

## CHAPTER – VII

# **HOT-MONEY MOVEMENT AND SOUTH-EAST ASIAN CURRENCY TURMOIL AND LESSONS FOR INDIA**

### **Historical Background of Global Financial Crisis**

Asian Financial Crisis 1997 is not unique to the economic system because history is replete with banking and exchange rate crises<sup>1</sup>. In this century, for instance, there were numerous financial crises of the interwar period; the sterling and French Franc crises of the 1960s; the breakdown of the Brettonwoods system. In the earlier periods also there were two similar examples: one the Barings Crisis of 1890, which had striking parallels to the Mexican crisis of 1994-95<sup>2</sup>, and other the U.S. exchange rate crisis of 1894-96, which has been seen as a speculative attack on the United States' adherence to the gold standard and as an early example of the effectiveness of official borrowing of international reserves to stem a currency crisis<sup>3</sup>. In fact, it was largely in response to various crises that modern institutions and practices such as the lender of the last resort function of central banks, deposits insurance, prudential and regulatory standards, and international financial arrangements- especially the IMF itself- were established and evolved.

### **Types of Crises**

Broadly there are there three types of economic on financial crisis namely (i) currency crisis, (ii) banking crisis and (iii) foreign debt crisis. A currency crisis may be said to occur when a speculative attack on the exchange value of a currency results in a devaluation (or sharp depreciation) of the currency, or forces the authorities to defend the currency by expending large volumes of international reserves or by sharply raising interest rates. A banking crisis refers to a situation in which actual or potential bank runs or failures induce banks to suspend the internal convertibility of their liabilities or which compels the government to intervene to prevent this by extending assistance on a large scale<sup>4</sup>. Finally, a foreign debt crisis is a situation in which a country cannot service its foreign debt, whether sovereign or private.

Almost all types of crisis had common origins: The build up of unsustainable economic imbalances and mis-alignments in asset prices or exchange rates, often in a context of financial sector distortions and structural rigidities. A crisis may be triggered by a sudden loss of confidence in the currency or banking system, prompted by such developments as a sudden correction in asset prices, and failures of financial institutions and non-financial corporations<sup>5</sup>.

A currency crisis could be identified simply from a substantial nominal currency devaluation<sup>6</sup>. This criterion, however, would exclude instances where a currency came under severe pressure but the authorities successfully defended it by intervening heavily in the foreign exchange market, or by raising interest rates sharply, or by other means.

### **Asian Tigers : A Myth**

In August 1993, the World Bank brought out a publication of 389 pages entitled *The East Asian Miracle*. The economies characterised by seemingly miraculous economic performance were Japan, the four tigers (Hong Kong, South Korea, Singapore and Taiwan) and the newly industrialising economies (NIEs) of Indonesia, Malaysia and Thailand. The Bank report called these eight economies as the high-performing Asian economies (HAPes). The World Bank Report (Chapter 1, pp 27-77) details a number of common characteristics of the eight HPAEs. Two major characteristics namely 'rapid growth and reduced inequality' describe the economic miracle :

"Their most obvious common characteristic is their high average rate of economic growth. During the same period, income inequality has declined, sometimes dramatically. These two outcomes – rapid growth and reduced inequality – are the defining characteristics of what has come to be known as the East Asian economic miracle [World Bank 1993: 27]."

For the three decades before Asia's financial crisis, Indonesia, Korea, Malaysia, and Thailand had an impressive record of economic performance—fast growth, low inflation, macroeconomic stability and strong fiscal positions, high saving rates, open economies, and thriving export sectors (See Table-I). It is therefore not too surprising that no one predicted the Asian crisis. Now that the crisis has unfolded, it is, of course, much easier to identify the problems that led to it. In fact, there is a consensus on the causes of the crisis, in sharp contrast to the diversity of views on the remedies.

The UNCTAD (1996) was of the opinion that the 'success' of the East Asian countries could be replicated by other developing countries.

Table-I						
Key indicators for Asian crisis economies: Malaysia, Indonesia, Thailand and Korea (% of GDP unless otherwise noted)						
	1975-1982	1983-1989	(1990-1996	1995	1996	1997
	(average)	(average)	(average)			
<b>Malaysia</b>						
Real GDP growth	7.1	5.4	8.8	9.5	8.6	7.0
Inflation	5.3	2.0	3.5	3.4	3.5	3.7
Domestic saving	21.6	29.4	32.1	33.5	36.7	37.0
Fixed capital formation	29.4	28.5	38.3	43.0	42.2	42.7
Current account	-2.0	-0.7	-6.0	-10	-4.9	-5.8
Fiscal balance	-6.3	-4.0	0.0	3.8	4.2	1.6
External debt service	3.8	9.0	6.0	6.6	5.4	8.4
<b>Indonesia</b>						
Real GDP growth	6.2	5.5	8.0	8.2	8.0	5.0
Inflation	15.0	8.1	8.6	9.4	7.9	8.3
Domestic saving	19.3	23.2	28.9	29.0	28.8	27.3
Fixed capital formation	19.8	24.3	27.4	28.4	28.1	26.5
Current account	-1.2	-3.5	-2.6	-3.3	-3.3	-2.9
Fiscal balance	-2.6	-1.3	0.3	0.8	1.4	2.0
External debt service	3.5	6.8	8.6	8.5	9.0	10.5
<b>Thailand</b>						
Real GDP growth	7.0	8.1	8.6	8.7	6.4	0.6
Inflation	9.0	3.1	5.1	5.8	5.9	6.0
Domestic saving	19.6	25.4	34.2	34.3	33.1	31.8
Fixed capital formation	23.6	27.7	40.4	41.8	40.8	35.8
Current account	-5.6	-3.2	-6.9	-8.0	-7.9	-3.9
Fiscal balance	-5.8	-3.0	2.8	2.6	1.6	-0.4
External debt service	3.8	5.8	4.5	5.0	5.4	7.1
<b>Korea</b>						
Real GDP growth	7.0	9.6	7.7	8.9	7.1	6.0
Inflation	17.6	3.8	6.4	4.5	4.9	4.3
Domestic saving	25.7	32.7	35.0	35.1	33.3	32.9
Fixed capital formation	29.4	29.4	36.7	36.6	36.8	36.6
Current account	-4.6	2.5	-1.9	-2.0	-4.9	-2.9
Fiscal balance	-2.7	-0.3	-1.0	0.0	0.0	0.0
Import cover	n.a.	1.4	2.2	n.a.	n.a.	n.a.

Sources: IMF, 1997, World Economic Outlook: Interim Assessment, December, World

Bank

Note

a. Percentage per annum.

b. Average annual % change of consumer price index.

c. Gross international reserves in months of import cover.

d. 1991 and 1994 data unavailable.

e. 1980-1990.

f. 1995 figure.

## Nature and Causes of the Crisis

South East Asian crisis began on July 2, 1997 with substantial devaluation of Thai Baht and has been termed as global economic crisis by Joseph E. Stiglitz (1998), The then Chief Economist, World Bank, in a foreward note to the Annual Report on Global Economic Prospects 1998-99. The Report says that this crisis is worst since the 1980's debt crisis, downturning some economies from robust growth to deep recession in the space of a few short months. The crisis has led to sharp slowdown in world output, trade and capital flows.

According to a World Bank Press Release<sup>7</sup> "Private capital flows to developing countries experienced a 'roller coaster year' in 1997, rising strongly during the first half of the year before colliding with the East Asian financial crisis and the subsequent turmoil in global stock markets, and falling sharply in general retreat from new investments in emerging markets. Over the year as a whole, net long term private flows rose for the seventh straight year to reach a total of \$ 256 billion, up from \$ 247 billion in 1996. However, following the turmoil in global stock markets in October 1997, flows from international capital markets fell sharply.

In essence, there has been a mismatch between capital account convertibility and weakness in the financial and corporate sectors in the crisis-affected economies. With good investment potential built up by past economic success, foreign capital inflows accelerated, especially since the capital accounts were liberalized. However, the institutional capacities in the financial sectors of these economies were not robust enough to manage these inflows effectively. In essence they lacked the capability to allocate capital resources efficiently through a mechanism to assess values of future profits dispassionately. Poor corporate governance due to lack of transparency, as well as inadequate accounting and auditing standards, also contributed to the emergence of such overtly risky behavior. Moreover, short-term external loans were often used for financing projects with long gestation periods, resulting in a mismatch in maturity. Part of the foreign capital inflows were also invested in real estate, stock markets and other sectors, which were prone to speculation. Therefore, the cause of the Asian crisis lies more in structural deficiencies than in macroeconomic mismanagement. In this sense, the Asian crisis is a new type of crisis that may be called a "capital account crisis" as compared with the conventional "current account crisis"<sup>8</sup>.

The problem started in Thailand and then spread to the rest of the region. Storm clouds had been gathering over Thailand for some time. It had a fixed exchange rate (and so did Malaysia). So, when the dollar strengthened after 1995, this pulled up the Thai baht and Malaysia ringgit too, and affected their export competitiveness. Thailand's current account deficit rose to a whopping eight per cent of GDP, which was as high as Mexico's when that country went bust in 1994.

What was treated at first, as a temporary imbalance became a crisis of the world's financial system. In the past 20 years, two Mexican crises, in 1982 and 1994, spread to most of Latin America; the Asian crisis in 1997 also infected Eastern Europe, South Africa and Latin America. Each crisis has been more extensive and has spread more widely than its predecessor. Morris Goldstein (1998) claims this to be the third major crisis of the 1990s. Its predecessors were the crisis in the European Monetary System in 1992-93, and the Mexican peso crisis of 1994-95. He has identified six various reasons behind the Asian crisis namely credit boom, fixed exchange rate, financial sector mismatch, high current account deficit, major investment in property and stocks and contagion effects. However Marcus Noland (1998) has identified four principal causes for the crisis namely exchange rate misalignment, weak financial institutions, export slowdown and moral hazard. Another noted economist Edouard Balladur (1999) of Institute for International Economics has claimed that the Asian crisis is in fact, the outcome of an interaction between the failings of markets, the failings of governments, and the failings of the international monetary system.

An analysis by IMF Staff (1998) suggests that the chances of a currency or banking crisis are increased when the economy is overheated: inflation is high, the real exchange rate has appreciated, the current account deficit has widened, domestic credit has been growing rapidly, and asset prices have become inflated. An analysis further indicates that real appreciation of the domestic currency, an excessive expansion of domestic credit, and a rapidly rising ratio of broad money to international reserves are signals of vulnerability to pressures in currency markets. Equity price declines and deteriorations in the terms of trade can also signal vulnerability to a crisis, as can a rise in world interest rates. Indeed, a number of these variables indicated the emergence of vulnerabilities in the Asian countries most affected by the recent crisis. Indicators of vulnerability do give false signals, however, and they cannot predict crisis.

