The Asian Crisis: Diagonosis, Remedies and Prospects A Case Study on Thailand and Indonesia

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Abstract: In recent years banking and financial crises have imposed heavy costs: in the United States savings and loan crisis, in Nordic countries, the European Union, Japan, Mexico and the Southeast Asian. Several countries in Asia now face the challenge of resolving difficulties in their banking systems after the crisis that started in Thailand in 1997. The increased challenges today in preventing and resolving both domestic and international financial crises are paradoxically a consequence of economic progress, which at the same time, is a result of the globalization of capital markets and the rapid mobility of funds allowed by advances in technology. South East Asia's recent problems illustrate this point, however, they can only be understood in light of the region's economic progress over the last years. While the views on what caused crisis and its implications will continue to churn, this paper has tried to explore the roots of the Asian crisis in three specific fields: the macroeconomic management, the international market conditions and the financial system. And the conclusions derived afterwards are:

⇒ In the macroeconomic context, we saw that the Asian economies had showed some imperfections as real appreciation of the currencies over time, large current account deficits, and a declining quality in investment; however, these problems were not dramatic. In other words, even though the macroeconomic fundamentals were not perfect, they were acceptable in comparison with previous crises observed in other regions.

⇒ In the case of international market conditions, they were stable, and although some hypotheses have arisen about the possibility that shift in the international markets caused the crisis, there is evidence opposite to that as we showed in the paper.

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- ⇒ In the case of the financial sector, there are some hypotheses about the existence of a moral hazard problem, whereas others point out that the crisis was of the self-fulfilling type. However, there are two facts that cannot be denied, the first is the existence of an excessive reliance on short-term borrowing and an excessive exposure to exchange rate risk. This determines a vulnerability of the financial sector since the market, at some time, may test the resistance of the banking sector by putting pressure on the exchange rate. The vulnerability in the financial position definitely increases the likelihood of such attacks. Therefore, the weakness of the financial sector might have triggered the crisis, once the attack started.

- ⇒ As a final point, the crisis can be attributed to lack of the necessary institutional and regulatory structures to cope with increasingly integrated capital markets, therefore, the immediate source of the problems was private sector decisions, both on the part of borrowers of East Asia and on the part of lenders.

1. Introduction

In recent years banking and financial crises have imposed heavy costs: in the United States savings and loan crisis, in Nordic countries, the European Union, Japan, Mexico and the South East Asian countries. Elsewhere we have seen the impact of such crises on economic growth and development. Several countries in Asia now face the challenge of resolving difficulties in their banking systems after the crisis which started in Thailand in 1997. The increased challenges today in preventing and resolving both domestic and international financial crises are paradoxically a consequence of economic progress, which at the same time, is a result of the globalization of capital markets and the rapid mobility of funds allowed by advances in technology. South East Asia's recent problems illustrate this point, however, they can only the understood in light of the region's economic progress over the last years.

The origins of Asia's growth have been hotly debated, and the discussion has taken on new energy with the onset of the crisis. Some observers have suggested that Asia's recent development is somehow mirage that it never really happened. Others, instead, argue that there may have been something in Asia's growth strategy that made the financial crash ineviatable. Jeffrey Sachs argues that the core strategy in East Asia's industrial success was to integrate national with international production, not merely through export orientation, but also through export orientation, but also through specific institutions such as technology licensing, original equipment manufacturing, and export processing zones, which helped to attract export-oriented foreign investment. Whatever the real cause of the success was, the results were obvious: average incomes in East Asian countries climbed approximately from 10 percent of the U.S average in 1965 to around 27 percent in the late 1990's; life expectancy at birth increased in around 20% in 25 years; illiteracy fell as well as poverty, decreasing considerably the proportion of the population living below the poverty line.

However, while the East Asian economies continued to achieve rapid economic growth in the 1990's, there were growing imbalances and weaknesses at both the microeconomic and macroeconomic levels. Most important, there was rapid buildup of short-term external debt into weak financial systems. In early 1997, pressure began to mount, especially in Thailand, county whose currency experimented already an attack in late 1996. Foreign creditors reacted by withdrawing capital from countries around the region, and exchange rates came under an even higher pressure. By early September, the currencies of Indonesia, Malaysia, the Philippines, and Thailand had each fallen by 20 percent or more.

Out purpose in this paper is to analyze the causes of the crisis, focused on the cases of Thailand and Indonesia. We examine first, the role of the macroeconomic fundamentals and current account imbalances. Then we assess the international market conditions previous the crisis, especially taking into account some hypothesis which find int eh international markets, part of the explanation of the crisis. We continue later on, analyzing the financial sector and the evidence of moral hazard problems which according to some economists, might have been the main cause for the crash of the banking sector. Finally, we review the role of the International Monetary Fund in the post-crisis phase and its success or failure in helping the affected countries to get over the problem.

2. Root of the Asian Crisis

This paper offers a comprehensive discussion of the East Asian financial crises. It is better to use the plural because what occurred in the second half of 1997 was not a single crisis; it was a series of crises, not completely unrelated to one another. However, if we look under the rug, the reasons differ in important ways from one country to another. The Asian currency and financial crises in 1997 and 1998 reflected structural and policy deterioration in countries of the region.

Different hypothesis and interpretation have emerged in the aftermath of the crisis. As soon as the crisis hit in the mid 1997, the International Monetary fund (IMF), which led the official international response, assigned primary responsibility to the shortcomings of East Asian capitalism, in particular the East Asian financial market. Thus the IMF's principal strategy for the countries-was to overhaul their financial system. Fundamental imbalances triggered the currency and financial crisis in 1997, once the crisis started, market overreaction and herding caused the plunge of exchange rates, asset prices and economic activity, to be more severe than warranted by the weak economic conditions. Macroeconomic imbalances in these countries are assessed within a broad overview of structural factors:

a) Current account deficit and foreign indebtedness
b) Saving and investment ratios
c) Budget deficits
d) Real exchange rates
e) Foreign reserves
f) Measures of debt and profitability
g) Indexes of excessive bank lending

Another view says that sudden shift in market expectations and confidence were the key sources of the initial financial turmoil. While the macroeconomic performance of some countries had worsened in the mid 1990s, the extent and depth of the 1997-1998 crisis should not be attributed to a deterioration in the fundamentals, but rather to panic on the part of domestic and international investors, somewhat reinforced by the faulty policy response of the International Monetary fund (IMF). This is the view expressed by Stefen Radelet and Jeffrey Sach[1].

