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# The Asian Crisis: a Perspective after Ten Years[1]

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My self-imposed task here is limited. I want to present a simplified overview of the causes of the East Asian financial crisis and the main policy actions taken against it. I have not tried to make a grand assessment of causes and policies, of how something similar might be avoided, and what policy faults were committed, though there are various hints. Many countries were affected by the crisis that burst upon an unsuspecting world in 1997, but here I focus only on the four principal countries involved, namely, Thailand, Indonesia, Malaysia and Korea. I shall note some special features of the crisis in each of these countries. Usually the Philippines is included in the list, but this country was actually affected much less, mainly because it had only recently recovered from an earlier crisis and thus its boom was much smaller. Many other countries were actually or potentially affected, but I do not discuss them.

Finally, while there are plenty of references to the International Monetary Fund (IMF), I do not discuss systematically the role of the IMF in the East Asian crisis, or make an assessment of its activities. This is a popular subject on which there has been a considerable literature and strong views are held. It would take a full lecture to deal with it. I reviewed it all concisely in Corden (1999) and my views have not changed since. Recent and valuable assessments are in the report of the IMF's Independent Evaluation Office (2003) and in Ito (2007).

I have drawn extensively on the publications of present or former members of the Department of Economics in the Research School of Pacific and Asian Studies of the ANU, of which Heinz Arndt was head for many years, namely Hill (2000) on

[1] I am indebted to valuable comments on drafts of this paper from Robert Z Aliber, Prema-Chandra Athukorala, Stephen Grenville, Hal Hill and Peter Warr.

Indonesia, Athukorala (2001) on Malaysia and Warr (1999, 2002, 2005) on Thailand, as well as Corden (2002) on exchange rate policies and experiences. In addition, I have benefited from Lee and Rhee (2007) on Korea, and Siamwalla (2005) on Thailand.

## THE BOOM

In the four countries, Thailand, Indonesia, Malaysia and Korea, there was an investment boom financed both by local savings and by foreign capital inflow. This was a familiar story—such booms did happen, even when capital markets are closed to capital inflow or outflow. But this one was truly international. Significant capital account opening in the early 1990s in Thailand, Korea and Malaysia played a key role in the story. The explanation for the boom was simple—the countries' macroeconomic policies and outcomes were very favourable when compared with those of other developing countries; budget deficits were low and in some cases there were surpluses; and inflation was low and growth rates were high. These countries were the stars of the developing world.

In Thailand and Malaysia, new industries for exporting manufactures were established or further expanded as a result of foreign direct investment (FDI) as well as local investment financed in Thailand, in part, by foreign borrowing. In Korea, internationally successful conglomerates (*Chaebols*) were financed to enable further international expansion. Stock market values rose. These countries indeed looked good. They were part of the 'Asian miracle'. I have the impression that much of the investment, especially in the early part of the period, was sound. This was probably true especially in the case of investment in Thai and Malaysian export industries.

As usual, the booms went too far. There was 'irrational exuberance' not just in the countries themselves but also in the world capital market. In Thailand and Malaysia, where the funds initially went into developing manufacturing industries, real estate booms developed and these got out of hand. Investment shifted from manufacturing to construction. In both countries, there was a huge stock market boom. All of this was bound to come to an end. The four countries had been very successful, but they were not perfect. There was a lack of transparency in investment allocation, and excessive political influence on bank lending.

The various crises earlier in Latin America—other than the 1994–95 Mexican crisis—had originated in excessive borrowing by the public sector, including parastatal enterprises. By contrast, the Mexican crisis was the first post-World War II crisis originating in the private sector, and this East Asian crisis was again a private sector crisis. Indeed, one reason why the flow of international capital to these countries accelerated after 1994 was the rebound from the Mexican crisis. For some years Mexico had been the largest recipient of private funds flowing to 'emerging markets'.

While inflation was generally low when compared with Latin America, there was real appreciation with nominal exchange rates more or less fixed to the US dollar (or moving closely with it) and domestic prices and wages rising somewhat faster than in the United States and other trading partners. In some cases, notably Thailand and Malaysia, there were large current account deficits, this being the way in which capital inflow was transferred into the economy. These deficits were not really a separate phenomenon but were a part of the capital inflow story.

