

The background of the slide is a grayscale image of financial data. It features several overlapping line graphs and bar charts. One prominent chart in the center-left has a y-axis labeled '30 year yield' and an x-axis with the year '1993'. Other charts show various data points and trends, with some axes labeled with numbers like '10000', '12000', and '14000'. The overall aesthetic is that of a busy financial market or a data analysis dashboard.

# Macroeconomic Management in Thailand

## The Policy-induced Crisis

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## Scope and Methodology of Study

Macroeconomic management includes two important areas: structural policies and cyclical policies. Structural policies influence the potential growth rate of an economy.<sup>1</sup> They include the type of economic system employed to mobilize resources—whether bank-centered, for instance, or stock-market-centered. Cyclical policies are aimed at influencing actual growth, usually in order to bring it in line with the potential growth rate. They include the interplay of monetary, exchange rate, and fiscal policies. This study incorporates the latest findings in economic theory and applied economics, which stress a special role for monetary and, in particular, credit policies. Key issues that are crucial for macroeconomic management, but are usually neglected, include the form of government intervention, type of economic system (classified as bank- versus capital-market-based resource allocation), and nature of the credit markets. (See Appendix 1.)

This study analyzes the development of the 1997 financial crisis and offers policy responses against the background of the precrisis economic structure and the macroeconomic management policies employed in Thailand. (See Appendix 2.) Much of the postcrisis analysis, including the program imposed by the International Monetary Fund (IMF) on Thailand, is based on an understanding of economic systems that are more similar to the UK or US model than to the bank-centered model that has been operative in much of postwar Asia, particularly in Thailand.

The following section discusses in greater detail the policy mix since the 1980s. It also examines and evaluates the policy mix during the 1997 crisis. The final section is devoted to detailed policy recommendations for macroeconomic management, covering both countercyclical recovery policies and structural and regulatory policy changes.

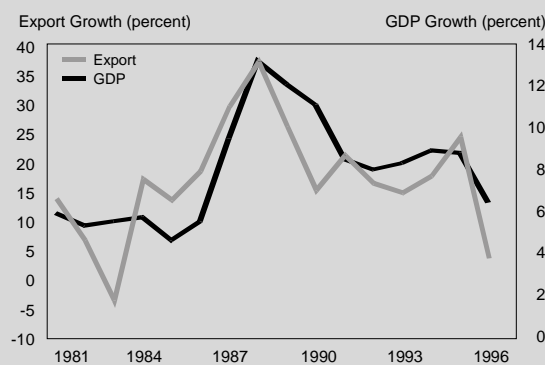
## Macroeconomic Management Since the 1980s

### Macroeconomic Overview

After the brief but sharp recession and balance-of-payments crisis in 1983/84, economic growth picked up again in the second half of the 1980s, as reflected in the rising proportion of exports and imports to gross domestic product (GDP). Real GDP growth accelerated from 5.5 percent in 1986 to 9.5 percent in 1987 and further to 13.3 percent in 1988. It then fell marginally, remaining at double-digit rates in 1989 and 1990, and maintaining still-high levels of growth of close to 9 percent in 1991–1995. Growth then slowed to 6.4 percent in 1996, before contracting in 1997 (Figure 1).

Exports grew at an average annual rate of 25.1 percent in 1986–1990 and 15.7 percent in 1991–1996. Inflationary pressures remained in check, with annual consumer price inflation averaging 3.9 percent in 1986–1990 and 5 percent in 1991–1996. Economic indicators were particularly impressive until 1994. In 1992–1994, exports rose at a rate of more than 14 percent, the trade deficit stayed at 7 percent of GDP, the current account deficit at 5 percent, and inflation at below 5 percent. Domestic savings averaged 32.5 percent in 1986–1996. The high savings rate was enhanced by Government saving, since the fiscal bal-

Figure 1: Real GDP and Export Growth



Source: Bank of Thailand.

ance turned into surplus in 1988 and continued to do so every year until 1996, with an average surplus of 3 percent of GDP, making up for the decline in household savings in the 1990s.

