

# **EAST ASIAN FINANCIAL CRISIS: ALTERNATIVE APPROACHES**

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## **ABSTRACT**

East Asian economies were considered as "miracle economies" because of their sustained high rate of economic growth during the last two decades. In 1997 these economies suffered financial crisis due to several reasons. An attempt has been made in this paper to give alternative approaches to explain the crisis. Financial and capital liberalization without a framework of prudential regulation caused the financial crisis of the East Asian countries. No institutional and operational frame work exist for financial sector to function effectively under market conditions. These economies are not well equipped to absorb the shocks of capital liberalization. The financial crisis of East Asian economies fit the model of speculative cycles developed by Minsky. According to the model, foreign capital inflows intermediated through the banking system were used to fuel a boom in asset prices in equity and real estate. As a result, the stock and real estate prices shot up. The event of non-repayment of foreign debt by the financial companies triggers the crisis. The slow down of exports due to change in global market conditions raised concerns among creditors about the ability of East Asian firms to repay their debts, which precipitate the financial crisis in East Asia.

## **1. INTRODUCTION:**

East Asian economies were considered as "miracle economies" because of their sustained high rate of economic growth during the last two decades. These economies enjoyed high degree of trade orientation, high savings and investment rates and low inflation rates. They adopted relatively free market, free trade, open capital account and liberalized policies to attract foreign direct investment. Production and exports were geared to the fast growing manufacturing sector, both in labour intensive products and in high-skill high-tech goods like automobile and electronics. GDP had a relatively high order of dependence on exports as the ratio of export-GDP varied between 25% to 85% over 1990-96. Their manufacturing exports constitute a large proportion of their exports. The high growth of GDP of these countries is contributed by high growth of exports.

The low inflation rates in Europe and U.S. helped lower nominal interest rates globally, moderate the debt burden of the East Asian economies and maintain a low inflation rate in these countries. During this period, the developed countries were looking for their funds to be invested. Since East Asian countries followed liberalized policies, the developed countries, especially Japan and USA had heavily invested in East Asia. Japan played a major role since 1985 as a supplier of capital, as a market for manufacturer and as a transferor for

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technology.

However, cracks in the East Asian economies were observed during 1993-96 (See Table 1). The current account deficits have increased and export growth has fallen in East Asian Countries due to several reasons. A depreciation of the Japanese Yen as well as the Chinese Yuan vis-à-vis the U.S. dollar which was the link currency for these two countries, hit hard the export competitiveness of the products exported from these countries.

**TABLE 1**  
**CURRENT ACCOUNT DEFICITS AND EXPORT GROWTH RATES**  
**IN EAST ASIAN ECONOMIES IN THE 1990s**

	Current Account Balance (Per cent of GDP)			Annual Growth (per cent) of Exports in Dollar Terms		
	1990-1992	1993-1995	1996	1993-1995	1996	1997*
Indonesia	-2.9	-2.2	-3.5	10.2	9.7	8.9
Korea	-1.6	-0.8	-5.0	18.1	4.2	0.3
Malaysia	-4.8	-6.5	-4.9	21.9	6.2	3.2
Philippines	-3.7	-4.2	-4.7	21.7	16.7	24.0
Thailand	-7.2	-6.3	-8.0	20.1	-1.2	2.3

*Note: \* Annualised first half growth rates.*

*Source: United Nations (1998).*

China devalued its currency Yuan by 33% in 1994 in order to push up its exports. It can be seen from the Table 2 that the Thai baht was pegged around 25 to the U.S. dollar whereas the Yuan of China fell from 5.221 to the U.S. \$ in 1990 to 8.339 to the U.S. \$ in the first quarter of 1996. China flooded its exports to U.S. and other markets at the expense of rivals from Thailand, Malaysia and Indonesia. International trade growth slowed down especially in areas like semiconductors, office automation and consumer electronics – which were the major exports from East-Asian countries. This was aggravated further by new signs of protectionism in the developed market, in the form of non-tariff barriers. Based on the current account positions and the continuing deterioration of export growth, one could expect the currencies of Indonesia, Korea, Malaysia and Philippines to depreciate relatively modestly.

The genesis of the crisis can be traced to Thailand. The Thai banking system has been liberalised since 1985. The capital account has been opened up and banks became intermediaries between foreign lenders and domestic Thai borrowers. In 1993, Thailand instituted a major policy change with introduction of Bangkok International Banking Facilities. This policy change provided the use of cheaper foreign borrowings for domestic uses. The Bank of Thailand assured that the baht would not be devalued against U.S. dollar. There was uninterrupted inflow of foreign capital used for speculative real estate boom and other

non-economic private investment. Foreign borrowings were unhedged because of the acceptance of the assurance of bank of Thailand on the maintenance of exchange value of baht. External borrowing was made attractive by maintaining the stable baht to dollar exchange rate and the interest rate differentials between baht and U.S. dollar.

