Financial Crisis in East Asia: A Macroeconomic Perspective

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The East Asian crisis occurred despite highly impressive macroeconomic performance and prudent fiscal policies pursued by the severely affected countries which enjoyed excellent international credit rating till June 1997. The crisis came as a rude shock to the international financial community and the policy-makers on account of its unprecedented magnitude and global impact. In this paper, Bakul Dholakia argues that the crisis resulted from a strong combination of mutually reinforcing factors such as appreciation of real exchange rates, high levels of current account deficit, extremely high growth of short-term external debt/ and highly fragile financial sector. According to Dholakia/ the overall impact of East Asian financial crisis on the Indian economy can be described as moderate. The slow-down of India's industrial growth and exports and fall in the stock market since the last quarter of 1997 can be attributed more to the climate of political uncertainty than the East Asian crisis. Given the favourable macroeconomic fundamentals/ Indian economy currently does not face any threat arising from the Asian virus.

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The second half of 1997 witnessed a major financial crisis in several East Asian countries. The crisis originated in Thailand in mid-1997 with 20 per cent devaluation of the baht on July 2 and it quickly spread to other countries in South-East Asia and ultimately affected South Korea as well as Japan. By the end of 1997, the repercussions of East Asian financial crisis were felt around the globe. Between June 1997 and the end of the year, the medium currency devaluation in 12 of the largest emerging markets was as high as 39 per cent and in four East Asian countries, viz., Thailand, Indonesia, Malaysia, and South Korea, which were most severely affected by the crisis, the average increase in dollar rates was more than 80 per cent. As a result, between June and December 1997, the International Finance Corporation's emerging stock market index declined by 25 per cent, while its Asian index fell sharply by 53 per cent. Moreover, in the group of 12 largest emerging markets, the median rise in the short-term interest rates during the post-June 1997 period turned out to be more than 600 basis points (World Bank, 1998).

The surprising feature of the East Asian crisis is that it occurred in spite of fairly impressive macroeconomic performance and highly prudent fiscal policies pursued by East Asian countries. Moreover, the crisis occurred in the midst of what could be essentially regarded as a favourable international environment characterized by low interest rates and relatively high rates of growth of global output and exports. In fact, the most severely affected East Asian countries actually enjoyed the best of international credit rating among the developing and newly industrializing countries till June 1997. The World Bank also lauded the performance of East Asian countries in a recent s,tudy titled the *East Asian Miracle* and suggested that the Asian development model should be replicated by other developing countries. Even Tarapore Committee in its *Report on Capital Account Convertibility* cited the examples of Malaysia, Indonesia, Korea, and Thailand as some of the success stories involving relatively more open capital accounts. The East Asian financial crisis has, therefore, come as a rude shock for many involved in international finance, multilateral institutions, policy making, and academics.

Given the magnitude and the global impact of the East Asian crisis, it would be interesting to examine its background, the underlying causes, its impact on the affected countries, and its implications for the Indian economy. The present paper is an attempt in this direction. Since the crisis has been most severe in four countries, viz., Thailand, Indonesia, Malaysia, and South Korea, the broad macroeconomic analysis presented in this paper is based on the experience of these four countries.

Chronology of Asian Crisis

The financial crisis in East Asia was triggered by several events which exposed the growing weakness of Thai economy during the first half of 1997 such as sharp drop in the growth of exports resulting in near stagnancy, significant slow-down in capital inflows and the burst of real estate bubble leading to a fall in the price of real estate companies by almost two-thirds and the consequent drop in the stock market by more than one-third. The Euro-bond default of a Thai property company Somprasong Land in February 1997 resulted in a significant erosion of market confidence creating immense pressure on the Thai baht. The Central Bank of Thailand implemented a multi-pronged strategy to support the currency consisting of the following measures: (a) market intervention on a fairly large scale involving spending of US $ 8.7 billion of reserves to defend the currency, undertaking $ 23 billion in forward contracts and extending liquidity support to failing financial institutions to the tune of $ 16 billion by June 1997; (b) sharp increase in interest rates from around 12 per cent prevailing in January 1997 to 18 per cent by June 1997; and (c) imposing restrictions on foreign speculators. However, these efforts ultimately failed mainly because, during the post-February 1997 period, most of the Thai companies started converting their foreign debt into domestic liabilities and also hedging their entire foreign exchange exposure, which led to a sharp increase in the domestic demand for dollars. Finally, the Bank of Thailand had to give up its aim of maintaining baht-dollar peg and decided to allow the exchange rate to float on July 2 and Baht depreciated by 20 per cent on that day itself (World Bank, 1998). The downslide of baht continued thereafter and it triggered a massive currency crisis in Indonesia, Malaysia, and Philippines during July-August 1997, which set into motion a vicious circle leading to further collapse of currencies and equity markets in the region. By October 1997, the East Asian crisis spread to Hong Kong, Korea, and Taiwan. The sharp drop in Hong Kong's equity market resulted in a global depression in equity prices affecting Europe, Latin America, Japan, and the United States. A detailed chronology of major events in East Asian financial crisis covering the period from early 1997 to March 1998 is provided in Exhibit 1.

East Asian Miracle

Before examining the main factors responsible for creating the crisis, it would be useful to briefly review the development strategy and past track record of the East Asian countries which earned them the glory of being referred to as the East Asian Miracle. While the East Asian economies are highly diverse in terms of natural resources, culture, and political institutions, the most strikingly common characteristics of their development experience over the last two decades have been (a) incredibly high rates of economic growth sustained over a long period of time; (b) highly successful implementation of export-led growth strategy; (c) significantly higher rates of investment; and (d) significant reduction in the incidence of poverty.

Information on the growth of GDP and exports in the four East Asian countries under consideration is provided in Exhibit 2, while comparative picture of growth rates achieved by other developing as well as developed countries is presented in Exhibit 3. It is indeed remarkable that each of the four countries achieved double digit growth rates of both GDP and aggregate exports (measured in US dollars) during the 90s. Moreover, while the first half of 90s witnessed a sharp decline in the growth rate of developed countries, the average growth rate of East Asian countries actually increased during the same period. Total exports of Thailand, Indonesia, Malaysia, and South Korea increased from $ 68 bn. in 1980 to $ 361 bn. in 1996 leading to an increase in the share of these four countries in world exports from 2.8 per cent to 5.4 per cent and in total exports of developing economies from less than 11 per cent to more than 22 per cent over the 16 year period. A detailed analysis of the experience of newly industrializing economies of South-East Asia presented in the World Bank Study shows that the export push in countries like Thailand, Malaysia, and Indonesia during the post-1980 period was achieved through generalized reductions in import protection, liberalized export credit, and export-oriented foreign direct investment (World Bank, 1993).