Despite such an array of impressive macroeconomic data, however, not all was well, especially after 1994. The current account had switched from modest surplus in 1986 to deficit in 1987. In 1990, it peaked at 8.5 percent of GDP, plunged to below 6 percent in 1992–1994, and rose to 8 percent in 1995–1996. Moreover, the current account deficit had increasingly been financed by private borrowing from overseas. Private debt almost tripled from \$6.1 billion in 1987 to \$17.8 billion in 1990. By 1993, it had more than doubled to \$37.9 billion. It doubled again, soaring to \$73 billion in 1996. Clearly, the most worrisome aspect of the buildup of foreign debt was its term structure; the share of short-term debt rose substantially in the 1990s. The other indicator that resources might not have been efficiently allocated was the surge in asset prices, as witnessed in the real estate market.

In 1994, the yuan was devalued. In 1995–1996, from a historic peak of ¥79.75 on 19 April 1995, the yen depreciated by more than 60 percent. Since the baht remained pegged to the US dollar, it appreciated by 60 percent against the yen. Partly as a consequence of the currency depreciation and increased competitiveness of the People's Republic of China (PRC) and Japan, which are among Thailand's most important trading partners, Thai exports suffered significantly.

When export growth slowed from an impressive 23.6 percent in 1995 to virtually zero in 1996, large capital outflows, combined with massive speculative attacks on the currency, led to the flotation of the baht on 2 July 1997, and the beginning of a deep recession. High interest rates aimed at defending the baht exacerbated the collapse of the credit-driven real estate boom, which has produced substantial amounts of bad debt that are now crippling the banking system. Fifty-six finance companies were closed,

four banks de facto nationalized, and, since 1998, many financial institutions have acquired foreign strategic partners.

The Government has set up several institutions to dispose of bad debt. The law now allows substantial foreign ownership of banks and real estate. Due to the IMF-led multilateral bail-out package, the baht stabilized in 1998, after depreciating by 93 percent from June to December 1997. However, the continued domestic credit crunch brought GDP growth to a halt in 1997 and resulted in a negative GDP growth in 1998.

## Macroeconomic Policy Mix (Pre-IMF)

### FISCAL POLICY

Fiscal policy had been consistently conservative since the mid-1980s. Having been in the order of 3–4 percent of GDP for most years since the mid-1970s, the fiscal deficit shrank sharply to 1.4 percent of GDP in 1987. Since then and until 1997, Thailand recorded substantial fiscal surpluses, peaking at 4.9 percent of GDP in 1991, and 2.2 percent in 1996. From 1997 onward, fiscal policy turned stimulatory, with a likely fiscal deficit of 3 percent in 1997/98.<sup>2</sup> This was largely due to the cyclical economic downturn, which reduced tax revenues and boosted expenditures with the provision of higher unemployment benefits, social expenditures, and Government spending packages.

Clearly, Thai fiscal policy has been almost without fault over the past decade. The only criticism that might be made is that, precisely because it was so prudent, some foreign investors, who used the fiscal deficit as an indicator of the credibility of Government policies, diverted their investments to Japan in 1993–1996. However, this behavior was due to a misguided reading of economic indicators and certainly not to a policy flaw.

The post-IMF fiscal policy, which is severely restricted by IMF targets, is also not a problem for the economy since the nature of the economic crisis is almost entirely monetary. Monetary policy,

therefore, hold not only the key to understanding past mistakes, but also to economic recovery. It should be emphasized that due to the primacy of monetary over fiscal policy, the Government, if given a choice between tight fiscal and loose monetary policy mix and loose fiscal and tight monetary policy combination, should without doubt opt for the former. As will be seen below, the economic outcomes of the policy mixes are not the same: while the former would offer economic relief, the latter would hardly affect economic growth. It is monetary policy, therefore, that requires far more detailed analysis.

