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The Major Economic Crises in 1990s and Lessons For India's Trade and Financial Policy

ARCHANA S. MATHUR
ARVINDER S. SACHDEVA

PERSPECTIVE PLANNING DIVISION
PLANNING COMMISSION
GOVERNMENT OF INDIA

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ABSTRACT

The paper attempts to study some of the major economic crises since the mid 1990s, in particular the one in Latin American countries in 1994-6 and the Asian crises in 1997-8, the reasons that led to these crises and the lessons that can be learnt so as to prevent the occurrence of a crisis or minimise the damage to the economy if the crisis has occurred. Some of the other episodes like that in Russia, Brazil, Turkey and even the latest crises in Argentina in 2001 are also analysed to get a better insight on the lessons for India.

The upshot from the analysis is that strong macro-economic fundamentals cannot be sufficient guarantee to avert a crisis situation. Existence of multiple equilibria, asymmetric information system coupled with weaknesses in financial sector can lead to currency and financial crises. This can have trans-boundary implications with breakdown of confidence.

India could avert the contagion of the crises in the latter part of 1990s. However, there is no scope for complacency as there are a number of weaknesses in the macro-economic fundamentals viz., persistently high fiscal deficit, low savings rates and also low investment efficiency vis-à-vis some of the emerging economies. Moreover, the financial and capital markets are still not sufficiently well developed, with weak regulatory mechanism. This was reflected in the recent problems faced by certain financial institutions like UTI, IFCI, etc., and the investors. An appropriate mix of monetary, fiscal and exchange rate policies is emphasized in view of greater openness of the economy. It is essential that there is close monitoring of a number of indicators on a regular basis and to develop a system of advance warning signals. This would help in confidence building to minimize damage, if not avert the very occurrence of a crisis.

Dr. Archana S. Mathur and Arvinder S. Sachdeva are from Indian Economic Service and are currently working as Directors in the Perspective Planning Division of Planning Commission. The views expressed are those of the authors and not necessarily those of the Government of India.

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1. Introduction

In the course of their development several emerging economies have often tended to suffer from economic crisis at some point or the other. Most of these crises differed in nature from each other. In some economies crisis have been characterised by a sudden and drastic decline in the foreign exchange reserves, while in others there has been rapid decline in the value of their currency. In some cases there have been large scale banking problems that have often succeeded a currency a crisis or sometimes they have occurred independent of the currency crisis. The degree of severity of crisis has varied in different economies and so has been the pace with which the economies have recovered from crisis. In some cases the crisis has been confined to one country, whereas in others the effect has spread to several other countries.

In this paper, an attempt is made to study some of the major economic crises since the mid 1990s, in particular the one in Latin American countries in 1994-6 and the Asian crises in 1997-8, the reasons that led to these crises and the lessons that can be learnt so as to prevent the occurrence of a crisis or minimise the damage to the economy if the crisis has occurred. Some of the other episodes like that in Russia, Brazil, Turkey and even the latest crises in Argentina in 2001 are also analysed to get a better insight on the lessons for India.

The paper is organized as follows. At first, the theoretical developments related to the occurrence of an economic crises are discussed, followed by an analysis of the factors that led to unfolding of the crises in different countries mainly the East Asian and Latin American countries including detailed examination of the trends in macro-economic, financial and external factors that led to the situation. Finally, the lessons that emerge for India, are looked at and certain suggestions are made regarding monitoring of critical indicators to avert currency and financial crises.

2. The Theoretical Arguments

One of the earliest theoretical discussions on analysis of currency crises was by Milton Friedman (1953), where he suggests the following:

> *"Even though an exchange-rate change would not otherwise be the occasion for a crisis, speculative movements are highly likely to convert it into one, for this system practically insures a maximum of destabilising speculation. Because the exchange rate is changed infrequently and only to meet substantial difficulties, a change tends to come well after the onset of difficulty, to be postponed as long as possible, and to be made only after substantial pressure on the exchange rate has accumulated. In consequence, there is seldom any doubt about the direction in which an exchange rate will be changed, if it is changed. In the interim between the suspicion of a possible change in the rate and the actual change, there is every incentive to sell the country's currency if devaluation is expected (to export 'capital' from the country) or to buy it if an appreciation is expected (to bring in 'capital') ---."*

It may be noted that the discussion about the currency crisis was for a different exchange rate regime (when fixed exchange rate regime was the order of the day) and the financial markets were quite small as compared to their present dimension and the private capital movements were hardly there.

Most of the recent theoretical underpinnings of the occurrence of an economic crisis can be found in terms of what has been termed as the "First Generation Models" and the "Second Generation Models". In addition, there are certain theoretical arguments that have been put forward more recently to explain economic crises, which are being categorized as “Third General Models”.

The **first generation models** focused on the role of the inconsistencies in the economic policies of a country which could include, a large fiscal and current account deficit, high rate of inflation, over-valued exchange rates, and a sharp reduction in the foreign exchange reserves that result in the deterioration in the macro-economic fundamentals. According to the first generation model, crises are *unavoidable and predictable* consequences of incompatible economic policies. A currency crisis (currency depreciation, loss of foreign exchange reserves, collapse of a pegged exchange rate) arises when domestic credit expansion is inconsistent with the pegged exchange rate. Often, the credit expansion results from the monetisation of budget deficits. Foreign exchange reserves fall gradually until the central bank is vulnerable to a sudden run, and the resulting exhaustion of the reserves, pushes the economy to adopt a floating rate.

Paul Krugman (1979) considered an economy with a pegged exchange rate, where budget deficit is financed by the expansion of domestic credit. He suggested that the peg is sustained by the positive stock of foreign exchange reserves. It is the incompatibility of expansionary fiscal and monetary policies with an exchange rate policy of maintaining a fixed exchange rate, that bring about the crisis. In light of this, according to Krugman, the crisis occurs when, *"the government is no longer able to defend fixed parity because of constraints of its actions."* The result would be that when reserves fall to some critical level, there would be a speculative attack which would quickly drive the reserves to near zero levels and force abandonment of the fixed exchange rate policy. There are some other variants of this model that have been developed by different economists, which include amongst others, Flood and Garber (1984), Connolly and Taylor (1984), Dooley (1997). However, all these models can be put in the category of the first generation models as they try to explain the crisis as an unavoidable and predictable event as a result of following certain combination of macro-economic policies that are incompatible.

It has been suggested that the currency crises in these models reflect basic inconsistency between domestic economic policies (mainly the fiscal and monetary policies) and exchange rate policy in a highly simplified form. The first generation models try to give a rationale for the occurrence of a crisis, and demonstrate that the abrupt runs on a currency need not reflect either investor irrationality, or the schemes of market manipulators, but a logical situation in which holding a currency is an unattractive proposition once its price no longer appears to be stable.

It has been argued that the first generation models do not adequately represent the role that the governments or the central banks could and do play. They ignore the fact that there are many policy options, available to the government, which can be used as and when required. Here the viability of an exchange rate peg is explained by exogenous fundamentals, which in turn determine the expectations. The market expectations do not directly influence

the macro-economic policy decisions. As an alternative, some economists have developed what are generally known as "second-generation" models to explain currency crises that explicitly take into account the role of expectations.

In the **second-generation models,** associated mainly with Maurice Obtsfeld (1986), crises occur as a consequence of self-fulfilling expectations and are *non-predictable* phenomenon. Here crises are not an unavoidable consequence of following certain combination of incompatible policies, until either the foreign exchange reserves disappear or government abandon the system of fixed exchange rates. The crises arise on account of tradeoffs between costs and benefits of following policy of fixed exchange rate. In these models, the government can defend a fixed exchange rate by following certain policies viz. raising interest rates, borrowing from other countries, resorting to exchange controls, etc. However, there could be costs associated with maintaining parity, viz. unemployment, increase in interest rates, etc. The higher these costs are vis-à-vis the benefits of maintaining fixed parity, the greater is the probability of speculative attacks on currency which would result in the abandonment of fixed exchange rates. Such speculative attacks can take place on account of imperfect and asymmetric information that could result in herd behaviour on part of the investors, even when the financial and macro-economic indicators are only moderately weak. Here *market expectations* can have an influence on the macro-economic policy decisions and it is this interaction that could lead to self-fulfilling crises and multiple equilibrium situations. There would be situations in which the market may undermine stability of the currency. The shift in expectations of currency depreciation could lead to multiple outcomes.

Jagdish Bhagwati (as quoted in Jalan, 1999) has described the self-fulfilling phenomenon with reference to the behaviour of exchange rates quite lucidly. He suggested, *"Let the objective reality initially be that the dollar will not depreciate. But suppose that speculators expect the opposite, and move out of the dollar, depreciating it. If the reality were independent of the actions of the speculators, the dollar would go up again, and the market would have chastised and ruined the speculators. But it may well be that as the dollar falls initially with the speculation, wages and hence prices rise in sympathy. If so, the objective reality would itself have changed, legitimating the devaluation of the dollar in view of the speculation-induced rise of prices. Such self-justifying speculation shapes its own reality."*

It has been felt that the first and second-generation models do not adequately explain the type of crises that occurred in the Asian economies. These models miss out on the role of banking and financial sector in explaining the crisis and also fail to explain the mechanisms of crisis transmission across countries (contagion). This resulted in development of models that analyse the crises in a different conceptual framework, often termed as the **third generation models**. These models incorporate anomalies in the financial sector and attempt to rationalise the reaction of markets and the process of a currency crisis leading to an outright financial and economic collapse (see for details Krugman (1998, 1999a, 1999b), Radalet and Sachs (1998), Corbett and Vines (1999).

It is argued that financial and currency crises in emerging markets may be seen as 'twin' events amplifying each other. A sudden and large depreciation of a currency (loss of confidence) would lead to an increase in the liabilities of the financial institutions, particularly when denominated in foreign currency. Since the banks generally lend in domestic currency, devaluation leads to a mismatch between their assets and liabilities. On

the other hand, a banking crisis could result in a currency crisis if government provides guarantees to the banks even if implicitly such guarantees may involve excessive, overly risky investment being made by banks and other financial institutions, which are often under-capitalised or weakly regulated, thus leading to moral hazard. The governments often try to bail out the banks out of the budgetary resources, which could impose fiscal burden on the economy. This generally results in expectations for monetisation of the deficit and currency depreciation. The heightened perception of credit risk and weakening of capital markets could create a panic situation, as creditors start withdrawing. The negative sentiments can become self-fulfilling and lead to a crisis. This is more so when the liabilities are mainly of short-term variety.

Often currency crises in a country are associated with strong pressures on exchange rates and asset prices in other countries. There may be several reasons for the crises to be contagious and contemporaneous in time. Policy measures undertaken in one country could have effects on other markets because of trade/financial linkages. Second, a crisis in one economy may affect the macroeconomic fundamentals in other markets. For instance, devaluation in one country could reduce the price competitiveness of other countries, thereby leading to devaluation by the latter. Moreover, a crisis in one country may trigger a crisis elsewhere for reasons unexplained by macroeconomic fundamentals, possibly because it leads to shifts in market sentiment or results in change in interpretation of existing information.

A question arises whether these models can help in explaining the crisis. The third generation models that are being developed in the wake of the Asian crises appear to better explain the recent crises in the East Asian and Latin American economies. In the Mexican crisis the dominant source of financial crises was the weak banking systems and poor bank supervision. In Thailand, the failure of the finance companies appears to have been the trigger that set off the run on the currency. In other Asian countries, currency depreciation undermined the balance-sheet positions of banks and bank customers with unhedged foreign exposures, thus precipitating a run on the banks, which further weakened their position. Here too, weakness of financial systems and financial supervision was the key factor.

Types of Financial Crises

Financial crises can take various forms. Radelet and Sachs (1998) suggest the following:

1. **Macro-economic policy induced:** Here, financial crisis is the result of the pursuing inconsistent macro-economic policies. This includes Krugman (1979) type balance of payment crisis, where the exchange rate collapses, as domestic economic policy is inconsistent with the exchange rate target, or it can take the form of self-fulfilling crises (Obstfeld, 1986). This explanation includes the possibility of presence of some structural weaknesses (e.g., decline in competitiveness, weak financial systems), which could make macro-policies inconsistent.

2. **Financial panic:** Here a country is subject to run on banks where creditors, particularly those with short-term claims, suddenly withdraw from the country, causing an acute shortage of foreign exchange liquidity. The withdrawal may be rational for each creditor as there is lack of coordination among creditors and each creditor wants to withdraw first.

3. **Collapse of a bubble:** Here the countries were exposed to very high capital flows relative to the opportunities available while even the level of contractibility and corporate governance was not suitably developed. This drove these economies into a "bubble" which collapsed subsequently (Tomioka, 2001).

4. **Moral hazard:** This involves excessive, overly risky investment by banks and other financial institutions that were able to borrow as they had implicit or explicit guarantees from the government on their liabilities. Creditors went along with this risky behavior, as they knew the government or international financial institutions would bail them out.

5. **Disorderly workouts:** This refers to the equivalent of a grab for assets in the absence of a domestic bankruptcy system in case of a liquidity problem of the corporates. In case of an international liquidity problem, a disorderly workout would result if there does not exist a means of reorganizing claims e.g. including re-scheduling loans, etc. This in turn would create a debt overhang.

Conceptually, there can be some overlap between these categories, and, in practice there is likely to be elements of each explanation present—in causing or triggering financial crises or making it more severe, often leading to contagion.

3. Unfolding of the Recent Crises

Prior to the crisis that started in mid-1997, the East Asian economies generally had annual growth rates in the range of 7-8%, high rates of savings and investments (nearly 1/3rd to 2/5th of the GDP), low budget deficits (in fact surplus in the 2 years prior to 1997) relatively lower rates of inflation (3-5% except in Indonesia where it was a little higher) and low levels of unemployment. These economies had also achieved fair degree of success in reducing poverty levels. These were some of the factors apart from the investor friendly regime, stable currencies, etc. that brought large capital inflows since mid 1980s and consequential benefits to these economies, particularly in East Asia. Hence, the currency and financial crises that struck the economies of Indonesia, Thailand, Malaysia, South Korea and Philippines took almost everyone by surprise. There were, however, a few like Young (1994), Krugman (1995) and Park (1996), who had warned that all is not well in East Asia and that the "East Asian Miracle" could be a 'myth' and not a 'reality'.