During the boom, capital inflow took essentially three forms. First, there was FDI, which was important in Malaysia, but to a lesser extent in Thailand and Indonesia and restricted in Korea. Flows of such investment seemed to have been fairly stable, and not changing in response to 'herd effects' (investor sentiment moving *en masse* together). Nevertheless, surely the flows would in time have responded somewhat to changes in expectations about exchange rates and investment profitability. Second, there were inflows of portfolio capital into local stock markets. This was particularly important in Malaysia. Finally, there was short-term borrowing from the world capital market by local banks and other financial intermediaries, and also by corporations, all in the form of debt-creating instruments. The lenders were international banks and also mutual funds, pension funds, and so on. The debts were (almost) all denominated in US dollars. Both portfolio capital and short-term borrowing were highly responsive to changes in expectations, and lacked the relative stability of FDI. It was a particular feature of the boom that so much of it was financed by highly mobile capital in the form of short-term borrowing and, to a somewhat lesser extent, also in the form of portfolio capital.

## THE BUST AND THE TRIGGER

It may be inevitable that a boom comes to an end some time, but not necessarily a sudden end. There could be a 'soft landing', with a gradual decline in investment and capital inflow. But the 'herd effect' in the international capital market may lead to a sudden end in the form of a crisis, which would be a 'hard landing'. Usually it is not possible to predict whether there will be a soft or a hard landing and, if the latter, when it will take place. One can see the possibility of a crisis but cannot really predict it. This applied as much to the East Asian crisis as it does now to a frequently predicted 'dollar crisis', or indeed a housing crisis in various countries

A hard landing usually has to have a trigger of some kind. But the trigger is not the fundamental cause of a crisis. In these four Asian countries, the fundamental cause was the inevitable ending of the investment boom owing to eventual over-investment, and the financial difficulties that an excessive boom was causing. In the case of Thailand, the trigger was a combination of domestic and external factors that led to a drastic collapse in the growth rate of exports (from over 20% a year to about zero) in 1996, and thus to an increase in the current account deficit. I shall come back to that later. This led in 1997 to an exchange rate crisis in Thailand, with the Thai currency (the *baht*) depreciating from 26 *baht* to the dollar to 47 *baht*. In the case of the other three countries, the trigger was this Thai depreciation.

Suppose there had not been a sudden and drastic depreciation of the *baht*, would there still have been crises in the other three countries? This is a relevant question because it is often argued that international action is needed to avoid contagion. And when an event in Thailand sets off crises in Malaysia, Indonesia and (after some lag) Korea, for example, it is indeed a case of contagion. The answer has to be that, for fundamental reasons, the booms in the latter three countries had to come to an end, but if there were no trigger there would be a soft rather than a hard landing, and hence no crisis. Yet it is also possible that, in the absence of the Thai exchange rate crisis, eventually there would have been some other trigger.

My general conclusion, at this point, is that the fundamental cause of the crisis was that there had been investment booms that ended in a period of 'irrational exuberance'. Both lenders and borrowers, as well as financial intermediaries, should be blamed for this. It was not predictable that the boom would end in a crisis, but it

was certainly a possibility. The sharp decline in investment caused recessions in all countries, with a multiplier effect literally multiplying the effect of the investment slump as reflected in a decline in consumption. As shown in Table 1, the recessions were deepest in Indonesia and Thailand.

**Real growth rates**

(% of GDP)

| Country | 1988–95* | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|
| Indonesia | 7.9 | 7.8 | 4.7 | -13.1 | 0.8 | 4.9 |
| Malaysia | 9.4 | 10 | 7.3 | -7.4 | 6.1 | 8.9 |
| South Korea | 8.1 | 7 | 4.7 | -6.9 | 9.5 | 8.5 |
| Thailand | 10 | 5.9 | -1.4 | -10.5 | 4.4 | 4.8 |

* Average growth rate.
**Source**: Asian Development Bank at <http://www.adb.org>, accessed on 8 May 2007.

The international nature of the boom and subsequent slump clearly depended on the ability of capital to move freely—or relatively freely—internationally. Thus the liberalisations of international capital movements that had taken place earlier were crucial, especially in allowing contagion to take place. India and China, which had strict capital controls, did not have crises. But with regard to the four countries on which I focus here, one should be more precise. For Thailand, a crucial policy feature was the gradual liberalisation, especially of short-term capital movements, that took place principally in 1993 (Siamwalla, 2005). Indonesia had fully liberalised in the 1970s, and in practice enforceable controls were hardly feasible anyway. Malaysia was very liberal about FDI and also portfolio capital, but not short-term debt-creating borrowing. I shall come back to this important feature later. Finally, Korea had controlled and discouraged FDI inflow, but had liberalised short-term debt-creating borrowing, leading to massive short-term interbank inflows. Its liberalisation was associated with its membership of the OECD.