1) Current account imbalances and macro economic fundamentals
2) Growing weaknesses and mismanagement in the Asian economies
3) Instabilities to the international capital markets.

We start out study of Asian crisis by assessing the case studies for two countries Thailand and Indonesia.

3. Current Account Imbalances and acroeconomic Fundamentals

At the corporate level, political pressure to maintain high rates of economic growth had led to long tradition of public guarantees to private projects. Markets operated under the impression that the return on investment was somewhat 'insured' against shocks. Such pressure and beliefs represented the under pinning of a sustained process of capital accumulation, resulting into persistent and sizable current account deficits. As shown in Table 1 that the countries whose currencies collapsed in 1997 had experienced somewhat sizable current account deficits in the 1990s. The current account in Thailand was over 6% of GDP virtually in each year in the 1990s, and approached 9% of GDP in 1995 and 1996. Indonesia started the decade with the large imbalance (over 4% of GDP in 1990-91) but the deficit shrank in 1992 and 1993. Later the current account imbalance widened again, reaching 3-4% of GDP in 1995-96. Data on the current account positions provide some preliminary evidence that the currency crisis may have been associated with an external competitiveness problem. In fact *as a group, the countries that came under attack in 1997 appear to have been those with large current account deficit throughout the 1990s.*

Table 1: Current account as % of GDP and GDP growth rate

	Current Account (% of GDP)		GDP growth rate (%)	
	Indonesia	Thailand	Indonesia	Thailand
1990	-4.40	-8.74		
1991	-4.40	-8.01	6.95	8.18
1992	-2.46	-6.23	6.46	8.08
1993	-0.82	-5.68	6.50	8.38
1994	-1.54	-6.38	15.93	8.94
1995	-4.27	-8.35	8.22	8.94
1996	-3.30	-8.51	7.98	5.52
1997	-3.62	-2.35	4.65	-0.43

Source: IMF- Balance of Payment Statistics

3.1 Output Growth

There are several practical reasons why large current account deficits may be perceived as sustainable. One reason of which is when current and expected economic growth in high. Higher growth rates imply the countries higher ability service its external debt. Thus current account imbalances driven by transitory fall in private saving should not be a concern, since future income growth will lead to increased future savings. The CHART 1 (a and b) says that in these countries GDP growth rates were remarkably high in the 1990s. Only in 1996, they experienced a slowdown in down.

The key question, however, is whether or not the traditional views provide reliable indications for the diagnosis of the Asian crisis. High growth may induce overly optimistic beliefs that the economic expansion will persist unabated in the future. Thus the observed high rates of growth may have contributed to current account imbalances.

3.2 Foreign Reserves

For any country foreign reserves act as the protection for domestic currency. It indicates the solvency of the country. Thus the higher the foreign reserves the higher the capacity of the Central Bank to defend the domestic currency. Chart (2) (a and b) shows the level of foreign reserves for the countries under analysis. The capacity to defend the currency was obviously lower, fact which could have been perceived by speculators when the crisis took place in Thailand.

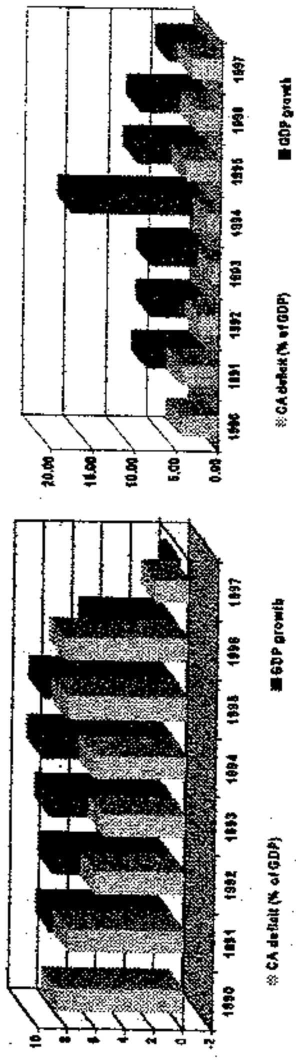


CHART 1(a). Thailand *(b). Indonesia*

Current account (as a percentage of GDP) and GDP growth

Source: IMF –Balance of Payment statistics

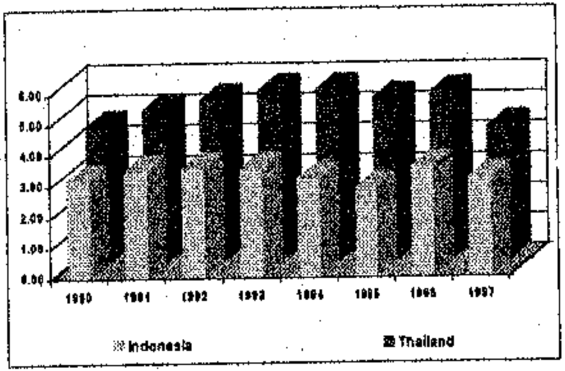
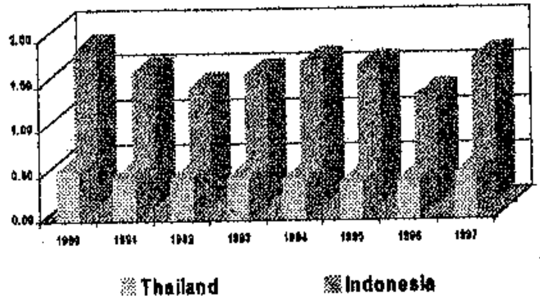


CHART 2(a). Thailand
Foreign reserves in months of imports
Source: IMF financial statistics



(b). Indonesia
M1 to foreign reserves ratio

If one observes first panel (a), where the reserves are expressed in months of imports, it is easy to conclude that the dispersion was rather low and until 1996, at least for Thailand, the level of reserves in terms of months of imports was not low. The same conclusion can be obtained when one observes the ratio of M1 to foreign reserves, in the case of Thailand, reserves were close to the double of the money available in the economy. Indonesia shows a weakness in this case, its reserves were lower than the Thai case, hence

3.3 Investment rates, efficiency and profitability

Since the current account in equal to the difference between national saving and investment, a deficit can emerge from either a fall in savings or an increase in investment. Evidence on investment rates in Asian countries in shown in Chart 3. These countries are characterized by very high rates of investment throughout the 1990's. In these countries these rates are well above 30 percent of the GDP.