The East Asian crisis, as it unfolded, involved several mutually reinforcing events. The triggering event was the devaluation of the Thai baht in July 1997. Consequently, there were pressures on Malaysian ringgit, Indonesian rupiah and Korean won. The currency meltdown in East Asia led to a rapid withdrawal of foreign private capital from the region as most of the foreign borrowings were of short-term duration. The currency crisis led to severe domestic financial crisis and there was a decline in the value of financial assets and an increase in general price levels. The growth in these economies slowed down considerably. It was observed that the efficiency of investments declined as reflected in increasing incremental capital output ratios (ICORs) over the years in some of these countries. The ICOR in Indonesia increased from 4.0 in 1987-89 to 4.4 in 1993-94, while in Korea and Malaysia it increased from close to 3.5 to around 5.0 during this period. In Thailand the ICOR had registered a sharp increase from 2.9 to 5.2 in this period. Some of the macro economic indicators are given in Table-1.

The Mexican economic crisis of 1994 was also quite unexpected, as the economy had experienced rapid growth along with reduction in fiscal deficit and inflation as a result of structural reforms undertaken during late 1980s and early 1990s. Majority of economists and market participants had not forecast such an eventuality. Milton Friedman, however, had warned about un-sustainability of Mexico's exchange rate policy more than two years before the devaluation (Meigs, 1997). The devaluation in December 1994 led to a crisis of confidence, growing current account deficit and substantial reserve losses. The 'Tequila

Table 1 : Selected Economic Indicators

	Average 1980-90	1991	1992	1993	1994	1995	1996	1997	1998	1999
East Asian Countries:										
Indonesia:										
1. Real GDP Growth	5.9	7.0	6.5	6.5	7.5	8.2	7.8	4.9	-13.7	
2. Inflation	9.4	9.4	7.5	9.7	8.5	9.4	8.0	6.7	57.6	
3. Current A/c Balance/GDP	-3.1	-3.7	-2.2	-1.3	-1.6	-3.5	..			
4. Overall Govt. Balance/GDP				-0.6	0.4	0.6	0.2	0.0	-3.7	-2.2
5. Exchange Rate	1580.5	2849.4	2835.3	2898.2	3211.7	3430.8	3426.7	6274.0	11299.4	
6. Reserves/Imports (Months)	3.7	3.1	3.4	3.5	3.2	2.8	3.6	3.6	7.1	
Malaysia:										
1. Real GDP Growth	6.1	8.4	7.8	8.3	9.3	9.4	8.6	7.7	..	
2. Inflation	3.5	4.4	4.8	3.5	3.7	5.3	3.5	2.7	5.3	
3. Current A/c Balance/GDP	-2.8	-8.9	-3.8	-4.8	-6.4	-8.6	..			
4. Overall Govt. Balance/GDP				-1.4	-2.4	-3.1	-1.0	-	-	-
5. Exchange Rate	3.0	3.9	3.6	3.7	3.7	3.8	3.6	5.3	5.4	
6. Reserves/Imports (Months)	3.8	2.5	3.8	5.2	3.5	2.5	2.9	2.4	3.8	
South Korea:										
1. Real GDP Growth	8.1	9.1	5.1	5.5	8.2	8.9	6.8	5.0	-5.8	
2. Inflation	8.1	9.3	6.2	4.8	6.2	4.5	4.9	4.4	7.5	
3. Current A/c Balance/GDP	-0.1	-2.8	-1.3	0.3	-1.0	-1.8	..			
4. Overall Govt. Balance/GDP				0.6	0.4	0.3	0.3	-1.5	-4.2	-2.9
5. Exchange Rate	919.6	1088.3	1084.1	1110.0	1151.4	1151.6	1213.9	2287.0	1695.3	
6. Reserves/Imports (Months)	1.3	1.4	1.8	2.1	2.1	2.0	1.9	1.3	4.8	
Thailand:										
1. Real GDP Growth	7.6	8.4	7.8	8.7	8.6	8.8	5.5	-0.4	-10.2	
2. Inflation	5.7	5.7	4.1	3.4	5.0	5.8	5.8	5.6	8.1	
3. Current A/c Balance/GDP	-4.3	-7.7	-5.7	-5.1	-5.6	-8.2	..			
4. Overall Govt. Balance/GDP				2.2	1.9	3.0	2.4	-0.9	-3.4	-3.0
5. Exchange Rate	30.0	36.2	35.1	35.1	36.6	37.4	36.8	63.7	51.7	
6. Reserves/Imports (Months)	2.5	3.9	4.4	4.7	4.4	4.1	4.4	3.7	5.7	
Latin American Countries:										
Argentina:										
1. Real GDP Growth	-0.9	10.5	10.3	5.7	8.0	-4.0	4.8	8.6	4.2	
2. Inflation	391.6	171.7	24.9	10.6	4.2	3.4	0.2	0.5	0.9	
3. Current A/c Balance/GDP	-1.8	-0.3	-2.4	-2.9	-3.5	-0.9	-1.3			
4. Overall Govt. Balance/GDP										
5. Exchange Rate	0.5	1.4	1.4	1.4	1.5	1.5	1.4	1.3	1.4	
6. Reserves/Imports (Months)		6.3	6.0	7.3	5.6	5.8	6.4	6.5	6.7	
Brazil:										
1. Real GDP Growth	2.3	-	-0.9	6.0	4.9	3.9	3.0	3.6	0.2	
2. Inflation	303.8	440.9	1008.7	1928.0	2075.9	66.0	15.8	6.9	3.2	
3. Current A/c Balance/GDP	-2.1	-0.4	1.6	-	-0.2	-2.5	..			
4. Overall Govt. Balance/GDP										
5. Exchange Rate		..	0.0	162.9	1235.0	1446.4	1494.6	1506.3	1701.9	
6. Reserves/Imports (Months)	3.4	3.0	8.6	9.7	8.5	7.5	8.6	7.0		
Mexico:										
1. Real GDP Growth	2.4	4.2	3.6	2.0	4.4	-6.2	5.2	6.7	4.8	
2. Inflation	61.1	22.7	15.5	9.8	7.0	35.0	34.4	20.6	15.9	
3. Current A/c Balance/GDP	-1.3	-5.1	-7.3	-5.8	-7.0	-0.2	..			
4. Overall Govt. Balance/GDP										
5. Exchange Rate	1.8	4.4	4.3	4.3	7.8	11.4	11.3	10.9	13.9	
6. Reserves/Imports (Months)	3.6	2.7	2.4	3.2	0.6	1.8	1.7	2.2	2.1	

Source: Based on IMF, various issues of International Financial Statistics.
ADB, Asian Development Outlook

Crisis' then spread to Brazil and Argentina leading to collapse of exchange rate and banking systems in these countries.

In the recent times, there have been problems in Russia and Brazil. The Asian crisis contributed to the already weak in macro-economic fundamentals in Russia and this led to collapse of the Russian currency. The IMF macro-economic stabilisation policies had resulted in control of inflation with slowing down of the growth in money supply and a stable rouble, but the budgetary management was weak. There was a decline in revenue while interest payments more than doubled during the first half of 1998. The government excessively relied on short-term foreign funds and this coupled with a liberalised capital account led to speculative transactions. The flight of capital could not be curtailed as households purchased foreign exchange and non-residents withdrew from government bills. This resulted in a rise in foreign liabilities of the banks. The banks were not in a position to pay foreign creditors and had to buy foreign exchange to repay debts. The government was unable to redeem their fast depreciating securities. In addition to this, certain exogenous factors viz., the collapse of East Asian currencies along with decline in (export) prices of oil and non-ferrous metals led to a negative current account balance of $ 5 billion by mid 1998 as against the positive $ 4-6 billion in the corresponding period of preceding 3 years (Desai, 2000). Initially the Central Bank of Russia attempted to defend the rouble band despite massive loss of foreign exchange reserves, but it was later depreciated by 10-15% in mid August 1998.

The Brazilian crisis of 1998-99 also had the genesis in high fiscal deficit and the attempt to control inflation by exchange rate anchor. The over-valuation of its currency led to unsustainable current account deficit financed mainly by short-term capital inflows.

Argentina had adopted currency board for almost a decade whereby the peso was pegged to the US dollar. This implied that the country could not follow an independent monetary policy. At the same time, Argentina followed a restrictive fiscal policy as part of the structural adjustment programme. Though these policies helped to contain inflation, the country entered a recessionary phase in the latter half of 1990s. The strengthening of the US dollar vis-à-vis other currencies resulted in an over-valued peso. The devaluation of the Brazilian real in 1998 also contributed to decline in the competitiveness of Argentinean exports. The exports were not sufficient to meet the import requirements. Financing the current account at the prevailing exchange rates to meet the gap required sustained capital flows, which were increasingly forthcoming only for shorter duration maturities. By mid-2001, short-term external debt had risen to 95% of reserves (Eichengreen, 2001). As a result of these events, the interest rates soared which created doubts about debt repayments. The banks faced liquidity problems and started disposing off the government securities. This accentuated the rise in interest rates. The monetary authorities provided additional liquidity in an attempt to restore the financial system but that led to further loss of confidence in the exchange rate stability and prompted capital flight.

The Turkish crisis in 2000-01 is quite similar to the recent Argentinean crisis. Turkey undertook the stabilisation programme in 1999. A crawling peg was adopted against a dollar-deutsch mark basket. During the period 1995-98, the inflation in Turkey averaged around 79% per annum, which declined to 51% in 2000 and to 36% by January 2001. The currency depreciation during the period 1995-98 was 69%. The inflation continued to be higher than the rate of currency depreciation during 1999-2000, which affected the competitiveness of the economy. The exports were insufficient to meet the import requirements (Details in

Annexures 1 to 7). Turkey had to rely on short- term foreign capital inflows. The banking sector faced credit crunch and high interest rates with loss of confidence. Thereafter, Turkey experienced similar problems as faced by other crisis-hit economies.

It may thus be observed that almost all the crises during the 1990s, including the more recent ones, followed a pegged exchange rate, had a less developed financial sector, large capital inflows along with a weak regulatory and supervisory framework. Many questions have been raised in the light of these crises e.g. what role do alternative exchange rate regimes have on the possibility of occurrence of a crisis, to what extent and under what circumstances can one pursue rapid financial liberalisation, open capital account, the role of short term debt, the role of current account balance and other macro-economic variables vis-à-vis the variables of financial sector in explaining the crises, etc. These issues are examined in detail in the next sections and lessons will be drawn for India.

3.1 Current Account Balance

The current account balance (CAB) indicates the financial flows from trade and transfers. It reflects the economy's requirement of international finances.

$CAB = TAB + iNFA + NUT$ - (1)
Where

TAB = Trade Balance
iNFA = Interest on Net Foreign Assets
NUT = Net Unilateral Transfers

CAB also measures the change in net foreign assets during a particular year. This would depend on the level of national income and its absorption (comprising consumption I, investment (I) and government expenditure (G)).

$CAB_t = NFA_t - NFA_{t-1}$ or
$NFA_t = CAB_t - NFA_{t-1}$ - (2)

$NFA_t = NFA_{t-1} + GDP_t + I_tNFA_{t-1} - C_t - I_t - G_t$ - (3)

In case investment rates are higher than savings rate and/or absorption exceeds income, as is the case in most developing countries, CAB would result in accumulation of foreign debt and could be accompanied with depletion of foreign exchange reserves over time. The latter would depend on the status of current and capital account balance, i.e.

$CAB + KAB = d(FEX)$ - (4)

where KAB = Capital Account Balance
FEX = Foreign Exchange Reserves

From the above, it is seen that the CAB depicts an imbalance between savings and investment that needs to be financed by capital inflows or accumulation of debt. It is important to note that in certain situations, imbalance in equations (2) and (3) could arise on account of excessive foreign capital flows arising from the surplus funds available with the international lenders. A situation where borrowing economies offer higher returns on

investment than elsewhere, will result in capital inflows. The ability to sustain these imbalances is determined by the economy's stock of foreign exchange reserves and other assets held abroad. Further, sustainability of CAB would be affected by factors like GDP growth, budget deficit, levels of savings and investment and its allocation into tradable sectors or otherwise, apart from overall openness of the economy.

The evidence from Asian countries emphasizes high current account deficit (CAD) as one of the key factors explaining the currency and financial crises in these countries, particularly Thailand and Malaysia. In these countries, the investment to GDP rates exceeded the savings rates by 3-5%, which was mainly financed by foreign capital inflows. Table-2 gives the position of CAB in selected Asian and Latin American economies.

Table-2 : CAB/ GDP in Selected Asian and Latin American Economies

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Indonesia	-2.6	-3.3	-2.0	-1.3	-1.6	-3.2	-3.4	-2.3	4.3	4.1	-
Malaysia	-2.0	-8.5	-3.7	-4.5	-6.1	-9.5	-4.6	-4.8	-	-	-
Korea	-0.8	-2.8	-1.3	0.3	-1.0	-1.7	-4.4	-1.7	12.8	-	-
Thailand	-8.5	-7.7	-5.7	-5.0	-5.7	-8.2	-8.1	-2.0	12.6	9.1	7.5
Argentina	3.2	-0.3	-2.4	-3.4	-4.3	-1.9	-2.4	-4.1	-4.8	-4.3	-3.1
Brazil	-0.8	-0.4	1.6	-	-0.2	-2.6	-3.0	-3.8	-4.4	-	-2.3
Mexico	-2.8	-4.7	-6.7	-5.8	-7.0	-0.6	-0.7	-1.9	-3.8	-2.9	-3.1

Source: International Financial Statistics Yearbook, Various Issues, IMF.