**TABLE 2:**  
**EXCHANGE RATES IN EAST ASIA, 1985-1997**  
(Price of 1 US dollar in domestic currency)

	1985	1986	1987	1988	1989	1990		
China	2.9367	3.4528	3.7221	3.7221	3.7651	4.7832		
Indonesia	1,110.6	1,282.6	1,643.8	1,685.7	1,770.7	1,842.8		
Malaysia	2.4830	2.5814	2.5196	2.6188	2.7088	2.7049		
Philippines	18.607	20.386	20.568	21.095	21.737	24.311		
South Korea	870.02	881.45	822.57	731.47	671.46	707.76		
Thailand	27.159	26.299	25.723	25.249	25.702	25.585		
	1991	1992	1993	1994	1995	1996	1997	
							I	II
China	5.3234	5.5146	5.7620	8.6187	8.3514	8.3142	8.3202	8.3276
Indonesia	1950.3	2,029.9	2,087.1	2,160.8	2,248.6	2,342.3	2,403.3	2,437.2
Malaysia	2.7501	2.5474	2.5741	2.6243	2.5044	2.5159	2.4852	2.5074
Philippines	27.479	25.512	27.120	26.147	25.714	26.216	26.367	26.384
South Korea	733.35	780.65	802.67	803.45	771.27	804.45	870.98	891.70
Thailand	25.517	25.400	25.319	25.150	24.914	25.343	25.861	25.000

**Sources:** IMF, International Financial Statistics; Taiwan Statistical Data Book, 1996, Taipei, Council for Economic Planning and Development, Republic of China; ADB (1990 and 1997).

The overvalued exchange rate and low productivity growth contributed to the decline in Thai competitiveness. The total external debt rose rapidly to reach to \$70 billion, which contributed 50% of the GDP with private debt representing about 80% of the total. About 40% of external debt were short-term. The required annual rollover of short-term debt was \$40 billion. The foreign direct investment and portfolio investment in Thailand were \$1.9 billion and \$0.9 billion in 1992. The respective figure for 1996 were \$1.7 billion and \$4.1 billion.

The domestic financial crisis was already evident in the late 1996 with significant property bubble and severe strains on financial companies. When a leading property company missed payment due on its foreign debt in early Feb. 1997, the signal was a fall in the property markets and doubts arose about many finance firms that have lent heavily to the property

companies. Finance one, a major finance company had non-performing loans comprising more than 40% of its hire purchase loans of \$600 million and 55% of its \$2.4 billion property loans. The company collapsed in July 1997. Earlier the Bangkok Bank of Commerce failed in mid-1996. The confidence in Thai financial system and Thai economy were completely broken down. It is estimated that the non-performing loans of banks and finance companies were 12% of total loans in mid-1997. In June 1997, Bank of Thailand ordered 16 ailing finance companies to suspend their operations, to submit plans to strengthen their capital base through merger or capital issues and to improve their operational performance.

In mid-May 1997, the baht was hit by massive selling pressure. The bank of Thailand responded by establishing a two-tier foreign exchange market by closing off of baht resources to foreign entities. Short-term interest rates soared as domestic liquidity was squeezed. Bank of Thailand spent forex reserves of \$13 billion to defend the exchange rate through direct sale of foreign currency and through forward currency swaps.

The sharp slowdown of exports, rising real wages, mounting external debt, weak financial sector and dwindling forex reserves and drastic fall in economic growth have led to a loss of confidence that has set off withdrawal of foreign funds. The Bank of Thailand gave into market pressure on July 2, 1997, abandoning a 13-year old exchange rate mechanism and adopted managed float which depreciated baht by 20% within a few days of its announcement. By November 1997, it had shed 40% of its value. It is a case of confidence crisis leading to currency crisis.

The downward trend in the Thai currency had a contagious effect in the rest of eastern countries. Between July 1997 and February 1998, the Korean, Malaysian and Philippine currencies depreciated at the rates of 34% to 47% and Indonesian rupiah declined by 76%.

The timing of the first serious currency devaluation differ across the countries, the degree of devaluation differs and the number of serious depreciation also differs. The relatively serious depreciation had occurred after January 1998. Similarly, the Korean episodes occurred long after that baht depreciation. The contagion from Thailand ended by the end of 1997 and then the contagion is from Indonesia. The sudden movements in the exchange rates of these countries were matched by swings in cross-border capital outflows, which mostly included short-term portfolio movements.

In the wake of fall in currencies, short-run interest rates shot up by 30% for Indonesia, 25% for South Korea and 15% for Thailand by the end of November 1997. Malaysia resisted the wave as in other aspects of economic policy by maintaining the interest rate at 9%.

The impact of the currency crisis immediately felt on share prices in stock markets. This has debilitating effect on the real economies.

The east Asian economies have adopted relatively free market, free trade and open capital flows without appropriate regulatory agencies, banking controls, transparency, bureaucratic professionalism and the civil society needed to keep such a system stable and reasonable fair.

