
(Billions of US$)



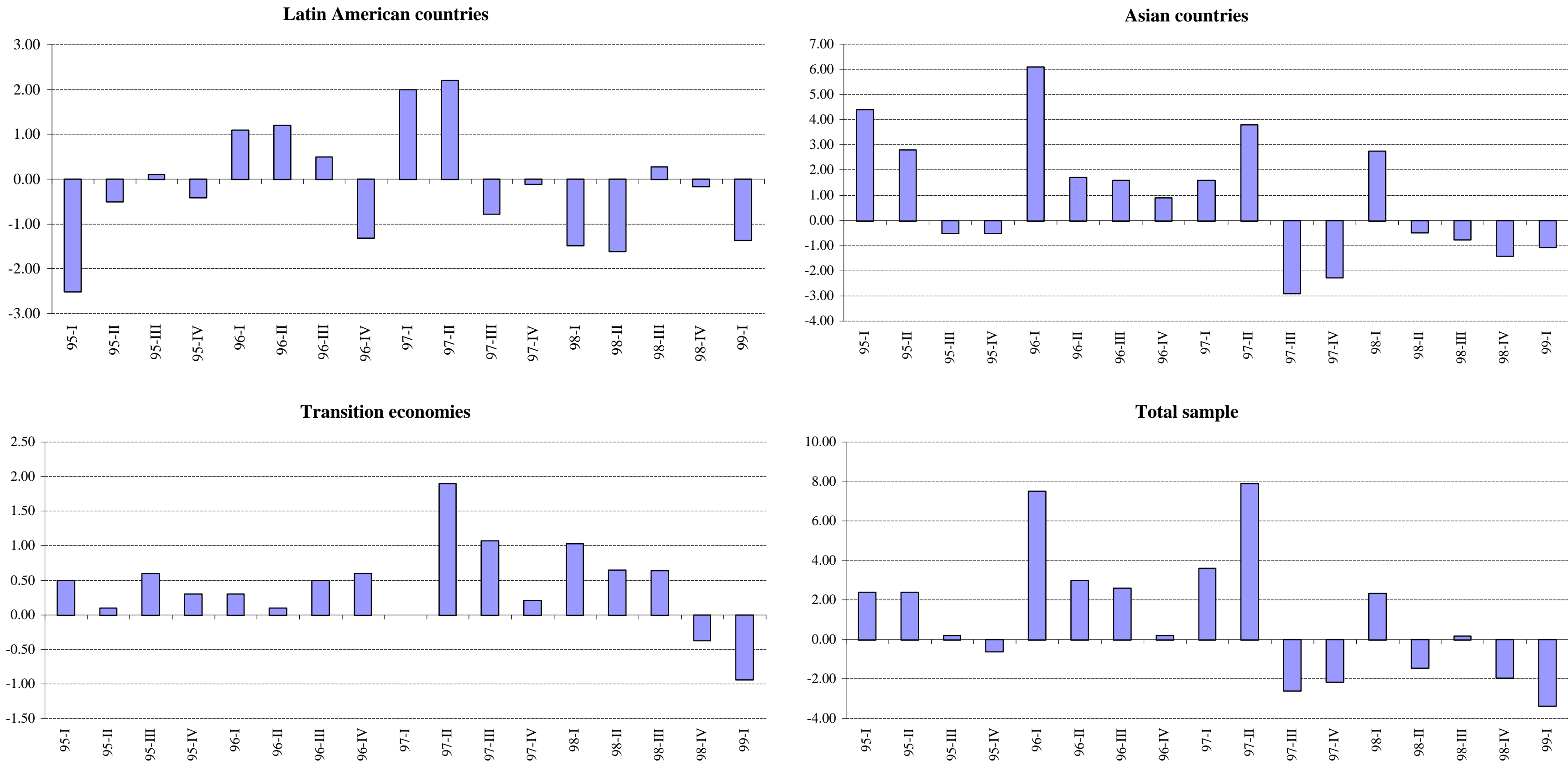
Note: The countries comprising Latin America & Caribbean are Antigua and Barbuda, Argentina, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela

The countries comprising East Asia & Pacific are American Samoa, Cambodia, China, Fiji, Indonesia, Kiribati, Korea, Dem. Rep., Lao PDR, Malaysia, Marshall Islands, Micronesia, Fed. Sts., Mongolia, Myanmar, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Thailand, Tonga, Vanuatu, Vietnam

The countries comprising Europe & Central Asia are Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Isle of Man, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Macedonia FYR, Moldova, Poland, Romania, Russian Federation, Slovak Republic, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan, Yugoslavia FR (Serbia/Montenegro)

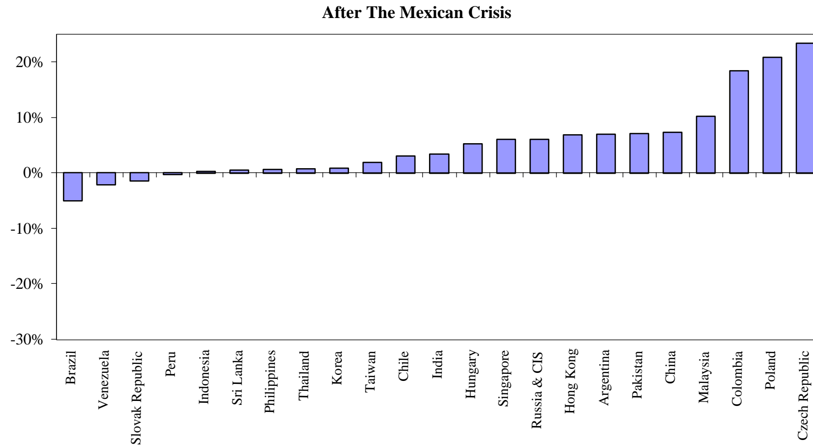
Source: The World Bank

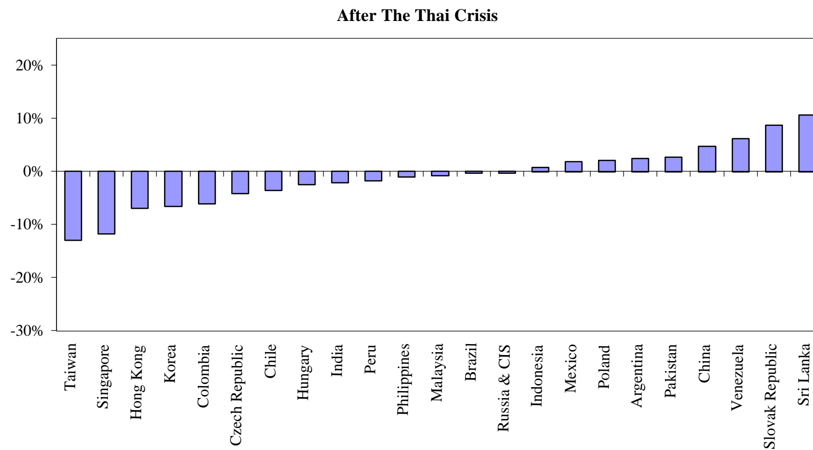
Figure 3
Mutual Funds: Quaterly Flows to Emerging Countries
(Billions of U.S. Dollars)

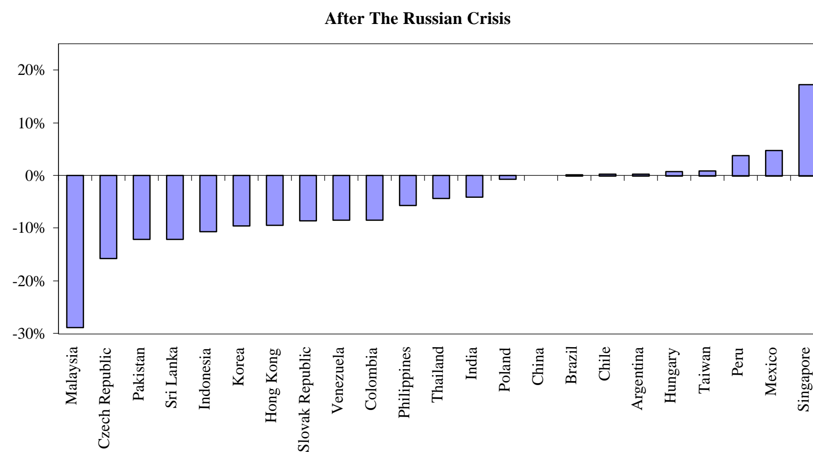


Notes: Latin American countries include Argentina, Brazil,,Chile, Colombia, Mexico, Peru, Venezuela.
Asian countries include China, Hong Kong, India, Indonesia, Korea, Malaysia, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand.
Transition economies include Czech Republic, Hungary, Poland, Russia & CIS, Slovak Republic.
Source: S&P Micropal Emerging Market Fund Monitor.

Figure 4
Mutual Fund Flows
Global Spillover





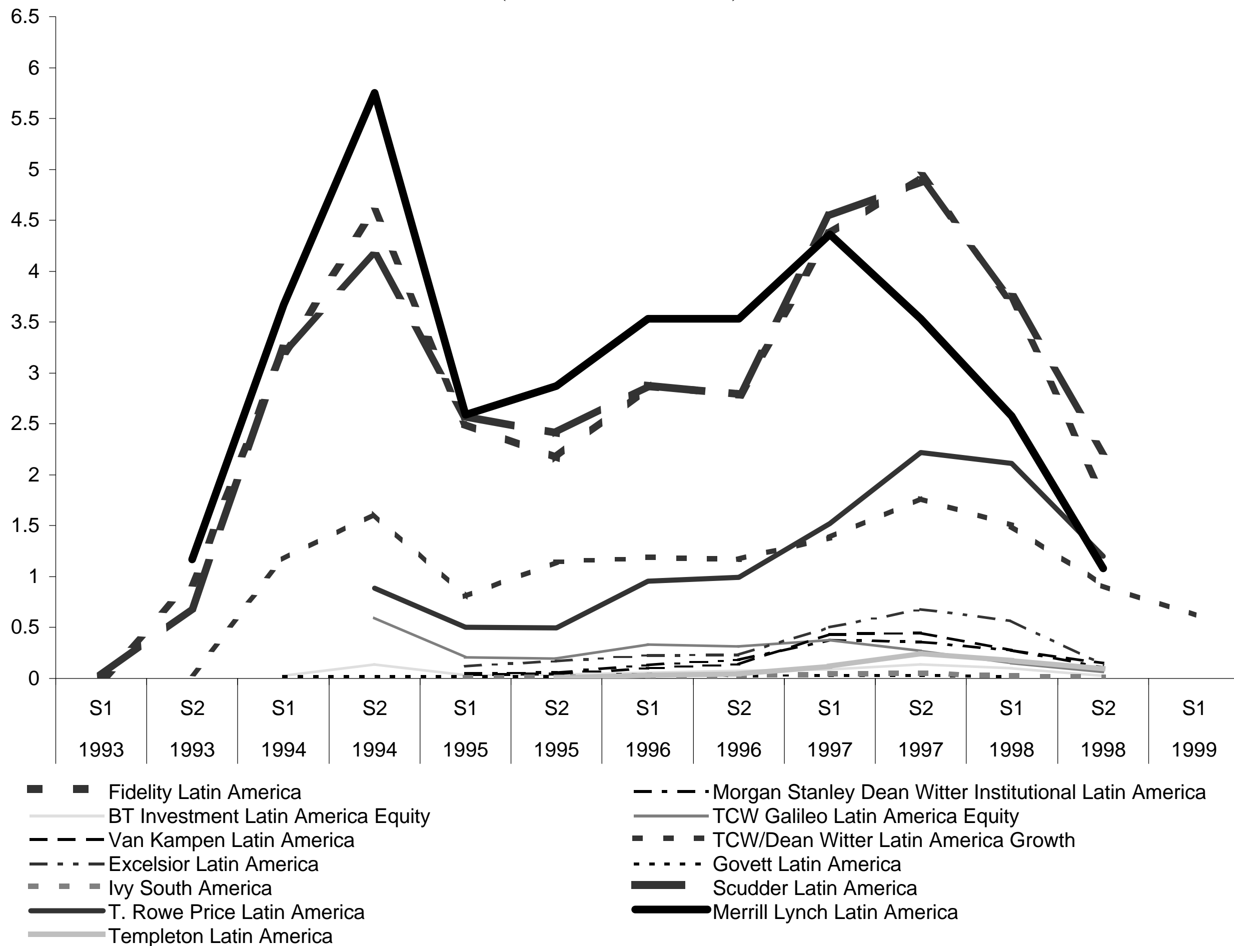


Notes : The Mexican crisis happened in late December of 1994. The Thai crisis erupted in July 1997.
The Russian crisis began in August 1998.
Mutual funds flows are the average net buying/selling (as percentage of the end of the preceeding quarter holdings) in the two quarters following the outbreak of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

Source: S&P Micropal Emerging Market Fund Monitor.