The East Asian economies maintained very high rates of investment (averaging around 40% in the 90s) to achieve an accelerated rate of growth. To sustain such high levels of investment, the governments used a variety of interventionist mechanisms to increase domestic savings such as encouraging postal savings systems (Korea and Malaysia), compelling high pri-

vate savings through mandatory provident fund contributions (Malaysia and Thailand)/ and stringent controls on consumer loans and high taxes on luxury consumptions (Korea, Malaysia, and Thailand). While the average rate of domestic savings increased in these economies as a direct consequence of such interventions, there still existed a significant gap between the domestic saving rate and the aggregate investment rate (Exhibit 4). This wide resource gap had to be financed through external resources during the entire post-1980 period. By mid 90s, the dependence of East Asian countries on external resources to sustain their booming economies had increased considerably. A positive fall out of this strategy was a significantly higher degree of openness to foreign direct investment which accelerated and intensified technology acquisition in the East Asian countries during the 80s.

The most striking feature of East Asian growth has been a rare combination of sustained rapid growth in living standards and a phenomenal reduction in the incidence of poverty, as brought out by the figures given in Table 1.

Table 1: Growth of Living Standards in East Asian Countries

Country	*Per Capita*	*Income (US$)*	*Poverty*	*Ratio*
	1980	*1996*	*1965*	*1995*
Thailand	694	2980	57%	13%
Indonesia	526	1090	60%	14%
Malaysia	1782	4740	49%	9%
South Korea	1650	10040	40%	5%

The East Asian leaders generally believed in the principle of shared growth based on the premise that a rapid expansion of the economy would benefit all groups of population. Specifically directed mechanisms of state intervention were effectively used to achieve this purpose. Thus, Korea implemented comprehensive land reform programme, Indonesia used rice and fertilizer price policies to raise rural incomes, while Malaysia introduced explicit wealth sharing programmes to improve the economic conditions of ethnic Malays (World Bank, 1993). Moreover, the East Asian economies focused education-related public spending on the lower grades by first providing universal primary education and later by significantly increasing the spread of secondary education. These countries also attained a more rapid demographic transition through declining fertility rates which enabled them to make more resources available per child even with a relatively constant share of educational investment in GDP (World Bank, 1993). As a result of such policies and interventions, the East Asian countries succeeded to a large extent in more or less eradicating poverty by mid 90s, which in essence represents the most crucial aspect of the East Asian miracle.

Magnitude of the Crisis

The currencies of East Asian countries were generally stable and did not show any signs of volatility during the 90s till the crisis occurred in July 1997. The behaviour of exchange rates in Thailand, Indonesia, Malaysia, and South Korea during the period from 1980 to January 1998 is brought out by the figures given in Exhibit 5. The period from 1990 to 1996 was actually marked by a marginal appreciation of the Thai baht, considerable appreciation of Malaysian ringgit, and some depreciation of Indonesian rupiah and Korean won. The relative stability of these currencies observed during the 90s almost created an impression as if those countries followed a more or less fixed exchange rate regime. The sudden and sharp depreciation of each of these currencies during the post-June 1997 period needs to be viewed in this context.

Table 2 shows the magnitude of the East Asian financial crisis in terms of the currency depreciation, as indicated by the extent of increase in the dollar rates, and the fall in stock markets during the period from July 1997 to January 1998, when the currency crisis was at its peak. The severity of financial crisis in these countries is evident from the fact that within a period of just six months, the dollar rates doubled while the stock markets fell to half of the levels prevailing in June 1997.

One of the main consequences of maintaining fixed or quasi-fixed exchange rates over a fairly long period was a significant misperception of exchange rate risks on the part of banks as well as corporates in East Asian countries. This resulted in a large scale build-up of unhedged foreign currency exposures which made the East Asian economies quite vulnerable to a sudden crisis of confidence.

Table 2: Magnitude of East Asian Financial Crisis

	CJiange Dollar R	*in .ates*	*Chan Stock*	*'ge in Prices*
	June 1996 to June 1997	*July 1997 to Jan 1998*	*June 1996 to June 1997*	*July 1997 to Jan 1998*
Thailand	1.6%	110.1%	- 57%	- 31%
Indonesia	6.7%	430.2%	23%	- 52%
Malaysia	1.6%	80.6%	- 5%	- 50%
S. Korea	9.6%	98.2%	- 10%	- 50%

Under the given circumstances, the initial loss of confidence in South-East Asian currencies led to substantial capital outflows facilitated by relatively open capital accounts, which quickly translated into depreciating currencies and falling asset prices. This set into motion a vicious circle under which capital outflows led to currency depreciation which in turn led to drop in asset prices causing strains on private sector balance sheets creating further panic in the market, which contributed to exaggerated perceptions about the fundamental weaknesses in those economies and resulted in further capital outflows. It is evident that the onset of such a vicious circle would ultimately lead to a massive collapse of the currency and the stock market to a level where the magnitude of fall would be totally out of proportion to the level of adjustment actually required in the light of real assessment of underlying weaknesses. The available evidence shows that domestic investors were also major participants in the outflow of capital which accelerated the spiral causing severe financial problems thereby accentuating the overall financial fragility (World Bank, 1998).

Main Contributory Factors

The factors responsible for the East Asian crisis are by and large quite different from those causing previous financial crises in other developing countries. For instance, large fiscal deficits and very high rates of inflation were the contributory factors in the Latin American crisis during the 80s. As against this, most East Asian countries had actually been running a fiscal surplus during mid-90s. Similarly, while rapidly growing public debt and excessive consumer goods imports to sustain high levels of private sector consumption were the main factors underlying the Mexican peso crisis of 1994, these were not the basic issues at all in East Asian economies during the 90s.

The main factors contributing to the East Asian financial crisis are as follows:

- Appreciation of real effective exchange rate.
- Unsustainable high levels of current account deficit.
- Explosive growth of external debt of the private sector.
- Rapidly rising proportion of short-term debt in total external debt.
- Rising proportion of speculative investment in aggregate foreign investment flows.
- High fragility of the financial sector.
- High degree of monetary growth.

In what follows, we examine these factors in the light of available empirical evidence.

Appreciation of Real Effective Exchange Rate

The policy of pegged exchange rates in the face of relatively higher domestic inflation rates over a long period of time led to a significant appreciation of real exchange rates in East Asian countries. Our estimates of the extent of appreciation of real exchange rates in East Asian countries by June 1997, based on the actual behaviour of nominal exchange rates and relative inflation rates during the period 1990 to mid-1997, are given in Table 3.

Table 3: Estimates of Depreciation in Nominal Exchange Rates Required to Maintain Constancy of Real Exchange Rates

	Actual Dollar Rate in June 1997	Expected Exch. Rate in June 1997	Change in ER Required for Constancy of RER
Thailand	25.8	32.4	26%
Indonesia	2499	2782	11%
Malaysia	2.53	3.29	30%
S. Korea	888	1220	37%

Several recent studies have found real exchange rate appreciation to be an important factor indicating the likelihood of an exchange rate crisis (Edwards, 1989; Klein and Marion, 1994). Moreover, there is a strong empirical evidence suggesting that a substantial appreciation of real exchange rate can make the domestic currency vulnerable to speculative attacks (Frankel and Rose, 1996). Thus, detailed analysis of past experiences clearly shows that significant appreciation of real exchange rate, which actually occurred in the case of Thailand, Malaysia, South Korea, and Indonesia during the first half of 90s, constitutes an important factor leading to a major currency crisis.