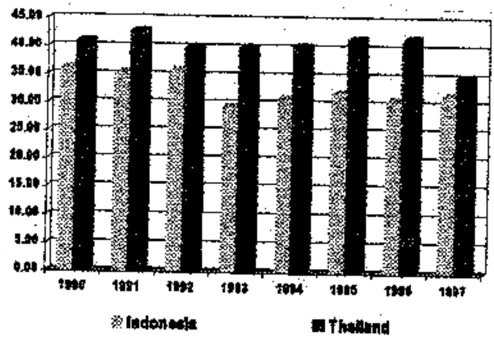


CHART 3
Investment rate as % of GDP
Source: IMF Statistics.

3.4 Private and public saving

A fall in public savings in seen typically as more disruptive than a fall in private saving is more likely to be a transitory phenomenon. Chart 4(a) shows that Asian countries were characterized by high saving rate throughout the 90's.

In **Indonesia** the savings rate fell below 30% (to a 28% average) after 1992. Looking at the data before the crisis, there is little evidence of public dissaving, so that the current account imbalances do not appear to be the result of increased public sector deficit, Chart 4(b) shows that in these countries, the fiscal balance of central government was most of the time in surplus. But the absence of fiscal imbalances in years before the crisis cannot be interpreted as pervasive evidence against the fiscal roots of Asian crisis. We should remember that the pre-crisis years were a period of excessive credit growth leading to large stock nonperforming loans and then the eventual collapse of financial institutions. In spite of this fact, IMF suggested to spend 15 percent of GDP of several Asian economies in restructuring the financial sector; this amount, acted as a severe burden on the fiscal liabilities for Asian countries. However, such a liability was not reflected by the data on public deficit until the eruption of the crisis, but affected the sustainability of the pre-crisis current account imbalances. So the issue of understanding the rule of public vs. private savings in a current account crisis is fair from settled, as here we find that the crisis occurred in spite of the fact that fiscal balance was in surplus.

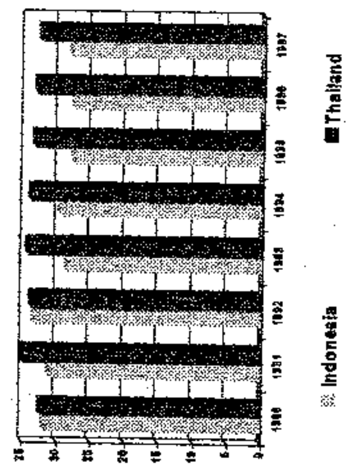


CHART 4(a)
Savings rate (as a percentage of GDP)
Source: IMF Statistics

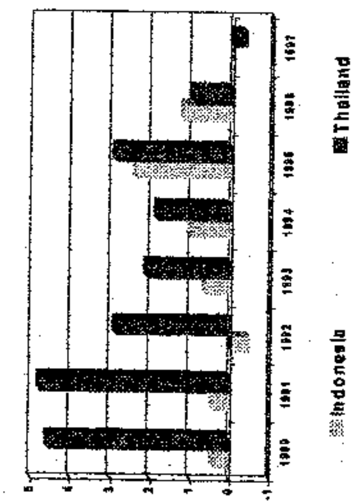


CHART 4(b)
Fiscal balance (as a percentage of GDP)

3.5 Quality of the Investment

The Asian countries were characterized by very high rates of investment throughout the 1990's. In these countries these rates were well above 30% of GDP.

Again, to measure the quality of the investment we have taken a crude measure which is called the incremental capital to output ratio (ICOR), that is the ratio of new investment to the change in output in a given year. Generally speaking, when investment quality deteriorates, the ICOR increases, as more investment spending is needed to support a given increase in GDP. The Chart 5 shows that for Thailand the ICOR ratio is increasing, meaning a decline in the investment quality or diminishing returns for new investment. While for the case of Indonesia the ratio does not increase, but remains stable over time.

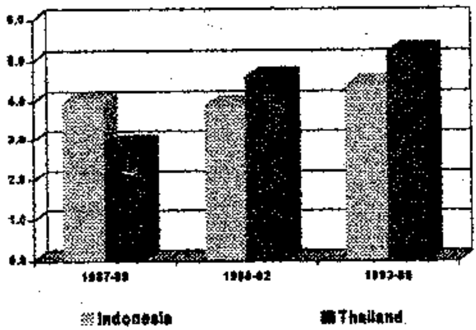


CHART 5
Incremental capital output ratio , Source: IMF Statistics

3.6 Openness

Economies that are relatively open are considered less likely to face current account problems as the large export sector strengthens the country's ability to service its debt obligation. Chart 6 reports the ratio of average of exports and imports to GDP, as measure of openness of the countries under study. As the chart shows, the Asian countries were considerable open.

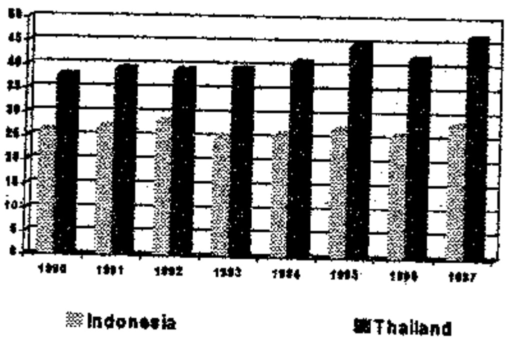


CHART 6
Openness (X+M)/2 as % of GDP
Source: IMF Balance of Payment Statistics

3.7 Real Exchange Rate Appreciation

Significant real exchange rate appreciation may be associated with a low of competitiveness and a structural worsening of trade balance, thus jeopardizing the sustainability of the current account. Graph 7 presents the data on the real exchange rate of the countries under analysis. Taking 1990 as the base year, we observe that by the spring of 1997 the real exchange rate had appreciated by 12% in **Thailand** and 8% in **Indonesia**. This suggests that the currencies that crashed in 1997 had experienced a real appreciation. Countries with more rigid policy like **Thailand** experienced a much larger real appreciation than Indonesia which followed a flexible exchange rate regime.