Stanley Fischer (1998), while analyzing the causes of the crisis has attributed banking and financial sector fragility as the main cause of the crisis. According to him the

problems facing Asia's banking systems were the legacy of years of bad lending practices and inadequate supervision and regulation that led to rapid lending growth and excessive risk taking. Most of the countries in the region displayed lending growth well in excess of GDP growth for several years and had higher loan leverage ratios than industrial countries with better-developed financial infrastructure. Moreover, credit growth in some of these countries was led in part by under-regulated nonbank financial intermediaries, such as finance companies in Thailand and merchant banks in Korea. The large capital inflows to the region, driven by partial financial liberalization and implicit guarantees of stable exchange rates, fueled an expansion of banks' balance sheets and increased exposure to liquidity, market and credit risks.

The fixed exchange rate created perverse incentives for banks and finance companies. They found they could borrow in dollars abroad at low interest rates, and re-lend the money locally at high interest rates. In theory, there was a currency risk-devaluation, which could greatly increase the cost of servicing the dollar debt. But the fixed exchange rate created the illusion of zero currency risk. And so Thailand and Malaysia both used dollars to finance a domestic lending boom, which took bank credit to more than 150 per cent of GDP. Borrowing to finance export-oriented industry was always viable. But foreign bankers started believing they could place unlimited amount of foreign exchange in economies to earn miraculous returns.

Soon a major part of the dollars was channeled by banks and finance companies into real estate, sparking a property boom and gross over-building. This bubble had to burst one day. Initially, banks lent happily against property as collateral. But when the property bubble burst, property prices crashed, and the finance companies suddenly found the collateral insufficient to recover their loans. Most of the financial system went bust.

This feature of the crisis has been described in a model form by Krugman (1999) as 'Moral hazard and asset deflation'. According to him one thing that quickly became apparent in the Asian crisis was that the depth and scope of the calamity put it outside the range of what traditional speculative-attack models-whether of the "first generation" type developed in the late 70s and early 80s (Krugman 1979, Flood and Garber 1984) or the "second-generation" type that became popular after the European currency attacks of 1992

(Obstfeld 1994)-could explain. The moral hazard over borrowing view was emphasized in a series of initially under-appreciated paper by McKinnon and Pill (especially McKinnon and Pill 1987). The problem began with financial intermediaries-institutions whose liabilities were perceived as having an implicit government guarantee, but were essentially unregulated and therefore subject to severe moral hazard problems. The excessively risky lending of these institutions created inflation – not of goods but of asset prices. The overpricing of assets was sustained in part by a sort of circular process, in which the proliferation of risky lending drove up the prices of risky assets, making the financial condition of the intermediaries seem sounder than it was.

Meanwhile, the Thai government used up its entire foreign exchange reserves trying to prop up the fixed exchange rate. When it finally gave up and let the baht float, panic set in, and the currency plunged. Not even an IMF rescue package could reverse the trend.

In Indonesia and Korea, the currency plunge actually worsened after announcement of IMF packages. Suddenly confidence in the Asian miracle was replaced by blind panic, which spread from Thailand to Malaysia, the Philippines and Indonesia.

Indonesia had only a modest trade deficit and modest lending boom. But its financial system was a disaster. Lending was based on good connections rather than hard-nosed appraisals, and lending to friends and relatives of President Suharto (who dominated business) was mandatory.

Korea had other problems. It had become rich through the “chaebol” system. Businessmen had little money of their own; so the government directed enormous amounts of bank credit to favoured “chaebol” (business conglomerates) to enable them to build huge empires. In the US, prudent companies have as much equity as debt to guard against a business downturn.

South Korea, Indonesia, Malaysia, Thailand and the Philippines experienced – an inflow of \$93 billion in 1996 and an outflow of \$12 billion in 1997 (See Table-II and III).

	1994	1995	1996	1997e	1998f
Current account balance	-24.6	-41.3	-54.9	-26.0	17.6
External financing, net	47.4	80.9	92.8	15.2	15.2
Private flows, net	40.5	77.4	93.0	-12.1	-9.4
Equity investment	12.2	15.5	19.1	-4.5	7.9
Direct equity	4.7	4.9	7.0	7.2	9.8
Portfolio equity	7.6	10.6	12.1	-11.6	-1.9
Private creditors	28.2	61.8	74.0	-7.6	-17.3
Commercial Banks	24.0	49.5	55.5	-21.3	-14.1
Non-bank private creditors	4.2	12.4	18.4	13.7	-3.2
Official flows, net	7.0	3.6	-0.2	27.2	24.6
int'l financial institutions	-0.4	-0.6	-1.0	23.0	18.5
Bilateral creditors	7.4	4.2	0.7	4.3	6.1
Resident lending/other, net <sup>2</sup>	-17.5	-25.9	-19.6	-11.9	-5.7
Reserves excl. gold	-5.4	-13.7	-18.3	22.7	-27.1
(- = increase)					
e=estimate, f=IIF forecast					
1 South Korea, Indonesia, Malaysia, Thailand and the Philippines.					
2 Including resident net lending, monetary gold, and errors and omissions.					
Source: Institute for International Finance, 1998.					

**Table-III**  
**External Debt (Percent of GDP)**

Country	1994	1995	1996	1997	1998	1999
Indonesia	57.0	56.3	53.4	63.9	149.4	95.5
Korea	24.1	26.0	31.6	33.4	46.9	33.0
Malaysia	38.6	37.6	38.4	44.0	58.8	55.3
Philippines	60.4	53.1	50.5	55.3	73.3	68.0
Thailand	44.9	49.1	49.8	62.0	76.8	61.5
<b>Of which: Short-term debt</b>						
Indonesia <sup>1</sup>	6.5	8.7	7.5	27.5	76.4	45.1
Korea	13.3	14.6	17.9	13.4	9.6	10.9
Malaysia	7.5	7.2	9.9	11.1	11.7	9.4
Philippines	8.1	7.1	8.7	10.3	11.0	3.6
Thailand	20.2	24.5	25.1	24.6	27.0	21.1

Source: World Economic Outlook May 2000, IMF, Pg.67.

## Currency Crises and Causes of Contagion

Macroeconomic imbalances have often been at the root of foreign exchange market crises. Experience clearly demonstrates that unsustainably large current account deficits can bring about sudden reversals in capital inflows and sharp change in exchange rate<sup>9</sup>. Most often, crises have arisen when large external imbalances have developed in inflexible exchange rate system that have allowed the currency to become significantly overvalued. In the recent two crises of Mexican (1994) and South-East Asian (1997) types we find that instability in foreign exchange markets has been transmitted across countries. An attack on one currency has spilled over or spread contagiously to the currencies of other countries with apparently sound fundamentals.

It is useful to distinguish three sets of reason of why currency crises tend to be clustered in time<sup>10</sup>. One is that crises may stem from a common cause—for instance, major economic shifts in industrial countries that trigger crises in emerging markets—in what has been referred to as “monsoonal effects”<sup>11</sup>. The sharp increase in U.S. interest rates in the early 1980s was an important factor in the Latin American debt crisis. Similarly, the large appreciation of the dollar, especially vis-à-vis the yen, between mid-1995 and 1997 contributed to the weakening of the external sector in several southeast Asian countries. But while external events may contribute to or precipitate a crisis, a country’s vulnerability to a crisis depends on domestic economic conditions and policies, such as over borrowing for unproductive uses, a fragile financial sector, or an inflexible exchange rate system.

A second reason why crises may be clustered is that a crisis in one country may affect the macroeconomic fundamentals in another country, either because of trade and capital market linkages (for example, a devaluation in one country adversely affects the international competitiveness of other countries) or because of interdependences in creditors’ portfolios (for example, illiquidity in one market forces financial intermediaries to liquidate assets in other markets)<sup>12</sup>. Such “spillovers” resulting from interdependences have been cited as contributing in important ways to the spread of the East Asian Crisis. A third reason for clustering is that a crisis in one country may lead creditors to reevaluate the fundamentals of other countries, even if these have not objectively changed, or may lead creditors to reduce the riskiness of their portfolios and “flee to quality.” It is this effect, specifically, that is sometimes referred to as contagion (or “pure” contagion)<sup>13</sup>; it may be associated with “herding” by investors, resulting from bandwagon effects driven by asymmetric information or from the incentives faced by fund managers.

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

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

Although the evidence is not conclusive, it seems that capital controls had the desired effect of lengthening maturities in Chile, Colombia, and Malaysia. This is an important policy outcome, because the short maturity of debt was identified as a main determinant of the volatility and reversals of capital flows in the Mexican and Asian crises.

Surges in capital inflows are often followed by sudden stops. With few exceptions, these sudden stops are involuntary and associated with a currency crisis and most often with a banking crisis as well. A comparison of recent crises suggests that their severity has intensified in the present decade. Until the recent Asian crisis, Latin America was the region most prone to large-scale capital inflow reversals. But the Thai crisis, which resulted in a 26 percentage point swing in private capital flows (from inflows of about 18 percent of GDP in 1996 to outflows of more than 8 percent in 1997), superseded the 20 percent reversal in Argentina in the early 1980s. In terms of reserve losses and the estimated costs of bailing out the banking sector, the severity of the Asian crises surpassed that of their Latin American counterparts in the 1990s, and represented a significant departure from the region’s historic norm.

### **Indicators of Vulnerability**

A commonly used approach to constructing an “early warning system”, which is

followed below, is to identify a set of variables whose behaviour prior to episodes of financial market pressures or crises is systematically different from that during normal, or tranquil, periods<sup>14</sup>. By closely monitoring these variables, it may be possible to detect behaviour patterns similar to those that in the past have preceded crises. The difficulty lies in identifying the relevant variables that not only warn of an impending crisis with a high degree of success, but also do not produce frequent false signals, so that they can be used with some degree of confidence.

There are potentially a large number of variables that might serve as indicators of vulnerability. The choice is determined largely by one's understanding of the causes and proximate determinants of crises. For example, if it is considered that currency crises are caused mainly by fiscal problems, then variables such as the fiscal deficit, government consumption, and credit to the public sector by the banking system tend to feature prominently in the set of indicators<sup>15</sup>. If weaknesses in the financial sector are perceived to lie at the root of currency crises, then variables such as private sector credit growth, measures of financial liberalization, the level of short-term foreign indebtedness of the banking system, the structure of domestic interest rates, changes in equity prices, the quality of bank assets measured by the extent of non-performing loans, and so forth, could be used as indicators<sup>16</sup>. Similarly, if external sector problems are viewed as being largely responsible for currency crises, then the real exchange rate, the current account balance, changes in the terms of trade, the differential between foreign and domestic interest rates, changes in the level and maturity structure of foreign capital inflows, and other such variables may be used<sup>17</sup>. Real sector variables such as the rate of growth of output, the unemployment rate, variables to proxy institutional and structural factors, and political developments have also been employed<sup>18</sup>.

Currency crises have often been preceded by a boom-bust cycle in asset prices. For instance, in almost all of the countries affected by the recent Asian Crisis, real estate and equity prices rose steeply during the early 1980s and then declined sharply during the early 1990s and then again declined sharply from around mid-1996. Consistent with this experience the growth rate of equity prices in previous crises typically began to decline sharply around 6 to 12 months before a crisis, turned negative at around the sixth month, and then plummeted to around 25 percentage point below the tranquil-period average soon after the crisis.

