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Diagnosis of Financial Crisis in Asia

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Diagnosis of Financial Crisis in Asia: From Miracle to Debacle.

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Summary.

This paper discusses the causes, cures and consequences of the Asian financial crisis.
Since mid-1997 a number of Southeast Asian economies have been in the grip of a severe financial crisis that has thrown the region into a deep recession. On the basis of expected diminishing returns this has raised doubts about the durability of the region's rapid growth rates which were realized since the 1980's.
Its very success made it attractive to private capital inflows which were borrowed in dollars on short terms but lent out domestically for long periods and intermediated through poorly regulated domestic financial systems.
Large current account deficits due to overvalued currencies and overinvestment in the nontradable sector created an asset bubble which had to burst.
The crisis started in Thailand in July 1997 but has not been predicted and alarm bells did not ring although the ratio of short-term debt to foreign reserves had increased to unsustainable heights and falling stock prices gave some indication of growing concern.
A key feature of the crisis has been the contagion and spillover to other countries in the region.
After six months of currency and stockmarket turmoil the process of cleaning up shattered financial systems did start, but some obstacles obstruct a rapid clean up.
On the basis of IMF projections world output growth in 1998 has been estimated at 2% (down from 4% in 1997) and global growth is to recover only moderately in 1999.
There are reasons to believe that the IMF rescue packages added rather than ameliorated the panic.
Now financial and economic conditions in Asia are improving and the period of economic and financial meltdown is largely over. Real activity has reached a bottom and much of this reflects the improvement in current account balances.
Incipient signs of recovery are emerging but the path to recovery remains rocky with significant head wind. While the symptoms of the crisis have abated and the underlyhing malaise is better understood, the treatment is only just beginning.

Contents:

1. Introduction.

The economies of East Asia have made remarkable economic progress over the past three decades. After Japan’s double-digit growth in the 1960s, Korea, Taiwan, Hong Kong and Singapore grew at rapid rates from the mid-1960s. They were followed in the 1980s and 1990s by the Southeast Asian economies of Indonesia, Malaysia and Thailand. All these countries attained growth rates of 8-10% a year for a decade which was achieved without increases in income inequality and accompanied by impressive advances in social development: poverty, infant mortality and adult illiteracy declined significantly.

Central to their successful performance was an emphasis on stability-oriented macroeconomic policices with reasonable price stability and fiscal outcomes broadly balanced, the avoidance of overvalued exchange rates, high rates of physical and human capital accumulation and export-oriented production encouraging the adoption of advanced technology. Even though current account imbalances widened to levels that would be considered alarming in more consumption-prone countries, the association of these imbalances with high investment spending by the private sector and rising shares of saving in GDP fed the perception of robust and sustainable growth.

One of the most remarkable aspects of East Asia’s export performance has been the rapid shift in the composition of exports from resource- and labor-intensive industries to more skill- and capital-intensive industries with specialization in high-technology industries, mainly electronics. This has caused East Asia to become increasingly dependent on one another and on fewer products as their exports exposed them to greater risk of export instability and contagion. The magnitude and interdependency of trade links was one of the features of the Asian miracle fueling rapid regional growth, but after 1997 these links became a liability since they provided a perfect channel for the contagion to spread throughout East Asia.

Favorable initial conditions also played a part such as strong educational systems and less marked inequalities in the distribution of income and wealth than in other developing countries.

Empirical research has attempted to measure the relative contributions of factor inputs and technological progress by deducting from growth in output per worker a weighted average of the accumulation of physical and human capital per worker with the residual interpreted as total factor productivity (TFP) growth, i.e. the increase in productivity brought about by technological progress and greater efficiency. Generally, capital accumulation has been found to have made the largest contribution and productivity growth made smaller but still significant contributions. Therefore, the contribution of capital per worker dominated growth in factor productivity in explaining growth in output per worker.

Compared with the TFP growth of Europe and Japan during their fast catch-up years in the 1960s and 1960s, TFP growth in the East Asian economies has been much less rapid, although since the early 1980s TFP growth appears to have played a larger role, especially in China, Taiwan and Thailand. However, the relative importance of productivity growth remains contentious. This is important for the future prospects of the region because if growth is mainly due to capital accumulation a growth slowdown is inevitable as diminishing returns to capital set in. This has prompted Paul Krugman to refer to the economies of East Asia as a collection of "paper tigers" whose growth rates are bound to decline with the onset of diminishing returns. However, given the existing international differences in productivity levels there is abundant opportunity for further technological catch-up in the East Asian countries, especially when differences in hours worked per worker, which are between 15 and 30% higher than in the USA, are taken into account.

Since mid-1997 a number of Southeast Asian economies have been in the grip of a severe financial crisis that has thrown the region into a deep recession. This has raised doubts about the durability of the region’s rapid growth.

The regions’ very success - rapid growth, conservative economic management and low indebtedness - made it attractive to private capital. These inflows, while spurring growth, were intermediated through poorly regulated domestic financial systems and helped fuel domestic credit expansion and produced three weaknesses in the foundation of East Asia’s growth:

* Large current account deficits, financed with short-term capital inflows, exposed the Asian economies to sudden reversals.
* Liberalization of domestic financial markets without adequate prudential regulation and supervision allowed banks and corporations to assume unhedged foreign borrowing that left them vulnerable to sudden currency fluctations.
* In the absence of fully developed bond and equity markets, companies borrowed heavily from banks to finance their rapid expansion and became very highly leveraged with corporate debt-equity ratios of four to one or more which were 30 to 50% higher than the US’s ratios. Equity finance in East Asia was more expensive than debt finance due to the need to pay a risk premium. The high corporate debt levels, resulting from high savings by households held in bank deposits, allowed heavy investments but also

made firms vulnerable to shocks that disturb cash flows or interest rate rises. A significant rise in interest charges may not be able to be met out of profits so that it will have to be recapitalized into debt which may threaten the firm's viability. The debt mountain was at the heart of the problem in Korea.

Although high savings and high debt yield powerful advantages for national development, if they are accompanied by loose financial regulation and loose bank supervision they may endanger the stability of the Asian high debt model, thereby helping to set up a crisis. The rush to capital liberalization in the early 1990s without serious regulation was a most irresponsible act.

Domestic corporate borrowers could borrow abroad half as cheaply as at home. Unmonitored capital inflows and an uncontrolled credit boom increased the vulnerability in two dimensions:

* The ratio of short-term debt to foreign reserves, as a measure of the ability to meet current obligations from own liquid resources, rose sharply from 1994 to 1997 to well over 150% by June 1997, except for Indonesia where it remained at high levels.
* The ratio of M2 money to reserves indicates the potential for a run on the foreign exchange reserves by own residents of a country when there is a loss of confidence in the local currency. Countries with exchange controls and less open capital accounts are less vulnerable by this measure.

When markets became worried about the sustainability of the fixed exchange rate in Thailand, capital inflows became outflows. Asset values, i.e. equities and property, plummeted and turned a virtuous circle into a vicious one. Falling asset values reduced wealth and imposed balance sheet losses on financial agents, demand fell and contracting markets produced greater outflows. Finance stampeded to safe havens, making the situation worse.

The trends in the crisis countries were not sustainable before the crisis and the region was unquestionably heading for a significant slowdown, even in the absence of a crisis. This conclusion is based on the growing capital intensity of output, the tendency for the efficiency of new investments to decline, substantial evidence of strain in the financial system due to a growing burden of nonperforming assets and signs of overcapacity and losses in the industrial sector and considerable overbuilding and asset price inflation.