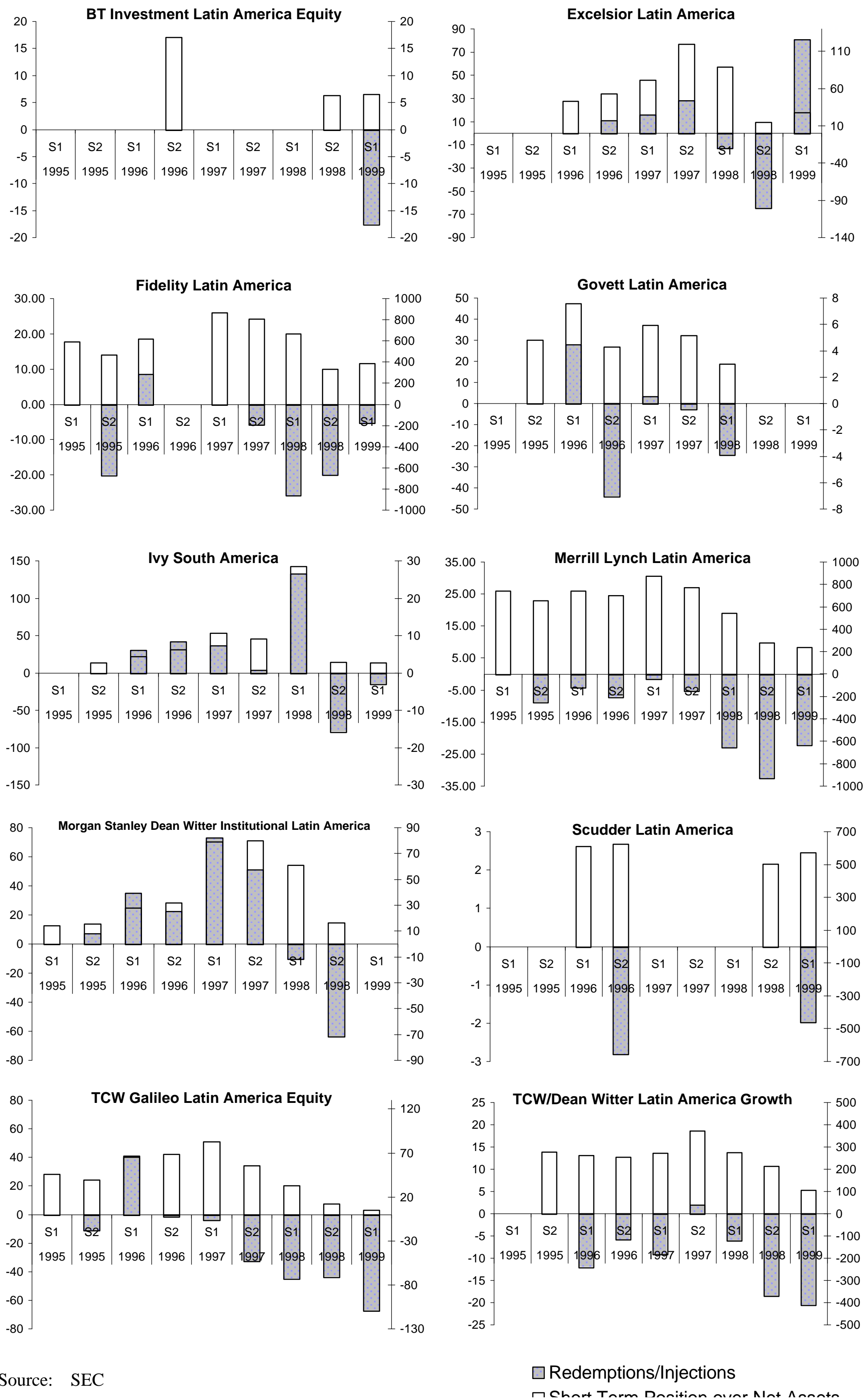
Figure 5

Net Assets
Latin America Mutual Funds
(Millions U.S. Dollars)



Source: SEC and Morningstar

Figure 6
Redemptions/Injections and Net Asset Values
Latin America Mutual Funds
(Left Scale: Percent, Right Scale: Millions of U.S. Dollars)



Source: SEC

Table 1
Dedicated Emerging Market Funds Assets and Their Relative Importance
(in Billions of US$)

Country	1995		1996		1997		1998	
	End of The Year Holding	% Market Capitalization	End of The Year Holding	% Market Capitalization	End of The Year Holding	% Market Capitalization	End of The Year Holding	% Market Capitalization
China	1.90	4.24	2.30	2.99	3.05	1.70	1.93	0.81
Hong Kong	12.60		20.40		13.23		9.40	
India	4.50	3.24	6.10	4.36	7.35	5.16	5.59	4.64
Indonesia	4.50	8.61	5.50	6.95	1.86	2.36	1.26	6.89
Korea	10.30	5.63	7.70	4.61	2.52	2.02	7.29	11.31
Malaysia	8.20	3.85	12.00	4.38	2.40	1.00	1.48	1.74
Pakistan	0.60	6.05	0.50	4.72	0.80	6.67	0.23	3.21
Philippines	3.40	6.28	4.20	5.63	1.68	2.73	1.88	5.98
Singapore	5.10		5.30		2.97		3.77	
Sri Lanka	0.20	8.83	0.10	5.32	0.22	10.03	0.13	7.19
Taiwan	4.60	2.39	7.20	3.26	5.94	1.90	5.69	2.04
Thailand	9.80	7.10	5.90	4.45	2.20	3.68	3.06	10.28
Total Asia	**65.70**		**77.20**		**44.22**		**41.71**	
Argentina	3.10	9.25	3.30	8.00	4.64	8.50	3.06	5.99
Brazil	8.10	5.30	11.50	6.19	15.43	5.65	8.25	3.90
Chile	3.40	4.63	2.90	4.13	3.36	4.29	2.59	4.43
Colombia	0.40	2.32	0.60	3.84	0.62	3.14	0.29	1.92
Mexico	5.50	6.03	7.80	7.34	13.38	9.98	7.94	7.02
Peru	0.70	7.06	0.90	6.60	1.10	6.21	0.65	4.53
Venezuela	0.30	6.37	0.70	11.88	1.20	9.11	0.46	5.37
Total Latin America	**21.50**		**27.70**		**39.73**		**23.24**	
Czech Republic	0.50	3.21	1.00	5.51	0.95	6.32	0.72	5.77
Hungary	0.40	24.98	1.20	28.78	2.32	26.16	2.19	15.96
Poland	0.70	18.06	1.50	19.79	1.93	17.20	2.24	14.49
Russia & CIS	1.00		2.60	9.93	7.49	6.93	1.71	3.05
Slovak Republic	0.10		0.10	4.15	0.11	5.42	0.10	8.28
Total Transition Economies	**2.70**		**6.40**		**12.80**		**6.96**	

Source : S&P Micropal Emerging Market Fund Monitor, International Finance Corporation

Table 2

Symptoms and Leading Indicators

Symptoms	Indicator	Critical-Shock Sign	Comments
Overborrowing Cycles	M2 Multiplier	Positive	Both banking and currency crises have been linked to rapid growth in credit fueled by liberalization of the domestic financial system and by the elimination of capital account restrictions
	Domestic Credit/GDP	Positive	
	Domestic and External Financial Liberalization	Dummy Variable = 4	
Bank Runs	Bank Deposits	Negative	Banking crises and currency can be preceded by bank runs (see Goldfajn and Valdes, 1995)
Monetary Policy	"Excess" M1 Balances	Positive	Loose monetary policy can fuel a currency crisis (see Krugman, 1979). To the extent that a devaluation worsens the health of the banking sector it can also trigger a banking crisis.
Problems Current Account	Exports	Negative	Real exchange rate overvaluations and a weak external sector are a part of a currency crisis.They add to the vulnerability of the banking sector since a loss of competitiveness and external markets could lead to a recession, business failures, and a decline in the quality of loans. Thus, large negative shocks to exports, the terms of trade, and the real exchange rate and positive shocks to imports are interpreted as symptoms of financial crises
	Imports	Positive	
	Terms of Trade	Negative	
	Real Exchange Rate	Negative	
Problems Capital Account	Reserves	Negative	High world interest rates may anticipate currency crises as they lead to capital outflows. Capital account problems become more severe when the country's foreign debt is large and capital flight increases since it may raise issues of debt unsustainability. Debt concentrated at short maturities will increase the vulnerability of a country to external shocks. As discussed in Kaminsky and Reinhart (1996), a currency crisis may in turn deepen the banking crisis.
	M2/Reserves	Positive	
	Real Interest Rate Differential	Positive	
	World Real Interest Rate	Positive	
	Foreign Debt	Positive	
	Capital Flight	Positive	
	Short-term Foreign Debt	Positive	
Growth Slowdown	Output	Negative	Recessions and the burst of asset price bubbles precede financial crises (see Calomiris and Gorton, 1991) High real interest rates could be a sign of a liquidity crunch leading to a slowdown and banking fragility. An increase in the lending/deposit ratio in the domestic economy can capture a decline in loan quality.
	Domestic Real Interest Rate	Positive	
	Lending/Deposit Rate Ratio	Positive	
	Stock Prices	Negative	

Table 3

Economic Fragility, Liquidity and Risk:
The Behavior of the Mutual Funds in the Mexican Crisis

Country	Mutual Funds Flows	Fragility	Liquidity: Volume Traded	Liquidity: Share in Mutual Fund Portfolio	Liquidity: Trading in Mature Markets	Liquidity: Stock market restrictions	Liquidity: Average Liquidity	Risk: Political Risk	Risk: Economic Risk	Risk: Average Risk	General Average
Indonesia	0.26	0	0	0	1	0	0.25	0	0	0.00	0.14
Sri Lanka	0.51	0	0	0	n.a.	1	0.33	1	0	0.50	0.33
Philippines	0.66	0	0	0	1	0	0.25	0	1	0.50	0.29
Thailand	0.75	0	0	1	1	0	0.50	0	0	0.00	0.29
Korea	0.84	0	n.a.	1	1	0	0.67	0	0	0.00	0.33
Taiwan	1.92	0	n.a.	0	1	0	0.33	0	0	0.00	0.17
India	3.41	0	0	0	1	0	0.25	0	0	0.00	0.14
Singapore	6.01	0	1	0	n.a.	1	0.67	0	0	0.00	0.33
Hong Kong	6.81	0	1	1	n.a.	1	1.00	0	0	0.00	0.50
Pakistan	7.06	0	0	0	n.a.	0	0.00	0	0	0.00	0.00
China	7.37	n.a.	1	0	n.a.	0	0.33	0	0	0.00	0.20
Malaysia	10.21	0	1	1	1	1	1.00	0	1	0.50	0.71
Avrg. Asia	3.82	0.00	0.40	0.33	1.00	0.33	0.47	0.08	0.17	0.13	0.29
Brazil	-4.93	1	1	1	1	0	0.75	0	1	0.50	0.71
Venezuela	-2.03	1	0	0	1	0	0.25	0	1	0.50	0.43
Peru	-0.17	0	0	0	n.a.	1	0.33	0	0	0.00	0.17
Chile	3.04	0	0	0	1	0	0.25	0	0	0.00	0.14
Argentina	6.99	0	1	0	1	1	0.75	0	0	0.00	0.43
Colombia	18.44	0	0	0	1	1	0.50	0	1	0.50	0.43
Avrg. Latin America	3.56	0.33	0.33	0.17	1.00	0.50	0.47	0.00	0.50	0.25	0.38
Slovak Rep.	-1.33	n.a.	0	0	n.a.	1	0.33	0	0	0.00	0.20
Hungary	5.22	1	0	1	n.a.	0	0.33	1	0	0.50	0.50
Russian Fed.	6.03	0	0	1	n.a.	n.a.	0.50	1	0	0.50	0.40
Poland	20.80	0	1	0	n.a.	1	0.67	0	0	0.00	0.33
Czech Rep.	23.42	n.a.	1	0	n.a.	1	0.67	0	0	0.00	0.4
Avrg. Transition	10.83	0.33	0.40	0.40	n.a.	0.75	0.50	0.40	0.00	0.20	0.37

Notes:
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.
Fragility equals one if the probability of currency crisis is greater or equal than 50 in the 12 months before the crisis, and zero elsewere.
Volume traded equals to one if, during the calendar year previous to the crisis, the country is in the upper 30 percent of the countries in the region, ranked by the volume traded.
Share in Mutual Fund Portfolio equals one if the country share in the region's portfolio is in the upper 30 percent as of the end of Mar-95.
Trading in mature markets equals one after the introduction of ADR's.
Stock market restrictions equals one when there are no significant restrictions to entry and exit the stock market by foreign investors in the calendar year previous to the crisis, and zero elsewere.
Average liquidity is the simple average of the liquidity variables during the six months previous to the indicated date.
Economic risk equals one if the country makes a policy change oriented to restrict capital account movements in the six months previous to the crisis or during the six months after the onset of the crisis.
Political risk equals one if there are major political unstabilizing events in the calendar year of the crisis.
Sources: See Appendix.