It may be observed that CAD was higher in Thailand and Malaysia than others. Since these economies were performing well (achieving high rates of growth), not much attention was paid to CAD and it's financing. CAD was being financed by capital inflows and the foreign exchange reserves generally increased in these countries. As far as Latin American countries are concerned, it may be observed that the CAD in Mexico increased in the early 1990s, while it increased quite appreciably in Argentina and Brazil in the latter part of 1990s. It is the financing of such large current account deficit by capital inflows (a substantial proportion of which were short term flows that could be withdrawn at any time) that had the potential to snowball into a crises situation.

3.2 Capital Inflows

The international capital markets help to channel world savings to the most productive use. In developing countries, financial integration tends to boost growth by increasing investment and consumption by providing effective insurance through pooling of risk, thus resulting in benefits to the individual countries and the global economy. However, along with the advantages offered by international capital markets, there are a number of associated risks and distortions due to asymmetric information and on account of imperfect contract enforcement (Obstfeld, 1998).

The extent of capital flows has been related to 'push and pull' factors in the literature. Push factors are largely external to the emerging economies, while pull factors are country or region specific, e.g. a more conducive policy regime. Recent research suggests that the two phenomena are in fact complementary. While push factors determine the timing and magnitude of new capital inflows to emerging economies, it is the pull factors, which determine the geographic distribution of these flows.

Capital inflows have played a crucial role in emerging economies since 1980s and more particularly in the 1990s.The favourable international macroeconomic environment in the 1990s and relatively low international interest rates, were among the cyclical push factors from industrialised economies. At the same time, rapid improvements in telecommunications and information technologies along with the proliferation of financial instruments led to increased capital flows to developing countries. Further, as mentioned above, institutionalisation of savings and availability of new investment opportunities together with desire for greater risk diversification have been among the structural factors leading to intensified global capital flows. Table-3 gives the annual net private capital flows since early 1980s.

Table-3 : Annual Net Private Capital Flows

	1983-9	1990	1991	1992	1993	1994	1995	1996	1997
All Developing Countries									
-US $ Billions	17.2	48.9	124.8	108.2	151.4	133.4	147.6	189.6	139.0
-% Exports	3.7	7.4	18.6	14.77	19.7	15.3	14.3	16.4	11.1
-% GNP	0.7	1.6	3.9	3.1	3.9	3.3	3.2	3.7	2.5
Of which:									
Asia									
-US $ Billions	12.9	27.5	32.2	20.9	54.3	64.3	91.2	98.3	28.8
-% Exports	10.7	13.5	14.0	7.9	18.0	17.5	20.1	19.4	5.2
-% GNP	1.5	2.6	2.9	1.7	3.7	4.1	4.9	4.6	1.3
Western Hemisphere									
-US $ Billions	-1.5	14.1	25.5	55.9	63.1	46.5	38.2	81.8	87.5
-% Exports	-1.3	8.5	15.4	32.1	34.4	22.2	15.5	29.9	29.2
-% GNP	-0.2	1.3	2.2	4.5	4.6	3.0	2.3	4.5	4.4

Source : Mejia (1999)

It is observed that the capital flows to the developing countries increased substantially in the 1990s. There were excess funds available in the developed countries in search of higher returns, increased efficiency and profits. The BIS norm for international bank lending, particularly outside the OECD, required fulfilling the minimum capital adequacy ratio of 20% for short term and 100% for long term maturities. This tended to encourage short-term capital inflows to developing countries.

The emerging economies had undertaken stabilisation and structural reforms, including capital market liberalisation and financial reforms. The economies that had undertaken such reforms attracted the floating funds. The rate of interest prevalent in most of these economies was much higher than those prevailing in developed countries, thus making it more attractive for the latter to invest in the emerging markets. Some of these countries even provided tax incentives to attract inflows, particularly of short-term variety. Apart from this, there was macro-economic stability in terms of high growth, low rate of inflation, and a

stable currency, particularly in East Asia. The Latin American countries were the major recipients of capital inflows from developed countries till the early 1980s. Subsequently, these were directed mainly to East Asian countries during the latter half of 1980s and most of the years till 1996. During the subsequent phase, these capital inflows declined substantially and majority of this decline was in the East Asian countries. As can be seen from Table-4, the net financial flows to developing and transition economies increased from US $ 67 billion in 1990 to US $ 229 billion in 1995. There after, it declined to US $ 83.5 billion in 1999. Bulk of these was private capital flows. The net direct investment steadily increased from US $ 18.5 billion in 1990 to around US $ 150 billion in 1999.

It has been suggested that the speculative attacks in emerging economies have often been preceded by very large private capital inflows (Dooley, 2000). Although capital flows would normally help in the development process, the practical problem relates to their variability i.e. the surges and reversals. There have been variations in capital flows in response to changes in interest rates over the cycle, profit opportunities, exchange rate expectations and general confidence levels (Grenville, 1998). The variability can be quite large, as was the experience in a number of crisis-ridden economies. Net private capital inflows to the East Asian economies exceeded the current account deficit, resulting in a sustained accumulation of international reserves. Also, the total investment increased while the average propensity of consumption declined in Thailand, Indonesia and Malaysia. In contrast, the capital inflows to Mexico in fact resulted in a consumption boom during 1989 to 1994 i.e. the period prior to the Tequila crisis of 1994-95.

It is apparent that large capital inflows are not an unmitigated blessing. They can lead to rapid monetary expansion, inflationary pressures, real exchange rate appreciation, risks to the financial sector, and larger external debts. In addition, as the experiences of Mexico in 1994-95, Asia in 1997, and Russia in 1998 have shown, financial integration can lead to greater volatility and, eventually, to large reversals of the inflows because of changes in expected asset returns, investor herding, and contagion effects.

A look at the composition of the capital inflows to the Asian countries would reveal that till 1996 most of these flows were in the form of ‘others’ comprising flow to banks, corporates, etc. It was these flows, which were observed to be the most volatile (see details in Annexure-7). It was the sudden reversal of these flows that played a major role in the turn of events in 1997. In Thailand, the net inflows in 1996 were US $ 19.5 billion which declined to US $ (-) 16.9 billion in 1997, thereby representing an outflow of US $ 36.4 billion in this period. It was the category ‘others’ that contributed to the net outflow of US $ 19 billion (from an inflow of US $ 9 billion in 1996 to an outflow of US $ 10 billion in 1997). Similarly, in Indonesia, Korea and Malaysia, the net inflows declined substantially. This was mainly accounted for by category ‘others’. At the same time, the share of FDI in total long-term resources more than doubled in 1998-99 (Nunnenkamp, 2001).

It may be observed that as far as the Latin American economies are concerned, the sudden reversal of capital inflows was most pronounced in Mexico during 1994-95 when the net inflows declined from US $ 33.8 billion in 1993 to US $ 15.8 billion in 1994 and to an outflow of US $ 10.5 billion in 1995. This implied that there was a net outflow of around US $ 45 billion in these two years. Unlike the Asian countries, bulk of the outflows in Mexico were accounted for by the portfolio investment which declined from a net inflow of US $ 28.5 billion in 1993 to an outflow of over US $ 10 billion by 1995. Other investment declined from an inflow of US $ 1 billion to an outflow of US $ 10 billion during the same

period. However, direct investment increased from around US $ 4.4 billion in 1993 to nearly US $ 10 billion in 1994 and 1995. In Argentina the net inflows were of the order of US $ 20.3 billion. The current account was negative since 1980 and the foreign exchange reserves declined till 1991 due to low and often negative inflows on capital account. This was on account of an increase in the portfolio investment liabilities to the tune of almost US $ 35 billion in 1995, most of which was in the form of debt. The Brazilian downturn occurred at a later date i.e. in 1998-99. The capital flows declined from US $ 33 billion in 1996 to US $ 25 billion in 1997 and further to US $ 20 billion in 1998. There were massive withdrawals from banks (in the 'others' category) in 1998. Other investments declined from an inflow of US $ 4 billion in 1996 to an outflow of US $ 21.6 billion in 1998. However, during this period, FDI and FII continued to increase.

From the above analysis, it is evident that the FDI proved to be the most resilient inflow and 'others', mainly bank inflows, the most volatile. The nature and variability of capital flows along with the weak financial structure appears to be responsible to a great extent for the turmoil in these countries.

3.3 Issue of External Debt

The capital flows to an economy can be used to meet the current account deficit and/or change the foreign exchange reserves, as seen in equation (4) in Section 3.1. These flows can be used as a policy instrument to enhance (or otherwise) the foreign exchange reserves. The large current account deficit in the East Asian and Latin American countries was being financed by greater amounts of capital flows. A large part of which was in form of debt, mainly short-term debt. As a result, the total stock of debt in these countries increased considerably. It has been suggested that debt related flows from banks and portfolio investors are to be blamed for "herd behaviour and panicking" as their share in total long term flows fell from over 30% in 1996 to 7% in 1999 (Nunnenkamp, 2001). This herd behaviour in turn, is related to incomplete information, available with private capital investors along with strong profit motive leading to excessive investment initially and subsequent withdrawal, both at individual level and as a collective group.

The total external debt in the 4 Asian countries increased substantially during the period 1990-97 (Annexure-8). It doubled in Indonesia and South Korea and trebled in Malaysia & Thailand. In these 4 countries, the total external debt was US $ 160 billion in 1990 and this increased to nearly US $ 440 billion by 1998, representing an increase of over 175% in just 8 years. In 1999, however, the total external debt stock declined to US $ 422 billion. The total external debt in the three Latin American countries viz., Argentina, Brazil and Mexico, was US $ 560 billion. Looking at the change in total debt scenario in these countries, it is observed that the external debt doubled during the period 1990 to 1999. The highest increase of (total) debt was in Argentina at 196% and least in Mexico at 70%.

Table-5 : Total debt/GNP (%)

Year	Indonesia	Korea, Rep.	Malaysia	Thailand	Argentina	Brazil	Mexico
1990	64.0	18.7	37.5	33.4	46.1	26.5	41.1
1991	64.9	18.4	38.3	39.0	37.3	30.3	37.3
1992	66.2	14.1	36.3	38.4	30.7	33.6	31.7
1993	58.7	13.7	41.1	42.9	27.7	33.6	33.6
1994	62.6	18.0	42.8	46.1	29.6	28.1	34.4

1995	63.4	17.6	40.6	60.6	38.9	23.0	61.2
1996	58.3	22.3	41.3	60.6	41.7	23.8	49.5
1997	65.0	28.9	49.8	74.7	44.7	25.2	38.3
1998	161.5	44.5	65.3	97.1	48.6	32.4	39.7
1999	113.3	32.3	62.5	79.9	53.7	33.5	35.5

Source: Global Development Finance, World Bank.

A look at the Table-5 reveals that the ratio of total debt to GNP remained more or less at the same levels till 1996 in East Asia and there was a substantial increase in this ratio in the period 1997-98. The ratio subsequently declined in 1999. This was on account of the fact that the GNP declined in most of these countries in 1997 and 1998. The decline in GNP was most notable in Indonesia and this resulted in the debt to GNP ratio increasing from 65% to 161.5% in that country. For Latin America, it is observed that the increase in the debt/GNP ratio is not very marked in any of the countries during 1990 to 1999. There was a substantial increase in the ratio in 1995, in Mexico and a constant increase in this ratio in Argentina since 1993.

A large proportion of the external debt was accounted for by the short-term debt that is of less than one-year duration. The ratio of short term to total debt generally tended to increase during the period 1990-97 as can be seen from Table-6.

Table-6 : **Short Term to Total Debt Ratio (%)**

Year	Indonesia	Korea Rep.	Malaysia	Thailand	Argentina	Brazil	Mexico
1990	15.9	48.5	12.4	29.5	16.8	19.8	15.4
1991	18.0	46.8	12.1	33.1	20.7	21.8	19.2
1992	20.5	27.0	18.2	35.2	23.5	18.7	21.9
1993	20.2	25.9	26.6	42.9	13.4	21.3	27.5
1994	18.1	43.7	20.4	44.5	9.5	20.8	28.1
1995	20.9	54.3	21.2	44.1	21.6	19.2	22.4
1996	25.0	57.5	27.9	39.5	21.1	19.6	19.0
1997	24.1	39.3	31.6	34.5	24.8	17.3	18.7
1998	13.3	20.2	19.3	28.3	21.9	12.3	16.5
1999	13.3	26.8	16.4	24.3	21.3	12.1	14.4

Source: Global Development Finance, World Bank

The short-term debt was nearly one-fourth of the total debt in Indonesia, close to 40% in Korea and Thailand and nearly 1/3rd in Malaysia in 1997. In the next two years this ratio declined though in Korea and Thailand, these were close to 25%. The short-term debt to the

total debt in the selected Latin American countries was around 20% during the period 1990-96 and declined subsequently except in Argentina. In 1994, short-term debt increased to 28% in Mexico. However, during this year, the ratio declined substantially to 9.5% in Argentina, which may be due to flight of short-term debt during the crisis in this country.

The ratio of hard currency assets to the short-term liabilities reflects the country's international liquidity position. A country's financial system is internationally liquid so long as ratio is greater than one. However, if holders of the short-term liabilities lose confidence in the country's ability to honour the obligations and begin to redeem their holdings, it could result in loss of confidence and a crisis situation could emerge. The short-term debt in these economies in relation to export earnings and reserves were not sufficient to meet the debt obligations in the event of crisis and consequent withdrawal. Table-7 gives the total foreign exchange reserves in Indonesia and Korea were mostly less than the short-term debt, and in Malaysia and Thailand, they declined during the period preceding the crises. The reserves were not sufficient to meet the sudden outflow.

Table-7 : **Reserves to Short Term Debt Ratio**

Year	Indonesia	Korea Rep.	Malaysia	Thailand	Argentina	Brazil	Mexico
1990	78.0	65.6	560.5	171.5	59.5	38.9	63.6
1991	72.2	55.1	566.9	147.1	55.1	33.0	82.3
1992	63.9	144.4	494.5	143.7	70.6	96.8	78.1
1993	69.4	166.8	405.5	112.4	179.1	103.7	69.8
1994	68.4	81.5	425.6	103.8	223.3	122.6	16.4
1995	57.4	70.4	339.6	83.8	74.8	168.8	45.7
1996	60.2	51.3	252.0	90.7	83.1	168.4	65.4
1997	53.2	38.0	143.7	71.7	70.1	150.2	103.5
1998	117.4	185.2	303.0	99.6	80.3	145.8	121.1
1999	132.1	213.0	405.2	145.5	83.3	117.8	132.1

Source: Global Development Finance, various issues.

