Discussion

Bad Banking in Thailand? An Empirical Analysis of Macro Indicators

LUKAS MENKHOFF

It appears to be common wisdom that the basic cause of Thailand's crisis is its extraordinarily weak financial institutions. The article questions this proposition from an empirical viewpoint. It is well established that the long-term performance of Thailand's financial system is favourable. The insight from moral hazard indicators is unexpected regarding the bad banking proposition, although not compelling. Finally, the liberalisation process produced inadequately addressed risks. However, this also applies to experienced and well-regulated foreign banks. It is argued that the facts provided can be better explained in a framework of system change than by bad banking in Thailand.

I. INTRODUCTION

The now widely accepted account of the Asian crisis states that weak financial institutions played a major – or even decisive role. In its in-depth analysis, the BIS [*1998*] stresses 'domestic sources' [*1998: 3*], prominent among them the 'fragility of financial systems' [*1998: 117*] promoted by 'banks and others to underestimate risk' [*1998: 117*]. The IMF [*1997: 2*] also emphasises 'structural weaknesses, particularly in the financial sector'. The first reason mentioned has to do with the 'pricing and managing of risk' [*1997: 12*]. Later on, banking practices are characterised as 'imprudent

Lukas Menkhoff, Aachen University of Technology, Germany and Center for Development Research, University of Bonn, Germany. The author would like to thank the many researchers, officials and bankers in Thailand who have readily discussed the proposition of bad banking with him, in particular Joachim von Braun, Suthiphand Chirathivat, Norbert Funke, Horst Gischer, Kitti Limsakul, Sothitorn Mallikamas, Renate Ohr, Vichai Punpocha, Sunai Saubhayana, Chantavarn Sucharitakul, Sunti Tirapat, participants at several seminars and conferences and two anonymous referees who provided helpful comments. Financial support from the Center for Development Research is gratefully acknowledged.

The Journal of Development Studies, Vol.36, No.5, June 2000, pp.135–168
PUBLISHED BY FRANK CASS, LONDON

lending, including lending associated with relationship banking and corrupt practices' [*1997: 12*].

Whereas these international institutions have to use diplomatic language [see also *World Bank, 1998*], it is up to academics such as Krugman [*1998*] to speak clearly: 'The problem began with financial intermediaries – institutions whose liabilities were perceived as having an implicit government guarantee, but were essentially unregulated and therefore subject to severe moral hazard problems.' Krugman summarises his analysis by saying that 'the Asian crisis ... was mainly about bad banking ...'. Bad banking, as characterised above, creates excessive credit growth, (sectoral) overinvestment and an asset (price) bubble. According to this interpretation, the Asian crisis, and with it Thailand's crisis, is the bursting of the bubble that was mainly caused by bad banking in Thailand and the other countries concerned.

This now popular stance contrasts markedly with the high reputation that Thailand and its financial sector had earned before the crisis. The inclusion of Thailand in the group of the 'East Asian miracle' countries, as the World Bank [*1993*] called its respective study, met with great approval [also *Christensen et al., 1993; Warr and Nidhiprabha, 1996*]. Thailand, however, was not only a member of this group of excellence, but within this group was among those countries whose growth was driven by remarkable improvement in total factor productivity. The efficient use of resources is generally positively related to the ability of institutions to organise factor allocation, that is, at particular banks. This research seems to lead to the almost self-evident conclusion that Thailand's banks have been efficient institutions, a characteristic that is not likely to disappear within a few years. How do these findings fit with the current interpretation of bad banking in Thailand?

There seem to be only three 'solutions' to this puzzle: first, the implied proposition of *good banking* in the past might not be well founded, but might possibly wrongly attribute growth to financial sector performance. Second, in Thailand's case the *bad banking* proposition might be wrong or at least a gross overstatement. Third, something might have changed over time: as this cannot be simply the institutional quality of a whole system consisting of many quite different banks, there must be a more subtle reason. A candidate for this might be a change in the environment that turns former winners into losers under changed circumstances. This could be formulated as *inadequate banking*.

To address these questions, the performance of Thailand's banks is analysed empirically. As the crisis produced an enormous structural break, the inclusion of post-crisis data does not seem to be useful [also *Demirgüc-Kunt and Detragiache, 1998*]. Even a sound banking system would have run

into problems from insolvent borrowers when facing – as Thailand did – an abrupt currency devaluation of more than 50 per cent (at its peak), a collapsing stock market, a sharp interest rate increase and a swing in growth of about 15 percentage points. Thus the causality between banking shocks and macro shocks becomes difficult to disentangle in the case of post-crisis analysis. However, identifying failures in banking using *ex ante* data is not easy either. As there are no data providing exact information about aspects of performance – which would obviously need to go beyond simple profit figures – there is no alternative to working with proxies, that is, empirical indicators, proposed in the literature. Among these indicators, the word 'macro' hints at the data base used, which is always aggregated at the level of all banks or even all financial institutions.

The result of the analysis is straightforward. Whatever the empirical discussion about the causes of the East Asian miracle may show for larger country samples, for Thailand there is no reason to doubt the proposition of good banking. The shortcoming of this approach is its inertia in measurement. However, an evaluation of indicators showing more recent decision making, as proposed by the BIS and others, does not support the notion of moral hazard in banks either. If one compares the risk-return policy of Thailand's banking system with that of other countries, Thailand is quite consistently positioned in a surprising direction, indicating sound and efficient rather than bad banking.

Although this picture emerges almost homogeneously from the macro indicators, it falls too short in understanding the origins of the banking crisis. It becomes clear that the crisis is not due to inherent problems of governance among Thailand's banks but to an adversely changing environment. The macroeconomic information that Thai banks could have used in operating more cautiously was just as available to banks from industrialised countries. The latter were eager to increase their exposure in the crisis region. It is thus not the case that Thai banks operated more poorly than everyone else, but rather that practically all the banks behaved inadequately. An important factor facilitating the mistakes made is that the regulatory and macroeconomic policy did not function properly.

Section II begins by explaining how banking used to work in Thailand, why this looks like 'crony capitalism' at a superficial level but may have functioned. Section III introduces the empirical part with what is possibly the broadest concept of the success of a banking system, that is, the efficiency with which resources are allocated in the economy. Section IV examines several indicators concerning the risk-return policy of Thailand's banks that have been proposed by sceptics. As a third empirical approach, section V addresses the changing banking environment with regard to risk measures and risk awareness. Section VI provides the conclusion.

II. CONSIDERATIONS ON THE THAI-STYLE CAPITALISM

The financial sector performs several functions which contribute to the improvement of economic welfare, among which the quality of credit allocation is probably the most important. During this allocation process, a decision is made as to which investment projects will receive the funds necessary for their implementation. If 'good' projects are chosen, then resources are used efficiently; but if 'bad' projects are chosen frequently, capital is wasted in the economy and growth will be lower.

In modern theory, the banks are therefore often described as institutions specialised in making good credit decisions. The problem with giving credit is that lender and borrower have different interests. In simplifying the analysis, one can reduce it to the notion of 'limited liability' [*Stiglitz, 1972*]. Borrowers may tend to pursue plans involving unacceptably high risk levels. This is rational given their incentives – and in particular when limited liability is borne in mind – but it is not in the interests of lenders, represented here by the bank. Attempts to control this by making appropriate contractual arrangements are complicated by the fact of asymmetric information between the parties involved:

- First, from an *ex-ante* point of view, the lender has less information on possible investment projects than the borrower. The latter thus has an incentive to propose projects to the bank characterised by comparatively high risk. Allocation quality can therefore be interpreted as an effort to reduce the knowledge gap as much as possible. It seems plausible to assume that there are returns due to specialisation in this process.

- Second, from an *ex-post* point of view, that is, after having granted the loan, a second asymmetric information problem arises as the borrower can decide on how to utilise the loan. She can decide on her level of effort and to some extent on the riskiness of the strategy followed. Again, banks may amass expertise on how to handle this kind of problem.

The 'solution' to these problems in industrialised countries is the development of institutional settings that help reduce asymmetric information and thus find efficient arrangements between lender and borrower. In particular, the *ex-ante* problem can be reduced by reliable accounting and reporting rules that give information about the enterprises' state of affairs. The *ex-post* problem requires not only timely information about the use of the loan but also instruments for the lender to enforce the contract. It is obvious that this institutional setting is not self-evident in developing countries where, among other things, legal rules have to be

implemented. Rather, one could say that it is a characteristic of the development process to make institutions work in this sense. So how can banks operate without the necessary tools?

From this perspective, the often-criticised practice of relationship lending in many countries, among them Thailand, looks justified to a certain extent. If books and other data do not say much about the success of a business, how do you evaluate the creditworthiness of potential borrowers? A personal relationship serves to close the gap stemming from information asymmetry. This relationship helps inform lenders about the personal abilities of the future management team, about any earlier successes and, possibly, about important qualitative information related to the project.

The situation is similar for the *ex-post* problem of possible moral hazard. If contracts are not worth much because reliable data about their performance and instruments of enforcement are missing, embedding a borrower in a network of personal relationships, such as a family, extends the one-period moral hazard problem to a multi-period decision. In this situation of 'repeated games' any moral hazard strategy in the first period becomes costly in later periods. Thus, there is a strong incentive to fulfil the 'contract' without legal enforcement.

The specific role in this environment of Thailand's family centred banks – which are part of business syndicates – is outlined by Phongpaichit and Baker [*1998: 20*]: '[The major banks] acted as much more than just banks. They worked like investment houses, informal chambers of commerce, and business consultancies.' 'For [their] associates, the banks not only provided finance but facilitated deals, found overseas contacts through their networks, and managed their political relations.'

We do not want to discuss how efficient this kind of relationship banking is in comparison to others, but one should keep in mind that it is in principle a set of complementary institutions. Thus, it should come as no surprise that such a system can produce favourable outcomes as long as the elements comprising it all function. If this system, which has been called the (old) 'Thai-style capitalism' [*Siamwalla and Sobchokchai, 1998: 49ff.*], is transformed into a more market-oriented system, that the elements continue to complement each other becomes crucial.