## Surging Capital Flows in Crisis-Hit Countries

Large capital inflows can bring considerable economic benefits to developing countries but, if not properly managed, can also cause economies to overheat, increase exchange rate volatility, and lead eventually to large outflows. During the 1990s, net capital flows to developing countries increased markedly. In 1996, net private capital flows were \$190 billion, almost four times larger than in 1990. During 1990-97, annual net private capital inflows were also larger than those preceding the 1982 debt crisis, and more heavily concentrated. Five countries accounted for more than 50 percent, and a dozen countries accounted for 75 percent, of total inflows. Most of the surge was concentrated in Asia and Latin America. Consequently, 140 of 166 developing nations collectively accounted for less than 5 percent of total inflows (See Table-IV) (Alejandro Lopez-Mejia 1999). Composition and sectoral destinations of capital flows during the recent surge were different from those during the surge that preceded the 1982 debt crisis. In the 1970s, bank lending was the larger component of capital flows, the most important recipient of which was the public sector. In the 1990s, by contrast, bonds, foreign direct investment, and portfolio investment dominated the surge, and the private sector did most of the external borrowing.

Table-IV  
Net Capital Flows<sup>a</sup> in Crisis Countries<sup>b</sup> (billion of US dollar)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Net private capital flows <sup>c</sup>	29.0	31.8	36.1	74.2	65.8	-20.4	-25.6	-24.6	-40.6	-18.1
Net direct investment	7.3	7.6	8.8	7.5	8.4	10.3	8.6	10.2	12.0	7.2
Net portfolio investment	6.4	17.2	9.9	17.4	20.3	12.9	-6.0	6.3	6.6	3.0
Other net investment	15.3	7.0	17.4	49.2	37.1	-43.6	-28.2	-41.1	-59.2	-28.3
Net official flows	2.0	0.6	0.3	0.7	-0.4	17.9	19.7	-4.7	5.0	-1.9
Change in reserves <sup>d</sup>	-18.1	-20.6	-6.1	-18.5	-5.4	30.5	-52.1	-44.5	-17.2	-20.3
Memorandum Current account <sup>e</sup>	-16.1	-13.5	-23.2	-40.4	-53.0	-25.0	69.1	62.9	43.1	36.7

<sup>a</sup> Net capital flows comprise net direct investment, net portfolio investment, and other long-and short-term new investment flows, including official and private borrowing. Emerging markets includes developing countries, countries in transition, Korea, Singapore, Taiwan Province of China, and Israel. No data for Hong Kong SAR are available.

<sup>b</sup> Indonesia, Korea, Malaysia, the Philippines, and Thailand

<sup>c</sup> Because of data limitations, other net investment may include some official flows.

<sup>d</sup> A minus sign indicates an increase.

<sup>e</sup> The sum of a current account balance, net private capital flows, net official flows, and the change in reserves equals, with the opposite sign, the sum of the capital account and errors and omissions.

Source: *World Economic Outlook May 2000, IMF, Pg.51-52.*

## Fire Sale FDI

Table-V outlines the salient financial facts concerning the crisis in the East and South-East Asian countries (July 1997-February 1998). In the worst affected country, Indonesia, the stock market had fallen by more than 80 per cent and the exchange rate of the rupiah against the dollar by almost 75 per cent. This implies that a foreign investor who invested \$100 in a company quoted on the Indonesia stock market would have seen the value of the investment fall by 96 percent during the half year. By the same token, it also means that if a foreign corporation had to pay \$100 to acquire an Indonesia company in July 1997, it could in principle purchase it now for only \$4. This is of course not just a theoretical possibility, but as Krugman (1998) notes, there is evidence of a 'fire sale' of East Asian assets currency in progress in the wake of the financial crisis<sup>19</sup>. The twin crises of the stock and currency markets have also resulted in corporate and financial sector bankruptcies with huge losses of production and jobs.

The financial structure of the corporations and the banks, as well as other deficiencies of the state-guided or state-directed financial system in Asian countries, made these economies very fragile. IMF (1997, p.14).

<b>Country</b>	<b>Equity Markets</b>	<b>Exchange Rate (against US\$)</b>
Indonesia	-81.2	-73.5
South Korea	32.3	-48.1
Thailand	-47.9	-43.2
Malaysia	-59.0	-33.3
Singapore	-45.0	-13.2
Hong Kong	36.6	Pegged to US\$

*Source : Financial Times, 20 February 1998.*

## Incidence of the Crisis

The relatively quick resolution of the currency crisis in East Asia and the strength of recovery of the entire region since early 1999 were beyond the most optimistic forecasts of economists and international financial institutions. However, the toll extracted by the crisis was not insignificant; nor are all its effects likely to be

ephemeral. The impact of the crisis was the most severe on the five crisis-hit Asian countries (See Table VI and VII), and among them Indonesia and Thailand were the worst casualties, in terms of duration of the crisis, the extent of financial meltdown, as also the loss of output, employment and other indices of the real sector.

<b>Incidence of East Asian Crisis</b>						
Country	Duration		Extent of Financial Meltdown*		Output Loss as % of 1996 GDP	Maximum Inflation Rate
	Financial Sector	Real Sector	Maximum	In mid		
			During the Crisis	December, 1999		
Thailand	16 months	7 quarters	-74%	-42%	64%	10.7 (June-98)
Malaysia	13 months	5 quarters	-82%	-52%	44%	6.2 (June-98)
Indonesia	20 months	8 quarters	-92%	-70%	65%	82.4 (Sep-98)
The Philippines	14 months	4 quarters	-76%	-54%	12%	11.6 (Jan-99)
Korea	9 months	5 quarters	-74%	12%	44%	9.5 (Feb-98)
* Percentage change of share prices in dollar terms from the pre-crisis level.						
Source: ICRA Bulletin, Money & Finance, Jan-March 2000. Pg.30-31.						

<b>Quarter GDP Growth Rate</b>												
Country	1997				1998				1999			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Indonesia	8.50%	6.80%	2.50%	1.40%	-7.90%	-16.50%	-17.40%	-13.90%	-10.30%	1.80%	0.50%	5.80%
Malaysia	8.20%	8.40%	7.40%	6.90%	-1.80%	-6.80%	-8.60%	-8.10%	-1.30%	4.10%	8.10%	10.60%
Philippines	5.70%	5.70%	4.90%	4.70%	1.70%	-1.20%	-0.10%	-1.90%	1.20%	3.60%	3.10%	4.60%
Korea	5.40%	6.30%	6.30%	3.90%	-3.80%	-6.60%	-6.80%	-5.30%	4.60%	9.80%	12.30%	13.00%
Thailand	7.00%	7.50%	-4.20%	-11.50%	-16.80%	-15.30%	-13.60%	-4.95%	0.90%	3.50%	7.70%	6.50%

## Similarity between Mexican Crisis and the Asian Crisis

The broader points of similarities between the Mexican Peso Crisis 1994 and the South-East Asian Crisis 1997 are: the large current account deficits ranging between 7%-8% of GDP; the fixed exchange rate regime; capital account convertibility and large inflow of short term debts in the form of dollar-denominated tesobonos in Mexico and foreign currency bank loans in South-East Asian countries.

Both the crises can be classified as 'currency crisis'. Michel Camdessus, the Managing Director of the IMF, described the Mexican crisis in 1994-95 as "the first financial crisis of the twenty-first century" to draw attention to the volume and velocity of the capital flows involved. The similarities between the Mexican crisis and the recent financial crisis in some Asian countries are striking.

The common problems relate to economic policy management faced by emerging nations in a world of highly mobile capital. A comparison of the two crises can help us to understand better their causes and yield some useful lessons about the vulnerability of emerging economies to sudden capital outflows.

The foreign exchange and financial problems encountered by Mexico in 1994-95 and by the Asian economies in 1997-98 caught many by surprise, given that these economies were considered to be fundamentally sound and even held as models for others to emulate. The huge fiscal deficits or high inflation seen in other countries that has experienced financial crises were not apparent in either Mexico or the Asian countries. Both the Mexican and the Asian crises were preceded by very buoyant financial markets for the assets of the countries in question and, therefore, by major inflows of capital. In both cases, investors abruptly changed their attitudes, leading to bouts of panic and massive outflows of capital. Similarly, the sudden interruption of capital flows unleashed a profound crisis in domestic financial systems, threatening the stability of the productive sectors.

In both cases, the capital flows contributed to a very pronounced expansion of aggregate demand, a considerable increase in stock and real estate prices, accelerated growth of bank assets and liabilities, and a sizable external current account deficit (Table-VIII)

	1995	1996	1997 <sup>1</sup>
Indonesia	-3.3	-3.3	-2.9
Korea	-2.0	-4.9	-2.8
Malaysia	-10.0	-4.9	-5.8
Philippines	-4.4	-4.7	-4.5
Thailand	-8.0	-7.9	-3.9
	1992	1993	1994
Mexico	-6.7	-5.8	-7.0

*Sources : IMF; and Bank of Mexico, Finance & Development June, 1998, Vol.35.No.2,Pg.1.*  
<sup>1</sup> Preliminary.

Mexico received considerable capital inflows in the years leading up to the crisis of 1994-95. To a large extent, this capital was attracted by the favorable outlook for the economy after years of macroeconomic stabilization and intensive structural reform. Starting in the mid-1980s, the country had embarked on a programme of fiscal consolidation, deregulation and privatization.

These policies led to economic recovery after nearly a decade of low growth and high inflation. From 1989 to 1994, Mexico's average GDP growth rate was 3.9 percent, and, in 1993, inflation fell to single-digit levels for the first time in over 20 years. These developments suggested that Mexico was poised to enjoy sustained economic growth. In this context, unprecedented amounts of capital flowed into the country, reaching \$104 billion between 1990 and 1994-20 percent of total capital flows to developing economies during that period.

These capital flows helped widen Mexico's external current account deficit to such an extent that investors began to question its sustainability. The Mexican economy became more vulnerable because of this and other factors-notably, rapid growth of bank credit to the private sector, maintenance of an exchange rate peg or anchor, rising international interest rates, and political events and criminal acts that generated considerable uncertainty. Similar was the situation in South-East Asian countries as discussed elsewhere.

Another pre-crisis feature common to Mexico and the Asian economies was the existence of an exchange rate peg or anchor. This type of exchange rate arrangement is very difficult to defend against speculative attacks, especially when a country's financial system is weak. The interest rate increase required to shore up the exchange rate have a severe negative impact on the financial system and may even cause a crisis in that sector.

Furthermore, exchange rate anchors can cause distortions in the financial system. To the extent that the peg is considered an implicit guarantee that there will be no changes in the value of the currency, it is an incentive to borrow in foreign currencies and encourages the financial and business sectors to incur excessive exchange risk. In addition, with an exchange anchor, investors know that the implicit guarantee of convertibility is limited by the availability of international reserves and a country's capacity to borrow abroad. Consequently, when doubts arise as to the sustainability of its exchange rate arrangement, a country will attract mainly short-term, speculative capital inflows.