The Asian crisis is best seen as a story of rapid growth built on an incomplete foundation, which was left exposed to the winds of international capital markets.
The crisis is largely one of debt refinancing, in which

creditors have run away from the Asian currencies leaving the borrowers unable to continue to finance their loans. The solution is to restore confidence, which requires overcoming the collective action problem in which no lender wants to refinance for fear that others will not. This is where the IMF enters the picture, in organizing a refinancing effort and in helping to erect the structure of financial regulation that will help to minimize the risks of a melt-down occurring again.

With hindsight it is useful to describe the crisis as passing through four phases:

* Denial that the crisis could spread beyond South East Asia.
* Panic which involved a drastic change in the approach taken by the US government which first abandoned the notion that the IMF should manage the crisis while in December 1997 it sharply reversed its attitude by urging American banks to roll over loans, including interest payments to Asian banks and companies. The lack of a mechanism for orderly workouts of corporate and bank debt undoubtedly contributed to the full-scale financial panic.
* Confrontation which involved addressing a rapidly deteriorating situation in Indonesia after New Year 1998 when it blatantly ignored the conditions laid down in the $43 billion IMF package of loans. Panic sharpened when Indonesia’s budget, published on 9 January 1998, simply repudiated the IMF conditions. This mobilized forces by the USA and the IMF to contain the crisis.
* Absorption, implying that it is no longer possible to shield from the fact that the world has changed profoundly.

The Asian financial crisis has involved several interlinked phenomena. The countries to be discussed more or less explicitly in this paper are Thailand, South Korea, Malaysia, Indonesia and the Philippines.

2. Balance of payments situation.

The single most dramatic element has been the rapid reversal of private capital inflows into Asia. Banks (in Thailand and Korea) and private corporations (in Indonesia) were the main forces behind the capital inflows, not the government. Net private inflows dropped from $93 billion to -$12.1 billion, a swing of $105 billion on a pre-shock GDP of $935 billion, or a swing of 11% of GDP.

It is very difficult to attribute a reversal of this magnitude in such a short period to time to changes in underlying economic fundamentals. Therefore, some other factors must be involved.

The surge in capital inflows had its roots in changes in

both internal economic policies and world markets.
* Internationally, capital market liberalization in the industrialized countries facilitated a greater flow of funds to emerging markets. Low interest rates in the US and Japan favored increased outward investment to Southeast Asia.
* Domestically, five broad factors contributed to the capital flows:
1) Continuing high economic growth of some 7%;
2) Financial deregulation made it easier to tap into foreign capital;
3) Lax supervision allowed banks to take on substantial foreign currency and maturity risks;
4) Predictable exchange rates (due to pegging to the US dollar) reduced perceived risks for investors;
5) Governments gave tax breaks that encouraged foreign borrowing.

These capital account surpluses were accompanied by exchange rates which appreciated significantly in real terms between 1990 and early 1997. Due to overvaluation of its currencies East Asia has been confronted with growing current account deficits. The real appreciation exceeded 25% in each of the four Southeast Asian nations. The real appreciation has been caused by the pegging of the exchange rates to the dollar, which rose significantly since 1995. Moreover in 1994 China had devalued with 40% while the Japanese Yen had depreciated with 25%. However, because a large share of transactions (probably 80%) were already conducted in the free parallel "swap" market before the 1994 reform the effective devaluation of the Chinese yuan is estimated at 7 to 8%. Furthermore the own inflation rate in the East Asian countries was higher than the American inflation rate. All these factors contributed to a loss of competitiveness as demonstrated by the current account deficit. 1)

As expected with the real appreciation, export growth rates fell sharply in 1996 and 1997 and this should have provided some indication that investment quality was weakening and that firms would be less able to repay foreign exchange obligations.

The current account deficits reflected not public sector dissaving, but shortfalls of private saving relative to extraordinary high investment:

$$X - M = (S_p - I_p) + (T - G) < 0$$

This investment was financed by short term foreign capital inflows, attracted by relatively high rates of return and interest rates.

International Lending to East Asia (in billion US dollars) outstanding at end 1996 were from:

US	46
Japan	260
EU	318
...	...
Total	736

Capital flows from abroad can indeed be an important engine for growth if they are channeled to productive investment activities. However, they can make macroeconomic management more complex when they are large, volatile, unsustainable and poorly utilized. In that case macroeconomic pressures may manifest themselves through two channels:
* Capital inflows lead to a real appreciation and an expansion of non-tradeables sectors (e.g., real estate) at the expense of tradeables sectors and a slowdown in export growth.
* Capital inflows place new pressures on underdeveloped financial systems in the form of excessive risk taking, poor banking judgments, and even outright fraud.

The inflow of foreign funds into Asia was a precondition for the subsequent crisis, but the capital inflows do not by themselves provide an explanation of the crisis that followed.

3) Banking Crisis.

Thanks to deregulation and liberalization, the number of commercial banks exploded. An empirical study by Kaminsky and Reinhart (1996) has shown that financial liberalizations signal 71% of balance of payments crises and 67% of banking crises! Banking crises are more likely to occur in liberalized financial systems, especially those with weak institutional environments.

With respect to the linkages among the crises, in the 1980s and 1990s, banking crises proliferated; in about half of the cases the banking crisis got underway before the balance-of-payments crisis. While the issue of causality remains nebulous, knowing that there is a banking crisis underway helps to predict currency crises. Most banking crises in the sample were preceded by financial liberalization; statistically, financial liberalization plays a significant role in explaining the probability of a banking crisis. The reason is that liberalization came without an adequate regulatory and supervisory framework to accompany it. Increased risk-taking by banks on the wake of financial deregulation may be a cause of the banking problems.

Kaminsky and Reinhart have found very few instances of a causality running from a balance-of-payments crisis to a banking crisis so that knowing that there is a balance-of-payments crisis does not help predict a future banking crisis. It remains true however, that recessionary conditions characterize the periods preceding both banking and balance-of-payments crises.

In East Asia banking activity has increased steadily as is shown by the high growth rates in deposits and credits. However, a basic mistake of banks was:
* Borrowing short in dollars
* Lending out long in local currency, often in unproductive investments.

Therefore, banks transformed their own illiquid assets into short-term liquid ones for the foreign investors. This allowed the possibility of bank runs and large capital outflows in case of expected devaluation.
Then, in the case of pegged exchange rates investors have a "one-way option": they reap capital gains by selling domestic currency if the peg collapses and the currency devalues, but they will not suffer losses if the peg is maintained.

Banks have provided excessive or unwise (speculative) credits (largely in real estate) to the private sector, often in unproductive, low-quality investments (unprofitable golf-courses) with implicit government guarantees but insufficent monetary supervision. Prestigeous projects (highest building in Kuala Lumpur, longest bridge between Sumatra and Malaysia) were set up with high cost.

Perhaps the most important weakness was the limited institutional development of banks. E.g., much of the lending was done on a collateral basis, rather than on a cash-flow basis, thus obscuring the need to analyze profitability and riskiness of projects. Credit tended to flow to borrowers with relationships to government or private bank owners and to favored sectors rather than on the basis of cash flows.
For example, in Korea corporations were limited in raising funds abroad or in selling domestic-currency denominated securities to foreign investors, but merchant banks had carte blanche to borrow abroad and were subject to only limited supervision. Since many of the merchant banks were under de facto control of the chaebols, they were able to channel foreign funding to them.

Banks were encouraged to finance risky projects in the expectation that they would enjoy profits, if any, while the government would cover losses.
This is the "*moral hazard*" problem. A moral hazard crisis arises when banks are able to borrow funds on the basis of implicit or explicit public guarantees of bank liabilities. If banks are undercapitalized or under-regulated, they may use these funds in overly risky or even criminal ventures.
Krugman argued that the Asian crisis is a reflection of excessive gambling and stealing by banks which gained

access to domestic and foreign deposits by virtue of state guarantees on these deposits. The potential availability of government guarantees encouraged borrowers and lenders to act imprudently. Excessive risks have been taken in the expectation that a government will bail out when things go wrong. Implicit government guarantees, high domestic funding costs and the creation of offshore banking centers all created incentives for excessive borrowing abroad.

