Anatomy of the
Thai Economic Crisis

by

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> *"I truly believe … that we, more than any other country are also trying to change the rules of the game and the basic structures of the economy because there is a lot more recognition of this problem in Thailand--that it was the rules and regulations which broke the economy and not the lack or the excess of money. The bubble did not just create a void. During the bubble, a lot of new structures were put up in capriciousness, in over-confidence, and in ignorance. I think we have learnt our lessons and we are trying to change back to the rule of sensibility, logic, and conservatism."*
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> *M.R.Chatumongkol Sonakul, Governor of the Bank of Thailand*[1]

A. THE BUBBLE

Until the crash of 1997, the Thai economy had performed exceptionally well. Economic growth had been averaging 7.6 per cent over the two decades from 1977-1996. There was a dip in that rate in the early 1980s when an adverse shift in the terms of trade (high oil prices and low agricultural prices) depressed growth between 1980 and 1985 to 4.5 per cent. In the meantime, Thailand also adjusted its production structure to reflect its changed comparative advantage toward labor-intensive industries and away from agriculture. Thus were created the conditions which led to the export-led manufacturing boom beginning in the second half of the 1980s and which continued until 1996.

The basis of the boom in its earlier and middle stages, that is until about 1993, was sound, with rapid investments in manufacturing capacity brought about by the relocation of industry from East Asia following the appreciation of the yen. As a result economic growth accelerated sharply, reaching double-digit rates towards the end of the 1980s. Such high growth rates naturally led to severe pressures on the capacity of the infrastructure. Consequently, major investments had to be made in telecommunications, power generation, and urban expressways. Together with the investments in manufacturing, there was a sharp acceleration in the country's gross capital formation.

This growth in demand for investment funds coincided with the decision of the Bank of Thailand to liberalize Thailand's financial system, particularly in its relationship to the rest of the world. There were two important milestones in this opening up of the financial system. The first was Thailand's acceptance of the obligations under Article VIII of the International Monetary Fund in 1990. This required the lifting of all controls on all foreign-exchange transactions on the current account, most of which had already been removed. The second was the gradual

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1 From "Thailand: What Happened And Has Anything Really Changed?" Speech given at the ASEM Conference in Copenhagen, Denmark, 8-9 March 1999.

opening of the capital account, in a long process that was capped by the launching of the Bangkok International Banking Facility (BIBF) in 1993. This facility was designed to make Bangkok a center for financial services by encouraging foreign financial institutions to set up operations in Thailand. These financial institutions were to make loans both to domestic borrowers and to those in other countries in the region, although in the end, BIBF proved to be more efficient as a conduit for domestic borrowers.

Following the logic of these two milestone decisions, most remaining foreign-exchange control measures were removed. Although Thai residents who wished to acquire assets abroad had to obtain the approval of the central bank, it was readily granted. Similarly it became easier for foreigners to hold non-resident baht accounts.

On the domestic front, all ceilings on interest rates were removed in 1992, and the requirement for banks to direct a certain proportion of their loans to the agricultural sector was gradually loosened until it became almost meaningless. The rules relating to non-performing assets were changed to conform to those defined by the Bank for International Settlements (BIS). But the Bank of Thailand chose to use the loosest of the rules. For example, a loan was deemed to be non-performing only if principal and interest were overdue for twelve months.

Financial liberalization at a time when the country was growing rapidly and had major capital requirements fueled an investment boom, and later an asset price bubble which grew out of control. With foreign money available at the low interest rates prevailing in the developed world, and with an exchange rate which was perceived to be fixed forever, borrowers perceived their cost of capital to be considerably reduced. This first stimulated the investment boom, which in turn nurtured a high growth rate. Side by side with the investment boom, the high growth rate of the economy, and the low perceived cost of capital, there arose an asset price bubble. The benchmark SET index for stock prices rose from 613 at the end of 1990 to peak at 1410 at the end of January 1996.

A similar bubble in property prices was to have wider repercussions. The property boom went back to the late 1980s, when Thailand was enjoying double-digit growth. With that kind of growth rate, there was indeed a shortage of office and residential space, particularly in Bangkok. The resulting construction spree was only to be expected and in the beginning, justified by demand, at least until about 1992-1993 (Renaud, Zhang and Koeberle 1998). By 1994 it was becoming obvious that supply was overshooting requirements. There was an Indian summer of construction activity, when everyone raced to complete their projects before the impending crash, helped along by the cheap money that was becoming available at that time.

Lenders collaborated closely in fueling the property boom. Bank of Thailand data indicate that the banks' share of real estate lending in their overall portfolio went up from 6.3 per cent at the end of 1988 to 14.8 per cent at the end of 1996. Over the same period, the share of real estate in the portfolios of the finance companies went up from 9.1 per cent to 24.3 per cent (cited in Renaud, Zhang and Koeberle 1998).

These figures actually under-estimate the role of property in the Thai financial system. The majority of Thai bank loans are based on collateral, with property as the asset of choice. With rapidly rising prices, even to non-property companies, the property placed as collateral could be used to raise more loans, whose proceeds could in turn be used to purchase yet more property, fueling asset price rises even further. The travails that Thai banks and finance companies are currently going through are in no small measure due to the close nexus between property and bank loans.

However, while the bubble arose in large part out of private decisions, there were major policy and regulatory failures also. One should not fault the Bank of Thailand simply for having liberalized the financial regime, a decision which set in train the events which caused the bubble to grow and then to burst. Liberalization under the right circumstances can be beneficial. But the right circumstances were not present. First, domestic financial institutions were not ready for a liberalized market – their management still used the old methods of using collateral as security and did not try to assess cash flows and their risks carefully. With these weaknesses among the financial institutions, the Bank of Thailand was also at fault for failing to follow through that liberalization with strict prudential measures, and to take firm action when it was needed.

First of all, the central bank should not have continued with an essentially fixed exchange-rate regime. An open capital account has repeatedly been shown to be incompatible with such a regime (unless there is a very strong currency board that strictly eschews the use of monetary policy). The crises in Chile in 1982, in Sweden in 1990 and in Mexico in 1994 can be cited as examples of the failure to heed this rule. The reason is that the insurance against exchange-rate movements offered by the central bank tended to encourage excessive movements of capital, both inwards and outwards. The outward movement would also be bound to be more violent if associated with a fear of devaluation, which is what happened in the first half of 1997.

Second, granted the central bank's decision to keep the exchange rate fixed, the authorities can be faulted for not taking appropriate action to control excessive demand. True, the Bank of Thailand began to apply monetary brakes starting from mid-1994 onwards. But under a fixed exchange-rate regime with an open capital account, monetary policy is not very effective, as was soon shown to be the case. As the central bank's policy pushed domestic interest rates upwards, there was an acceleration of the inward flow of foreign money. The current account deficit rose to 8 per cent of the gross national product in 1995 and 1996. This high current-account deficit was primarily due to the capital inflow that in turn fueled the high domestic investment. The investment rate eventually reached 42 per cent of GNP in 1996.

With monetary policy ineffective, fiscal policy should have become the central instrument to limit aggregate demand. While Thai fiscal policy appeared conservative, with a string of budget surpluses going back almost a decade, it was not so by design. Rather it was an outcome of the strong growth, combined with an excessive caution in the estimate of revenues. In any case the surplus as a per cent of GNP was steadily declining, turning into a small deficit in 1996. The 1996 deficit was in fact a conscious decision to loosen fiscal policy, at a time when monetary policy was already quite tight. But given the overheated economy, this was definitely a wrong move.

These policy mistakes aside, the primary cause of the bubble was the high growth rate itself and expectations of a perpetuation of that growth rate. For with a high growth rate of the economy, asset prices continued to appreciate, revenues continued to grow, and the burden of any debt incurred then could be expected to decline relative to income in the future. With an open capital account, and with the Thai economy performing miraculous feats of continued high growth, debt could be increased seemingly without limit. As foreign money continued to pour in, the growth of the economy continued, confirming the expectations of high growth that generated the state of euphoria in the first place.

The crisis that finally hit Thailand occurred in many different markets at different points in time, as did the recovery. The following analysis will examine events in each of the following markets: credit, currency, goods and labour markets. The stress on markets emphasizes the fact that it was their failings which led to the crisis, and which should be the focus of the analysis. There were of course policy failures as well. Many of these pertain directly to government action and inaction in each individual market and will be covered in the relevant section, but there are also other, more general policy issues, which will be addressed in the final section.

B. FINANCIAL INSTITUTIONS AND MARKETS

The flotation of the baht on 2nd July 1997 is now conventionally designated as the start of the Thai and the broader Asian crisis. This is because this dramatic event was what hit the headlines in the international media. Actually, Thais had been aware for some time that their economy was entering a stormy period. What triggered that awareness was the suspicion that the balance sheets of many financial institutions were extremely shaky, with some being in reality near insolvent. Many of the loans, particularly to the property sector, were already non-performing. But with the economy spiraling downwards and, after the float, with the baht rapidly depreciating, the total size of the non-performing loans was becoming larger. Often in the past, the government had bailed out the depositors of insolvent banks, but there was no automatic guarantee. Considerable uncertainty existed, and this is an important backdrop to developments in the critical year 1997.

Finance Companies

The Bank of Thailand, as the supervisor of these institutions, began to move on some of the worst cases, first asking ten finance companies to increase their capital (on 3rd March 1997), and encouraging them to merge. Strangely enough, the names of these companies were announced. This action both shows too tough a stance (by announcing the names of the problematic firms) and too mild a stance (in hoping that there will be investors willing to put up the capital). The result was to precipitate a run on these and other finance companies, which were kept going only by loans from the Financial Institutions Development Fund (FIDF). The amount lent by FIDF in the month of March shot up by 80 billion baht from the total of 50 billion baht outstanding at the end of February (Nukul Commission, para. 343). At that point the total deposits of businesses and households with all finance companies stood at 995 billion baht.

The seepage from the finance companies continued, more finance companies came to FIDF for funds, this time joined by a bank as well. On the 28th June, the government suspended the operations of 16 finance companies, including the 10 that was required to increase their capital. These sixteen included what was then the largest finance company. Depositors at these institutions were asked to have their promissory notes replaced by those issued by a finance company (Krung Thai Thanakit), which was in turn owned by a state bank (Krung Thai Bank). The maturity for deposits were however made longer: for deposits greater than 1 million baht, the maturity was three years and for deposits greater than 5 million baht, the maturity was five years, at floating interest rates somewhat below market rates. Creditors to these suspended financial institutions were not protected.

The depositors were thus not quite fully protected: at the very least, the forced extension of the maturity created problems for them. Consequently, there was a huge run on the remaining financial institutions. Only a few large banks escaped the run. An announcement by the Prime Minister one day after the suspension of the 16 firms assured the population that the government will not suspend any more financial institutions and that deposits and loans at the remaining ones will be guaranteed. The first part of the announcement was falsified on 5th August with the suspension of 42 more finance companies, bringing the total to 58. After the suspension, the managements of these companies were asked to submit rehabilitation plans. The authorities eventually decided (in December 1997) that only two of these could pass muster, and the remaining 56 were closed down permanently, their assets transferred to newly instituted Financial Restructuring Authority. By the end of the year, the FIDF had on its books a total of more than 700 billion baht (18 per cent of GDP) owed by these and other financial institutions including more than a few banks (Nukul Commission, para. 346).