Speculation and contagion have been the mechanism responsible for starting and spreading currency crisis. Contagion was evident in the transmission of the financial and currency crisis of Thailand to other East Asian economies. The baht was tested by speculative attacks in late 1996 and in the first half 1997. Bank of Thailand spent a large part of the nations' forex reserves to defend the exchange rate through direct sale of foreign currency and through forward currency swaps. Behind the speculative attacks and the contagion there are high short-term debt to reserves ratios of Indonesia, Korea and Thailand.

How do we explain this financial crisis? An attempt has been made in this paper to give alternative approaches to explain the crisis.

The paper is organised in four sections. Section 2 gives a brief review of literature. Section 3 analyses the alternative approaches to explain the East Asian crisis. Section 4 concludes the discussion.

## **2. Brief Review of Literature**

Edwards (1989, 1990), Edwards and Wijnbergen (1983, 1986), Rodrik (1987), Corden (1987), Calvo (1987) emphasized that stabilization process is to precede capital liberalization. However, Krueger (1981, 1984, 1988) recommended reliance on foreign funds and strong multilateral assistance to tide over transition period. He argued to reduce barriers to capital movements before stabilization program.

There is widespread agreement that capital liberalization would be postponed till trade and banking sector reforms are completed. Edwards (1990) argued that international capital controls should be lifted after the domestic financial market has been reformed and domestic interest rates have been raised. In turn interest rates should be liberalized only after fiscal deficits is under control.

It is argued that opening up of capital account results in excessive capital inflows consequently real exchange rate (RER) appreciates. Whereas the trade reform would require a depreciated RER to give boost to the export sector and neutralise the effect of reduction in tariffs on imports. Opening of capital account makes the exchange rate management difficult and it leads to excessive imports, which is financed from the international sources if there is lack of credibility of reforms. However there is mixed experience in the sequencing of capital liberalization and financial reforms.

Edwards (1984), Edwards and Wijnbergen (1983, 1986) and Caprio et al (1994) argued that slow gradual financial sector reforms would avoid short-term crises whereas rapid liberalization would lead to short-term crises.

Again there should be credibility to reform process, otherwise the very reform process would be thwarted. If economic agents believe that the trade liberalization will be reversed, they will import consumer durables immediately. This will be facilitated in the presence of free capital mobility as agents can also resort to foreign credit to finance imports. This will result in unsustainable current account deficits, falling reserves of central bank and may

finally force them to reverse the trade reform process.

Andersen (1993) and Huh and Kim (1994) expressed that East Asian countries ignored the absence of well-developed financial markets. Le-Fort (1994) described that banks acted as agents of the groups engaging in risky investment activity despite extremely low capital positions.

McKinnon (1991) and McKinnon and Pill (1996 and 1998) attributed “over borrowing syndrome” to implicit deposit insurance. They stressed the need to restrain short-term capital flows, particularly those intermediate through the domestic banking system. Edwards and Edwards (1987) argued that depositors had little incentive to try to discriminate between sound and unsound banks because of moral hazard in the banking system. Bigignano (1999) argued that there was significant microeconomic misallocation of credit in East Asian countries. He found that contribution of government-guarantee-induced moral hazard problems affected the behavior of large borrowers and lenders in deregulated financial systems. He further argued that the weakness in financial transparency, corporate governance and prudential regulation and supervision in a high-growth environment led to excessive credit creation, asset price booms and large currency exposure. Fernald, Edison and Loungani (1999) provided evidence against the view that China's emergence as trade nation and its 1994 devaluation had a significant adverse effect on the export performance of other Asian economies. However, Sachs and Radelet (1998) argued that devaluation of Yuan of China and NAFTA contributed modestly to the financial crisis of East Asia. They further established that the combination of rapid inflows of foreign capital, appreciating real exchange rates and rapid growth in bank lending led to some deterioration in the quality of investments in Asia. In their probit technique they found that short-term debt to reserves and rapid buildup of bank claims led to the crisis.

### **3. Alternative Approaches to explain the Crisis**

There are broadly three approaches to explain the East Asian Crisis. They are: (a) Financial and Capital liberalization without a framework of prudential regulation (b) Minsky's boom-bust model and (c) shift in global market conditions.

#### **(a) Financial and Capital Liberalization without Framework of Prudential Regulation**

The East Asian countries have adopted liberalized policies in Banking sector. But there is no institutional and operational framework exists to function financial sector effectively under market conditions. There were shortcomings in legislation, prudential norms and accounting frameworks and the general lack of adequate supervision. Under banking sector reforms, specialized banks were commercialized and assigned new tasks to them. Private banks were allowed to enter. During reforms period both old and new banks accumulated significant amount of non-performing loans and they could not strengthen their banking skills to cope with the reforms. In many cases, the former specialized banks acted as the main channel in a subsidy chain from government extended unrecoverable loans to loss

making enterprises at below market interest rates. New private banks engaged in aggressive lending to enterprises with which they were associated through ownership or other ties. High real interest rates in the immediate aftermath of successful stabilization exacerbated banks' stocks (outstanding bad loans) and flow (operational inefficiencies) problems.