Excessive lending and over-investment created inflation, not of goods but of asset prices, based on the assumption that the demand for offices, hotels and luxury homes would continue to soar. This overpricing of assets made the financial condition of financial institutions seem sounder than it was.
The overcapacity caused rents and asset prices to fall, which made the insolvency of banks visible, forcing some to cease operations.
Therefore, loans were over-guaranteed but under-regulated. Such a bubble persists so long as government guarantee is maintained.

4. Overinvestment.

Investment rates have been exceptionally high in East Asia in the 1990s at around 40% of GDP. There is some evidence suggesting that the efficiency of investment has declined partly due to their rapid catch-up and convergence toward the level of per capita income of the advanced economies and partly due to over-investment. This may be indicated by some measures.
*** Comparing an economy’s real rate of return on investment to its real rate of growth is a commonly used method. If the return on investment is lower than the growth rate, welfare in terms of consumption for both current and future generations will be enhanced by reducing investment. However, in practice the rate of return on investments (which vary with the riskiness of projects) for an economy as a whole is difficult to measure.**
*** Comparing gross investment with gross capital income is a method taking account of the riskiness of projects. If investment consistently exceeds capital income there may be overinvestment because capital accumulation is absorbing more resources than all past investment made available for consumption.**
*** The incremental capital-output ratio (ICOR) which measures the ratio of investment to the change in output is another measure of the efficiency of investment. A rising ICOR indicates a declining output response to investment and thus a falling efficiency of investment.**
*** Increased portions of investment have been in non-traded or protected sectors, such as real estate or petrochemicals that generate low returns in sectors with excess capacity.**

*** Government policies may provide access to easy credit allowing firms to pursue investment objectives with inadequate attention to profitability.**

Evidence provided by the IMF's Economic Outlook of October 1998 on most of these measures suggests that investment in recent years in a number of East Asian countries was excessive.

5. Triggering events.

A crisis requires a triggering event that leads short-term creditors to expect a panic flight of other short-term creditors. In a panic short-term creditors suddenly withdraw their loans from a solvent borrower.
In general, a panic can occur when three conditions hold:
a) short-term debts exceed short-term assets;
b) no single private-market creditor is large enough to supply all of the credits necessary to pay off existing short-term debts;
c) there is no lender of last resort.
Then it becomes rational for each creditor to withdraw its credits if the other creditors are also fleeing from the borrower, even though each creditor would also be prepared to lend if the other creditors were to do the same.
The essence of a panic is that a bad equilibrium occurs that did not have to happen. The panic may result in large economic losses: premature suspension of investment projects, liquidation of the borrower, creditor grab race, etc.

With the possible exception of Thailand, foreign investors apparently did not play a large role in triggering the crisis. Data do not suggest a massive outflow of foreign capital during July-December 1997. Foreign investors appear to have reduced their holdings prior to the crisis and increased their holdings in the first few months of 1998. Hedge funds and other short-term investors played a limited role in triggering the crisis. The massive reversal in capital flows arose mainly from:
*** the reluctance of foreign lenders to roll over short-term claims after September 1997 causing an outflow of about $50 billion;**
*** the purchases of foreign exchange by local corporations to cover open positions and in Indonesia capital flight.**

At almost the same time cracks began to appear in Korea and Thailand in early 1997.
*** In January 1997, Hanbo Steel collapsed under $6 billion in debts and it was the first bankruptcy of a Korean chaebol in a decade. In the months that followed, Sammi Steel and Kia Motors suffered a similar fate. These bankruptcies put several merchant banks under significant pressure since much of the foreign borrowing of these**

firms had been channeled through these banks.

* In early February 1997 in Thailand Samprasong Land missed payments due on its foreign debt, signaling the fall in the property markets and the beginning of the end for the financial companies which had lent heavily to property firms. The Bank of Thailand committed almost all of its liquid foreign exchange reserves in forward contracts to speculators that correctly guessed a devaluation of the baht. Speculators bought forward foreign exchange in the expectation that they could sell them later at a higher devalued local currency price. By late June 1997, net forward sales of reserves equaled gross reserves. In June the Thai government removed support from a major finance company, Finance One, so that creditors incurred losses. This accelerated the withdrawal of foreign funds and prompted the depreciation on July 2, 1997.

The Thai baht devaluation triggered capital outflows from the rest of Asia which have been caused by:
* Bank failure in Thailand.
* Corporate failure in Korea.
* Political uncertainty due to the potential for a change in government in Korea, Thailand, the Philippines and Indonesia.
* Contagion. Many creditors treated the region as a whole so that if Thailand was in trouble, the other countries probably would have similar difficulties and experienced a loss of government credibility. Malaysia, the Philippines and Indonesia were hit hard by contagion effects.
* The IMF intervened by recommending immediate suspensions or closures of financial institutions which actually helped to incite panic.

Therefore, the withdrawal of funds triggered a chain reaction which quickly developed into a financial panic. The exchange rate depreciation itself sparked new withdrawals of foreign exchange because foreign lenders became more concerned that their customers would be unable to repay their debts and grew increasingly reluctant to roll over short-term loans.
The banking system quickly came under intense pressure. The losses of their foreign exchange exposure and the rise in non-performing loans eroded the capital base of the banks, exacerbated by the fall in the stock market. The withdrawal of funds set off a liquidity squeeze and a sharp rise in interest rates, reducing the profitability of local firms.

The rapid evolution into panic was aided by policy misjudgments and mistakes.
* Had Thailand responded to the fall in property prices in early 1997 by floating the baht and moderately tightening monetary and fiscal policies, the Asian

financial crisis probably could have been largely avoided.
* Thailand and Korea made the mistake of trying to defend their exchange rate peg until they had effectively exhausted a substantial proportion of their foreign exchange reserves.
* Thailand and Korea injected large sums into failing financial institutions, opening a large hole into the fiscal positions of their governments.
* Malaysia announced the formation of a large fund to be used to prop up stock prices, then abandoned the plan a few days later.
* In Indonesia, the state enterprises were instructed to withdraw a sizeable portion of their deposits from the banking systems and to purchase central bank notes, adding to the intense liquidity squeeze and driving up interest rates. Large investment projects of dubious value were postponed, then given the go-ahead, and postponed again, adding to the confusion.

Once the trigger was pulled, several powerful feedback mechanisms amplified the withdrawal into a panic. Undercapitalized Japanese banks with heavy exposure in the rest of Asia felt downward pressure on their balance sheets and began to call in loans. Similarly, Korean and Hong Kong banks called in loans from the rest of Asia. The Hong Kong dollar came under attack in November due to the loss of trade competitiveness and banks faced steeply rising interest rates on liabilities.
The New Taiwan dollar also came under pressure and fell sharply despite its huge stock of reserves.

The first banks whose investments failed to yield required returns got bailed out, but the cost of bailouts reduced government willingness to provide future rescues. Without government guarantees asset prices fell, leading to loan defaults and losses for banks.
Falling asset prices made the insolvency of banks visible, forcing them to cease operations, leading to further asset deflation.
Non-performing loans threatened the liquidity and solvency of financial institutions.
Soft disclosure rules on providing information and lax supervision allowed banks to regard a loan as "performing" even if no interest has been paid for a year.
(In the US a loan is called "bad" if interest is not paid for the last 3 months).
Borrowers were repaying loans in plummeting local currencies, making the banks dig into their own pockets to meet their dollar obligations.