Growing levels of capital inflows can prevent the depreciation of currency that would otherwise occur under prolonged periods of relatively high rates of inflation, as it happened in India during March 1992 to August 1995. However, rapid growth of exports is a precondition for sustaining the stability of exchange rates in an inflationary economy over a longer period of time. A decline in the growth rate of exports and slow-down in the inflow of capital can easily expose the inherent vulnerability of a relatively overvalued exchange rate. It is obvious that real exchange rate appreciation would ultimately affect export competitiveness which in turn would exert considerable pressure on the domestic currency. The loss of export competitiveness in East Asian economies resulting

from a significant appreciation of real exchange rates got eventually translated into a substantial slow-down in exports. Thus, the growth rate of exports of four East Asian economies declined sharply from the average of more than 15 per cent during 1990-95 to less than 5 per cent during 1996 and the first half of 1997.

While the rapid growth of exports during the early 90s gave the Asian companies and financial intermediaries enough reason to believe that high levels of unhedged foreign currency debts could be adequately serviced, the significant slow down in export growth coupled with persistence of high rates of inflation, as indicated by the estimates given in Exhibit 6, drastically changed the situation and brought to the fore the basic issue of misalignment of real exchange rates. The conditions were, therefore, ripe for speculative attacks on the currency with strong expectations of a significant depreciation of nominal exchange rates in East Asian economies. In an earlier study, Krugman had argued that the onset of a currency crisis in a country following an almost fixed exchange rate policy is often caused by a decline in foreign exchange reserves which culminates in a speculative attack on the currency (Krugman, 1979). One of the possible explanations for the relationship between declining levels of international reserves and the likelihood of a currency crisis is that the decline in reserves prior to the onset of the currency crisis essentially results from substantial but unsuccessful efforts on the part of the central bank to defend the currency peg (Kaminsky, 1997). As already indicated above, this is precisely what happened in Thailand in the first half of 1997, which triggered the East Asian crisis. **Unsustainable Current Account Deficit**

Although East Asian countries had fairly high saving rates, their investment rates were much higher than the saving rates and substantial inflows of foreign capital were required to bridge the sizeable resource gap reflected by the current account deficit (Exhibit 6). By mid-90s, Thailand, Malaysia, and Indonesia had large current account deficits, while Korea had maintained a fairly large current account deficit from mid-80s to early 90s. When the current account deficit exceeds 3 per cent of GDP, it is generally regarded as high and in most cases, where it persists over a relatively long period of time, it would turn out to be unsustainable. The sustainability of a large current account deficit depends mainly on how the capital inflows financing the deficit are used and whether the external liabilities associated with the capital inflows are consistent with the country's debt servicing capacity.

In East Asian economies, a large proportion of capital inflows got channelled into risky and low productivity investments, especially real estate and other non-tradables rather than well diversified and high productivity investments. Thus, for instance, in mid-90s the real estate loans accounted for about 25 per cent of outstanding bank loans in Malaysia and about 20 per cent in Thailand and Indonesia, which led to a tremendous surge in real estate investments outpacing the demand and, as a result, by 1996, the vacancy rates reached nearly 15 per cent in Bangkok and Jakarta (World Bank, 1998). The poor quality of real estate investment in Thailand adversely affected the stock market with the index for building and furnishing companies collapsing from a peak of around 8200 in late 1994 to 1100 by the end of 1997. It is interesting to observe that, while the high current account deficit turned out to be unsustainable in Mexico in 1994 because the funds were used mainly to finance consumer goods imports on a large scale, the current account deficits in East Asian countries became unsustainable on account of the funds being channelled into bad and speculative investments.

There was a significant increase in the incremental capital output ratios (ICORs) in East Asian economies reflecting the poor quality of new investments during the first half of 90s. The available information indicates that in Korea and Thailand, the average level of ICOR increased sharply from around 3 during the late 80s to more than 5 by mid-90s (World Bank, 1997 and 1998a). The low productivity of investment of the Korean corporate sector was also reflected in a sharp decline in Korean companies' average return on assets to just 1 per cent in 1996 and the spate of bankruptcies that occurred in Korea in 1997 prior to the Korean currency crisis. The situation was similar in Indonesia, Malaysia, and Thailand, where the average return on equity declined significantly during the period from 1992 to 1996 and actually fell below money market interest rates by 1996 indicating lack of adequate compensation to cover the additional risk of equity investment in these countries (World Bank, 1998). The findings of a recent study on total factor productivity growth in East Asian countries also corroborate this premise by revealing that a large proportion of the high growth rates of East Asian economies is actually explained by high growth of total factor input reflecting large resource flows and only a small proportion of the observed output growth is accounted for bv total factor productivity growth (Krugman, 1994). **Growth and Composition of External Debt**

The structure of foreign capital inflows required to finance the large and growing resource gap in East

Asian economies changed significantly during the first half of 90s. While the capital inflows during the 80s were mainly in the form of foreign direct investment representing risk capital, the composition of inflows changed rapidly from equity to debt flows during the period from 1990 to mid-1997 (Bank for International Settlements [BIS], 1998). As a result, there was an incredible increase in the external debt liabilities of East Asian countries. Information on the growth and changing structure of external debt in the four East Asian countries is provided in Exhibit 7. Aggregate external debt increased more than three-folds on an average leading to a sharp increase in the external debt-GDP ratio for these four countries taken together from around 30 per cent in 1990 to 40 per cent by mid-1997.

The problem of rapidly changing structure of foreign capital inflows from equity to debt was further aggravated by the changing composition of external debt itself. More than 60 per cent of the incremental debt was contracted as short-term debt, which resulted in a more than five-fold increase in the total short-term debt liability of the four East Asian countries from $ 32 bn. in 1990 to $ 171 bn. by mid-1997. Consequently, the share of short-term debt in aggregate external debt increased sharply from an average level of 22 per cent to 45 per cent during this period. Another significant feature of the changing composition of external debt in East Asian countries was the rapidly growing proportion of private non-guaranteed debt. On an average, the share of private non-guaranteed debt in these countries increased from less than 24 per cent in 1990 to more than 52 per cent by mid-1997. Thus, East Asian countries not only borrowed heavily during the 90s, but a large proportion of their high incremental external borrowings was private and short-term in maturity. This significant structural change in East Asian countries' external debt profile can be viewed as highly unfavourable inasmuch as it would certainly increase the vulnerability of these countries to internal and external shocks which could adversely affect the market confidence.