The absence of a well-functioning, market-based banking system and persistence of prudential problems have complicated the handling of foreign fund.

In addition, bad loan problems distort credit allocation and thereby impede structural adjustment, as well-run banks try to protect their assets by shifting their portfolios towards holdings of less risky government securities and by widening spreads. Finally, dealing with problem banks usually entails significant government financial assistance, which has fiscal and therefore broader macro economic implications.

Financial reforms are crucial pre-condition for capital liberalization. The experiences of East Asian countries reasserted the bitter consequences capital liberalization in these countries.

East Asian economies have undergone radical financial deregulation over the 1990's, including near-removal of restriction on the inflow and outflow of capital. The deregulation happened with little attention to the new kinds of regulation that would be required and with only a thin base of financial skills. Banks and finance companies still operate in East Asia as family business with management structures unable to cope with the complexity of present-day finance. The deregulated financial system enabled inexperienced private domestic banks and firms to take out large, dollar denominated loans from foreign lenders and on-lend with generous spreads. High profits for those with access to much cheaper foreign credit was the chief reason firms and banks, both national and international, pressurized the governments to undertake financial deregulation, their pressure converging with that of the IMF and the World bank.

In Korea, President Kim Young Sam proclaimed financial deregulation as an important policy objective. Korea liberalized capital flows and relaxed monitoring of foreign borrowing activities. The control on foreign borrowing was relaxed more than was needed and fails to supervise the financial institutions involved in such borrowings adequately. The Kim government sanctioned new license for 20 merchant banks and there was virtually no supervision on these banks. Korea's external debt increased to \$150 billion in 1996. In order to contain inflation, exchange rate was used, which caused overvaluation of currency, hurting exports.

Under radical capital liberalization and financial deregulation, Thailand undertook heavy private borrowing from Japan, Europe and United States. Their investment rate was between 40-44% during 1990-96. Many investments were based on money borrowed abroad. Due to high interest rates in Thailand and a fixed exchange rate policy, foreign investors were eager to place their money in Thailand.

In 1992, the Bangkok International Banking Facilities (BIBF) were established to attract

more foreign funds to cover increasing current account deficits. The BIBF made it possible for local and foreign commercial banks to take deposits or borrow in foreign currencies from abroad and lend the money both in Thailand and abroad.

The external debt increased from \$40 billion in 1992 to \$80 billion in 1997. The total outstanding debt as a share of GDP was 51% in 1996. Of the total debt stock, 80% was private debt and almost 36% were short term. In 1997, the total foreign debt was \$90 billion that \$73 billion belonged to private companies and that \$20 billion was falling due by the end of 1997.

The massive inflow of money led to a tripling in the amount of loans in the financial system and as there were not enough places to invest them productively, a misallocation of investments took place. Substantial part of the money was channeled into already inflated assets in the real estate sector. During 1992-96, a total of 755,000 housing units were built in Bangkok. By 1996 the supply of housing was outstripping effective demand and the following year Thailand had residential vacancy rates of 25-30% and vacancy rates for officers in Bangkok of 14%. Moreover, many property owners artificially inflated the value of their assets and kept borrowing against them and most real estate companies had poor cash flow.

There was "over-borrowing" syndrome in East Asian Economies due to moral hazard of government control and protection of banks over a long period of time. The implicit guarantees given to lenders eliminated the incentives for lenders to analyze carefully the credit quality of the banks.

When the economic recession started in 1996 and the buying power of the middle and upper classes began declining the property bubble burst and left substantial bad debts on the balance sheets of the financial companies, which had financed their investments by borrowing abroad.

The underlying factor behind the East Asian crises is institutional failures in the context of financial sector stabilization. Mature free market economies function on the basis of institutions that minimize informational imperfections and transaction costs and which facilitate high degree of transparency and accountability of government regulatory agents. When the institutional conditions fail to hold or are incomplete, it results in adverse selection, and moral hazard behavior under the principal and agency relations, which are highly relevant to the functioning of financial markets. The prevailing institutional conditions in east-Asian countries are inconsistent with and inadequate for an efficient functioning of the free market mechanism.

In the case of East Asian economies, the borrowed capital was channeled to unproductive and highly risky assets like real estate (non-tradable) creating an asset bubble. Borrowing and lending in financial markets are based on principals (savers) and agency relations (intermediaries) and if there is informational imperfection or engineered misinformation results in adverse selection and moral hazard behavior. Informational imperfection in these countries



is observed to be a result of the corrupt and mismanaged banking system and highly inefficient and non-transparent corporate governance under insider relations between the government agents and large banks and industrialists. The cost of these outcomes is the evaporation of savings of the public without any accountable and compensatory mechanism.