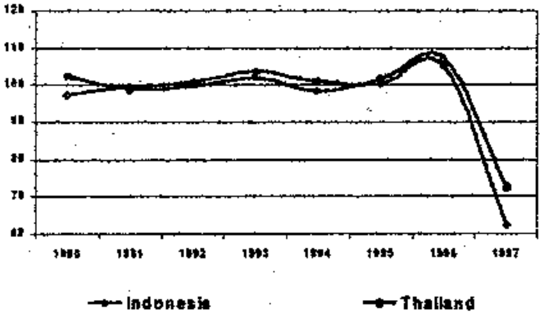


CHART 7
Real Exchange rate (1990=100)
Source: IMF Balance of Payment Statistics

4. Shifts in International Market Conditions

One hypothesis, which also should be considered when analyzing the roots of the Asian Crisis, is the previous conditions in the international markets. When Mexico experienced the financial crisis in 1982, a steep increase in US interest rates and US Dollar appreciation were observed, which led to an increase in foreign debt service and the consequent insolvency problem. In the South East Asian case, the previous condition in the international markets was stable; US interest rates remained low. World commodity markets were falling. The growth in total volume of international trade was strong, if a little bit slower in the aggregate in 1996 and 1997 compared with

1993-1995. World export volumes grew by 6% in 1996, down slightly from the 9% recorded in 1994 and 1995 but still above the world average for the early 1990s. despite this favourable environment, several hypothesis about the crisis, center around unexpected international shocks to the Asian economy.

4.1 New Competition in Exports Market

A new global glut in labor-intensive manufactured exports, precisely the king of exports that fueled East Asia's growth in the past generation. Such a glut would be reflected in slower export earnings in countries with labor-intensive manufacturing and declining terms of trade for labor-intensive products, such as apparel, footwear, and consumer electronics. World prices for manufactured exports fell about 2% in 1996. Semiconductors were hit especially hard, with prices estimated to have fallen by as much as 80% in 1996, before they began to rebound. The rapid growth in electronics production in East Asia, coupled with the addition of China and Mexico to these markets, probably crated excess productive capacity ad contributed to the decline in price.

Table 2

Exports and Imports growth rates, 1995-1996
Percentage

	Value growth		Volume growth		Unit value change	
Country	1995	1996	1995	1996	1995	1996
Exports						
Thailand	25.10	-1.30	14.20	-0.70	9.50	-0.60
Indonesia	13.40	9.70	10.30	4.80	2.80	4.70
Imports						
Thailand	30.00	3.80	15.90	-3.60	12.10	7.70
Indonesia	27.00	5.70	17.40	10.70	8.20	-4.60

Source: IMF statistics. Calculations based on US dollar values

Table 2 shows the evolution of exports of the countries under analysis, one observes that in terms of value, exports from Thailand plunged in 1996 in comparison with the high growth rate achieved in the previous years. In terms of volume, one observes the same effect, even though the difference in lower. Concerning to imports, the evolution in similar; until 1995 they showed a high growth rate which considerable decreased only in 30% of the previous level (in terms of value) but decrease in approximately 50% in terms of volume. The unit value change was still positive in 1996, but lower than 1995's level.

4.2 Devaluation of the Chinese Yuan

Some observers have directly linked the 1996 decline in Southeast Asian exports to China's 50% devaluation of the Yuan in 1994, considering that Chinese firms compete directly against other firms in the region in textiles, apparel, and electronics; and in some products they are clearly gaining market share. However, several researchers have argued that the devaluation of the Yuan was not that significant. Fernald, Edison and Loungani, for instance, mention that the effective nominal depreciation relative to the US dollar was of only 7%, since before 1994, China had a dual foreign exchange market the official and the swap-market rate. On January 1st, 1994 China unified the dual rates at the swap-market rate, implying a nominal devaluation of the official rate of 50%. However, before the unification, Chinese exporters foreign income was exchanged at an effective marginal rate that was a weighted average of the official and swap-market rates.

According to IMF estimations, about 80% of the weight was on the swap-market rate and 20% on the official rate (since exporters were allowed to retain 80% of foreign exchange earnings). Hence, despite the huge devaluation in the official market, the effective nominal depreciation measured through the weighted average of the exchange rate was of approximately 7%, as can be observed in Chart 8.

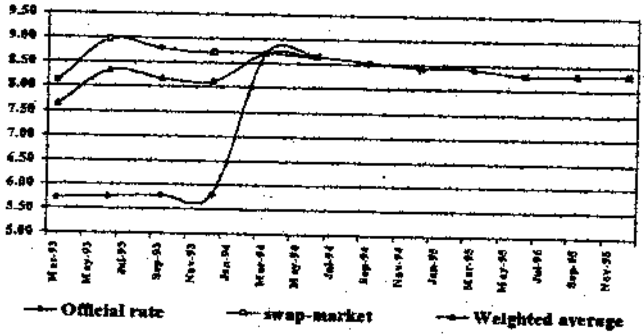


CHART 8
Chinese Yuans per US Dollar
Source: IMF Statistics

4.3 Appreciation of the US Dollar

Another factor, which also may have played some role in the Asian Financial crisis is the real appreciation experienced by the US dollar relative to European currencies and the yen after 1994 (see chart 9). Since all of the Southeast Asian currencies were effectively pegged to the dollar, they appreciated significantly against the yen as the yen per dollar rate moved from Y85/$1 in June 1995 to Y127/$1 in April 1997. This appreciation might have affected competitiveness of South East Asian exports, mainly those addressed to Japan accounting for one third of total exports. However, this fact had another effect, prices of imports from Japan fell commensurably, providing some benefit to manufacturers that imported raw materials and intermediate foods from Japan. Despite the fact that the net effect can not be determined, it is worthwhile to mention that exports actually observed a slowdown in 1996, however, this was not limited only to the Asian countries, besides, Asian exports were still growing, though at a slower pace.

5. The Role of the Financial Sector

Financial liberalization and reforms to the banking sector according to international standards have been undertaken throughout Latin America, Central Europe and South-East Asia. Financial institutions have been deregulated and privatized in recent years, allowing them much greater latitude to borrow from abroad and channeling foreign capital into the domestic economy. The problem arises when the newly liberalized banks and near-banks operate under highly distorted incentives. Under-capitalized banks have incentives to borrow abroad and invest domestically with reckless abandon. If the lending works out, the bankers make money, if the lending fails, the depositors and creditors stand to lose money, but the bank's owners bear little risk themselves because they have little capital tied up in the bank. Even the depositors and the foreign creditors may be secure from risk, if the government bails them out in the case of bank failure, having as a consequence that the taxpayers bean the costs.