The massive shift towards short-term debt seems to have been guided primarily by the considerations of significantly lower cost of such funds in the international financial markets. The behaviour of interest rates in developed countries during the period from 1990 to 1996 is shown in Exhibit 8. While the interest rates fell significantly across the board during this period, the decline in the short-term interest rates was far more pronounced than the corresponding decline in long-term interest rates. By 1996, short-term funds were available at the rate of only 0.5 per cent from Japan and around 3.5 per cent from Germany and France, while the long-term borrowing rates generally exceeded 6 per cent. This phenomenon coupled with a complete misperception of the foreign exchange risks involved in external debt transactions led many private borrowers and banks to opt for short-term borrowings rather than long-term borrowings even when the borrowing requirements were essentially of a long term nature. Moreover, the relatively open capital accounts in East Asian countries facilitated short-term external borrowings on a large scale to finance local currency denominated assets including those in real estate and other non-tradables. It is evident that this pattern of borrowing would create serious maturity mismatches in terms of the expected time profile on cashflows arising from the investments vis-a-vis the given time profile of contractual debt service obligations.

While the exchange rate pegs and the resulting appreciation of real exchange rates coupled with easy global liquidity conditions encouraged the private borrowers to bear excessive foreign currency and maturity risks, this tendency got considerably aggravated by the combination of relatively high domestic interest rates and inflation in East Asian countries. It appears that the East Asian investors suffered from some sort of a "real interest rate illusion" indicating an attempt to deflate foreign currency interest rates by local inflation rates to arrive at the misleading conclusion about the actual cost of foreign funds used to finance local currency business (BIS, 1998). It is obvious that this sort of situation is not sustainable as it would lead to a significant growth of short-term debt without a proportionate increase in a country's foreign exchange reserves. The information given in Exhibit 9 shows that between December 1996 and June 1997, the foreign exchange reserves of Thailand and Malaysia actually declined, while they remained unchanged in Korea. As a result, the short-term debt expressed as a proportion of foreign exchange reserves not only increased significantly but exceeded 150 per cent in Thailand, 180 per cent in Indonesia, and 200 per cent in Korea (Exhibit 10).

It is rather surprising that the East Asian banks made the mistake of assuming that a balancing of foreign currency borrowing with foreign currency lending to residents for domestic currency business is good enough to ensure viable short-term lending. Since most of their lending business was based on this assumption, the East Asian banks raised funds from the international banks with either short-term maturity or long-term maturity with floating rates. Moreover, the domestic banks regarded short-term

lending to their clients as safer than long-term lending as it reflected a better alignment with the maturity pattern of their external borrowing. However, this kind of logic would be appropriate only if the domestic bank is lending mainly to provide additional funds to those who already have other sources of long-term finance. But this was not the case in East Asia, where the long-term investment in real estate and other domestic assets was often financed almost entirely through short-term bank loans (BIS, 1998). It is quite obvious that, if a large currency depreciation takes place under such conditions, the domestic banks would face the problem of rapid erosion of the credit-worthiness of their customers and would eventually find that the exchange rate risk gets effectively translated into a major credit risk. Thus, with the onset of the currency crisis, the domestic banks were caught in the cross-fire between the foreign banks, who started reassessing the risks involved in lending to Asian borrowers and refusing roll over of the short-term credit and the domestic customers, who were not able to service the foreign currency denominated short-term loans and started defaulting on a large scale.

Fragility of Financial Sector

The high growth of East Asian economies through huge volumes of investment and fast growing exports required a rapid expansion of the domestic banking system and financial services. The high degree of stability of both exchange rate and interest rate, which characterized the rapid growth phase during the late 80s and 90s, was instrumental in concealing the inherent fragility of the financial systems in East Asian economies. The banking system in these countries, as it evolved during the 80s and 90s, was capable of functioning well only under the conditions of rapid growth with stability. In fact, it was highly vulnerable to a slow down in growth, fluctuations in interest rates, and currency depreciation. It is hardly surprising, therefore, to find that in the aftermath of the currency crisis, highly non-performing loans of the banking system reached 19 per cent of aggregate loans in Indonesia, 17 per cent in Thailand, and 16 per cent in Malaysia by the end of 1997 (World Bank, 1998). In the case of Korea, it is estimated that a huge amount of resources equivalent to 6.5 per cent of GDP would be required to restore the capital adequacy of Korean banks as of December 1997.

The main factors that contributed to the overall fragility of financial sector in East Asian economies are distorted incentive structure, lack of transparency, inadequate disclosure and supervision, poorly managed financial liberalization and lack of strictly enforced regulatory standards. Explicit or implicit government guarantees encouraged the banks to take excessive risks based on the assumption that if the projects so funded were successful, they would earn high profits and if the projects failed, the government would absorb the losses, which in turn reduced the need for a detailed credit appraisal and contributed to inflated prices of financial and physical assets (Krugman, 1998). Thus, for instance, Korea's chaebol could manage to obtain large amounts of credit to finance their massive expansion plans despite their very high debt-equity ratios, which for the 25 biggest chaebol averaged 4:1 in 1996; and, when the financial position of several chaebol deteriorated in 1997, the government provided funds to cover some of the resulting losses (World Bank, 1998). It is well known that the chaebol exerted considerable influence on the government which actually directed a significant proportion of aggregate bank lending in Korea.

Lending norms followed by East Asian banks placed excessive reliance on collaterals rather than a careful analysis of cashflows. An unintended consequence of over-emphasis on collaterals resulted in introducing an explicit bias in lending towards real estate and construction business. This phenomenon coupled with the increasing use of quoted equities as collaterals made the banks highly vulnerable to the downward fluctuations in the property market and the stock market. Thus, the financial sector in East Asian economies was characterized by a complex interlocking of the foreign exchange market, stock market, property market, and money market.

A recent World Bank Study observes that the East Asian countries lacked the institutional capacity to effectively cope with rapid expansion of domestic credit during the 90s and, as a result, the financial sector supervision in these countries has been weak and the regulations have been quite lax. Reporting and provisioning requirements for non-performing loans have been inadequate and capital adequacy norms are far more lenient in East Asian countries than those suggested by the BIS. For instance, in Indonesia, a loan can be non-performing for more than 24 months before it is even identified as non-performing. It is also important to note that East Asian countries generally lacked effective exit mechanisms for insolvent banks which would, therefore, continue to borrow and lend creating further strains on the financial system. Moreover, the forces operating in the financial sector did not compel less efficient banks to merge with more efficient banks as some form of government guarantees kept such banks afloat.

The problems associated with the weaknesses of financial sector were further accentuated by the rapid liberalization of financial markets without paying adequate attention to the strengthening of supervision and regulation. Thus, for instance, by early 90s, the Thai government had reduced reserve requirements, liberalized the rules governing non-bank financial institutions and significantly expanded the scope of permissible capital market activities of banks. Similarly, Korea took several measures to deregulate the financial sector in 1993 such as eliminating interest rate controls and removing restrictions on corporate debt financing and cross-border flows. But, these measures were not accompanied by any attempt to tighten the systems for effective supervision and regulation. Moreover, the liberalization of financial markets in these countries occurred during the period of easy global monetary conditions, which encouraged a tremendous expansion of external borrowing and the corresponding growth of domestic credit. Thus, during the period from 1990 to 1996, the ratio of net domestic credit to GDP increased sharply from 80 per cent to 136 per cent in Malaysia and from 84 per cent to 130 per cent in Thailand (World Bank, 1997a). Moreover, liberalization introduced greater competitiveness in the financial sector leading to a squeeze on profit margins in traditional businesses but it failed to bring about the required restructuring and competence building in the banking sector. As a result, the banks which had grown by operating under fairly tight restrictions of a regulated financial sector simply could not appreciate the high degree of self-imposed precautions needed in the new liberalized environment where higher profits can result only from assuming higher risks and by covering or pricing them appropriately. Driven by a herd-mentality, individual banks felt that they had to match the growth of their competitors and what followed was the massive expansion of bank credit in the face of positive real interest rates, the average level of real short-term interest rates in Indonesia, Thailand and Korea being around 5 per cent or more during the first half of 90s (BIS, 1998). None of the foreign or domestic banks questioned the widely held optimism about future growth prospects of East Asian economies and, in the process, ended up seriously underestimating the risks of over-investment.