Capital liberalization is the root cause of the Asian collapse. It was the removal of restrictions, which allowed foreign capital to enter the countries with ease and just as quickly flee when trouble surfaced. This freedom of entry and exit to global capital has provided few long-term benefits, but it has caused enormous destruction in the developing countries. Jagadish Bhagavati of the Columbia University argued that making currencies of the developing countries fully convertible is of benefit only to the Wall Street – U.S. Treasury Complex.

The liberalized capital inflow crushed South America in 1982, Mexico suffered its currency crisis in 1994 and in 1997 there was the collapse in East Asia.

The basic problem is that global financial markets are prone to vulnerability and crises. One reason for the crises is the mismatch between short-term liabilities and long-term assets makes intermediaries vulnerable to panic.

The argument for capital liberalization has been built on the premise that it will promote a more efficient allocation of capital across the world. Domestic firms facing high interest rates can access inexpensive funds in the global market.

Capital liberalization broadens the channels through which the trade and investments can be financed and increase income. It gives more opportunities for portfolio diversification and hence a potential higher risk adjusted rates of return. It also increases the efficiency of domestic financial system.

However, the capital liberalization is highly sensitive to: conduct of macro economic policies and perceived soundness of domestic banking. It will lead to excessive capital inflows and outflows and there is a possible attack on currency as happened in Mexico and East Asian Countries. It does not permit monetary policy to take on an excessive burden of the adjustment. However, it enhances the effectiveness of fiscal policy by: reducing real interest rates applicable to public sector borrowing, bringing about an optimum combination of taxes to international levels with beneficial effect for tax revenues and reducing crowding out effect in the access to funds.

Mr. Dani Rodrik of the Harvard University has analyzed the experience of 100 developed and developing countries between 1975 and 1989, some of which had controls on capital movements while others did not. The conclusion was "There is no evidence in the data that countries without capital controls have grown faster, invested more or experienced lower inflation. Capital controls are essentially uncorrelated with long-term performance.

Mc Kinan argued that trade reforms, strong balance of payment positions, fiscal disciplines, financial sector reforms, banking reforms, inflation control, good foreign reserve position, strengthening of prudential regulation etc., are pre-requisite to capital account convertibility.

## **(B) MINSKY'S BOOM-BUST MODEL**

The financial crisis of East Asian economies fit the model of speculative cycles developed by Minsky (See Bordo, 1986 pp. 199-200).

According to Minsky, as the economy proceeds through the upswing of the business cycle, the financial structure becomes more fragile. A crisis occurs when a fragile financial structure is shocked by some event that triggers a sell-off of assets in a thin market, producing a sharp decline in asset prices. The fragility of a financial structure is determined by three factors viz. (i) the mix of hedge, speculative and Ponzi finance (ii) the liquidity of the portfolio and (iii) the extent to which on-going investment is debt-financed.

Minsky's terms are defined as follows: if a unit's cash flow commitments on debt are such that over each significant period cash receipts are expected to exceed cash payments by a significant margin, the unit is said to be engaged in hedge financing. Speculative financing is defined as "cash flow payments over some period exceed the cash flows expected over this period. A ponzi finance unit is one for which the interest portion of its cash payment commitments exceeds its net income cash receipts. A ponzi unit has to increase its debt in order to meet its commitments on outstanding instruments. The importance of speculative and Ponzi finance is that a rise in the interest rate can convert a positive into a negative present value; precipitating insolvency.

According to Minsky's approach, in the upswing of the cycle, the demand for new investment in response to improved profit opportunities leads to a demand for finance. Part of the new investment is directly financed by short-term debt, part by equity and part by long-term debt. As the economy expands, it generates an excess demand for finance, raising the rate of interest. However, the excess demand is partially and temporarily offset by financial innovation, which in turn fuels the finance for further investment, which would raise the rate of interest.

As the rate of interest rises, four factors are to create a fragile financial environment viz. (a) an increase in debt finance (b) a shift from long term to short term debt (c) a shift from hedge to speculative to ponzi finance and (d) a reduction in financial institutions' margin of safety.

Once a fragile environment takes place, any further rise in interest rates by shifting hedge to speculative to ponzi financing crisis where firms are unable to 'roll over' their debt. However, the crisis can be aborted by the central bank acting as lender of last resort.

If we analyze the financial crisis of the East Asian economies, Minsky's model explains this crisis to certain degree.

East Asian economies have shown sustained high growth rates during 1991-97 (Table 3). Their savings and investment rates were very high and inflation rate was low during the same period (Table 4,5 and 6). The extremely fast growth of the East Asian exporters has

prompted much speculation as to the cause of such success. As these economies grew, it attracted huge capital inflows during 1990-96. The private net inflows to these countries had increased from \$40.5 billion in 1994 to \$93 billion in 1996. The bank credit to the private sector as a percentage of GDP has increased enormously during 1980 and 1997 (Table 7). There was a shift in the composition of external financing from foreign equity investment to bond and from long-term to short-term (Table 8). There was noticeable increase in inter-bank claims in these countries (Table 8). The ready availability of foreign short-term credit contributed to "the development of get-rich-quick casino mentality" which lead to the division of resources from productive activities towards speculative one (Piei and Ariff, 1998).