Table 4
Economic Fragility, Liquidity and Risk: The Behavior of the Mutual Funds in the Thai Crisis

			Liquidity					Risk			
Country	**Mutual Funds Flows**	**Fragility**	**Volume Traded**	**Share in Mutual Fund Portfolio**	**Trading in Mature Markets**	**Stock market restrictions**	**Average Liquidity**	**Political Risk**	**Economic Risk**	**Average Risk**	**General Average**
Taiwan	-12.91	0	n.a.	1	1	0	0.67	0	0	0.00	0.22
Singapore	-11.75	0	1	0	n.a.	1	0.67	0	0	0.00	0.22
Hong Kong	-6.91	0	1	1	n.a.	1	1.00	0	0	0.00	0.33
Korea	-6.49	1	n.a.	1	1	0	0.67	1	0	0.50	0.72
India	-2.05	0	0	1	1	0	0.50	1	0	0.50	0.33
Philippines	-1.05	1	0	0	1	0	0.25	0	0	0.00	0.42
Malaysia	-0.77	1	1	1	1	1	1.00	0	0	0.00	0.67
Indonesia	0.68	0	0	0	1	0	0.25	0	0	0.00	0.08
Pakistan	2.61	1	0	0	n.a.	0	0.00	1	0	0.50	0.50
China	4.68	0	1	0	n.a.	0	0.33	0	0	0.00	0.11
Sri Lanka	10.51	0	0	0	n.a.	1	0.33	0	0	0.00	0.11
Avrg. Asia	-2.13	0.36	0.44	0.45	1.00	0.36	0.52	0.27	0.00	0.14	0.34
Colombia	-6.10	1	0	0	1	1	0.50	1	0	0.50	0.67
Chile	-3.49	1	0	0	1	0	0.25	0	0	0.00	0.42
Peru	-1.68	0	0	0	n.a.	1	0.33	0	0	0.00	0.11
Brazil	-0.29	1	1	1	1	1	1.00	0	0	0.00	0.67
Mexico	1.73	0	1	1	1	1	1.00	0	0	0.00	0.33
Argentina	2.41	0	0	0	1	1	0.50	0	0	0.00	0.17
Venezuela	6.06	0	0	0	1	1	0.50	0	0	0.00	0.17
Avrg. Latin Americ	-0.19	0.43	0.29	0.29	1.00	0.86	0.58	0.14	0.00	0.07	0.36
Czech Rep.	-4.10	1	1	0	n.a.	1	0.67	1	0	0.50	0.72
Hungary	-2.45	1	0	1	n.a.	n.a.	0.50	0	0	0.00	0.50
Russian Fed.	-0.26	1	0	1	n.a.	1	0.67	0	0	0.00	0.56
Poland	1.98	0	1	0	n.a.	1	0.67	0	0	0.00	0.22
Slovak Rep.	8.67	n.a.	0	0	n.a.	1	0.33	0	0	0.00	0.17
Avrg. Transition	0.77	0.75	0.40	0.40	n.a.	1.00	0.57	0.20	0.00	0.10	0.43

Notes:
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.
Fragility equals one if the probability of currency crisis is greater or equal than 50 in the 12 months before the crisis, and zero elsewere.
Volume traded equals to one if, during the calendar year previous to the crisis, the country is in the upper 30 percent of the countries in the region, ranked by the volume traded.
Share in Mutual Fund Portfolio equals one if the country share in the region's portfolio is in the upper 30 percent as of the end of Jun-97.
Trading in mature markets equals one after the introduction of ADR's.
Stock market restrictions equals one when there are no significant restrictions to entry and exit the stock market by foreign investors in the calendar year previous to the crisis, and zero elsewere.
Average liquidity is the simple average of the liquidity variables during the six months previous to the indicated date.
Economic risk equals one if the country makes a policy change oriented to restrict capital account movements in the six months previous to the crisis or during the six months after the onset of the crisis.
Political risk equals one if there are major political unstabilizing events in the calendar year of the crisis.
Sources: See Appendix.

Table 5
Economic Fragility, Liquidity and Risk:
The Behavior of the Mutual Funds in the Russian Crisis

			Liquidity					Risk			
Country	**Mutual Funds Flows**	**Fragility**	**Volume Traded**	**Share in Mutual Fund Portfolio**	**Trading in Mature Markets**	**Stock market restrictions**	**Average Liquidity**	**Political Risk**	**Economic Risk**	**Average Risk**	**General Average**
Malaysia	-28.83	1	1	0	1	0	0.50	0	1	0.50	0.67
Pakistan	-11.99	0	0	0	n.a.	0	0.00	0	1	0.50	0.17
Sri Lanka	-11.99	0	0	0	n.a.	1	0.33	0	0	0.00	0.11
Indonesia	-10.55	0	0	0	1	0	0.25	1	1	1.00	0.42
Korea	-9.44	1	n.a.	1	1	1	1.00	1	0	0.50	0.83
Hong Kong	-9.33	0	1	1	n.a.	1	1.00	0	1	0.50	0.50
Philippines	-5.60	1	0	0	1	0	0.25	0	0	0.00	0.42
Thailand	-4.30	1	0	0	1	0	0.25	0	0	0.00	0.42
India	-3.96	0	0	1	1	0	0.50	0	0	0.00	0.17
China	-0.04	0	1	0	n.a.	0	0.33	1	0	0.50	0.28
Taiwan	0.87	0	n.a.	1	1	n.a.	1.00	0	0	0.00	0.33
Singapore	17.18	0	1	0	n.a.	1	0.67	0	0	0.00	0.22
Avrg. Asia	-6.50	0.33	0.40	0.33	1.00	0.36	0.51	0.25	0.33	0.29	0.38
Venezuela	-8.44	0	0	0	1	1	0.50	0	0	0.00	0.17
Colombia	-8.41	1	0	0	1	1	0.50	0	0	0.00	0.50
Brazil	0.07	0	1	1	1	1	1.00	0	0	0.00	0.33
Chile	0.20	0	0	0	1	0	0.25	0	0	0.00	0.08
Argentina	0.24	1	0	0	1	1	0.50	0	0	0.00	0.50
Peru	3.74	0	0	0	n.a.	1	0.33	0	0	0.00	0.11
Mexico	4.70	0	1	1	1	1	1.00	0	0	0.00	0.33
Avrg. Latin America	-1.13	0.29	0.29	0.29	1.00	0.86	0.58	0.00	0.00	0.00	0.29
Czech Rep.	-15.63	1	0	0	n.a.	1	0.33	0	0	0.00	0.44
Slovak Rep.	-8.47	n.a.	0	0	n.a.	1	0.33	0	0	0.00	0.17
Poland	-0.64	0	1	1	n.a.	1	1.00	0	0	0.00	0.33
Hungary	0.69	1	0	0	n.a.	n.a.	0.00	1	0	0.50	0.50
Avrg. Transition	-6.01	0.67	0.25	0.25	n.a.	1.00	0.42	0.25	0.00	0.13	0.36

Notes:
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.
Fragility equals one if the probability of currency crisis is greater or equal than 50 in the 12 months before the crisis, and zero elsewere.
Volume traded equals to one if, during the calendar year previous to the crisis, the country is in the upper 30 percent of the countries in the region, ranked by the volume traded.
Share in Mutual Fund Portfolio equals one if the country share in the region's portfolio is in the upper 30 percent as of the end of Jun-98.
Trading in mature markets equals one after the introduction of ADR's.
Stock market restrictions equals one when there are no significant restrictions to entry and exit the stock market by foreign investors in the calendar year previous to the crisis, and zero elsewere.
Average liquidity is the simple average of the liquidity variables during the six months previous to the indicated date.
Economic risk equals one if the country makes a policy change oriented to restrict capital account movements in the six months previous to the crisis or during the six months after the onset of the crisis.
Political risk equals one if there are major political unstabilizing events in the calendar year of the crisis.
Sources: See Appendix.

Table 6
Average Short-Term Positions
(In Percent of Total Net Assets)

	All Times	Injection Times	Redemption Times
All Funds	4.44	4.57	4.37
Large Funds	6.97	8.40	5.22
Medium Funds	3.81	2.24	4.40
Small Funds	4.16	4.48	3.61

Note : Large Mutual Funds are Merrill Lynch Latin America, Fidelity Latin America and Scudder Latin America
Medium Mutual Fund is TCW/Dean Witter Latin America Growth
Small Mutual Funds are BT Investment Latin America Equity, Excelsior Latin America, Govett Latin America, Ivy South America, Morgan Stanley Dean Witter Institutional Latin America, TCW Galileo Latin America Equity

Source: SEC

Appendix Table
Selected indicators

Countries	Year	Fragility	Liquidity					Risk		
	Year	Probability of currency crisis	Volume Traded (Millions of current US$)	Share in Mutual Fund Portfolio (Percent of market capitalization of mutual funds in the countries in the sample) (1)	ADR introduction	Stock market restrictions		Political Events	Borrowing Abroad by banks and firms	Dual or multiple exchange rate regime (2)
Countries		Jun - Dec		Jun - Dec		Entry	Repatriation of Income and Capital			
ASIA										
China	1994	n.a. - n.a.	97526	2.29	n.a.	Non-residents can only purchase B shares. These shares are listed on the Chinese Securities exchange and can only be bought by foreign investors.	The remittance of profits or dividends is not restricted after applicable taxes have been paid. Outward transfers of capital generally require government aproval.	In 1994, no major political unstabilizing events.	Foreign borrowing is classified either as "plan" or "non-plan" borrowing. External borrowing of authorized chinese financial institutions and enterprises require approval as part of the state plan for utilizing foreign capital and must be approved. Only authorized financial institutions and enterprises can engage in external borrowing of comercial credit. For credit over a one-year maturity, the loan must be part of the state plan for utilizing foreign capital and must be approved by the government. Short-term comercial credit (with a maturity one-year or less) is subject to foreign exchange balance requirements. Foreign Funded Enterprises (FFE) may borrow from non-residents without obtainig approval, but must report the borrowing to the government. Financial institutions permitted to engage in foreign borrowing are free to conduct short-term foreign borrowing within target balances without obtaining approval, but must register the borrowing with the government. Borrowing by branches of foreign banks operating in China is "non-plan" and does not require authorization, but must be reported and registered.	No
	1995	n.a. - n.a.	49774	2.14 - 2.11		n.a.	No changes in 1995.	In 1995, no major political unstabilizing events.	No changes in 1995.	No
	1996	n.a. - 0 (***)	256008	1.85 - 2.06		No changes in 1996.	No changes in 1996.	In 1996, no major political unstabilizing events.	No changes in 1996.	No
	1997	0 (***) - 0 (***)	369574	2.62 - 3.15		No changes in 1997.	No changes in 1997.	In Mar-97, Premier Li Pend replaced by Zhu Rongji, both from the ruling Communist party CCP.	No changes in 1997.	No
	1998	n.a. - n.a.		3.24 - 2.68		No changes in 1998.	No changes in 1998.	In Mar-98, a major industrial unrest, followed by more incidences (both industrial and agricultural) in other provinces.	In Aug-98, if there are no provisions on the advance repayment in the lending contract, no redemption of debt is permitted. If there are provisions on advance repayment, with the approval of the SAFE, enterprises may redeem debt with their own foreign exchange and may not purchase foreign exchange for that purpose.	No
Hong Kong	1994	n.a. - 0 (***)	117894	13.25	n.a.	Free entry.	Free repatriation.	In 1994, no major political unstabilizing events.	Firms may freely borrow from abroad. All authorized financial institutions are required to report to the Hong Kong monetary authority their foreign exchange positions (including options) monthly. Locally incorporated financial institutions are required to report their consolidated foreign currency positions. The aggregate net foreign position should be kept bellow certain limits. For subsidiaries of foreign banks, where the parent consolidates the foreign exchange risk on a global basis and there is adequate home supervision, the HKMA may accept higher limits. For branches of foreign banks, the HKMA rewiews and monitors their internal limits.	No
	1995	n.a. - n.a.	86904	13.6 - 14.0		No changes in 1995.	No changes in 1995.	In 1995, no major political unstabilizing events.	No changes in 1995.	No
	1996	n.a. - 0 (***)	102351	13.5 - 18.3		No changes in 1996.	No changes in 1996.	In 1996, no major political unstabilizing events.	No changes in 1996.	No
	1997	0 (***) - 0 (***)	198235	16.6 - 13.6		No changes in 1997.	No changes in 1997.	In Jun-97, China regained sovereignty over Hong Kong from UK and established it as Special Administrative Region (PLC). In Jul-97, China-supported Provisional Legislative Council replaced democratically elected Legislature Council right after China's takeover, which provoked peaceful demonstrations..	No changes in 1997.	No
	1998	n.a. - n.a.		11.9 - 13.0		In Aug-98 the Honk Kong Monetary Authority intervened in the Stock Market.	No changes in 1998.	In 1998, no major political unstabilizing events.	No changes in 1998.	No
India	1994	10.92 (**) - 14.49 (**)	27290	6.63	Feb-92	Foreign Institutional Investors (FII) are permitted to make investments in all securities traded on primary and secondary markets, including equity and other securities, and instruments of companies listed on the stock exchange in India. FFI's are required to registed initially with the Securities and Exchange Board of India and with the RBI. Portfolio investments are subject to the ceiling of 5 per cent of the issued share capital per individual FFI holdings and 24 per cent of issued share capital for the total holdings of all registered FII in any one company, with some exceptions.	The authorization from the RBI enables FII to repatriate capital, capital gains, dividends and interest income.	In 1994, no major political unstabilizing events.	Borrowing abroad by firms requires permission from the Reserve Bank of India (RBI) The contracting of all foreign currency loans and credits secured from non-resident persons and companies (including banks) as well as repayments of such loans and credits and payments of interest and other charges on such loans require prior authorization from the RBI. Borrowing abroad, except when loans are for less than one year must be cleared by the Ministry of Finance before they may be approved by the RBI. Banks in India may borrow freely from their branches and correspondents abroad, subject to the maximun of $500,000 or its equivalent for meeting requirements of normal exchange business. They may obtain loans or overdrafts from their overseas branches in excess of this limit solely for the purpose of replenishing their Rupee resources in India without prior approval from the Reserve Bank. Repayment of such borrowings requires prior approval from the reserve bank or may be accorded only when the debtor bank has no outstanding borrowings in India from the RBI or any other bank or financial institution and is clear of all money market borrowings for a period of	No
	1995	19.69 (**) - 14.49 (**)	13738	5.68 - 5.00		No changes in 1995.	No changes in 1995.	In 1995, no major political unstabilizing events.	No changes in 1995.	No