In Mexico, as in Asia, appreciation of the real exchange rate, growing short-term external debt, and the size of the external current account deficit, compounded by the weakness of the financial system, exerted strong pressure on the foreign exchange market. Speculative pressures against the peso led to abandonment of the peg and the adoption of a floating exchange rate on December 22, 1994.

Similarly, as the markets began to question the sustainability of exchange rates in Asia, speculative pressures increased. This occurred against a backdrop of considerable short-term external debt, declining real estate prices, decreasing external competitiveness, and major current account deficits. The Asian countries had problems defending their currencies because of the weakness of their financial systems; speculation increased, leading to the collapse of their exchange arrangements (Guillermo Ortiz Martinez June 1998). Stock markets also plummeted in both Mexico and Asia (Table-IX).

<b>Table-IX</b>			
<b>The crises caused currencies to depreciate, share prices to drop, and interest rates to soar in some countries</b>			
	<b>Depreciation of the currency vis-à-vis the dollar</b>	<b>Changes in the share price index</b>	<b>Changes in interest rate</b>
	<b>(percent)</b>		<b>(basis points)</b>
	<b>July 1, 1997 — February 16, 1998</b>		
Indonesia	231.00	-81.74	2,398
Korea	83.04	-63.06	965
Malaysia	55.43	-58.41	373
Philippines	51.37	-49.17	0
Thailand	87.09	-48.37	-25
	<b>December 2, 1994 — March 31, 1995</b>		
Mexico	98.12	-28.12	5,875

Sources : Bloomberg Financial Services L.P.; and Bank of Mexico; Finance & Development, IMF, Vol. 35, June 1998.

## Speculative Currency Attacks

East Asia was the great success story of the eighties. The East Asian countries were not only economic successes, but also economic paragons: they had frugal governments and liberal policies. Economists loved them. Compared to the oligarchies of Latin America and Eastern Europe, they looked much more trustworthy. Their fall was a great blow to the belief in the rewards of economic virtue. Certainly for us in Asia, the East Asian meltdown was a portentous event.

It is time to stop pretending that the “economic crisis” is an “Asian crisis” or a “Japanese crisis” or a “Russian crisis” or an “emerging markets crisis”. This

economic convulsion is unprecedented in the post-World War II era, and has caught major political leaders and their economists completely unprepared. Briefly, the sequence of events can be summarized as below.

In the 1990s, vast sums of foreign capital poured into the developing countries. The funds arrived in many forms: as investments in local stocks, as bank loans, as purchases of bonds, as direct investment to build factories. Between 1990 and 1996, annual net inflows to all "emerging markets"-from Brazil to China – averaged \$ 150 billion, says the International Monetary Fund; that was roughly 10 times the 1984-89 averages. Some investments were justified on the basis of rapid economic growth. Some were pure speculations.

The rapid and continuing integration of emerging market countries into global financial markets during the 1990s has been accompanied by several currency crises, most recently involving the Thai baht and other Asian currencies, and the Czech koruna. These events, like the Mexican peso crisis in late 1994, have raised a host of questions about the nature of speculative currency attacks, the appropriate defensive policies, the degree of exchange rate flexibility (including exit strategies) that is appropriate in the evolving international financial environment, and the role of international financial support.

The same structural changes that have improved the access of emerging market countries to international financial markets and opened national financial markets to foreign investors have also increased the potential intensity and duration of speculative attacks. For example, the growing institutionalization of saving and participation of institutional investors in international markets that have boosted demand for emerging market securities have also led to the growth of highly leveraged hedge funds and property traders prepared to tolerate significant risk in their search for weaknesses in foreign exchange arrangements. Institutional investors now have the capacity to take substantial short positions in a weak currency through spot, forward, and currency options markets, and through the rapidly growing markets in structured products (leveraged debt or equity instruments with payoffs tied to an exchange rate). Estimates put the total assets of hedge funds, property traders, and speculative mutual funds at more than \$100 billion; in undertaking certain investments, these funds have leveraged their capital between five and ten times. In this environment, countries need to increase their intervention resources, adopt more complex intervention strategies, and be more vigilant for shifts in investor sentiment.

Speculative currency attacks are not a uniquely modern phenomenon. Historically, they have occurred during periods characterized by high capital mobility and fixed exchange rates—for example, the gold-standard era and the 1920s. Then, as now, investors and lenders responded swiftly and abruptly to bad news about political or economic crises in a given country, launching speculative attacks on the country's gold reserves.

During the second half of 1997 and in early 1998, a series of speculative attacks caused several Asian currencies—notably, the Thai bath, Malaysian ringgit, Indonesian rupiah, and Korean won—to depreciate sharply. Although these currencies may have been overvalued before the attacks, their depreciation was far greater than any “correction” that might have been necessary to restore the export competitiveness of the countries in question. What explains the acuteness and persistence of the crisis?

One key explanation is that policymakers failed to address problems in advance of the crisis and did not act forcefully enough when the crisis erupted. Their reluctance either to tighten monetary policy to bolster exchange rates or to keep it sufficiently tight more than temporarily was a particularly important factor contributing to the erosion of investor confidence in the region. The crisis became self-perpetuating.

### **IMF Bailout and Issues to Deal with Future Crisis**

IMF acts as lender of last resort at the time of financial crisis in the developing countries. IMF lending to Mexico in 1994 and Asian countries in 1997 exceeded their borrowing quota as evident from the table-X.

	<b>Loan Amount</b> <b>in Billions</b>	<b>Year</b>	<b>Percent of</b> <b>Quota</b>
Mexico	\$17.80	1995	743
Indonesia	9.9	1997	484
South Korea	20.9	1997	1,914
Thailand	3.9	1997	498

Sources: International Monetary Fund, Annual Report 1997; and IMF Web site. <http://www.im.org>.

However, the US Administration had also come forward, out of turn to bailout Mexico from economic crisis by utilizing its Exchange Stabilization Fund (ESF). The ESF was the main source of funding for the U.S. supplement to the IMF bailout of

Mexico in 1995<sup>20</sup>. The Administration also indicated that the ESF would be the source of \$8 billion in promised U.S. bilateral assistance to Indonesia and South Korea in the ongoing Asian crisis. Greater congressional oversight of the ESF would supplement restrictions on the IMF by ensuring that another avenue for international bailouts would be restricted<sup>21</sup>.

The financing packages assembled to support the Asian crisis countries were impressive: \$36 billion for Indonesia, \$58 billion for Korea, and \$17 billion for Thailand. But they were not so large in relation to potential private capital flows. Moreover, not all of the money was available—especially at the outset—to counter market pressures. First, the IMF support was phased—made available in tranches—over the life of the programs; this is standard procedure, intended to ensure that the authorities have a continuing incentive to adhere to the adjustment policies agreed under the program, but it did reduce the authorities' ability to counter immediate market pressures. Moreover, some of the bilateral money—the “second lines of defence”—promised to Indonesia and Korea was never actually disbursed.

The crisis raises a number of important issues for the international financial system, many of which are related to the development of a new international financial architecture. The unfolding of the crisis underscored the inherent difficulty of stopping a crisis once it has started, given the speed with which short-term capital can move in response to changing market sentiment : prevention is the key.

But how can countries prevent the buildup of vulnerabilities of the kind that led to the Asian crisis? Clearly, part of the answer is the maintenance of sound macroeconomic policies. The exchange rate regime is a particularly controversial aspect, because many observers have focused on the role of limited exchange rate flexibility in fostering capital inflows prior to the crisis. Some have concluded that the only viable options are full exchange rate flexibility or the opposite extreme of institutionalized fixity—a currency board or full dollarization—while others have expressed reservations over this “law of the excluded middle.” This remains an active area of policy discussion and research.

Another key element is improved financial supervision and regulation in both debtor and creditor countries. The crisis also exposed possible flaws in risk management by international financial intermediaries, including inadequate stress testing of exposures with regard to price movements that were possible but appeared unlikely.

Transparency is also important to crisis prevention. At the height of the Asian crisis, some unpleasant information was revealed—in particular, on the weaknesses of central banks' international reserve positions—that exacerbated market panic; it would have been much better if such information had instead been revealed earlier on, when it might have restrained the heady inflows of capital. In normal times, improvements in standards for data dissemination and steps to increase the transparency of policies could help markets to improve their pricing of risk, inhibiting the buildup of imbalances, and also spur policymakers to take timely action to address vulnerabilities. Greater transparency of the IMF itself is an integral part of this agenda.

Strengthened international surveillance with closer monitoring of the financial sector and a focus on international standards may also help alert policymakers to upcoming problems. Such surveillance should also incorporate a regional perspective to provide warnings of impending regional contagion of the kind that spread the Asian crisis.

Some more difficult issues concern ways of involving private creditors in forestalling and resolving financial crises. Here, the central problem is how to maintain private creditors' exposure—and impose losses on short-term creditors if appropriate—without unduly exacerbating contagion. Recent international discussions have concentrated on assessing the potential benefits and costs of preparatory steps that could be taken in normal times—for instance, modifying standard bond contracts to facilitate their restructuring in the event of a crisis and establishing contingent credit lines with private financial institutions. A related issue is the change in the IMF's policy on lending to countries with arrears to private sector creditors.

Another thorny issue is that of capital controls. Here, there are three key aspects: one is the sequencing of capital account liberalization, where the crisis has highlighted the pitfalls of liberalizing short-term flows while leaving restrictions on longer-term flows, as well as the need to keep the pace of capital account liberalization in line with the strengthening of the domestic financial system. A second relates to the possible merits of taxes to discourage short-term capital inflows, such as those implemented in Chile. A final issue is the effectiveness of controls over capital outflows in the event of a crisis: the central question for the international system is not whether controls could have alleviated a particular crisis but whether a regime in which controls tend to be imposed in the event of a crisis is characterized by more or fewer crises, of

greater or lesser severity—given that the prospect of controls strengthens the incentive for capital to run at the first signs of trouble. The longer-term implications of the resulting limitations on access to international capital markets also need to be taken into account.

Another set of issues pertains to crisis management. With regard to monetary policy, the experience of the Asian crisis suggests that, by and large, tight policies worked: after a period of high interest rates, market pressures abated and interest rates fell below pre-crisis levels. In fact, an earlier firming of monetary policy might have been even more effective in containing the crisis. Nevertheless, important unsettled issues remain regarding the effectiveness of raising interest rates in a crisis characterized by widespread insolvencies. With regard to fiscal policy, the crisis highlights the need for countries to adapt their policy responses to changing macroeconomic conditions. With regard to structural policies, the crisis underscores the importance of decisive action but also raises some important—and, for the most part, still unsettled—questions about the optimal pace and sequencing of reforms.

Finally, the crisis has brought about a rethinking of the way official financing is provided to address a crisis, including the appropriate size and phasing of IMF support to countries facing market pressures. One important step in this regard is the IMF's recent introduction of the Contingent Credit Lines, which would provide large-scale financing to countries that might be affected by market contagion.

### **Krugman's Diagnosis**

Paul Krugman of Stanford University had voiced contrary views about the Asian miracle much before the present meltdown. Unlike other economists and analysts who had forecasted an eventual Asian ascendancy, Krugman believed that Asian economic growth rates would taper off significantly, well before a convergence with world's economic leaders.