In the Asian region, with bond and equity markets relatively underdeveloped, most financial intermediation occurred through the banking system, this meant that the capital inflows financing the region's large current account deficits were largely intermediated by local banks. Specifically, domestic banks borrowed from foreign banks and then, in turn, lent on to domestic firms, so that when domestic firms

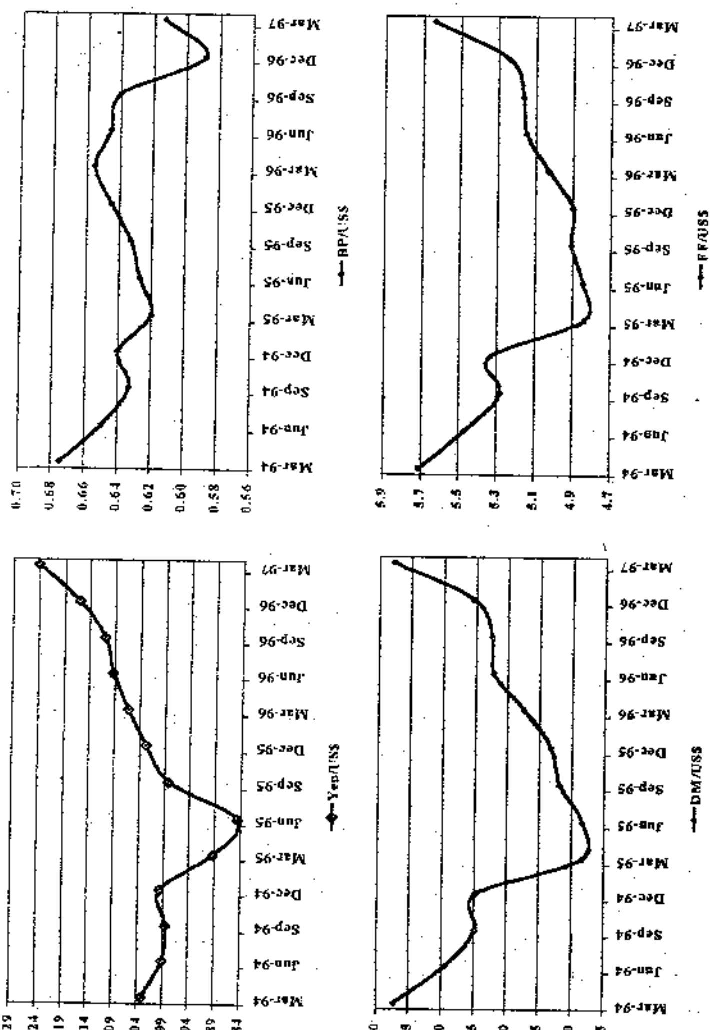


CHART 9
US dollar against (a) Japanese Yen (b) British Pound (c) German Mark and (d) French Franc
Source: IMF Statistics

experienced financial difficulties, domestic banks were faced with non-performing domestic assets and short-term foreign-currency liabilities.

Some researchers have found evidence of structural distortions in the pre-crisis Asian financial and banking sectors: lax supervision an weak regulation; low capital adequacy fatios; lack of incentive-compatible deposit insurance schemes; insufficient expertise in the regulatory institutions; distorted incentives for project selection and monitoring; outright corrupt lending practices; non-market criteria of credit allocation. All these factors contributed to the build-up of severe weaknesses in the undercapitalized financial system.

In Thailand, regulation of commercial banks limited their credit expansion, but financial liberalization in the 1990s let to the emergence of other largely unregulated non-bank intermediaries that could circumvent credit limits. Besides, even though these credit limits existed, most of the time they might have been avoided underreporting the risk exposure, as in many of the emerging markets.

In Indonesia, although official prudential requirements for domestic banks were in line with Basle Committee recommendations, compliance and enforcement were low. According to central bank statistics, from a total of 240 banks in April 1996, 15 did not meet the required 8% capital adequacy ratio, 41 did not comply with the legal spending limit, and 12 out of 77 licensed foreign exchange banks did not meet the rules on net overnight positions.

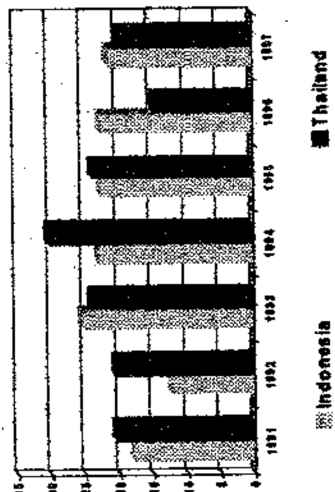
While in the 1980s the banking system had been dominated by five large state-owned banks, accounting for 80-90% of all bank credit, in the 1990s following a wide-ranging series of reforms in 1988/89 - the private banking sector grew rapidly, surpassing the state sector by 1994. Rapid growth within this deregulated system, along with the struggle for market shares, resulted in a system containing an excessive number of small undercapitalized banks. Chart 10(a) and (b) shows the evolution of the loans granted to the private sector by local banks. In the case of the loans as % of GDP they show an upward tendency even though the quality of investment was declining as it was presented before.

The adverse consequences of these distortions were crucially magnified by the rapid process of capital account liberalization and financial market deregulation in the region during the 1990s, which increased the supply-elasticity of funds from abroad.

5.1 The moral hazard problem

The moral hazard problem in Asia magnified the financial vulnerability of the region during the process of financial markets liberalization in the 1990s. The origins of the moral hazard problem have been justified by political pressures to maintain high rates of economic growth which had led to an implicit guarantees to private projects, some of which were effectively undertaken under government control, directly subsidized, or supported by policies of directed credit to favored firms and/or industries. Within this context, according to economists as Krugman, the financial sector grew considering this policy as certain kind of insurance against adverse shocks, which derived in risky lending practices and inefficient allocation of loans, among them, an excessive exposure to the real state sector.

The evidence for the Asian countries in the mid-1990s highlights that the profitability of new investment projects



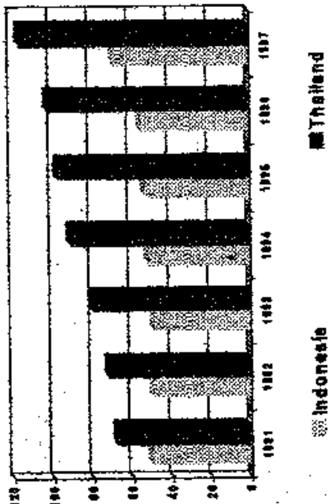


CHART 10 (a) Loans to the private sector growth rate (b) Loans to the private sector as % of GDP
Source: IMF Statistics

was low. Investment rates and capital inflows, and therefore growth rate of loans to private sector in Asia remained high even after the negative signals sent by the indicators on profitability. In part, this occurred because the interest rate fall in industrial countries lowered the cost of capital for firms and motivated large financial flows into the Asian countries. National banks were borrowing excessively from abroad and lending excessively at home (see Chart 11).