Until July, the decision with respect to the financial institutions was entirely in the hands of Thai authorities, without the involvement of the International Monetary Fund (IMF), at least in regard to the decisions taken before July. The extent of IMF's involvement with the August decision to suspend 42 firms is less clear, however. That suspension was prior to Thailand's formal entry into the IMF program, and it was said at the time that this was the entry price into the program. In the first letter of intent submitted by the Thai authorities to the Fund (dated 14th August 1997), they highlighted the measures taken with respect to the finance companies:

> "The first part, which has already been set in train, begins by isolating fundamentally unviable finance companies from the rest of the financial system. We have made clear the principle that the public costs of this intervention will be strictly minimized through burden sharing among the claimants of unviable institutions, starting with a capital write-down of existing shareholders and losses for the creditors of finance companies."

The depleted funds at these institutions were made up by loans from the FIDF, which in turn borrowed from the Bank of Thailand.[2] All of these actions led in effect to the transfer of a very large chunk of the financial institutions' assets to the FIDF – assets whose value was highly dubious. To finance these transfers, the Financial Institution Development Fund (which is a part of the central bank, although it is a distinct legal entity) began to issue notes that ballooned in size, so that eventually they totaled nearly a trillion baht. Worse than that, during the period when there was a

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[2] Although a separate legal entity from the Bank of Thailand, FIDF is in reality a part of it with almost all personnel from the Bank staff.

severe run and a big demand for FIDF loans by the finance companies, the Bank of Thailand took up many of FIDF notes that could not be sold in the money market.

The assets of the 56 closed finance companies acquired by the FIDF were passed on to a newly instituted Financial Sector Restructuring Authority (FRA) to be auctioned off. Until 13th September 1999, the last date for which we have figures, the FRA was able to sell core assets (loans) whose face value was 584 billion baht for 147 billion baht, implying a recovery rate of 25 per cent. There was an additional revenue of 34 billion baht from the sale of non-core assets, mostly securities although of unknown face value.[3]

Commercial Banks

The problems with the finance companies did not end with the closure of the 56 companies, the remaining ones continued to worry the authorities, and several were closed in 1998. But these problems were submerged under far more serious problems with the commercial banks. One bank, the Bangkok Bank of Commerce – a subject of numerous fraud investigations – had already been taken over in 1996, two more were taken over at the end of 1997, and two more in 1998. The takeover of the last two banks was in conjunction with an overall program to rehabilitate the entire banking sector, to which subject I shall return presently.

The central problem with the banks that were taken over, and indeed of the banking system of a whole was a frighteningly rapid deterioration in the quality of the banks' assets. The single most important culprit for this deterioration was the fall in the value of the baht. The net exposure of the banks (and finance companies) to exchange risk had been regulated by the Bank of Thailand to be less than 20 per cent of the banks' capital. However, most local banks belong to the BIBF. As such, they were permitted to act as conduits for cheap dollar loans to Thai companies. As both liabilities and assets for these loans were both in dollars, technically they did not increase the banks' exposure to exchange risks. But as their customers were so exposed, the banks' *credit* risks certainly increased. Therefore, in addition to the problems created by the property sector, which had already weakened the financial institutions before 2nd July, the banks had now to harvest the more serious consequences of the baht depreciation. The sharp decline in economic activities after July 1997 added a further impetus to the rate of loan non-performance.

After July 1997, the Bank of Thailand no longer accommodated the banks' loan problems by practicing regulatory forbearance. It steadily tightened up the definition of non-performing loans (NPL), as a result of which the NPL figures climbed to incredible figures of 40 per cent plus for the whole system, and to as much as 70 per cent for the state-owned banks.

The huge volume of non-performing loans and the resulting recapitalization requirement under the more stringent rule froze up the entire financial system. Banks were increasingly reluctant to lend, even for working capital. The result was that firms began to hoard cash rather than repaying their loans or even paying interest, merely to maintain their operations, thus pushing the NPL figures even higher. Some firms

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[3] The figures are from FRA's home page (www.fra.or.th)

began to reduce prices, particularly on sales overseas, to generate cash flow (Suthep 1999). This hoarding of cash in preference to loan repayment was the mildest form of what came to be known as the "strategic NPL" problem. Other borrowers were less strategic and more opportunistic. These add to the financial institutions' balance-sheet problems, and for them to require further increases in their capital.

The depreciation of the baht wreaked such havoc with the balance sheets of most Thai firms that no rational lender would like to put up the money for them. By resorting to such stratagems as becoming a strategic NPL, many firms were able to continue operating. The freezing up of the credit market appeared to have relatively little impact on the firms' ability to obtain working capital, as indicated by the fact that Thai exports *in baht terms* expanded considerably, indicating that exporters had no trouble processing their orders.[4] Of course, any expansion or modernization plans will have to be shelved.

The banks, even those that had not been taken over by the government, needed to increase their capital to make up for the deteriorating assets. At first, the government encouraged the banks to do so on their own. In March 1998, two of the largest banks, Bangkok Bank and Thai Farmers' Bank successfully raised capital overseas. Unfortunately, their success was the undoing for the other banks in the system. It turned out that they luckily floated their new shares during a very narrow window of opportunity. Soon after, the yen was facing severe problems, Russia defaulted, and Asia went out of fashion once more. The NPL figure in the Thai banking system continued to move relentlessly ahead, pulling banking share prices down further (see Figure 1). Those who put their funds in the two banks lost a great deal of money. After that, it became impossible for any other bank to raise equity in the markets.

Eventually, the government had to step in and announced on 14th August 1998 a series of measures to facilitate the recapitalization of banks, if necessary by means of public funds. Two more banks were taken over by the government, and were to be merged into two government banks, together with two of the banks that had been taken over earlier in the year. These two banks taken over earlier had their FIDF debts converted into equity, to the point where their NPLs are now adequately covered with reserves up to the year 2000. These are to be sold to investors, most likely foreign. One bank, the Bangkok Bank of Commerce (BBC) was to be closed down altogether.

The more important part among the 14th August measures eases the recapitalization burden by shifting the required proportions of tier-1 and tier-2 capital in favour of the latter. It also provides government funding for both these capital tiers. If commercial banks commit themselves to comply with new rules of loan loss

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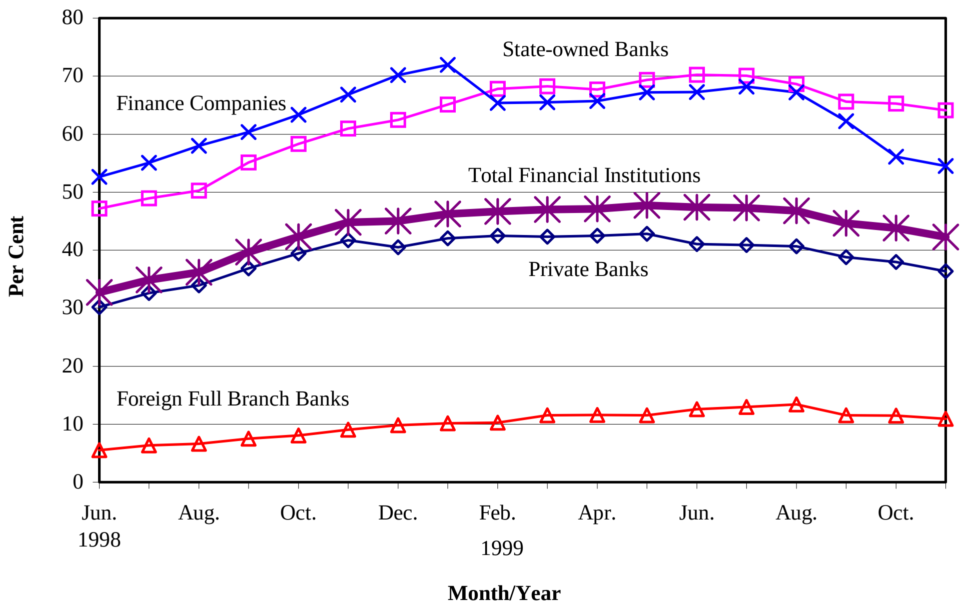
[4] Dollar et al. (1998) find in the sample of firms they surveyed in the last quarter of 1997 and first quarter of 1998 that these firms perceived the problem of the credit constraint to be much less than was being discussed in policy circles at the time. The credit problem was swamped by others, such as fall in domestic demand. Ito and Pereira da Silva (1999) argued that there was a "credit crunch", in the sense that many firms that should be able to get access to credit were being denied it. The two views are not incompatible. The position that I expounded in this part of the text (in terms of impact on firms and of export performance) appears to be broadly in agreement with the Dollar et al. view, but that there was a "credit crunch" in the sense of Ito and Pereira da Silva is documented further below.

provisioning by the end of 2000, then they are entitled to issue new preferred shares to the government in exchange for tradable government bonds. To encourage banks to restructure debts with their clients, the government stood ready to provide them with nontradable government bonds equal to the losses incurred during the restructuring. These bonds would be exchanged for the banks' subordinated debentures, which could count as the banks' tier-2 capital (TDRI 2000). Parliamentary approval was sought for the issuance of 300 billion baht worth of government bonds.

Although all banks except the larger ones have come to the government, the offtake of the government bonds has to date totaled less than 100 billion baht. Only banks that already had large government holdings asked for and received tier-1 capital. The government had plans to sell off its remaining banks, except the largest, Krung Thai Bank most likely to foreigners. Several of them have been taken over. Consequently, the foreigners' share of the Thai banking business is now much larger than before, and look set to expand further.

These recapitalization efforts merely tackle the consequences of the loan non-performance, but they do not get at the root cause of it. The figures for NPLs were soaring upward continuously and peaked in June 1999 (see Figure 1). To obtain a full picture of the NPL problem, one has also to look at the demand side of the story.

Figure 1 Non-Performing Loans in Thai Financial Institutions As Per Cent of their Loans Outstanding



Source : Bank of Thailand.

Corporate Finance

Thai corporations have always been highly leveraged. In an international comparison of debt/equity ratios among publicly listed non-financial companies, Thailand ranked quite high, even among Asian countries, being exceeded only by

Japan and Korea (Claessens and Djankov 1999). The reasons why this should be so has not been well analyzed.[5] Rapidly growing firms have to depend on external sources of capital for their expansion. Among these sources, loans from banks and the finance companies have been the preferred option, because in Thailand, the founding families still exert overwhelming control over their firms, which makes them reluctant to dilute their equity holdings too much. Furthermore, the finance sector is quite narrowly based, with banks and finance companies capturing most of the household financial savings. Other financial intermediaries (such as insurance companies or pension funds) are not only much smaller relative to the bank, but are ineffective in generating risk capital as well. As a result the equity market before 1997 became the arena of small investors, dealing in shares of companies where the founding families exert overwhelming control. Such an environment is hardly conducive to good corporate governance, further discouraging equity financing.

On the other hand, from the corporations' point of view, the high leverage and the dependence on the banks meant that they were highly vulnerable to the kind of crisis that occurred. Moreover, that vulnerability had been steadily increasing, for throughout the 1990s, the heavy investments that they had been making were yielding progressively lower returns. From high teens in the early 1990s, the median rate of return (in nominal dollars) on assets of publicly listed non-financial companies has sunk to 13.2 per cent in 1995 and 11.5 per cent in 1996. Their rate of return in real baht terms has sunk from around 11 per cent in the early 1990s to 7.8 per cent in 1995 and 7.4 per cent in 1996 (Claessens and Djankov 1999).

Thailand then had already vulnerable companies owing large dollar debts entering the crisis in which the price of the dollar would rise enormously, far more than anybody had expected. At the time when the exchange rate was at its peak, even a blue-chip company such as the Siam Cement group became technically insolvent. In fact the balance sheets of almost all major companies were askew, as they had the easiest access to dollar loans, some through their Thai banks, some directly contracted with foreign banks, and some through both channels. Only a small minority of firms hedged their dollar loans.