		Fragility	Liquidity					Risk		
	1996	14.67 (**) - 16.22 (**)	26599	6.43 - 5.48		No changes in 1996.	No changes in 1996.	In May-96, with no party gaining majority in the general election, Vajpayee from the leading party BJP failed to form a majority coalition government and resigned; a new coalition UF formed a new majority government and Deve Gowda was elected Prime Minister.	No changes in 1996.	No
	1997	32.34 (**) - 14.49 (**)	53954	6.37 - 7.59		Portfolio investments are subject to the ceiling of 10 per cent of the issued share capital per individual FFI holdings and 24 per cent of issued share capital for the total holdings of all registered FII in any one company, with some exceptions.	No changes in 1997.	In Apr-97, Deve Gowda resigned following defeat in a vote of confidence; Kumar Gujral (UF) assumed premiership. In Jun-97, President Yadav resigned over scandal and Narayanan was elected new President. In Nov-97, Gujral resigned following a coalition party Congress (I) withdrew its support; since no party was able to form a majority government, Gujral retained the premiership in an acting capacity; in general election in March 1998, the leading party BJP formed a fragile coalition government and Vajpayee became Prime Minister.	The contracting of financial loans and credits, as well as the repayment of such loans and credits, and payments of interests on such loans require prior permission form the RBI. Borrowing proposals except for loans less that one-year and those falling under the three million scheme must be cleared by the MOF befor they may be approved by the RBI. In 1997, new guidelines easing the end-use of resources coming from external commercial borrowing were issued. In 1997, exporters were allowed to raise external commercial borrowing to twice the average amount of annual exports during the previous three years, subject to a maximum of $100 million without end-use restrictions.	No
	1998	19.69 (**) - 16.75 (**)		8.12 - 7.77		In Jun-98, transactions among FII's with respect to Indian stocks no longer requires ex-post confirmation from the RBI.	No changes in 1998.	In May-98, the government incurred international sanctions by exploding a series of underground nuclear test devices. In Dec-98, nation-wide protest by Christians against Hindu persecution. In Dec-98, one-day nation-wide strike by trade unions caused widespread disruption.	No changes in 1998.	No
Indonesia	1994	47 (*) - 38 (*)	11801	4.34	Apr-91	No changes in 1994. In 1989, foreigners were allowed to purchase up to 49 per cent of all companies listed shares, including foreign joint ventures but excluding bank shares. No person can purchase more than 1 percent of any collective investment security. Investors are granted the right to repatriate capital and profits. The law provides that no transfer permit shall be issued for capital repatriation as long as investments benefits from tax relief are being received; however, foreign payments do not require a transfer permit. In 1992, foreigners were allowed to invest in up to 49 per cent of the listed shares in three categories of banks (private national, state owned, and foreign joint venture).	Some restrictions apply to the repatriation of income and capital.	In Apr-94, riots over workers' demands and attacks on Chinese property and business.	No changes in 1994. In Sep-91, a Commercial Offshore Loan Team (COLT) supervises all foreign commercial loan transactions. COLT's prior approval is required before any commercial bank may accept a loan from abroad. Resident banks or credit institutions are allowed to borrow abroad within limits. An annual borrowing ceiling is imposed for foreign commercial borrowing of more than two years maturity. Besides, banks are allowed to receive foreign commercial borrowing with maturities of no more than two years with an amount not exceeding US$20 million without previous approval, but the total of such borrowings cannot exceed 30 per cent of the bank's capital. Also, banks are required to allocated at least 80% of all foreign exchange credits to export-oriented businesses that earn foreign exchange. The non-bank private sector may borrow from non-residents. However, they have to submit periodic reports to the COLT on their borrowing. Private borrowing related to financing based on build-operate-transfer, build-and-transfer and similar schemes requires prior authorization by the COLT. (16) p. 437	No
	1995	10 (*) - 23 (*)	14403	4.61 - 5.00		No changes in 1995.	No changes in 1995.	In 1995, no major political unstabilizing events.	No changes in 1995.	No
	1996	25 (*) - 20 (*)	32142	4.67 - 4.94		No changes in 1996.	No changes in 1996.	In Jul-96, mass riot in capital between Megawati (prominent politician) supporters and opponents in PDI.	No changes in 1996.	No
	1997	20 (*) - 30 (*)	41650	4.74 - 1.92		No changes in 1997.	No changes in 1997.	In May-97, extensive localized pre-election violence.	No changes in 1997.	No
	1998	39.29 (**) - 32.34 (**)		1.05 - 1.75		No changes in 1998.	No changes in 1998.	In May-98, major riots in capital over nation-wide political and economic crises. In May-98, President Suharto resigned; Vice President Habibie resumed presidency. In Nov-98, further major violence in capital.	No changes in 1998.	Yes
Korea	1994	10.92 (**) - 13.50 (**)	n.a.	11.45	Nov-90	No changes in 1994. In 1992, foreign investors were permitted to invest in the domestic stock market, subject to the restriction that foreign ownership of listed firms may not exceed 10 per cent of total equity, and foreign investors may not hold more than 3 per cent of total equity. Investments in stocks by resident foreign financial institutions were subject to the same limits as those by institutions owned by nationals. Resident foreign financial institutions were allowed to undertake over-the-counter transactions in listed bonds.	No changes in 1994. In 1984, the repatriation of dividends and capital was fully permited. Prior to 1984, the repatriation of capital was permited only after 2 years and on an annual limit of 20 percent of the originally invested amount.	In Apr-94, Prime Minister Lee Hoi-Chang resigned and was replace by Lee Yung-Duk from the same ruling party DLP. In Dec-94, Prime Minister Lee Yung-Duk was replace by Lee Hong-Koo from the same ruling party DLP.	For banks, there are no restrictions on foreign borrowing for overseas investments and related operations. Authorization is required for all foreign borrowing by firms other than foreign exchange banks. The overbought and oversold positions of foreign exchange banks are limited to 10% and 20% respectively of their capital base. Foreign exchange banks must report to the Minister of Finance all borrowing exceeding 10 million dollars with a maturity of more than one year. Loans by resident banks to non-residents exceeding 20 million dollars require prior notification. There are no taxes or subsisidies on purchases or sales of foreign exchange. There are no specific restrictions on the terms of forward contracts in respect of interbank transactions.	No
	1995	32.34 (**) - 33.54 (**)	n.a.	10.1 - 11.4		In 1995, the ceiling on stock investment by non-residents was raised twice. The ceiling on aggregate purchases rose to 12 per cent in January, and to 15 per cent in July.	No changes in 1995.	In Dec-95, Prime Minister Lee Hong-Koo was replace by Lee Soo-Sung from the same ruling party DLP.	Regulations governing the foreign exchange positions of banks were modified. The ratios with respect to capital were set as follows: (a) overall overbought position: 15% of capital at the end of the previous month; (b) overall oversold position: 10% of capital at the end of the previous month or $20 million, whichever is greater; (c) spot oversold position: 3% of the total equity capital or $5 million, whichever is greater.	No
	1996	34.26 (**) - 37.85 (**)	n.a.	9.61 - 6.91		In 1996, the ceiling on stock investment by non-residentswas raised twice. The ceiling on aggregate purchases was increased to 18 per cent in April, and to 20 per cent in October. The ceiling on individual purchases aws increased to to 5 per cent.	No changes in 1996.	In May-96, students staged violent protests in commemoration of Kwangju massacre and urging reunification with North Korea. In Dec-96, a general strike for 3 weeks by manufacturing industries and public sector workers in protest of new labor law.	No changes in 1996.	No

		Fragility	Liquidity					Risk		
	1997	100 (****) - 100 (****)	n.a.	6.65 - 2.60		In 1997, ceilings on foreign ownership were raised four times (in May 2, November 3, December 12, and December 30). On December 12, the limits of foreign ownership of Korean equities were increased to 50 per cent. On December 30, this limit was further increased to 55 per cent.	No changes in 1997.	In Mar-97, Prime Minister Lee Soo-Sung resigned over a loan scandal and was replace by Koh Kon from the same ruling party DLP. In Jun-97, students staged demonstrations demanding President Kim's resignation over Hanbo scandal. In Dec-97, Kim Dae-Jung won in the presidential election; NCNP-ULD formed coalition government, Kim Jong-Pil was designated as acting Prime Minister.	No changes in 1997.	No
	1998	42.27 (**) - 42.27 (**)		4.45 - 10.1		In May-98, the aggregate ceiling on foreign direct investment in Korean equities was eliminated, and equity investment in non-listed companies was permitted.	No changes in 1998.	In May-98, a rally by workers with lost jobs ended in violent clashes with riot police and a general strike. In Jul-98, more strikes against unemployment and escalated confrontation at Hyundai. In Sep-98, opposition party GNP boycotted parliamentary sessions over nomination of Prime Minister and led to prolonged legislative inactivity.	Borrowing abroad by high-tech foreign-financed manufacturing companies is allowed up to 100% of the foreign invested capital. Maturity is limited to 3 years or less and limitations are imposed on the use of funds. In Apr-98, regulations on the usage of long-term loans with maturity of over five years that are brought into the country by foreign manufacturers (through the banking sector) were lifted.	No
Malaysia	1994	14.49 (**) - 22.31 (**)	126458	10.72	Aug-92	No changes in 1994. In 1992, the guidelines on foreign equity capital ownership were liberalized. Companies exporting at least 80 per cent of their production were no longer subject to any equity requirements, whereas companies exporting between 50 and 79 per cent of their production were permitted to hold 100 per cent equity, provided that they have invested $50 million or more in fixed assets or completed projects with at least 50 per cent local value added and that the company's products do not compete with those produced by domestic firms. These guidelines do not apply to sectors in which limits on foreign equity participation have been established.	No significant restrictions apply.	In 1994, no major political unstabilizing events.	Residents are allowed to borrow in foreign currency from nonresidents up to 5 million ringgit. Borrowing abroad that exceed this limit requires permission from the Controller of Foreign Exchange (COFE), which is readily granted if the loan is to be used for productive purposes in Malaysia.(4) p.308 & (5) p.166 During 1994, Malaysia imposed temporary measures to restrict short-term capital inflows. Between Jan-94 and Aug-94, banks were subject to a ceiling on their nontrade- or noninvestment-related external liabilities. Between Feb-94 and Aug-94, residents were prohibited from selling short-term monetary instruments to nonresidents. Between Feb-94 and Aug-94, comercial banks were required to place in the Bank Negara the ringgit funds of foreign banking institutions.	No
	1995	44 (*) - 44 (*)	76822	11.3 - 9.12		No changes in 1995.	No changes in 1995.	In 1995, no major political unstabilizing events.	No changes in 1995.	No
	1996	21 (*) - 35 (*)	173568	9.61 - 10.7		No changes in 1996.	No changes in 1996.	In 1996, no major political unstabilizing events.	No changes in 1996.	No
	1997	66 (*) - 66 (*)	147036	6.37 - 2.48		No changes in 1997.	No changes in 1997.	In 1997, no major political unstabilizing events.	Residents are permitted to obtain total credit in foreign currency up to RM 5 million from licensed banks and non-residents. Any larger amount would require tyhe prior approval of the COFE. Residents are not allowed to obtain loans in ringgit from non-residents. (6) p. 560	No
	1998	42.27 (**) - 24.25 (**)		2.72 - 2.05		In Sep-98, non-residents must undertake all transactions on ringgit securities through authorized depository institutions.	In Sep-98, non-residents must undertake all transactions on ringgit securities through authorized depository institutions. Investors cannot directly convert their short-term investment into foreign exchange. Proceeds from investments held for less than one year can be transferred only to MYR-denominated accounts, which can be used only to acquire other MYR assets. (4) In Feb-99, the minimun holding period was eliminated and a graduated system of exit taxes was introduced: for investments made prior to Feb-99, capital is taxed 50 percent if repatriated less than 7 months after entry; 20 percent if repatriated after 7 months; and 10 percent if repatriated 9 to 12 months after entry. Capital repatriated after a year is not taxed. For investments after Feb-99, the original capital is not taxed, but the repatriated gains are as follows: capital gains repatriated within 12 months after the gain is realized are taxable at 30 percent, and those repatriated after more than 12 months are taxable at 10 percent. (1)	In Sep-98, violence followed the arrest of Anwar, leader of opposition movement against Prime Minister Mahathir.	In Sep-98 exchange rate controls are introduced affecting mainly external account transactions of non-residents. (9) p.72	No
Pakistan	1994	16.90 (**) - 10.92 (**)	3198	0.84	n.a.	Non-residents are allowed to trade freely in the shares quoted on the Stock exchanges in Pakistan though special convertible accounts with banks in Pakistan. Such accounts are to be fed by remmitances in foreign currencies.	Repatriation of income is permitted only if the initial investment was made on a repatriable basis.	In Sep-94, nation-wide general strike. In Nov-94, tribesmen uprising.	n.a.	No
	1995	14.49 (**) - 37.17 (**)	3210	0.75 - 0.66		No changes in 1995.	No changes in 1995.	In 1995, no major political unstabilizing events.	n.a.	No
	1996	40.01 (**) - 60.63 (**)	6054	0.70 - 0.44		No changes in 1996.	No changes in 1996.	In Sep-96, attempted assassination of an opposition politician. In Oct-96, President dismiss Prime Minister Bhutto (PPP), government, and National Assembly.	Credit with respect to imports of goods is permitted. Borrowing abroad by banks is not allowed for temporary periods, and only if they become necessary for the normal course of business.	No
	1997	61.44 (**) - 46.76 (**)	11476	0.49 - 0.82		No changes in 1997.	No changes in 1997.	In Feb-97, general election, PML (Sharif) defeated PPP. In Nov-97, constitutional crisis, followed by presidential election.	No changes in 1997.	No
	1998	19.69 (**) - 41.98		0.41 - 0.31		No changes in 1998.	No changes in 1998.	In May-98, nuclear tests in retaliation against India incurred international sanction.	No changes in 1998.	Yes