III. TOTAL FACTOR PRODUCTIVITY AND BANKING

Perhaps the most comprehensive indicator for measuring the usefulness of a banking system for the whole economy is its contribution to real growth. The problem is, of course, that there is no measure for capturing this contribution directly. However, there does seem to be a plausible way of accounting for the performance of the financial sector: the size of national

financial sectors is positively related to macroeconomic growth. Going even deeper into this relationship, it has been argued that the most important function of the financial sector lies in the efficient allocation of resources within the economy [*Levine, 1997*]. One may thus expect this argument to imply that efficient resource allocation is reflected in comparatively favourable total factor productivity growth. Although empirical growth accounting studies typically relate banking to growth rather than to productivity growth (an exception is Levine and Zervos [*1998*]), the latter is probably more relevant. Its disadvantage is severe measurement problems [e.g., *Felipe, 1999*]. In the Asian case, this has been made public by Krugman's critique of the Asian 'miracle' [*Krugman, 1994*], a paper that relied heavily on empirical work by Young [*1995*].

A convenient way out of these struggles about the most appropriate way of accounting for productivity emerges if we focus on Thailand and not on the diverse group of Asian countries. Regardless of the measurement criteria used, Thailand is certainly among the countries with above-average growth in total factor productivity (see Table 1). Even in the study of the Asian 'contrarian' Young [*1994*], it ranks in the top 25 per cent of the 66 countries covered and in Kim and Lau [*1996*] it is above average.[1]

If one interprets this consistent finding as the relatively efficient use of resources, this tends to support the good banking proposition. There are, however, at least three major empirical objections to this claim. First, even a relatively efficient capital allocation could have been better and thus growth higher with a more efficient financial sector. Second, high total factor productivity could be the result of good decision making outside of the banking sector. Finally, the results for longer period averages may be irrelevant for the more recent past. The latter two objections mentioned will be addressed below.

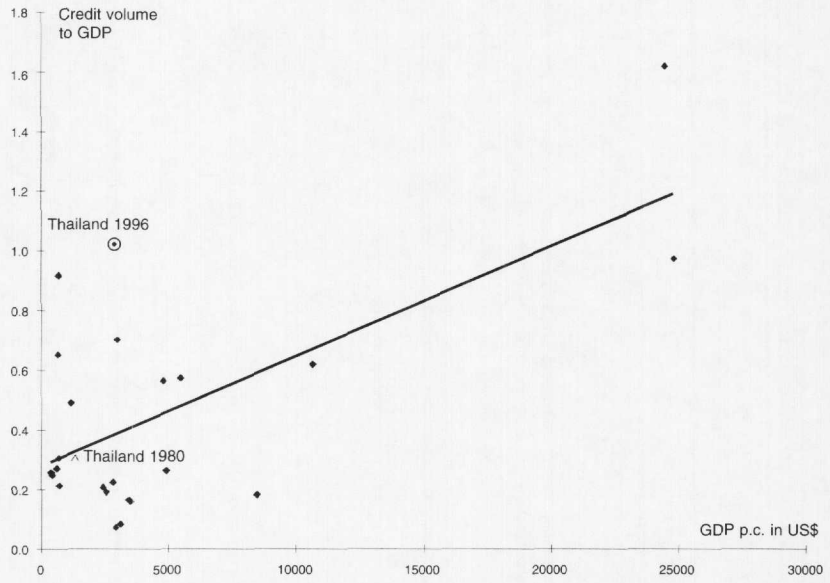
Regarding the importance of banks in capital allocation, it is informative to see whether banks play a comparatively large role in the economy. Besides qualitative evidence, such as Jansen [*1997*] or Phongpaichit and Baker [*1998: 19ff.*], there is quantitative evidence: the credit volume coefficient (CVC), that is, the ratio of the credit volume to GDP, can be used as a simple indicator to measure the importance of banking. As the level of GDP systematically influences this measure, it is interesting to know whether Thailand deviates from the respective cross-country regression of CVC on GDP. In order to control for a possible credit boom during the last few years, the regression for the year 1996 is supplemented by data for the year 1980. The results depicted in graph form in Figure 1 clearly show that Thailand has a financial system with a comparatively large banking sector and that its CVC in 1980 was already above the median value for all countries covered.[2] It can therefore be said that capital allocation involved

TABLE 1
THAILAND'S TOTAL FACTOR PRODUCTIVITY GROWTH IN INTERNATIONAL COMPARISON

Study	Period	Countries covered	Results on TFP for East Asia	Results on TFP for Thailand	TFP growth p.a. in %[1]
World Bank (1993) Tables 1.9, 1.10	1960–85	113; East Asia: Hong Kong, Indonesia, Japan, Korea, Malaysia, Singapore, Taiwan, Thailand	leading in the group of developing countries; productivity-driven (Japan, Korea, Hong Kong, Thailand, Taiwan) vs. investment-driven (p.57 f.)	unusually high TFP-growth	1.31 (1.85) [0.01]
Klenow and Rodriguez-Clare (1997)	1960–85	98; East Asia: Hong Kong, Indonesia, Japan, Korea, Malaysia, Philippines, Singapore, Taiwan, Thailand	East Asia: above average; large differences between countries	better than other large South-East Asian countries (Indonesia, Malaysia, Philippines)	2.66 (2.52) [1.03]
Young (1994), Table 3	1970–85	66; East Asia: Hong Kong, Japan, Korea, Malaysia, Singapore, Taiwan, Thailand	East Asia: average (Hong Kong possibly 'extraordinarily high', p.972)	rank 15 of 66 (Hong Kong: 6; Taiwan: 21; Korea: 24; Singapore: 63)	1.9 (1.4) [1.3]
Harberger (1998), Table 3	1971–91	32 (20 listed); East Asia: Hong Kong, Korea, Taiwan, Thailand	East Asia: all countries clearly above average	rank 2 of 20 countries listed (behind Taiwan)	2.96 (2.83) [1.20]
Collins and Bosworth (1996), Tables 6, 7	1960–94	88; East Asia: China, Indonesia, Korea, Malaysia, Philippines, Singapore, Thailand, Taiwan	East Asia: among the leaders	rank 3 of 8 East Asian countries; 1973–94: rank 2 (behind China)	1.8 (1.1) [0.37]
Sarel (1997), Table 2	1978–96	6; Indonesia, Malaysia, Philippines, Singapore, Thailand, USA	East Asia: much higher than US with exception of the Philippines (p.29)	rank 2 of 6 countries (behind Singapore); 1996: rank 2 (behind Singapore)	2.03 (1.33) [1.16]

Note: [1] Value of Thailand, value in parenthesis for East Asian countries, values in squared brackets for all countries covered (figures are unweighted means of country or country-group data).

FIGURE 1
CREDIT VOLUME TO GDP IN RELATION TO GDP P.C. IN 1996



Regression: y (credit to GDP) = 0.313054 + 0.0000366x (GDP p.c) $R^2 = 0.39343$
(4.178) (3.862)
p = 0.004 p = 0.008

Notes: T-values in parenthesis; data for 24 developing countries from IMF International Financial Statistics (IFS); Credit volume = deposit money banks´ claims on private sector (=IFS line 22d); GDP p.c. calculated by 1996 average exchange rate (=IFS line rf); Thailand´s 1980 GDP inflated by CPI.

banks to a high degree. If capital allocation were then to be regarded as successful, as suggested above, this might be more easily reconciled with good banking than its being realised despite bad banking.

Even if the long-term level of capital allocation quality is satisfactory, there may be a declining trend in the quality of credit allocation. The limited information available on this does not give a clear-cut picture:

- The studies in Table 1 cover different time periods but do not give the impression that Thailand's position has recently become weaker. For example, Sarel [*1997*], quoted in Table 1, explicitly states a constant level of TFP growth.

- A related measurement 'clearly reveals that during 1991-1995 the capital stock per worker increased at a much higher rate ... than did value added per worker' [*Tinakorn and Sussangkorn, 1998: 388*]. This is interpreted as overinvestment in capital stock in comparison to other input factors, in particular human capital (see in this vein also Alba, Claessens and Djankov [*1998: 39*]).

- Others who claim that the financed investments were of a low quality base their argument on an increasing incremental capital-output ratio (ICOR) [e.g., *Bank of Thailand, 1998c: 12*]. However, the evidence provided is not compelling. An increase may depend not only on project quality but also on cyclical influences or the kind of investments involved (for example, infrastructure investments with a relatively long period of depreciation). Moreover, the ICOR level in Thailand during the 1990s has not been extreme, or even above average in comparison to other countries [*Radelet and Sachs, 1998*].

- A further approach is presented by Demetriades *et al.* [*1998*], who examine determinants of the average productivity of capital, among them the influence of banks. In their sample of five Asian countries, the proxy for banking activity seems to indicate a negative relation only in India and Thailand. 'This somewhat surprising result may reflect inefficiencies in the Thai banking system' [*1998: 79*]. However, the period covered unfortunately ends exactly where other work sees the problems growing, that is, in the year 1992. Moreover, cautious interpretation of the data quoted above seems to be justified, as the proxies available are definitely questionable. For example, the approach applied produces a negative relation between financial repression and capital productivity for the years around 1982 when Thailand was in an economic crisis. This relation is not, however, a causal one: the macroeconomic slowdown led to low capital productivity and the banking crisis required state intervention to prevent systemic failure, which fostered high 'repression' (see Figure 5 in Demetriades *et al.* [*1998*]). This example of third-party causation highlights the methodological problems and shows why the results should not be overinterpreted.[3]

Unfortunately, the inconclusive evidence cannot be overcome, due to methodological weaknesses: the exact results of TFP growth studies are notoriously heterogeneous, especially when short periods are evaluated. The ICOR approach, 'in a time-series context ... is likely to be a very erratic measure of capital productivity' [*Demetriades et al., 1998: 67*]. In addition,

the capital productivity measurement based on capital stock figures, as applied by Demetriades *et al.* [*1998*], has other limitations, such as the fact that it neglects the influence of further input factors and possibly blurs measurement, as demonstrated. Despite these weaknesses, one may argue that the 1990s in Thailand are characterised by a level of investment that could hardly be efficiently absorbed by enterprises [*Pomerleano, 1998*]. However, the adverse effect on productivity can (partially) be rationalised by declining interest rates from relying more on foreign currency loans as will be shown later (see section V).