### MONETARY AND EXCHANGE RATE POLICIES

Monetary policy is implemented by the Bank of Thailand (BoT). By law, BoT is subject to supervision by the Ministry of Finance (MOF). However, it has always de facto independently implemented its own policies (an issue of relevance for policy recommendations). MOF can influence BoT policy only by removing the bank's governor. In practice, MOF has not been involved in the formulation and implementation of the key monetary policies and their tools.<sup>3</sup>

According to BoT, the main "anchor" for monetary policy from November 1984 to June 1997 was the nominal exchange rate, pegged to a basket of currencies of Thailand's major trading partners (and dominated by the US dollar). Under the basket-peg regime, BoT set a mid-rate for the dollar-baht exchange rate everyday and would buy or sell dollars against the baht with commercial banks without limit within the narrow band of  $\pm B0.02$  of the mid-rate from 8:30 a.m. until noon.<sup>4</sup> As Figure 2 shows, the regime successfully stabilized the exchange rate around the target value with only minimal variation.

The basket-peg regime reduced the monetary policy options of BoT. BoT was not, however, rendered without policy tools, as its credit control policy, in particular, continued to be effective. When foreign capital inflows became substantial in the 1990s, domestic sterilization operations did not keep up with them. As Figure 3 shows, the growth of the mon-

Figure 2: Baht per Dollar

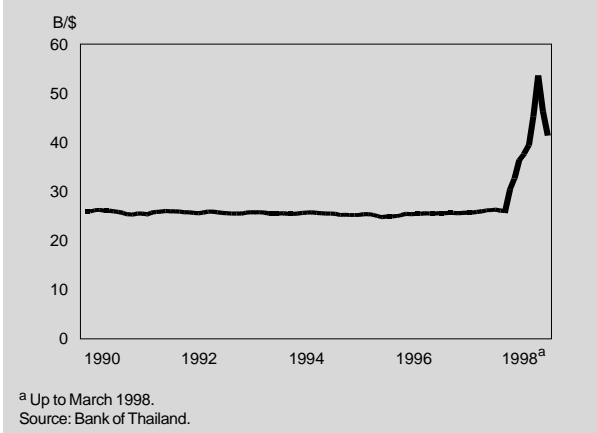
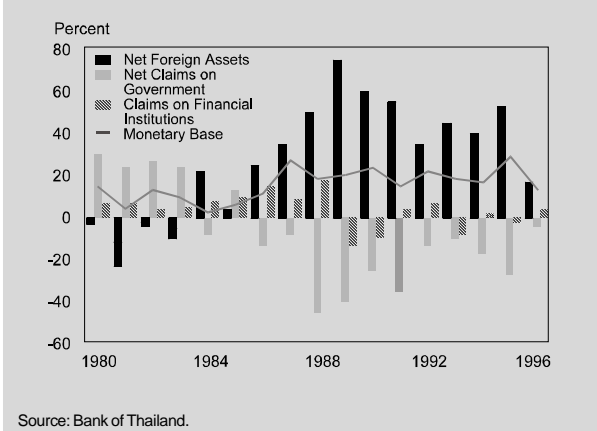


Figure 3: Contribution to Monetary Base



etary base was dominated by capital inflows even as credit to the Government or the domestic banking sector shrank.

Officially, BoT adopted a "multiple indicators" approach in monitoring monetary conditions, as it found that the relationship between monetary and economic variables became less stable. However, the breakdown of the stable relationship between money and GDP is common during times of rapid credit expansion (Werner 1997). While the official response was to shift to monitoring a long list of indicators, including short-term interest rates, commercial banks' deposit and lending rates, bank reserves, monetary aggregates, and capital flows, the key variable monitored by BoT decision makers was domestic credit expansion.<sup>5</sup> The credit control scheme was officially introduced in 1994, and is discussed below.