At this point let me mention that, after giving this lecture, I looked at Kindleberger and Aliber (2005) on ‘Manias, Panics and Crashes’. This is the fifth edition of a classic by Charles Kindleberger, first published in 1978. It tells the story of numerous booms that ended in crises. Financial crises, or ‘bubbles’ as they address, are hardy perennials. They list (p8) ‘the big ten financial bubbles’, beginning with the

Dutch Tulip Bulb Bubble of 1636, and including the late 1920s stock price bubble which preceded the Great Depression. One of these ten is the East Asian bubble, which they regard as beginning in 1992 and, of course, ending in 1997. This puts the subject of this edition in perspective. One chapter discusses 'international contagion', another 'the domestic lender of last resort', and all issues that arise in any discussion of the East Asian crisis are covered.

## THE EXCHANGE RATE REGIME AND EXCHANGE RATE CRISES

It may seem surprising that I have hardly referred to exchange rates so far, other than the brief reference to the Thai *baht*. The East Asian crisis is often thought of as a currency or exchange rate crisis. And, it is true that, in Indonesia, Malaysia and Korea, it was triggered by the depreciation of the *baht*. What then is the relationship between the exchange rate regimes and the investment booms and slumps? Before the crisis, three of the countries had (more or less) fixed exchange rates to the US dollar. The Indonesian target zone regime was somewhat (and not very much) more flexible. The first point is that, if the exchange rates had floated and if the underlying changing expectations about investment profitability had been the same as they actually were, then there would still have been a boom followed eventually by a soft or a hard landing.

During an investment boom, nominal exchange rates would have appreciated, so there would have been less inflation than there actually was with a fixed exchange rate, but there would still have been current account deficits (Real appreciation might have been somewhat greater, and this might have moderated the boom.). When investment eventually declined, there would have been nominal depreciation, possibly very sharp—that is, a hard landing. After a lag, these depreciations would probably have stimulated exports and import-competing sectors, and thus would have moderated, or even ended, the recession caused by the investment slump. One might compare this with what actually happened. The various crises ended the fixed rate regimes, and this was followed by substantial (in the case of Indonesia, vast) depreciations, which eventually stimulated exports. With a floating rate initially, this stimulus to exports would have happened earlier.

I have focused on the underlying fundamentals, namely the investment booms and slumps, which were somewhat similar in all the four countries. How did the

exchange rate crises fit in? Consider first Thailand. The asset price bubble burst already in 1994 and the terms of trade worsened in 1996, so that there was a drastic decline in the growth rate of exports. As Warr (2005) points out, an additional reason for the decline in exports, especially of labour-intensive goods (garments and shoes), was the steady rise in real wages explained by the gradual ending of the available pool of surplus labour from rural Thailand. The current account deficit sharply increased. With use of foreign exchange reserves and foreign borrowing in the forward market by the central bank, the exchange rate was kept fixed. With the bursting of the asset price bubble, banks got into trouble, and the central bank then engaged in monetary expansion to rescue the banks. Such expansion reduced the foreign exchange reserves further. By 1996, it was clear that the investment boom was at an end. The 'fundamentals' had deteriorated. Finally, in 1997, speculation on the exchange rate forced an end to the fixed exchange rate regime. Short-term capital flows sharply reversed.

Thus the currency crisis clearly followed the investment and banking crises after a lag of one year or more. Here it should be noted that, as Warr (2002) has pointed out, Thailand had become very vulnerable to a currency crisis because of the growing stock of very volatile short-term debt relative to the stock of reserves. Short-term debt had been accumulating for a decade, especially since 1993, when the gradual opening of the capital account was capped with the establishment of the Bangkok International Banking Facility.

The story was much the same for Korea. There was clear evidence of a financial crisis, or at least difficulties, well before the currency crisis (Krueger and Yoo, 2001). There had been excessive lending to unsound borrowers; the terms of trade deteriorated in 1996; and confidence was shaken by evidence of problems in the banking system. Only late in 1997 was there a currency crisis forcing abandonment of the fixed exchange rate regime.

In the case of Malaysia, well before the currency crisis, the stock market had risen to excessive heights and there were signs of banking problems. Again, in the case of Indonesia, the fundamental problems were much the same. Because of the lack of data then, however, there was less awareness of an international borrowing binge and thus of a likely problem. In this case the exchange rate crisis—triggered by the Thai depreciation—came first, and the financial crisis followed.