It was only after 1998 these countries started having foreign exchange reserves that were sufficient to meet the short-term debt obligations. As in the S.E. Asian countries, the export earnings were far short of the debt obligations. The reserves to short-term debt varied considerably during this period in the Latin American countries, with the situation being worst in early 1990s. The position in Brazil stabilised by and large since 1993. In Argentina the ratio suddenly improved in 1993-94 and then again deteriorated in later years, apparently due to decrease in short term debt and assistance from international financial institutions in this year. Mexico had adverse conditions until 1997 when the ratio reversed. The worst situation for Mexico was in 1994 when it fell to 16.4 and then improved from the following year. Argentina still continues to have problems of short-term debt exceeding the foreign exchange reserves, as evident from the recent crisis.

Despite having high and rising exports, the ratio of total debt to exports and more so the ratio of short term debt to exports of goods and services was generally increasing as can be seen from Table-8 (also see Annexure-9).

Table-8 : **Short Term Debt to Export of Goods & Services (%)**

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Indonesia	37.2	42.7	47.2	42.9	41.8	47.3	54.8	49.9	34.8	34.0
Korea	29.7	29.9	13.3	12.5	27.5	30.8	42.3	31.8	17.5	19.9
Malaysia	5.5	5.2	7.8	12.7	9.0	8.5	11.7	15.6	10.2	7.7

Thailand	26.6	33.1	34.3	45.6	49.7	59.5	56.5	49.7	42.8	31.4
Argentina	62.8	83.9	91.0	45.3	31.2	72.4	71.3	87.7	82.9	92.8
Brazil	64.4	71.4	56.4	66.5	59.2	51.7	59.3	52.3	46.6	48.5
Mexico	29.5	38.1	40.1	53.8	50.4	38.6	25.9	21.3	18.8	15.1

Source: Based on data in Global Development Finance, various issues.

It may be observed that, with the exception of Malaysia and to a large degree, Korea, the total debt of the economy was in excess of the exports. However, this aspect is not so worrisome, as is the fact that the ratio of short-term debt to total exports and services was also fairly high and generally increased in all the countries prior to the onset of crises. Short-term debt accounted for nearly half of the export earnings of Indonesia and Thailand and over 42% of the exports earnings of Korea in 1996, the year prior to the onset of the crisis in Asia. Similarly, the ratio was over 50% in 1993 and 1994 in Mexico. The situation in Argentina and Brazil was also not comfortable as, in general, 70-80% of the exports earnings of Argentina and 50-60% of the exports earnings in Brazil were used up for meeting the short-term debt obligations. In fact, the ratio was as high as 93% in Argentina in 1999. This tends to necessitate greater borrowings to meet the demand for imports.

It is clear from above that these countries (both in S.E. Asia and Latin America) were heavily dependent on foreign debt in the pre-crisis era. The absorption exceeded income with investment greater than savings leading to unsustainable current account deficit. A crisis situation ensued with the reversals of the 'flighty' short-term capital flows, as confidence levels dipped.

3.4 Alternative Foreign Exchange Regimes

Another manifestation of dis-equilibrium in an economy is in the exchange rate. Foreign exchange policy regime adopted by many of the emerging market economies discussed here was managed float, although a few continued with the pegged exchange rate. The extent of flexibility adopted was related to the share of international trade in GDP, degree of involvement with internationals capital markets, level of inflation and macro economic stability, flexibility of monetary and fiscal policy, apart from presence of a reasonably well developed financial system.

The two extreme cases of the exchange rate regimes, range from a fully flexible one with minimal central bank intervention to fixed nominal exchange rate. The fixed exchange rate reduces the degree of flexibility of the system but imparts much higher degree of credibility. The public perceives, that under this system the primary goal of monetary policy is to preserve exchange rate parity in lieu of lower rates of inflation. Here, the assumption is that the central bank would not abandon the fixed exchange rate and resort to devaluation. Further it is contended that a pegged exchange rate provides implicit guarantees for those borrowing in foreign currency, which gives rise to a moral hazard problem. The insurance against exchange rate changes attracts more capital inflows but leaves the economy more vulnerable. Historically, pegged exchange rate has not been successful in most of the countries which ended up in major devaluation crisis (Edwards and Savastaro, 1999).

Similarly, purely floating system also does not exist in reality. The main argument for supporting the floating system is that they offer a possibility of a more stabilising monetary policy. The exchange rate can absorb some of the real shocks faced by an economy, say in

times of adverse external shocks, while interest rates need not be raised. In this way, output is protected through competitiveness and more favourable financial situation. However, most developing countries refrain from using exchange rate flexibility in times of external shocks (Domac & Peria, 2000). There are a number of alternative exchange rate regimes that are adopted with varying degree of flexibility. These have been categorized as "dirty" float, floating within a band, sliding band, crawling band, crawling peg, fixed-but-adjustable exchange rate and currency board, which prevail between the two extremes.

The main benefit of the floating regimes is in the form of lower adjustment costs to any foreign/domestic shocks. This could mean requirement for maintaining lower level of foreign exchange reserves. However, the high exchange rate volatility could distort resource allocation. On the other hand, although the pegged exchange rate regimes have the advantage of providing credible system but all external shocks have to be absorbed by the real economy and the central bank cannot follow an active monetary policy.

Most of the East Asian countries followed a pegged exchange rate system allowing for variations within a narrow band. This was adopted to prevent an appreciation of the exchange rate that was always in the realm of possibility, taking into account the large capital inflows. In order to examine the movements in exchange rate (in terms of U.S. dollar) over time in these countries, a simple time trend was fitted. The results are as follows:

Country	Value of		R^2	Time period
	α	β		
Indonesia	7.20 (136.1)	0.052 (7.2)	0.84	1985-96
Malaysia	0.951 (38.3)	0.001 (0.32)	0.01	1985-96
Republic of Korea	6.66 (121.6)	- 0.0008 (-0.11)	0.001	1985-96
Thailand	3.255 (325.1)	- 0.0025 (-1.86)	0.26	1985-96
India	2.31 (43.2)	0.113 (15.55)	0.96	1985-96
Mexico	0.62 (8.9)	0.065 (5.9)	0.065	1987-93
Brazil	3.53 (- 3.76)	0.61 3.28)	0.64	1992-99
Argentina	- 0.0079 (- 0.93)	0.0019 (1.23)	0.18	1989-99

As can be seen from above, there was very little movement in the exchange rate between 1985 and 1996 in Malaysia, Republic of Korea and Malaysia, and some depreciation in Indonesia of around 5.3% per annum. For Latin American countries, different time periods were taken for Argentina, Brazil and Mexico. These were partly related to time points for the occurrence of the crisis, and partly on account of data availability for Argentina and Brazil. While the exchange rate has not changed in Argentina (as they have been following pegged exchange rate system/currency board), there has been depreciation of 6.7% per annum in Mexico in the time period 1987-93 (just prior to crisis) and 6.3% per annum for time period 1992 to 1999 in Brazil.

The pegged exchange rate, along with high interest rates in these countries vis-à-vis the OECD countries, resulted in large capital inflows, including unhedged short-term borrowings. The increased capital inflows could not have been absorbed without an increase in real exchange rate. The capital inflows tended to boost foreign exchange reserves with a consequent increase in domestic liquidity and build up inflationary pressures in the economy. Monetary instruments like higher interest rate helped in curtailing inflationary tendencies. However, this led to further appreciation of 'real' exchange rate, while the nominal rates were pegged. Most of the borrowings were in foreign currency and of short-term duration, while the investment was mostly in projects, with long gestation periods. This resulted in asset-liability mismatch. As a consequence of pegged exchange rate and other policies, the current account deficit reached unsustainable proportions. The initial optimism in the ability to restore the system gradually led to loss of confidence. As the crisis broke out, the central banks tried to defend the peg. However, the investors had very little incentive to remain and wanted to get out ahead of others in order to minimize their losses.

3.5 Banking Crises

As observed in section 3.2, there was a rapid increase in international bank lending to the Latin American countries in early 1990s and to the East Asian countries during mid 1990s up to 1996. This was due to various factors that have been analysed in Section 3.2. The direct investment flows to these countries was also high, since multinational companies (MNCs) looked upon this region as an 'integrated production hub' (World Bank, 1997). Sound macro economic policies and progressive financial and capital account de-regulation in the East Asian economies pulled capital flows into the region. The expansion in bank credit (deflated by consumer prices) to some of the selected countries may be seen from Table-9.

Table-9 : **Bank Credit Expansion and Indicators of the Banking Industry**

Country	Bank credit to the private. Sector			As a percentage of assets			
	Annual average rate of expansion		As a percentage of GDP	Operating costs		Net interest margin	
	1981-9	1990-7	1997	1990-4	1995-6	1990-4	1995-6
Taiwan	15	13	138	1.3	1.3	2.1	2.2
Indonesia	22	18	57	2.3	2.8	3.3	3.6
Korea	13	12	64	1.9	2.1	2.2	2.2
Malaysia	11	16	95	1.6 *	1.4	4.7 *	3.2
Philippines	- 5	18	52	4.0	3.5	5.3	4.8
Thailand	15	18	105	1.9	1.8	3.6	3.6
Argentina	- 2	4	18	11.0	6.3	13.1	7.2
Brazil	7	2	24	10.1	6.7	15.5	6.7
Mexico	- 2	7	14	4.0	3.0	5.4	4.4

* 1993-94.

Source: Computed from BIS 68th Annual Report.

The bank credit to GDP ratio rose substantially and even higher than observed in many other developed countries. As can be seen from Table-9, the annual rate of expansion of bank credit was 18-22% in Indonesia, 11-16% for Malaysia, 12-13% for Malaysia and 15-18% for Thailand during the period 1981-1997. This resulted in a fairly high bank credit to private sector/GDP ratio in 1997. Often this credit was higher than the GDP, as it happened in Indonesia and Thailand and close to GDP levels in Malaysia.

Lending by banks was stimulated by the asset prices boom, as it offered good collateral while prices were rising. The long-term projects were often being financed by short-term borrowings. Banks were not particular about diversifying their assets prudently which may have helped to maintain a stable banking system. Provision was not made for loans that were non-performing or were likely to be so in future.

It has been suggested that the banks exhibited lack of prudence while expanding credit rapidly during the 1990s (BIS 68th Annual Report). There was excessive investment in real estate. According to a study by the Institute of International Economics (1998), the share of bank lending to property sector ranged from 15-25% in South Korea, to 30-40% in Thailand and Malaysia at the end of 1997. The corporate investment focused on increasing market share with inadequate attention to generation of returns from the investment. The non-performance loans were quite substantial, as was evident from 'peak' non-performing loans to total loans and 'actual' non-performing loans to total loans ratio. According to the BIS, actual non-performing loans accounted for 7.7%, 8.8% and 3.9% of the total loans in Thailand, Indonesia and Malaysia respectively. According to estimates of the Jardine Fleming, the peak non-performing loans were 19.3%, 16.8% and 15.6% respectively in these countries.

In the process of liberalisation, there were certain developments in the banking industry, which largely explain the ensuing crisis. The banks undertook credit expansion at increasingly narrow interest margins, even though riskier business was being undertaken and they had not been restructured to cope with the new liberalised environment. The earlier sustained growth over a long period and rising asset prices led to under-estimation of risks of over-investing. The borrowers continued to borrow, even at high interest rates, to finance assets that were rapidly appreciating in value. The less efficient banks continued to remain afloat with implicit or explicit government guarantees. Herd mentality in bank operations encouraged large investments with the belief that the government would rescue them in case of any trouble. Such excessive lending had to do something with "moral hazard". As Jeffrey Sachs (1997) had pointed out:

"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 liberalised banks and near-banks often operate under highly distorted incentives. Under-capitalised banks 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 banks 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."

In such a scenario, once the foreign exchange crisis occurred and there was a large depreciation of foreign currency, the banks along with the companies were totally unprepared and got badly affected, thereby compounding the crisis. As the foreign banks attempted to reassess the risks associated in lending to these countries, borrowers had difficulty in renewing their credit or could arrange it only at a much higher interest rate. The secondary market spreads on international bonds, issued by major emerging market countries widened

sharply. The banks themselves became unviable with fall in asset value that aggravated the crisis situation.

3.6 The Contagion

The above sequence of events started in Thailand in 1997 in the East Asian countries and quickly spread to other countries and generated a wide-ranging contagion. Indonesia and South Korea were affected much more than Malaysia, Singapore and Taiwan. As far as Latin American countries are concerned, the contagion spread in mid 1990s from Mexico to Brazil and Argentina (although the time period was different).

The contagion has been variously explained and one is in terms of "wake-up call" hypothesis (Goldstein M, 1998). It is suggested that Thailand acted as a wake-up call for international investors to re-assess credit worthiness of borrowers in the South Asian countries. The investors realised that similar weaknesses existed in other countries also, in terms of weak financial sectors with inadequate supervision, lack of transparency in transactions, large external deficits, appreciating real effective exchange rates, declining investment efficiency etc. The process of re-examination of credit- ratings led to spread of the crisis, as there was breakdown of confidence in the system.

A symmetric information system also contributed to the crisis situation and its contagion. The accounting practices were not developed commensurate to the requirements of trade and industry. The supervision and monitoring of flow of funds to select industries was also inadequate. Hence, once the crisis situation arose in one set of industry and the related financing institutions in one country, there was panic and it spread to others rapidly. The other source for contagion, it is suggested, emanated from consecutive depreciation of currencies by one country after another, and deterioration in competitiveness of the country, which had not yet devalued. This resulted in speculation of currencies and disturbance in exchange rate equilibrium with successive devaluations.