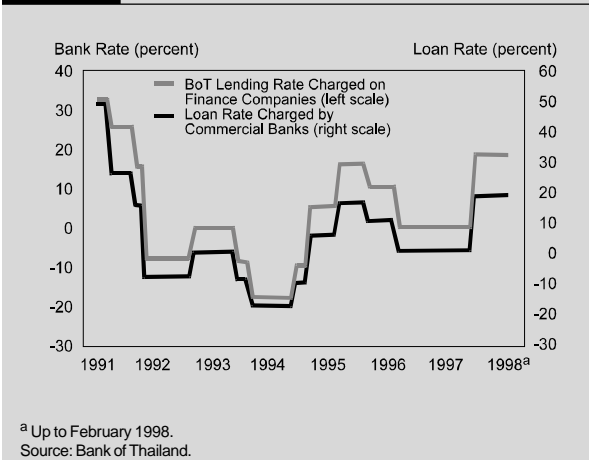
### Monetary policy tools

*Reserve requirements.* In order to discourage short-term capital inflows, in August 1995, banks were required to maintain 7 percent reserve against nonresident baht deposits of less than one-year maturity in the form of deposits in BoT. In 1996, the requirement was expanded to include all short-term foreign currency liabilities of banks (including the Bangkok International Banking Facility [BIBF]) and finance companies.<sup>6</sup> The banks' required reserve ratio remained unchanged at 7 percent of deposit liabilities from September 1974 to September 1997, when it was reduced to 6 percent. Thus, until September 1997, BoT had never used the reserve requirement as a monetary policy tool.

*Official bank rate.* Banks and finance companies can borrow from BoT's "loan window" a limited amount of money at a fixed official interest rate or bank rate. Access to the facility is at BoT's discretion. Since the bank rate has been used in the past as a signal for changes in monetary policy, it correlates closely with changes in the commercial banks' deposit and lending rates (Figure 4). BoT maintained a high interest rate policy, especially in 1995–1996. The policy's aims were to slow down the economy (to avoid overheating), bring down the current account deficit, and reduce capital inflows.

*Money market operations.* BoT uses repurchase agreements, outright purchases or sales, and foreign exchange swaps to conduct money market operations.<sup>7</sup> Volume in the repurchase market has risen significantly in recent years (especially after the crisis), while the loan window's importance has diminished.<sup>8</sup> Outright bond purchases and sales are limited by the underdeveloped bond market. In contrast, the dollar-baht swap market has been deep and liquid (with daily turnover estimated at \$9 billion globally in early 1997). BoT thus considered swaps a more "efficient instrument" to partially sterilize foreign exchange operations necessitated by the basket-peg exchange rate regime under conditions of significant capital inflows.<sup>9</sup>

Figure 4: Bank Rate vs. Loan Rate Charged by Commercial Banks



### Direct control and moral suasion:

#### Credit controls

Official documents state that BoT has "occasionally" resorted to direct control and moral suasion as monetary policy tools. In fact, the measures were not "occasional" but regular and, indeed, the most important features of monetary policy. A direct credit control regime, the Credit Planning Scheme, was officially introduced in 1987 and remained in place until at least the first half of 1997. It was both quantitative and qualitative in nature.

The Credit Planning Scheme, which the literature almost totally neglects, requires attention here because of its central role in economic causation (and thus the propagation of the crisis) and in the implementation of monetary policy.

Banks were required to submit semiannual lending plans for their desired amount and allocation of credit across various sectors of the economy. BoT then collated and aggregated the individual lending plans and compared the resulting overall credit expansion with its own plans for credit creation. Credit expansion of the banking system was defined as bank loans plus bank purchases of securities. The latter were prepared by the Economic Research Department based on a projection for targeted nominal GDP growth and the targeted expansion in credit across the various sectors. If the banks' plans did not match

BoT's policy target for credit growth, BoT adjusted the individual banks' lending and securities purchase plans. Although officially semiannual, the plans were monitored monthly by BoT and commercial banks to compare the actual situation with the central bank's plan.