In summary, there is strong evidence that a comparatively large banking system was heavily involved in credit allocation and that the overall quality of capital allocation was not too bad. This provides a clear hint, although no compelling evidence, that the banking sector provided reasonable credit allocation in the past. The level of return on capital may have gone down during the 1990s, but at least the system did not break down and it may have been relieved by the sinking price of capital. However, as productivity figures do not consider risk, there is still the possibility (indeed this is the main claim of those supporting the 'bad banking' hypothesis) that during the 1990s the risk levels associated with the projects financed may have become too high in relation to returns.

IV. THE RISK-RETURN POLICY OF THAILAND'S BANKS

At its core, the bad banking proposition is a proposition of moral hazard behaviour of financial institutions in Thailand. Its main empirical indicator would be the financing of overly risky projects, that is, projects whose expected total return is not covered by expected payments to the lender. In some sense, this can be interpreted as a situation in which the underlying incentives become dysfunctional due to limited liability. This raises two questions in the case of Thailand: are there any empirical indicators supporting the notion of an overly risky policy, and is there any information about possible (dis)incentives for Thailand's banks to pursue a moral hazard strategy?

The problem with risk indicators is that one ideally needs measures of *ex-ante* risk, that is, the risk as it was perceived by the bank when granting its loans. However, this requires data that are usually strictly confidential and thus not available. The information that can be used is therefore, in effect, always a variety of *ex-post* information showing how risky the projects carried out were or have been analysed to be in hindsight. To make the information even hazier, the data is supposed to be restricted to the period before the crash to avoid interdependent influences. This leaves one in the somewhat unpleasant situation of finding indicators for excessive risk

before this. In general, there are four ways of approaching the risk-return policy being followed:

- If *ex-post riskiness* is comparatively high, this may hint at excessive risk taking *ex ante*. However, two qualifications need to be made. First, a low degree of risk could be due to luck, even though the *ex-ante* policy was excessive. Second, a high degree of risk could be due to the selection of high-risk projects with appropriate yields, which would also create a misleading picture. Nevertheless, our cautious understanding is that excessive risk taking over a period of years will show up in some indicators.

- The aspect of *ex-post return* was just mentioned. Moral hazard banking is expected to yield not more but rather less than average profitability in the long run. Here too, looking at isolated measures of return may lead to similarly misleading interpretations as in the case of risk.

- As a result, *risk-return measures* should be granted the most weight. These measures relate the risk involved to the return received, which is informative in the very long run. In the short run, however, there are similar problems to those discussed above: (un)favourable circumstances may have arisen during the period of investigation or may show up only at a later, unobserved time.

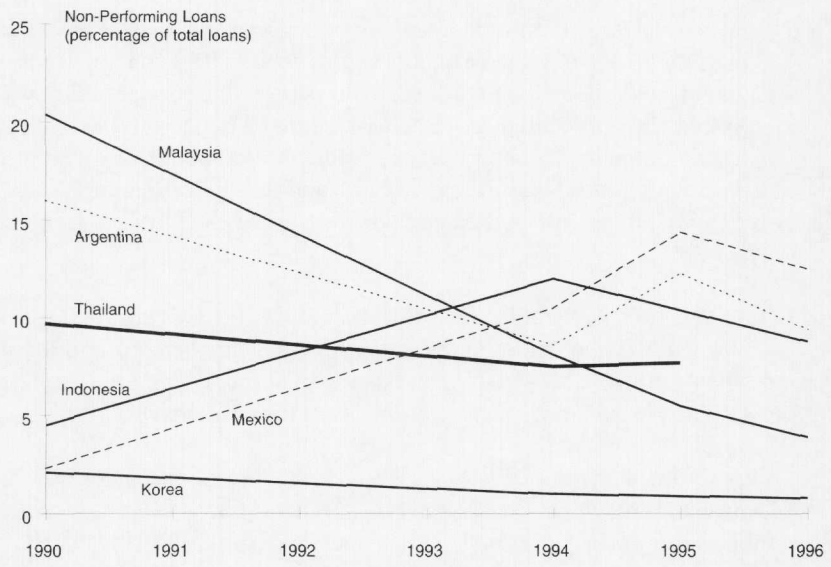
- As the three quantitative approaches discussed all involve severe identification problems, it may also be useful to apply a qualitative approach: ask about the *incentives* for taking excessively risky positions. The higher the incentives, the more reasonable is the assumption to be realistic.

The methodological qualifications require care in the interpretation of data but do not necessarily forbid inquiry. Indeed, the literature has used several indicators to evaluate the policy of banks or bank systems [*Karels and McClatchey, 1999*]. These will be discussed for the case of Thailand. One would expect either that Thailand demonstrates a greater element of risk in comparison to other countries (where no such severe banking crisis has happened) or that the indicator has worsened for Thailand over time.

Ex-post Risk Levels

One indicator that is often used to measure *ex post* risk levels is an analysis of the proportion of non-performing loans to assets (or total loans). For example, Radelet and Sachs [*1998*] have argued that Asian countries,

FIGURE 2
THE SHARE OF NON-PERFORMING LOANS DURING THE 1990s

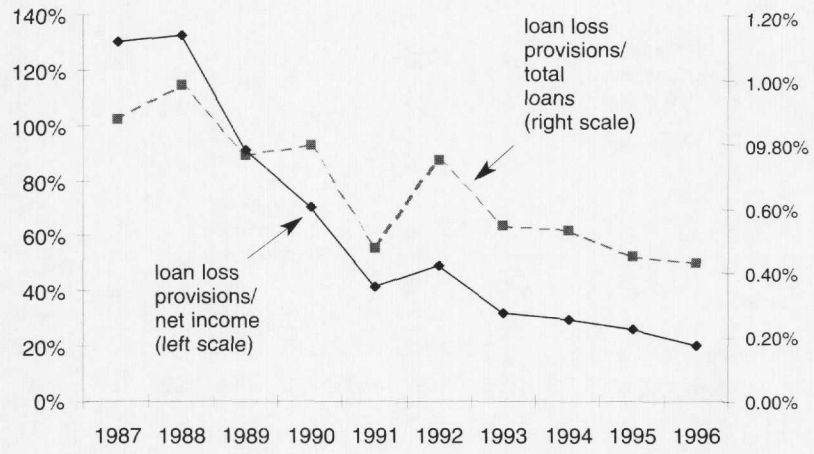


Note: Values for 1991–93 linearily interpolated; data from Radelet and Sachs [*1998: Table 10*].

including Thailand, did not show behaviour different from Latin American countries (see Figure 2). Of course, as with many single indicators, the share of non-performing loans depends on several influences, only one of which is the risk level of the policy adopted (others include the state of the business cycle, accounting rules and the extent of credit growth).

With regard to the first influence, there are no panel data for non-performing loans available that would allow one to normalise the levels of bad loans. With regard to the second influence, it is now well known that Thailand's rules were generous compared to those of industrialised countries. The criterion for non-performance was no payment within 12 months (in contradiction to shorter periods and stricter definitions in other countries). However, it is not clear how strictly the rules are applied in countries at a similar stage of development. Differences in behaviour could be even more problematic. There is informal evidence that paying back one's debt was a strong behavioural imperative in Thailand until the early 1990s – the rationalisation for this behaviour may be the pronounced relationship banking system, which means that it is more or less impossible

FIGURE 3
LOAN LOSS PROVISIONS AT THAILAND'S BANKS



Notes: Loan loss provisions and net income (before income tax) data from Bank of Thailand (1996 based on data only for Thai commercial banks); total loans data from IFS (=line 22d).

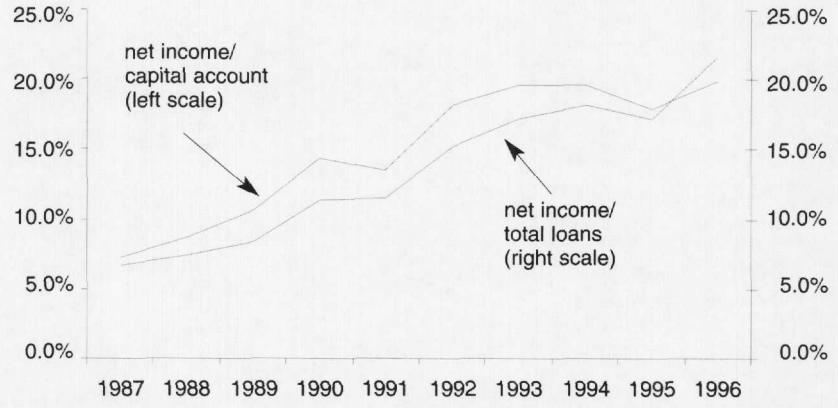
to switch lending institutions. Another rationalisation for introducing the above-mentioned 12-month criterion is the high proportion of income in Thailand that is dependent on agriculture, implying a seasonally varying income.

Once again, if one analyses loan loss provisions, there is no evidence of an emerging crisis (Figure 3).[4] Nevertheless, here too one must consider the possibility that banks either manipulated the data to avoid a loss of confidence, that strong credit growth diluted the problem or that banks were just lucky until 1996.

Ex-post Returns

Standard measures of performance with regard to returns are the return on equity and the return on assets (assuming that the business structure of the banks compared is similar). As no internationally comparable data for developing countries are yet available,[5] a solution is to watch the time-series data for Thailand's banks; these do not exhibit any major trend (see Figure 4).