4. Lessons for India

In the light of above analysis of the crises in East Asia and Latin America, several lessons have emerged for developing countries. The prescriptions, of course, could vary according to economic situation prevailing in individual countries. The developments in 1990s clearly bring out the vulnerability of the developing countries to a crisis in spite of relatively strong fundamentals in several of these economies. The crucial lesson that emerges from the various crises is that strong macro-economic fundamentals are no guarantee against the occurrence of a crisis and that there are other variables also need to be looked into. The lessons for India, in particular, emanate not only from the experience in East Asian and Latin America but her own crisis in 1990-91.

The Indian economy had experienced a major economic crisis in 1990-91. Though the immediate cause for the balance of payments crisis was attributed to the Gulf War and the consequent increase in the oil prices, there were several weaknesses in the system that were indicative of an impending crisis. The fiscal situation was under strain throughout the 1980s and this, along with expansionary monetary policy, resulted in inflationary pressures and, in general, questioned the very viability of the macro-economic situation. The gross fiscal deficit during the 1980s averaged 8.7% of GDP; current account deficit was in the range of 1.5 to 2% of GDP till 1987-88 and increased to around 3% during 1988-89 to 1990-91. The

increase in current account deficit was being met by increased foreign borrowings, thus resulting in external debt, which was not sustainable by the level of exports and GDP (details are in Annexure-10).

It was in this background that the developments in the external sector, which partly resulted from the Gulf War, hastened the onset of the crisis. These mainly took the form of decline in exports to Iraq and Kuwait apart from outflow of foreign currency non-resident deposits. There was an expectation of default due to a crisis of confidence in the government's ability to manage balance of payments. Such a situation led to down- grading of India's credit rating, thereby making it more difficult to borrow from abroad. The non-resident Indians (NRIs) also withdrew their savings leading to an increase in outflow of foreign exchange. The short-term debt to total debt, which was in the range of 3-4% in the 1970s, increased to over 10% in the period 1983-1990. In absolute terms, short-term debt had increased from US $ 1.27 billion in 1980-81 (accounting for 15% of total exports) to US $ 8.54 billion in 1990-91 (accounting for close to 47% of the total exports). At the same time, the import compression adversely affected the industrial growth and in turn led to decline in exports. Since a large part of imports comprised inputs for exports, any such reduction resulted in reduced exports.

However, corrective steps in terms of a devaluation in July 1991, change in fiscal and trade policy accompanied with macro-economic stabilisation programme and the IMF loan reinstated confidence. The external economic situation improved by February 1992. With concerted policy reforms, the economy bounced back and in fact, the industrial and agricultural growth, and particularly, exports improved considerably. In the five years following 1991-92 i.e. till 1996-97, the GDP had increased by 6.8% per annum and exports by 13.2% per annum.

The crises in East Asian countries in 1997, did affect the exports from India adversely, since exports to these countries comprise almost 20% of our total exports. However, the contagion, as such, did not have more than a limited effect on the Indian economy. This was primarily due to the fact that India's share in the world trade is very small, contributing a mere 0.6%. Secondly, the external debt stock ratio declined from 30.4% in 1991 to 24.7% in 1997. The short term to total debt was also curtailed from 10.2% to 5.4% in 1996, although it was 7.2% in 1997. Hence, there was limitation on sudden outflow of capital funds. Third, the stock market still being at a nascent stage, the scope to withdraw by foreign investors was limited. In fact, the withdrawal tends to result in a decrease in stock prices, which has a self-correcting impact on the actual outflow of foreign institutional investment.

In this context, there are several emerging issues that have relevance in trade and financial policies in India. Also, it is important to note that the Indian balance of payments crisis of 1991 provided useful lessons on various aspects of macro-economic management, some of which helped us to avoid the contagion effect of the 1997 Asian crisis. Nevertheless, some of the lessons critical for India are discussed here and include the following:

(a) Flexibility in exchange rate and capital mobility,
(b) External debt,
(c) Banking and Capital Market Regulatory System,
(d) Discipline and transparency in Fiscal, Monetary & Financial Policies,
(e) Corporate governance,

4.1 Flexibility in Exchange Rate and Capital Mobility

An important lesson that emerges from these crises is that it is not possible to simultaneously sustain pegged exchange rate and an independent monetary policy and free capital movement. The degree of flexibility of exchange rate regimes would depend upon the degree of openness in the economy to international trade, the degree of involvement with the internationals capital markets, the extent to which a country can follow an independent monetary policy, inflationary conditions prevailing in the country, the strength of financial sector of the economy, flexibility and sustainability of fiscal policy and the amount of foreign exchange reserves available in the economy. In most of the emerging economies, some sort of floating exchange regime appears to be increasingly the appropriate choice. Such an arrangement is likely to be more responsive to market forces in both directions. The Central Bank may limit exchange rate fluctuations through official intervention and adjustments in monetary policy, in case required. Some of these issues have been discussed in Section 3.4.

In a country like India, it is neither desirable nor feasible *not* to follow an independent monetary policy in view of the multiple objectives that the monetary authorities are required to fulfill. In such a situation, exchange rate stability can be achieved with controls on capital movements. Since the initiation of reforms in India in 1991, the policies relating to the foreign exchange have been quite flexible, with minimal interference from the Central Bank. The general exchange rate policy in India is to remain close to the real effective exchange rate (REER). While allowing free movement of the exchange rate, Reserve Bank of India (RBI) had been occasionally undertaking counter cyclical interventions to stabilise the market.

With liberalisation, the controls on trade and current account were phased out, while restrictions on capital mobility continue to prevail, though less stringent than before. Foreign investment inflows, including direct and portfolio investment, increased from US $ 103 million in 1990-91 to US $ 5099 million in 2000-01. This is a relatively more stable form of external inflows than the pro-cyclical and volatile foreign institutional investment flows, and in any case more than the short-term debt finance. Foreign exchange reserves increased from US $ 5.8 billion (including US $ 3.5 billion worth of gold) in 1990-91 to US $ 42.3 billion (including US $ 2.7 billion worth of gold) by March 2001. This implies that presently foreign exchange reserves are sufficient to meet over 10 months of imports. The sustainable level of CAD taking cognisance of foreign exchange reserves and months of import requirements indicates a rather comfortable situation, as of now. Short term debt financing has been restricted, as per the lesson learnt from the 1991 crisis. It thus gives scope to maintain a higher level of CAD in the development process. At the same time, greater emphasis has been on foreign direct investment inflows and somewhat less on free foreign portfolio investment. This has relevance in an economy where foreign exchange markets are very thin compared to the international financial markets and thus the relatively less foreign institutional inflows prevent excessive speculative movements, which lead to disruption in the domestic economy.

The Committee on Capital Account Convertibility (CCAC) set up by the Reserve Bank of India (RBI) had outlined the minimum conditions under which capital account convertibility can be reasonably considered. These are, first, a set of macro-economic targets, which include: (a) the fiscal position be brought under control so that the gross fiscal deficit of the Central Government is below 3.5 percent of GDP and a significant reduction in

the borrowing needs of States and public sector enterprises (PSEs) be achieved; (b) inflation be brought under control to the range of 3 to 5 percent; (c) external debt service ratio be reduced to 20 percent of current external receipts; (d) the level of minimum foreign exchange reserves be determined not merely on the norm of three months of imports but in addition, it is important that the availability and costs/prices of non-traded goods and services which are inputs into production and distribution, are in line with those prevailing internationally. Also, Indian exports have to be sufficiently robust so as to withstand periodic fluctuations in the exchange rate and in international prices.

In addition to the macro-economic pre-requisites, the CCAC recommended certain minimum conditions pertaining to the financial sector viz., (a) uniform and transparent regulatory framework for all financial institutions; (b) the non-performing assets of the banking sector to be brought below 5 percent of total credit outstanding; (c) cash reserve ratio (CRR) of banks to be reduced to 3 percent of net demand and time liabilities (NDTL); and (d) tighter prudential norms to be established than required by international practice. While the Indian economy does meet a few of the macro-economic pre-requisites, it is yet to meet many of the conditions concerning the financial sector, and until these conditions are met, there may be no point in adopting full capital account convertibility.

Here it is apt to conclude with what Jagdish Bhagwati (1998) stated regarding free capital mobility (FCM) *"The gains from FCM, measured at 'crisis-free' value, must in any event be set against the expected value of losses during a crisis. The latter obviously reflects the probability of a crisis setting in and the expected value of the losses during the crisis. We would have to reckon also with the fact that, as the latest Asian crisis demonstrates, the probability of being hit by a crisis (once you have FCM and hence the possibility of excessive short-term exposure and associated possibility of herd-behaviour-driven panics for instance) is not exactly 'low'."*

4.2 External Debt

As in the Asian and Latin American countries, India too had accumulated large external debt in the 1980s, culminating in the crisis of 1991. The total external debt in India increased from US $ 19.6 billion in 1980 to US $ 81.1 billion by 1990 (Global Development Finance, World Bank, 2000). There was rapid build up of debt while exports of goods and services increased at a much slower pace resulting in an increase in the total debt to exports ratio from 13% in 1980 to 32% by 1990. Short-term debt accounted for 6.2% of the debt in 1980 and 10.2% in 1990. Ratio of short-term debt to exports increased from 8.4% to 32.7% during this period. Apparently, external debt had reached unviable levels and this among other factors, led to the 1991 balance of payments crisis. This crisis was a lesson for the management of external sector, and more so on external debt

During 1991-92, external debt was curtailed, initially by severely compressing the imports and by implementing the economic stabilisation programme that included the adjustment of exchange rate, liberalisation of trade and other measures that aimed at reducing the current account deficit. Some specific measures to curtail external debt included continuation of a annual cap on debt with minimum maturity restrictions and prioritising the use of external commercial borrowings; market-based ceilings on interest rates as far as possible along with minimum maturity requirements on foreign currency denominated non-resident deposits; reduction in short-term debt; retiring/refinancing of more expensive

external debt; encouragement to foreign equity and institutional investment; incentives and schemes to promote exports; and conscious build up of foreign exchange reserves.

As a result of the steps mentioned above, the rate of growth of external debt declined from 15.3% in 1980-90 to 1.8% in the period 1991-2001. In particular, the short term to total debt ratio declined from 10.2% to 3.4%, the debt service to current receipts ratio declined from 35.3% to 16.3% and the debt to GDP ratio declined from 28.7% to 21.5% during 1991 to 2001 (details in Annexure-11). These features, which have made the external debt more manageable, have resulted in India being upgraded by the World Bank to a "less indebted country" category. It may be reiterated that these improvements were taking place not so much in the wake of Asian or Latin American crisis, but more so in response to her own crisis in 1990-91. As mentioned earlier, some of these policies also helped in insulating the Indian economy from the "contagion" effect of these crises.

In view of the greater financial requirements of the developmental goals and integration with the global financial system, in the years to come, there will be a need to further relax capital controls. This will call for appropriate regulatory mechanism including better surveillance, greater transparency, etc. to minimize vulnerability to speculative attacks.

4.3 Banking and Capital Market Regulatory System

The need for improvement in banking system and capital markets in India was recognised as a part of process of liberalisation and economic reforms that began in 1991. The requirement of external and internal balance and the various policy issues associated with it had been emphasised initially by James Meade during 1949-51 and subsequently elaborated by Robert Mundell in 1963. This had become all the more important, in view of the opening up the economy to institutional flow of external capital, which could increase the risk of financial crisis in the absence of a strong financial sector. The major focus of financial sector reforms had been on the banks, which account for about 80% of the intermediation in countries like India. It was felt that the reforms in financial sector were also required to be extended to the securities markets and the insurance sector. Reforms in the financial intermediaries were also required especially in areas like accounting systems, corporate governance and bankruptcy laws. Further, there was a need to upgrade existing regulatory and prudential standards.

The banking crisis in the East Asian economies and the impact it had on many other countries emphasised the need for sound banking system and effective regulation and supervision. The issues concerning prudential norms regarding capital adequacy have been discussed in the Basle Committee on Banking Supervision and Meltzer Commission (International Financial Institution Advisory Commission). The Basle Committee recommended a suitable legal framework for banking supervision, including provisions relating to authorisation of banking organisations and their ongoing supervision. The norms also address compliance with laws, along with safety and soundness concerns and legal protection for supervisors. The norms should reflect the risks that the banks undertake, and must define the components of capital, taking into account their ability to absorb losses. There is need for constant evaluation of the bank's practices and procedures relating to granting of loans and taking investment decisions. Further, the Committee suggests there should be a means of collecting, reviewing and analysing reports and statistical returns as well as independent validation of supervisory information, either through on-site

examinations or use of external auditors. Banking supervisors must practice global supervision over their internationally active banking organizations.

In order to prevent abuses arising from lending, the Committee suggests bank managers should have guidelines on prudential limits to restrict bank exposures to single borrowers or groups of related borrowers. At the same time, banks lending to related companies and individuals on an arm's-length basis should be effectively monitored and that other appropriate steps taken to control the risks involved.

Reforms in the banking sector in India were an integral part of overall reform programme and some steps were taken even before the East Asian crisis to improve prudential norms and to strengthen supervision. The process acquired a new urgency after the crisis in East Asia, when financial sector weaknesses were seen as one of the principal causes of crisis in emerging markets and there was a growing consensus that prudential norm and supervision standards should be raised to internationally accepted levels.

There has been a significant improvement in capital adequacy requirements and prudential norms in recent years. Banks are currently expected to maintain a minimum capital to risk assets ratio of 9% and this is to be increased to 10% by March 2002. The classification of non-performing assets and provisioning have also been tightened. However, since international norms are being implemented in a phased manner, Indian norms remain below the Basle Committee's minimum standards in some important respects. Loans are classified as sub-standard only when debt service payments become overdue for 180 days whereas the international norm is for 90 days. The extent of provisioning for different categories of assets is also below the international level. There is a need to align the norms accordingly.