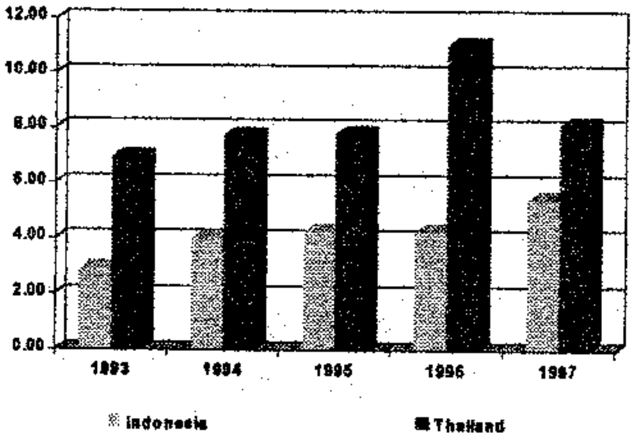


CHART 11
Foreign Liabilities to Foreign Assets
Source: IMF Statistics

However, also an international dimension of the moral hazard problem should be analyzed, since international banks had lent large amounts of funds to the region's domestic intermediaries over the period leading to the crisis. A very large fraction of foreign debt accumulation was in the form of bank-related short-term, unhedged, foreign-currency donominated liabilities: by the end of 1996, a share of short-term liabilities in total liabilities above 50% was the norm in the region. Moreover, the ration of short-term external liabilities to foreign reserves - a widely used indicator of financial fragility was above 100% in Indonesia and Thailand as can be observed in Chart 12.

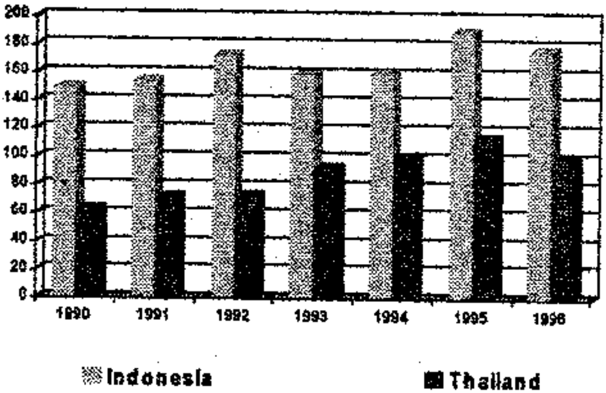


CHART 12
Short term debt to foreign exchange reserves
Source: IMF Statistics

However, if one observes Chart 13(a) and (b), were the level of the debt is exposed, one can see that it was not that high, confirming that as far as the debt is concerned, the problem was not of level but of concentration in short-term borrowing as shown in the previous Chart.

Was there overlending? Well, it is difficult to achieve such conclusion without a benchmark; however, one can observe the speed of growth of loans in Chart 10, and compare it with the quality of investment. Quality of investment was declining, as shown in the ICOR index, but an the same time growing at a fast pace, there are two

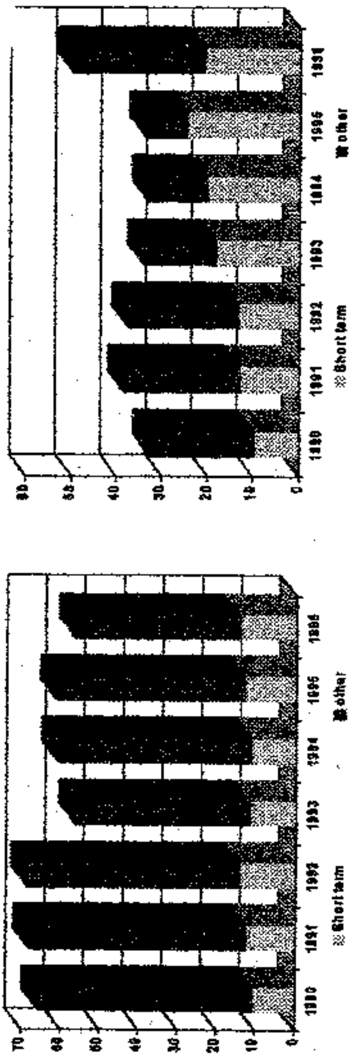


CHART 13 Foreign debt composition (a) Indonesia (b) Thailand
Source: IMF Statistics

possible explanations for this bevaviour: banks were capitalizing interest on unrecoverable loans, or they were granting loans to non-profitable projects, which might have been owned by their related individuals or corporations.

Both answers can be related to the problem of weak regulation in the Asian banking system.

According to Paul Krugman, one of the main problems was an excessive exposure to the real sector, creating a bubble price, which burst with time. Once the panic started the property sector experimented a contraction in price which reduced considerably the value of the collateral of the loans granted in the past. This fact originated a situation of insolvency, making impossible for the debtors to repay the loans, and therefore to the banking sector to attend the foreign liabilities, especially in the case of Thailand. This argument was sustained especially by Paul Krugman; however, it was been argued by Jeffrey Sachs, int he sense that such a pressure on the Real Sector was not that significant.

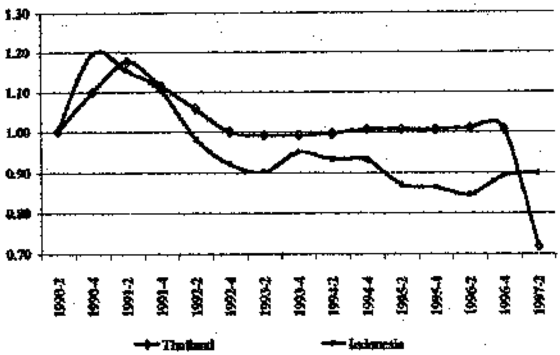


CHART 14. – Price of a squared meter for "grade A" office space in Bangkok and Jakarta

1990-2 = 1 - Source: Radelet and Sachs

According to Sachs and Radelet, and the data provided in their paper (see Chart 14), there was a pressure on land prices until 1990, after that time prices started to fall slowly for Indonesia, and remained stable for Thailand, until 1997 when they actually plunged. What can be shown with this is that in the case of Thailand, some evidence from a boom-bust cycle might be found, but definitely not in Indonesia.