FIGURE 4
RETURN RATIOS FOR THAILAND'S BANKS

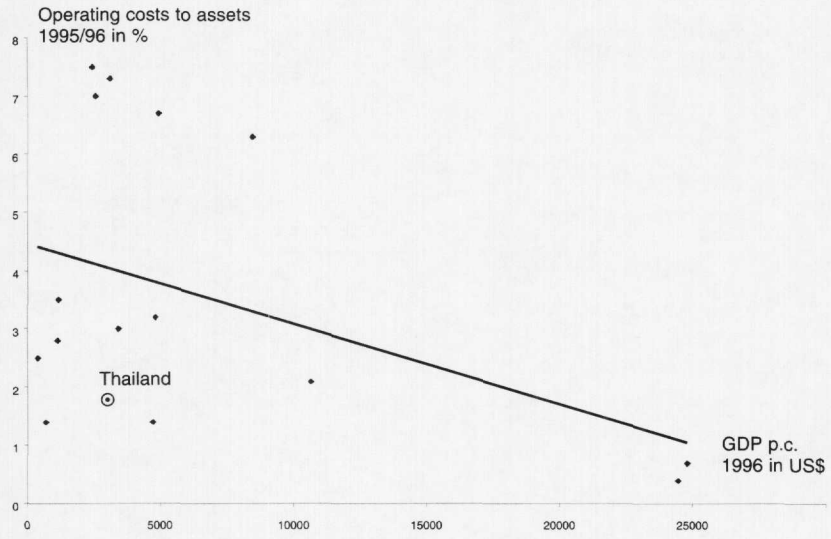


Notes: Net income data (before income tax) from Bank of Thailand (1996 based on data for Thai commercial banks only); capital account data from IFS (= line 27a); total loan data from IFS (= line 22d).

As the absolute profitability shown in the profit and loss statements does not seem to be remarkably low, this raises the question as to whether the reason is good banking or restricted competition. The latter claim is often made for Thailand but has hardly been empirically substantiated. One way of challenging its plausibility is to examine the inference to be drawn from low competition that operational efficiency is lacking by means of an international comparison. One measure of this is the ratio of operating costs to assets, a figure provided by the BIS [*1998*]. Based on these absolute figures, Thailand's banks do not appear to operate expensively. As one would expect this ratio to vary systematically with income per capita, it can be 'normalised' by applying a linear regression. Again, however, Figure 5 shows that Thailand is positioned below the income-adjusted average.

Other arguments put forward in favour of collusive behaviour between banks are concentration ratios and observations of similar interest rates offered. Both arguments lack theoretical and empirical substantiation. Regarding concentration, Thailand's banking market could be described as a wide oligopoly, in which the market outcome depends on strategies, but is not per se worse than a situation in which there are many small competitors. It is precisely these strategies which critics claim are co-ordinated, as similar interest rates on deposits offered by the many different banks seem

FIGURE 5
THE RELATIONSHIP BETWEEN OPERATING COSTS AND GNP P.C.



Regression: y (operating costs ratio) = 4.4654 – 0.0001377x (GDP p.c.) $R^2 = 0.178$
(5.815) (–1.743)
p = 0.00 p = 0.103

Notes: T-values in parenthesis; operating costs ratio from BIS [*1998: Table VII.1, 119*] (data for 16 developing countries); GDP p.c. from IFS.

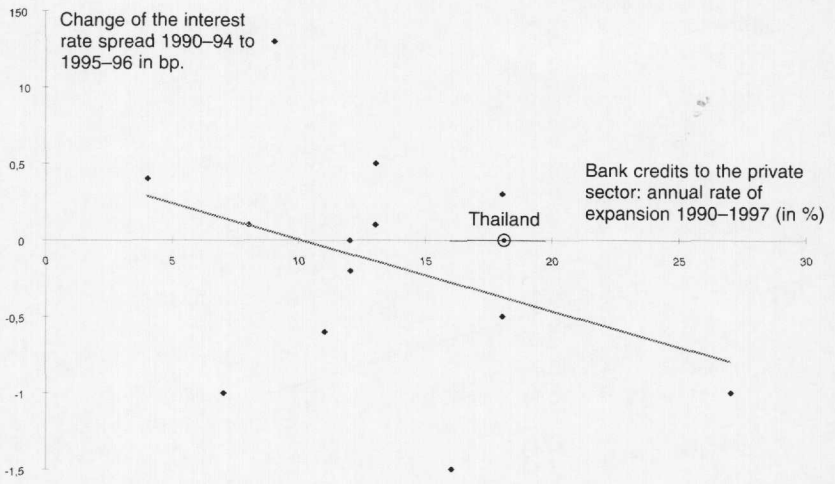
to show. However, market forces would not allow much variety between the prices for almost homogeneous goods in a competitive market, either.

In summary, the profitability observed is not low in absolute terms and is also not (obviously) caused by oligopolistic collusive pricing. This leaves room for efficient behaviour.

Risk-return Measures

Combined risk-return measures are definitely more preferable than isolated risk or return measures. However, risk can only vaguely be assessed or approximated by means of empirical indicators. In this respect, the BIS [*1998*] has argued that an enormous increase in credit extensions, as took place in Thailand during the 1990s, should be accompanied by an increase in the net interest margin. The reasoning is that, in such cases, a greater share of the project applications presented to the banks will be approved, thus bringing less favourable projects onto the banks' books. If the banks

FIGURE 6
CHANGE OF THE NET INTEREST MARGIN AND THE CREDIT EXPANSION



Regression: y (spread) = 0.474 – 0.047x (credit expansion) $R^2 = 0.1438$
(0.993) (–1.419)
p = 0.34 p = 0.18

Notes: T-values in parenthesis; operating costs ratio from BIS [*1998: Table VII.1, S. 119*] (data for 16 developing countries excluding three outliers).

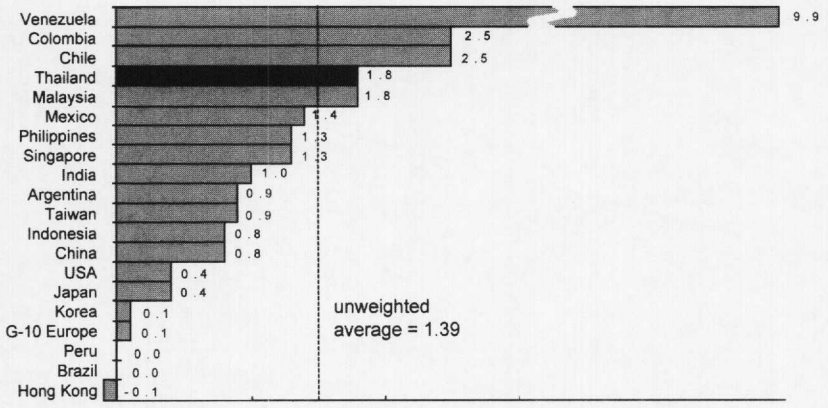
are, however, prone to moral hazard, they may not consider the price of risk appropriately and thus show a decline in the net interest margin.

The data sample provided by the BIS (see Figure 6 for a graphical presentation), indeed shows the theoretically unwanted situation of a negative relationship, which seems to indicate moral hazard behaviour. From a statistical point of view, however, the evidence is not really convincing. Furthermore, Thailand, which might be expected to be a leading example in this respect, is positioned on the conservative side of the regression line.

In another attempt to get to grips with the risk-return problem, the BIS [*1998: 119*] proposes a very rough measure for risk provision, that is, the difference between the net interest margin and the operating cost margin. The theoretical expectation would be that countries in which banks take greater risks are characterised by higher risk provision margins. Assuming that the risk in crisis countries has been above average, these countries have

FIGURE 7
A ROUGH ESTIMATION OF RISK PROVISION

(risk provision = net interest margin minus operating cost margin, in % of total assets)



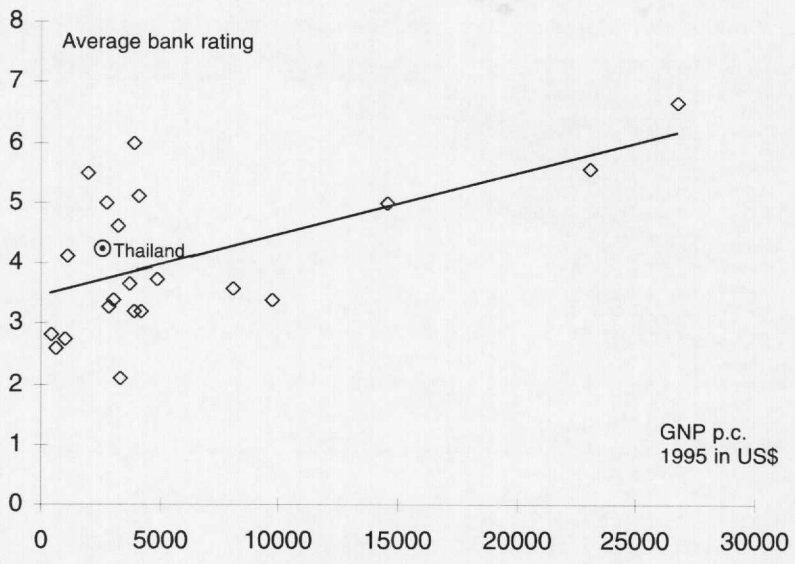
Note: Data from BIS [*1998: 119*]; net interest margin and operating costs 1995–96.

moral hazard problems because their risk provisions are below average. Once more, though, the data for Thailand do not fit the moral hazard case based on this simplistic measure (see Figure 7).

Finally, one could argue that all information available about the risk-return policy followed is considered by the rating industry. The expected consequence is that banking systems with moral hazard problems will receive lower ratings than others will. As the financial strength of banks is systematically related to the general stage of development, a linear regression is applied to produce an average ratio between GNP per capita and average bank ratings. According to the data supplied by an IMF study [*IMF, 1996: 114*], Thailand is again on the safe side of the regression line, where misbehaviour would be expected to be less (see Figure 8).