It is interesting to observe that the performance of major international credit rating agencies in assessing various risks associated with the rapidly growing East Asian economies has also been unimpressive. Despite clear evidence available on the growing current account deficits and increasing short-term external indebtedness of East Asian countries from 1995 onwards, the credit rating agencies did not alter their assessment of risks of long-term foreign currency debt for any of these countries. In fact, between December 1994 and May 1995, Standard & Poor upgraded Indonesia, Thailand, Malaysia, and Korea while Moody's upgraded Malaysia and Korea (BIS, 1998). Since there were no major revisions during the subsequent period, the foreign currency debt of East Asian countries had almost the same investment grade ratings in June 1997 as in June 1996. The credit rating agencies did not downgrade the East Asian ratings despite the sharp increase in the amount of hot money which far exceeded die available foreign exchange reserves by mid-1997, as shown in Table 4. It was only during the last quarter of 1997 that the international agencies effectively downgraded the credit rating of these countries (Exhibit 11).

Table 4:

Hot Money in relation to International Reserve in East Asian Countries, June 1997

	Shart-term Debt	*Cumulative Portfolio Jnv.*	*Total Amt. of Hot Money*	*Forex Reserves*
Thailand	47.2	8,2	55.4	30.9
Indonesia	36.2	7.6	43.8	19.9
Malaysia S.	16.0	12.5	28.5	25,8
Korea	71.3	14.0	85.3	33.3

Finally, it also needs to be noted that the weaknesses of East Asia's financial sector were not overcome by the strengths of the international banks and investors. In fact, there is enough evidence to suggest that there was a complete lack of the required diligence by external creditors and poor external intermediation with regard to lending operations in East Asia. The foreign currency loans advanced to East Asian countries came from the developed countries with well-regulated and transparent financial institutions operated by well-trained managers. It is, therefore, surprising to find that the foreign banks and investors carried out large scale transactions despite getting inadequate financial statements, ignoring the widening current account deficits, realizing the illiquid nature of domestic investments and also knowing about the unhedged foreign exchange exposure of East Asian banks and firms. The huge amounts of loans advanced to the four East Asian countries by Japanese, European, and American banks by mid-1997, as estimated by the BIS, are shown in Table 5.

After the Mexican peso crisis, there was a significant improvement in the collection and dissemi-nation of information on various aspects of emerging

Table 5: Loans Given by Foreign Banks to East Asian Countries (Outstanding Amount by End-June 1997 in US$ Billion)

Thailand	99.5
Indonesia	61.9
Malaysia	32.9
South Korea	118.0
Total	312.3

markets, which should have allowed the foreign lenders to foresee many of these problems and assess their consequences at least by mid-1996, i.e., almost a year in advance (World Bank, 1998). It seems, however, that no one could appreciate the seriousness of the structural weaknesses in East Asian economies and the foreign lending continued unabated till June 1997. Under these circumstances, the crash of Thai currency in the first week of July 1997 served the purpose of a strong wake-up call for the foreign lenders and investors, whose sudden panic stricken response contributed to the high intensity and the wide spread of the crisis across the sub-continent.

Bail-out Package

Given the gross inadequacy of foreign exchange reserves in relation to the amount of hot money and the growing panic-driven demand for foreign exchange in East Asian countries, it is evident that a large scale bail-out effort would be required to pull these economies out of the situation of near bankruptcy. In view of the large stakes of Japanese, European, and American banks, which faced the serious threat of a sizeable proportion of their loans ending up as non-performing loans, and the significant business interests of the developed countries in East Asian markets, it was hardly surprising to see IMF undertake a quick and well-coordinated effort to mobilize multilateral and bilateral assistance of a magnitude that set new records in official bail-out packages. Information available from BIS on official financing commitments offered to East Asian economies is provided in Table 6.

Table 6: International Liquidity Assistance Offered to East Asian Economies by March 1998

(LJS$ Billion)

Agency	*Tliailnnd*	*Indonesia*	*Korea*	*Total*
IMF	3.9	10.1	21.0	35.0
World Bank	1.9	4.5	10.0	16.4
ADB	2.2	3.5	4.0	9.7
Bilateral Commitments	12.1	22.0	22.0	56.1
Total Assistance	20.1	40.0	57.0	117.1

An important aspect of this bail-out package is that the quick disbursing stand-by credits extended by IMF were extremely large in relation to the respective countries' IMF quotas, almost five times in the case of Thailand and Indonesia and more than 19 times for Korea, as against the usual norms of the stand-by assistance not exceeding three times the countries' quota. Moreover, since the IMF assistance by itself would turn out to be inadequate in relation to the required amounts, swift action was simultaneously mooted to bring in substantial additional funds to multilateral and bilateral assistance. It is quite obvious that the main consideration governing both the large size of the bail-out package as well as the swiftness with which these commitments were made was to create a major psychological impact on the inter-locked markets and thereby not only arrest any further erosion of market confidence but actually try to restore it to the extent possible. However, it may be noted that the international official support initially offered to the East Asian countries was not large enough to cover all short-term foreign obligations of these countries, who had to press for additional support to supplement the initial commitments.

The announced size of the bail-out package succeeded at least partially in achieving the basic purpose of arresting the erosion of market confidence and led to an overall recovery of the East Asian currencies by March 1998, and the process of recovery continued during the subsequent period as shown in Table 7. Thus, as compared to the bottom levels recorded in January 1998, the proportion of the lost ground recovered by the East Asian currencies by November 1998 turned out to be 62 per cent for baht, 51 per cent for rupiah, 38 per cent for ringgit, and 51 per cent for won.

Table 7: Recovery in East Asian Currencies

	June 1997	*fan. J998*	*March 1998*	*Nov. 1998*
Thailand	25.8	54.2	45.1	36.7
Indonesia	2499	13250	10750	7800
Malaysia	2.53	4.57	3.98	3.80
S. Korea	888	1760	1627	1318

The sustainability of the significant recovery already achieved and the possibility of further recovery during early 1999 would depend entirely on each country's commitment to effectively implement a carefully designed policy reform, package. It is important to observe in this context that major improvements in the exchange rates did not occur immediately after the announcement of large scale financial assist-

ance; on the contrary, the currencies actually weakened during the couple of weeks after the announcement of the bail-out packages. Moreover, the international credit rating agencies also significantly downgraded East Asian economies after the packages had been announced. Partial restoration of market confidence and relative stabilization of exchange rates occurred only after the respective governments announced specific policy measures and the relevant agreements with foreign banks were finalized. Such agreements included, among other aspects, specific arrangements to roll over the bulk of Thailand's short-term bank debt and the foreign hahks' agreement to lengthen the maturity period of their loans in return for the Korean government's willingness to guarantee the bank debt (BIS, 1998).