As in other countries where similar direct credit controls have been applied (UK until the 1970s, France until the late 1980s, Korea until the mid-1990s, and Japan until 1991),<sup>10</sup> the credit controls were, strictly speaking, extralegal and "nonbinding" means of influencing behavior of the banks. However, in practice, banks closely followed the "guidance" of the central bank. The most important sanctioning device to ensure compliance was the implicit threat of noncooperation by the central bank. Since commercial banks are dependent on the goodwill and cooperation of the central bank on a daily basis in their money market and fund-raising operations, moral suasion has proven to be highly successful in almost all countries, including Thailand.

The credit controls were not confined to the quantity of desired credit expansion, but also contained a detailed breakdown of aggregate credit expansion across various industrial sectors of the economy. The share of loans allocated to real estate and construction was of particular interest to BoT. The Credit Planning Scheme also included loans by Thai banks through BIBF and the Provincial International Banking Facility (PIBF). However, foreign banks (which constituted the majority of BIBF lending) were not included until 1996, when the large foreign banks and finance companies were also made part of the credit scheme. In 1995, BoT reduced the credit growth ceilings slightly. In 1996, it reduced them to 21 percent. Until 1996, the exclusion of BIBF loans by foreign banks at a time of restrictive domestic credit controls could not fail to induce a shift of borrowing from the domestic baht market to the offshore market, where there were incentives to borrow in US dollars. However, the policies concerning the award

of banking licenses were based on the performance of foreign banks in providing loans to the domestic corporate sector. Indeed, the master plan concerning the introduction of BIBF stated this explicitly and therefore directly encouraged "out-in" lending despite the fact that it contradicted the purpose of setting up BIBF in the first place, which was to encourage "out-out" and "in-out" lending.

#### **Other forms of moral suasion**

Although virtually no written records exist of other forms of informal moral suasion by BoT, interviews with market participants in Bangkok indicated that, to a surprisingly high degree, BoT engaged in micromanagement of the banking system. It apparently used its extralegal discretionary market power to coax banks to follow its "guidelines" concerning fee structure, branching policy, and interest rates. It may be said, therefore, that the financial markets have become transparent and rule-oriented.

#### **REGULATORY POLICY**

A number of important changes in regulatory policy in the late 1980s and early 1990s were in line with the first and second Three-Year Financial System Development Plans (1990–1992 and 1993–1995), also known as the "Master plan."<sup>11</sup> The plan aimed to deregulate and liberalize the financial sector and capital account. The two most far-reaching regulatory changes were the following:

##### **Interest rate deregulation**

After the initial relaxation of the upper limit on interest rates in the 1980s, the recession that soon followed brought liberalization to a halt. Interest rate deregulation resumed in the late 1980s. In June 1989, the interest rate ceiling on long-term deposits was lifted. In March 1990, interest ceilings on all types of time deposits were removed and those on loans and savings deposits raised. The development plans defended the policies as encouraging competition, which

would, in turn, raise productivity and efficiency in the financial system.

### Exchange control deregulation

After liberalization of foreign direct investment in manufacturing of mainly export-oriented goods, portfolio investment was gradually liberalized in the late 1980s. In June 1990, the capital account was fully liberalized. In March 1993, BIBF and, later, PIBF, were established.

Government officials gave the following reasons for exchange control deregulation:

- It would facilitate so-called “out-out” investment (offshore financing for projects abroad) or help “in-out” flows from Thailand into Indochina, and strengthen the role of Bangkok as a financial center.
- It was a response to pressures from IMF, General Agreement on Tariffs and Trade (GATT) Uruguay Round (and, later, World Trade Organization [WTO]), and the US Treasury Department. Thailand implemented exchange control deregulation to comply with Article 8 of IMF’s Articles of Agreement, guaranteeing that its currency for all payments and transfers from current international transactions would be convertible and that it would refrain from imposing restrictions on such payments and transfers without IMF’s approval.<sup>12</sup>
- It would attract more foreign investment, which would supplement domestic savings and fund domestic capital accumulation and infrastructure development.<sup>13</sup>

Some decision makers argued that the introduction of competition into the banking system would increase efficiency and prudent lending. However, none of the above reasons has provided, or was likely to provide, benefits in excess of the costs and potential costs incurred due to deregulation. The benefits of becoming an important international financial center are debatable and the probability of achieving this

goal may have been overestimated. Outside pressure is likely to serve outside interests, while the literature agrees that premature capital account deregulation is very costly for the country concerned.