Although these measures should not be overinterpreted, it is surprising that they are introduced to identify moral hazard but do not deliver the expected results for Thailand. It is, of course, possible that the inferences made above demonstrate the uselessness of these indicators. However, if one accepts the fact that the indicators have been introduced by experienced institutions and that they are, for example, more informative for Indonesia and Korea (see the short summary in Table 2), the fact that Thailand is the only one of the crisis countries to be consistently positioned in an unexpected way should give pause for thought. What if the measurements

FIGURE 8
THE RELATIONSHIP BETWEEN AVERAGE BANK RATING AND GNP



Regression: y (rating) = 3.4782 + 0.0001 (GNP p.c.) R^2 = 0.33877
(12.242) (3.201)
(p = 0.00) (p = 0.0045)

Note: Average bank rating (= Moody´s Financial Strength Rating, May 1996) from IMF [*1996: 114*]; transformation: A→9, B→8, … , E→1; GNP p.c. from IFS.

are not wrong, but rather that Thailand's banks do not really fit into the category of excessive risk taking?

Incentives for Excessive Risk Taking?

When empirical indicators do not deliver very clear results, the policy of banks may be analysed indirectly: have there been incentives for imprudent risk-taking? The moral hazard framework often stresses two assumptions in this respect, as explained by Krugman [*1998*]. First, an (implicit) government guarantee reduces monitoring efforts by depositors, a notion that is supported empirically rather than rejected by the study of Demirgüc-Kunt and Detragiache [*1998*]. Second, weak prudence regulation leaves room for imprudent lending. A third aspect is that certain financial institutions, that is, finance companies, were treated differently to banks, thus creating different incentives. Finance companies made up about 20 per

TABLE 2
SUMMARY OF INFORMATION FROM RISK-RETURN MEASURES ON ASIAN CRISIS COUNTRIES

In this paper	Measures	Indonesia	Korea	Malaysia	Thailand
Figure 6	Change of net interest margin and credit expansion	+	0	–	0
Figure 7	Risk provision	–	–	+	+
Figure 8	Bank rating	–	–	+	+
Signs of crisis		yes	yes	?	no

Note: + indicates reasonable risk-return policy etc.

cent of all financial institutions' assets – compared to more than 60 per cent for (commercial) banks – and experienced a strong increase in market share during the 1990s [*see Menkhoff, 1998: 226*].[6]

Analysing the situation applying to deposit insurance is more complicated than is often assumed. Until August 1997, there was neither a government guarantee nor a deposit insurance scheme. Although in the past the central bank had helped depositors, it effectively did not insure deposits fully in the recent crisis. Why, then, should depositors have expected to be bailed-out? If they had formed rational expectations, they would have realised that in the recent crisis there would be no complete insurance. The regulations are quite complicated in detail but can be summarised as follows: stakeholders of bankrupt financial institutions do not receive anything, whereas depositors often keep the principal amount of their investment but have to compromise on the interest or a (longer) holding period.[7] The differences between depositors follow the logic that the professional participants have to accept a higher burden, whereas only the truly small retail deposits are completely insured.

This practice by Thailand's authorities is in line with the modern understanding of how deposit insurance should be applied. It has to be emphasised that it is simply wrong to assume that deposits would have been fully insured in Thailand, and it is also implausible to assume that this could have been expected.

The case is different for prudential regulation. The verdict, for example, of the World Bank [*1997a*] is very clear, and it enumerates the failures. A widely cited example may serve to demonstrate the severity of the problem: first, a loan was only classified as non-performing if no payment was made for a whole 12-month period (compared to the three-month international standard). Second, it seems to have been not uncommon practice to

renegotiate these loans by adding interest payments to the principal shortly before finalising the 12-month period, thus effectively circumventing the regulation. Third, if a loan was non-performing, accrued interest was still calculated as if it had been received, which bolstered the capital basis (by fictive earnings). Fourth, loan loss provisions for accepted non-performing loans seem to have been insufficient.

Although these practices and their implications may not have been easily recognisable for outsiders, the bankruptcy case involving the Bangkok Bank of Commerce (BBC) in May 1996 disclosed the risks involved [e.g., *Phongpaichit and Baker, 1998: 105ff.*]. Not only was the bank technically bankrupt, but politicians were also heavily involved in exploiting to their personal profit advantage; what is more, the central bank kept quiet despite knowing better. In the end, the head of the Bank of Thailand, a deputy finance minister and others had to leave office, taking with them a lot of the trust in Thailand's financial system.

The third aspect besides deposit insurance and prudential regulation refers to the situation of finance companies. As these financial institutions were not allowed to open branch networks, they could not directly compete with (commercial) banks but had to specialise in certain ways. In the savings sector, they offered promissory notes for relatively large amounts of money that not only offered higher yields than small savings deposits, but also higher yields than equally large time deposits at banks. There are three possible reasons for this interest rate difference: first, finance companies could not offer identical convenience. Second, they were less known and less visible to the general public. Third, informed savers may have realised that the risk was higher, for example, due to the perceptibly lower equity capital regulation. In any case, finance companies were thus 'forced' to engage in riskier business. Consumer credits, margin loans and real estate finance were among their preferred fields. The need to accept higher risks may have been amplified by the chance that some finance companies might be upgraded to banks.

Summing up the risk-return policy of banks in Thailand, the country does not really look like a case of general intentional moral hazard behaviour in banking (although the BBC case could serve as an example). This still leaves open the possibility that, according to their old standards, banks operated in a prudent manner, i.e. that they did not misbehave deliberately. However, one side effect of a changing environment is that the factors that previously accounted for market success may turn into wrong strategies. This idea will be developed further in the next section.

V. CONSEQUENCES OF INTERNAL AND EXTERNAL FINANCIAL LIBERALISATION

Thailand's financial markets changed markedly during the early 1990s. The driving forces behind this move towards liberalisation are similar to the efforts of other countries: the insight into the power and efficiency of functioning markets, the wish to 'upgrade' to international standards and, finally, the need to open up in the financial sector in line with the gains from free trade. The changes in Thailand's financial markets during the 1990s can be summarised in one phrase: a rapid liberalisation process. Although this process consists of numerous measures that are documented, for example, by the Bank of Thailand [*1998a*], three major elements can be singled out:

- In 1992, the three-year process of interest rate liberalisation was completed. Interest rates were no longer decreed by the Bank of Thailand but were determined by national and international market forces, with some influence from the central bank.

- Thailand allowed new competitors to enter the banking market. No new banking licenses had been issued for decades, but 15 additional banks entered the market in 1993 when the Bangkok International Banking Facilities (BIBF) was implemented. A second element is that the upgrading of some finance companies into full banks was announced. There is evidence that productivity of banks increased significantly during the earlier years of liberalisation [*Leightner and Lovell, 1998*].

- The capital account was liberalised in significant steps during the early 1990s. One of these measures was the introduction of the BIBF.

These three major reforms transformed the character of banking in Thailand to the extent that one could say the entire system has changed. To oversimplify the argument, the former system of relatively exclusive relationship banking has been transformed within only a few years into a system of market-oriented competitive banking. Although the latter seems to work as a reference standard and thus looks almost natural, it is not, as section II of this article has demonstrated. The key conclusion to be drawn here is that because of this rapid change in the environment, the financial institutions had severe problems adapting to the new situation.

In the following sub-sections, the new environment is described in terms of increasing risk and decreasing risk awareness. The first two sub-sections, discuss why market and credit risk have almost inevitably increased due to liberalisation. This, of course, does not mean that liberalisation *per se* brings

disadvantages, but there must be acceptance that the advantages are accompanied by negative side effects if proper market institutions are not established. The latter development may take some time, however. In the two following sub-sections, the effect of liberalisation reflects the way in which risk has been recognised: risk awareness was decreasing.

Increasing Market Risks Due to Liberalisation

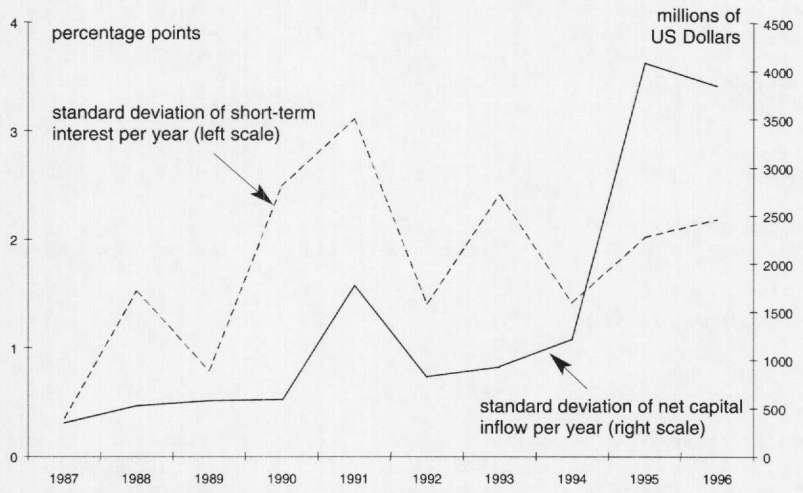
Financial liberalisation can have risk-increasing as well as risk-decreasing effects from a theoretical *ex ante* point of view. With regard to financial institutions, it is quite obvious that the nature of the business changes, and with it the kind of risk involved. In an environment of financial repression in which the state dictates prices and possibly also quantities, or the kind of quantities, financial institutions also run risks. These risks can be related to the incentives set by the state, such as changes in administered prices or in pursued credit steering, etc. As in a market environment, the financial institutions have incentives to control the quality of their borrowers; however, instead of a market risk they run a kind of state risk, which they must learn to manage.

Thus the market risk or at least the extent of the market risk which Thailand's banks faced from the early 1990s onwards took on a new quality. This is obvious in the case of interest rates, which were previously administered. Although 'administered' is different from 'fixed', it seems to be common practice for bureaucrats to adjust nominal interest rates less than markets. This still leaves the possibility that real interest rates are more stable in a market environment. However, experience does not support such a supposition. The reason for the more volatile prices that occur in a free market as opposed to under administered regimes is probably that markets permanently adjust to new information, whereas 'fixed' prices contain less information. In the last instance, however, there is no theoretical determinacy; it is a question of empirical realisation.