The high level of non-performing loans was thus an inevitable consequence. Unfortunately, the resolution of the debts that had thus piled up is turning out to be very difficult and time-consuming, largely because of poor legal infrastructure and incentive incompatibility among key actors.

Debt Workouts

Decades of continuous growth before 1997 meant that the problems posed by the bankruptcy of firms were never serious enough to warrant a close examination of Thai bankruptcy laws. Never modern to begin with, they had become increasingly

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[5] To pick on only one of many possible explanatory hypotheses, La Porta et al. proposed legal tradition as an important determinant of forms of corporate finance. The common law tradition is supportive of both equity investors as well as of lenders to corporations. The civil law tradition is less supportive of equity investors in general, while the German branch of civil law is more supportive of creditors, hence the traditionally strong role of banks in Germany. Thailand has a body of codified civil law. Its commercial law is derived from Germany via Japan. Not completely irrelevant is the fact that most of its judges are trained in the common law tradition.

irrelevant over time. There was only one option for creditors faced with an insolvent debtor: liquidation. For troubled companies, this would mean a mutually unprofitable race for the remaining assets. This was no doubt a wasteful way of handling bad debts, but as long as such companies constitute a small portion of the economy, no one thought of changing it.

Worse than the bankruptcy laws were the foreclosure procedures – an important consideration, given the important role that collateral played in Thai banking. It could take from three to five years to foreclose on a mortgage. Again, in the era of high growth, this created little problem, because the carrying cost caused by the delay would be partly, and sometime more than compensated by the appreciation of the land price.

With the onset of serious corporate insolvency problems, reforms became necessary. These were undertaken with the enactment of wide ranging legislation that instituted Chapter-11 type procedure, as an alternative to liquidation for insolvent firms. Foreclosure procedures were also speeded up.

In addition to these judicial procedures, lenders and borrowers had another option with the establishment of the Corporate Debt Restructuring Advisory Committee (CDRAC) under an agreement signed by the Thai and foreign bankers' associations, the association of finance companies, the Federation of Thai Industries and the Board of Trade. The Bank of Thailand provides the secretariat and acts as a facilitator for CDRAC. The CDRAC process entailed a prior agreement among lending institutions (its members) to abide by certain rules in their negotiations with debtors, for example not to seek recourse to the Bankruptcy Courts until the avenue of negotiations within CDRAC with its strict time frame is closed. By and large, the CDRAC process is similar to a Chapter 11 proceeding, with some exceptions. Because it is based on a voluntary agreement among creditors, the majorities required for the CDRAC process to take effect are larger than in the new bankruptcy law. In any case, the agreement reached through this process would in the end have to be ratified by the court, in order to bring the dissenting creditors into line. Because it is a quasi-policy body and not a judicial one, it could and did negotiate with the tax authorities to change tax rules for transactions within the framework of a CDRAC agreement. Because it is more flexible than the Bankruptcy Court, CDRAC has become the preferred venue for debt negotiations, and has chalked up some successful debt restructuring.

Not that the process was easy. Like bankruptcy proceedings everywhere, it faces the problem that creditors' incentives differ greatly among themselves as well as with those of the debtor. In addition to the usual conflict between secured and unsecured creditors, the financial institutions' incentives to write off debts also differ greatly, as will be discussed below. This particular issue has broader macroeconomic implications, and is worth expanding on.

It is best to begin with the following observations. In a crisis arising out of over-investment, many firms' book values of the assets and net worth would have to be written down. Where such reductions threaten the solvency of the firms, reductions on the liabilities side of the balance sheet must also take place to accommodate the reductions on the asset side.[6] All bankruptcy proceedings and the CDRAC process entail negotiations to that end. The aim is to ensure that the collection of assets that together form the company can again function as a unit and yield a return that is compatible with its new value. The process of writing down the assets and liabilities of the debtor company should be as speedy as possible, so that it can get on with its business without the disruption caused by a credit constraint. For the macroeconomy, if too many companies are stuck in the limbo of debt renegotiations for too long a period, the recovery from the crisis may be delayed or even put in jeopardy.

Certain peculiarities of Thai business practices as well as the nature of the crisis and the recapitalization rules introduced by the government combine to slow down this process considerably.

The first problem is with respect to the shareholders of the debtor firms. In advanced countries, this normally causes the least trouble. For the first rule of the capitalist game is that when a reduction in the values of assets and liabilities become necessary, it is the shareholders' interest that takes the first cut. In the case where the shareholders' equity is reduced to zero, this means their ejection from the company. Now, in Thailand, nearly all companies are family-owned and managed. To eject the owners would raises many problems for the creditors, as they would lose the management as well, thereby losing part of the value of the company. The creditors' bargaining power vis-à-vis the owners of the debtor firms would therefore be less than in Western companies where they had to deal with a management team that is usually separate from the owners, and that can be expected to continue functioning independently from them.

Turning now to the creditors, we find different types of financial institutions facing different incentives and willingness to conclude deals with their debtors. Most foreign banks do not lend on collateral, but lends on the basis of cash flow. This method means also that foreign banks have less NPL problem to begin with. And when problems do arise they have a greater understanding of the business prospects of the clients, and they have been far readier to write down these problem loans, where necessary. Ironically, despite their reputation for close connections with their customers, Thai banks turned out to be much less understanding of their customers' prospects and problems both before and after the crisis hit them.

Thai banks also had to recapitalize on the other hand, taking losses on the value of the debt would mean that much greater burden. Hence their preference for rescheduling rather than write-offs. But rescheduling is insufficient to put the affected companies on a solid financial footing, and for them to be able again to move aggressively in their markets. Worse, because in many cases, minimizing write-offs usually mean that the residual earnings kept by the firms are also minimal. These firms are therefore extremely vulnerable to any adverse changes in their environment, for example an increase in the interest rate. If this happens, the debts will have to be renegotiated all over again, and again the recovery would be jeopardized. Above all, it means that their balance sheets remain fragile, and their access to new capital for future investments limited.

[6] The baht depreciation has meant that the book value of foreign debts has also to be increased.

Table 1 shows the achievements of the restructuring process, both through the CDRAC process and through various alternative mechanisms, including bilateral negotiations. The different incentives have led to different results. Thai private banks managed to restructure 66.1 per cent of the value of the total, when their share of the NPLs on the books was only 46.1 per cent. This may suggest their greater willingness to negotiate. In fact, they have chosen the easier route by rescheduling the debts. State-owned banks performed poorly. Their managers are subject to government regulations that hold them (as public employees) liable for any decision that entails loss of public money. They have thus been excessively rigid in renegotiating their loans. The figure for foreign full-branch banks in Table 1 does not represent those of all foreign banks, most of which have merely a representative or a BIBF office. It does however reflect their behavior, that is the greater willingness to remove the NPLs from the books. Not visible from these figures is their greater willingness to write off rather than to reschedule the debts.[7]

Table 1 Total Loans Outstanding, Non-Performing Loans and Restructured Debts, Classified by Types of Financial Institutions, End of October 1999

Unit : Billions of Baht

Types of Financial Institutions	Total Loans Outstanding	Non-Performing Loans	Restructured Debts
Private Bank	2,984.72	1,132.84	546.08
State-owned Banks	1,744.50	1,138.55	174.04
Foreign Full Branch Banks	687.04	78.89	61.44
Finance Companies	188.65	105.84	45.18
Total Financial Institutions	**5,604.90**	**2,456.12**	**826.73**
			Unit : Per cent
Private Bank	*53.3*	*46.1*	*66.1*
State-owned Banks	*31.1*	*46.4*	*21.1*
Foreign Full Branch Banks	*12.3*	*3.2*	*7.4*
Finance Companies	*3.4*	*4.3*	*5.5*
Total Financial Institutions	**100.0**	**100.0**	**100.0**

Source: Bank of Thailand.

Working out the debt problems of a company requires a projection of economic trends to be able to assess the earning capacity of a given firm. The latter is to be thought of as a given, as long as we confine our attention to the firm level. I have argued above that the future trend of the economy is itself a function of how quickly the debt problem is resolved for the corporate sector as a whole. The Thai way has been to take the conservative approach, with the problems being resolved

[7] My evidence for the last assertion is at the moment limited to interviews with individuals involved with workout process.

largely by the debtors and creditors themselves, with the government involved only marginally, in securing favorable tax treatment for the debt transfers.

The road taken has led a period of trench warfare which will continue for some time to come. The alternative could have been one of blitzkrieg, with the government buying out the non-performing loans from the banks, and letting the latter get on with the business of generating new loans for new investments, and the government managing these questionable assets. Arguably, growth would have would resumed faster, and the recovery rate on the NPLs would have been better than it has been.

Adopting such an approach in Thailand would be risky, and from a political point of view, not that easy. Sales by the FRA of the assets of the fifty-six defunct finance companies (which included loans that were still performing) had given a very low yield of only a quarter of their face value. Admittedly, this low yield was predicated upon the assumption of low or negative growth made at the time the sales were made. For the finance minister to adopt the blitzkrieg approach would have involved an estimate of the incremental yield from the resulting higher growth (which also had to be guessed at). Given the large uncertainties involved, the characteristically conservative approach of Thai officialdom triumphed.

The Future of Bank-Based Capitalism in Thailand

In the past, Thai banks had been phenomenally successful in gathering the savings, and investing them productively. Thais apparently trusted these institutions, as evidenced by the high M2/GNP ratio for Thailand, compared to other developing countries (see Table 2).

Table 2

Ratios of Money and Quasi-Money (M2) to GNP in Selected Countries, End of 1996

Chile	0.41
Korea, Republic of	0.20
Malaysia	0.93
Mexico	0.28
Thailand	*0.81*
Turkey[1]	0.32
Japan	1.12
United Kingdom	1.09
United States	0.59

Note: [1] Turkey's figure is for 1995.
Source: International Monetary Fund, *International Financial Statistics, 1997.*

Consequently, banks occupied the commanding heights of the economy, and played a central role in channeling the savings to firms. In investing these savings, the banks relied on a close relationship of trust between them and the clients, to the point where banking families had acquired equity interest in many of their clients' businesses. Insider lending was thus quite widespread. At the same time, banks performed important tasks of coordinating investment by firms. In the last function, their importance substantially overshadowed that of government agencies. By relying on traditional methods of lending, Thai banks tended to eschew modern (i.e. Western) reliance on financial analysis and risk management. While growth was going strong, such alien techniques appeared unnecessary. Throughout the last three decades, such tried and tested methods of mobilizing capital had worked. Companies had expanded, and the economy had grown at more than seven percent through the three decades.

It was when foreign money began pouring in in large quantities in the 1990s that the delicate nexus joining lenders and borrowers began to unravel. With access to rival sources of credit, corporate clients are no longer the banks' captives. When the crash came, and companies' debt had to be restructured, it was found out that many of them had a very large number of creditors. The largest problem company, the Thai Petrochemical Industries Company (TPI) with debts of close to 100 billion baht had 140 creditors from among the financial institutions. A much smaller debtor with only 3 billion baht of debts had 29.

Both local and foreign banks and the corporate borrowers appeared to settle on the use of short-term credit to finance much of their investments. In this the banks were further encouraged by the rules on capital requirements (taken from the Bank for International Settlements) that class short-term loans as less risky and therefore requiring less capital to cover the risks. While banks could thus get clear of the problem of maturity mismatch, they obtained short-term funds and lent short-term, their customers did not. They were borrowing short-term and investing in longer term projects. But no one appeared concerned, least of all the borrowers. The heady atmosphere of the bubble assured them that they could easily refinance their loans.