		Fragility	Liquidity					Risk		
Philippines	1994	32 (*) - 21 (*)	13949	3.73	Mar-91	No changes in 1994. In 1991, a new Foreign Investment Law was promulgated. The law expanded the number of sectors open to full foreign ownership, simplified the approval process and defined more clearly restrictions on foreign investment. Nevertheless, the Law requires that Phillippines nationals own a minimum of 60 per cent of the shares issued by domestic firms. To ensure compliance, Phillippine companies typically issue two classes of stock (A-shares to be held by Phillippine nationals and B-shares, which both foreign and national investors can buy). Foreign investors would be allowed to invest in all sector, except for those especified in a negative list. Also, full and inmediate repatriation privileges for all types of investments were allowed to be serviced directly, without the approval of the Central Bank.	No changes in 1994. In 1991, a new Foreign Investment Law was promulgated. Full and inmediate repatriation privileges for all types of investments were allowed to be serviced directly, without the approval of the Central Bank.	In 1994, no major political unstabilizing events.	In 1983, foreign borrowing by firms require prior approval from the Central Bank (still in place in 1996). Commercial banks are allowed to maintain open exchange positions, subject to the limitation that long and short positions do not exceed 25% and 5% respectively of un-impaired capital; any excess beyond the limit must be settled daily. All forward transactions to purchase foreign exchange require the prior approval of the Central Bank. All public and certain private sector loans from foreign creditors, off-shore banking units and Foreign currency deposit Units (FCDUs) must be referred to the Central Bank for prior approval. This regulation includes all loans with maturity exceeding 1 year and all the loans with official guarantees. In Jul-94, the Bankgo Central began to discourage forward cover arrangements with nonresident financial institutions.	No
	1995	21 (*) - 23 (*)	14727	3.96 - 3.78		No changes in 1995.	No changes in 1995.	In May-95, campaign violence during election.	Depository banks operating FCDUs need to maintain full cover for their foreign currency liabilities at all times. Not less of 70% of the said cover must be maintained in the same currency of the liability and 305 or less may be denominated in other acceptable foreign currencies.	No
	1996	63 (*) - 76 (*)	25519	4.23 - 3.77		No changes in 1996.	No changes in 1996.	In 1996, no major political unstabilizing events.	No changes in 1996.	No
	1997	63 (*) - 50 (*)	19783	2.62 - 1.73		No changes in 1997.	No changes in 1997.	In Sep-97, public rally in protest against constitutional changes. In Oct-97, hostages held by communist rebels (NDF).	In 1997, loans from non-residents to firms (irrespective of maturity) no longer require the approval of the Central Bank. All forward transactions, including renewals thereof, from non-residentsrequire prior approval from the Central Bank. Loans of resident private sector borrowers from FCDUs and off-shore sources and non-resident loans serviced by foreign exchange purchased outside the banking system no longer require the central bank approval.	No
	1998	32.34 (**) - 19.69 (**)		2.18 - 2.61		No changes in 1998.	No changes in 1998.	In May-98, presidential election, LaMMP (Estrada) defeated Lakas-NUCD (Ramos) .	In Mar-98, sanctions for the violation of the net open position limits for banks were announced.	No
Singapore	1994	n.a. - 0 (***)	81054	6.14	n.a.	Free entry.	Free repatriation.	In 1994, no major political unstabilizing events.	Firms may freely borrow from abroad. Banks in Singapore may freely accept deposits in foreign currencies.	No
	1995	n.a. - n.a.	60461	5.79 - 5.67		No changes in 1995.	No changes in 1995.	In 1995, no major political unstabilizing events.	No changes in 1995.	No
	1996	n.a. - 0 (***)	42739	4.23 - 4.76		No changes in 1996.	No changes in 1996.	In 1996, no major political unstabilizing events.	No changes in 1996.	No
	1997	0 (***) - 0 (***)	63954	3.54 - 3.06		No changes in 1997.	No changes in 1997.	In 1997, no major political unstabilizing events.	No changes in 1997.	No
	1998	n.a. - n.a.		2.97 - 5.24		No changes in 1998.	No changes in 1998.	In 1998, no major political unstabilizing events.	No changes in 1998.	No
Sri Lanka	1994	14.49 (**) - 14.49 (**)	700	0.36	n.a.	Investments in shares by non-residents, up to 100 per cent of the equity capital are permitted, subject to certain exclusions and limitations, without previous approval, through a Share Investment External Rupee Account maintained at a commercial bank. Companies incorporated abroad are permitted to invest in securities traded at the Colombo Stock Exchange, subject to the same terms and conditions as those applicable to such investments by approved country funds, approved regional funds, and non-resident individuals.	Capital can be freely repatriated. Profit and dividend remittances may be effected without approval if they relate to the year of the application and do not include undistributed profits of previous years or undistributed profits of previous years or reserves of the company. However, considerable documentation is required to remit interim profits or dividends, or final profits or dividends.	In Aug-94, former ruling party UNP defeated in legislative elections by PA, whose leader Kumaratunga became Prime Minister and formed coalition government. In Oct-94, presidential candidate from UNP assassinated by Tamil Tigers group (LTTE). In Nov-94, current ruling party won presidential election.	n.a.	No
	1995	27.07 (**) - 28.17 (**)	221	0.21 - 0.22		No changes in 1995.	No changes in 1995.	In Apr-95, truce between government and Tamil Tigers ended, civil war resumed.	n.a.	No
	1996	23.61 (**) - 19.49 (**)	134	0.17 - 0.08		No changes in 1996.	No changes in 1996.	In 1996, no major political unstabilizing events.	There are controls on commercial credits and on financial credits. There are specific provisions on borrowing abroad by commercial banks and other credit institutions.	No
	1997	17.63 (**) - 18.07 (**)	311	0.14 - 0.22		No changes in 1997.	No changes in 1997.	In 1997, no major political unstabilizing events.	No changes in 1997.	No
	1998	14.49 (**) - 14.49 (**)		0.20 - 0.18		No changes in 1998.	No changes in 1998.	In 1998, no major political unstabilizing events.	No changes in 1998.	No
Taiwan	1994	42.91 (**) - 41.63 (**)	n.a.	5.66	Dec-91	The market was closed until January, 1991. At that time, authorities permitted foreign institutions meeting fairly strict registration requirements to invest in listed stocks, up to a 10 per cent aggregate foreign participation limit. Also, authorities set a ceiling on the aggregate amount of foreign portfolio capital inflows. The inicial ceiling was set to US$2.5 billion, which was raised to US$5 billion in 1993, and to US$7.5 billion in 1994.	n.a.	In 1994, no major political unstabilizing events.	n.a.	n.a.
	1995	45.04 (**) - 53.61 (**)	n.a.	4.50 - 5.11		In 1995, the ceiling on inflows was eliminated, and the limit on foreign participation was increased to 12 per cent in July, and to 15 per cent in September.	n.a.	In 1995, no major political unstabilizing events.	n.a.	n.a.
	1996	51.25 (**) - 46.18 (**)	n.a.	6.26 - 6.46		In 1996, the limit was further increased to 20 per cent in March, and to 30 per cent in November.	n.a.	In Mar-96, first direct presidential election; KMT remained in power, Lee Teng-Hui remained President and Lian Chan became Premier.	n.a.	n.a.
	1997	35.83 (**) - 38.72 (**)	n.a.	7.08 - 6.13		n.a.	n.a.	In May-97, popular demonstration in protest against government's inability against increasing crime. In Aug-97, government resigned over social disorder; Vincent Siew replaced Lian Chan as Premier.	n.a.	n.a.
	1998	45.21 (**) - 43.49 (**)		6.98 - 7.91		n.a.	n.a.	In 1998, no major political unstabilizing events.	n.a.	n.a.