Table -3: Selected indicators of the banking sector

Banking system exposure to risk			
		Indonesia	Thailand
Property exposure		25-30%	30-40%
Collateral valuation		80-100%	80-100%
Non-performing loans	1997	11%	15%
	1998	20%	25%
Capital adecuacy ratio		8-10%	6-10%

Source: JP Morgan

However, if the banking sector was not overexposed to the real estate sector, why the Thai Government decided to buy US$4 billions in bad property from the financial institutions to avoid a financial crash can not be logically explained. According to JP Morgan figures (see Table 3), the banking sector exposure to the property sector was lower in Indonesia, approximately 25-30% of the total loans were addressed to the Real Estate industry, while in Thailand the figure is much higher. The same report includes an estimation of the value of the collateral, which in most of the cases was lower than the loan. These facts might be explained in part with the concentration of risk in related parties; as in many emerging economies, Thai banking sector, as well as Indonesian, experienced the presence of major corporations with their owns banks. The consequence of this fact is an non-market oriented credit allocation, since banks underreport the concentration of credit in related firms, addressing resources to non-profitable projects or at least non-optimal ones.

5.2 Self-fulfilling crises and other views

However, Sachs, for instance, argues that the problem of the Asian crisis was a case of a self-fulfilling crises, a multiple equilibria case arises, where the two possible equilibria are to attack the currency or to refrain of doing so, under perfect information about the macroeconomic fundamentals. The basic notion is that international loan markets are prone to self-fulfilling crises, in which although individual creditors may act rationally, market outcomes produce sharp, costly, and fundamentally unnecessary panicked reversals in capital flows. The primary reasons why markets might fail in this way is a problem of collective action, if depositors run, thereby bringing down the banking sector, they will lose part of the value of their deposits. The run occurs not when depositors fear that the banking sector has made bad investments, but when individual depositors fear that other depositors are withdrawing their money from the banks, thereby driving the banking sector into illiquidity and eventual liquidation.

Some other researchers like Banerjee, Mishkin, Stiglitz and Weiss, have also explored in detail the possible role of asymmetric information among creditors as a cause of market instability. One basic implication of the assumption of asymmetric information is that each individual creditor may rationally respond more to the actions of other creditors, now taken as signals, than to private information. This determines that it is rational, but socially inefficient, for each decisionmaker to discard private information and base actions purely on the actions of earlier moves in queue. It is socially inefficient because it would be Pareto improving for each investor to ignore the actions of the other when making an individual decision.

6. IMF Response to the Crisis

In the previous sections we have discussed the possible causes and roots of the crisis in Thailand and Indonesia, from the point of view both macroeconomic situation inside these two countries and international environment contribution. Now it is useful to see the consequences of the crisis linking with the attempt of the IMF to resptore the stability in Indonesia and Thailand.

In this section we are going to analyze the IMF response to the crisis in Thailand and Indonesia. First, we describe the main goals of the IMF's programmes, and the instruments used to achieve them; then we show the results of these programmes as the instruments used to achieve them; then we show the results of these programmes as the performance of main macroeconomic indicators, such as Real GDP growth rate and fiscal balances figure. At the end of this section we discuss the main reasons of IMF's original programmes failure.

Main *goals* of the IMF's programmes can be generalised as following:

- To reassure domestic and foreign investors that the macroeconomic stability would be retored;
- To avoid excessive depreciation of the exchange rate;
- To restructure the financial sector;
- To create transparency and accountability in the reported data;

As it can be seen, the fist goal defines the rest of them, since macroeconomic stability implies stability of the exchange rate and a healthy financial sector.

Among the core instrument and measures of the IMF's programmes for Thailand and Indonesia one can find strong fiscal and monetary policy, and also restructuring of the financial system.

The results of IMF programmes in these two countries are shown in the table below.

Table-4: Fiscal balances and GDP growth rate in Indonesia and Thailand

	Indonesia		Thailand	
	1997/98	1998/99	1996/97	1997/98
Fiscal Balance	-0,9	-10,1	-1,6	-1,5
Real GDP growth rate	4,6	-12,1	-0,4	-5,0

Source: Corseti, Pesenti and Roubini

As it is pointed out by S. Radelet and J.D. Sachs, (and also can be easily see from the previous table), the IMF programmes failed to reach their goals, even adjusted ones. In both countries fiscal balance had performed a greater deficit, and real GDP growth rates were below zero during the correspondent period. IMF tried to emphasize the importance of market instruments in the stabilization process, but actually already at the second stage of IMF policy in Asia non-market actions were implemented to prevent aggravation of economic situation. For example, the IMF insisted on the comprehensive debt rollover as a condition for further disbursement of its lending package. This step is called by S. Radelet and J.D. Sachs as *non-market postponement of debts falling due.*

Among the reasons due to which one can see the failure of the original IMF programmes, S. Radelet and J.D. Sachs name the following:

The IMF increased the confidence that this crisis was the result of deep weaknesses, while the authors found that it was the consequence of self-fulfilling panic among creditors.

The reassuring of foreign creditors to make them roll over their credits was thought to be achieved by strict actions of financial market restructuring. The measures of strengthen the financial system, including, of course, closure of "unviable" financial institutions under given circumstances could only worsen the situation. The result could be seen Indonesia, where after the closure of 16 insolvent banks in November 1997, a lot of customers shifted sizeable amounts of deposits to state and foreign banks, and some withdrew funds from the banking system entirely. Such reaction led to the difficulties with the liquidity in the banking sector, and put certain constraints for the further monetary policy. It is possible, however, to find another point of view[2], that there were no IMF's fault that some kind of systems preventing of bank runs (incentive compatible deposit insurance schemes) were absent in Indonesia.

Policy of fiscal targeting was too tough for that situation. There is no evidence of positive reaction of currency markets to fiscal surplus. In case of Thailand, for example, the depreciation of the baht stopped at the end of January, 1998, only after the formalization the guarantee of all liabilities owed by commercial banks, including those of foreign creditors, by the government. In case of Indonesia, negotiations with IMF about new budget for 1998 year continued too long and made the situation more chaotic.

This budget implied increasing in the nominal expenditures of 32%, which was considered by the IMF as excessive, and the IMF claimed that the government was not serious in implementing the programme. However, after the recognition that the increasing in the nominal expenditures was primarily due to the depreciation, and that in real terms it was decreasing, the IMF approved a budget with a 46% increase in spending. But the time was wasted for nothing.