The Thai authorities did not ignore the need for a market for long-term risk capital. The equity market was developed and encouraged to grow during the 1980s and the 1990s with that segm1ent in view. The fruit of that development has been to draw in individual investors, mostly from the growing Thai middle class, rather than the institutional investors, based on life insurance companies or pension funds for example. The problem with relying on individual investors to power the equity market is that the monitoring of corporate officers has been less than satisfactory, a problem compounded by the lack of protection afforded to minority shareholders against the majority family interests.

The crisis probably means the end of traditional Thai-style capitalism. Resuscitating the past is not among the options available. With the devastation wreaked on the Thai capitalist class as a whole, it is clear that the banks, at the very least, will begin to look distinctly different from now on. The multinational presence in the financial sector will be much more strongly felt, together with their different methods and culture. More significantly than would be implied by their share of the market, they would be the standard-setter for banking practices. And with a different banking culture, practices among borrowing corporations that were once taken for granted will have to give way to something different. What shape or form that will be no one can foresee. What can be predicted is that, because the changes required would be institutional and even cultural, the process will take time. Meanwhile the saving-investment nexus will remain frayed and this is yet another reason why growth will be stunted.

C. CURRENCY MARKET

I have suggested that by the middle of the 1990s Thai economic growth was increasingly based on self-fulfilling expectations, and its tie with the fundamentals justifying such growth was becoming increasingly tenuous. By 1996, the assumptions on which growth was premised were being exposed to be false one by one. The problems with the financial system have already been discussed in Section B. On the foreign sector, export growth rates fell dramatically in mid-1996 from the level in the upper teens to a negative level. The cause of this collapse is still shrouded in some mystery. It is natural, particularly for economists, to link this decline to the misaligned exchange rate, in particularly to the rise in real effective exchange rate, consequent on the higher inflation rate in Thailand relative to other countries. I shall return to the issue of real exchange rates as indicators of disequilibria in the goods markets in Section D. However other forces appeared to be at work in 1997, which had a larger impact on the currency markets than the goods market disequilibria.

Indeed, the emphasis on the current account was misplaced. With capital account liberalization, movements of capital have become the dominant factor in the balance of payments. Expectations play a major role in these movements, and to that extent, export competitiveness matters only inasmuch as it affects the expectations. But export competitiveness was only one among many influences on the expectations. At least of equal importance is the state of the Thai financial institutions, discussed in Section B. From the currency market's point of view, these problems increased the probability that the contingent liabilities of the Thai government will become actual liabilities. Although deposits in financial institutions were not explicitly insured by the Thai government, past practice and political considerations suggest that, should these institutions fail, the Thai government would not stand idle and let depositors take the fall. These contingent liabilities of the government began to cause concerns to the market, and may have been a factor that led to speculative attacks on the baht.[8]

In addition to these underlying weaknesses, Thailand's external debt situation made it particularly vulnerable to attack. Its total foreign debt at the end of 1995 was US$90.5 billion, or just under 50 per cent of the GDP at the then current exchange rate. Of this, US$37.6 billion or 42 per cent had a maturity of less than one year maturity. Buffering against this was US$38.7 in gross official reserves, which would be adequate in normal times, but could not withstand serious capital flight.

These weak fundamentals were sufficient to trigger waves of speculative attacks against the baht. Let it be said at once that while Thailand was vulnerable to sudden capital withdrawals because of the large amounts of short-term debt, it was not the lenders who were heading for the exit door in the beginning. Indeed these sorts of capital inflows remained positive through the entire first half of 1997, although the rate of inflow began to ebb markedly in the second quarter. It was only in the third quarter that the outflow became quite substantial (see Table 3). The outflow through most of the capital account items was small and could be handled with the adequate

[8] Paul Krugman (1979) argues that continued government deficits can lead to a speculative attack on the currency. Although the Thai government had been running fiscal surpluses continuously for almost a decade before 1997, the contingent liabilities arising out of the need to support financial institutions may lead to similar attacks.

foreign currency reserves at the beginning of the year.[9] In the end, the collapse of the baht came about because of speculation by parties who originally did not hold any position in Thai assets. This activity was only partially recorded in the balance of payments accounts.

Table 3 Current Account and Net Flows of Private Financial Account

(Millions of Baht)

Year/Quarter	Current account balance	Bank			Non-bank						TOTAL
		Commercial bank	of which Recapitalization	BIBFs	Direct investment	Others loans	Portfolio investment	Non-resident baht account	Trade credits	Others	
1996											
Q1	-86,365	-58,704	n.a.	44,206	12,277	23,291	28,742	93,466	2,760	303	**146,341**
Q2	-123,667	14,914	n.a.	47,888	7,778	44,424	23,037	5,281	639	62	**144,023**
Q3	-91,884	42,050	n.a.	3,665	8,625	42,571	21,017	-30,437	-5,520	53	**82,024**
Q4	-70,243	12,583	n.a.	20,169	8,143	27,736	15,446	5,454	-1,581	217	**88,167**
1997											
Q1	-54,268	39,132	n.a.	22,086	13,649	-2,971	13,191	-43,773	6,523	-1,723	**46,114**
Q2	-81,178	-7,054	n.a.	7,989	14,707	-21,881	31,775	-46,583	-1,766	335	**-22,478**
Q3	-23,024	-146,919	n.a.	-44,152	37,798	-28,266	78,246	-127,196	438	7,575	**-222,476**
Q4	118,163	-61,795	n.a.	-62,313	39,112	-80,107	15,768	61,277	-17,874	3,281	**-102,651**
1998											
Q1	196,988	29,329	39,444	-98,700	47,866	-96,661	21,037	-102,971	-8,733	8,093	**-200,740**
Q2	112,836	-70,811	46,313	-85,762	59,721	-32,575	1,914	45,944	-3,712	-2,111	**-87,392**
Q3.p	139,798	-100,350	0	-79,450	49,996	-30,257	-696	32,375	-6,557	6,550	**-128,390**
Q4.p	142,461	-26,515	0	-128,496	35,962	-25,210	2,286	-90,782	-2,106	-1,554	**-236,415**
1999											
Q1.e	127,083	-125,372	783	-71,189	33,514	-45,934	8,196	-11,675	67	-1,350	**-213,744**

Source : Bank of Thailand.

Imagine a foreign speculator as he surveyed the problems of the Thai economy at the end of 1996. It did not require particular astuteness to realize that asset prices in Thailand were considerably misaligned. The prices of land, property, and stocks were well above what was justified by their future returns, particularly now that growth can no longer be assumed to be automatic. Even the value of deposits in some of the Thai financial institutions would be less than their face value, if proper consideration were given to the assets backing these deposits. For the speculator, such expectations, verging on certain knowledge, could in theory be converted into profit.

But there is a problem in the working of the asset markets. When an asset price is expected to rise, profit can be made by buying the asset and waiting until the price actually rises. On the other hand, when the asset price is falling, the matter is more complicated. For here, profit can only be made by short-selling the asset. Now, short sales are possible only in very few markets. The one important market where short sales can be easily made is the currency market.

[9] The one item where considerable activity could be observed is in the non-resident baht accounts. These may have been caught up in the speculative activity of the baht.

Thus the only way our foreign speculator could make a profit on Thailand in Thailand was to short-sell the baht. It is thus not surprising that beginning in November 1996, three waves of attacks (the other two were in February and May 1997) were made against the baht, in the expectation that the central bank would be forced to devalue it. The original baht currency used by the speculators to mount their attacks were acquired by short-selling stocks, by some borrowing in the local inter-bank markets and more importantly by in the off-shore baht market, and by drawing down on the non-resident baht accounts. But these were used basically to prime the speculative pump. For, as the attacks continued, much of the baht was actually supplied by the Bank of Thailand, because of the method it used to defend the currency.

In addition to buying baht for dollars from the speculators, the Bank would engage in a "swap". In the swap transaction, it would sell baht for the dollars in the spot market, in exchange for a forward purchase of the baht for dollars. These series of transactions, in effect, allowed the Bank to postpone the release of the dollar reserves. From the point of view of the Bank, the swap had two attractions. First, because it was considered "off-balance-sheet", the loss of reserves was hidden from the markets and from the public. Second, another means by which the market could have become aware of the size of the attacks was by its impact on the money market. Without the swap transactions, as more and more baht were withdrawn from the market and sold to the Bank of Thailand, interest rates would climb. By engaging in the swap operation (remember that this entails sale of baht in the current period), the Bank would sterilize the speculators' sales of baht and thus lessen the impact on interest rates. The downside of this operation, of course, was that the speculators were able to continuously obtain fresh supplies of baht from the spot sales by the Bank during the swap transaction (Nukul Commission 1998: paras.105-117).

The fiercest attacks came in May 1997. On the 14th it lost US$10 billion in twenty-four hours. Within days, the Bank had almost run out of net reserves, which had stood at US$33.8 billion at the beginning of 1997, although this fact was not known at the time, because only gross reserve figures are reported. It barely avoided devaluing the baht then, but only by sharply reversing the policy of opening the foreign exchange market that it had been conscientiously following for the last decade. It told Thai commercial banks to stop their loans to non-residents. This sharply curtailed the flow of baht overseas, and caught those who short-sold the baht in a squeeze. A gap arose in the baht exchange rates on-shore and offshore with the latter commanding a premium at times of as much as 10 per cent.

This closing-off of the flow of baht overseas was undertaken too late, and extended the life of the old baht exchange rate by only six weeks. In June, the problems of the baht worsened. This time it was a run by the Thais themselves, not by outside speculators. Finally, on July 2, the baht was floated, whereupon its value deteriorated, slowly at first, but then, as other countries joined Thailand in allowing their currencies to depreciate, the value of the baht worsened sharply, particularly between November 1997 and January 1998. This rapid depreciation was caused primarily by the sudden exodus of money (see Table 3), which previously had flowed so easily into the country. The motive behind this exodus was panic, fed in part by the revelation in August 1997 of the extent of the swap commitments of the central bank, in part by the spread of the crisis throughout Asia, and in part by the rapidly collapsing financial system (see Section B).

In January 1998, the exchange rate reversed itself and has settled at a level around 37-40 baht to the dollar since April 1998. At that point, the nominal effective exchange rate vis-à-vis trading partners stood at a level 40 per cent above that in June 1997 and has fluctuated in the range between 35 and 40 per cent (see Section D below). The nominal rate vis-à-vis Thailand's competitors has increased by 20 per cent.

After April 1998, stability returned to the currency markets. The rush to withdraw credit by foreign lenders appeared to have ceased. Although the capital account still remained in substantial deficit in the second half of 1998 and continuing on to this day (Table 3 above), it was mostly due to the repayment of loans by the larger banks wishing to take advantage of the lower interest rates domestically. Throughout the post-float period, the Bank of Thailand constantly claims (with one exception[10]) that it allows the baht to float freely, without any intervention. The Bank however had one policy instrument at its disposal, that is, the pace with which it unwound its vast swap positions built up when it was defending the baht peg, and of its build-up of reserves. Each transaction to this end was no doubt timed with an eye to exchange rate stability.

There is now, if anything, a danger that exchange rates may have become too stable, leading to a built-in expectations of further stability, which if disappointed will again lead a disastrous surge in volatility as occurred in 1997-1998.