6. Non-prediction on the basis of fundamentals.

One of the most unusual aspects of the Asian crisis is the extent to which it was unpredicted by market participants and market analysts. Warnings by observers

were rare. In mid-1997 all signs pointed to a very recent and dramatic shift in expectations.
Capital inflows remained strong enough till mid-1997. The only exception was in the equity markets in Thailand and Korea, where foreign investors became uneasy in 1996. In Malayisa and Indonesia stock market and bank lending remained strong till mid-1997.

With respect to the risk premia attached to loans to emerging markets, a recent study by W.Cline and K. Barnes found that bond spreads (i.e., the interest premium over US treasury securities) even fell in emerging markets, including Southeast Asia between mid-1995 and mid-1997 well below what could be justified by economic fundamentals.
Syndicated loans spreads were also low and falling before the crisis. Only in Thailand did spreads begin to rise somewhat in early 1997, but from a very low base.

The rating of sovereign bonds provided by agencies such as Standard & Poor and Moody's did not signal increased risk until after the onset of the crisis itself. Long term sovereign debt ratings remained unchanged until mid-1997, except for the Philippines.

The country risk ratings of a number of independent firms such as the Euromoney Country Risk Assessment changed little or even improved between March 1993 and March 1997. Only Thailand's and South Korea's ranking fell sharply after the crisis had begun.

The forecasts of leading investment banks, such as Goldman Sachs, show that the dramatic slowdown in export growth in 1996 and 1997 was unanticipated. No one in the market anticipated the extent to which currencies would depreciate, even once the crisis began.

In its overall market forecasts as published in its World Economic Outlook the IMF gave very little indication of a sense of macroeconomic risk to the Asian region.
In its country assessments according to its Article IV consultations with member countries the IMF expressed concerns about the Asian economies, in no case major concerns, but in the context of overall optimism.

Stock prices provided the only indication of growing concern among market participants in the months preceding the crisis.

* **The Thai stock market fell continuously after January 1996;**
* **The Seoul bourse also fell sharply over 1996 and early 1997;**
* **In Malaysia the stock market began to turn down in March 1997;**
* **In contrast, in Indonesia both the stock market and bank lending showed continued confidence until mid-1997.**

7. Non-ringing alarm bells.

Many of the signals that analysts normally associate with impending problems showed little sign of deterioration. Most fundamentals remained sound throughout the early 1990s.

* Government budgets registered regular surpluses in each country. Indonesia, Malaysia, Philippines, Thailand, Korea maintained a fairly responsible budgetary position between 1990 and 1996.
* Inflation rates have been below 10% across the regions during the 1990s.
* Sovereign debt remained at prudent levels and had been steadily falling in the Philippines and Indonesia.
* Domestic savings and investment rates were very high throughout the region, suggesting that even if foreign capital flows slowed, robust growth could continue.
* Foreign exchange reserves at the end of 1996 were well over 4 months of imports in each country except Korea with 2.8 months.
* World interest rates have been unsusually low in recent years, so that the burden of repaying foreign obligations did not seem onerous.
* Although some important prices (e.g. semiconductors) slumped, key commodity prices have been relatively stable so that external terms of trade changed little.
* Of course, the Japanese economy has been very sluggish throughout the 1990s, but the US economy as the major market for Asia had been very robust.

In sum, the macroeonomic fundamentals across Asia seemed sound and the usual alarm bells were not ringing so that the crisis was not easily predictable.

8. Signs of growing risk.

However, there were several signs of growing financial vulnerability during 1996 and early 1997.

* In some cases (e.g., growing current account deficits, overvalued exchange rates and slowing export growth), imbalances grew with the need for a modest adjustment, but there was no sign of an impending major crisis.
* In other cases, important indicators appeared to have been missed by the market (e.g. rapid expansion of commercial bank credit and growing short term foreign debt).

In line with the high levels of capital imports, current account deficits were growing increasingly large across the region. Between 1990 and 1996, current account deficits averaged 4% of GDP and in most countries were rising. But the current account deficit is not always a good predictor: Indonesia and South Korea, with the smallest deficits, have arguably been the hardest hit countries.

In line with the current account deficits and large capital inflows, exchange rates appreciated significantly in real terms between 1990 and early 1997. The real appreciation exceeded 25% in each of the four Southeast Asian nations, and was especially rapid after 1994, when the US dollar began to appreciate. While they signaled the need for some kind of correction, the appreciations were not nearly as large as those in Latin America, where Mexico appreciated by 40% between 1988 and 1993, just before its most recent crisis.

As expected with the real appreciation, export growth rates fell sharply in 1996 and 1997 and this should have provided some indication that investment quality was weakening and that firms would be less able to repay foreign exchange obligations.

Probably the biggest signs of growing risk were in the financial sector.
Much of the credit to the private sector expanded very rapidly, with much of it financed by offshore borrowing by the banking sector, headed for speculative investments in real estate markets rather than into increasing productive capacity for manufactured exports as in earlier periods. Total obligations to foreign banks of the five countries grew from $210 billion to $260 billion in 1996 alone.

The use of short-term foreign currency borrowing to finance domestic investments in real estate and other non-tradeable activities was particularly dangerous.
Banks became increasingly vulnerable:
1) Borrowing in foreign exchange and lending in local currencies exposed banks to the risk of foreign exchange losses from a depreciation.
2) Borrowing offshore in short-term maturities and lending onshore with longer payback periods exposed banks to the risk of a run.

A particularly telling indicator is the ratio of short-term debt to foreign exchange reserves. This measures a country's short-term foreign liabilities to its liquid foreign assets available to service those liabilities in the event of a creditor run. In mid-1997 in Indonesia, Thailand and Korea short-term debt exceeded available foreign exchange reserves. In Thailand, foreign-currency debt with a maturity of less than 2 years equaled to about 120% of foreign exchange reserves and nearly 200% in Indonesia and Korea.

Although this does not necessarily cause a crisis, it renders a country *vulnerable* to a financial panic. (In 1997, South Africa showed major vulnerabilities to panic, but without the occurrence of a crisis. This confirms the multiple-equilibrium character of financial panics.)
Once a crisis started, each creditor knew that there were

not enough liquid foreign exchange reserves for each short-term creditor to be fully paid, so each rushed to be the first in line to demand full repayment.
Under normal circumstances, short-term debts can be easily rolled over. However, once creditors begin to believe that the other creditors are no longer willing to roll over the debt, each of them will try to call in their loans ahead of other creditors.

Only businessmen and local investors seem to have foreseen the crisis in Thailand and Korea and to a lesser degree in Malaysia. No one predicted the crisis in Indonesia. In contrast, international analysts and forecasters and international financial markets did not clearly forsee the crisis in any of the countries.

9. Self-fulfilling Crisis.

Any arbitrary pessimistic piece of information could trigger a self-fulfilling spiral. The expectation of what others will do is crucial to the possibility of self-fulfilling crises and shifts in investors' assessments of market sentiment could trigger such a crisis.

Markets began to doubt the sustainability of external deficits, the high short-term external debt, the collapse of property price bubble and the increasingly apparent weakness of banks. Falling profits due to deteriotating competitiveness contributed to falling equity prices.

In May 1997 the Thai Central bank heavily intervened in the spot and forward exchange market and allowed interest rates to rise, contributing to fall of equity prices on stock market. These measures failed to restore confidence. In face of continued large capital outflows, Thailand on 2 July 1997 abandoned its exchange rate peg against the dollar and floated downward. This devaluation increased foreign debt in local currency!

***10. Contagion*.**

A key feature of the Asian crisis has been the existence of contagion or spillover effects.
There may be several reasons for expecting crises to be contemporaneous in time. However, it is difficult to distinguish empirically the different forms of contagion from each other.