It is not obvious that foreign portfolio investment necessarily enhances domestic capital formation on a net basis. If funds are required for domestic investment, then the domestic banking system is perfectly capable of creating enough credit as long as the balance of payments does not constrain growth. If the balance-of-payments constraint has been reached, then increased reliance on capital inflows may carry the risk of sudden reversals and balance-of-payments crises. The argument that domestic savings are “insufficient” is based on a misunderstanding of the macroeconomic meaning of savings. Savings do not provide the funds for investment, as is commonly believed by laymen.<sup>14</sup>

As the empirical evidence from countries like Denmark, Japan, Norway, Sweden, and UK shows, deregulating the banking system and introducing competition is prone to reduce instead of enhance the efficiency of its lending activities. The reason is to be found in the special nature of banks. Before deregulation, banking systems operate like oligopolies or semicollusive cartels. When a normal manufacturing cartel is abolished, the result is immediate competition for market share, implying that the players shift from short-term profit maximization to the more immediate goal of survival and market-share expansion. As all players compete for market share and drive down profit margins, the total amount of the product sold by all players is likely to rise. In the case of banks, the product concerned is bank loans. The problem arises due to the macroeconomic externality of overproduction of bank credit as banks compete for market share: excess bank credit implies an expansion in the money supply and, hence, in overall economic activity. Since most banks attempt to expand loans quickly by lending to the real estate sector, real estate and asset prices in general



rise (while consumer prices may not be affected much). An asset bubble ensues. The policy implication is clearly that the deregulation of the banking system and the introduction of competition must be accompanied by policies that strictly limit the amount of total credit creation. An ideal tool is the credit controls imposed by BoT. However, the very imposition of credit controls negates a full deregulation of the banking system. The conclusion must be that, due to their special nature as producers of the money supply, banks should not be deregulated as much as other economic agents.

The authorities admitted that they seriously miscalculated the use that would be made of BIBF. While “out-out” and “in-out” flows had been expected, the “out-in” flows were most often used, which authorities claim they had not foreseen. As a result, some of the liberalization policies were toned down, as capital inflows increased far beyond expectations. In 1995, the minimum loan level of BIBF was raised to B2 million (although this might also have had the adverse effect of encouraging large-scale transactions instead) and a 7 percent cash reserve requirement imposed on nonresident accounts with a maturity of less than one year. In August 1995, BoT attempted to discourage borrowing from abroad by commercial banks by requiring them to reduce the loan-deposit ratio to the average of the whole system (i.e., if the average were 105, those banks with higher ratios would have to slow down loan expansion). In September 1995, savings were encouraged by reducing withholding taxes from 15 to 10 percent for contractual long-term savings deposits with maturities of more than five years for housing, education, and retirement.

#### OVERALL POLICY MIX AND CRISIS

While interest rates and the capital account were deregulated, other aspects of the economic system remained unchanged. This created an unusual regulatory policy mix and did not conform with estab-

lished experience and recommendations concerning the sequencing of deregulation. Monetary and exchange rate policies only worsened the policy mix.

To summarize, the policies were the following:

- BoT maintained a fixed exchange rate and announced that it would not devalue the currency.
- The banking system was operating with the implicit guarantee that banks would not be allowed to fail, as happened in the crisis of 1983/84.
- Interest rate deregulation increased competition between different types of financial institutions, mainly commercial banks and private finance companies.
- Nominal interest rates on US-dollar borrowing were lower than nominal rates on domestic borrowing.
- BoT tightened its credit controls on domestic borrowing in 1995, but not on BIBF borrowing.