**TABLE 3**  
**EAST ASIA: GDP AVERAGE ANNUAL GROWTH RATES**

	1961-70	1971-80	1981-90	1991-97	1995	1996	1997
Indonesia	3.9	7.2	5.6	6.8	8.2	8.0	5.0
Korea	9.1	9.3	9.1	7.1	8.9	7.1	6.0
Malaysia	6.5	7.9	6.0	8.4	9.5	8.6	7.0
Philippines	4.9	5.9	1.8	3.1	4.8	5.7	4.3
Thailand	8.2	6.8	8.0	7.0	8.7	6.4	0.6

**Sources:** 1960-94. World Bank. World Data 1995: 1995-97. Latin America: Economic Intelligence Unit. Country Reports; 1995-97, Asia, IMF (1997).

**TABLE 4**  
**GROSS DOMESTIC SAVINGS (% OF GDP)**

	1961-70	1971-80	1981-90	1991-95	1995	1997
Indonesia	7.6	26.7	29.9	32.1	36.0	31.0
Korea	9.9	22.4	32.4	36.4	36.0	34.0
Malaysia	23.8	30.4	33.2	35.3	37.0	44.0
Philippines	19.1	25.1	20.4	16.4	15.0	16.0
Thailand	19.4	22.4	27.5	34.9	36.0	35.0

**Source:** 1961-94, World Bank, World Data 1995: World Bank Development Report various years.

Foreign capital inflows intermediated through the banking system were used to fuel a boom in asset prices in equity and real estate. Rising asset prices increased the value of collateral, inducing further lending by banks. Real assets used as collateral increased credit limits as their market value rises. This can spark the beginning of an asset price bubble leading to a demand for fixed assets, such as real estate whose higher market price raises collateral values, further increasing credit availability, borrowing and asset prices. This dynamic multiplier of credit lines and asset values has become all the more rapid. The

increase in credit was encouraged by the relatively easy monetary policies in the major industrial economies reflected in low interest rates and abundant liquidity. The high liquidity was directed at the high growth countries based on implicit credit guarantees given by the

**TABLE - 5**  
**GROSS DOMESTIC INVESTMENT (% OF GDP)**

	1961-70	1971-80	1981-90	1991-95	1995	1997
Indonesia	10.4	22.7	28.3	38.2	38.0	31.0
Korea	20.0	28.0	30.7	31.3	37.0	35.0
Malaysia	19.9	26.3	30.6	37.0	41.0	43.0
Philippines	20.1	27.8	22.0	22.9	23.0	25.0
Thailand	21.5	26.2	30.6	41.0	43.0	41.0

Source: 1961-94, World Bank, World Data 1995: World Bank Development Report various years.

**TABLE - 6**  
**AVERAGE ANNUAL CONSUMER PRICE INFLATION**

	1961-70	1971-80	1981-90	1991-97	1995	1996	1997
Indonesia	210.6	17.5	8.6	8.8	9.0	6.6	11.6
S. Korea	12.5	16.5	6.4	6.1	4.8	4.9	6.6
Malaysia	0.9	6.0	3.2	3.7	3.2	3.3	2.9
Philippines	5.7	14.9	14.6	9.5	11.0	5.2	6.1
Thailand	2.3	10.0	4.4	5.5	7.4	4.8	7.7

Source: 1960-94. World Bank. World Bank Data 1995: 1995-97. Economic Intelligence Unit. Country Reports.

**TABLE - 7**  
**GROWTH OF REAL BANK CREDIT TO THE PRIVATE SECTOR**

	1981-89	1990-97	1996	1997	Memorandum item: Bank credit to the private sector as a percentage of GDP	
					1980	1997
Indonesia	22.4	17.9	11.5	19.2	8.1	54.1
S. Korea	13.3	11.6	11.9	15.1	36.3	65.6
Malaysia	11.2	16.1	24.5	23.3	33.1	96.6
Philippines	-4.6	18.0	39.9	27.7	30.6	52.1
Thailand	14.8	17.7	11.6	8.6	27.6	104.5

Source: BIS

governments for the banking system and borrowing countries. Growth in the real sector of these economies did not improve with additional flows of finance, particularly in deregulated financial markets. As a result a large part of these inflows were deployed in speculative ventures covering property and stocks, thus chasing the available financial assets in the secondary markets and bidding up prices in real estate markets. The stock and real estate prices shot up as a result of high liquidity.

When the stock prices and property market started tumbling down by the second quarter of 1995 in Thailand, it caused heavy damage to the asset value of banks. As a consequence the share of non-performing assets held by both banks and the corporates went up sharply in these countries. In addition indices for private investments and construction activities in Thailand started declining from the first quarter of 1996. This process led the Thai economy broken down. In mid-1997, the Thai baht was hit by massive selling pressure.