The reform agenda negotiated as a part of the conditionality associated with the bail-out package included quick implementation of financial sector reforms and labour market reforms through a revamping of labour legislation. The main elements of financial sector reforms urgently required in East Asian economies include restructuring of large banks, the merger of weak banks with large banks, closure of the weakest and completely non-viable banks, privatization of inefficient public sector banks, easy entry of foreign banks, adjustment of short-term as well as long-term interest rates, and strengthening the system of monitoring the operations of financial sector under a liberalized environment. The progress in terms of the formulation and implementation of the reform package has been by and large satisfactory in Korea and Thailand, while uncertainty still prevails in the case of Indonesia; and, to that extent, the recovery seems to be far more sustainable in Korea and Thailand, but it may turn out to be quite fragile in Indonesia.

Macroeconomic Impact of the Crisis

The financial crisis has adversely affected the performance of East Asian countries during 1998 and is likely to have a major impact on their performance in 1999 also. Exhibit 12 brings out the impact of the East Asian crisis on GDP growth based on the most recent forecasts for 1998 and 1999. The provisional estimates for 1997 clearly indicate a significant decline in the growth rate of real GDP in Thailand and Indonesia and a marginal decline in Malaysia and South Korea. However, the forecasts for 1998 indicate that each of these four countries will experience significantly large negative growth rates of real GDP in the year 1998 and the growth rates would continue to be negative in 1999, though their magnitude would be much lower than in 1998. As a result, the level of real GDP attained by Thailand, Indonesia, and Korea in the year 1999 is likely to be lower than the level achieved in 1996, while it may turn out to be more or less the same in the case of Malaysia. Thus, the crisis has effectively put the clock of economic development of East Asian countries behind by at least three to four years.

The latest available information on the macroeconomic performance of the affected countries during the first half of 1998 is summarized in Table 8. It is evident from the table that the first half of 1998 has witnessed negative growth not only in real GDP but also in exports in each of these countries. Moreover, the rate of inflation has increased significantly. Since the overall import intensity of East Asian countries is quite high, the currency crisis has severely affected the normal channels of imports. The rising costs of imports, highly restricted availability of imported materials, and serious problems of working capital finance have adversely affected exports. Thus, despite a- large scale depreciation of the currency, which should facilitate rapid growth of exports through improved price competitiveness, the actual growth of exports of East Asian countries has turned out to be negative during 1998 mainly on account of the overall structural destabilization and its adverse impact on export manufacturing.

Table 8: Impact of Currency Crisis on Macroeconomic Performance During the First Half of 1998

(Growth Rate per Annum)

Country	*Real GDP*	*Exports*	*Inflation*
Thailand	- 7.0%	- 7.7%	9.2%
Indonesia	- 13.6%	- 6.1%	52.0%
Malaysia	- 5.1%	- 12.6%	7.5%
S. Korea	- 5.5%	- 10.4%	8.5%

Sudden and significant appreciation in the dollar rates has resulted in sharp unprecedented increase in the local currency value of short-term foreign debt leading to a spate of bankruptcies and closures. This coupled with the general decline in GDP and exports has contributed to growing unemployment and deteriorating living standards, especially among the low income categories. The overall incidence of poverty in East Asian countries is, therefore, expected to increase during 1998 and 1999.

Another aspect of the impact of currency crisis on East Asian economies relates to their relative position in the context of international comparisons of GDP and living standards. It is evident that the dollar values of nominal GDP of each of these

countries would decline significantly in 1998 as compared to the levels reported in 1996 and 1997. As a result, the per capita GDP, measured in US dollars at average exchange rate prevailing in 1998, would decline by about 40 per cent in Thailand, 70 per cent in Indonesia, 30 per cent in Malaysia, and 35 per cent in South Korea during 1998. This phenomenon is likely to adversely affect the foreign investors' perception about the overall size of the East Asian markets. It is interesting to observe that in the aftermath of East Asian currency crisis, India's per capita GDP in 1998 measured in US dollars at average market exchange rate would perhaps for the first time exceed that of Indonesia and its gap vis-a-vis the per capita GDP of Thailand would considerably reduce from more than 7:1 to less than 5:1.

Implications for Indian Economy

The broad spheres of Indian economy that can be regarded as most vulnerable to the East Asian crisis are the exchange rate, the stock market, and the foreign trade. It is obvious that the financial crisis in East Asian countries would generate significant expectations of downward movement in Indian rupee as well as Indian stock market and adversely affect the balance of India's trade especially with East Asian countries.

Exchange **Rate**

Assessment of India's foreign exchange market during the latter half of 1997-98 made by RBI in the context of East Asian financial crisis is as follows : "The year 1997-98 posed a severe challenge for the exchange rate management in the face of the threat of external contagion and domestic uncertainty. Excess supply condition in the foreign exchange market which characterized 1996-97 spilled over into the period April-August 1997. However, despite strong fundamentals, partly as a result of the South-East Asian crisis, the rupee weakened in the last week of August." In this context, it would be interesting to examine the actual behaviour of the rupee exchange rate during the period from June 1997 to January 1998. The average dollar rate in June 1997 was Rs 35.81, which increased to Rs 36.43 in September 1997 but improved to Rs 36.22 in October 1997. It was only during November 1997 when intense pressure on the rupee started building up and, as a result, the dollar rate increased considerably in the subsequent period to reach Rs 39.4 in January 1998. It is difficult, however to attribute the noticeable though relatively much smaller depreciation of about 8 per cent in Indian rupee during the period from November 1997 to January 1998 to the East Asian contagion effect, since the same period was essentially characterized by major political uncertainties arising from the announcement of mid-term polls. Thus, the Indian currency has for all practical purposes remained quite insulated from the East Asian virus.

Stock Market

The major and by far the most significant effect of the East Asian crisis on the Indian economy was felt in the country's stock markets. Under the bullish spell created by Mr Chidambaram's dream budget, the BSE Sensex had reached the level of 4256 by the end of June 1997, which crashed to 3876 by the end of August 1997 and partially recovered to 3934 by the end of October 1997, indicating a decline of 7.6 per cent during July-October 1997. It is important to note that the drop in the Indian stock market in response to the collapse of the Hong Kong stock market on October 23, 1997 can only be regarded as moderate, with the BSE Sensex falling by around 5 per cent over three trading sessions during the last week of October. The major and pronounced fall in the stock markets occurred during the period from November 1997 to January 1998, with the BSE Sensex declining by 18 per cent to reach the level of 3224 by the end of January 1998. It is again evident that a large proportion of this decline can be attributed to the political uncertainty rather than the East Asian crisis. In fact, soon after the general elections, the BSE Sensex increased significantly to reach the level of 4007 by the end of April 1998, indicating a strong recovery of more than 25 per cent from the low levels reached in January 1998.