According to him the rapid growth in the Asian miracle economies had been the result of three primary factors. First, the transition of labor from rural to industrial, the second, education of these workers, and the third contributing factor, the catching-up effect in the capital stock. What was critically lacking, according to Krugman was an ability to innovate in technology.

According to the growth theory he advocated, growth can be expressed by means of the following formula :

**Economic Growth = Increases in Labor + Increases in Capital + Changes in Total Factor Productivity.**

Total factor productivity is the residual of growth that is not accounted for by increases in the labour force and capital stock. Total factor productivity looks at the interaction of technological progress with labour and capital. Improvements in technology increase the productivity of labour as it works with more advanced capital.

For practical purposes, while increases in labour and capital can be measured, there is no measure of total factor productivity. Instead it is counted as the residual of growth after accounting for increases in labor and capital.

Using growth accounting and empirical estimates, Krugman concluded that the Asian growth miracle of the past decades has primarily been the result of migration of workers from farms to urban areas, significant increase in the participation by industrial workers during the past decades throughout Asia. The result is higher labour force participation – had been growing faster than the population as a whole. Asian countries had also invested heavily in their capital stock, both physical and human. Net investment has been relatively high as these countries rapidly added to their capital stock.

According to Krugman's empirical estimates, almost all the rapid growth in the developing economies of Asia can be accounted for by the above two factors: increased labor force participation rates and a building of the capital stock.

Consequently, total factor productivity has shown little or no growth as increases in labor and capital account for the economic growth that has been occurring. Increased labor force participation and additions to capital can only expand at a rapid pace for only so long.

Krugman's argument is to encourage high growth rates, given steady population growth rates, the Asian economies should have relied on a strong pace of technological improvement. Krugman's empirical work shows little progress in

this area for these countries, as they primarily relied upon the adoption of technology developed elsewhere.

It may be pointed out here that though Krugman's diagnosis is apparently acceptable and the role of technology cannot be denied for sustainable growth because capital and labour alone cannot lead to total factor productivity. However the warning signals given by ILO about the cascading effects of Asian crisis on unemployment raises doubts about the kind of technology to be applied for the economic growth. In countries like India and China too much of capital intensive technology may displace jobs and therefore there is a need for a balanced view about technological changes and it will depend upon the kind of industry or the product selection decision of these countries for a long and sustainable growth which has to be job oriented and not merely growth oriented. However the role of technological innovation cannot be denied and the developing countries must draw a lesson from Asian crises for sustainable development.

### **Optical Illusions of Jaffrey Sachs**

Jeffrey Sachs, Director of the Harvard Institute for International Development, says Asia's crisis was caused by the panicky outflow of international capital. According to him what we have experienced is massive inflows based on high optimism about the region followed by massive outflows that one can only characterize as a panic. The recent currency crises in emerging markets provide a salutary wake-up call to over-exuberant money managers. He opines that it is a good time to ponder over some basic economic lessons.

According to him, even when overall macroeconomic conditions look fairly good, as in most of today's emerging economies, financial markets can create two kinds of optical illusion that channel money to the wrong investments.

One kind is produced by the capital inflows themselves. Economic reforms and financial liberalization produce a spurt of capital inflows, which chase high rates of return. The inflows in turn lead to currency appreciation, while the spending boom financed by the foreign flows leads to higher prices of non-trade goods, services and real estate.

Investors rarely understand, however, that the short-run currency appreciation offers an incorrect reading of future relative prices. Since the capital inflows must be repaid

in the long run by increased net exports, the exchange rate is most likely to have to depreciate in real terms to service the capital inflows.

Another kind of illusion can be created by financial market liberalization that typically accompanies the start of large-scale capital inflows. Throughout Latin America, central Europe and South-East Asia, banks have been deregulated and privatised in recent years, allowing them much greater latitude to borrow from abroad.

Banks and near-banks – such as Thailand’s now notorious financial trusts – become intermediaries for channeling foreign capital into the domestic economy. The trouble is that the newly liberalized banks and near-banks often operate under highly distorted incentives.

Under-capitalized banks (those who do not fulfill the capital adequacy norms as suggested in financial sector reforms for banks and NBFC companies) have incentives to borrow abroad and invest domestically with reckless abandon. If the lending works out, the bankers make money. If the lending fails, the depositors and creditors stand to lose money, but the bank’s owners bear little risk themselves because they have little capital tied up in the bank. Even the depositors and the foreign creditors may be secure from risk, if the government bails them out in the case of bank failure.

His analysis of the Mexican crisis and its impact on other countries – the so-called “Tequila Effect” shows that it could be explained by currency overvaluation and by excessive build-up of bank credits, a sign of irresponsible bank lending following financial market liberalization.

Thailand’s crisis had the same hallmarks: Overvaluation of the real exchange rate, coupled with booming bank lending, heavily directed at real estate. The overvaluation tended to push new investment towards non-tradeable sectors-notably construction-and away from the tradeable sectors that are necessary to provide the wherewithal for future servicing of foreign debts.

### **Capital Controls : Its Meaning and Purpose**

Strictly defined, capital controls include only restrictions that affect the capital account of a country’s balance of payments. That takes in limits on foreign investment

in financial markets, on direct investment by foreigners in business of property, and on domestic residents' investments abroad. Capital controls are not, on this definition, the same as "exchange controls". Capital controls restrict asset movements while exchange controls can also affect spending on imports and the use of foreign currency earned from exports.

Both types of controls were much in fashion before and after the Second World War. Restriction on the use of foreign currency for trade had vanished in most rich countries by the early 1960s. By 1997, according to the International Monetary Fund, over 140 countries had made their currencies convertible for such purposes.

Capital controls, in contrast, have remained far more widespread. After the Second World War, only Switzerland, Canada and the United States adopted open capital regimes. Other rich countries maintained strict controls; many, indeed, stiffened them during the 1960s and 1970s. Those were the days when you had to get your passport stamped to receive foreign-currency notes, and when British tourists in France took along their own food to save on precious francs. Driven partly by technical innovation that rendered such controls increasingly ineffective, and partly by a growing vogue for free markets, most advanced economies dismantled the controls in the 1980s and early 1990s.

In developing countries, however, the trend has been less uniform. Latin American countries had relatively few controls during the 1960s; they imposed manifold restrictions during the debt crisis of the 1980s to build up foreign-currency reserves; and then took them off rapidly from the late 1980s. Asian countries began to loosen capital controls in the 1980s, a trend that accelerated in the 1990s. The IMF's figures show that in 1997, 144 countries still had controls on foreign direct investment, and that 128 regulated international financial-market transactions in some way. Nonetheless, the unmistakable trend has been towards fewer capital controls

Governments have also learnt that capital controls do not work well and can have undesirable consequences. Latin America's controls in the 1980s did little to keep money at home but a lot to deter foreign investment. Controls helped to feed corruption, as bureaucrats were empowered to determine who would be exempted from them. And as governments have gradually liberalised domestic financial markets, restricting access to foreign markets has seemed increasingly anachronistic.

The perception regarding the money neutrality proposition, however, underwent a significant change with the Keynesian revolution, which emphasised that nominal wages are relatively more rigid than prices, so that an increase in money supply will decrease real wages and bring down unemployment. This idea was later given an empirical justification by A W Philips through his celebrated Philips curve relationship between the wage rate or inflation rate and the unemployment rate.

In India, our experience shows that money demand function is a stable function of select variables and it can be used to reasonably predict inflation. Several statistical functions of the demand for money estimated by using the equilibrium and disequilibrium analysis provide overwhelming evidence on the long run stability of the money demand function. A recent study conducted by the Development Research Group (DRG) of Reserve Bank of India which specifically tested the impact of financial deregulation in the Indian economy on the demand for money in the cointegration framework stated that “there exists a long-run relationship between money and its determinants namely exchange rate, interest rate, inflation rate and real output” [Parikh 1994]. Another study conducted by DRG stated that “cointegration tests confirm that broad money stock, output and prices have stable long-run linkages.

A question has come for debate on capital account liberalization (CAL) particularly after the South-East Asian crisis as to whether CAL automatically lead to attract foreign investment.

For instance, many African countries, in the recent past, have adopted full CAL but global capital is yet to flow there. On the other hand, China attracted over \$63 billion worth of foreign capital in 1997, much of it as long-term foreign direct investment (FDI), without full capital account liberalization. Japan maintained high-speed growth in the 1950s and 1960s without full CAL. Similarly, South Korea enjoyed rapid development with government controlled financial markets in the 1970s and 1980s. The present financial crisis in Korea can be attributed to the decision by its authorities to remove controls and restrictions on the borrowing and lending by domestic and international financial institutions, in exchange for the membership of OECD<sup>22</sup>. Furthermore, countries such as China and India have been able to survive the contagion effects of the South-East Asian crisis because of not adopting capital account convertibility (CAC). However India is gradually proceeding on the path of

capital account liberalization in a phased manner. The budget proposal in the Union Budget for 2001-02 contains a number of proposals allowing Indian companies to invest abroad up to \$ 50 million on an annual basis through automatic route and to acquire shares of foreign companies up to an amount of \$100 million by utilizing the proceeds of ADRs/GDRs<sup>23</sup>.

In a recent study carried out by Dani Rodrik of Harvard University, it has been pointed out that free capital mobility had no significant impact on the economies of almost 100 countries (development and developed) during 1975-1989 for which the capital account was free of restrictions<sup>24</sup>. According to this study, there is no evidence to suggest that countries without capital controls have grown faster, invested more or experienced low inflation.

Some economists are arguing in favour of some form of controls on global financial flows. Even those economists, who have been vocal supporters of the "free market" ideology, are arguing for the need for capital controls. These economists include Paul Krugman of MIT, Jeffery Sachs of Harvard, Joseph Stiglitz of the World Bank and Jagdish Bhagwati. In its latest Trade and Development Report 1998, the United Nations Conference on Trade and Development (UNCTAD) has also called for a return to capital controls as an indispensable part of the developing countries armour against global financial instability and repeated speculative attacks on their currencies. The Report says, "Capital controls are a tried technique for dealing with unstable capital movements"<sup>25</sup>. Thus, there is a renewed interest in intellectual and political circles to reintroduce capital controls as an alternative to the IMF prescriptions. Some of the problems that have surfaced in capital markets—such as "herding" and "asset bubbles"—and that have been cited by proponents of capital controls rarely feature in trade in goods and services. One of the main arguments frequently made in favor of controls is that countries with little transparency and weak regulatory frameworks are likely to experience problems with macroeconomic management and their financial systems in the face of herding behavior (that is, when international investors seem to act en masse, blindly following each other in moving large amounts of short-term capital into and out of countries). The social costs incurred in such situations may outweigh the benefit of free capital movements. This was presumably the reason Malaysia reintroduced capital controls in September 1998.