		Fragility	Liquidity					Risk		
Thailand	1994	10 (*) - 20 (*)	80188	10.72	Jan-91	No changes in 1994. In 1990, equity capital investments in Thailand by nonresidents may be made freely. Foreign equity participation or joint ventures are freely permitted. Foreign investors can hold up to 100 percent of the equity of a firm, but provided that the firm exports all of its output. Certain economic activities are still reserved to Thai nationals. The Banking Law restricts foreign ownership in banks to 25 per cent. The Alien Business Law restricts foreign ownership in specified sectors to 49 per cent. In addition, other laws provide for similar restrictios that range from 15 to 65 per cent.	No changes in 1994. In 1988, repatriation of income and capital may be made freely. Previoulsy, all outward transfers of capital by residents or nonresidents were subject to approval, although the Investment Promotion Act guaranteed the transfer abroad of income and capital.	In 1994, no major political unstabilizing events.	No changes in 1994. In 1992, loans from abroad can be contracted by firms without restrictions, but if the loan is used domestically, resident borrowers are required to convert foreign currency obtained into bahts, which they are not allowed to deposit in foreign currency accounts.	No
	1995	10 (*) - 10 (*)	57000	11.5 - 10.9		No changes in 1995.	No changes in 1995.	In Jul-95, in general election a new coalition government formed with Banharn (Chart Thai) as Prime Minister.	In Aug-95, reserve requirements, to be held in the form of non-interest bearing deposits at the Bank of Thailand on short-term nonresident's accounts were raised from 2 percent to 7 percent. Reserve requirements on domestic deposits are also 7 percent but can be held in the form of interest-bearing public bonds. In Dec-95, a variety of measures aimed at reducing foreign-financed lending were introduced.	No
	1996	35 (*) - 100 (*)	44365	9.17 - 5.30		No changes in 1996.	No changes in 1996.	In Nov-96, in general election a new coalition government formed with Chavalit (NAP) as Prime Minister.	No restrictions on credits to residents from non-residents. (6) p.273 Offshore borrowing with maturities of less than 1 year by commercial banks, finance companies will be subject to a 7 percent minimun reserve requirement in the form of a non-remunerated deposit in the Bank of Thailand. Loans for trade purposes will be exempt.	No
	1997	100 (*) - 72 (*)	23119	2.90 - 2.27		No changes in 1997.	In May-97, the Bank of Thailand introduced restrictions on capital account transactions. In Jun-97, adittional measures to limit capital flows were introduced. Bath proceeds from the sale of stocks is required to be converted at the onshore exchange rate. In Sep-97, additional controls on invisible and current account transactions were introduced.	In Jan-97, among popular protests, an encampment of 15,000 outside the PM's office. In Nov-97, Chavalit resigned among popular demonstration, Chuan (DP) became new PM and formed new coalition government.	No changes in 1997.	No
	1998	42.27 (**) - 42.27 (**)		2.65 - 4.25		No changes in 1998.	No changes in 1998.	In Jan-98, violent demonstrations over economic crisis.	No changes in 1998.	No
<u>LATIN AMERICA</u>										
Argentina	1994	42 (*) - 21 (*)	11372	2.77	Aug-91	No changes in 1994. In 1989, the Economic Emergency Law liberalize foreign investment in the stock exchange.	No changes in 1994. In 1989, repatriation of profits, dividends and capital was fully liberalized.	In Jul-94, protest march in capital and general strike against economic austerity.	Since 1989, no conditions on conditions on maturity or interests of loans by firms (which could be made without prior Central Bank authorization). In 1990, complete de-regulation of foreign borrowing by banks.	No
	1995	26 (*) - 26 (*)	4594	2.78 - 3.44		No changes in 1995.	No changes in 1995.	In Jun-95, social unrest in provinces over economic austerity and unemployment.	No changes in 1995.	No
	1996	21 (*) - 21 (*)	4382	3.17 - 2.96		No changes in 1996.	No changes in 1996.	In Aug-96, popular general strike among industrial unrest.	No changes in 1996.	No
	1997	46 (*) - 65 (*)	25702	3.25 - 4.79		No changes in 1997.	No changes in 1997.	In Jan-97, public outcry at the mafia-style murder of prominent media member. In May-97, nation-wide violent protest against bad economic performance.	No changes in 1997.	No
	1998	34.96 (**) - 36.69 (**)		4.57 - 4.25		No changes in 1998.	No changes in 1998.	In 1998, no major political unstabilizing events.	No changes in 1998.	No
Brazil	1994	26 (*) - 75 (*)	109498	8.67	Jan-92	No changes in 1994. In 1991, foreign portfolios without local custody were allowed. Also, foreign ownership levels were increased. Foreign institutions may own up to 49 per cent of voting common stock and 100 per cent of non-voting participating preferred stock. Some corporate limitations apply (e.g. Petrobras common stocks is off llimits) and the voting class (ON) of banks is not available.	In 1983, the minimum holding period for capital repatriation was reduced from 2 years to 3 months. Remmitances of profits and dividends are subject to certain restrictions stipulated in the Foreign Investment Law. Profit and interest remittances are allowed only when the foreign capital concerned is registered in the Central Bank.	In Oct-94, Cardoso (PFL, PTB, PL) won the presidential election and formed multi-party cabinet.	In Mar-94, automatic authorization for issuing bonds, commercial paper, and other fixed-income instruments abroad was terminated. Circular #2410 altered the provisions that govern the prior authorization and registration of foreign credits through issues of securities on the international market. In Apr-94, Brazil completed arrangements to re-schedule its external debts to commercial bank creditors. In Oct-94, the limit on the purchase of foreign exchange by Brazilian residents temporarily staying abroad (US$4,000 per month) was eliminated. Also, a 1 percent tax on foreign investment in the stock market was imposed. The tax on Brazilian companies issuing bonds overseas was raised from 3 to 7 percent of the total. The tax paid by foreigners on fixed investments in Brazil was raised from 5 to 9 percent. The Central Bank raised the limits on the amount of dollars that can be bought on foreign exchange markets.	Yes
	1995	98 (*) - 75 (*)	79186	8.79 - 9.01		No changes in 1995.	No changes in 1995.	In May-95, general strike in public service and widespread industrial action at oil refineries against government economic program, resulted in military intervention.	Financial and non-financial institutions are authorized to obtain resources from abroad by issuing commercial papers, notes and bonds, including securities. Prior approval from the CB is required for borrowing by the private sector when the funds originate abroad (no matter where the funds came from -foreign banks or official financial institutions-). Proceeds of foreign borrowing converted into domestic currency are subject to a financial transaction tax of 7%. Under National Monetary Council resolution #63, private, commercial, investment and development banks may be authorized to take up foreign currency credits abroad for domestic re-lending in order to finance working capital. Safeguards against excessive use of such credits include: (a) limitations on the foreign obligation that each bank may assume and (b) the provision that the ultimate borrower must agree to bear the exchange risk.	No

		Fragility	Liquidity					Risk		
	1996	76 (*) - 76 (*)	112108	9.96 - 10.3		Since 1996, foreigners can also adquire shares of Brazilian companies by adquiring Depositary Receipts in international markets. The purchase of shares of Brazilian companies by foreign investors occurs either though direct investments or portfolio investment made by institutional investors. Collective investment in local shares by non-residents is regulated in investment companies, investment funds, and diversified stock portfolios. Natural and juridical persons resident or domiciled in MERCOSUR countries may invest freely in Brazilian stock exchanges without the necessity of trading through investment funds or portfolios.	No changes in 1996.	In 1996, no major political unstabilizing events.	During February, the minimum average term for contracting, renewing or extending foreign loans was increased from 24 to 36 months. A few specific loans were exempted from this regulation. The limit on banks' short-term position is contingent upon each bank's adjusted net worth. Banks are permitted to buy and sell foreign exchange in the forward market without restrictions. No official cover of forward positions.	Yes
	1997	45 (*) - 10 (*)	203260	14.1 - 15.9		No changes in 1997.	No changes in 1997.	In Jun-97, a police officers' strike was denounced by President as illegal; government troops were deployed as response.	Any bank authorized to conduct foreign exchange operations and holding an investment or development portfolio is permitted to contract loans abroad to be on-lent to enterprises in Brazil by issuing commercial papers. Foreign borrowing exceeding 360 days is subject to authorization and registration with the CBB. Banks authorized to conduct foreign exchange operations may use facilities contracted for terms exceeding 360 days with banks abroad to finance imports by resident enterprises to finance imports by resident enterprises.	Yes
	1998	35.63 (**) - 41.96 (**)		16.9 - 11.4		No changes in 1998.	No changes in 1998.	In 1998, no major political unstabilizing events.	Foreign borrowing by firms for terms exceeding 1 year is subject to authorization and registration with the Central Bank. Banks are prohibited from granting foreign currency loans within Brazil. Purchase of locally issued securities cannot be denominated in foreign currency. Bonds and some other debt securities may be issued by residents but are subject to prior approval by the CB. There is a minimum average maturity of 24 months for new issues. A 15% income tax rate is levied on remittances of interest and other income associated with foreign loans operations. Foreign exchange position limits did exist. Long positions: up to 5 million dollars. Amounts exceeding that ceiling must be deposited in the CB. Short positions: contingent upon each bank's adjusted net worth.	No
Chile	1994	20 (*) - 20 (*)	5263	4.10	Mar-90	No changes in 1994. In 1987, Law 18657 permits foreign capital investment funds to invest in shares in Chilean corporations and other securities approved by the securities Commission, provided such funds meet certain portfolio diversification requirements and have certain minimun paid-up capital levels. Aggregate foreign owneship is limited to 25 per cent of a listed company shares. repatriation of capital from sales of such instruments is allowed only after 5 years. No restrictions apply to the remittances of these funds.In 1992, Chilean enterprises and banks were allowed to issue bonds in foreign markets. Also, Chilean enterprises are authorized to issue ADR's.	No changes in 1994. In 1987, Repatriation of capital from sales of such instruments is allowed only after 5 years. No restrictions apply to the remittances of these funds.	In Mar-94, CPD (ruling coalition) candidate Frei won the presidential election.	No changes in 1994. In 1992, all foreign borrowing by firms requires prior approval by the Central Bank. A reserve requirement of 20% was imposed on all new foreign borrowing by firms (30% as of 1998) for the first 12 months. (9) p. 208 & (8) p. 100 All new foreign borrowing or refinancing of existing credits by commercial banks requires prior registration at, or approval from, the Central Bank. Short-term loans are subject to a limit determined mainly by a bank's capital and reserves. The reserve requirements are of 30%. (12) p.107	No
	1995	20 (*) - 62 (*)	11072	4.29 - 3.78		No changes in 1995.	No changes in 1995.	In 1995, no major political unstabilizing events.	The minimum risk rating required for firms to issue bonds abroad was reduced from "A" to "BBB+" in Apr-95 and the minimum amount for a foreign bond was reduced from US$50 million to US$25 million. (10) p. 37 & (12) p.109	No
	1996	78 (*) - 62 (*)	8460	3.17 - 2.60		In 1996, according to the IFC, the bulk of foreign portfolio inflows into the stock market was done under Decree Law 600, wich permits 100 per cent foreign ownership of listed Chilean companies.	In 1996, according to the IFC, the bulk of foreign portfolio inflows into the stock market was done under Decree Law 600, wich allows capital to be repatriated after one year. Permission must be obtained from the Central Bank for access to the formal exchange market.	In 1996, no major political unstabilizing events.	Residents can issue equities and bonds abroad, and the associated foreign exchange operations must be done through the formal exchange market. (13) p.42 Commercial credits can be contracted with foreign banks and financial entities under a 30% reserve requirement charged on average balance and subject to 4% tax on interest. (13) p.44 & (15) p.192 Financial credits can be contracted with foreign banks and financial entities, subject to a one-year 30% reserve requirement, a 4% tax on interest, and a stamp tax of 1.2%. (13) p.44 & (15) p.192 The net position of foreign currency assets for banks cannot exceed 20% of capital and reserves. (13) p.45	Yes
	1997	43 (*) - 22 (*)	7445	3.11 - 3.47		No changes in 1997.	No changes in 1997.	In 1997, no major political unstabilizing events.	Banks may grant loans domestically in foreign currency, provided they remain within the open position limits (20% of capital and reserves). They can also obtain foreign credit subject to a reserve requirement (30% for a year for financial credits). By law there are ceilings on interest rates for loans on both domestic and foreign currency (1 ½ times the average market interest rate). (6) p. 12	Yes
	1998	43.82 (**) - 50.08 (**)		3.71 - 3.60		No changes in 1998.	No changes in 1998.	In Oct-98, former president Pinochet arrested in London under extradite appeal by Spain, followed by clash during demonstration of supporters and opponents of Pinochet in Chile.	Only blue-chip companies with an excellent credit rating are authorized to borrow abroad and they must borrow no less than $25million. (10) p. 37 In Sep-98 the reserve requirement to capital inflows was eliminated for all flows. (11) p.23	Yes
Colombia	1994	20 (*) - 25 (*)	2191	0.60	Dec-92	No changes in 1994. In 1989, foreign investment in the form of a placement of shares in a fund established to make invcestments in the stock exchange and in debt papers issued by the financial sector are permitted with the approval of the National Planning Board. Repatriation of capital is allowed only 5 years after registration with the Exchange Office. In 1991, Resolution 52 came into effect which allowed foreigners to purchase up to 100 per cent of locally listed companies. Special regimes remain in effect in the fnancial, petroleum and mining sectors. The purchase of a 10 per cent or more of the shares of a Colombian financial institution requires prior approval by the Superintendency of Banks.	No changes in 1994. In 1989, foreign investment in the form of a placement of shares in a fund established to make invcestments in the stock exchange and in debt papers issued by the financial sector are permitted with the approval of the National Planning Board. Repatriation of capital is allowed only 5 years after registration with the Exchange Office. In 1991, limitations on annual transfers of profits were abolished. Capital must be registered with the Central Bank before profits can be repatriated. Foreign investors may not repatriate their capital within 1 year of registration but are free to do so thereafter.	In Jun-94, Samper (PL) elected President; results of congressional and local election reestablished 2-party dominance of PL and PCC.	All foreign loans must be registered with the Central Bank. Short-term foreign borrowing to finance any activity is permitted. Foreign loans with maturity ranging from 30 days to 5 years are subject to a non-remunerated deposit requirement ranging from 43% to 140% of the loan, respectively. This is still in place in 1996. (9) p.118 & (10) p.119	Yes