Too strict monetary policy was not relevant for the given situations in both countries. High interest rates — the important instrument of the IMF's programmes - under circumstances of elastic expectations of change (of currency depreciation, of bankruptcies) could not serve for the attraction of foreign capital, but, in contrast, is the sign for foreign investors to take out their money.

So, as we can see, the IMF did not achieved the supposed goals. The instruments which were used and measures which were imposed, such as financial targeting, for example, were not appropriate for the situation. The increase of the interest rates gave the adverse effect of creating more uncertainty in the possibility to restore macroeconomic stability. Facing obvious disability of market measures to control the situation, the IMF implemented non-market mechanisms to prevent further deterioration of the economies. The restructure of the financial sector in Indonesia led to the runs on solvent institutions, and as a consequences, withdrawing of the money from the financial sector (which aggravated the conditions of successful monetary policy). It is possible to conclude that the IMF's programmes in Indonesia and Thailand were not always relevant to the reality, and they did not take into account the peculiarities of the economies of these two countries.

Table-5: Timing of the IMF response and actions

Thailand	
7/2/97	a managed float of the baht was announced, the start of IMF- negotiatins
8/20/97	IMF approves a USD 3.9b credit for Thailand. The plan assumes a positive growth of 2.5% in 1997 and 3.5% in 1998; limiting the end-period rate of inflation to 9.5% in 1997 and 5% in 1998; targeting a small overall fiscal surplus by 1998 through an increase in the rate of the VAT, and selective expenditure cuts; initiation a credible restructuring of the financial sector, focused on the identification and closure of unviable financial institution (56 financial companies)
11/25/97	Larger-than-expected depreciation of the baht, approval of a second IMF package for Thailand. Additional measures to maintain the targeted fiscal surplus of 1% of GDP, the establishment of a timetable for financial sector restructuring, and plans to protect the weaker sectors of society.
12/8/97	Disbursement of USD 810m to Thailand
2/24/98	The Thai plan is further modified. The fiscal policy target is adjusted from a surplus of 1% of GDP to a deficit of 2% of GDP
3/3/98	Disbursement of US 270m to Thailand
5/2698	Fourth IMF Program agreed to by Thailand. The main priority is to prevent any further slowdown of the economy and foster an early recovery. This modified program calls for gradual reductions of interest rates, higher monetary growth rates, a looser fiscal deficit target at 3% of GDP, and accelerated corporate debt restructuring with financial sector reforms.
6/10/98	Disbursement of USD 135m to Thailand
8/25/98	The Thai program is modified to incorporate a more comprehensive approach to bank and corporate restructuring. The fiscal deficit is still at 3% of GDP. for both 1998 and 1999, but this target excluded the costs of financial sector restructuring.
Indonesia	
10/31/97	Indonesian government agrees to request help from IMF

10/31/97	The IMF announces a USD 23b multilateral financial package involving the World Bank and Asian Development Bank to help Indonesia stabilize its financial system.
11/5/97	The IMF approves stand-by credit for Indonesia and releases an disbursement of USD 3b. Measures include financial sector restructuring, with the closure of 16 insolvent banks; structural reforms to enhance economic efficiency and transparency, with the liberalization of foreign trade and investment, the dismantling of monopolies, and privatization; stabilizing the rupiah though a tight monetary policy; implementing fiscal measures equivalent to 1% of GDP in 1997/1998, and 2% in 1998/1999, to yield a 1% of GDP surplus in both years.
1/15/98	A second package for Indonesia I agreed upon. This plan allows for the relaxation of the previous fiscal targets, include: dismantling of government monopolies, postponing infrastructure projects, and closing insolvent banks.
4/10/98	Indonesia issues a Supplementary Memorandum of Economic and Financial Policies on additional measures. (strong monetary policies, accelerated bank restructuring, a comprehensive agenda of structural reforms). The IMF allows Indonesia to continue its fuel and power subsidies.
5/4/98	Disbursement of USD 1b to Indonesia
6/24/98	Additional IMF reforms agreed to by Indonesia in light of changing political climate and worsening economic situation. Provisions include an increase in social expenditures (7?5% of GDP), a budget deficit target at 8.5% of GDP, the closure or merging of weak banks, and the establishment of a bankruptcy system.
7/15/98	Disbursement of USD 1b to Indonesia. The IMF increases financing by USD 1.4b
7/29/98	The Indonesian government requests the canncellation of the existing arrangements with the IMF and its replacement with a new extended arrangement, including new measures on bank and corporate restructuring and improvements in the distribution system.
8/25/98	Disbursement of USD 1b to Indonesia. The IMF approves an extended facility with a longer repayment period.

Source: Corsetti, Pesenti and Roubini

7. Concluding Remarks

It is clear that the crisis in East Asia has been different from the debt crisis of the 1980s or even the Mexican peso crisis of 1994-95. While the views on what caused the crisis and its implications will continue to churn, this paper has tried to explore the roots of the Asian crisis in three specific fields: the macroeconomic management, the international markets conditions and the financial system. And the conclusions we can derive afterwards are:

- In the macroeconomic context, we saw that the Asian economies had showed some imperfections as real appreciation of the currencies over time, large current account deficits, and a declining quality in investment; however, this problems were not dramatic. As it was shown, the real appreciation in the case of Thailand and Indonesia was below 15% in 7 years, and the current account deficit was sustained with high rates of GDP growth. The latter comment can be sustained with the level of total debt that these countries accumulated, which was not tremendously high. In other words, even though the macroeconomic fundamentals were not perfect, they were acceptable in comparison with previous crises observed in other regions.
- In the case of international market condition, they were stable, and although some hypothesis have arisen about the possibility that shifts in the international markets caused the crisis, there is evidence opposite to that as we showed in the paper.
- In the case of the financial sector, there are some hypothesis about the existence of a moral hazard problem, wereas others point out that the crisis was of the self-fulfilling type. However, there are two facts that

can not be denied, the first is the existence of an excessive reliance on short-term borrowing and an excessive exposure to exchange rate risk. This determines a vulnerability of the financial sector, since the market, at some time, may test the resistance of the banking sector by putting pressure on the exchange rate. The vulnerability in the financial position definitely increase the likelihood of such attacks. Therefore, the weakness of the financial sector might have triggered the crisis, once the attack started.

- As a final point, the crisis can be attributed to a lack of the necessary institutional and regulatory structures to cope with increasingly integrated capital markets, therefore, the immediate source of the problems was private sector decisions, both on the part of borrowers in East Asia and on the part of lenders.

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