Would it be appropriate to impose capital controls to avoid future crises? This would be like closing the door after the proverbial horse has bolted. Furthermore, capital

controls are much less effective in stemming outflows than inflows. It would be more effective to deal boldly with the underlying problems in the financial and corporate sectors and to create the right environment so that when capital inflows resume they can be used productively. After all, these countries' easy access to foreign capital before the crisis contributed significantly to their rapid growth. Even if output in the Asian countries declined by, say, 10 percent, their growth over the past twenty years would still be impressive. What is important is the appropriate sequencing of capital liberalization, to ensure that a country's financial system is capable of channeling capital into productive investment.

The East and South-East Asian countries have to their credit substantial achievements in respect of infrastructure and institution building in the pre-reform period, which not only helped them to sustain the momentum of growth over a long period by simultaneously enabling a large number of the poor to cross the poverty line but also enabled them to withstand the external economic shocks as well as those arising from the internal efforts at economic reform and adjustment to the changing economic environment. For example, already in 1980, the saving rate in East Asia at 30% of GDP was much higher than in most countries of the world (World Bank, 1990a). The growth rates in GDP in East Asia over the sixties and the seventies at 7.9% and 6.5% respectively represented the highest recorded in the world. Further, agricultural growth rates in the post-green revolution but pre-adjustment period, i.e., during 1965-80, were far above population growth rates in this region ranging between 3.2% for East Asia to 4.6% for Thailand and Philippines (World Bank 1990, p.181).

Tariffs on capital flows could take various forms, (i) They could be levied through non-interest-bearing reserve requirements, whereby interest would accrue to the central bank. (Chile had such requirements for a number of years but abolished them in September 1998), (ii) Tariffs could also be levied as a proportionate tax on capital inflows and outflows. Transaction taxes that aim to discourage short-term flows relative to long-term flows are called. These levies would need to be applied in such a manner that they temper volatility without insulating the domestic economy from international markets and without raising financing costs during crises, (iii) Dual-or-multiple-exchange-rate systems whereby different exchange rates are applied to different types of capital movements are also conceivable, but experience with such systems has been unsatisfactory.

Given the fact that the recent financial crises are the outcome of international financial liberalization and increased global capital mobility, there is a greater need

for regulation and supervision at national, regional and international levels. It is increasingly acknowledged by the policy makers that unless proper regulatory control mechanisms are developed, we will continue to witness greater financial turmoil in the world<sup>26</sup>.

The 'holy trinity' of monetary policy consists of fixed exchange rates, perfect capital mobility and independent monetary policy. Governments would love to have all three, but being holy, it is unobtainable for mere mortals; the result is the well-known tri-lemma of international monetary policy. In reality, capital mobility is not perfect, so a nation with a fixed rate can get a bit of day-light between domestic and foreign interest rates. The degree of independence depends upon some combination of the restrictiveness of capital controls and the size of the country's reserves. As capital controls have eroded, the size of potential foreign exchange flows has come to eclipse all conceivable levels of official intervention. Consequently, the holy trinity has become more unobtainable (Eichengreen 1996).

### **Vulnerability of Indian Economy to Financial Crisis**

The experience of Mexico and South-East Asian economies shows that financial crises followed financial reforms and globalisation. The macroeconomic theory tells us that there are certain standard indicators of vulnerability to economic crises. The traditional factors/indicators of vulnerability include slow growth of real GDP, external indebtedness, large current account deficit, volatile exchange rate, high inflation rate and public sector deficits. These are presented in Appendix 1. Data reveal that in the recent financial crises in Mexico and East Asian countries, many of these traditional factors are generally not found significant. The recent experience of financial crises show that current account deficits by themselves have not been helpful in predicting crises. While the accepted rule of thumb that a current account deficit more than 5 percent as an indicator of vulnerability is often used, no empirical evidence supports it. Further, it is revealed that the deterioration of current account balance in the East Asian countries was associated with a significant increase in investment rate without a corresponding increase in saving rates. Other factors identified in the Asian crises of 1997 include real exchange rate appreciation and loss of competitiveness, deteriorating currency exposure, short-term indebtedness, lending books, weak quality of bank portfolios, and financial sector weaknesses. Data is presented in Appendix 2. A comparative analysis of major macroeconomic variables for major Asian countries including India is presented below in Table-XI. The

indicators of vulnerability show that the Indian economy is comparatively worse off in terms of its real fiscal deficit as a percentage of GDP and external debt-service as a ratio of its exports. Over the years, the proportion of hot money flows to the foreign exchange reserves of India has been steadily increasing. It increased from 37.5 percent in 1994 to 53.5 percent in 1997 and further to 78.8 percent by February 1998<sup>27</sup>. This figure is very high as compared to a maximum of 60 percent recommended by the CAC committee. (Agarwal R. N: 2000)

	Real GDP	Inflation rate	Dom. saving rate	Govt. fiscal Def.	M2 growth rate	Dom. credit growth rate	Current a/c balance	Ext debt service
India	6.4	8.4	23.7	-9.6	16.1	12.3	-1.2	3.4
China	11.0	11.4	41.6	1.9	12.3	18.2	0.5	—
Indonesia	7.2	8.8	29.1	0.7	23.7	22.1	-2.5	9.0
S.Korea	7.3	5.0	34.2	0	16.7	16.3	-2.2	—
Malaysia	8.5	3.6	36.6	1.9	14.8	14.2	-6.7	6.3
Philippines	4.3	7.7	19.3	-1.2	24.7	55.5	-4.7	7.0
Thailand	6.6	5.2	33.8	1.6	15.2	22.2	-6.1	5.3

Source: International Monetary Fund, International financial statistics, 1997.

India is in a peculiar position with regards to a financial crisis. We have committed ourselves to capital account convertibility and there is a definite dependence on foreign funds. Not just direct foreign investment and Euro funds, but also foreign portfolio funds, which have virtually become a decisive factor in buoying the domestic capital markets. The Government is already talking about opening up its own debt market for foreign investment, which though a good solution could nevertheless be destabilizing. In such a situation, it does make sense to talk of devising some warning signals, which could serve as useful signposts for heralding a crisis.

India has problems, but they are different from Asia's and they remain exactly the same as they were before the Asian crisis. This nation is no Asian "tiger" with a fast-paced economy open to such destabilizing factors as currency speculation and global price cyclicity. India is a slow moving giant a vast, complex, diverse nation that neither could nor should attempt to behave, as have some of the less multidimensional economies of Asia. India's pace is not that of a tiger, but of an elephant. That is the image for India: the elephant will march unceasingly on, crushing the jungle in its

path by the force of its size and inevitable progress and arriving perhaps more slowly but also more securely at the freedom of the other side.

The most fundamental structural difference in the economy and business environment of India compared to those of the wounded Asian tigers is that India's vast domestic market is still largely protected and untapped. It is far less export dependent. In addition, its corporations are insulated from the true competitive force of free international trade; in that sense, it is more like China than like the South-East Asian countries. Also, in contrast to the slowdown expected among Asian economies, India's macroeconomic situation is stable, with inflation and interest rates low and growth trends actually improving. It is revealing to note that India's equity market was the least hit within the region by the turmoil. (Datta Soumilya and Patel Shanat 1997)

### **Lessons from South-East Asian Currency Crisis**

What are the major lessons learned from the crisis? First, sound macroeconomic fundamentals do not suffice to achieve sustained economic growth. Structural factors have played a much more decisive role in the Asian crisis. Second, for developing economies to reap the benefits of an open capital account, greater attention should be paid to the institutional capacity in the financial sector and to the sequencing of financial sector reforms. Third, it is vital to develop domestic capital markets in the region. This is particularly true as the region has a lot of savings. A well functioning capital market can mobilize long-term capital and encourage more efficient allocation of resources under market scrutiny. Fourth, the Asian crisis poses a new challenge to the international financial system. What is needed is essentially a system that enables international financial institutions to back up the ailing countries with sufficient amount of liquidity, so that the governments can concentrate on structural reforms, especially on restructuring of their weak financial and corporate sectors, without unduly contracting the real economies. There is also a need to prepare an architecture to monitor international capital flows, whose reversal has proven to be devastating for capital receiving countries. Monitoring mechanisms should be enhanced not only at the national level, but also at the regional level to stave off the risks of contagion.

When the Mexican meltdown hit the markets in December 1994, forcing a virtual collapse of the Mexican peso, the first thought among most market players was the possibility of more countries encountering the same crisis. A fundamental point is

that a large trade or current account deficit cannot persist for more than a few years, and in any case cannot be financed by private capital flows from abroad. The best form of private capital flows is direct investment in plant and factories. Such investments are less likely to be withdrawn, even though while the composition of capital inflows can provide information about their causes, it is often difficult to distinguish between foreign direct investment flows and portfolio investment flows, especially in the short term. In general, an increase in money demand is likely to attract short-term portfolio investment, whereas other changes, such as an increase in the domestic rate of return on capital, will tend to attract longer-term foreign direct investment. In these cases, also, there may be long delays between the stimulus and the inflow of capital, depending, among other things, on the regulatory environment and absorptive capacity of the recipient country. Thus, an increase in the domestic productivity of capital may initially lead to larger portfolio inflows and only later attract greater amounts of foreign direct investment.

Capital inflows to developing economies are mainly due to a) better economic prospective in the host countries and b) a slowdown of economic activities in the capital exporting countries. However there are certain problems imbedded with the capital inflows : i) appreciation of the real exchange rate, ii) larger trade deficits, iii) higher inflation and iv) Dutch disease (see notes) problems, which are also known as the side effects of capital inflows, and therefore, there is a need to manage capital inflows to minimize their detrimental effects particularly in the wake of the Mexican crisis of December 1994, and the South Asian currency crisis of 1997 and the impelling dangers of "Tequilla effect" on the neighbouring countries.

The annual volume of fresh inflows may fluctuate. The worst form of capital flows is short-term debt capital. The initial reaction was to look around for other economies with similar track records of currencies that had remained strong over sustained periods on account of capital inflows, leading to growing trade and current account deficits. The domino effect on some Latin American and East Asian economies was visible for a short while, and central banks had to briefly pull out all stops to prevent their currencies going the Mexican way. Lately, there have been signs of similar crisis situations emerging once again in East Asia.

The problems that can be created by an excessive reliance on capital flows, in an environment of lax macro-economic policies, was dramatically illustrated by the crisis that suddenly hit Mexico on December 20, 1994. Within a few days, investor

confidence in Mexico, which was one of the largest recipients of foreign private capital, all but disappeared. There was panic in foreign exchange markets after the sudden devaluation of the peso on December 20, and the exchange rate collapsed to half its value within a few days. In 1993, Mexico had attracted foreign capital inflows of \$29 billion, which exceeded the current account deficit by nearly \$6 billion. By March 1995 it had depleted its entire foreign exchange reserves of \$28 billion.

As the East Asian financial crisis worsens, many economists have singled out the inefficient use of capital as the main culprit.

The lessons that can be learned from the present financial crisis are not new. We have known all along that within an environment that is free from political and bureaucratic interference, capital will always be put to its most efficient use.

With their economies booming on the back of large inflows of foreign capital and low bank interest rates, many Asian governments felt they could afford to ignore the issue of financial liberalisation. Now it has been thrust into the limelight. The region-wide financial crisis that is plunging once high-flying Asian economies into despair must force a rethink in economic policies.