		Fragility	Liquidity					Risk		
	1995	30 (*) - 43 (*)	1254	0.64 - 0.44		No changes in 1995.	No changes in 1995.	In Nov-95, assassination of prominent Conservative politician during government armed exchange with guerrillas.	No changes in 1995.	Yes
	1996	21 (*) - 65 (*)	1360	0.52 - 0.53		No changes in 1996.	No changes in 1996.	In Apr-96, nation-wide "armed industrial strike" organized by guerrilla group.	For firms, the non-remunerated deposit requirement was reintroduced at 50% of the loan up to 5 years.(12) p.30 For banks, reserve requirements of 50% were imposed on all foreign credits with a maturity of less than five years. The CB eased restrictions on foreign borrowing by reducing the maximum maturity of credits from 5 to 3 years. (7) p.13 The minimum required net foreign exchange position of banks was eliminated. (10) p.120	No
	1997	44 (*) - 22 (*)	1894	0.56 - 0.64		No changes in 1997.	No changes in 1997.	In Jun-97, assassination, kidnapping and threatening of departmental and municipal election candidates by guerrilla groups, followed by assassination of a Senator close to President.	Since May-97, foreign loans by firms and banks (all maturities) are subject to non remunerated deposits requirements of 30% of the loan in pesos to be held for 18 months. (11) p.227 In Mar-97 the maximum maturity of foreign loans by banks was reverted to 5 years.	No
	1998	72.50 (**) - 74.02 (**)		0.53 - 0.40		No changes in 1998.	No changes in 1998.	In Jun-98, Pastrana (PCC) elected President.	Since Jan-98, foreign loans nonremunerated deposits requirements were reduced to 25% of the loan in pesos, and the period was shortened to 12 months. (11) p.229	No
Mexico	1994	98 (*) - 98 (*)	82964	4.46	Jan-89	No changes in 1994. In 1993, restrictions on portfolio investment were lifted. Nevertheless, there are sectors that remain reserved to Mexicans or to Mexican corporations with a foreign exclusion clause. There are also caps to foreign participation in some sectors and foreign investment in others require prior authorization.	No significant restrictions apply.	In Jan-94, Indian groups (EZLN) rebellion in southern state Chiapas, resulting in a declaration of war against the government; unilateral cease-fire by the government and peace negotiations followed. In Mar-94, assassination of ruling party PRI's presidential candidate Colosio. In Aug-94, Zedillo from the ruling party won the presidential election. In Sep-94, murder of another prominent member of ruling party PRI, Ruiz Massieu.	Credits by firms denominated in foreign exchange are subject to restrictions. (10) p.174 Since 1994 private-sector borrowing has been pushed up because the non-banking sector, in particular, has found cheaper to borrow from foreign banks than to go to the domestic banks. (8) p. 36 Mexican banks are prohibited from receiving domestic currency deposits from foreign financial institutions abroad or from non-Mexican exchange houses, except in certain cases. (9) p.325	No
	1995	63 (*) - 32 (*)	34377	5.36 - 6.11		No changes in 1995.	No changes in 1995.	In 1995, no major political unstabilizing events.	No changes in 1995.	No
	1996	22 (*) - 10 (*)	43040	6.52 - 7.00		No changes in 1996.	No changes in 1996.	In Jun-96, government staged military offensive in Guerrero against EPR rebels who formed a rally in commemoration of the massacre of 17 peasant farmers in July 1995.	Credits by firms denominated in foreign exchange are restricted. (11) p. 565 Residents banks or credit institutions may not contract on any liability which may be expressed in domestic currency with foreign entities. Banks must not register a monthly average of daily balances that should not be any higher than the result of either (1) 10% plus an additional 4% of their liabilities in domestic currency, or (2) 1.6 times their net capital. Commercial banks must balance their positions subject to exchange rate risk on a daily basis. Short and long positions are acceptable as long as they do not exceed 15% of the bank's net capital. (10) p.175 & (11) p. 564	No
	1997	22 (*) - 10 (*)	52646	8.35 - 13.8		No changes in 1997.	No changes in 1997.	In 1997, no major political unstabilizing events.	Firms are allowed to issue bonds abroad subject only to registration. (7) p. 594 There are limits on credits denominated in foreign currency and open foreign exchange position limits. (7) p. 596	No
	1998	14.49 (**) - 14.92 (**)		12.4 - 11.0		No changes in 1998.	No changes in 1998.	In 1998, no major political unstabilizing events.	No changes in 1998.	No
Peru	1994	25 (*) - 22 (*)	3080	0.84	n.a.	No changes in 1994. In 1992, under the Private Sector Guarantee Regime, foreign investors were guaranteed nondiscriminatory treatment. The stock market is 100 per cent open except for banks, which have a foreign portfolio investment limit of 15 per cent of total shares outstanding. In 1993, shares of banks, isurance companies and pension fund management companies become freely available.	No changes in 1994. In 1991, repatriation of income, dividends and capital were liberalized.	In Feb-94, resignation of Prime Minister over judicial crisis.	From 1992 on, no restrictions on borrowing abroad by firms. Borrowing abroad by the public sector, as well as borrowing abroad by the private sector with a government guarantee is subject to prior approval by supreme decree, within the limits established by the financing Requirement Law of the public sector.	In 1994, single exchange rate regime. During 1993 import rates differed from export rates.
	1995	22 (*) - 35 (*)	3935	0.85 - 0.77		No changes in 1995.	No changes in 1995.	In 1995, no major political unstabilizing events.	Bonds issued by a domestic bank that are in foreign currency with maturity shorter than 1 year and placed in a foreign country are subject to a minimum reserve requirement of 9%, which can range up to 30% of the issuing entity's capital. These issues must be followed by a first class foreign underwriter or arranger.	No
	1996	25 (*) - 22 (*)	3805	0.79 - 0.80		No changes in 1996.	No changes in 1996.	In Apr-96, resignation of Prime Minister over economic policies. In Dec-96, MRTA (guerrilla group) took Japanese ambassador residence into hostage.	No changes in 1996	No
	1997	22 (*) - 10 (*)	4033	0.92 - 1.13		No changes in 1997.	No changes in 1997.	In Apr-97, government troops ended the siege.	No changes in 1997	No
	1998	42.27 (**) - 42.27 (**)		1.14 - 0.90		No changes in 1998.	No changes in 1998.	In Jun-98, President replaced Prime Minister with a former opposition senator. In Aug-98, resignation of Prime Minister over conflict of interests. In Jan-99, President replaced Prime Minister in a major cabinet reshuffle.	No changes in 1998	No
Venezuela	1994	65 (*) - 43 (*)	936	0.36	Aug-91	In 1994, bank stocks were fully opened to foreign institutional investors. Since 1990, controls on foreign participation in non-financial companies were completely abolished.	In 1994, the government fixed the exchange rate and effectively prohibited the repatriation of capital and income. (2)	In Feb-94, Caldera (the winning candidate from a new party) took office of President and formed new government. In Jun-94, government suspends constitutional guarantees in view of economic crisis. In Nov-94, Government deployed National Guard to patrol major cities in reaction to urban crime.	The foreign exchange market was closed, and a comprehensive system of exchange controls covering all current and capital account transactions was introduced. In place until 1996. (7) p. 531 & (10) p.40	No
	1995	35 (*) - 76 (*)	510	0.32 - 0.33		No changes in 1995.	In 1995, the government approved trading Venezuelan Brady bonds at the stock market, creating a de facto currency convertibility. Profits and capital can be freely repatriated.	In Mar-95, demonstrations in capital in opposition to militarization of cities and suspension of constitutional guarantees..	No changes in 1995.	No
	1996	32 (*) - 20 (*)	1275	0.44 - 0.62		No changes in 1996.	No changes in 1996.	In 1996, no major political unstabilizing events.	No control on private credit operations. In place until 1998. (8) p.298, (9) p.970 & (27) p.940 Local banks can make loans denominated in foreign exchange. There are limits regulated by the Central Bank in relation to foreign exchange position limits by banks. (8) p.298	No

		Fragility	Liquidity					Risk		
	1997	45 (*) - 22 (*)	3858	0.84 - 1.24		No changes in 1997.	No changes in 1997.	In 1997, no major political unstabilizing events.	No changes in 1997.	No
	1998	42.27 (**) - 60.63 (**)		0.70 - 0.63		No changes in 1998.	No changes in 1998.	In Dec-98, left-wing party MVR's candidate Chavez won in presidential election.	No changes in 1998.	No
TRANSITION										
Czech Rep.	1994	n.a. - n.a.	1328	0.36	n.a.	There is no limit on equity participation by non-residents.	Free repatriation.	In 1994, no major political unstabilizing events.	Resident enterprises may freely obtain supplier's credit. Also, resident enterprises may obtain financial credits from foreign banks with the approval by the Czech National Bank (CNB).	No
	1995	n.a. - n.a.	3630	0.53 - 0.55		No changes in 1995.	No changes in 1995.	In 1995, no major political unstabilizing events.	In Apr-95, the Central Bank introduced a fee of 0.25 percent on its foreign exchange transactions with banks with the aim of discuurage short-term speculative flows. In Aug-95, the limit on net short-term (less than one year) foreign borrowing by banks was introduced. Also, administrative approval procedures seek to slow down short-term borrowing by nonbanks. There are limits on the net short-term liabilities of banks with nonresidents.	No
	1996	n.a. - n.a.	8431	0.88 - 0.89		No changes in 1996.	No changes in 1996.	In May-96, in general election the ruling coalition lost parliamentary majority, but remained in power as a minority government; Klaus (CPP) became new Prime Minister.	n.a.	No
	1997	100 (****) - 100 (****)	7055	0.63 - 0.98		No changes in 1997.	No changes in 1997.	In Nov-97, trade-union members demonstrated in Prague against social welfare and economic policies. In Nov-97, Klaus administration resigned under allegation of corruption; Tosovsky succeeded with a new coalition.	n.a.	No
	1998	n.a. - n.a.		1.14 - 1.00		In Apr-98, the Securities Commission Act entered into force, removing most restrictions on controls imposed by the previous Securities Law. The purchase of shares and other securities of a participating nature by non-residents may be affected by regulations on inward direct investments.	No changes in 1998.	In Jun-98, CSDP led in general election and formed a minority government led by Zeman.	No changes in 1998.	No
Hungary	1994	n.a. - 100 (***)	270	0.60	n.a.	Restricted.	Guarantee is given for the transfer of profits abroad.	In May-94, HSP and AFD replaced HDF in legislative election and formed coalition government, Horn became Prime Minister.	Foreign borrowing of legal entities different from financial institutions is subject to the approval of the foreign exchange authority (NBH). Commercial credits in connection with foreign trade activities between non-financial legal entities with maturities over one year require authorization. Medium- and long-term financial credits for enterprises are allowed. Short-term credits for enterprises require authorization from the NBH and authorization is granted liberally, on a case-by-case basis. Since 1991, financial institutions must report all foreign borrowing to the NBH.	No
	1995	n.a. - n.a.	355	0.53 - 0.44		Portfolio investment flows must be registered, and permission, in most cases granted by the National Bank, is not automatic.	In 1995, the Foreign Exchange Law abolished restrictions on all payments and transfers for current international transactions.	In 1995, no major political unstabilizing events.	No changes in 1995.	No
	1996	n.a. - 100 (***)	1641	0.97 - 1.07		n.a.	No changes in 1996.	In 1996, no major political unstabilizing events.	No changes in 1996.	No
	1997	100 (***) - 100 (***)	7684	1.41 - 2.39		n.a.	No changes in 1997.	In 1997, no major political unstabilizing events.	No changes in 1997.	No
	1998	n.a. - n.a.		2.96 - 3.04		n.a.	No changes in 1998.	In May-98, FYP-HCP and HDF and ISPP replaced HSP in legislative election and formed coalition government, Viktor Orban became Prime Minister.	No changes in 1998.	No
Poland	1994	n.a. - 0 (***)	5134	0.36	n.a.	Purchase of Polish securities by non-residents is free, except for shares for which the freedom to purchase can be limited by Poland's restrictions of foreign direct investment.	Free repatriation.	In Mar-94, nation-wide strike against bad economic situation.	With a permit, firms can finance imports with a value of up to the equivalent of $1 million with a credit with repayment terms of up to three years. Under the provisions of the banking law, certain banks are empowered to borrow abroad, on short or long term, and to extend foreign credits. The Minister of Finance sets limits on the foreign borrowing of the banks, and the contracting of foreign loans is subject to approval.	Yes
	1995	n.a. - n.a.	2770	0.53 - 0.77		No changes in 1995.	No changes in 1995.	In Feb-95, Prime Minister Plawlak (PSL) resigned under Presidential pressure, succeeded by Oleksy (SLD). In Nov-95, Kwasniewski (SdRP) defeated incumbent Walesa (NPBR) in presidential election.	No changes in 1995.	No
	1996	n.a. - 0 (***)	5538	1.23 - 1.34		No changes in 1996.	No changes in 1996.	In Jan-96, Olesky resigned as Prime Minister, succeeded by Cimoszewicz (SLD).	An NBP's foreign exchange credit is required for residents contracting financial credit with non-residents, with the exception of: (1) credits granted by authorized banks; (2) credits granted to residents by international banks guaranteed by the Council of Ministers or the NBP for financial investments in the country; and (3) credits contracted by residents abroad with the maturity of 1 year or more from the date of contracting the credit. For commercial credit, the NBP must be notified within 20 days.	No
	1997	0 (***) - 0 (***)	7977	1.20 - 1.99		No changes in 1997.	No changes in 1997.	In Mar-97, nation-wide demonstration against closure of several state-owned companies. In Sep-97, center-right party coalition AWS won in general election, Buzek (Solidarity) became Prime Minister.	No changes in 1997.	No
	1998	n.a. - n.a.		3.17 - 3.11		No changes in 1998.	No changes in 1998.	In Aug-98, farmers organized nation-wide road blockades demanding government protection.	No changes in 1998 with respect to restrictions on borriwing abroad by firms. There are controls on short-term borrowing by banks.	No
Russian Fed.	1994	n.a. - 0 (***)	268	0.60	n.a.	n.a.	Repatriation of profits and dividends is not restricted. Non-resident juridical persons may transfer abroad foreign curency assets up to the amount imported, provided that the foreign exchange is in their possession. Non-residents may buy of sell foreign currency for investment purposes through special accounts without limits.	In Sep-93, Yeltsin dissolved an attempt to impeach him by taking over the parliament using force.	External borrowing by juridical persons is subject to control. Foreign borrowing by non-residents is subject to a special license and authorization by the CBR and also by the Ministry of Finance when a state guarantee is involved. Borrowing by banks possessing a general foreign exchange license does not require a special license.	No