A number of steps have also been taken to improve accounting standards and disclosure by the banks to strengthen supervision. Traditional on-site supervision is being supplemented by a system of offsite supervision based on a regular flow of information from the banks and this is expected to allow closer and more continuous monitoring of asset quality, capital adequacy, large exposures, connected lending etc. The minimum capital requirement needs to be related to credit risk of the banks i.e. linking capital adequacy to the ratings of assets in bank's books going by the internal ratings based approach recommended by the Basle Committee. The need to strengthen regulation by establishing a system for prompt corrective action has been further recognised.

In addition, there are certain actions required to be taken to improve the quality of supervision. Performance of banks, say, in terms of capital adequacy, would indicate most banks to be above the minimum level of capital to risk-weighted assets. Shifting to international norms, though desirable, has to be done gradually as a faster transition to such norms would push many banks below the accepted capital adequacy level. This could restrict their ability to expand credit and have a contractionary impact on economic activity. There is also a need to undertake institutional changes for improvement in the internal functioning of banks, including especially, improvements in the systems of credit evaluation and risk assessment. (Ahluwalia, 2000)

It has been felt by many that government ownership of financial institutions is inconsistent with sound banking. In the Indian scenario, government equities are in the process of being reduced to 33%. Reducing government equity to a minority position could

give the bank managements a degree of flexibility and autonomy that is likely to improve the functioning of banks. Excessive investments in risk-free government securities and priority sector, often at rates higher than statutory liquidity ratio (SLR), tend to result in crowding-out bank credit to the private sector. Other problems include giving loans at subsidised rates, higher administrative cost, and high risk of default. Adherence to sound banking system would involve reduction/removal of such stipulations.

In order to achieve greater efficiency in the banks, there is a need to encourage greater competition. Transfer of banking licenses to new Indian private sector banks and also foreign banks will help in this respect. This will put pressure on the public sector banks to improve their performance. Stronger public sector banks can achieve much higher levels of efficiency if they are given operational flexibility. Indian banks are also greatly hampered by legal procedures, which make it difficult to attach collateral (especially real estate) and realise its sale value. The procedures regarding bankruptcy are also extremely cumbersome and liquidation of insolvent companies can take several years. This is one of the major reasons for the relatively high level of non-performing assets in the banking system. The government has announced its intention to amend the existing legislation to address some of these problems.

Further, the strategy to improve the financial system could include setting up appropriate institutional frameworks, removing non-viable institutions from the system, strengthening the viable ones, dealing with value-impaired assets, improving prudential regulations and banking supervision, and promoting transparency in financial market operations. Strengthening viable institutions could involve asset valuations, loss recognition, and recapitalisation (Lindgren, et.al, 1999). In India, there is need for prompt recapitalisation of banks and restructuring of corporate debt. The Basle Core Principles need to be applied appropriately. Market discipline and corporate governance are essential for sound banking. Surveillance, assessment of vulnerabilities in financial and corporate sectors, while ensuring transparency of information and regulation would help to contain any form of crises (Das, 2000).

Moreover, it is important that investible resources are made available by banks in the form of equity, long-term, medium and short-term debt, depending on the sector in which the investment is proposed to be made. It is possible that there is a mismatch of perceptions, which could result in simultaneous excess demand and excess supply in different segments of the financial market.

Institutional improvements in the Indian capital markets are needed to ensure that excessive over-pricing of primary issues does not occur on a regular basis. The principal tasks to be performed by SEBI are to ensure investor protection through transparency in the capital markets and full disclosure by the promoters and to prevent market manipulation. In order to bring greater discipline into the primary issues, conditions for recognition of lead merchant bankers and supervision needs to be made more stringent. SEBI should have appropriate institutional arrangements, which would ensure expeditious and rigorous implementation of enhanced penal provisions. The Mutual funds industry should play the intermediary role for small investors but these have started focussing excessively on the secondary market and in debt instruments. Greater investment in primary issues needs to be emphasised for the healthy growth of the industry.

It is some of these issues that need to be underlined to ensure an efficient and integrated financial market, which is not subject to asymmetric information and speculative behaviour and moral hazard.

4.4 Discipline and Transparency in Fiscal, Monetary and Financial Policies

Good governance is of central importance for achieving macroeconomic stability and high-quality growth, and that monetary, financial and fiscal transparency is a key aspect of good governance. It is essential to convey right signals that enhance confidence of investors, both domestic and foreign.

In India, the rapid expansion in fiscal deficit since the early 1980s is a matter of concern. The gross fiscal deficit (GFD) of the Centre and States combined increased from Rs.12012 crore in 1980-81 to Rs.20636 crore in 1999-2000. The ratio of GFD to GDP (at market prices) was 8.3% in 1980-81 and increased to 11.2% in 1990-91. It declined marginally to 10.4% of the GDP by 1999-2000 (details in Annexure-12). Such high fiscal deficit can prove to be unsustainable and even lead to a crisis situation.

The fiscal problem in Central and more so in the States is attributed to the increasing subsidies on publicly supplied goods and services, inter-state competition in attracting investment through tax incentives and expenditure on administration. Although socially important activities do need to be encouraged but greater emphasis on 'targetted' subsidies is essential. This would facilitate suitable provisioning and pricing of infrastructure and essential services. The taxation system is being further rationalised by shifting to the VAT system instead of the prevalent input based system.

Fiscal transparency implies, being open to the public about the structure and functions of government, fiscal policy intentions, public sector accounts, and fiscal projections. Fiscal transparency strengthens accountability. It can help enhance credibility, the benefits of which could be reflected in lower borrowing costs and stronger support for sound macroeconomic policies by a well-informed public. In contrast, nontransparent fiscal management can be destabilising, create inefficiency, and foster inequity. The potential for a fiscal crisis in one country to spill over to others underscores the value of efforts to anticipate and prevent these events.

Many of these issues have been recognised in India and a reasonable standard of fiscal transparency has been achieved in the budget making process and availability of fiscal information. Further, the Fiscal Responsibility and Budget Management Bill has been introduced in December, 2000. This Bill provides for the Central Government to take suitable measures to ensure greater transparency in fiscal operations and minimize secrecy in the preparation of the annual budget.

The Code of Good Practices on Transparency in Monetary & Financial Policies issued by the IMF, 1999 has indicated the desirable transparency practices for central banks and other financial agencies in their conduct of financial policies. Monetary and financial policies can be made more effective if the public knows the goals and instruments of policy and if the authorities make a credible commitment to meeting them.

Transparency in monetary and financial policies refers to an environment in which the objectives of the policy, its legal, institutional and economic framework; policy decisions and

their rationale, including data and information related to monetary and financial policies and the terms of accountability of different agencies, are provided to the public on an understandable, accessible and timely basis. There is a need to (a) have clarity of roles, responsibilities and objectives of central banks and financial agencies; (b) ensure public availability of information on monetary and financial policies; and (c) accountability and assurances of integrity by the central bank and financial agencies.

The RBI has initiated a number of steps in this regard by strengthening prudential norms, assets quality, supervisory mechanisms along with greater transparency in there operations. A revised reporting system has been introduced for collecting and reporting data on risk analysis of investments of all Indian and foreign operations of the banks. The aim is to make the banking system sound, comparable to international standards.

4.5 Corporate Governance

Corporate governance is concerned with giving overall direction to the enterprise, with overseeing and controlling executive actions of management and with satisfying legitimate expectations of accountability and regulation of interests beyond the corporate boundaries (Banaji & Mody, 2001). The OECD (1999) had drawn up a set of Principles of Corporate Governance, which aimed at improving its legal, institutional and regulatory framework. Basic rights included secure ownership and registration, transfer shares, obtains relevant information, share in residual profits, participate in general shareholder meetings and transparent transfers of control. Insider trading and abusive self-dealing are to be prohibited. The Principles recognise rights of stakeholders that are established by law. Transparency aspects called for timely and accurate disclosure on all material regarding the company, including its financial situation.

It was suggested that high quality standards of accounting, disclosure, and audit should be followed as per internationally recognised accounting and audit standards. Channels for disseminating information should provide for fair, timely, and cost-efficient access information by users. Effective monitoring of management by the board and board's accountability to the company and the shareholders was underlined. Members should act on a fully informed basis, in good faith and in the best interests of the company and shareholders. In addition, formulating strategy, managing potential conflicts of interest, ensuring compliance with the law and assuring the integrity of the company's accounting, reporting and communications should be taken cognisance of.

The rules that govern the Indian manufacturing industry changed rapidly with launching of the economic reforms in the early 1990s. As part of these reforms, the recommendations of the Narasimhan Committee brought about changes in the financial market and an independent regulator replaced the administrative machinery that directed the capital market.

In February 2000 the Securities & Exchange Board of India had issued guidelines regarding Corporate Governance. The salient features are as follows:

- In future at least one-third of the board should consist of independent directors.
- Companies shall have a 'qualified and independent' audit committee with a majority of independent directors.

- The Annual Report shall disclose details of the remuneration of directors.
- The Annual Report should contain a Management Discussion and Analysis 'as part of the director's report or as an addition there to'.
- Annual Reports shall contain a separate section on Corporate Governance detailing compliance with the mandatory and non-mandatory requirements proposed by SEBI.

The guidelines reflect the need to revamp the system of governance around stronger, more professional boards, and to upgrade and internationalise the standards of disclosure and financial reporting. In this connection, it is important that some of the variously proposed suggestions are not lost sight of. These include (a) the selection of boards through nomination committees consisting chiefly of independent directors should be made more broad-based; (b) making compliance with international accounting standards mandatory; (c) proposing the setting up of a panel of professional and independent outside directors who would be willing to act as nominees of the financial institutions, and (d) discontinuing the practice of issuing preferential shares to the stock-holders.

5. Leading Indicators for Predicting/Avoiding Twin Crises

An important lesson from the crises during the 1990s is the necessity to closely monitor several indicators that could exhibit unusual behaviour in the period preceding a crisis situation. Monitoring of these indicators would help to identify ways to prevent crisis or initiate suitable corrective measures in the event of a crisis. There have been many studies including those by Kaminsky, Lizondo & Reinhart (1998), Kaminsky & Reinhart (1999), Demirguc–Kunt & Detragiache (1998), amongst many others who have proposed 'early warning system'. Some of the indicators that need to be monitored on a regular basis in India are as follows.

External :

Capital account

(1) stock of international reserves,
(2) reserves/imports,

(3) central bank foreign assets/base money,
(4) net foreign assets/M1
(5) capital flows in the form of short term borrowing,
(6) short term capital flows/GDP,
(7) FDI/debt,
(8) capital account balance/GDP,
(9) domestic-foreign interest rate differential.

Debt profile

(1) foreign aid,
(2) external debt/GDP,
(3) share of commercial bank loans,
(4) share of concessional loans,

(5) share of short term debt,
(6) share of multilateral development bank loans,
(7) debt service/GDP.

Current account

(1) level of the real exchange rate,
(2) variations in of the real exchange rate,
(3) trade balance/GDP,
(4) current account/GDP,
(5) exports/GDP,
(6) exports/imports,
(7) change in exports,
(8) change in imports,
(9) saving/GDP,
(10) investment/GDP,
(11) change in the terms of trade,
(12) change in export prices,
(13) exchange rate expectations.

International

(1) World real GDP growth,
(2) international interest rates,
(3) foreign price level.

Financial :

Financial liberalisation

(1) real interest rates,
(2) credit growth,
(3) credit/GDP,
(4) lending-deposit interest rate spread,
(5) trends of money multiplier.

Other financial

(1) central bank credit to the banking system,
(2) changes in M 1,
(3) change in bank deposits,
(4) bond yields,
(5) inflation,
(6) M2/ international reserves.

Real sector :

(1) real GDP growth,
(2) per capita growth,

(3) output level,
(4) wage growth,
(5) unemployment growth,
(6) changes in stock prices.
(7) efficiency of investment (ICOR).

Fiscal :

(1) fiscal deficit/GDP,
(2) government consumption/GDP,
(3) domestic credit to public sector/total credit.

Institutional/structural :

(1) movements in cross currency exchange rates,
(2) exchange controls – domestic & international,
(3) relative GDP per capita,
(4) occurrence of foreign banking crisis,
(5) openness,
(6) trade concentration,

Political :

(1) change in government,
(2) legal executive transfers,
(3) degree of political instability.

Contagion :

(1) financial crisis in other countries,
(2) currency crisis in other countries,
(3) changes in trade patterns in major trading partners.

It is important that indicators that point towards potential crisis need to be judged carefully. There may be various options to examine the probability of the occurrence of crisis situation. This could be done by developing a formal model, which may be difficult due to complexities in the economy and enormous data requirements. Alternatively, this could be based on a priori assessment of vulnerability of crisis that could imply working with fewer variables. With liberalisation and changes in policy regimes, the relative importance of the indicators that need to be monitored could undergo a change. There is need to provide enough flexibility in identifying and monitoring these indicators.

6. Concluding Remarks

The upshot from the analysis is that strong macro-economic fundamentals cannot be sufficient guarantee to avert a crisis situation. Existence of multiple equilibria, asymmetric information system coupled with weaknesses in financial sector can lead to currency and financial crises. This can have trans-boundary implications with breakdown of confidence.

India faced a currency crisis in 1990-91. Several policy measures were initiated as part of the reforms package. This, along with the fact that India is a small player in the global market, and also had lower short term external debt helped to avert the crisis in the latter half of the 1990s. However, there is no scope for complacency as there are a number of weaknesses in the macro-economic fundamentals viz., persistently high fiscal deficit, low savings rates and also low investment efficiency vis-à-vis some of the emerging economies. Moreover, the financial and capital markets are still not sufficiently well developed, with weak regulatory mechanism. This was reflected in the recent problems faced by certain financial institutions like UTI, IFCI, etc., and the investors. An appropriate mix of monetary, fiscal and exchange rate policies is emphasized in view of greater openness of the economy. It is essential that there is close monitoring of a number of indicators on a regular basis and to develop a system of advance warning signals. This would help in confidence building to minimize damage, if not avert the very occurrence of a crisis.