The incentives of each player are reviewed below.

*Domestic firms.* The credit market is always in an excess-demand disequilibrium (see, for instance, Stiglitz and Weiss [1981]). Thus, as in all other countries, there is credit rationing by banks and any slackening of their lending standards is readily accepted by potential borrowers. If excess demand for credit cannot be met by domestic loans, but foreign-currency-denominated loans are easily available, then borrowers are likely to avail themselves of the latter. Since BoT guaranteed the continuation of the fixed exchange rate, firms perceived currency risk to be low or nil. Inasmuch as interest rates on US-dollar loans were lower, they had an incentive to avail themselves of US loans.

*Domestic banks.* When any previously regulated and de facto cartelized market is suddenly exposed to competition, the players will initially focus on market-share competition. In order to gain market share, they tend to dump their products. This is why the total amount of products sold in a postderegulation market is usually larger than that



in the prederegulation state. The product of banks is credit. Therefore, the increased competition among banks and between banks and other financial institutions fueled excessive growth in aggregate credit. A similar phenomenon has been observed in other countries such as Scandinavia and the UK where interest rate deregulation and increased competition in the banking system produced credit boom-bust cycles.

With BoT-imposed credit rationing and selective credit ceilings that restricted domestic loans but allowed foreign loans free rein, domestic banks also increasingly accessed BIBF in order to supply funds to the domestic economy. Banks were not concerned about the risk of default, as the authorities implicitly guaranteed the solvency of banks. Moral hazard implied that banks also had an incentive to continue to either directly borrow from abroad or help domestic firms borrow from abroad.<sup>15</sup>

*Foreign lenders.* The risk-return assessment by foreign investors was likely to have been skewed by a number of factors: (i) the strong macroeconomic performance of Thailand in the past; (ii) the official policy to maintain the peg; (iii) tight fiscal policies, which signal to international investors that Government policy is credible and that “the government was indeed getting the order of economic liberalization ‘right’” (McKinnon and Pill 1996:13); (iv) faith in the process of liberalizing Thailand’s capital account, as pushed by IMF, GATT, WTO, and the US Treasury; and (v) the hasty assumption that liberalization is always beneficial.

*Domestic authorities.* They are basically BoT. It is unclear what BoT’s policy objectives were. Since an analysis of BoT decision makers and their motives is beyond this study, it remains to be said that BoT may have also put blind faith in the validity of the approach taken by international organizations to push for capital account and interest rate liberalization. Moral hazard also seems to have existed at BoT, because its monetary and exchange rate policies have

been undertaken without prudential auditing and accountability, enabling it to slide into blatant nepotism and to dramatically neglect professional ethics and standards.

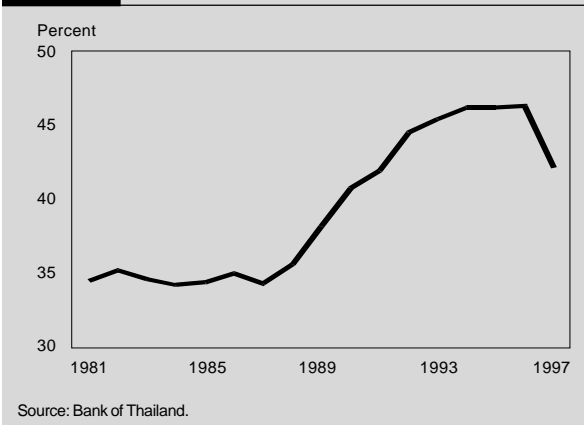
### The creation of the bubble

Given the above set of policies and incentives, a classic overborrowing cycle developed. Total credit creation, which closely corresponds to nominal economic activity, was fueled by almost all its components; bank lending expanded due to BoT Credit Planning Scheme “guidance.”