1) Common causes or "monsoonal" effects.
These are defined as major economic shifts in industrial counries that trigger crises in emerging markets, such as policies undertaken by industrial countries that have similar effects on emerging markets or terms-or-trade shocks.
E.g., a depreciation of the yen, relative to the US dollar, has been associated with slowdowns in real export

growth in the Asian crisis countries. A decline in world semi-conductor prices had an adverse effect since chips are a key export product of many crisis countries.

2) Spillover effects.
These result from interdependence among developing countries themselves. A crisis in one country may affect macroeconomic fundamentals in other countries through trade or capital market linkages. This is likely to be an important source of contagion in the affected Asian countries.
A devaluation of one currency may have an adverse effect on the international competitiveness of other countries, putting downward presure on their currencies as well. Not only do these countries tend to export to the same destinations, but they also tend to export similar products. Export competition among the countries may have intensified over the last few years as all crisis countries moved in the direction of increasing their shares of semiconductors and capital goods while reducing their shares of apparel, footwear and household goods.

Since the bilateral trade shares with Thailand of Korea, Indonesia, Malaysia and the Philippines are smaller than 5%, it seems unlikely that bilateral trade with Thailand could be the main driving force of contagion.
However, the competitive dynamics of successive devaluations may be a partial explanation for why Asian currencies came under increasing pressure after the initial depreciations of the Thai baht and Indonesian rupiah. The Asian emerging economies do have important trade links with one another (between 25 and 45% to their total exports is traded with one another) and they also compete in third-country markets.

Financial linkages may mean that events in one country negatively affect another country. Investors from outside the region may be forced to sell assets in one country in response to losses in other countries.
Empirical work on testing capital market linkages suggest that there are strong contagion effects across stock markets.
In the lead-up to the Korean crisis, Korean banks had accumulated substantial amounts of high-yielding Brazilian and Russian government debt. At the same time there was also substantial Brazilian investment in Russian debt. When Korean banks encountered severe liquidity problems they began to sell off their Brazilian and Russian assets, leading to falls in asset prices in these countries and knock-on sales of Russian debt by Brazilian investors.

3) Pure contagion effects.
A crisis in one country may conceivably trigger a crisis elsewhere for reasons unexplained by macroeconomic fundamentals, perhaps because it leads to shifts in

market sentiment or changes the interpretation given to existing information. A crisis in one country may lead creditors to reassess fundamentals in other countries. Pure contagion involves changes in expectations that are self-fulfilling, with financial markets subject to multiple or "sunspot" equilibria for given values of a country's macroeconomic fundamentals.

Explanations of crises based on sunspots do not save policymakers from any blame for the speculative crises. Policymakers should try to ensure that they avoid the range of fundamentals in which multiple equilibria are possible, e.g. by reducing their exposure to short-maturity foreign currency debt.

In this respect the "wake-up call" hypothesis has become a known phenomenon. It is called a wake-up call because private creditors and rating agencies were judged asleep prior to the outbreak of the Thai crisis. The implication is that if one country has difficulties, then such an event leads investors to reassess their view of other countries. If investors find the same weaknesses in the other countries their credit ratings are reduced and the crisis spreads. In this respect contagion is rationalised if countries are perceived as a group with some common, but imperfectly observed characteristics, like common culture, or temperament. Then if one country abandons its peg, the willingness of other such countries to defend their parity may be revised downward.

Some contagion may be exacerbated by sheer imitation or *herding behavior*, which can be explained if one or more of three effects are present.
1) Payoff externalities such that the payoff to an agent adopting an action is positively related to the number of other agents adopting the same action.
In this respect bandwagon effects may be relevant.
As an example it may be assumed that:
- Investor 1 has information on real estate market;
- Investor 2 about financial condition of banks;
- Investor 3 on internal government discussions.

Now, if investor 1 gets some negative information he may sell, inducing 2 and 3 to do the same even if they have neutral or even positive information, and the outcome may be that markets overreact.

2) Principal-agent considerations such that a manager, in order to maintain or gain reputation when markets are imperfectly informed, may prefer either to "hide in the herd" to avoid evaluation or to "ride the herd" in order to improve reputation. In this respect one has to realize that much invested money is managed by agents rather than directly by principals. These managers are remunerated by comparison with other money managers. Therefore, they act alike: "I feel worse if I lose money in a devaluation when others do not, than I will if I lose the same amount

of money in a general rout".

3) Information cascades when later agents, inferring information from the actions of prior agents, optimally decide to ignore their own information.

It has been argued that all three of these elements played a role in the Asian crisis. Analysis of movements in exchanges rates and stock prices across countries in response to announcements and events in other countries in East Asia revealed that there were were important spillovers.
In this respect it is important to distinguish pure spillovers from co-movements that are due to similarities in changes in underlying fundamentals. However, in practice this is difficult. If expected fundamentals and risks change in similar ways for all East Asian countries during a period, co-movements may arise as rational market responses. Similarly, capital flows may exhibit co-movements.

In a recent paper Kaminsky and Schmukler analyzed the 20 largest one-day swings in stock prices in US dollars since 1997 to see what type of news moved the markets in days of extreme market jitters. Some of the largest one-day downturns cannot be explained by any apparent substantial news, either economic or political, but seem to be driven by herd instincts of the market itself. Most movemetens are triggered by local news, not news of a country's neighbor.

In fact, the initial attack on Thailand quickly widened to other members of ANSEAN (The Philippines, Malaysia and Indonesia) which were confronted with a loss in competitiveness. Even Taiwan, completely unnecessarily, chose to let its currency join the decline and competitively devalued.

However, competitive devaluations are unlikely to be the major cause for the contagion. The World Bank has calculated that if one East Asian country devalues alone versus the dollar, the required devaluation to restore competitiveness varies between 10 and 20%. Howefer, if all five affected countries devalue at the same time, the required devaluations increase only by ½ to 1 percentage points. As the difference between the two scenarios is relatively small *competitive* devaluations appear insufficient to explain actual depreciations.

Trade links between countries were probably a more significant mechanism than competitive devaluation to explain contagion. Intra-regional exports among East Asian countries accounted for almost 40% of total exports in 1996, up from 32% in 1990, reflecting a process of specialization and outsourcing of activities from the more advanced to the lower income countries in the region. Such trade complementarity increases the speed of the contagion.

Spillover effects beyond the Asian region remained fairly limited, although in Latin America the Brazilian real came under downward pressure due to concerns about competitiveness, so that investors required a rise in interest rates, as was evident from the rising bond yield spreads over US Treasury bonds in mid-1997.

Following several waves of pressure in emerging markets emanating from Asia, Russia became a new source of contagion during August 1998. The immediate cause of the Russian crisis was the growing loss of financial market confidence in the country’s fiscal and international payments situation leading to a loss of international reserves and an inability to roll over treasure bills as they matured. Although external developments including the Asian crisis and associated energy prices contributed to Russia’s difficulties, domestic policy shortcomings were more important, such as the failure to bring the fiscal situation under control which led to levels of public debt and debt-service payments that appeared unsustainable.

Observers have come to different conclusions as to whether the contagion effects are evidence of irrational investor behavior or more conventional fundamental causes. If due to panic credits are suddenly and uncessarily withdrawn while economic conditions are viable, then, the economy should be protected through lender-of-last activities. If the crisis results from the end of a bubble or the end of moral-hazard-based lending, lender-of-last operations should be avoided because they keep the inefficient investments alive.