## THE CURRENCY MISMATCH—UNHEDGED FOREIGN BORROWING

I now come to a very important aspect of the whole story, which does not apply to Malaysia but does apply to the other three countries. Borrowing in the form of debt, primarily from international banks, was short term and was generally denominated in US dollars. This was not hedged against the possibility of a devaluation or depreciation of the domestic currency. Why this was so is a subject for discussion, but I will temporarily pass over this question. The consequence of such lack of hedging was that, when the domestic currency depreciated sharply—hugely in the case of the Indonesian *rupiah,* big losses were incurred by domestic banks that had acquired international debts in dollars and had on-lent domestically in local currency. There was a 'currency mismatch' which then created balance sheet problems. In some cases, as particularly in Indonesia, but also in Korea, local non-financial corporations borrowed abroad from international banks in US dollars (without the intermediation of local banks) and so also acquired the currency risk. Sometimes local banks lent in dollars to local firms, so that the firms then carried the currency risk and the banks acquired a credit risk.

In all these cases, balance sheets of banks and of corporations were severely affected by the exchange rate depreciations that resulted from the ending of the investment boom. In fact, many banks and corporations were bankrupted. Thus the currency crisis greatly added to the financial crisis because of the currency mismatch problem.

I suggested earlier that the exchange rate regime may not have made much difference to the fundamentals—even with a floating rate there would have been an investment boom that was followed eventually by a slump. Whether the exchange rate was initially fixed and then depreciated in a currency crisis, or whether it had floated and simply depreciated within the floating rate regime once capital inflow declined, the basic story would have been much the same. But now there is another factor to take into account, namely, the balance sheet effects of unhedged foreign borrowing denominated in foreign currency.

I come now to the reason why there was a failure to hedge against the consequences of the currency mismatch. In a floating rate regime, the demand for hedging is likely to develop and an appropriate market for hedging will emerge. The

experience of variable exchange rate values makes a desire to hedge likely, and perhaps even inevitably (as in Australia). By contrast, in the fixed rate regimes the need for hedging was not perceived because a breakdown in the regimes was thought highly improbable. But, when the regimes did actually break down, the currency mismatch caused balance sheet problems that had not been hedged against, and which thus damaged banks, other financial intermediaries, and corporations that had borrowed in dollars but expected to receive income in domestic currency. [2]

## THE RECESSIONS

In all four countries, there were deep recessions in 1998. One can break down the several elements that caused the decline in demand and thus the recessions.

First, there was the decline in investment that started off the crisis. Second, there was the financial crisis caused by the excessive domestic lending and by the decline in asset values resulting from the change in expectations. The difficulties of banks and other financial firms led to a drying up of new credit. One might say that the boom in the lending had been very unwise, and now the country had to deal with the consequences. Third, there was the reduction of private consumption resulting from the multiplier effect of the two shocks just mentioned. Finally, there were the consequences on balance sheets of the currency mismatch that I have just discussed—the reduction of credit by domestic banks and the reduction of spending by corporations, both resulting from the adverse effects of the currency mismatch on their balance sheets. The bigger was the crisis depreciation of the exchange rate, the bigger was this effect. Since the Indonesian depreciation was huge, it is not surprising that this adverse effect of currency mismatch in Indonesia was also huge.

[2] It can be argued that hedging was not available because it would require foreigners to take exposure. Hedging will shift risk, not eliminate it. That is correct. But one has to explain why foreigners, ever in search of profits, did not get into this business. They would profit if the event ensured against does not happen. If it does happen—i.e. if the *rupiah* does depreciate—they would have to sell dollars and buy *rupiah*. They thus must be prepared to take exposure. But taking on risk is the business of (say) hedge funds. I therefore conclude that hedging was potentially available, but there was no demand. If demand had emerged, supply would have emerged as a result. In the case of Indonesia, where the exchange rate was not absolutely fixed, the market only expected moderate exchange rate changes, and hence there was no demand for hedging. The extreme event that actually happened was thought inconceivable. Ron Duncan has also pointed out that hedging is very difficult, if not impossible, with fixed-but-adjustable exchange rates because changes in the rate occur at the whim of governments, so that the market cannot assess the risk. There is no probability distribution upon which it can base a financial derivative.

## THE POLICY RESPONSES

There were three possible policy responses, and all were eventually pursued in all four countries.

### Moderate the Depreciation

The first policy response was to try and moderate the depreciation by raising the domestic interest rate and by various measures that would restore the confidence of foreign investors and, indeed, also of local investors in the currency. This was very much the focus of initial IMF advice or conditionality. The main concern was to minimise the impact of the currency mismatch effect—the less the depreciation, the less would be the harmful effects on the financial sector. In addition, it was thought that fiscal and monetary tightness would improve confidence and thus moderate the depreciations.