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Annexure - 1

EXPORTS

(US $ billion)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Argentina	8.0	9.1	7.6	7.8	8.1	8.4	6.9	6.4	9.1	9.6	12.4	12.0	12.2	13.1	15.7	21.0	23.8	26.4	26.4	23.3	26.3
Brazil	20.1	23.3	20.2	21.9	27.0	25.6	22.3	26.2	33.5	34.4	31.4	31.6	35.8	38.6	43.5	46.5	47.7	53.0	51.1	48.0	55.1
India	8.6	8.3	9.4	9.1	9.9	9.1	9.4	11.3	13.3	15.8	18.0	17.7	19.6	21.6	25.0	30.6	33.1	35.0	33.4	35.7	42.1
Indonesia	21.9	25.2	22.3	21.1	21.9	18.6	14.8	17.1	19.2	22.2	25.7	29.1	34.0	36.8	40.1	45.4	49.8	53.4	48.8	48.7	62.1
Malaysia	13.0	11.8	12.0	14.1	16.6	15.4	13.8	17.9	21.1	25.1	29.4	34.3	40.8	47.1	58.8	73.9	78.3	78.7	73.3	84.5	98.1
Mexico	15.6	19.6	21.2	21.8	24.4	22.1	16.3	20.9	20.8	23.0	27.1	42.7	46.2	51.9	60.9	79.5	96.0	110.4	117.5	136.4	-
Republic of Korea	17.5	21.3	21.9	24.4	29.2	30.3	34.7	47.3	60.7	62.4	65.0	71.9	76.6	82.2	96.0	125.1	129.7	136.2	132.3	143.7	172.3
Thailand	6.5	7.0	6.9	6.4	7.4	7.1	8.9	11.7	16.0	20.1	23.1	28.4	32.5	37.0	45.3	56.4	55.7	57.4	54.5	58.4	69.1
Turkey	2.9	4.7	5.7	5.7	7.1	8.0	7.5	10.2	11.7	11.6	13.0	13.6	14.7	15.3	18.1	21.6	23.2	26.3	27.0	26.6	26.6
Russia												-	42.0	44.3	67.5	81.8	88.6	88.3	74.9	74.7	104.8

Source : International Financial Statistics Yearbook, Various Issues.

Annexure - 2

IMPORTS

(US $ billion)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Argentina	10.5	9.4	5.3	4.5	4.6	3.8	4.7	5.8	5..322	4.2	4.1	8.3	14.9	16.8	21.5	20.1	23.8	30.5	31.4	25.5	25.1
Brazil	25.0	24.1	21.1	16.8	15.2	14.3	15.6	16.6	16.1	19.9	22.5	23.0	23.1	27.7	36.0	53.8	56.9	65.0	60.6	51.7	58.5
India	14.9	15.4	14.8	14.1	15.3	15.9	15.4	16.7	19.1	20.5	23.6	20.4	23.6	22.8	26.8	34.7	37.9	41.4	43.0	47.0	51.6
Indonesia	10.8	13.3	16.9	16.4	13.9	10.3	10.7	12.4	13.2	16.4	21.8	25.9	27.3	28.3	32.0	40.6	42.9	41.7	27.3	24.0	33.5
Malaysia	10.8	11.6	12.4	13.2	14.1	12.3	10.8	12.7	16.6	22.5	29.3	36.6	39.9	45.7	59.6	77.7	78.4	79.0	58.3	65.0	82.2
Mexico	20.4	25.3	16.0	8.4	12.4	14.8	12.6	13.4	20.6	25.7	31.5	52.3	65.0	68.4	83.1	75.9	93.7	114.8	130.9	148.6	-
Republic of Korea	22.3	26.1	24.3	26.2	30.6	31.1	31.6	41.0	51.8	61.5	69.8	81.5	81.8	83.8	102.3	135.1	150.3	144.6	93.3	119.8	160.5
Thailand	9.2	10.0	8.5	10.3	10.4	9.2	9.2	13.0	20.3	25.8	33.4	37.6	40.7	46.1	54.5	70.8	72.3	62.9	43.0	50.3	61.9
Turkey	7.9	8.9	8.8	9.2	10.8	11.3	11.1	14.2	14.3	15.8	22.3	21.0	22.9	29.4	23.3	35.7	43.6	488.6	45.9	440.7	53.5
Russia												-	37.0	32.8	55.5	68.9	74.9	79.1	63.8	43.6	49.1

Source : International Financial Statistics Yearbook, Various Issues.

Annexure - 3

Foreign Exchange Reserves

(SDR million)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Argentina	5421	2961	2425	1273	1421	3133	2375	1293	2652	1267	3376	4342	7418	10193	9967	9765	12743	16555	17592	19139	19301
Brazil	4589	5750	3566	4179	11792	9763	4829	4525	5276	5838	5390	5687	16457	22383	25523	33600	40689	37776	30401	25463	25001
India	5745	4333	4213	5017	6266	6174	5594	4915	4006	3302	1443	2930	4584	7826	13907	12504	14474	18744	19820	24203	29493
Indonesia	4311	4416	2959	3660	4978	4637	3421	4051	3860	4259	5352	6581	7708	8308	8419	9330	12801	12402	16240	19376	17414
Malaysia	3521	3602	3497	3696	3880	4554	5009	5323	4932	6005	6938	7692	12613	19922	17498	16077	18867	15489	18235	22328	22700
Mexico	2393	3579	828	3818	7504	4549	4725	8875	4012	4852	6965	12424	13800	18298	4316	11351	13523	21350	22592	23162	27262
Republic of Korea	2304	2315	2556	2252	2820	2623	2725	2537	9186	11588	10409	9590	12463	14738	17574	21995	23682	15107	36928	53922	73797
Thailand	1310	1575	1481	1622	2046	2081	2380	2911	4617	7327	9439	12333	14893	17904	20179	24293	26326	19490	20559	24905	24655
Turkey	976	929	1111	1362	1429	1096	1288	1386	1876	3770	4396	3742	4621	4707	5045	8501	11561	13960	13972	17141	17391
Russia	-	-	-	-	-	-	-	-	-	-	-	-	-	4605	3021	10005	8314	10127	6056	6628	19056

Source : International Financial Statistics Yearbook, Various Issues.

Annexure - 4

Current Account Balance

(US $ million)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Argentina	-4774	-4712	-2353	-2436	-2495	-952	-2859	-4235	-1572	-1305	4552	-647	-5521	-8030	-10992	-4985	-6521	-11954	-14274	-12152	-8903
Brazil	-12831	-11764	-16317	-6834	33	-280	-5311	-1452	4156	1002	-3823	-1450	6089	20	-1153	-18136	-23248	-30491	-33829	-	-24632
India	-1785	-2698	-2524	-1953	-2343	-4177	-4598	-5192	-7172	-6826	-7037	-4292	-4485	-1876	-1676	-5563	-5956	-2965	-6903	-2784	-4198
Indonesia	..	-566	-5324	-6338	-1856	-1923	-3911	-2098	-1397	-1108	-2988	-4260	-2780	-2106	-2792	-6431	-7663	-4889	4096	5785	-
Malaysia	-266	-2469	-3585	-3482	-1657	-600	-101	2575	1867	315	-870	-4183	-2167	-2991	-4520	-8469	-4596	-4792	-	-	-
Mexico	-10422	-16240	-5889	5866	4183	800	-1377	4247	-2374	-5825	-7451	-14888	-24442	-23400	-29662	-1576	-2328	-7454	-15725	-14016	-17768
Republic of Korea	-5273	-4574	-2513	-1504	-1249	-758	4747	10092	14538	5387	-1745	-8317	-3944	990	-3867	-8507	-23006	-8167	40558	-	-
Thailand	-2076	-2571	-1003	-2873	-2109	-1537	247	-366	-1654	-2498	-7281	-7571	-6303	-6364	-8085	-13554	-14691	-3024	14048	11050	9195
Turkey	-3408	-1936	-952	-1923	-1439	-1013	-1465	-806	1596	938	-2625	250	-974	-6433	2631	-2338	-2437	-2679	1871	-	-9765
Russia															8848	8026	12450	2548	1034	24995	46317

Source : International Financial Statistics Yearbook, Various Issues.

Annexure - 5

Balance of Payment

(US $ million)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Argentina	-2777	-3562	-4726	-5274	-2293	-846	-2147	-4247	-1368	-9637	-617	-806	1883	11125	-709	-2215	3338	3374	4118	1945	-1176
Brazil	-3469	622	-7541	-11251	-5065	-9479	-13427	-12009	-5805	-11220	-9525	-5424	10639	6890	6598	12969	8396	-8251	-16302	-	7980
India	-1663	-2178	-1698	-752	1070	-397	-409	133	-16	237	-1941	-235	1072	4211	10391	-733	3958	5321	3071	6664	6087
Indonesia	..	-374	-1853	183	981	510	-1003	630	-113	495	2251	1528	2070	594	784	1573	4503	-8137	-3693	1973	-
Malaysia	464	-452	-264	-13	492	1148	1461	1139	-458	1235	1951	1236	6618	11350	-3160	-1767	2516	-3859	-	-	-
Mexico	817	1274	-10420	-525	2149	-2729	-481	4134	-10062	-211	2218	7973	1745	7232	-17199	-16312	3863	13997	3193	4278	7150
Republic of Korea	311	-329	5	-236	560	192	77	2104	9316	3120	-1208	-1147	3724	3009	4614	7039	1416	-22979	25930	-	-
Thailand	-206	42	-231	-320	529	105	714	945	2596	5029	3235	4618	3029	3907	4169	7159	2167	-18250	-3222	1266	-1806
Turkey	-1328	-387	-748	-632	-1477	-784	540	580	1153	2710	943	-1199	1484	308	203	4660	4544	3343	441	-	-2934
Russia												-	-	-	-18969	-8298	-17190	-6555	-21323	-1813	13923

Source : International Financial Statistics Yearbook, Various Issues.

Annexure - 6

Investment to GDP

(Percent)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Argentina	25.3	22.7	21.8	20.9	20.0	17.6	17.5	19.6	18.6	15.5	14.0	14.6	16.7	19.6	19.9	18.6	19.6	20.8	20.9	18.3	17.6
Brazil	23.2	23.2	21.5	17.2	15.3	21.3	19.1	22.2	22.7	28.6	21.8	19.8	18.9	20.8	22.1	22.3	20.9	21.5	21.2	20.4	-
India	20.9	25.0	22.9	21.1	21.2	24.2	23.2	22.5	24.4	24.1	25.2	21.4	22.7	21.3	23.5	26.5	21.9	23.4	21.2	22.7	-
Indonesia	20.9	29.8	27.9	28.7	26.2	28.0	28.3	31.4	31.5	35.2	36.1	35.5	35.8	29.5	31.1	31.9	30.7	31.8	16.8	12.2	17.9
Malaysia	30.4	35.0	37.3	37.8	33.6	27.6	26.0	23.2	26.0	28.6	31.3	37.8	35.4	39.2	41.2	43.6	41.5	42.9	26.7	22.4	27.0
Mexico	29.6	27.5	22.7	20.8	19.7	20.8	18.1	19.2	21.1	22.2	22.8	23.3	23.3	21.0	21.7	19.8	23.1	25.9	24.4	23.6	23.3
Republic of Korea	31.7	29.5	28.6	29.0	30.1	29.6	28.7	29.8	31.1	33.6	36.9	39.9	37.3	35.5	36.5	37.2	37.9	34.2	21.2	26.7	28.7
Thailand	29.1	29.7	26.5	30.0	29.5	28.2	25.9	27.9	32.6	35.1	41.1	42.8	40.0	39.9	40.2	41.8	41.6	33.3	20.3	19.9	22.7
Turkey	..	..	..	..	..	..	..	25.8	25.8	24.2	24.6	22.4	23.7	26.5	21.5	25.5	24.6	25.1	23.6	21.8	23.6
Russia												-	34.6	27.0	25.5	25.4	24.6	22.8	15.7	15.5	17.6

Source : International Financial Statistics Yearbook, Various Issues.

Annexure-7

Composition of Balance of Payments of Selected Countries

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Argentina																				
Curr.AC	-4774	-4712	-2353	-2436	-2495	-952	-2859	-4235	-1572	-1305	4552	-647	-5521	-8030	-10992	-4985	-6521	-11954	-14274	-12152
K A/c	2305	1355	-1972	-2391	257	638	410	100	369	-8083	-5884	182	7350	20328	1115	4623	11175	16826	17818	15146
Net DI	568	730	197	187	268	919	574	-19	1147	1028	1836	2439	5550	3467	4503	6812	8122	12411	8692	24347
Net Port. I	-154	-1125	-299	-649	-372	617	542	572	718	1098	864	-16488	-1289	-36841	-11359	-7686	-14693	-13727	-12691	2664
Net Other I	-2243	-2496	1424	2475	-99	-284	-950	-483	1818	7215	7696	3075	-1227	6146	-6627	-15405	-7128	-14902	-4699	-4233
E&Omm.	-308	-205	-401	-447	-55	-532	302	-112	-165	-249	715	-341	54	-1173	-872	-1853	-1316	-1498	574	-1049
Overall Bal.	-2777	-3562	-4726	-5274	-2293	-846	-2147	-4247	-1368	-9637	-617	-806	1883	11125	-709	-2215	3338	3374	4118	1945
Brazil																				
Curr.AC	-12831	-11764	-16317	-6834	33	-280	-5311	-1452	4156	1002	-3823	-1450	6089	20	-1153	-18136	-23248	-30491	-33829	
K A/c	9677	12791	9146	-3828	-5506	-8676	-8189	-9757	-9137	-11426	-5441	-4868	5889	7604	8020	29306	33142	24918	20063	
Net DI	2278	2727	3286	1796	1636	1522	488	1307	2979	1654	1654	2117	2198	1783	4109	6243	10733	20692	34634	
Net Port. I	-354	-4	-5	270	264	231	452	428	498	361	-646	-3808	-7366	-13534	-50836	-11107	-21346	-10728	-19607	
Net Other I	-8589	-13274	-7719	5660	136	10179	10711	9558	7280	9825	549	2485	3203	127	30011	-20162	-7297	8250	15564	
E&Omm.	-340	-418	-375	-586	399	-530	66	-805	-827	-819	-296	852	-1393	-815	-442	1447	-1992	-3160	-2911	
Overall Bal.	-3469	622	-7541	-11251	-5065	-9479	-13427	-12009	-5805	-11220	-9525	-5424	10639	6890	6598	12969	8396	-8251	-16302	
Mexico																				
Curr.AC	-10422	-16240	-5889	5866	4183	800	-1377	4247	-2374	-5825	-7451	-14888	-24442	-23400	-29662	-1576	-2328	-7454	-15725	-14016
K A/c	11508	26601	2923	-3275	81	-612	1634	-3067	-4495	1110	8441	25139	27039	33760	15787	-10487	6132	19253	18540	17826
Net DI	2090	3078	1901	2192	1542	1984	2036	1184	2011	2785	2549	4742	4393	4389	10973	9526	9186	12831	11312	11567
Net Port. I	-77	-831	-370	385	115	206	-192	605	-1881	-410	-10723	-13344	-16876	-29483	-8949	9053	-12873	-5746	-190	-11627
Net Other I	-11833	-31212	-2304	-2288	-2454	-366	924	-5950	4879	-255	-12567	-9049	5334	-7092	-7205	-3752	3245	12758	-6172	88
E&Omm.	-269	-9087	-7454	-3116	-2115	-2917	-738	2954	-3193	4504	1228	-2278	-852	-3128	-3323	-4248	58	2198	378	468
Overall Bal.	817	1274	-10420	-525	2149	-2729	-481	4134	-10062	-211	2218	7973	1745	7232	-17199	-16312	3863	13997	3193	4278