11. Obstacles to a Rapid Clean-Up.

After six months of currency and stockmarket turmoil plenty of Asia’s financial institutions have technically left bankrupt. But hardly any have been liquidated and the process of cleaning up shatterred financial systems did barely begin end 1997.
In principle, next steps are required:
* The sale of assets held by defunct institutions. However, liquidating bad loans is difficult. When a company in Europe or America cannot pay its debt, its creditors force it into bankruptcy, where a judge can fix a repayment plan or liquidate the firm and divide up the assets. But in Asia’s troubled economies, it is more likely to be the creditors who end up in trouble.
Not all the property will come under the auctioneer’s hammer immediately. Many debtors prefer to see their creditors in court, what may take a few years.
In Thailand, in December 1997 the government announced that 56 finance companies would and had to be closed

down.
* Survivors raise more capital, merge or find a foreign owner.
In Malaysia, the central bank is preparing now to force bank mergers, having for years failed to persuade banks to merge by asking them nicely.

Exchange rates in the Asian crises countries have recovered somewhat since early 1998, but downward pressures have continued in many emerging markets, hampering foreigners' efforts to value potential investments.

Also hampering efforts to bolster banks with foreign capital is the difficulty in putting a price on anything in a collapsed market.

Rigid labour laws are a further deterrent: in Korea the National Assembly refused to make it easier for insolvent banks to lay workers off.

Moreover, there are legal obstacles to foreign ownership of banks and property, which prevent direct investment by foreigners. E.g. in Thailand foreigners were until recently not allowed to own more than a minority share in Thai property. This radical measure has a slow response.

As Asia begins to clean up from the financial meltdown of 1997, the lack of legal process is a serious hindrance. E.g., so long as insolvent companies can keep operating with impunity, the restructuring of Asia's over-indebted corporate sector will be indefinitely delayed.

Without massive injections of foreign capital it is hard to see how Asia can restore solvency to its banking systems, let alone ease its liquidity crunches.

The challenge in East Asia is to avoid a spiral of competitive devaluations and to restore confidence while dealing with insolvent financial institutions.
Restructuring of foreign debts is a way by changing short-term loans into long term debt.
There are some principles for bank restructuring. Only viable institutions should stay in business and losses should be allocated transparently while minimizing the cost to taxpayers. Restructuring should be fast enough to restore credit while maintaining confidence in the banking system. Next table presented by the World Bank presents the different options for bank restructuring entailing difficult trade-offs. A higher figure in the cells of the table should be interpreted as better.

If the government were to bail out troubled banks by supplementing bank capital with public resources, the strategy would have the advantage of speed, but at a high cost to the treasury and low incentives for bank managers

to improve performance.
If the government were to recapitalize distressed banks and sell them later, this would lower fiscal costs, provide better incentives for bank performance and raise confidence in the banking system, but at the probable cost of making the process longer.
Liquidating and paying off creditors and depositors would provide a speedy solution, give better incentives for bank performance and entail relatively low fiscal costs, but this might severely undermine the confidence in banking system.
Balancing these trade-offs will vary from country to country and depend on the nature of the systemic problem.

	Speed	Fiscal costs	Incentives for bank performance	Confidence
Bailout	6	1	1	2
Assisted mergers	3	5	3	4
Recapitaliza-tion and sale	2	4	5	4
Restructuring plan	2	6	4	3
Liquidation and payoff	5	3	6	1

12. Consequences for the World Economy.

The delay in Asian growth has negative consequences for industrial countries:
1) The Asian countries import less from rest of then world. This has a growth retarding effect in:

US	0.2%
EU	0.2%
Japan	0.4%

2) Devaluations of Asian countries makes them super-competitive, so that they export more; moreover, the glut in electronics forces price cuts.
3) Cheaper imports from Asia holds down inflation and interest rates, which raises investment and compensates decreased exports in the rest of the world.

Next table shows the output projections in annual percent changes presented by the IMF in its October 1998 World Economic Outlook.

	1996	1997	1998	1999
World	4.2	4.1	2.0	2.5
USA	3.4	3.9	3.5	2.0
Japan	3.9	0.8	-2.5	0.5
EU	1.7	2.7	2.9	2.5
Asian NICs	6.3	6.0	-2.9	0.7
Lat. NICs	3.5	5.1	2.8	2.7
Russia	-5.0	0.9	-6.0	-6.0

On the basis of these projections world output growth in 1998 is estimated at 2% and global growth is to recover only moderately in 1999.
In Asia, while exchange rates have stabilized and in some case recovered significantly from their lows, the economic downturns in the crisis countries and Japan have worsened beyond expectations with particularly sharp declines in activity in the first half year of 1998 in Indonesia, Korea, Malaysia and Thailand. The weakness of the Japanese economy and the yen has put additional pressures on financial markets in the crisis countries.

Growth has continued to be well sustained in the USA and Europe. For US, the brake from Asia is not bad: it might replace an otherwise tightening of monetary policy as America’s economy roared by 4%. As in North America, growth in Europe appears thus far to have been relatively little affected. While external positions vis-à-vis Asia have worsened, domestic spending has been stimulated by declines in long-term interest rates since mid-1997. The contractionary effects of the Asian crisis on exports have been largely offset by the expansionary effects of improved terms of trade, lower interest rates and continued strong growth in many non-Asian markets.

Deteriorating economic conditions in Asia were a key factor behind the further falls in commodity prices in the first half of 1998.

Growth prospects have been marked down for Asia, Russia and to a lesser extent for many emerging market countries in other regions.
World trade growth is projected down to 3¾ in 1998 mainly explained by the Asian crisis.

In Latin America the weakness of oil prices has contributed to downward growth projections for Colombia, Mexico and Venezuela. Increases in interest rates associated with financial market pressure have affected growth prospects negatively. In Brazil growth in 1998 and

1999 is projected to slow down considerably from the 3¼% rate achieved in 1997.

For the countries at the center of the crisis downward revisions in projected 1998 growth range from 3 to 10 percentage points, with the largest revisions for Indonesia and Malaysia where output is to contract by 15 resp. 6½%. In all the crisis countries, indicators of overall activity point to deep recessions in 1998.

The impact of the Asian crisis on poverty and human welfare is of considerable concern. The economic contraction is affecting the lives of millions and aggravating social vulnerabilities: falling incomes, rising absolute poverty and malnutrition, declining public services, threats to educational and health status, increased pressure on women and increased crime and violence. Various factors are adversely affecting real household incomes, including currency depreciation, higher interest rates, financial sector collapse, corporate bankruptcies, job losses and supply bottlenecks, including national calamities.
In Indonesia the number of poor are estimated by the IMF to increase by 9.2 million persons (5% of the population), in Korea 0.7 million (2% of the population) and in Thailand 1.3 million persons (2% of the population).

13. IMF Programs.

The IMF aimed to dismantle the high debt system, despite the developmental advantages of such a system and wanted to see a western-type financial system in its place through a huge reduction in levels of corporate debt. However, to change an established high-debt/equity structure is not easy.

The IMF programs for Thailand, Indonesia and Korea had nine main declared goals:
* prevent outright default on foreign obligations;
* limit the extent of currency depreciation;
* preserve a fiscal balance;
* limit the rise in inflation;
* rebuild foreign exchange reserves;
* restructure and reform the banking sector;
* remove monopolies and reform the domestic non-financial economy;
* preserve confidence and creditworthiness;
* limit the decline of output.

To achieve these objectives the programs have six key policy components:
* Fiscal policy contraction;
* Bank closures;
* Enforcement of capital adequacy standards in order to recapitalize the banks.

* Tight domestic credit to defend the exchange rate by raising interest rates;
* Debt repayment backed by bailout funds mobilized by the IMF;
* Non-financial structural changes aimed at reducing tariffs, opening sectors for foreign investment and reducing monopoly powers.