		Fragility	Liquidity					Risk		
	1995	n.a. - n.a.	465	0.75 - 1.11		n.a.	No changes in 1995.	In 1995, no major political unstabilizing events.	No changes in 1995.	No
	1996	n.a. - 0 (***)	2958	1.67 - 2.33		Not restricted. Transactions involving the purchase of capital market securities by non-residents have to be notified to the Federal Securities Market Commission.	Not restricted.	In 1996, no major political unstabilizing events.	For commercial credit, resident legal entities may borrow in the form of deferred payment for commodities exported by the resident for a period of more than 180 days only after prior authorization from the CBR. For financial credit, residents may borrow for a term of more than 180 days only after prior authorization from the CBR.	No
	1997	100 (***) - 100 (***)	16362	5.24 - 7.74		No changes in 1997.	No changes in 1997.	In 1997, no major political unstabilizing events.	No changes in 1997.	No
	1998	n.a. - n.a.		5.45 - 2.37		No changes in 1998.	No changes in 1998.	In Mar-98, Yeltsin dismissed Prime Minister Chernomyrdin over economic reform failure. In Aug-98 the crises in the Russian financial system reached its climax. A three-month moratorium on debt payments, more than 50% devaluation of the ruble, halting of foreign exchange trading on MICEX, and news of debt rescheduling that will lead to unprecedented losses for investors combined to literally crush the Russian stock market. Yeltsin re-appointed former Prime Minister Chernomyrdin during financial crisis, but nomination rejected by Duma twice; a third Prime Minister was nominated in the same year. In May-99, Yeltsin dismissed Prime Minister Primakov over failure to resolve economic crisis.	No changes in 1998.	Yes
Slovak Rep.	1994	n.a. - n.a.	120	0.12	n.a.	There is no limit on equity participation by non-residents.	Not restricted.	In Mar-94, current MDS government (led by Prime Minister Meciar) forced out by "no confidence" votes in the National Council, replaced by a five-party coalition. In Dec-94, current coalition government defeated in election, replaced by Meciar and a three-party coalition.	Registered enterprises may freely obtain trade credits. Financial credits from abroad require a special permit from the National Bank.	No
	1995	n.a. - n.a.	832	0.10 - 0.11		No changes in 1995.	No changes in 1995.	In Aug-95, "no confidence" vote on the President (Kovac) failed, followed by abduction of his son.	No changes in 1995.	No
	1996	n.a. - n.a.	2321	0.08 - 0.08		No changes in 1996.	No changes in 1996.	In 1996, no major political unstabilizing events.	For banks to borrow from abroad, a banking license is required.	No
	1997	n.a. - n.a.	2165	0.07 - 0.11		No changes in 1997.	No changes in 1997.	In Jun-97, voters boycotted a referendum; a rally organized by opposition to protest against government intervention in the referendum.	No changes in 1997.	No
	1998	n.a. - n.a.		0.18 - 0.13		No changes in 1998.	No changes in 1998.	In Mar-98, protest rallies organized by opposition parties against Prime Minister taking over presidential powers. In Oct-98, new 4-party coalition won in election and formed new government (headed by Dzurinda). In May-99, candidate from current coalition government won presidential election.	No changes in 1998.	No

Notes:

Fragility, refers to the maximum value of the probability of a currency crisis in the corresponding semester. (*) come from Kaminsky (1997); (**) estimates from Berg and Patillo (19xx); (***) comes from Van Rickjenben and Osband (xx). For (***) the variable equals zero if the country is "safe" (low probability of crisis) and one if the country is vulnerable. (****) Goldstein, Kaminsky and Reinhart (2000).

Volume traded, refers to the volume traded during the calendar year before the crisis (millions of current US$).

Share in Mutual Fund Portfolio, refers to the market capitalization of the mutual funds in the country as a percentage of the market capitalization of the mutual funds in the countries in the sample. The market capitalization is measured at the end of the calendar year prior to the crisis (except for the Mexican crisis, where the market capitalization refers to the end of 1995).

Restrictions to entry and exit the stock market, refer to restrictions to entry and exit by foreign investors.

Trading in mature markets, are the dates in which ADR's where introduced.

Risk, describes the changes in controls to capital account movements that took place six months before and after the crisis. It also includes major changes in the political arena or events of political unstability that took place six months before and after the crisis.

(1) The values in 1994 are the shares in Mutual Fund Portfolio (Percent of market capitalization of mutual funds in the countries in the sample) at the end of the first quarter in 1995.

(2) Otherwise indicated, no changes occurred during 1994.

(3) Since 1996 on, the variable refers to restrictions on liquidation of direct investment. Otherwise indicated, no changes occurred during 1994.

Sources

General

IMF. Exchange Arrangements and Exchange Restrictions, Main Developments in Restrictive Practices. (*)
IMF. Exchange Arrangements and Exchange Restrictions, Appendix Summary of measures affecting Members' Exchange and Trade Systems. (**)
Williamson, J. and Mahar, m. A Review of Financial Liberalization. South Asia Region. The World Bank. January 1998 (***)
Sundarajan, V. and T. Baliño Issues In Recent Banking Crises. 1991.in V Sundarajan and T. Balino, eds,Banking Crises: Cases and Issues. Washington, D. C. IMF (****)
Galbis, Vicente. High Real Interest rates under Financial Liberalization, Is There a Problem?. IMF Working Paper. WP/93/7. IMF. (*****)
Wyplosz, Charles, Financial Restraints and Liberalization in Postwar Europe. A paper presented at the workshop on Financial Liberalization: How Far? How Fast? March 18-19, 1999. Washington, D. C. World Bank (******)

Chile

Velasco, Andrés. Liberalization, Crisis, Intervention: The Chilean Financial System, 1975-85. 1991.in V Sundarajan and T. Baliño, eds,Banking Crises: Cases and Issues. Washington, D. C. IMF (1)
IMF. Recent Economic Developments (1982 (2); 1984 (3); 1985 (4); 1987 (5); 1998 (6))
George M. von Furstenburg ed. The banking and financial structure in the NAFTA countries and Chile, Kluwer Academic Publishers,1997 (7)
IMF. Exchange Arrangements and Exchange Restrictions, Annual Report (1983 (14); 1992 (8); 1995 (12); 1996 (13); 1997 (15); 1998 (9))

The Economist. EIU Country Profile 1998-99 (10)
Central Bank of Chile, Annual Report (1973 (11); 1985 (21); 1990 (17); 1991(22); 1994 (19); 1995 (20); 1998 (18))
Johnston, B. at al. Sequencing Capital Account Liberalization: Lessons from the Experiences in Chile, Indonesia, Korea, and Thailand. Monetary and exchange Affairs Department. IMF. November 1997 (16)

Mexico

Montes-Negret, Fernando and Luis Landa, Financial Sector Reseach. A paper presented at the workshop on Financial Liberalization: How Far? How Fast? March 18-19, 1999. Washington, D. C. World Bank (1)
George M. von Furstenburg ed. The banking and financial structure in the NAFTA countries and Chile, Kluwer Academic Publishers,1997 (2)
IMF. Recent Economic Developments (1983 (3); 1984 (4); 1995 (5))
IMF. Exchange Arrangements and Exchange Restrictions, Annual Report (1974 (16); 1982 (17); 1986 (18); 1989 (19); 1992 (6); 1993 (20); 1995 (9); 1996 (10); 1997 (11); 1998 (7))
The Economist. EIU Country Profile 1998-99 (8)
Bank of Mexico, Annual Report (1973 (12); 1983 (13); 1992 (15))

Sources (Cont.)

Indonesia

Hanson, James, Financial Sector Reseach. A paper presented at the workshop on Financial Liberalization: How Far? How Fast? March 18-19, 1999. Washington, D. C. World Bank (1)
IMF. Recent Economic Developments (Jan-1985 (2); May-1985 (3); 1990 (4); 1991 (5); 1992 (6); 1993 (7); 1995 (8); 1996 (9); 1997 (10))
IMF. Exchange Arrangements and Exchange Restrictions, Annual Report (1979 (11); 1983 (12); 1986 (20); 1989 (13); 1992 (14); 1995 (15); 1996 (18); 1997 (19); 1998 (16))
Montgomery, John. The Indonesian financial System; its Contribution to Economic Performance, and Key policy Issues. IMF Working Paper. WP/97/45. IMF. (17)
Bank of Indonesia, Report for the Financial Year (1973 (21); 1975 (22); 1977 (26); 1980 (23) 1983 (24); 1985 (25); 1989 (27))

Colombia

IMF. Recent Economic Developments (1983 (1); 1984 (2); 1985 (3); 1986 (4); 1987 (5); 1988 (6); 1997 (7))
IMF. Exchange Arrangements and Exchange Restrictions, Annual Report (1992 (8); 1995 (9); 1996 (10); 1997 (13); 1998 (11))
The Economist. EIU Country Profile 1998-99 (12)
Central Bank of Colombia, Annual Report (1973 (14); 1991(15))

Malaysia

IMF. Recent Economic Developments (1997 (1); 1998 (2))
IMF. Exchange Arrangements and Exchange Restrictions, Annual Report (1992 (3); 1995 (4); 1996 (5); 1997 (10); 1998 (6); 1999 (13))
The Economist. EIU Country Profile (1995 (7); 1998 (8))
Bank Negara Malaysia, Annual Report (1973 (11); 1980 (12); 1998 (9))

Sources (Cont.)

Thailand

IMF. Recent Economic Developments (1975 (1); 1985 (2); 1990 (3))
IMF. Recent Economic Developments, Statistical Appendix (1995 (4))
IMF. Exchange Arrangements and Exchange Restrictions, Annual Report (1992 (12); 1995 (5); 1996 (6); 1997 (10); 1998 (7))
The Economist. EIU Country Profile 1998 (8)
Johnston, B. at al. Sequencing Capital Account Liberalization: Lessons from the Experiences in Chile, Indonesia, Korea, and Thailand. Monetary and exchange Affairs Department. IMF. November 1997 (9)
Johnston, Barry. Distressed Financial Institutions in Thailand: Structural Weakness, Support Operations, and Economic Consequences. 1991.in V Sundarajan and T. Balino, eds,Banking Crises: Cases and Issues. Washington, D. C. IMF (11)

Venezuela

IMF. Recent Economic Developments (1994 (1); 1995 (2))
IMF. The Secretary. The Banking Crises (1995 (3))
IMF. Recent Economic Developments (1996 (4); 1998 (5))
IMF. Exchange Arrangements and Exchange Restrictions, Annual Report 1974 (17); 1976 (18); 1977 (19); 1978 (20); 1981 (21); 1983 (22); 1984 (23); 1986 (24); 1989 (25); 1990 (26); 1992 (6); 1995 (7); 1996 (8); 1997 (11); 1998 (9); 1999 (27))
The Economist. EIU Country Profile 1998 (10))

Central Bank of Venezuela, Annual Report (1973 (12); 1978 (13); 1981 (14); 1989 (15))
Central Bank of Venezuela, Annual Report (1978)
Central Bank of Venezuela, Annual Report (1981)
Central Bank of Venezuela, Annual Report (1989)
Central Bank of Venezuela, Year-end economic review (1995 (16))
Central Bank of Venezuela, Press Note (1998 (28))
Central Bank of Venezuela, Monthly Bulletin (Dec-1995 (31); Dec-1997 (29); Aug-1998 (30))

Statistical Yearbook of Venezuela (1997 (17))