The major problem about monetary tightness, designed to moderate depreciation, was that there is an obvious trade off. The higher is the domestic interest rate, the more deflationary will be the effect for those firms that depend on domestic credit. One does not normally raise interest rates in a recession! On the other hand, higher interest rates may succeed in moderating depreciations, and this would then moderate the adverse effect of currency mismatch for firms. Both aspects have to be taken into account, and critics of the IMF have emphasised the first aspect. There has been much empirical analysis of the strength of the second aspect. To what extent does an increase in the domestic interest rate appreciate the exchange rate? I am not sure whether there are conclusive answers. At the beginning of the crisis, the IMF emphasised the need to moderate depreciations both through interest rate policy and, more generally, by restoring confidence, but its emphasis changed as the severity of the recessions became apparent.

### Rescue the Banks

The second response by the governments or the central banks was to rescue the private banks so as to save the financial system. Banks were in trouble because of their initial unwise lending in the boom and the subsequent declines in asset values. They suffered further from the balance sheet problems just discussed, and finally from the lack of demand that caused the recession, also just discussed. Restoring the financial system was important because consumption and investment demands depend

on the availability of credit. Furthermore, the depreciations should stimulate exports—which eventually was indeed an important source of restored demand for the country's products, but which depended on trade credit. In the short run a shortage of trade credit was a serious problem in Indonesia.

Hence governments through asset management companies bought non-performing loans. They financed this by the issue of government bonds sold to domestic or foreign buyers (i.e. fiscal policy), by foreign official loans (including loans from the IMF), or by money creation. The last would increase the depreciation and thus worsen the balance sheet problem. In any case, restoring the financial system by rescuing banks and other financial intermediaries was an objective in all countries. In the case of bond finance and foreign loan finance, the costs of unwise or unlucky borrowing and lending were, at least to some extent, transferred from private sector borrowers and lenders to the taxpayers of the four crisis countries.

Lee and Rhee (2007:150) write about Korea that 'the expansionary fiscal policy after the crisis successfully stimulated the economy and facilitated the development of financial markets'. They note that the ratio of sovereign (i.e. government) liabilities to GDP increased from less than 6% before the crisis to 32% in 2004. Inevitably this created some moral hazard, though the rescues of the private sector were usually not complete; pain remained for the rescued. The essential argument in favour of such rescues was that the alternative of allowing the market to work would lead to prolonged recession and thus would create collateral damage—the losers would not just be the relevant private domestic borrowers and domestic and foreign lenders, but all those citizens who lost their jobs or suffered drops in incomes as a result of continued recessions, or even a depression. Furthermore, international defaults would affect the reputation of the country as a future borrower. Perhaps there was a possibility of moral hazard, but it seems that creditors and local depositors, rather than local banks, were protected. In addition, there was forced restructuring, both of corporations and of banks, especially in Korea. (For details, see Bank for International Settlements, 2000). For Thailand, Siamwalla (2005) analyses in detail the effects of the crisis on finance companies, commercial banks, and corporations, and the restructuring and recapitalisation process.

**Keynesian Demand Expansion**

The third possible policy response was to compensate for the decline in investment demand and the various other sources of the recession outlined above with a domestic demand expansion. This was a straightforward Keynesian policy. It included various increases in public expenditure (such as food subsidies) designed, for example, to help the poor and the unemployed. One might also think here of public sector infrastructure investment as a traditional Keynesian counter-cyclical policy, but the difficulty in this case is the inevitable lag in planning and executing such a policy. Deliberate reductions in interest rates would also be part of such a policy.

Incidentally, one could regard the previous approach of rescuing the financial sector and corporations as being part of this Keynesian approach because it would also lead to demand expansion. But because it creates moral hazard, it is best thought of as being distinct, though having Keynesian effects.

A switch to this Keynesian demand-expansion focus (including rescues of the financial sector) did take place in 1998, as the severity of the recessions became apparent, though the eventual limits were set by the availability of foreign finance. In 1998, this Keynesian approach seems to have been followed in all countries to some extent, but most clearly in Korea and in Malaysia. I advocated it in a lecture in Singapore given in the depth of the crisis in August 1998 (Corden, 1999).

In practice, all three approaches that I have discussed here were followed in all four countries. The first approach—seeking to moderate depreciations by raising domestic interest rates and tightening fiscal and monetary policies to restore confidence—was followed early in the crisis and was soon abandoned. The second approach—rescuing the banks—was a central feature of public policy right through in all countries. A shift to the third Keynesian approach emerged mostly in 1998, when the seriousness of the recessions became clear. By 1999, exports started increasing as a result of the real depreciations, and gradually domestic demand expansions were less needed.

## THE FOUR COUNTRIES; SOME SPECIAL ASPECTS

The next step is to look at some special aspects of each of the four countries.