Short-term interest rates soared as the domestic liquidity was squeezed. Creditors withdrew their funds from the region and the crisis spread. The Thai government abandoned its fixed exchange rate mechanism and adopted managed float which depreciated baht by 20% within a few days of its announcement and 40% by November 1997. A precipitous drop in a currency's value raises the burden of external debt on banking and corporate sectors. The downward trend in the Thai currency had a contagious effect on the rest of the eastern countries. Between July 1997 and February 1998, the Korea, Malaysian and Philippine currencies depreciated at the rate of 34% to 47% and Indonesian rupiah decline by 76%.

In the wake of fall in currencies short-run interest rates shot up by 30% for Indonesia, 25% for South Korea and 15% for Thailand by the end of November 1997 (Table 9).

In 1997, the long period of inflow abruptly revised with a net outflow of around \$12.1 billion.

As the currencies fell and capital flows reversed, several forces came into play to create a self reinforcing spiral into panic. As the exchange rate depreciated and the domestic currency costs of serving foreign debt rose, foreign creditors became more reluctant to extend new loans and roll over existing loans. Domestic debtors had to buy foreign exchange to retire these debts, putting more pressure on exchange rates, which in turn further encouraged creditors not to roll over loans. Second, domestic debtors many of whom had not hedged their foreign exchange exposure began to purchase foreign exchange to try to close their position. Thirdly, the major rating agencies belatedly downgraded countries in the region triggering further withdrawals by creditors.

## **B) SHIFT IN GLOBAL MARKET CONDITIONS**

The East Asian Economies were highly dependent on exports. The export-GDP ratios varied between 25% to 85%. The collapse of their respective export performance in 1996 might probably lead to the crisis. There was a collapse of export growth in 1996 in Thailand and Korea and slowing exports growth in Malaysia and Indonesia (See Table 10).

**TABLE 8****MATURITY DISTRIBUTION OF TOTAL GROSS INTERNATIONAL CLAIMS OF FOREIGN BANKS ON SELECTED EAST ASIAN AND LATIN AMERICAN COUNTRIES**

In billions of US\$ at end-year

	Total claims	Up to and including one year	Over one year up to two years	Over two years	Un-allocated	Up to and including one year as a % of total	Interbank claims
<b>INDONESIA</b>							
1990	24.7	13.4	2.2	8.0	1.0	54.5	5.0
1991	27.3	15.1	3.2	7.9	1.1	55.2	5.8
1992	28.3	17.2	2.4	7.6	1.1	60.7	6.5
1993	30.5	18.8	2.7	8.1	0.9	61.7	7.5
1994	34.2	21.1	3.3	8.7	1.0	61.8	7.8
1995	44.8	27.9	3.2	12.3	1.4	62.3	9.8
1996	55.5	34.2	3.6	15.3	2.4	61.7	11.8
1997	58.4	35.4	3.7	17.3	2.0	60.6	11.7
<b>KOREA</b>							
1990	28.7	20.4	1.4	5.8	1.2	70.9	15.4
1991	34.2	23.9	1.9	6.8	1.6	69.8	20.1
1992	37.7	26.6	2.2	6.5	2.4	70.7	23.4
1993	41.2	29.2	2.4	7.0	2.7	70.8	26.0
1994	56.5	40.1	2.9	8.1	5.4	71.0	37.0
1995	77.3	54.1	2.6	12.0	8.6	70.0	52.2
1996	100.0	67.5	4.1	15.9	12.5	67.5	65.9
1997	94.2	59.5	5.2	16.4	13.1	63.1	56.0
<b>MALAYSIA</b>							
1990	7.3	2.1	0.5	3.6	1.1	28.3	1.0
1991	7.8	3.0	0.6	3.2	1.1	37.9	2.0
1992	7.8	4.1	0.3	3.2	0.9	48.1	2.9
1993	13.0	7.4	0.6	4.0	1.0	56.8	5.2
1994	13.5	6.6	0.8	4.8	1.2	48.8	2.9
1995	16.3	7.9	1.1	5.7	1.6	48.2	4.3
1996	22.2	11.2	0.7	7.3	3.0	50.3	6.5
1997	27.5	14.6	0.9	9.4	2.6	53.1	9.9
<b>PHILIPPINES</b>							
1990	9.3	3.2	0.4	5.3	0.4	34.3	1.9
1991	8.7	3.2	0.4	4.7	0.5	36.8	2.0
1992	6.9	3.1	0.2	3.0	0.5	45.7	1.5
1993	5.8	2.4	0.2	2.8	0.4	40.8	1.2
1994	6.6	3.1	0.2	2.9	0.3	47.1	1.7
1995	8.3	4.1	0.3	3.4	0.5	48.9	2.3
1996	13.3	7.7	0.6	4.1	0.9	58.2	5.2
1997	19.7	11.9	0.4	6.3	1.1	60.4	8.9
<b>THAILAND</b>							
1990	13.6	8.8	0.7	3.7	0.4	64.7	4.5
1991	19.5	13.0	1.3	4.6	0.6	66.8	5.2
1992	22.9	15.8	1.3	4.8	1.0	69.1	6.5
1993	29.6	21.4	1.8	5.7	0.7	72.1	8.9
1994	43.4	30.8	2.0	9.3	1.3	71.0	14.0
1995	63.0	43.8	3.5	13.6	2.0	69.6	20.8
1996	70.1	45.7	4.8	16.3	3.3	65.2	25.9
1997	58.9	38.8	4.2	13.8	2.1	65.9	17.8