It may be noted that during the period from July to October 1997, the net FII investments in Indian stock markets were not only positive but also substantial amounting to US$ 860 million, with FIIs being net buyers in each of the four months. It was only during the subsequent period from November 1997 to January 1998 that the net FII investments turned negative, their net aggregate sales during the three month period being US$ 322 million. Thus, during the entire period from July 1997 to January 1998, Indian stock markets witnessed positive portfolio investment of US$ 538 million by foreign institutional investors, unlike the East Asian countries where the portfolio investments turned substantially negative during the same period. Moreover, during the subsequent period, especially February and March 1998, the net FII investments turned positive and the portfolio investment inflows during these two months more than offset the negative FII flows experienced during the preceding three months which were characterized by uncertain political climate.

Foreign Trade

The East Asian crisis has direct as well as indirect implications for India's foreign trade. The direct implications of the crisis relate to the changes in India's *exports to the East Asian countries and* India's imports from these countries. The estimates of India's foreign trade with the four East Asian countries, based on the latest available information, are presented in Table 9.

Table 9: India's Trade with Four East Asian Countries

(US$ Million)

	1996-97			*1997-98*		
Country	*Exports*	*Imports*	*Trade Balance*	*Exports*	*Imports*	*Trade Balance*
Thailand	300	197	103	373	230	143
Indonesi.a	592	599	-7	435	729	- 294
Malaysia	531	1041	-510	481	1184	- 703
S. Korea	519	884	- 365	411	896	- 485
Total of countries	4 1942	2721	- 779	1700	3039	- 1339
Share in Total Trade	5.8%	7.0%		5.0%	7.5%	

Prior to the onset of the East Asian crisis, India had trade surplus with Thailand, almost balanced trade with Indonesia, and trade deficit with Malaysia and Korea and the situation continues to be more or less the same even in 1997-98. However, the direct consequence of the East Asian crisis on India's foreign trade is reflected in the significant increase in India's overall trade deficit with these four countries from less than $ 0.78 billion in 1996-97 to more than $ 1.34 billion in 1997-98. Thus, Indian economy has suffered a loss of $ 0.56 billion through increased trade deficit as a result of the East Asian crisis. It is interesting to note that only one-third of this amount represents the loss of export market, while the remaining two-thirds actually represent higher imports from East Asian countries indicating the effect of their substantially cheaper products replacing the domestic products.

Given the above estimates, the direct impact of East Asian crisis cannot be regarded as significant in relation to the overall magnitude of India's foreign trade. However, the aggregate picture can conceal massive effects on individual industries. An analysis of the commodity composition of India's exports to East Asian countries shows that the extent of decline in exports has been quite high in the case of gems and jewellery, raw cotton, and steel industry. Moreover, the indirect effects of the crisis on India's trade, which can be measured in terms of the increased pressure of competition in the third-country markets, may actually turn out to be quite significant. In the absence of adequate information on this aspect of India's exports and imports, it has not been possible to derive even a tentative estimate of the overall indirect impact of East Asian crisis on India's foreign trade.

Conclusion

The East Asian financial crisis resulted from a strong combination of mutually reinforcing factors such as appreciation of real exchange rates, very high levels of current account deficit, extremely high growth of short-term external debt, and highly fragile financial sector. With the introduction of major reform packages associated with the official bail-out assistance, the most severely affected East Asian economies are now on a path of recovery and it is most likely that this process of recovery will be more or less completed by the end of 2000. In all probability, these economies will bounce back and resume their high growth trajectory within a period of three to four years, though perhaps at a slightly lower rate of growth as compared to the early 90s. In fact, the much needed reforms finally introduced by these countries now in response to the financial crisis faced by them will make them stronger and more formidable economies in future.

The overall impact of the East Asian financial crisis on the Indian economy can at most be described as moderate. The slow down of India's industrial growth and exports, the moderate depreciation of Indian currency, and the significant fall in the stock market experienced during the last quarter of 1997 and the first three quarters of 1998 can actually be attributed more to the climate of political uncertainty rather than the East Asian crisis. Fortunately, the main contributory factors responsible for the East Asian financial crisis do not exist in any significant proportion in the Indian economy. India's short-term debt is only around $ 5 billion as of March 1998, which represents less than 6 per cent of aggregate external debt and less than 20 per cent of the country's foreign exchange reserves. Moreover, the current account deficit is still around 2 per cent of GDP and the cumulative portfolio investment by FIIs represents an insignificant proportion of the market capitalization. The downgrade of the country's credit rating by international agencies in 1998 has also not created any major negative impact on the foreign capital inflows, which seem to have been affected more on account of the prevailing political uncertainty coupled with the perceived threat of sanctions. Given the inherently strong fundamentals, the Indian economy, therefore,

does not face any strong threat arising from the that the government is now likely to adopt with regard contagion effects of the Asian virus. Thus, the only to introducing the capital account convertibility aimed major implication of the East Asian financial crisis for at making the Indian currency fully convertible and the Indian economy is perhaps the cautious approach this can actually be viewed as a positive effect.

Exhibit 1: Chronology of East Asian Crisis

1997	
jan-Feb 1997 February	Pressure on the Thai baht met by heavy intervention in spot and forward markets Euro-bond default by Thai property company Somprasong Land
1997 15th May	Thailand introduces controls aimed at segmenting the onshore and offshore markets but strong pressure continues
2nd July	Floating of the Thai baht. Pressure spreads to the Philippine peso, Malaysian ringgit and Indonesian rupiah
llth July llth July	Band of Philippine peso widened to unspecified range Band of the Indonesian rupiah widened from 8% to 12%
Last Week of July 7th	Malaysian ringgit falls by 4.8% Equity prices peak in Hong Kong
August 14th August 20th	Floating of the Indonesian rupiah
August 26th August 17th	IMF standby credit for Thailand of $ 3.9 bn. approved
October	Equity prices peak in Taiwan
20th-23rd October	Authorities stop supporting the New Taiwan dollar, which falls by 6%. Pressure on Hong Kong dollar and equity market intensifies Financial turbulence in Hong Kong. Hang Seng index falls by 23% in three days. Pressure on Korcnn won mounts
27th October 28th	7% decline in US equity prices. Sharp declines in Latin American equity markets
October 5th November	23% decline in Russian equity prices
10th November	IMF standby credit for Indonesia of $10.1 bn approved; $3 bn made available immediately
20th November 21st	Interest rates raised by 7 percentage points in Russia and authorities announce that the intervention band for the rouble will be widened from ±5% to ±15%
November 4th December	Daily fluctuation band for the Korean won widened from ±2.25% to ±10% Korea applies for IMF standby credit.
16th December	IMF standby credit for Korea of a record $ 21 bn. over three years approved; $ 5.6 bn. disbursed immediately Floating of the Korean won

1998	
27thJanuary	Indonesian corporate debt "pause" Agreement between Korea and its external creditors to exchange $ 24 bn. of short-term debt for
29th January	government-guaranteed loans at floating rates of 2.25 - 2.75 percentage points over six-month LIBOR
9th-10th Feb.	Indonesia's plan to create a currency board opposed by the IMF and several creditor governments, which threaten to withdraw financial assistance
4th March	In a second review of Thailand's economic programme, the IMF relaxes certain macroeconomic policy targets and approves disbursement of second tranche

Source : Bank for International Settlements, *Annual Report,* 1998.