D. THE REAL SECTOR

Before the crash in 1997, there were two disequilibria in the real sector. The first is in the property sector, which I have already discussed. The second, less obvious disequilibrium arises out of over-investment in the manufacturing sector, particularly that part which supplied the export trade. The problem made itself felt in the sudden drop in exports in 1996. At that time the causes of this drop were shrouded in some mystery.

Dasgupta and Imai (1998) and the World Bank (1998) have since thrown light on this matter by looking at the problem in some detail, within an East-Asia-wide framework. This broader framework is essential because the export slowdown was not confined to Thailand, but extends to nearly all countries in East Asia. They attributed the reasons for the decline to the following facts:

- World trade in nominal dollar terms and in real terms fell in 1996, owing to the appreciation of the dollar;
- Japanese growth, which used to be the main engine of East Asian growth, was sluggish;

[10] The exception was in October and November 1999, when the baht/dollar exchange rate suddenly surged from the normal 37-40 baht range to 42 baht. The Bank of Thailand later admitted to some intervention to bring the exchange rate back down again.

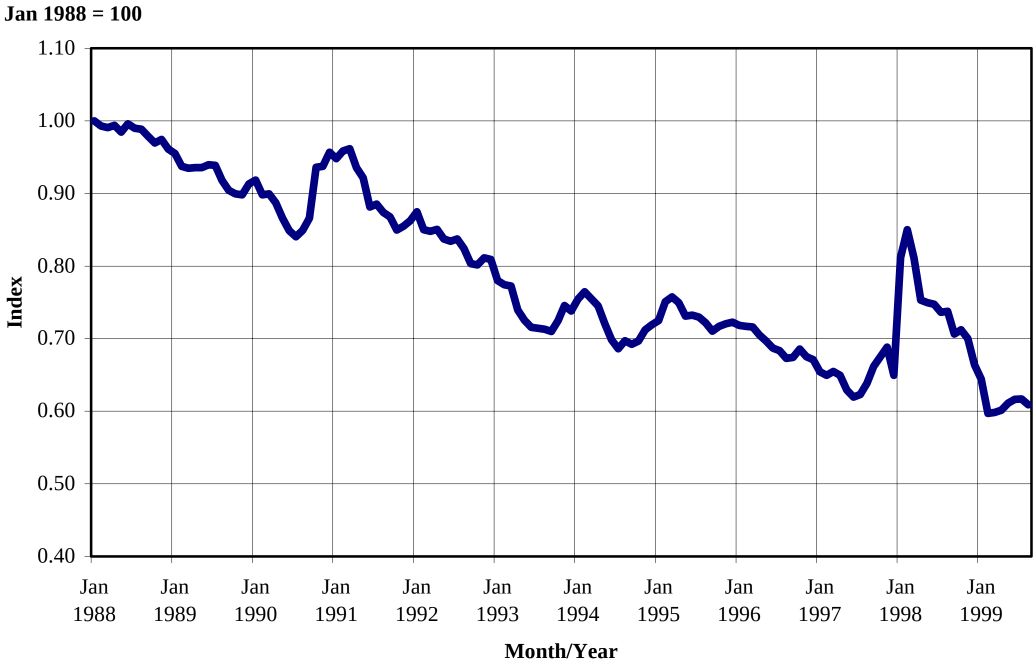
- Prices of major East Asian exports declined.

Of these the first two suggest a cyclical phenomenon. In the case of the first, it is of interest that Asian trade volumes had since 1990 finally responded to world trade cycles, whereas in the past, they have ridden above the world cycles. The decline of export prices however reflects something that may not disappear easily.

The World Bank study (1998:21) cites data from U.S. import prices, which show that prices were falling for a wide spectrum of manufactured goods. When classified by sources of goods, import prices for the U.S. for goods from the Asian newly industrialized economies fell more deeply than those from other sources, suggesting that Asians were concentrating on the "wrong" products to sell. The same study shows that the decline in the prices of electronic equipment and computer equipment – items which the Asians were concentrating on – was the sharpest. But other prices were also falling as well, such as machinery, transport equipment and electrical machinery, though not as sharply. In addition, throughout 1996 and 1997, the *The Asian Wall Street Journal* was reporting on various studies which forecast impending excess capacity in various industries such as petrochemicals, automotive and steel, and these were based on projections of the growth rates as expected before the crisis hit Asia.

The changes in relative prices described above are Asia-wide. The impact on Thailand of these developments can be first seen in the changes in Thailand's real exchange rates. Three different concepts of the real exchange rate are used here. Figure 2 shows the first of these, the ratio of the prices of traded goods to non-traded

Figure 2 Relatives Prices of Traded to Non-Traded Goods (Jan 1988 – Aug 1999)



Source: Calculated at TDRI, based on raw data on prices collected for wholesale and consumer price indices by Department of Business Economics, Ministry of Commerce.

goods (this ratio will henceforth be abbreviated to TNT). The method used to recalculate and update this set of data is as in Warr and Bhanupong (1996). This ratio has shown a steady decline from 1988 onward until 1997. The implied real value of the baht has risen by as much as fifty percent (TNT has fallen by a third) from 1988 to the eve of the baht flotation on 2nd July 1997. It could be argued that the fall in the real exchange rate is due to the secular growth of the economy, pushing TNT downward (see Bhagwati (1984) and the literature cited therein). But at least partially responsible is the demand pressure brought about by the bubble and induced by the capital inflow. In the case of non-tradables, this extra demand cannot find release through trade, causing their prices relative to tradables to shift upwards.

But the rise in the prices of nontradables reflected also a rapid rise in wages (to be discussed in Section E below). The consequence of this rise was the decline in the competitiveness of the more labor-intensive sectors. Thus, 1996 saw sharp declines in the exports of the garments (21.9 per cent relative to 1995), footwear (40.9 per cent) and textiles (4.4 per cent) (Warr 1999).

Figure 3 shows two real effective exchange rates (REER), one vis-à-vis trading partners, and the other vis-à-vis trade competitors.[11] The list and the weights for countries considered as Thailand's competitors (all of whom are in Asia) are from Mathinee (1999), although the calculation of the results reported in Figure 2 are mine. The results for the pegged exchange rate period are dramatically different from the results for TNT.[12] Until 1995, the baht was actually depreciating in real terms, but thereafter it appreciated until the float in mid 1997. Vis-à-vis the competitors, the results are similar, at least for the period before 1994. The sharp appreciation of the REER vis-à-vis competitors at the beginning of 1994 reflected the "depreciation" of the yuan.[13]

Incidentally, the data on REER are significant for exchange rate policies discussed in Section B. The Bank of Thailand's decision to defend the baht in 1996 and 1997 at the then current peg was based partly on its calculations of the REER against trading partners (Nukul Commission 1998, para. 24). These data which do not show an overwhelming case in favor of a devaluation of the baht, led the Bank to pursue its policy of resistance.

After the crisis, domestic demand in Thailand fell sharply, as can be expected in a country that had been running an 8-percent current account deficit, being forced suddenly to run a 12-percent current account surplus by the massive capital exodus.

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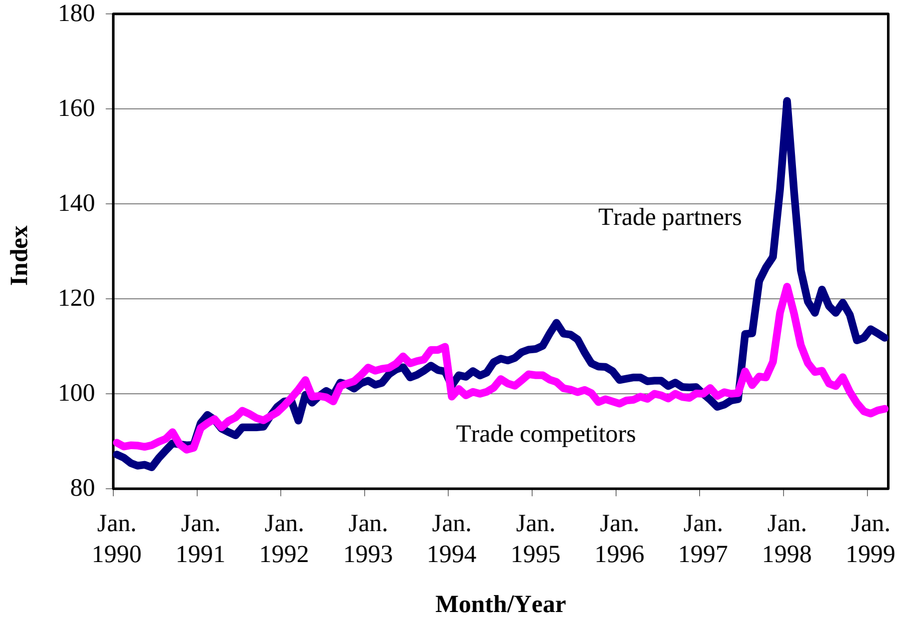
[11] The real effective exchange rate is defined as follows. First the real exchange rate vis-à-vis another foreign currency is defined as the exchange rate divided by the home inflation rate and multipled by the foreign country's inflation. The real effective exchange rate (an index) is then the weighted average of the indices of the real exchange rates.

[12] The REER measure will always show less movement than TNT. Normally, as in the data presented here, the REER would be obtained by using aggregate price data, including tradables and non-tradables to deflate the nominal exchange rate, when only non-tradable price should be used. The effect is to dilute the movement.

[13] Some skepticism concerning this "devaluation" must be expressed, as the Chinese authorities merely unified what had been multilateral exchange rates, with relatively little impact on the actual prices paid and received by both parties involved in the trade (World Bank 1998:24, Box 2.1).

Figure 3 Real Effective Exchange Rates Vis-à-vis Trade Partners and Trade Competitors



Source: Calculated at TDRI, based on exchange rate data from the Bank of Thailand, and consumer price indices from Bank of Thailand and various official sources in the countries.

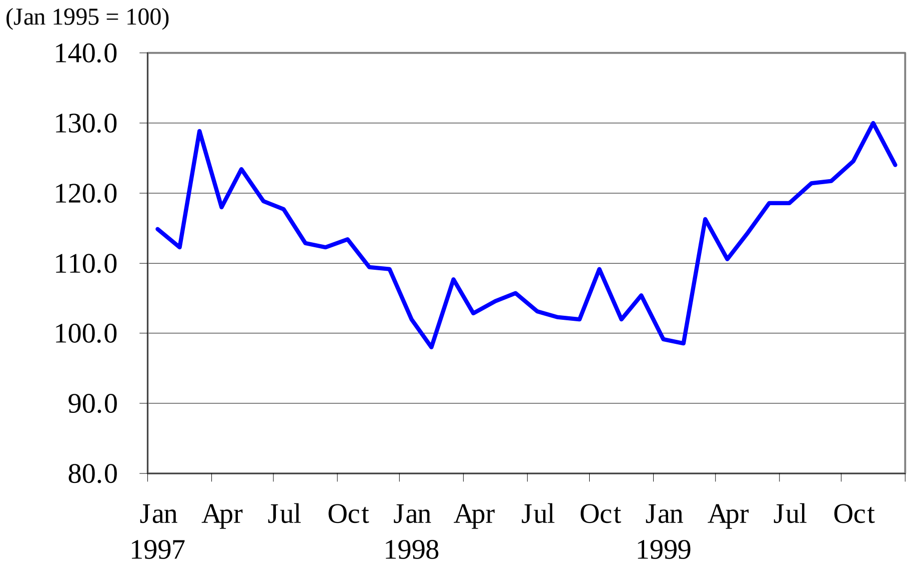
Notes: The weights for the real effective exchange rate against trading partners are in proportion to their (two-way) trading volumes with Thailand. The weights for the real effective exchange rate vis-à-vis competitors are drawn from an unpublished study from the Bank of Thailand. They are as follows (in percent): China 18.6, Hong Kong 21.1, South Korea 9.2, Singapore 14.2, Taiwan 19.9, Malaysia 8.6, Indonesia 6.4, Philippines 1.9. Because of lack of data, Indonesia is not included in the result shown in Figure 2.