### Thailand

Thailand displayed most clearly the disadvantages of a fixed-but-adjustable exchange rate regime (FBAR). The implications of such a regime—the pros and cons—have

been analysed fully in Corden (2002). Thailand had a strong, long-standing commitment to an exchange rate fixed to the US dollar, and this helped to explain its long history of very low inflation. But when financial institutions got into difficulties around 1996, the Bank of Thailand extended credit to financial institutions, which led to monetary expansion, and this in turn reduced the foreign exchange reserves. In addition, the Bank borrowed from the forward market. A Thai financial crisis was thus already under way when, in 1997, a speculative attack on the *baht* finally forced the central bank to give up the fixed exchange rate regime and allow the *baht* to float.

This was a familiar story. It reminded one of the United Kingdom's 1992 crisis when sterling was forced to leave the European Exchange Rate Mechanism (ERM). In such cases, a central bank makes big losses to the benefit of private speculators. It is worth noting that Indonesia did not get into this situation. As pressure on the *rupiah* mounted, the Indonesian authorities quickly gave up their target zone regime and allowed the *rupiah* to float. Here I should mention that Indonesia did not have a strictly fixed rate regime before the crisis, but something close to it—a narrow target zone within which the rate floated, and a central rate that had a modest rate of crawl. This did mean that its exchange rate regime was more flexible as soon as the crisis broke. Malaysia and Korea also did not hang on to their (more or less) fixed exchange rates for very long. In this respect, Thailand was special.

**Indonesia**

Indonesia had the biggest exchange rate and growth decline, and the slowest recovery. Why was this? Its initial economic position appeared to have fewer problems than the other three countries (Hill, 2000), though to some extent that was only an 'appearance' because inadequate data did not reveal certain problems of excess or unwise investment. But the main point, I wish to stress here, is that in Indonesia an economic problem interacted with a potential political problem. This political problem was that of the succession to elderly President Soeharto, and, in addition, his declining ability to manage the country. Each problem—the economic problem and the political problem—was made worse by the other. The trigger was a depreciation of the Indonesian *rupiah* caused by the Thai depreciation, a straight case of contagion. Because of the usual currency mismatch, this then caused a balance sheet problem for banks and for corporations that had borrowed directly overseas in dollars. That is a

familiar scene—efforts to rescue banks were financed by money creation, and this increased the depreciation. Indeed, for a period in early 1998, Indonesia lost control of monetary policy, though inflation was brought under control by late 1998.

The extreme depreciation that came about and that created huge currency mismatch problems was caused by a loss of confidence in President Soeharto's government. One reason was that the IMF—which had been brought in quickly to support the exchange rate—set conditions that were unacceptable to him, conditions which would weaken the influence of and gains to the Soeharto family. Basically he rejected IMF conditions. In addition, there was uncertainty about his health and the succession. The Chinese business minority lost confidence in their security, and that added to the flight of capital.

Thus one can say that the economic problem—triggered by the Thai depreciation—in turn triggered a political crisis, the potential for which had already existed, and this political crisis in turn worsened the economic problem through increasing the depreciation of the *rupiah* and thus the currency mismatch effect on banks and corporations. This argument sounds complicated, but is actually over-simplified. It is an attempt to explain why the effects of the East Asian crisis have been much more severe in Indonesia than in the other three countries even though Indonesia's initial macroeconomic situation appeared quite good.

**Korea**

There are, of course, many special features of Korea, which is by far the largest economy of the four Asian crisis countries. Here I will just note two.

The first is that more assistance was granted to Korea by the IMF and the United States than to the other countries. The Korean crisis was seen as a bigger threat to the world financial system because of the size of the economy and especially the very high short-term debts incurred by Korea's corporate sector and their associated banks (the *Chaebols*).

The first financing package, arranged by the IMF at the end of 1997, was primarily concerned to deal with the major drain on the capital account coming from bank debt repayments (resulting particularly from offshore borrowing by overseas branches of Korean banks). The IMF's own funds were quite modest (partly because the Korean IMF quota relative to its GDP was quite small), and so a crucial element

of the package consisted of promises from various bilateral sources, notably the United States, but also from other developed countries. But this was not sufficient—or sufficiently certain—to restore market confidence, so Korea's foreign exchange reserves dwindled rapidly. This then led to an important and successful development, namely the 'coordinated roll-over' (Independent Evaluation Office, 2003:114–5).