Another aspect in addition to the change from an administration- to a market-run system is the influence from abroad resulting from external financial liberalisation. Again, in theory more or less volatility may be expected, depending on the circumstances. In general, liberalisation works in the same way as increase in market size and may thus dampen volatility. However, international markets do not seem to be perfectly integrated, with the result that certain risks may increase, such as shocks from exchange rate shifts or from volatile, voluminous capital flows. Furthermore, internationalisation fosters specialisation and may thus increase the sensitivity of the economy towards industry-specific shocks.

To estimate these influences, several measures of market risk are compared over a ten year period. Besides the volatility of short-term interest

FIGURE 9
MEASURES OF MARKET RISK IN THAILAND 1987–96



Notes: Monthly short-term interest rates (= IFS line 60b); quarterly capital inflow (= IFS lines 78 bed + 78 bjd+78 bid).

rates, which are the most relevant factor due to the financing structure in Thailand, foreign influences as described above may be identified in capital inflows. The results are given in Figure 9. In the case of Thailand, it does not seem implausible to assume that the advantages of liberalisation are accompanied by increased market risk.

Increasing Credit Risks Due to Liberalisation

Whereas the increase in market risk from liberalisation is to be expected, the increase in credit risk is not so obvious. In terms of the quality of borrowers, it might not be possible to identify a direct link. However, this is not the only relationship between liberalisation and credit risk. The impact of liberalisation can also be channelled through a change in the market structure of the banking business. The main impact of liberalisation, which was intended both in Thailand and elsewhere, is to increase competition [*see also Hellwig, 1999*]. What has changed in this respect?

- First, more suppliers are chasing the same amount and kind of projects than before. In an effort to keep market share or simply to enter the market, one can expect projects that would have been rejected before to

TABLE 3
SOURCES OF NEW EXTERNAL FUNDS FOR PRIVATE NON-FINANCIAL ENTERPRISES IN THE YEARS 1990–96 (IN BN. BATH)

Source of funds	1990	1991	1992	1993	1994	1995	1996
bank credit of local banks	351.1	265.9	333.8	424.1	561.7	604.5	535.2
bank credit of foreign banks	12.4	22.1	14.4	67.4	205.9	180.6	62.9
private domestic issues: stock	20 (e)	17.7 (e)	55.7	55.1	137.2	129.6	117.9
private domestic issues: debentures	5 (e)	3.5 (e)	8.8	16.4	59.0	52.4	53.8
new securities issued abroad	10 (e)	10 (e)	10 (e)	31.2	54.2	35.0	86.2
finance company credit	65.9	67.9	112.2	134.8	189.8	220.7	139.6
total volume	464.4	387.1	534.9	728.8	1207.8	1222.8	995.6
share of local banks	75.6 %	68.7%	62.4%	58.2%	46.5%	49.4%	53.8%

Notes: Total bank credits are claims on private sector by commercial banks (=IFS line 22d); bank credit is allocated to local and foreign banks respectively according to their respective share of advances and investments (= Bank of Thailand Monthly Bulletin Table 12; local bank volumereduced by volume of personal consumption loans (Table 13)); data for private domestic issues are from Bank of Thailand Monthly Bulletin Table 24 (e = estimate according to other sources); new securities issued abroad are from Bank of Thailand Monthly Bulletin Table 24 (=line 17; e are rough estimation); finance company credit is from IFS line 42d, reduced by 30 % for personal consumption and banking and other financial business (Bank of Thailand 1998a, Table 2).

be financed now. However, this requires a greater pool of funds. As long as credit expansion is under control, the increased competition may result in a decreased net interest margin, which was not the case in Thailand (see, for example, Figure 6).

- Second, comparatively inexperienced suppliers are entering the market. At least in the beginning, they may have to pay for their learning process, for example, by underpricing risk. This effect is limited to new entrants and to their learning period.

- Third, new entrants shake up the long-lasting relationships between banks and customers. Today, relationships cannot be expected to be for an indefinite period, as in the old regime; customers may change their

bank. This creates two problems. On the one hand, if a bank does not adapt its loan approval technology to take this into account it is ignoring the fact that its knowledge and, what is more important, its control have weakened. On the other hand, borrowers now have a stronger incentive to demonstrate moral hazard behaviour, as their market access is not restricted to a single bank. If they do not at first succeed, they can now try again more easily with a different lender.

- Fourth, disintermediation dilutes credit quality. Domestic capital markets have been reformed, and this expansion worked not least because of foreign investments in the stock market. The direct tapping of foreign sources via debentures issued abroad was also important. These new opportunities, however, are open only to established enterprises with good standing as borrowers. This implies that the quality of the remaining bank customers is decreasing.

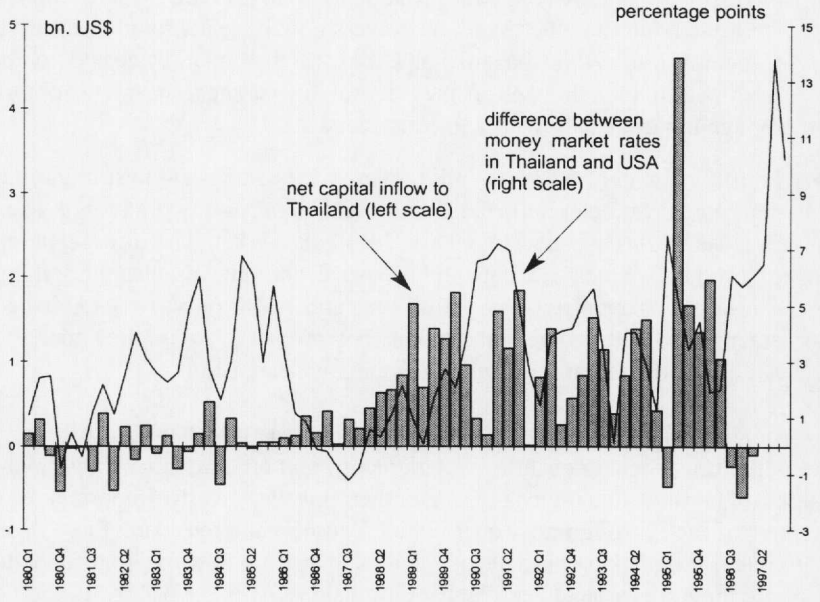
In summary, while one might expect the first two channels to be less important, weakening customer relationships and credit quality dilution are signs of a fundamental change. Whether this was really important is a matter of fact, a rough answer to which can be gathered from Table 3. In summary, the market share of local banks providing new external funds to private enterprises has been clearly diminishing over the 1990s, dropping from 75 per cent in 1990 to about 50 per cent in 1994–96. Thus local banks were losing one third of their 'potential' new credit business to competitors, which marks a landslide change. Moreover, declining credit quality may also have to be added to this.

Decreasing Risk Awareness Due to 'Easy Money'

The preceding section already mentioned that the increase in credit risk becomes much more important if financial liberalisation is accompanied by an easy stance on monetary policy. In this respect, Thailand's institutions, and in particular the central bank, the Bank of Thailand, have gained a high reputation for their conservative approach. The long-run inflation record of Thailand is remarkable in the international context and even more so in comparison to developing countries. The average annual inflation measured via the GDP deflator was 5.0 per cent during the period from 1985 – 1995 and was not accelerating. This puts Thailand comfortably among the high achievers: it was ranked number 7 out of 47 middle-income economies for low inflation [*World Bank, 1997b: Table 2*]. Thus Thailand cannot serve as an example of a deliberate 'easy money' policy.

This low inflation contrasts markedly with the relatively fast credit growth mentioned above; indeed, the gap between monetary expansion and

FIGURE 10
INTEREST RATE DIFFERENTIAL AND NET CAPITAL INFLOW



Notes: Money market rate from IFS (=line 60b); capital inflow from IFS (=line 78cbd = overall balance).

inflation was not completely filled by real growth. The gap could have two origins. On the one hand there is the – basically intentional – increase in monetary aggregates in relation to real figures, such as GDP, in as far as it reflects the increasing depth of the financial structure [*Levine, 1997*]. On the other hand, there is the negative development represented by an asset (price) bubble [*Bank of Thailand, 1998b*]. The latter is a matter for concern that can explain the parallel occurrence of heavy monetary expansion and low inflation.

The reason for this monetary expansion is not to be found in a deliberate policy stance by the Bank of Thailand. On the contrary, it becomes quite clear from official statements that the aim of monetary policy was generally directed towards restricting demand via high interest rates. The banks would not have been able to counteract this direction through their own sources of credit extension. Rather, the reason that the central bank could not achieve its goal was the influence of the liberalised capital account. For several years, monetary policy was severely handicapped by the 'impossible

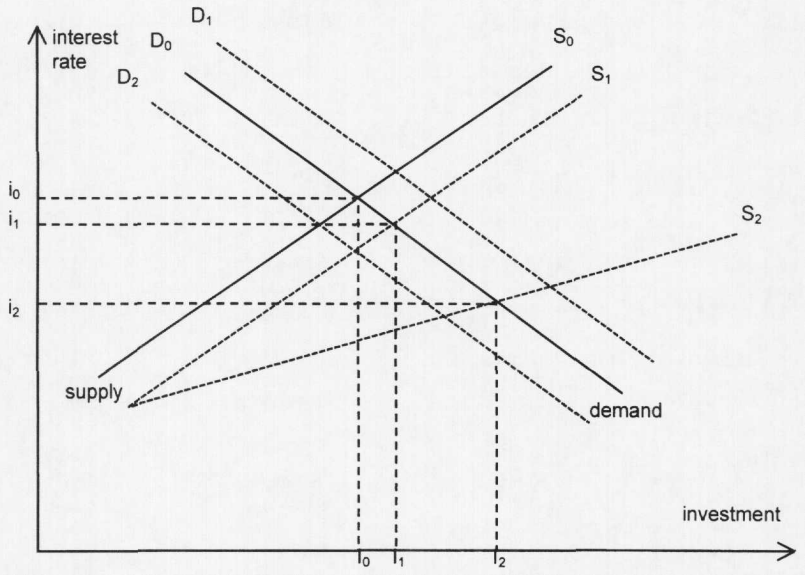
TABLE 4
REGRESSIONS ON CHANGES IN NET CAPITAL INFLOW

Variable	Period 1980:4–1986:4	1980:4–1996:2	1987:1–1996:2
Const.	–0.012478 [–0.244940] (0.8091)	0.052695** [2.575872] (0.0126)	0.088546*** [3.747228] (0.0007)
Interest rate differential	0.032017* [0.951192] (0.3535)	–0.075429 [–1.684739] (0.0975)	–0.114969 [–1.550870] (0.1308)
Interest rate differential (lag 1)	–0.017720 [–0.265055] (0.7938)	0.260346*** [2.968624] (0.0044)	0.403175*** [3.155255] (0.0035)
Interest rate differential (lag 2)	–0.048887 [–0.708427] (0.4873)	–0.326486*** [–3.896947] (0.0003)	–0.498141*** [–3.892411] (0.0005)
Interest rate differential (lag 3)	0.042576 [0.864461] (0.3981)	0.125767*** [2.814863] (0.0067)	0.194709** [2.598295] (0.0140)
Moving average term (first order)	–1.577728*** [–4.795993] (0.0001)	–1.205239*** [–16.56708] (0.0000)	–1.399440*** [–13.10712] (0.0000)
Number	25	63	38
R^2	0.823491	0.716467	0.816264
Durbin-Watson	3.089849	2.223003	2.304169