Because the crisis was Asia-wide and not confined to Thailand, the export growth that had been expected in the wake of the baht depreciation did not materialize. Other Asian countries went through similar experiences, and therefore added to one another's decline, feeding through a multiplier process to result in severe economic declines for all.

Figure 4 indicates monthly figures for non-food manufacturing production index (MPI) from the beginning of 1997 onwards, and Figure 5 indicates quarterly figures for non-agricultural GDP.[14] The sharp deterioration in both sets of figures can be seen. Between its peak in January 1997 and the same month one year later, non-food MPI declined by 23 per cent. Between the third quarter of 1997 and the same period one year later, non-agricultural GDP declined by 14 per cent. Such a decline is unprecedented in the postwar economic history of Thailand, and is largely responsible for the sorry state of the Thai financial system described in Section B.

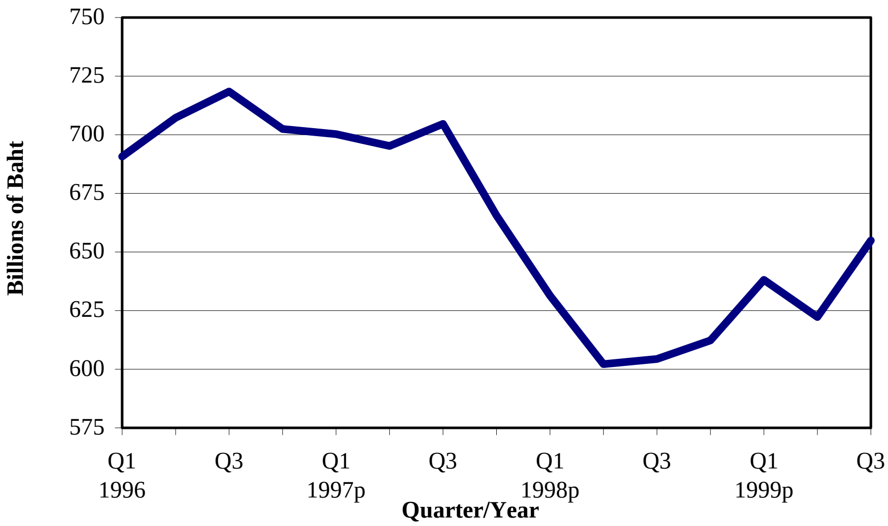
[14] Food and agriculture have been excluded in the two sets of figures because they introduce a strong, and distracting, seasonality into the data. For the non-food manufacturing production index and non-agricultural GDP, seasonally adjusted series have been estimated, but are not reported, because the adjustment made little difference to the figures.

Figure 4 Non-Food Manufacturing Production Index (Jan 1997 – Dec 1999)



Source : Bank of Thailand.

Figure 5 Quarterly Non-Agriculture GDP 1996 Q1 to 1999 Q3 (1988 = 100)



Source: National Accounts Office, National Economic and Social Development Board.

The biggest surprise from the crisis, apart from its severity, is the low level of price inflation following the strong depreciation of the baht. Explaining the moderate level of inflation is, of course, the massive fall in output and the excess capacity generated by such a fall. This moderate level of price inflation has meant that REER should have increased considerably. Ignoring the spike at the end of 1997 and beginning of 1998, the REER vis-à-vis trading partners, shown in Figure 3 above, did increase by 15-20 per cent. Of even greater signifcance, however, is the finding that the REER vis-à-vis competitors has reverted to the pre-devaluation level, suggesting that Thailand, probably along with its Asian neighbours, is facing a very severe competitive pressure in selling its good overseas. It is for this reason that in 1998 and early 1999, despite the depreciation of the baht and the presence of excess capacity at home, the dollar figure for exports showed little movement relative to the previous year, while there was a strong improvement in the quantity exported.

Figures 4 and 5 show that the economy appears to have stopped falling in the third quarter of 1998, and began the recovery at the beginning of 1999. There are also signs that the rate of recovery is quite slow, compared to the rate of decline. Just why the recovery took place is not yet been well studied and documented. The policy of rapid fiscal loosening and rapid expansion of the government deficit is usually cited (by the government itself) as the reasons for the recovery, but as will be discussed in Section F below, there are grounds for dispute on this score. Since the beginning of 2000, there has also been a strong export recovery, which added to the speed of recovery. Contributing to this recovery has been the strong growth experienced by other crisis-afflicted Asian countries.

E. THE LABOR MARKET

The labor market in Thailand was very tight during the bubble, and may have played a role in its bursting. Wages were rising very rapidly, reducing the competitiveness of the more labor-intensive sectors, such as textiles and footwear (Warr, 1999). At the time, such a wage increase and reduction of competitiveness of certain sectors were thought to be a normal part of the process of development. But the sectoral shifts that were taking place in Thailand could have been premature, and a direct consequence of the bubble. Thus the supposedly cheap foreign loans that were readily available during the bubble led to heavy investments in such capital-intensive industries as petrochemical, refinery, automotive and steel.

For the Thai labor force, such investments required an upgrade in its quality as well. In the past, Thailand had been a notorious laggard in human capital investment, with secondary-school enrolment ratio lower than even its poorer ASEAN neighbors, such as Indonesia and the Philippines. While the Thai public education system did successfully increase the enrolment at levels higher than primary, the labor force itself is still burdened with large numbers of older people educated only at the primary level. Consequently, during the bubble, wage differentials for people with different levels of education increased significantly. Thus, my calculations from the labor force survey data indicate that, between 1990 and 1997, real wages for university graduates increased at an annual rate of 7.0 per cent, while those of secondary school graduates and lower increased at only 4.6 per cent.

Unemployment in Thailand had traditionally been low. In August, in the middle of the agricultural season, this would amount to less than 2 per cent of the labor force. In February, an additional 2-4 per cent of the men and 6-8 per cent of the women would become seasonally unemployed. Altogether these seasonally unemployed amount to about 1 million persons. As there was no major change in what the labor force surveys record as seasonal unemployment,[15] we shall exclude this group from the discussion. Nevertheless, even with this exclusion, one should still expect the remaining numbers to be contaminated by the seasonal component.

The different panels in Figure 6 report changes in unemployment and underemployment in the last years of the bubble and continuing on into the crisis period. Because the term "unemployment" is defined very restrictively in the labor force surveys (a person is deemed to be unemployed only if he or she has not worked at all during the week preceding the survey), I have included in two more panels data on the severely and moderately underemployed. People are deemed to be severely underemployed if they work less than 20 hours a week, and to be moderately underemployed if they work between 20 and 34 hours a week. Those working more than 35 hours a week are considered fully employed.[16]

The data show clearly a rapid rise in unemployment, particularly noticeable in the February 1998 figure, but probably starting in the last quarter of 1997, during which, unfortunately, the National Statistical Office (NSO) conducted no Labor Force Survey.[17] It rose dramatically through 1998, continuing on until February 1999, although the continued rapid rise in that month was mostly among women. After May 1999, there has been some but not much improvement in the unemployment picture.

The data for underemployment showed a slight trend upward over the entire period, although this was interrupted by a spike in the immediate aftermath of the crisis and continuing on until the beginning of 1999. These data suggested that in the beginning employers were putting their workers on short time, before dismissing them. Anticipation of an increase in the severance pay rates that was due in August 1998 caused them to start dismissing workers in the first half and thus reducing the underemployed in the second half, thereby removing those from the figures for later periods.

This kind of unemployment is unprecedented in Thailand, although, at its peak in February 1999, it totaled "only" 4.1 per cent of the labor force. For countries with a functioning unemployment insurance system, this figure may not appear high, but Thailand does not have such a system. In its place it does have, for workers in the formal sector, a rather generous severance pay system – before August 1998, workers

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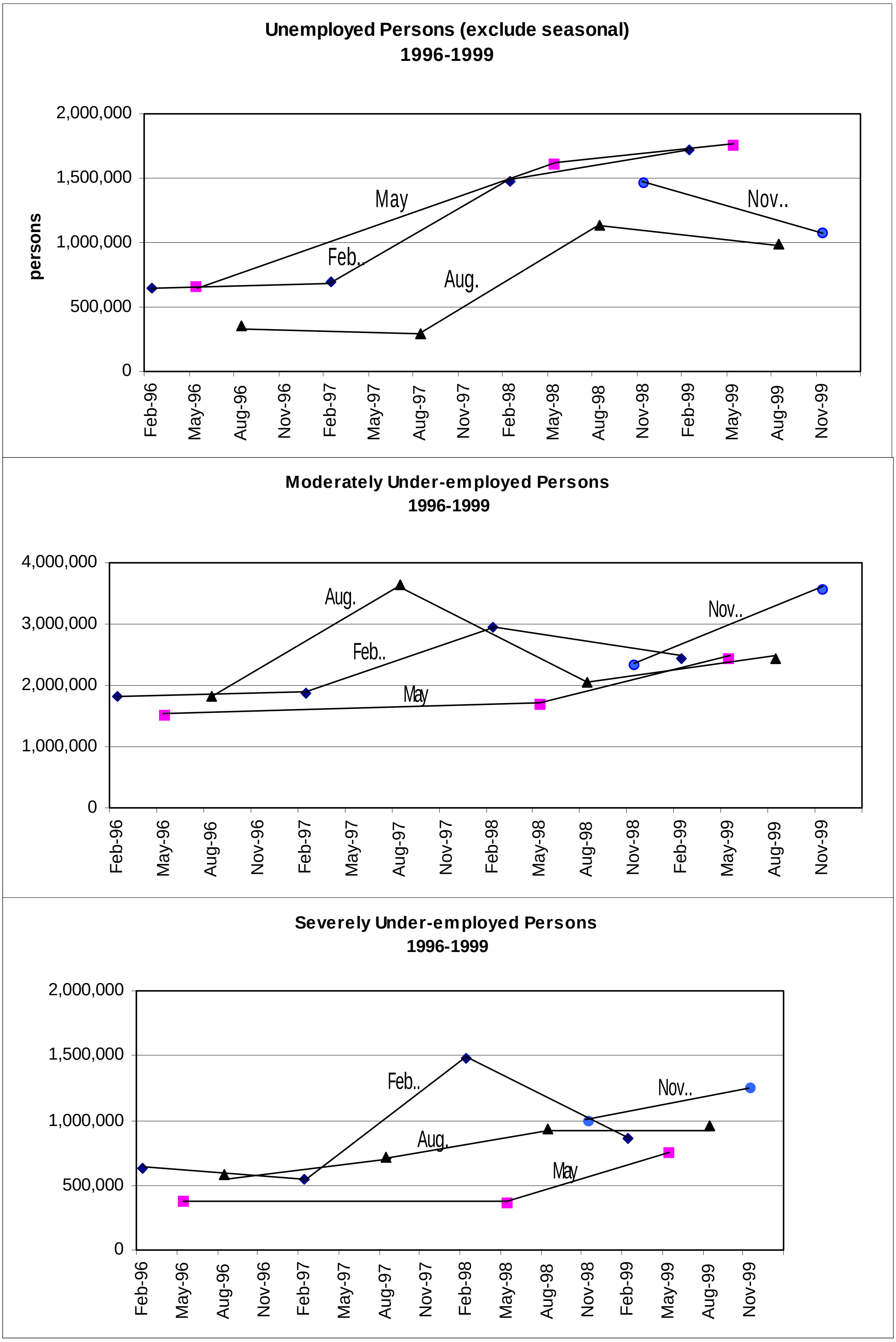
[15] The surveys classify unemployed persons into three groups: those actively seeking work, those ready to work but not actively seeking work, and finally those waiting for seasonal work. It is the last group for which we use the term "seasonally unemployed".