Crises are inevitable. As long as there are financial markets, there will be boom and bust cycles. But vulnerability to crises can be limited.

First, better information is needed so that situations can be monitored and actions taken in a timely fashion. Had the rest of the world known how weak these countries' financial systems were, something could have been done sooner. Similarly, had the IMF known how rapidly international reserves were falling in Thailand, and subsequently in Korea, policy adjustments could have been made earlier.

Second, the financial sector plays a critical role in all boom-bust cycles—in developed and developing countries alike. It is essential that appropriate prudential and supervisory procedures be in place and that banks be in a position to assess risk. Financial sector reforms are therefore extremely important.

Third, one very important lesson that has emerged from this crisis is that it is a mistake for a country to have a fixed exchange rate unless its authorities are prepared to do what it takes—that is, in addition to pursuing sound macroeconomic policies, it needs

to have a healthy banking system and a strong reserve position that can withstand a defensive rise in interest rates to fend off speculators. But few countries can maintain a fixed exchange rate when things go wrong.

Fourth, capital market liberalization must be undertaken with care. The problem in the Asian countries was not that they liberalized their capital accounts but that the sequencing was wrong and that liberalization was only partial. Most of these countries liberalized short-term capital inflows before foreign direct investment, when they should have done it the other way around. Furthermore, although capital inflows were liberalized, the financial system remained closed to competition from outside. The combination of partial liberalization and structural rigidities meant that capital was invested without due regard to risk.

## **Summary and Conclusions**

The growing threat of global crisis is fueling a debate over the means available to contain and resolve it, as well as over the ways in which countries can protect themselves from its consequences. The world economy has become so closely integrated that not only do countries need to ensure that they manage their own economies well; they must also be ready to anticipate, and adapt to, economic mismanagement elsewhere. We have yet to agree on a set of rules to manage international capital flows. Those described here would go far toward helping countries gauge the risks they faced in capital markets by making acceptable behavior transparent and by bringing to the surface some of the problems capital flows have posed for countries with proper economic fundamentals.

Just as the spectre of contagion has led us to advocate a lender of last resort endowed with resources commensurate with the scale of potential systemic threats, the prospect of efficient arbitrage channeling capital flows to economies on a scale that far exceeds their size must be confronted.

Ways must be found to bring those inflows to a sustainable level. This calls for the lender of last resort to exercise surveillance over capital flows to ensure that sound policies are in place in the countries in which the capital flows originate, so that their scale and direction do not reflect policy inadequacies. This is a key task for international surveillance and it will require an analysis and understanding of the factors underlying global capital flows. More generally, it will also require those

countries with the most influence in the world economy to accept responsibility for ensuring its stability, including in the domain of capital flows.

Maintaining order in the world economy in the absence of a global authority is a hard challenge. If we are to meet it, we need to acknowledge that all countries are part of the global society. Establishing universally applicable orderly norms is not the same as asking individual countries to bend to outside pressure. On the contrary, such a common endeavor will benefit everyone. In the words of José Ortega y Gasset: "Order is not a pressure which is imposed on society from without, but an equilibrium which is set up from within."

To a large extent, these countries were the victims of their own success. Because of their strong economic performance throughout the early 1990s, the Asian countries were in denial when problems began to surface. Believing they were immune to the type of crisis that erupted in Latin America in the 1980s because they did not have the large fiscal deficits, heavy public debt burdens, rapid monetary expansion, and structural impediments that had made Latin America vulnerable, the Asian countries did not deal in earnest with their emerging problems until too late.

Thailand's story is very telling in this regard. The problems in Thailand started in 1996. The IMF warned the authorities in early 1997 of the impending foreign exchange crisis, but it was difficult to convince them of the seriousness of the emerging problems. The warning was not made public, of course, given the strong risk that such a move could precipitate the very crisis it was intended to avoid.

Moreover, the IMF was not aware of the full extent of Thailand's problems at the time, because the baht was initially supported by heavy intervention in the forward market. Not knowing that virtually all of Thailand's international reserves had already been committed in the forward market, the IMF believed they were adequate—until mid-1997, when the country's usable reserves were nearly depleted and the authorities came to the IMF for help. Similarly, the IMF was not aware that Korea's foreign exchange reserves had been virtually used up until it was called to the scene.

The underlying causes of the Asian crisis have been clearly identified. First, substantial foreign funds became available at relatively low interest rates, as investors in search of new opportunities shifted massive amounts of capital into

Asia. As in all boom cycles, stock and real estate prices in Asia shot up initially, so the region attracted even more funds. However, domestic allocation of these borrowed foreign resources was inefficient because of weak banking systems, poor corporate governance, and a lack of transparency in the financial sector. These countries' limited absorptive capacity also contributed to the inefficient allocation of foreign funds. Second, the countries' exchange rate regimes—exchange rates were effectively fixed—gave borrowers a false sense of security, encouraging them to take on dollar-denominated debt. Third, in the countries affected by the crisis, exports were weak in the mid-1990s for a number of reasons, including the appreciation of the U.S. dollar against the yen, China's devaluation of the yuan in 1994, and the loss of some markets following the establishment of the North American Free Trade Agreement (NAFTA).

The massive capital inflows and weakening exports were reflected in widening current account deficits. To make matters worse, a substantial portion of the capital inflows was in the form of short-term borrowing, leaving the countries vulnerable to external shocks.

It is clear, with the benefit of hindsight that this situation was “just a big accident waiting to happen”; the only question was what would trigger it. Once the crisis broke out in Thailand in July 1997, the Asian countries were all vulnerable. And the markets overreacted. The thinking was that if this could happen in Thailand, it was bound to happen in other Asian countries facing, to varying degrees, the same problems—weak financial and corporate sectors, a large current account deficit, and a heavy external debt burden. Creditors withdrew funds from the region, and the crisis spread.

When these countries approached the IMF for assistance, the most pressing issue initially was to provide them with adequate financing to deal with the liquidity crisis created by the sudden flight of capital and the collapse of their currencies, and to give confidence to the market. The IMF provided the biggest loans in its history, while arranging for additional financing from other countries in the region as well as from the Group of Seven countries.

Crises are inevitable. As long as there are financial markets, there will be boom and bust cycles. But vulnerability to crises can be limited.

First, better information is needed so that situations can be monitored and actions taken in a timely fashion. Had the rest of the world known how weak these countries' financial systems were, something could have been done sooner. Similarly, had the IMF known how rapidly international reserves were falling in Thailand, and subsequently in Korea, policy adjustments could have been made earlier.

Second, the financial sector plays a critical role in all boom-bust cycles—in developed and developing countries alike. It is essential that appropriate prudential and supervisory procedures be in place and that banks be in a position to assess risk. Financial sector reforms are therefore extremely important.

Third, one very important lesson that has emerged from this crisis is that it is a mistake for a country to have a fixed exchange rate unless its authorities are prepared to do what it takes—that is, in addition to pursuing sound macroeconomic policies, it needs to have a healthy banking system and a strong reserve position that can withstand a defensive rise in interest rates to fend off speculators. But few countries can maintain a fixed exchange rate when things go wrong.

Fourth, capital market liberalization must be undertaken with care. The problem in the Asian countries was not that they liberalized their capital accounts but that the sequencing was wrong and that liberalization was only partial. Most of these countries liberalized short-term capital inflows before foreign direct investment, when they should have done it the other way around. Furthermore, although capital inflows were liberalized, the financial system remained closed to competition from outside. The combination of partial liberalization and structural rigidities meant that capital was invested without due regard to risk.

Would it be appropriate to impose capital controls to avoid future crises? This would be like closing the door after the proverbial horse has bolted. Furthermore, capital controls are much less effective in stemming outflows than inflows. It would be more effective to deal boldly with the underlying problems in the financial and corporate sectors and to create the right environment so that when capital inflows resume they can be used productively. After all, these countries' easy access to foreign capital before the crisis contributed significantly to their rapid growth. Even if output in the Asian countries declined by, say, 10 percent, their growth over the past twenty years would still be impressive. What is important is the appropriate sequencing of capital liberalization, to ensure that a country's financial system is capable of channeling capital into productive investment.

The abrupt reversals in economies that were hitherto deemed miraculous have challenged the conventional wisdom that it is a good thing to let capital move freely across borders. Popular sentiment in much of East Asia blames the present crisis on the sudden and destabilising withdrawal of foreign capital. Perhaps, it is suggested, things would have been calmer if less capital had been allowed to enter in the first place.

For years, it has been debated in the governments of developing countries that financial liberalization is essential for prosperity. Instead of discouraging foreign investors, and crafting rules to stop local capital from fleeing abroad, they were advised to open up. The theory was that this would give them access to global savings they could then invest in order to grow faster. When Mexico and South Korea sought to join the OECD, the group of rich economies, they were pushed to open up their capital markets further. Most economists are still wedded to the idea that international capital flows are desirable in principle. Indeed, Asia itself seemed until recently to have proved the case. As the East Asian countries erased capital controls during the 1990s, they enjoyed huge inflows of foreign money, amounting to 5-10% of GDP (see chart), which went hand-in-hand with fast growth. With their subsequent crash, however, has come a recognition that free-flowing capital can throw up unforeseen difficulties. In retrospect Alan Greenspan, the chairman of America's Federal Reserve, confessed, "it is clear that more investment monies flowed into these economies than could be profitably employed at reasonable risk." In an ideal economic system, this should not happen. Seeing that capital was producing a poor return in Asia, investors would put their money elsewhere. But real financial markets are more complex than the textbook models. Investors are erratic, swayed by waves of excessive optimism followed by waves of excessive pessimism. And it is impossible to eliminate moral hazard, which causes people to take excessive risks in the expectation that a central bank or the IMF will bail them out when things go wrong. These factors can mean that market forces do not allocate capital perfectly around the world.

Stanley Fischer (1998) has stressed the need for opening up the long-term investment before the short term flows. According to him, "Although country circumstances differ, the general advice on international financial sector liberalization is first to open to longer-term investment, particularly foreign direct investment, and only to open at the short end when the necessary preconditions, in the form of macroeconomic stability and a strong banking

and financial system, are in place. This was not the path chosen in Korea and Thailand. It needs also to be emphasized that lenders need to consider carefully the environment into which they are lending.”

Asia’s crisis occurred despite a benign international economic environment, with low international interest rates and solid global growth in output and trade, and unlike the Mexican peso devaluation in 1994 or the debt crisis of the 1980s, the main factor in the crisis involved private sector financial decisions not public sector borrowing. The cause of the crisis reflects the huge shift in recent years from private-to-public sector capital flows towards private-to-private sector flows.

“The general failure to predict the severity of the crisis owes much to the fact that analysts focused excessively on traditional indicators of sovereign risk, such as high savings and low inflation, and paid too little attention to indicators of business risk, such as high leverage, and maturity and currency mismatches,” said Uri Dadush, head of the World Bank’s Development Prospects Group.