Notes: Money market rate from IFS (=line 60b); capital inflow from IFS (=line 78cbd = overall balance); t-values in squared brackets, significance in parenthesis, stars refer to level of significance, *: 10 per cent, **: 5 per cent, ***: 1 per cent.

trinity': after having voted for a liberalised capital account and still aiming for a quasi-fixed exchange rate (versus the US dollar), there was only very limited room for an internally oriented monetary policy. Superficially, the capital inflow seemed to free monetary policy for demand management but, in effect, the policy problem was one of too great an inflow, and thus appreciation pressure on the exchange rate. High interest rates seemed to help cool down the economy but attracted even more foreign funds (see Figure 10). A regression for the period of large net capital imports, i.e. from the first quarter of 1987 to the second quarter of 1996, demonstrates a lagging, significant relation between a higher interest rate advantage compared to the USA and larger capital inflows (see Table 4). The relationship is, however, more complex as the specification in Table 4 shows and includes a strong element of inertia in capital flows.

FIGURE 11
DEMAND AND SUPPLY SHOCKS IN THE CAPITAL MARKET



The major problem with these inflows is not the inflow itself, which on its own would lead to higher capital supply and thus potentially to overinvestment. The true problem is that the price mechanism was put out of force – the foreign funds came in at interest rates several percentage points below the former market-clearing price for Thailand's internal capital market. In combination with a fixed exchange rate, this made money available readily – with supply being virtually totally price-elastic – and cheaply, as there seemed to be no currency premium but only a slight country premium to pay. Effectively, Thailand was in an 'easy money' situation, although the central bank did not intend it and although no (goods) inflation was recognisable.

The shock of this kind of liberalisation can be demonstrated in the generic Figure 11, which represents a highly simplified capital market in Thailand. Market opening basically causes an enlarged supply of capital (in the figure a shift from S_0 to S_1). Demand may also increase due to improved investment opportunities, that is shifting D_0 to D_1. However, it is also possible that liberalisation has no volume effect but only improves diversification. In marginal cases, this could lead to a shift from D_0 to D_2, implying an identical investment volume but a lower interest rate. Far more important than any slight shift in the demand curve, however, is the radical

downward movement of the supply curve when opening occurs at an extremely high domestic interest rate without any exchange rate risk (the limited country risk is not taken into account). The new 'equilibrium' $i_2 - I_2$ is characterised by much lower interest rates and much higher real investment. The increase in investments is due solely to capital inflows: these projects may be profitable at the now lowered interest rates, but are not necessarily so at the 'true' domestic rates.

In this sense, capital account liberalisation decreases awareness of the market risk involved when investments are financed in foreign currency, a practice that became increasingly popular in the 1990s. From the viewpoint of individual banks, it seemed rational to use the cheap funds and to reduce requirements on the profitability of projects, in particular as intensifying competition provoked this policy.[8] From a macroeconomic point of view, one has to question the rationality as the interest rate was 'subsidised' by an artificially stable exchange rate.

Decreasing Risk Awareness Due to International Benchmarking

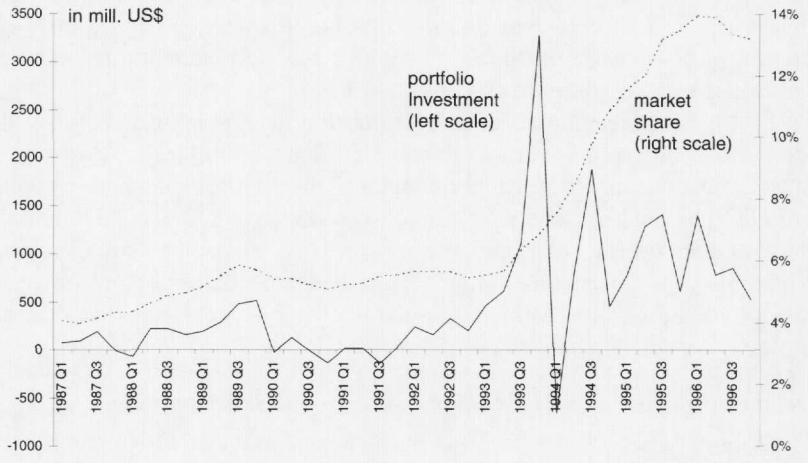
The split between the risk perception of a bank and the effective risk run by the economy was not only caused by easy money. The international liberalisation widened the horizon of many actors and introduced internationally competitive financial institutions into their 'world of thought'. The interesting point is that this internationalisation may not have helped Thai financial institutions to cope with the new environment. Instead, these institutions may have felt reinforced in their behaviour from the favourable feedback they received from the 'international benchmark'. At least four aspects of these unfortunate feedback channels merit examination:

- Quite obvious confirmation of Thai financial institutions' strategy must have come from the fact that foreign banks were very eager to deposit money with them, as the massive capital inflow shows. This inflow implies that professional foreign bankers saw profitable investment opportunities, thus rejecting the notion of overinvestment, asset inflation and financial fragility. An empirical indicator would be the increase in international bank lending to Thailand [*IMF, 1998: Table 2.4*].

- Related behaviour signalling relatively attractive investment opportunities is to be seen in the high portfolio investments by foreigners, as most of these channel their funds via professional fund managers or are advised by professional analysts.

- A third indicator of a positive international evaluation of the Thai market is the high and continuing interest of international banks in increasing

FIGURE 12
THAILAND'S ATTRACTIVENESS FOR INTERNATIONAL FINANCIAL INSTITUTIONS (1987–96)



Notes: Portfolio investment (=IFS line 78bgd); market share of foreign banks in Thailand (= Bank of Thailand Monthly Bulletin Table 12).

their presence in Thailand. During the process of cautious liberalisation of foreign access, the market share of foreign banks increased markedly.

- Finally, international rating agencies and, closely related to them, institutional investors expressed high confidence in the solidity of Thailand's economy, as the country rating and the country risk premium improved until 1996 and were not really damaged before the crisis [*IMF, 1998: 53*].

Empirical evidence for the second and third of the above-mentioned four aspects is provided in Figure 12.

VI. CONCLUSIONS

The basic issue addressed in this paper is whether Thailand suffered from bad banking in the sense of deliberately risky loan excesses and intentional moral hazard behaviour. The result is clear: the evidence available does not support such a proposition. On the contrary, rather the opposite is true: in terms of efficient capital allocation, operational efficiency or indirect

indicators of moral hazard, Thailand is very reasonable in comparison to other countries' experience. This result has important consequences for the course of economic policy to be adopted in dealing with the crisis.

To exaggerate the argument somewhat, trusting the bad banking proposition would require the drastic reform of Thailand's corrupt and inefficient financial institutions, thus healing the origin of the present crisis. If, however, the true problem is not bad banking but that reasonable institutions with governance structures that basically worked nevertheless failed badly, the framework has to be modified and the reform carried out should be more moderate. To overstate the point, the deep involvement of professionally managed and professionally regulated international financial institutions in the crisis indicates that the case is not specific to Thai institutions but to financial institutions in general. Above and beyond this, it is also a crisis of macroeconomic management, as can be recognised from the overvalued currency.[9]

It would, of course, be misleading to end the story here, as the crash reveals severe shortcomings in the financial sector. These shortcomings can be understood as the consequences of a liberalisation process that was probably performed too fast, and in the wrong order (see in detail Vajragupta and Vichyanond [*1998*]). Liberalisation, as discussed in section V, changed the rules of the game without offering appropriate guidance to financial markets. It increased new kinds of credit risks and market risks. So, formerly good banking practices transformed into inadequate banking. Negative effects were magnified by easy money and by the fact that the growing confidence in economic success was shared by international institutions. A side effect of this argument is that there have been elements of moral hazard and corruption in Thailand, too. However, finance companies only accounted for 20 per cent of the market, and the BBC scandal was not an example of general practice.

The interpretation suggested, that is, a system change leading to inadequate banking, cannot be based on compelling evidence. One may even ask, whether macro indicators are appropriate to detect perverse microeconomic incentives. The more useful data of banks' credit policies are not available, however. The purpose is thus to cut across anecdotal evidence and to provide a more systematic picture. It is up to later research trying to collect micro-data and to evaluate them.