In fact, currency depreciation and stock market collapse continued long after the IMF programs were signed and there was no sign of restoration of confidence. Bank closures in Thailand and Indonesia added to the panic rather than stemming the outflow.

This may be attributed to unexpeceted contagion effects, political uncertainty and poor implementation of the programs.
There are reasons to believe that the design of the program added to rather than ameliorated the panic.

1) Bank closures.
Abruptly shutting down financial institutions only served to deepen the panic and ignited a bank run, adding to the liquidity squeeze. The vulnerability of expectations adds to self-fulfilling creditor runs. The closures set off a flight to safety. Two-thirds of Indonesia’s banks had experienced runs on their deposits. A large number of banks were facing growing liquidity shortages.
A far better approach would have been to implement a longer-term strategy of bank restructuring.

2) Bank recapitalization.
The sharp increase in non-performing loans and the effect of exchange rate movements eroded the capital bases of even the strongest banks.
Pushing banks hard to recapitalize and to add to their capital quickly within an unrealistically time frame has caused a more severe credit crunch.

3) Monetary policy.
The tightening of quantitative credit limits has switched off the lender of last resort mechanism of central banks increasing the panic. The IMF’s insistence on raising interest rates and demanding a fiscal surplus led to an unnecessarily harsh economic contraction (I’M Fired!).

The question is whether any benefits with respect to the exchange rate as expected by the IMF outweigh the negative effects on short-run production.
Despite sharply higher interest rates currencies have not appreciated so that the IMF supposed benefits of this policy are in question. In fact, exchange rates continued to plummet after the signing of IMF programs.
By undermining the profitability of their corporate customers, higher interest rates discouraged foreign creditors from rolling over their loans.

4) Fiscal policy.
It is not clear why government budgets were made so central to the IMF program since fiscal policy had been fairly prudent across the region and was not the source of the crisis.
The IMF argued that fiscal contraction was necessary to reduce the current account deficit. The fiscal targets simply added to the contraction. Later, in February 1998, the IMF has rethought its position and allowed Thailand to run a small fiscal deficit.

One of the fundamental difficulties with the IMF packages was that they prescribe tighter budgets and tighter monetary policy aimed at sharply restricting aggregate demand. The objective was to free up resources by squeezing down domestic consumption so that producers could devote more output to sales in global markets. However, this contributed to deflationary pressure on world markets evoking protests from competitors in G-7 countries which might complain about dumping. The resulting global excess supply in the markets of goods produced in Asia may have the effect of bringing about a collapsing currency with the attendant rise in the burden of repaying debts in foreign hard currencies.

Therefore, the IMF package may result a currency collapse because it squeezes down domestic demand where excess supply already exists. The only way to increase global demand in the face of the collapse of domestic demand is to depreciate sharply. Indeed, after IMF programs were announced in Indonesia and Korea, their currencies dropped more sharply than currencies like those of Taiwan and Singapore, where IMF programs have not been introduced.

14. The case of Indonesia.

This is a country where the government derives its legitimacy by delivering economic success, rather than from a truly democratic mandate. That success has protected the government.

The moral hazard cum bubble model seems to be less appropriate for Indonesia. Much of the lending to corporations was unprotected by government guarantees. Stock market and international credit ratings performed very well right up until early July in 1997.
Indonesia seems to be a clear case of contagion leading to panic and ultimately to a severe economic contraction.

Indonesia has been hardest hit in the region and appears to be the clearest case of contagion in the region. Indonesia’s imbalances were among the least severe in the region, although there were many problems and weaknesses: under-supervised banks, extensive crony capitalism, corruption, monopoly power and growing short-term debts.

Indonesia was applauded for first widening the rupiah’s band to 12% and then moving to a float without spending its foreign exchange reserves in a futile defense of the currency.
When the rupiah did come under severe attack in August 1997 the government abruptly raised interest rates which intensified the short-run pressure. The government canceled 150 investment projects and a few days later reversed its decision, adding to the confusion.
By early September, Indonesia had joined Thailand, Malaysia and the Philippines in the crisis.

Since reserve levels remained strong at well over $20 billion, Indonesia did not seem an obvious candidate for an IMF program.
When nevertheless Indonesia signed its first IMF program on October 31 1997 the rupiah strengthened but the boost was very short lived.
As the impact of bank closures and bank runs, higher interest rates and decapitalization of the banks set in, the rupiah depreciated by 23% and the stock market fell by 19% between November 3 and December 4, 1997.
Within a couple of weeks of the start of the IMF program, Indonesia began to look even weaker than its neighbors.

In December the effects of the severest drought in many years set in with food prices rising and food shortages emerging, while the foreign exchange cost of food imports rose and world petroleum prices fell.
The prospect of a severe illness or death of Suharto added to the ongoing panic. The crisis in Indonesia became as much political as it is economic and they fed off each other.
A big problem was the interrelationships between government officials, banking managers and the business community, which easily might lead and in fact has led to corruption. There is ample anecdotic evidence of scandals in the newspapers!

The conditions attached to the IMF program were:
* Monopolies of wheat flour and sugar had to be eliminated and 12 lavish infrastructural projects should be postponed.
* Cartels in cement, paper and plywood would be dissolved.
* Subsidies on energy and tariffs on food would be cut.
* 16 out of 240 banks had to be shut to win approval for a loan from the IMF. However, one controlled by a son of President Suharto promptly reopened in a new guise, casting the government’s commitment to a cleanup into doubt.

In fact, Mr. Suharto was asked to dismantle an economic structure which had created enormous fortunes for his sons and daughters. He should institute fundamental reforms which would undermine his own position. It was questionable whether he would be prepared to do so, but he has been forced to resign in favor of Mr. Habibie.

15. Conclusions and lessons for policy makers.

Since the crisis may be viewed as a case of multiple equilibria, (as demonstrated by South Africa), the worst of the crisis could have been avoided with relatively moderate adjustments and appropriate policy changes.

Without question, there were macroeconomic imbalances, weak financial institutions, widespread corruption and inadequate legal foundations in the affected countries. These problems had been well-known for years and the Asian-5 countries were able to attract $211 billion of capital inflows between 1994 and 1996.
Krugman’s explanation that investors knew that their investments were to weak borrowers but felt protected by explicit or implicit guarantees seems to be only a partial explanation because much of the lending was to private firms that did not enjoy these guarantees.

The actual market participants while recognizing the fundamental flaws did not foresee a crisis with or without bailouts.
A more moderate adjustment would have been possible had appropriate steps been taken in the early days of the crisis.

Next lessons for policy makers may be relevant:
1) A policy of tying a currency to an anchor country is unsustainable if the own inflation is relatively high.

2) Current account imbalances must be financed properly, preferably not by volatile speculative capital inflows.

3) Defense of a currency by invervention is only justified if the financial system is strong enough to handle long periods of high interest rates.

4) The extent to which capital movements are destabilizing depends largely on the strength of a country’s financial system and soundness of its economic policies, that are under control of governments.

5) Financial liberalization requires strict bank regulation and supervision.

It is clear that too much investment money has flown into these economies than could be profitably employed at reasonable risk.

Financial markets need reliable information to work efficiently. If lenders would have had better information about the reserves of Thai banks, they would have pulled back sooner and the eventual problems would have been less severe.

16. The Present situation and the long term prospects: Is the crisis over?

Financial and economic conditions in Asia are improving with output finding a bottom and interest rates falling sharply. Much of this reflects the improvement in current account balances and the reduction of payment pressures. Although the recession is largely over, recovery, albeit from low levels, is only a forecast and not a reality. The focus is shifting from recession to recovery. Competitive exchange rates and low interest rates make good preconditions for recovery.