Exhibit 2: Growth of East Asian Countries

Country	Amount in US$ Billion			Average Growth Rate	
	1980	1990	1996	1980-96	1990-96
Gross Domestic Product					
Thailand	32.4	81.8	176.4	11.2%	13.7%
Indonesia	78.0	106.2	214.6	6.5%	12.4%
Malaysia	24.5	42.6	97.5	9.0%	14.8%
South Korea	62.8	253.6	461.5	13.3%	10.5%
Exports					
Thailand	7.9	29.6	71.4	14.8%	15.8%
Indonesia	23.8	27.9	51.2	4.9%	12.2%
Malaysia	14.1	31.9	83.3	11.7%	17.3%
South Korea	21.9	77.8	155.1	13.0%	12.2%
World Exports	2400.6	4238.9	6689.0	6.6%	7.9%

Sources : 1. World Bank, *Trends in Developing Economies*, 1994 & 1996.

2. World Bank, *World Development Report, 1998.*

Exhibit 3: Comparative Growth Rates of Real GDP (At 1993 Prices and Exchange Rates)

Category	1980-1990	1990-1996	1980-1996
Developed Countries	2.9%	1.7%	2.4%
Developing Economies	2.4%	4.9%	3.3%
Latin America	1.0%	3.2%	1.8%
Africa	1.9%	1.6%	1.8%
South-East Asia	6.9%	8.0%	7.3%
All Countries	2.8%	2.1%	2.5%

Source : United Nations, *World Economic & Social Survey 1997.*

Exhibit 4: East Asian Countries : Saving and Investment Rates in 1996

	Saving-GDP Ratio	Investment-GDP Ratio	Resource Gap
Thailand	35.2%	43.1%	7.9%
Indonesia	31.8%	35.3%	3.5%
Malaysia	37.3%	45.6%	8.3%
S Korea	35.4%	37.2%	1.8%

The Resource Gap for S. Korea was around 8% during the eighties.

Sources : 1. World Bank, *Trends in Developing Economies*, 1991 & 1996.

2. United Nations, *World Economic & Social Survey 1997.*

Exhibit 5: Behaviour of Exchange Rates
(Spot Rates in Units of Local Currency per US$)

	1980	1990	1996	June 1997	Dec 1997	Jan 1998
Thailand (Baht)	20.5	25.6	25.4	25.8	46.8	54.2
Indonesia (Rupiah)	627	1843	2342	2499	5130	13250
Malaysia (Ringgit)	2.21	2.67	2.49	2.53	3.89	4.57
S. Korea (Won)	607	708	810	888	1550	1760

Source : *Far Eastern Economic Review* (various issues).

Exhibit 6: Trends in Leading Macroeconomic Indicators in South-East Asian Countries

Country	Ratio of Current A/c. Deficit to GDP		Growth Rate of Exports		Annual Inflation Rate	
	1995	1996	1995	1996	1995	1996
Thailand	8.1%	7.9%	25.1%	1.8%	5.0%	5.9%
Indonesia	3.5%	3.4%	13.4%	9.7%	9.3%	8.0%
Malaysia	8.5%	8.3%	26.0%	9.3%	6.0%	6.3%

Source : World Bank, *Global Development Finance*, 1998.

Exhibit 7: Growth of External Debt

(US$ Billion)

Country	1990	Mid-1997
Aggregate External Debt		
Thailand	28.1	100.4
Indonesia	69.9	133.0
Malaysia	15.3	44.7
S Korea	35.0	103.3
Short-term External Debt		
Thailand	8.3	47.2
Indonesia	11.1	36.2
Malaysia	1.9	16.0
S Korea	10.8	71.3
Proportion of Private Non-guaranteed Debt		
Thailand	36.5%	68.0%
Indonesia	17.7%	37.9%
Malaysia	13.4%	45.3%
S Korea	27.0%	60.0%

Sources: (a) World Bank, *Global Development Finance*, 1998.

(b) World Bank, *World Debt Tables*, Vol 2, 1996.

(c) Bank for International Settlements, *Annual Report*, 1998.

Exhibit 8: Behaviour of Interest Rates in Developed Economies

Country	*Short-term Int. Rates*		*Long-term Int. Rates*	
	1990	*1996*	*1990*	*1996*
Germany	7.9%	3.3%	8.9%	5.6%
Japan	7.2%	0.5%	7.4%	2.4%
United States	8.1%	5.3%	8.6%	6.4%
United Kingdom	14.6%	5.9%	11.1%	8.1%
France	9.9%	3.7%	10.0%	6.4%

Source: United Nations, *World Economic & Social Survey*, 1997.

Exhibit 9: Recent Trends in Foreign Exchange Reserves

(US$ Billion)

Country	*Dec. 1996*	*June 1997*	*Dec. 1997*
Thailand	37.2	30.9	25.7
Indonesia	18.6	19.9	16.1
Malaysia	26.2	25.8	20.0
S. Korea	33.2	33.3	19.7

Source: IMF, *International Financial Statistics*, August 1998.

Exhibit 10: Trends in Short-term Debt as a Percentage of Foreign Exchange Reserves

Country	*End-1993*	*Mid-1997*
Thailand	89	153
Indonesia	171	182
Malaysia	28	62
South Korea	148	214

Source: Bank for International Settlements, *Annual Report*, 1998.

Exhibit 11: Credit Rating for East-Asian Countries, 1996-97

Country	*Standard & Poor's Rating*			*Moody's Rating*		
	June 1996	*June 1997*	*Dec. 1997*	*June 1996*	*June 1997*	*Dec. 1997*
Thailand	A	A	BBB	A2	A2	Ba1
Indonesia	BBB	BBB	BBB-	Baa3	Baa3	B2
Malaysia	A+	A+	A+	A1	A1	A2
S. Korea	AA-	AA-	B+	A1	A1	Ba1

Source: World Bank, *Global Development Finance*, 1998.

Exhibit 12: Impact of Currency Crisis on GDP Growth

Country	*1996 (Actual)*	*1997 (Estimate)*	*1998 (Forecast)*	*1999 (Forecast)*
Thailand	5.5%	0.7%	- 8.0%	- 1.0%
Indonesia	8.0%	4.6%	- 15.0%	- 0.6%
Malaysia	8.6%	7.8%	- 5.8%	- 0.7%
S Korea	7.1%	5.5%	- 7.0%	- 0.7%

Source: Goldman Sachs (Asia) Estimates, Nov. 1998.

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