The approach taken appears to have the major advantage that it does not require us to neglect the long-standing history of good banking in Thailand. If it is not adopted, analysts run the danger of overshooting their target and to concentrate one-sidedly on the failures made. The more balanced approach has, however, an unpleasant implication: there is no clear policy prescription on what to do in the longer term. In particular, implementing

isolated measures that make the market work better in some way are useful but may not be sufficient [e.g., *Moretti, 1998*]. More detailed work on the transformation of institutions and the sequencing of reforms may be necessary [e.g., *Johnston et al., 1997*].

final version received December 1999

NOTES

1. Much of the debate is confusing in so far as different benchmarks of success are implicitly applied: Thailand's TFP growth is comparatively good in comparison to all developing countries; it is more or less average for East Asia and comparatively weak in relation to industrialised countries (see also the accounts taken in Chen [*1997*] and Felipe [*1999*]).
2. The regression in Figure1 seems to be heavily dependent on two high income countries, that is, Hong Kong and Singapore. However, the relation has systematic character beyond the country sample covered. Moreover, taking the mean instead of the regression as a benchmark would not change the result. This also applies to further figures.
3. In a more recent paper by Demetriades *et al.* [*1999*], a largely extended and updated work with an approach being similar to Demetriades *et al.* [*1998*], the influence from financial development on capital productivity in Thailand has a statistically significant positive sign.
4. Also in comparison to commercial banks from OECD countries the ratio of net provisions to total assets was roughly on average for Thailand's commercial banks in 1996 [*OECD, 1998: Table 4*].
5. Comparing again Thailand's commercial banks record in 1996 with banks from OECD countries shows above average profitability for Thailand [*OECD, 1998: Table 3*].
6. The ratio of assets of finance companies to commercial banks increased from 1:5 to 1:3. The remaining share is mainly held by specialised state financial institutions.
7. This policy decreased the net present value of large deposits in the banking crisis of the early 1980s often to a value of roughly 70 per cent. The same happened in the recent crisis.
8. The interest rate advantage was about four percentage points for the US dollar (see Figure 10) and sometimes even more for the Yen.
9. This refers to the course of the policy, as, for example, emphasised by Corbett and Vines [*1999*], and to the administrative and political aspects of macromanagement, as addressed by Lauridsen [*1998*].

REFERENCES

Alba, Pedro, Claessens, Stijn and Simeon Djankov, 1998, 'Thailand's Corporate Financing and Governance Structures', *World Bank Policy Research Working Paper*, No.2003, Nov.

Bank of Thailand, 1998a, *Financial Institutions and Markets in Thailand*, Bangkok.

Bank of Thailand, 1998b, 'Asset Price Inflation: Developments and Policy Issues', *Bank of Thailand Economic Focus*, Vol.2, No.1, Jan.–March.

Bank of Thailand, 1998c, 'Focus on the Thai Crisis', *Bank of Thailand Economic Focus*, Vol.2, No.2, April–June.

BIS (Bank for International Settlements), 1998, *68th Annual Report*, Basle.

Chen, Edward K.Y., 1997, 'The Total Factor Productivity Debate: Determinants of Economic Growth in East Asia', *Asia Pacific Economic Literature*, Vol.11, No.1, pp.18–37.

Christensen, Scott, Dollar, David, Siamwalla, Ammar and Pakorn Vichyanond, 1993, *Thailand: The Institutional and Political Underpinnings of Growth*; The Lessons of East Asia, Washington, DC: World Bank.

Collins, Susan M. and Barry P. Bosworth, 1996, 'Economic Growth in East Asia: Accumulation versus Assimilation', *Brookings Papers on Economic Activity*, No.2, pp.135–203.

Corbett, Jenny and David Vines, 1999, 'The Asian Crisis: Lessons from the Collapse of Financial Systems, Exchange Rates, and Macroeconomic Policy', in Richard Agenor, Marcus Miller, David Vines and Axel Weber (eds.), *The Asian Financial Crisis: Causes, Contagion, and Consequences*, Cambridge: Cambridge University Press.

Demetriades, Panicos O., Devereux, Michael P. and Kul B. Luintel, 1998, 'Productivity and Financial Sector Policies: Evidence from South East Asia', *Journal of Economic Behavior & Organization*, Vol.35, pp.61–82.

Demetriades, Panicos O., Arestis, Philip and Bassam Fattouh, 1999, 'Financial Policies and the Aggregate Productivity of the Capital Stock: Evidence from Developed and Developing Economies', mimeo.

Demirgüc-Kunt, Asli and Enrica Detragiache, 1998, 'The Determinants of Banking Crises in Developing and Developed Countries', *IMF Staff Papers*, Vol.45, No.1, pp.81–109.

Felipe, Jesus, 1999, 'Total Factor Productivity Growth in East Asia: A Critical Survey', *The Journal of Development Studies*, Vol.35, No.4, pp.1–41.

Harberger, Arnold C., 1998, 'A Vision of the Growth Process', *American Economic Review*, Vol.88, No.1, pp.1–32.

Hellwig, Martin F., 1999, 'Banking and Finance at the End of the Twentieth Century', *Scandinavian Journal of Economics*, forthcoming.

IMF (International Monetary Fund), 1996, *International Capital Markets*, Sept., Washington, DC.

IMF, 1997, *World Economic Outlook, Interim Assessment*, Dec., Washington, DC.

IMF, 1998, *International Capital Markets*, Sept., Washington, DC.

Jansen, Karel, 1997, *External Finance in Thailand's Development: An Interpretation of Thailand's Growth Boom*, London: Macmillan.

Johnston, R. Barry, Darbar, Salim M. and Claudia Echeverria, 1997, 'Sequencing Capital Account Liberalization: Lessons from the Experiences in Chile, Indonesia, Korea, and Thailand', *IMF Working Paper*, WP/97/157.

Karels, Gordon V. and Christine A. McClatchey, 1999, 'Deposit Insurance and Risk-taking Behavior in the Credit Union Industry', *Journal of Banking & Finance*, Vol.23, No.1, pp.105–34.

Kim, Jong-Il and Lawrence J. Lau, 1996, 'The Sources of Asian Pacific Economic Growth', *Canadian Journal of Economics*, Vol.29, S448–S454.

Klenow, Peter J. and Andrés Rodríguez-Clare, 1997, 'The Neoclassical Revival in Growth Economics: Has It Gone Too Far?', in Ben Bernanke and Julio Rotemberg (eds.), *NBER Macroeconomics Annual*, Cambridge, MA: MIT Press, pp.73–114.

Krugman, Paul, 1994, 'The Myth of Asia's Miracle', *Foreign Affairs*, Vol.73, No.6, pp.62–78.

Krugman, Paul, 1998, *What Happened to Asia?*, http://web.mit.edu/krugman/www/ disinter.html.

Lauridsen, Laurids S., 1998, 'The Financial Crisis in Thailand: Causes, Conduct and Consequences?', *World Development*, Vol.26, No.8, pp.1575–91.

Leightner, Jonathan E. and C.A. Knox Lovell, 1998, 'The Impact of Financial Liberalization on the Performance of Thai Banks', *Journal of Economics and Business*, Vol.50, No.2, pp.115–31.

Levine, Ross, 1997, 'Financial Development and Economic Growth: Views and Agenda', *Journal of Economic Literature*, Vol.35, No.2, pp.688–726.

Levine, Ross and Sara Zervos, 1998, 'Stock Markets, Banks, and Economic Growth', *American Economic Review*, Vol.88, No.3, pp.537–58.

Menkhoff, Lukas, 1998, 'Thailand's Financial Institutions and their Current Crisis', in Lukas Menkhoff and Beate Reszat (eds.), *Asian Financial Markets*, Baden-Baden: Nomos, pp.223–42.

Moretti, Marina, 1998, 'A Strategy for the Revival of Thailand´s Financial Sector', in Johanna Witte and Stefan Koeberle (eds.), *Competitiveness and Sustainable Economic Recovery in Thailand*, Vol.II, Bangkok: NESDB and World Bank, pp.73–92.

OECD, 1998, *Financial Market Trends*, No.71, Nov., Paris.

Phongpaichit, Pasuk and Chris Baker, 1998, *Thailand´s Boom and Bust*, Chiang Mai: Silkworm

Books.
Pomerleano, Michael, 1998, 'The East Asia Crisis and Corporate Finance, The Untold Micro Story', *World Bank Policy Research Working Paper*, No.1990, Oct.
Radelet, Steven and Jeffrey Sachs, 1998, 'The East Asian Financial Crisis: Diagnosis, Remedies, Prospects', *Brookings Papers on Economic Activity*, No.1, pp.1–90.
Sarel, Michael, 1997, 'Growth and Productivity in ASEAN Countries', *IMF Working Paper*, WP/97/07.
Siamwalla, Ammar and Orapin Sobchokchai, 1998, 'Responding to the Thai Economic Crisis', *UNDP Working Paper*, Bangkok, Oct.
Stiglitz, Joseph E., 1972, 'Some Aspects of the Pure Theory of Corporate Finance: Bankruptcies and Takeovers', *Bell Journal of Economics*, Vol.3, pp.458–82.
Tinakorn, Pranee and Chalongphob Sussangkarn, 1998, 'Total Tactor Productivity Growth in Thailand: 1980 – 1995', in: Johanna Witte and Stefan Koeberle (eds.), *Competitiveness and Sustainable Economic Recovery in Thailand*, Vol.II, Bangkok: NESDB and World Bank, pp.377–413.
Vajragupta, Yos and Pakorn Vichyanond, 1998, *Thailand's Financial Evolution and the 1997 Crisis*; Thailand Development Research Institute, processed, Oct.
Warr, Peter G. and Bhanupong Nidhiprabha, 1996, *Thailand's Macroeconomic Miracle, Stable Adjustment and Sustained Growth*; World Bank Comparative Macroeconomic Studies, Kuala Lumpur: Oxford University Press.
World Bank, 1993, *The East Asian Miracle*, Oxford: Oxford University Press.
World Bank, 1997a, 'Background information regarding a Loan for Finance Companies Restructuring', unpublished.
World Bank, 1997b, *World Development Report 1997*, Oxford : Oxford University Press.
World Bank, 1998, *East Asia – The Road to Recovery*, Washington, DC.
Young, Alwyn, 1994, 'Lessons from the East Asian NICs: A Contrarian View', *European Economic Review*, Vol.38, pp.964–73.
Young, Alwyn, 1995, 'The Tyranny of Numbers: Confronting the Statistical Realities of the East Asian Growth Experience', *Quarterly Journal of Economics*, Vol.110, No.3, pp.641–80.