Under pressure from the governments of creditor countries, the creditor banks of the various countries agreed to 'roll-over', that is, to maintain their existing credit lines (i.e. not to require repayments of short term credits) and also agreed to extension of maturities of their claims on Korean banks. This was successful in restoring liquidity and hence confidence. All the extended loans were eventually repaid by the original Korean borrowers. In fact, 90% was repaid by April 2000, though only 63% was scheduled to mature by that date (Independent Evaluation Office, 2003).

The other special feature of Korea was that its recovery was faster than that of the other countries. Already in 1999 the Korea growth rate was 9.5%. By contrast, the Thai growth rate in 1999 was 4.4%. This rapid recovery of Korea was explained by the switch to expansionary monetary and fiscal policies in the middle of 1998. According to Lee and Rhee (2007), this was made possible by the structural changes that had been brought about very quickly and effectively in 1998. There were many public credit guarantee programs. In their view (P152), 'counter-cyclical fiscal policy can be quite effective when combined with financial restructuring'. The IMF's Independent Evaluation Office (2003:109) noted that 'public funds totalling over 20 per cent of GDP would eventually be committed to cleaning up the banking sector'. It certainly helped that, before the crisis, Korea had a very low ratio of public debt to GDP (6%).

To conclude discussion of the Korean experience, it would be interesting to make an in-depth study comparing the reactions to the crisis in Thailand with that of Korea. Why did Korea have a substantially faster recovery? One likely factor was that the proportion of non-performing loans remaining with commercial banks in 1999 was far lower in Korea (6.2%) than in Thailand (38.6%) (See Bank for International Settlements, 2000). This difference may reflect the greater impact in Korea of the government-financed asset management companies. Another factor may have been that Korea's current account deficit as a percentage of GDP was, to start with, much lower than Thailand's. In 1996, the deficit was 4.4% of GDP for Korea and 7.9% for

Thailand. Finally, there was the financial support provided by the United States to Korea, combined with the US-supported roll-over arrangements. This contrasts with the rather modest help given by the United States and Japan to Thailand and Indonesia.[3]

**Malaysia**

Malaysia is actually a very special case for two reasons. There are important lessons to be learnt here.

First of all, Malaysia did not have a currency mismatch problem, as all the difficulties that it caused in the other three countries, especially in Indonesia. I shall come to the reason for that in a moment. Nevertheless, Malaysia did still have a crisis, triggered by the Thai depreciation, but the crises was caused fundamentally by the inevitable ending of a sky-high investment, stock market and real estate boom. Thus the 'fundamentals' were the same as in the other three countries. Financial fragility resulted from unwise domestic lending. This convinces me that the fundamental factor in all four countries was the investment boom and slump.

Coming then to the special feature of Malaysia, it had effective regulations administered by the central bank that set ceilings on foreign currency borrowing or lending. The central bank thus allowed very little accumulation of foreign currency denominated debt. As a result, the crisis and depreciation of the Malaysian currency created no foreign debt problem, and thus Malaysia did not need the IMF to rescue it. Of course, banks did borrow domestically on a large scale because of Malaysia's high domestic savings. And there was still very volatile foreign capital inflow in the form of portfolio flows. When expectations changed suddenly, these flows reversed and set off the crisis.

It is worth emphasising that the currency mismatch problem was an important factor in Thailand and Korea, and a major factor in Indonesia, but in Malaysia it was not a factor at all because its central bank did what other central banks are often urged

[3] After completing this paper, I became aware of Park and Lee (2002) which systematically compared the post-crisis adjustments of the crisis countries (including the Philippines). The differences manifested themselves in the performance of investment and export growth. They found that real exchange rate depreciations, expansionary macroeconomic policies and favourable global environments were the critical determinants of the post-crisis recovery. IMF financial assistance had no independent impact.

to do—namely, control or limit foreign short-term borrowing by domestic banks. Yet, as I have said, Malaysia still did have a crisis.

The other special feature of Malaysia was that, in 1998, its government imposed controls on short-term capital outflows, in particular on the repatriation of portfolio capital by non-residents, as well as on speculative positions against the currency. After a year these controls were modified, but they did give more freedom to fiscal and monetary policies, allowing the domestic interest rate to fall below the US interest rate. There is some evidence that these measures allowed the recovery to be somewhat greater or earlier than in Thailand. The controls may not have made a big difference, but in the judgement of Athukorala, with which I agree, the net effect was beneficial (Athukorala, 2001, Corden, 2002).

It is clear to me that controls on short-term international capital flows, whether inflows or outflows, should not be ruled out, at least in particular circumstances. But one has to keep in mind that there are administrative problems. For that reason alone the controls were more suitable or indeed more feasible for Malaysia than for Indonesia. Furthermore, the benefits of free portfolio inflows and outflows must also be taken into account.