Appendix 1: Some Traditional Indicators of Vulnerability				
(in percentage)				
Financial Year		1995	1996	1997
Country	Real GDP Growth			
India		7.6	7.8	5.0
China		10.5	9.6	8.8
Indonesia		8.2	8.0	4.7
S. Korea		8.9	7.1	5.5
Malaysia		9.5	8.6	8.1
Philippines		4.8	5.7	5.1
Thailand		8.8	5.5	-0.4
	Inflation Rate		(CPI Based)	
India		9.6	8.8	7.0
China		16.9	8.3	2.9
Indonesia		9.4	8.0	6.5
S. Korea		4.5	5.0	4.4
Malaysia		8.1	8.4	5.4
Philippines		5.3	3.6	2.7
Thailand		5.8	5.9	—
	Debt/GDP Ratio	1994	1995	1996
India		33.1	30	26.3
China		14.7	14.3	20.0
Indonesia		55.6	54.7	48.4
S. Korea		14.0	—	—
Malaysia		39.7	39.9	38.5
Philippines		57.7	54.2	48.3
Thailand		33.2	34.1	42.6

	Fiscal		
	Balance/GDP		
India	-4.9	-4.7	-5.5
China	-1.0	-0.9	-0.7
Indonesia	2.2	1.2	0.3
S. Korea	0.3	0.1	0.6
Malaysia	0.9	0.7	1.8
Philippines	0.6	0.3	0.1
Thailand	2.9	2.3	1.6

Source : International Financial Statistics, International Finance Corporation, IMF, 1998.

## Appendix 2: Other Indicators of Vulnerability

	Current Account Deficit As % of GDP		At the end of the financial year	
	1995	1996	1996	1997
India	-1.7	-1.2	-1.2	-1.6
China	0.2	0.9	0.9	3.2
Indonesia	-3.4	-3.4	-3.4	-1.4
S. Korea	-1.9	-4.7	-4.7	-1.8
Malaysia	-9.7	-5.0	-5.0	-5.3
Philippines	-2.7	-4.7	-4.7	-5.3
Thailand	-7.9	-7.9	-7.9	-2.0

	1995	1996	1997
Short-term Ext./debt/Total ext. debt			
India	4.3	5.5	7.2
China	18.9	19.7	2.0
Indonesia	—	—	11.5
S. Korea	20.9	25.0	—
Malaysia	21.2	27.8	—
Philippines	13.4	19.3	—
Thailand	49.4	41.4	—

	1995	1996	1997
Short-term Ext./debt/Foreign Reserves			
India	16.9	23.2	25.5
China	27.5	22.3	—
Indonesia	173	165	182
S. Korea	—	—	214
Malaysia	29.5	39.3	62.0
Philippines	70.0	68.5	—
Thailand	111	99	153
Real Exchange Rate 1990=100			
India	75.6	79.4	76.3
China	—	—	—
Indonesia	92	89	80
S. Korea	91	88	88
Malaysia	86	84	78
Philippines	62	63	56
Thailand	89	87	80

	Debt-Service to Exports	1995	1996	1997
India		37.0	33.7	32.5
China		7.3	6.7	9.8
Indonesia		32.6	34.2	39.5
S. Korea		—	—	—
Malaysia		6.0	6.9	6.2
Philippines		16.1	12.7	11.7
Thailand		11.4	12.3	15.6

	Growth Rate of Exports	1995	1996	1997
India		20.3	2.1	-5.1
China		24.9	20.9	0.5
Indonesia		13.3	7.9	0.7
S. Korea		31.2	6.7	-4.9
Malaysia		26.1	6.0	-11.4
Philippines		29.4	22.8	16.9
Thailand		24.8	3.8	-6.6

Source: Asian Development Outlook, ADB, 1999.

	Non-performing loans/total loans	1995	1996	1997
India	For public sector banks only	19.5	17.3	16.0
China		—	22.0	22.5
Indonesia		3.1	3.8	—
S. Korea		0.9	0.8	—
Malaysia		5.5	3.9	—
Philippines		—	—	—
Thailand		7.7	—	—

Sources: Global Development Finance, World Bank, 1999; Asian Development Outlook 1998; International Financial Statistics, International Monetary Fund, 1999; Economic Survey, Govt. of India 1998-99.

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2. See, Barry Eichengreen, "The Baring Crisis in a Mexican Mirror", *CIDER Working Paper C97-084* (Berkeley, California: Center for International and Development Economics Research, University of California, February 1997).Pg.74.
3. See, Vittorio Grilli, "Managing Exchange Rate Crises: Evidence from the 1980s," *Journal of International Money and Finance*, Vo.9 (September 1990), pp.258-75.Pg.74
4. This definition follows Michael D. Bordo, "Financial Crises, Banking Crises, Stock Market Crashes, and the Money Supply: Some International Evidence, 1870-1933", in Forrest Capie and Geoffrey Wood, eds., *Financial Crises and the World Banking System* (New York: St. Martin's, 1985); Gerard Caprio, Jr., and Daniela Klingebiel, "Banking Insolvency: Bad Luck, Bad Policy, or Bad Banking", in *World Bank, Annual World Bank Conference on Development Economics 1996* (Washington, 1997); and Barry Eichengreen and Andrew K.

Rose, "Staying Afloat When the Wind Shifts: External Factors and Emerging-Market Banking Crises," NBER Working Paper 6370 (Cambridge, Massachusetts: National Bureau of Economic Research, January 1998).Pg.75

5. Not all financial disturbances that produce falling asset prices and wealth losses to particular economic sectors or agents-such as those associated with a collapse of land prices following a boom, or the bursting of bubbles in various asset markets-are to be viewed as true financial crises. Financial disturbances that do not impinge on the payments mechanism and do not have potentially damaging consequences for economic activity have been characterized as "pseudo-financial crises"-see Anna J. Schwartz, "Real and Pseudo-Financial Crises," in Capie and Wood, *Financial Crises and the World Banking System*; and Frederic S. Mishkin, "Preventing Financial Crises: An International Perspective," NBER Working Paper 4636 (Cambridge, Massachusetts: National Bureau of Economic Research, June 1994).Pg.75.
6. Jeffrey A. Frankel and Andrew K. Rose, "Currency Crashes in Emerging Markets: Empirical Indicators," NBER Working Paper 5437 (Cambridge, Massachusetts: National Bureau of Economic Research, January 1996), define a "currency crash" as a nominal depreciation of the currency of at least 25 percent in a year, along with a 10 percent increase from the previous year in the rate of depreciation. The latter condition is included so as to omit from currency crashes the large trend depreciations of high-inflation countries.
7. Press Release No.98/1683/S date March, 24, 1998 (World Bank)
8. See, Speech Material from the speech of President Tadao Chino Asian Development Bank at the Asia Society's 10th Annual Corporate Conference in Asia on 26 February 1999.
9. See, Box 8, Pg.86, World Economic Outlook May 1998, IMF.
10. See Paul R. Masson, "Contagion: Monsoonal Effects, Spillovers, and Jumps Between Multiple Equilibria" (unpublished: Washington: IMF, 1998).Pg.83
11. Paul R. Masson and Michael Mussa, "The Role of the IMF: Financing and Its Interactions with Adjustment and Surveillance," Pamphlet Series, No.50 (Washington: IMF, 1995), Pg.83.
12. Iian Goldfajn and Rodrigo O. Valdes, "Capital Flows and the Twin Crises: The Role of Liquidity", Working Paper 97/87 (Washington: IMF, July 1997) Pg.83.
13. This arises only if financial markets exhibit multiple equilibria and self-fulfilling speculative attacks.Pg.83.
14. For example, see Frankel and Rose, "Currency Crashes in Emerging Markets," Eichengreen and Rose, "Staying Afloat When the Wind Shifts", and Kaminsky and Reinhart, "The Twin Crises." Pg.88.
15. See, for example, Sebastian Edwards, *Real Exchange Rates, Devaluation, and Adjustment: Exchange Rate Policy in Developing Countries* (Cambridge, Massachusetts: MIT Press, 1989). Pg.89.
16. Kaminsky and Reinhart, "The Twin Crises," discuss the indicative properties of a broad set of financial variables.Pg.89.
17. For example, see Steven B. Kamin, "Devaluation, External Balance, and Macroeconomic Performance: A Look at the Numbers," *Princeton Studies in International Finance*, No.62, (Princeton, New Jersey: Princeton University, August 1988), Pg.89.

18. *For a summary of various indicators employed in the literature, see Graciela Kaminsky, Saul Lizondo, and Carmen M. Reinhart, "Leading Indicators of Currency Crises," Working Paper 97/79 (Washington, IMF, July 1997). Pg.89.*
19. *Krugman reports that in the case of South Korea, the price of its corporations to foreign buyers essentially fell by 70 percent during 1997. Thus, the stock market value of Korean Air Lines with a fleet of more than 100 aircraft at the end of 1997 was only \$240 million. This is approximately the price of two Boeing 747s. However, any acquirer would also have to take on the Korean Air Lines debt of \$5 billion.*
20. *Mexico had received \$13.5 billion in U.S. funds from the ESF (\$20 billion was made available) as of December 20, 1996. December Monthly Report to Congress, Summaries of the Treasury Secretary's Monthly Reports, July-December 1996, at <http://www.ustreas.gov/treasury/mexico/archive/mex9612.html>.*
21. *Several proposals to restrict the ESF have been suggested. The Foreign Government Bailout Accountability Act of 1998 (H.R.3138), sponsored by Representative Spencer Bachus, requires presidential certification that any ESF loan or obligation pose no cost to U.S. taxpayers and be backed by an assured source of repayment. It also requires an act of Congress to extend loans or obligations to any one country or entity in excess of \$1 billion over 180 days. The Accountability for International Bailouts Act of 1998 (S. 1458 and H.R. 3106) would require congressional approved for ESF loans or obligations in excess of \$250 million. Representative John Dingell's (D-MI) bill, H.R.3573, is much looser in only requiring the Secretary of the Treasury to certify that the recipient country is meeting its commitments to the IMF before the Treasury could disperse or obligate ESF funds in excess of \$500 million for an international rescue plan.*
22. *Alice H. Amsden and Yoon-Dae Euh, "Rapid Deregulation Led to the Korean Crisis," in Isabelle Grunberg (ed.), Perspectives on International Financial Liberalization, Discussion Paper Series 15, Office of Development Studies, United Nations Development Programme, 1998.*
23. *See paragraph 42, Part A speech of Shri Yashwant Sinha, Minister of Finance, 28th Feb.2001.*
24. *Dani Rodrik, "Who Needs Capital-Account Convertibility?," Essays in International Finance, No.207, Princeton University, 1998.*
25. *UNCTAD, Trade and Development Report 1998, United Nations, 1998.*
26. *Stephany Griffith-Jones, "How to Protect Developing Countries from Volatility of Capital Flows?," Institute of Development Studies, Paper prepared for the Commonwealth Secretariat for the Expert Group Meeting, London during 15-17 June, 1998.*
27. *The stock of hot money is derived by adding the stock of short-term debt, investments by FIIs, issuance of GDRs and off-shore funds, Pg.14-15.*