In most countries, real interest rates are still too high, given the low levels of economic activity. Thus, central banks are using any opportunity, such as local currency strength and cuts in the US Fed funds rate, to cut domestic interest rates. Although currencies have strengthened slightly and interests rates have come down sharply, there is still room for interest rate declines. The improved interest rate scenario is welcome news for equity and real estate markets.
Overcoming head winds, especially in the financial sector, remains a key challenge. Valuation and restructuring risks remain high. Property prices are now closer to fair value but vacancies have surged and more supply is coming, so that property prices are likely to drop another 5%-15% on average.
Within the region the largest risk is renewed recession in Japan, where the economy is on shaky ground and the relevance of the Keynesian liquidity trap and Ricardian equivalence seem to be present. Confidence is low and the government’s banking reform strategy remains ineffective despite increased funding.

The long term prospects are favorable because the depreciations have improved competitiveness; the skill levels are high; the savings propensity is high and the economies are characterized by openness. Perhaps a long crisis is not to be expected. The first signs are favourable.

The Asian-5 trade merchandise trade performance has resulted in a trade adjustment of $120 billion from a deficit of $40 billion in the first half of 1997 to a surplus of over $80 billion in the first half of 1998. This reflects lower imports and unchanged exports.
The stagnation of export revenues reflects two factors:
* lower export prices in US dollars, which have masked the effect of higher volumes and
* weaker domestic demand in the importing Asian markets, especially Japan.

The fall in import bills can be attributed to the decline in Asian-5 domestic demand and to sharp increases in the relative price of imports.

These surpluses will help countries to reconstitute their depleted foreign exchangs reserves so that they are becoming less dependent on financing flows and thereby restore confidence of investors in the ability of the authorities to meet normal demands for foreign exchange promoting the recovery of capital inflows, supporting the stabilization of exchange rates and permitting gradual easing of interest rates.

Within just a few weeks since the Annual Meetings of the IMF and the World Bank in September 1998 the expectations of many participants seem to have shifted strongly and a sense of greater calm has returned to the markets even with a more cautious attitude among many participants. Although the immediate downside risks have eased, they have not dissipated. While the symptoms of the crisis have abated and the underlying malaise is better understood, the treatment is only just beginning.

In Korea and Thailand, the financial indicators - appreciating exchange rates, falling interest rates and very strong reserves - have been signaling that a turning point in the countries’ performance is approaching and confidence is rising that a recovery should begin during 1999. The Philippines by its prompt policy response has avoided the worst effects of the crisis suffered by its neighbors and Indonesia has been following a path to recovery. In all these countries, the key to sustainable longer-term growth lies in determined implementation of structural policies. With almost no exception, countries did not retreat behind protectionist barriers nor have they rolled back the measures of liberalization already undertaken.

The period of economic and financial meltdown is largely over and real activity has reached a bottom, but the region’s economic downturn has been much deeper than expected and in the property sector, where deflation has been the general response to the crisis, supply (excess capacity) and demand (decline) conditions continue to deteriorate. The property sector adjustment still to come will be a drag on Asia’s recovery and the restoration of financial health and construction will be weak for several years ahead.

Competitive exchange rates plus much lower interest rates provide good preconditions for recovery, but the poor health of banks, along with high unemployment and substantial overcapacity, will be a drag for some time. Governments have increasingly felt obliged to act as principal agents that clear banks’ balance sheets by absorbing the bulk of nonperforming loans by swapping them for government bonds. This boosts government interest expenses at a time when fiscal balances are already under pressure from the economic downturn.

Government deficit projections for 1998 are 9% for Indonesia, while Korea, Malaysia and Thailand will run a deficit of some 4% to 5% of GDP. Government deficits are set to rise in 1999 and last for many years until economies have fully recovered. Funding government deficits will require huge increases in private net saving. As the current account balances in all the crisis countries have moved from deficit into surplus this points to huge net private saving in excess of current government deficits. With overcapacity still large, banks reluctant to lend and weak labor markets undermining household confidence, private net saving will likely stay elevated for several years. Depositor confidence is the key to tapping private saving, but the banking crisis has shaken that. If short-term interest rates are low and the yield curve upward-sloping, banks may buy government bonds. Given the weakness of domestic demand and banks' reluctance to lend to the private sector, crowding-out effects will probably be small. External fiscal funding will be limited. Capital flows to the region are unlikely to perk up much at all soon.

With capital flows dwindling, trade flows are becoming a more prominent driver of the exchange markets. On this score, Japan's current account surplus will provide support for the yen although this may be offset by capital outflow from Japan because of revived interest in US stock markets due to expectations of further lowering of US interest rates. However, the critical factor for the outlook of Asian currencies is not the US dollar rate against the yen but the level of Japanese economic activity. If the yen's strength depresses Japanese exports and compresses domestic demand further, the consequences for Asian economies will be negative. The impact of the yen as a driver for Asian currencies will likely diminish in 1999 as investor flows start to return to the region.

In sum, the first-half 1998 production collapse has stopped and output stabilization is underway. Incipient signs of recovery are emerging in some countries, but the path to recovery remains rocky with significant head winds. Korea and Thailand have taken solid steps in financial sector restructuring and Malaysia and Indonesia have barely begun.
Overall, a mild export recovery appears to be taking shape. However, with the global economy expected to slow into 1999, the prospects for East Asian exports are increasingly uncertain.
In South Korea the reform process has yet to turn the corner. Thailand as the good student graduates to the next level and has started to see some gain for its pain. The Philippines tries to ride out the storm with its new

skipper, the Estrada administration, at the helm. Malaysia has isolated itself from the financial markets and is beginning its own brand of reform.

The importance of offshore production in the form of foreing direct investment in East Asia by developed countries is decelerating in favor of a trend towards regionalisation in the developed countries themselves. The redeployment of production to low-wage sites increasingly takes place within the major regions in the developed countries rather than between the regions in global networks. However, in our opinion this trend is to be explained more by the requirements of flexible lean production than by the existence of overinvestment in East Asia which was mainly in the non-tradable sector due to the real appreciation of their currencies.

As the end of the centure draws to a close, it is possible to think of a "*policy standard*" that creates confidence through the robustness of economic institutions and policies. There was a global crisis, a crisis of the international financial system, some elements of which have not been sufficiently adapted to keep pace with the evolution of the markets. But global recession can be averted given the right policies and cooperative action.

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Note:

1) Although on the basis of current account deficits East Asian currencies were overvalued, on de basis of Purchasing Power Parity (PPP) in terms of the Big Mac Parity about the price of hamburgers all over the world as published by The Economist twice a year, undervaluation seems to be relevant. The question arises how to reconcile these two seemingly contradictory statements.

The answer is provided by the famous "*productivity bias*". This bias shows that in high productivity countries the relative price of tradables with respect to non-tradables is low in comparison with the situation in low-productivity countries such as the East Asian economies.

The explanation proceeds along the labour market mechanism which requires that wages in the different sectors are equalized if labour is mobile between sectors.

A productivity rise in tradables which does not lead to a change in its price allows a rise in wages which is being transferred to the non-tradables sector where there is no increase in productivity, so that the price of non-tradables rises.

Now, if the price level in both countries is the same, this lower price ratio of tradables with respect to non-tradables in the high-productivity country requires a lower exchange rate in the high-productivity country on the basis of the law of one price for tradables, so that its exchange rate is overvalued with respect to PPP. Or by the same reasoning, a low productivity country has a higher exchange rate than the high productivity country while the price level is the same in both countries, so that the exchange rate of the low productivity country is undervalued. This was the situation in East Asia. Therefore, the productivity bias reconciles the overvaluation in terms of current account deficits and the undervaluation in terms of Big Mac Parity.

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