Annexure-7 Cont'd

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Indonesia																				
Curr.AC		-566	-5324	-6338	-1856	-1923	-3911	-2098	-1397	-1108	-2988	-4260	-2780	-2106	-2792	-6431	-7663	-4889	4096	
K A/c		1861	5622	6054	3457	1782	4177	3481	2217	2918	4495	5697	6129	5632	3839	10259	10847	-603	-9638	
Net DI		133	225	292	222	310	258	385	576	682	1093	1482	1777	2360	2718	4949	6794	4855	-312	
Net Port. I		-47	-315	-368	10	35	-268	88	98	173	93	12	88	-1805	-3877	-4100	-5005	2632	1878	
Net Other I		-1681	-5082	-5394	-3245	-1507	-3651	-3184	-1739	-2409	-3495	-4227	-4440	-2179	1538	-2416	-248	2470	7360	
E&Omm.		-1669	-2151	467	-620	651	-1269	-753	-933	-1315	744	91	-1279	-2932	-263	-2255	1319	-2645	1849	
Overall Bal.		-374	-1853	183	981	510	-1003	630	-113	495	2251	1528	2070	594	784	1573	4503	-8137	-3693	
Malaysia																				
Curr.AC	-266	-2469	-3585	-3482	-1657	-600	-101	2575	1867	315	-870	-413	-2167	-2991	-4520	-8469	-4596	-4792		
K A/c	1431	2616	3743	3855	3026	1929	1108	-1517	-2001	1335	1784	5629	8746	10805	1288	7639	9479	2742		
Net DI	934	1265	1397	1261	797	695	489	423	719	1668	2332	3998	5183	5006	4342	4178	5078	5106		
Net Port. I	11	-1131	-601	-668	-1108	-1942	-30	-140	448	107	255	-170	1122	709	1649	436	268	248		
Net Other I	-710	-772	-2017	-4869	-597	1017	-473	1022	106	290	-116	461	-1681	-8375	2413	-5462	-4545	137		
E&Omm.	-682	-582	-406	-371	-863	-168	476	114	-267	-358	1085	-151	79	3624	154	-762	-2116	-1571		
Overall Bal.	464	-452	-264	-13	492	1148	1461	1139	-458	1235	1951	1236	6618	11350	-3160	-1767	2516	-3859		
Korea																				
Curr.AC	-5312	-4607	-2551	-1524	-1293	-795	4709	10058	14505	5361	-2003	-8317	-3944	990	-3867	-8507	-23006	-8167	40558	
K A/c	5925	4720	3950	2311	2822	1960	-3994	-8937	-4222	-2568	2895	6741	6994	3217	10733	17273	23924	-9195	-8438	
Net DI	32	150	220	199	162	825	1687	1131	1657	1716	1840	2669	1890	1929	3271	5328	6997	7293	10214	

Net Port. I	-134	-24	15	-546	-836	-1737	333	297	134	-707	-1162	-2708	-5799	-12074	-11194	-17526	-27927	-12232	-2774	
Net Other I	-6798	-4679	-5634	-2921	-1336	-2797	1531	8517	587	451	-7925	-10007	-8223	-3137	-21001	-35441	-38058	-5251	20561	
E&Omm.	-433	-328	-1292	-831	-1062	-862	-585	1187	-603	1164	-1769	758	1080	-722	-1816	-1240	1095	-5010	-6361	
Overall Bal.	184	-250	10	-124	385	211	34	2100	9327	3639	-1208	-1147	3724	3009	4614	7039	1416	-22979	25930	
Thailand																				
Curr.AC	-2076	-2571	-1003	-2873	-2109	-1537	247	-366	-1564	-2498	-7281	-7571	-6303	-6364	-8085	-13554	-14691	-3024	14048	11050
K A/c	2044	2479	1293	1966	2567	1538	-131	1062	3839	6599	9098	11759	9475	10500	12167	21909	19486	-16877	-14454	-9360
Net DI	193	293	193	351	402	164	264	522	1129	225	2584	2181	2260	2037	1859	2954	3267	4136	7071	6092
Net Port. I	-96	-44	-68	-108	-155	-895	29	-346	-530	-1486	38	81	-924	-5455	-2491	-4085	-3626	-5244	-360	-655
Net Other I	-1803	-2230	-1204	-1726	-2170	-964	63	-252	-1691	-4013	-7160	-9290	-6375	-10004	-10866	-22121	-9215	19777	13575	12602
E&Omm.	-180	133	-521	587	71	103	598	248	411	928	1419	431	-142	-230	87	-1196	-2627	1651	-2815	-423
Overall Bal.	-206	42	-231	-320	529	105	714	945	2596	5029	3235	4618	3029	3907	4169	7159	2167	-18250	-3222	1266
India																				
Curr.AC	-1785	-2698	-2524	-1953	-2343	-4177	-4598	-5192	-7172	-6826	-7037	-4292	-4485	-1876	-1676	-5563	-5956	-2965	-6903	-2784
K A/c	483	845	456	2051	3044	3281	3992	5734	7175	7212	5528	3450	4075	7074	10576	3861	11848	9635	8584	9154
Net DI	0	0	0	0	0	0	0	0	0	0	0	74	277	550	1056	2261	2665	3690	2683	2248
Net Port. I	0	0	0	0	0	0	0	0	0	0	0	-5	-84	-1369	-5491	-1590	-3958	-2556	601	-2317
Net Other I	-1120	-940	-1838	-969	-3552	-3175	-4492	-5484	-6623	-6985	-6750	-4988	-1658	-1495	-1854	-2602	-15123	-13100	-13076	-7658
E&Omm.	-361	-325	369	-850	368	500	197	-409	-18	-150	-432	607	1482	-987	1492	970	-1934	-1348	1390	293
Overall Bal.	-1663	-2178	-1698	-752	1070	-397	-409	133	-16	237	-1941	-235	1072	4211	10391	-733	3958	5321	3071	6664

Source : International Financial Statistics Yearbook, Various Issues

Annexure 8

Total External Debt (Long Term and Short Term)

(US $ million)

Year	Indonesia	Korea, Rep	Malaysia	Thailand	Argentina	Brazil	Mexico
1990	69378	46976	15328	28164	59150	118056	97879
1991	79382	53641	17080	37772	62920	119686	107293
1992	88002	57466	20018	41864	66031	127942	106310
1993	89172	47202	26149	52717	64718	143836	131726
1994	107824	72414	30336	65596	75139	151209	140193
1995	124398	85810	34343	100093	98802	159073	166874
1996	128941	115803	39673	107778	111419	181103	157496
1997	136173	136984	47228	109731	128411	198552	148696
1998	150884	139097	44769	104943	141549	244833	159778
1999	150096	129784	45939	96335	147881	244673	166960

Source: Based on Global Development Finance, World Bank

Annexure 9

Total Debt to Exports of Goods & Services (%)

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Indonesia	233.9	237.4	230.2	212.6	231.8	226.7	219.3	206.9	261.4	255.2
Korea	61.3	63.8	49.1	48.2	63.1	56.7	73.7	81.1	86.7	74.2
Malaysia	44.4	43.2	43.1	47.8	44.3	39.9	41.8	49.3	52.7	46.9
Thailand	90	100	97.5	106.3	111.8	135.1	143	144.1	151.6	129.3
Argentina	373.7	405.4	387.2	339	327.2	335.3	337.9	352	379	435.7
Brazil	325.3	327.7	301.4	312.5	285.1	269.7	303.2	301.5	378.7	402
Mexico	191.4	198.4	183.1	195.4	179.7	172.6	136.8	113.4	114.1	105.1

Source: Global Development Finance, various issues.

Annexure - 10

Some Key Indicators of Indian Economy during 1980-81 to 1999-00

Year	GDP at (constant prices) Rs. Crores	Growth Rate GDP (Constant Prices)	GFD/GDP (at current market prices)	Growth Rate M1	Inflation	CAB/GDP	Current Account Balance (US $ mill)	Capital Account (US $ mill)	Overall Balance (US $ mill)	Foreign Exchange Reserves US $ mill)	External Debt (US $ mill) End March	Short term debt as % of total debt	Exchange rate (Rs./US $)
1980-81	401128	7.17	7.5	17.12	18.19	-1	-2804	1665	-1140	6823	20581	6.2	7.91
1981-82	425073	5.97	6.29	6.46	9.35	-1.5	-3179	657	-2523	4390	22604	7.1	8.97
1982-83	438079	3.06	5.9	14.43	4.88	-1.3	-3407	2087	-1319	4896	27430	8.7	9.67
1983-84	471742	7.68	7.28	17.04	7.54	-1	-3216	2655	-561	5649	31994	10.4	10.34
1984-85	492077	4.31	8.97	19.51	6.48	-1.2	-2417	3147	730	5952	33812	10.9	11.89
1985-86	513990	4.45	7.98	10.47	4.42	-2	-4867	4506	-361	6520	40951	10.6	12.23
1986-87	536257	4.33	9.89	16.83	5.81	-2	-4560	4512	-47	6574	48124	10.3	12.78
1987-88	556778	3.83	9.15	13.66	8.14	-2	-4852	5047	195	6223	55522	10.2	12.97
1988-89	615098	10.47	8.51	14.06	7.46	-2.5	-7997	8064	68	4802	60477	10.5	14.48
1989-90	656331	6.7	8.87	21.37	7.46	-2.4	-6841	6977	136	3962	75407	9.9	16.65
1990-91	692871	5.57	9.42	14.6	10.26	-2.3	-9680	7188	-2492	5834	83717	10.2	17.94
1991-92	701863	1.3	7.02	23.16	13.74	-1.6	-1178	3777	2599	9220	85421	8.3	24.47
1992-93	737792	5.12	7	8.44	10.05	-1.6	-3526	2936	-590	9832	90264	7	30.65
1993-94	781345	5.9	8.26	21.53	8.35	-0.7	-1158	9695	8537	19254	94342	3.8	31.37
1994-95	838031	7.25	7.07	27.51	12.5	-0.6	-3369	9156	5787	25186	102483	4.2	31.4
1995-96	899563	7.34	6.54	11.74	8.09	-1.6	-5910	4689	-1221	21687	94469	5.3	33.45
1996-97	970083	7.84	6.38	12	4.61	-1.2	-4619	11412	6793	26423	93470	7.2	35.5
1997-98	1016266	4.76	7.27	11.32	4.4	-1.4	-5500	10011	4511	29367	943320	5.4	37.16
1998-99	1083047	6.57	8.93	15.39	5.95	-1	-4038	8260	4222	32490	97639	4.4	42.07
1999-00	1151991	6.37	9.44	10.59	3.27	-1	-4698	11100	6402	38036	94393	4.3	43.33

Source: CS0 (National Accounts Statistics) & Handbook of Statistics on Indian Economy , RBI.
Reserve Bank of India Handbook of Statistics on Indian Economy.
For External Debt, based on Global Development Finance, World bank

Annexure -11

External Debt Indicators

(Percent)

Year	Debt Service to Current Receipts	Debt to GDP	Short-term to Total Debt
1990-91	35.3	28.7	10.2
1991-92	30.2	38.7	8.3
1992-93	27.5	37.5	7
1993-94	25.4	33.8	3.9
1994-95	25.9	30.8	4.3
1995-96	26.2	27	5.4
1996-97	23	24.5	7.2
1997-98	19.5	24.3	5.4
1998-99	18.9	23.4	4.4
1999-00	17.8	21.9	4
2000-01 P	16.3	21.5	3.4

Source: GOI (2001) India's External Debt
A Status Report

Annexure - 12

TRADITIONAL DEFICIT INDICATORS -
CENTRE & STATES COMBINED

Year	Gross Fiscal Deficit (Rs. Crores)	Percentage to GDP	
		Revenue Deficit	Gross Fiscal Deficit
1980-81	10780	0.41	7.93
1981-82	10607	-0.62	6.64
1982-83	11116	0.24	6.24
1983-84	15971	1.12	7.69
1984-85	22013	2.23	9.52
1985-86	22172	2	8.45
1986-87	30789	2.6	10.51
1987-88	32432	3.07	9.73
1988-89	35887	3.11	9.07
1989-90	43135	3.41	9.44
1990-91	53580	4.46	10
1991-92	45850	3.55	7.43
1992-93	52403	3.36	7.42
1993-94	70952	4.51	8.75
1994-95	71640	3.86	7.44
1995-96	77671	3.39	6.94
1996-97	87438	3.82	6.85
1997-98	116028	4.47	8.2
1998-99	129975	4.53	8

Source: Based on Handbook of Statistics on Indian Economy, RBI, 2000