**Source:** The Maturity, Sectoral and Nationality Distribution of International Bank Lending, various issues, Bank for International Settlements.

**TABLE 9**  
**SHORT-TERM INTEREST RATES IN EAST ASIAN ECONOMIES**  
**(PER CENT PER ANNUM)**

	July 9, 1997	October 8, 1997	December 17, 1997	January 17, 1998	February 4, 1998
Indonesia	12.63	30.50	30.50	30.50	30.50
Malaysia	7.74	8.25	9.07	9.36	10.13
Philippines	9.44	13.19	13.13	15.38	13.93
South Korea	11.77	13.70	15.50	24.00	21.50
Thailand	21.00	20.00	23.50	26.50	24.00

(The fall of the volume growth of exports was very sharp in the case of Thailand and was significant in the case of Indonesia (Table 10). However, the fall of volume growth of exports for Korea and Malaysia was modest. The unit value change remained negative in all countries except Indonesia (Table 10).

**TABLE 10**  
**EXPORT GROWTH RATES – 1995-96 (PER CENT)**

Country	Value Growth		Volume Growth		Unit Value Change	
	1995	1996	1995	1996	1995	1996
Korea	30.3	3.7	24.0	19.1	5.0	-12.9
Indonesia	13.4	9.7	10.3	4.8	2.8	4.7
Malaysia	26.0	5.8	15.6	13.6	9.0	-6.9
Thailand	25.1	-1.3	14.2	-0.7	9.5	-0.6

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

Percentages are calculated.

The global prices for manufactured exports fell about 2% in 1996. Semiconductors were hit hard with price estimated to have fallen by 80% in 1996. The rapid growth in electronics production in East Asia coupled with addition of China and Mexico probably created excess productive capacity and contributed to the decline in prices.

China entered the global market with the exports of \$150 billion in 1996. Its manufactured exports have grown 22% per year between 1990 and 1995. Chinese firms compete directly against other firms in the region in textiles, apparel and electronics and they had shown significant growth in these sectors.

The formation of NAFTA also affected the exports of these East Asian countries. Mexico's

total exports have risen from \$52 billion in 1993 to \$96 billion in 1996 with gain in several areas that directly compete with east Asian exports including electronic machinery, apparel and automotive components.

A depreciation of Chinese Yuan and Japanese Yen vis-à-vis the dollar which was the link currency for the east Asian countries hit hard the export competitiveness of the products. The sharp real appreciation of the U.S. dollar relative to European currencies and Yen after 1994 may also have played some role in Asian financial crisis. The appreciation of the dollar pulled down dollar prices on world markets for a wide variety of goods and services including East Asian exports to Japan and Europe. Given that the bulk of East Asia's foreign debt is denominated in dollars, the appreciation of the dollars modestly increased the real debt servicing burden of these countries.

The exports slowdown of East Asian countries probably raised concerns among creditors about the ability of East Asian firms to repay their debts which precipitate the financial crisis in East Asia.

#### **4. CONCLUSION**

The East Asian crisis was explained under three approaches. According to the first approach, the crisis was due to financial and capital liberalisation without a framework of prudential regulation. When east Asian economies have undergone radical financial deregulation over the 1990's including near removal of restriction on the inflow there was massive capital inflows in these countries. The massive inflow of money led to a tripling in the amount of loans in the financial system and as there were not enough places to invest them productively, a misallocation of investment took place. Substantial part of the money was channeled into already inflated assets in the real estate sector. There was no institutional and operational framework exists to function financial sector effectively under market conditions. The second approach explained that the financial crisis of east Asian economies fit the model of speculative cycles developed by Minsky. According to Minsky's model, foreign capital inflows intermediated through the banking system were used to fuel a boom in asset prices in equity and real estate. As a result the stock and real estate prices shot up. The event of non-repayment of foreign debt by the financial companies triggers the crisis. In mid-1997, the Thai Baht was hit by massive selling pressure. Short-term interest rates soared and creditors withdrew their fund from the region and the crisis spread. The exports slow down due to change in global market conditions raised concerns among creditors about the ability of east Asian firms to repay their debts which precipitate the financial crisis in east Asia.



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