## WAS IT A LIQUIDITY CRISIS?

At last, I come to the 'liquidity versus solvency crisis' issue. In a very thorough discussion of the East Asian currency crisis, Ito (2007:43) concludes that "in summary, many believe that the Asian crisis was a 'liquidity crisis' rather than a 'solvency crisis' with fundamental structural problems". Ito notes, as evidence, that Korea and Thailand had repaid all their IMF debts by 2004, and Indonesia had repaid about half by June 2006 and planned to repay the rest within a year or so. Park and Lee (2002:315) also concluded earlier that the crisis was, in large measure, a liquidity crisis caused by investors' panic: 'Once the liquidity constraint was eased as it was during the first half of 1998, domestic demand has since surged again and the crisis countries have been able to move toward the pre-crisis path of growth.'

It seems to me that it is correct to argue that for the countries or, to be precise, the governments, there was an element of a 'liquidity crisis'. But it was superimposed on the 'fundamentals' that I have discussed. If more financial resources (i.e. more liquidity) had been available, exchange rates might not have needed to depreciate so suddenly and severely. Of course, the fundamental factors—the inevitable ending of

the investment booms—did require some significant depreciation. But, as I have said, these need not have been so sudden and severe. Especially, the temporary and massive overshooting of the exchange rate depreciation in Indonesia might have been avoided if major countries, notably the United States and Japan, had been prepared to provide quickly more back-up resources to the IMF. The IMF itself had very limited funds available given the size of quotas of the three countries (Thailand, Indonesia and Korea) that it supported.

It is arguable that the countries had been reasonably well managed in their macroeconomic policies, and did not really have solvency problems. As in the earlier case of Mexico, no losses were incurred by making emergency loans to their governments. For this reason, there was also no moral hazard issue for the governments. Essentially there was a market failure, reflected in inadequate international liquidity in the short term. The Korean 'roll-over' coordinated by the IMF was very effective, and ensured that private lenders played some part in the rescue. Probably such roll-overs would have been harder to arrange in the case of Thailand and Indonesia since the major lenders were harder to identify

These remarks concern the governments and their central banks. But the story is somewhat different with regard to the private borrowers—especially the banks, but also corporations—in the four countries. Here I would say that there was indeed a solvency crisis resolved eventually by the governments and central banks. The details varied by country, but it is clear enough to me in the Korean case that there was a transfer of debts to the government—that is, the taxpayers. The *Chaebols* and their banks were not in a position to repay. The non-performing loans that were bought by the government did turn out to be at least partially non-performing. But they were always bought at a discount. It is hard to generalise here, but there may be a moral hazard issue in this case, especially for the foreign lenders who mostly lost very little. Nevertheless, I am not convinced that the adverse effects of moral hazard should be regarded as outweighing the very good reasons for government and central bank rescues. At the same time, even the solvency problems of the various private sectors in the four countries would have been less, if the depreciations had been less (or less sudden) because of readier availability of international liquidity. This is particularly true in the case of Indonesia. Thus there was even a liquidity crisis element affecting the private sectors' problems. This large issue of 'liquidity versus solvency crisis', I cannot pursue here. It is one which is familiar to students of central banking, and

which underlies much of the discussion of the role of the 'domestic lender of last resort' in Kindleberger and Aliber (2005:195–210).

## CONCLUSION

Let me reiterate that this lecture has not been concerned with assessing the role of the IMF, even though I have touched on this at various points. The role and presumed failures of the IMF are interesting and much debated subjects which are probably discussed most thoroughly with regard to Korea and Indonesia in the IMF's own report by the Independent Evaluation Office (2003).

The main point, in my review here, has been that there was a prolonged investment boom followed inevitably by some kind of slump. An ending to the episode in the form of a 'hard landing' was neither inevitable nor predictable, but was set off by events in Thailand and reinforced in Indonesia's case by political factors. I have discussed the relationship with the exchange rate crises and the serious impact of short-term foreign borrowing that was denominated in foreign currency, usually dollars, and was unhedged. There were several policy responses, notably efforts to rescue the banks and various private corporations, and these rescues were generally expensive to the public sector. Only in the Korean case was there a systematic attempt to get foreign creditors to reschedule the payments they were owed. There were some special features of each of our four countries. In particular, in Indonesia, there was an interaction of a political with an economic crisis, while Malaysia did not incur significant short-term debts—unlike the other three crisis countries—while Thailand adhered too long to a fixed exchange rate. As I have said at the beginning of this lecture, I have not tried to make a grand assessment of the causes of the crisis and policy responses, and of how something similar might be avoided.

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