[16] The terminology and definition of severely and moderately underemployed are idiosyncratic to this paper. The 35-hour borderline for full employment is the standard adopted by the National Statistical Office, which conducts the surveys.

[17] Starting from 1998, the NSO intends to conduct four labor force surveys a year: in February, May, August and November. Prior to 1998, there was no November survey. Also the May survey would be conducted every other year, thus there was no May 1997 figure.

Figure 6 Unemployed and Under-employed Persons



Source: Labor Force Survey data tapes, NSO.

Note: Severely under-employed means that the workers work less than 20 hours per week.
Moderately under-employed means that the workers work 20-34 hours per week.

who had worked for an employer for at least three years had a right to six months' pay from the employers. After 1998, this rate was made higher, and put on a sliding scale according to the length of employment.

The lack of unemployment insurance, and more generally, of a publicly financed social safety net system has now been picked on by the government and the multilateral lending agencies as a major shortcoming of the Thai economic system. In the past, it was claimed that the Thai economy's strength has been its resilience, and that resilience has rested on the flexibility of the labor market in particular. When the crisis broke out, it was widely hoped that the agricultural sector would act as a shock absorber. This hope is not unreasonable in view of the fact that the overwhelming proportion of the industrial workers are first-generation, who had just left their rural homes, and could return to resume rural employment.

There were two assumptions implicit in this belief: that the workers would return and that there would be employment prospects in agriculture. The first was true, but the second turned out to be unrealistic. Agricultural employment was disappointingly unresponsive. Before reporting the figures for agricultural employment, I need to point out that the first impact of the crisis was a dramatic rise in crop prices when the 1997 harvest came in at the end of the year, mostly as a result of the sharp spike in the exchange rate. Agricultural activity in 1998 was therefore quite high. By the end of 1998, agricultural prices were again falling worldwide, and the exchange rate has come down again, so that the brief respite afforded at the end of 1997 came to an end.

Between August 1997 and August 1998, male employment in agriculture went up by less than a quarter of a million, from 8.31 to 8.54 million, but female employment fell by half a million, from 7.23 to 6.74 million,[18] leading to a fall in the total agricultural employment of about 220,000 (Table 4). Roughly the same picture holds for the dry season. This last is particularly disappointing in that the sector hardest hit by the crisis was the construction sector, which shed 980 thousand or 45 per cent of its workers between February 1997 and February 1998, and 720 thousand workers between August 1997 and August 1998. Traditionally, employment in this sector, being largely in the dry season, had dovetailed nicely with agricultural employment. Its collapse has thus affected rural incomes adversely.

Table 4 Employed Persons by Industry 1995-1999 (in Thousands)

	February					August				
	1995	**1996**	**1997**	**1998**	**1999**	**1995**	**1996**	**1997**	**1998**	**1999**
Employed Persons by Industry	*29,055*	*30,099*	*30,266*	*29,413*	*30,025*	*32,575*	*32,232*	*33,162*	*32,138*	*32,087*
Agriculture	11,849	12,146	11,938	11,640	12,553	16,929	16,127	16,691	16,472	15,564
Industry (excl. Construction)	5,098	5,188	5,229	5,174	5,100	4,591	4,524	4,517	4,408	4,605
Construction	2,649	3,125	2,984	2,042	1,560	1,846	2,172	2,021	1,280	1,286
Services	9,460	9,639	10,116	10,557	10,812	9,209	9,409	9,933	9,979	10,633

Source: Labor Force Servey , National Statistical Office, data tapes.

Note: Employed persons means that the workers work more than 0 hour per week.

[18] The reasons for the disappointing response from the agricultural sector are discussed in detail in the chapter by Nipon Poapongsakorn in this volume.

The recovery of agricultural employment in February 1999 proved short-lived, the August 1999 showed a resumption of the decline, this time with male employment also falling by as much as 400,000.

As the workers from urban areas returned, and employment in the rural sector proved inadequate to absorb the influx, it is unsurprising that rural unemployment increased. This increase was particularly severe in the Northeast, the traditional exporter of labor within Thailand, with the unemployment rate there rising as high as 8.1 per cent (Ammar and Orapin 1998). Overall employment has, as of August 1999, not yet regained its pre-crisis level.

The full consequences of the crisis on the incomes of rural households are not yet in. Preliminary estimates indicate the incidence of poverty has increased from 6.8 to 7.9 million between 1996 and 1998. In percentage terms it increased from 11.4 to 12.9 (NESDB 1999). Given the severity of the crisis, the increase that was observed must be considered relatively mild.

There are many plausible reasons for this. First, analysis of the labor force surveys shows that the wage differential between the more highly educated and the less educated appears to have narrowed after the crisis. Nominal wages among the males in the educated group fell by about 6-8 per cent between August 1997 and August 1998, and among females by about 4-7 per cent. Among the less educated, the fall was less than 2 per cent. The fall in nominal wages continued into August 1999, at a slightly reduced speed. For some reason, the labor market seems to have protected the relatively worse off better.

Second, one should bear in mind that the SES, which generated the figures for poverty was collected in 1998, but with questions that asked for incomes partially back to 1997. Now at the end of 1997 and the beginning of 1998, rural households, which include most of the poor, were benefiting from the windfall brought about by a rapidly depreciating baht, which in turn caused agricultural commodity prices to rise rapidly. That windfall has since disappeared as both the exchange rate and agricultural prices have subsided.

It seems that, helped by factors such as the rise in commodity prices, rural households could draw on their reserves throughout much of 1998. However, anecdotal evidence is beginning to pile up that the slowness of the recovery in employment has added to the strain of poor households in 1999. It is highly probable that when the new SES is collected for 2000, the poverty incidence will have increased further.

F. STABILIZATION STRATEGY

Thailand entered the International Monetary Fund programme in August 1997, having just floated the baht after a very costly defense, and concurrently experiencing a financial meltdown of massive proportions. It obtained loans totaling US$ 17 billion from myriad sources.[19] Both the government and the Fund perceived the primary task to be the restoration of confidence, to put a stop on the massive capital flight that began in the wake of the devaluation, and continued for the rest of the year, and continuing on until the second quarter of 1998.

As already mentioned in Section A, there were faulty policy strategies prior to the full emergence of the crisis in July 1997, most notably the failure to follow a sufficiently stringent fiscal policy to sop up the excess demand arising from the large capital inflows between 1994 and 1997. As 1997 began, a fall in government revenue presaged the emergence of the full-blown crisis. Year-on-year growth in government revenues turned negative, at which point the government began to make the first moves to contain its expenditures, in order to maintain its fiscal balance. As government revenues continued to fall, further cuts were made, with the same objective in mind, in consonance with the dictum that with a fixed exchange fiscal policy is the more efficient means to contain an overheated economy.

After Thailand floated its currency and entered into the IMF programme, however the policy of fiscal austerity continued. The Fund demanded tax increases and reductions in state enterprise investments in order to achieve a surplus of 1 per cent in the consolidated public sector account. It was expected that this surplus would provide a "full offset to estimated implicit financial restructuring costs in 1997/98."

Aside from the series of measures on the fiscal side, the Thai government was to follow a stringent monetary policy as well, primarily in order to stabilize the exchange rate. The broad money aggregate M2A (equals M2 plus deposits with finance companies) is to be expanded by no more than 7 per cent (compared to 18 per cent in 1994 and 1995 and 12 per cent in 1996).

As outlined in the memorandum attached to the first letter of intent, the primary task of the earlier measures was to restore stability and confidence. "The package is focused on upfront measures that are expected to restore confidence early, stabilize currency, stem capital outflows, and strengthen the financial system." With the floating of the exchange rate, a tightening of the monetary policy to prevent a free fall of the baht is perhaps understandable, particularly since many financial institutions and their customers were heavily exposed to dollar debts.

Tight monetary and fiscal policies were thus maintained through the end of the year. The second letter of intent (dated 25th November 1997) said that, notwithstanding the slower pace of economic activity leading to a large revenue shortfall equivalent to 2-1/2 per cent of GDP, "we [i.e. the Thai authorities] are determined to maintain the fiscal goal of keeping the consolidated public sector in a surplus of 1 per cent of GDP in 1997/98". Further cuts in government expenditures were made, and some minor tax increases (involving luxury products, beer, spirits and tobacco) were implemented. Monetary policy was made even more stringent, with M2A growth to be kept at 1 per cent. (For key quantitative estimates and targets in the various letters of intent, see Table 5).

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[19] The lenders were Japan $4 billion; the central banks of Australia, China, Hong Kong, Malaysia and Singapore $1 billion each; the central banks of South Korea and Indonesia $0.5 billion each; the World Bank $1.5 billion and the Asian Development Bank $1.2 billion. Since then, Japan has taken up the contributions of South Korea and Indonesia.

Table 5 Key Policy Variables and Expected Outcomes in Various Letters of Intent

Letter of Intent No.	1	2	3	4	5	6	7	8
Date	8/97	11/97	2/98	5/98	8/98	12/98	3/99	9/99
Policy Variables								
Public Sector Balance								
1997	-1.5	-1.5	-1.5	-2.1	N.A.	N.A.	N.A.	-2.1
1998	1.0	1.0	-2.0	-3.0	-3.0	N.A.	N.A.	-3.0
1999								-5.5
M2A Growth								
1997	7.0	1.5	3.1	2.1	N.A.	N.A.	N.A.	2.0
1998	11.0	6.8	5.1	9.0	N.A.	N.A.	N.A.	6.1
1999								6.0
Policy Outcomes								
GDP Growth								
1997	2.5	0.6	-0.4	-0.4	-0.4			-1.3
1998	3.5	0 to 1	-3 to –3.5	-4 to –5.5	-7.0	-7 to –8	-8.0	-9.4
1999						1.0	1.0	3 to 4
Current Account								
1997	-5.0	-3.9	-2.2	-2.0	-2.0			-2.0
1998	-3.0	-1.8	3.9	6.9	10.0	11.0	12.0	12.8
1999						8.0	9.0	9.0
CPI Inflation								
1997	7.0	6.0	5.6	5.6	5.6			5.6
1998	8.0	10.0	11.6	10.5	9.2	8.0	8.0	8.1
1999						2 to 3	2.0	0.5

Source: Various Letters of Intent
Notes: Growth and inflation are in percent per annum, public sector and current account balances are expressed as percent of GDP.
N.A. = Not available

The backdrop to the drafting of the second letter of intent is of some interest. Within Thailand, the Minister of Finance who signed it had just entered office, after the previous Cabinet resigned, and the letter opened with the statement that the new government reconfirmed its full commitment to the programme as outlined in the first letter of intent. Unlike previous finance ministers under the previous government, the new one had total support from his prime minister, and also had a much clearer, if orthodox, vision of his own of what needed to be done. Consequently from this point of view, it is more accurate to view the programme as a joint one between the IMF and the Thai government.

Also, at the time the second letter of intent was signed, South Korea was just going through its turmoil, the final Asian country to be subject to the contagion let loose by the floating of the baht in July.

The period between the second and third letters of intent was probably the worst in the post-crisis period. The exchange rate lurched upwards to reach 54 baht to the dollar at the end of January before subsiding. With such rapidly deteriorating value of the baht, interest rates soared and the economy continued to deteriorate. It is thus not surprising that the third letter of intent (dated 24th February 1998) showed the first signs of a turnaround in policy, particularly in fiscal policy. Because of a further revenue shortfall and a rise in expenditure on account of the baht depreciation, a deficit of 2 per cent instead of a 1 per cent surplus is projected. Nevertheless, "at this juncture, a complete offset of the projected deterioration would be unnecessary, … because current account adjustment is already exceeding substantially our earlier goals." Interestingly, no mention was made of the fiscal cost of the financial restructuring that featured so prominently in the two earlier letters of intent as requiring a fiscal surplus. Conversely, the need to achieve a comfortable current account surplus, whose attainment was now mentioned as allowing fiscal relaxation, was not explicitly stated as a reason for fiscal stringency in the earlier letters.

Deficit spending as a stabilization strategy was finally embraced in the fourth letter of intent (dated 26th May 1998). The exchange rates having been stabilized and the interest rates having come down, "the immediate priority under the program is to minimize any further decline of the economy and bring about early recovery, while sustaining stabilization gains." Additionally, the need to strengthen the existing arrangements for social safety net was also mentioned.

In the second half of 1998 and in 1999, the Thai government, in its letters of intent to the IMF, continued with its policy of fiscal relaxation, indeed expanding the size of the deficit until it reaches 6 per cent for the fiscal year October 1998-September 1999. Part of the rationale was of course the need to shore up further the stricken economy, but another part was the fall in interest rates, which was felt to lessen the cost of financial restructuring.

Interest rates fell from the second half of 1998 onwards because at that point, the outward rush of foreign capital has subsided. But by then, relaxing monetary policy was like pushing on a string. It did not increase investments, partly because the economy was suffering from an excess capacity. But more importantly, the financial meltdown has so devastated corporate balance sheets and so disrupted the relationship between banks and borrowers that the former have become less willing to lend money for any project. Luckily for the banks, the government entered the market and floated large amounts of bonds which had gone some way to absorb the rising liquidity that would have otherwise swamped the system.

Did the International Monetary Fund and the Thai government blunder badly in their approach to stabilizing the Thai economy? A stringent monetary policy was defensible in the immediate aftermath of the baht float with net official reserves down nearly to zero. The very tenuous position of the baht under these circumstances demanded high interest rates to prevent a drastic outflow of money. If the baht has been allowed to sink, then the Thai borrowers of dollar loans would not be able to repay their debts. It must be admitted, however, that these debtors and the Thai authorities were caught between a rock and a hard place. To prevent the baht from falling, the domestic interest rate had to be kept high. But the high interest rate was no less damaging to the Thai borrowers than the falling value of the baht. Facing such a harsh trade-off, it would be surprising if the Thai authorities and the IMF could escape criticism, whatever they do.

On the fiscal policy side, however, the IMF's and the Thai government's attempt to run a fiscal surplus was deservedly criticized. One of the gentler critics has this to say about this fiscal policy position: "initially the IMF went off the rails." (Corden 1999:14). It is only fair to add that this was said in the context of an exposition of a simple Keynesian model. Corden fully recognized the complications that arise from the implementation of the Keynesian pump-priming strategy. I turn now to these complications.

When exchange rates are flexible and capital mobile, the use of fiscal deficits as a pump-priming mechanism has been shown a long time ago to be ineffective. Mundell (1963) points out that when the two conditions are met, any fiscal stimulus will lead to an influx of foreign capital, triggering an appreciation of the home currency. This appreciation will in turn cause a rise in imports and a fall in exports. The contractionary effect through the trade balance will exactly offset the expansionary effect of the fiscal policy. Conversely, if the government was to adopt a strategy of fiscal contraction, then the effect will be a depreciation of the home currency and an improvement in the balance of trade.

In Thailand, this analysis can only be applied bearing in mind the large capital exodus that took place in the aftermath of the baht float in July 1997. That exodus was already causing currency to depreciate substantially, leading to an almost immediate improvement in the current account. In the beginning, this improvement in the current account was due much more to the absorption (income) effect rather than the expenditure-switching (price) effect. The sharp fall in investment consequent to the capital exodus, as well as to the increase in country-risk premium, which increased domestic interest rates, was reducing economic activity.

In this scenario, a fiscal surplus would and did reduce economic activity further. But there is a second impact from the fiscal surplus, namely that it would tend to depreciate the currency, particularly as the extra saving from the public sector had no other place to go but abroad, given the fall in investment demand. This extra depreciation can be defended on the grounds that it is needed to turn the current account around, but then it would flatly contradict the main objective of the monetary policy.

The IMF in particular is criticized for applying the lessons of Latin America to Asia. Most Latin American crises reflected weaknesses in the public finances. Their (theoretical) nature and occurrence are well captured by Krugman (1979). The Thai fiscal position in 1997 however was quite strong: the stock of public debt was less that 15 per cent of GDP.[20] True, the looming fiscal cost of the deposit guarantee given to financial institutions may give the Thai crisis a Latin American flavour. Certainly, the first two letters of intent put this fiscalization problem up as the main reason for the fiscal stringency, as mentioned above. However, that problem has not hit Thailand yet, but in the meantime the stringent fiscal policy cost the country a great deal in lost output, and indeed increased the cost of the financial restructuring.

When the IMF turned around and agreed to the government's fiscal expansion policy, this was greeted as the point at which IMF learnt the lesson and saw the light. But by the time that turnaround was actually implemented in the second quarter of 1998, fiscal relaxation may no longer be useful. Exchange rates have stabilized. A

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[20] Including guarantees for state enterprises.

fiscal expansion financed by direct government borrowing from abroad would have led to a currency appreciation, which would bite into export growth. Mundell's analysis[21] shows that this cut in export growth (plus some import expansion) would exactly negate the stimulus provided by the fiscal expansion.

In addition, as the increasing cost of the financial sector restructuring began to loom larger, worsened by the economic contraction, which was partly caused by fiscal and monetary stringency, to let larger deficits add to the burden of future public debt was no longer appropriate.

In summary then, the IMF's and the Thai government's fiscal stance has been mistimed. In the immediate aftermath of the crisis, it should have been expansionary to counter the steep fall in investment and negative absorption effect of the sharp currency depreciation. It was instead contractionary then. Six to nine months later, a fiscal stimulus would have less of an impact on economic activity, affect export adversely, and add to the looming debt burden. Yet that was the policy followed.

Never considered as an option was a more stringent set of capital controls to slow down the massive capital outflow, which in the final analysis was the cause of the crisis. Given that most of the outflows after July 1997 was to repatriate short-term credit back to the lending banks, for the government to put a stop to this outflow would have smacked of a debt moratorium or worse. Possibly Thailand would be severely punished in the currency and other markets. However, given the markets' reluctant acceptance of Dr. Mahathir's move toward capital controls in September 1998, and later admiration when the move proved successful, the Thai government's caution may well have been misplaced.

But in all fairness, it has also to be admitted that for Thailand to follow the capital control strategy, two conditions were necessary. First, the measures had to be well crafted and their implementation firm and decisive. Before Thailand's entry into the IMF programme, the Chavalit government was too disorganized and the Bank of Thailand too demoralized to initiate such a strategy.

Once Thailand entered the IMF programme, a second condition was required: the Fund had to agree to the strategy. In 1997 and early 1998, when such a strategy could have paid off, the Fund was still resolutely opposed to them. Indeed, the Thai government had imposed a mild form of capital control to fend off the currency speculators in May 1997 (see Section C), but the Fund would still like to see these measures removed, and required a promise to do so be included in the first two letters of intent. After confidence has been painfully gained in 1998, it is not clear what capital control could have achieved.

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21 Mundell's analysis does not require the government to go out and raise funds from abroad – it can raise them domestically – but then the private sector will be crowded out of the domestic market into foreign borrowing, with the same end results. However, in the world financial markets that Thailand was facing in 1998-1999, this is unlikely to happen. In the event, the government ended raising the funds itself, mostly from official sources.

G. CONCLUSION

As has been universally recognized, the Thai economic crisis had its origin in the private sector. That individual agents' behavior had led to such a disastrous outcome is a *prima facie* evidence for market failures. Hence I have organized the above presentation to emphasize the functioning and the dysfunctioning of the various markets.

Pride of place has to be given to the failures of the financial system and the financial markets as the major cause of the Thai crisis. The problems here are manifold, but I would select for emphasis inadequate markets for risk and, related to this, a grossly inadequate legal framework for market-based risk sharing to occur. The over-reliance on debt as a means of financing new investments – and these investments were, relative to the size of the economy, on a massive scale – has made companies and the financial institutions extremely vulnerable.

Nearly four decades of relatively stable growth had lulled everyone into complacency regarding the risks that they were running. In the past, those who made mistaken investments had almost always been rescued by growth. Market-supporting institutions and arrangements that would sort out the consequences of these mistakes, such as bankruptcy laws or deposit insurance were either not developed, or when proposed, always put on the backburner. Supervision and regulation of financial institutions were not overhauled to take account of the new environment opened up by financial market liberalization.

Financial market liberalization without adequate preparation thus turned out to be highly toxic to the economy. As Thailand emerged painfully – and fitfully – from the crisis, it has to take stock (literally) of its position. Current figures (as of April 2000) indicate the flow variables are all showing clear signs of recovery, fuelled in the beginning by large fiscal deficits and later by strong export performance. The balance sheets of companies, and financial institutions are still in a parlous state. For most of the larger corporations, their debt/equity ratios have become even higher, mostly as a result of heavy foreign exchange losses that they suffered. Many of them remain technically bankrupt. As a result, non-performing loans form a very large fraction of the total outstanding, and financial institutions consequently non-functional. As long as the recovery is based on using up the excess capacity, the economy can still move forward. But once there is no more slack, then growth will grind to a halt, as there will be problems with the financing of new investments.

The dismal balance sheets of the Thai non-financial corporations, three years after the onset of the crisis, are due to the lack of any rapid mechanism whereby the untenable values embodied in them can be adjusted to reflect new realities, and where necessary, changes in ownership can take place. Since these adjustments in turn have implications for the financial institutions' balance sheets, and their health, it means that the channels from savings to investments will remain clogged for some time, and firms will remain starved of funds for new investments, while the financial institutions are awash in money.

As can be easily surmised, the changes and adjustments that have already taken place have wrought considerable changes to the wealth of many individuals, and probably to the overall wealth distribution as well. Surprisingly, at the other end of the economic spectrum, while there has been an increase in the incidence of poverty, that increase has been small and, judging by the size of that observed impact, it probably was less than the undoubtedly large impact on the very rich. This is so despite the fact that there is very little in the way of a social safety net for the poor against contingencies of this kind. Perhaps explaining the relatively mild consequences for the poor is the fact that most of the industrial workers laid off from their jobs are still first-generation migrants from the rural areas. Their ties to their families and the informal social security thus provided are still strong.

Having said that, I would hasten to add that it does not allow complacency on the issue of a properly constructed social safety net, rather than the jerry-built one put in place during the crisis. At the very least, the resources that have been and will be put up by the taxpayers to cushion the blow to investors and lenders in misconceived investments have been out of all proportion to the safety net provided to the poor. And that should be an offense to anyone's sense of justice.

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