An increasing share of loans by commercial banks and finance companies was channeled into nonproductive investments: real estate; construction; and consumer loans (including automobile loans, margin loans for stock purchases, and hire purchase loans) (Figure 5). The total of bank lending, BIBF, domestic securities and stock issuance, corporate direct borrowing from overseas, and borrowing by finance companies grew by 27 percent of nominal GDP before 1993, and by 33 percent in 1995. The increase is largely credit creation used for transactions in real estate and stocks. In other words, it corresponds to the financial circulation identified by Werner (1997) as the source of speculative bubbles.

With total credit growth of about 30 percent and GDP growth of about 15 percent, the situation would

**Figure 5: Commercial Banks’ and Finance Companies’ Loans in Nonproductive Investments**



eventually become unsustainable. GDP growth represents the expansion of national income, i.e., the ability of the nation to service its debts. Credit growth represents debt accumulation. If, for a prolonged period, debt accumulation expands much faster than income generation (and both variables start out at already-similar absolute proportions), then debt servicing becomes impossible. In other words, as soon as the bubble bursts (as loan growth is slowed by exogenous variables, such as central-bank policy), excess credit creation must turn into bad debt.

Indeed, as interest rates rose and credit controls tightened in 1995–1996, credit creation for financial circulation also slowed. This resulted in a fall in asset prices, including real estate, as they had previously been driven up by excessive credit creation. As speculative borrowing could not be paid back, bad debt in the banking system began to rise. As foreign banks stopped lending at the same time that foreign funding began to withdraw, BoT was forced to inject large amounts of liquidity into the economy. This was done largely through BoT and Financial Institutions Development Fund (FIDF) balance sheet expansion (the latter not being accounted for on BoT's balance sheet despite FIDF's de facto funding from BoT). In mid-1996 and early 1997, a string of commercial banks and finance companies were on the brink of bankruptcy. Four commercial banks were nationalized when BoT took over them. In June 1997, 16 finance companies were ordered to suspend business. By 1998, altogether 56 finance companies had been closed down.

The development of the crisis was foreseeable. Indeed, long before the crisis, the literature on Latin America had pointed out the sequence of classic crisis development (McKinnon and Pill 1996),<sup>16</sup> a sequence that is clearly applicable to Thailand:

- Domestic credit grows rapidly, largely financed out of capital inflows intermediated through the domestic banking system, leading to higher levels of consumption.
- The current account deficit in the balance of payments widens as greater availability of financing from abroad eases the external constraint.
- Domestic monetary control weakens and domestic price inflation rises or remains high, which typically occurs when Government attempts to sterilize the capital inflows.
- The real exchange rate appreciates, with higher inflation concentrated in the nontradable goods sector; prices of domestic assets, especially real estate or house prices, typically increase.
- A large proportion of the capital inflows in the form of overseas deposits is placed in the domestic banking system; the Government is increasingly pressured to broaden the base of insured deposits (creating further adverse selection and moral-hazard problems).
- Financial crisis, capital flight, and recession occur, often causing an uncontrolled, deep devaluation of the currency, and a resurgence of inflation.

#### **The foreign debt buildup**

As domestic borrowers and foreign lenders had been given incentives to expand capital inflows into Thailand, the subsequent buildup of foreign debt is not surprising. By end-1997, Government borrowing amounted to \$27 billion (more than \$18 billion borrowed by MOF and about \$8 billion borrowed by BoT from IMF). Private borrowing amounted to a staggering \$67.2 billion, resulting in a total foreign debt of \$94 billion. Although most of the borrowing is short-term (less than a year), it is common practice for companies to borrow short-term and for banks to roll over those loans after a year, effectively rendering them longer-term loans.

According to the Siam Commercial Bank, 55 percent of the \$67.2 billion in total foreign borrowing was lent by Japanese banks. However, many loans were to companies affiliated with or subsidiaries of foreign companies, especially Japanese companies. Of the total, only \$5.7 billion were denominated in baht. However, the baht liabilities

were large enough for speculators to use to attack the currency. BIBF out-in loans amounted to \$28.9 billion as of December 1997. The sectoral allocation of BIBF loans as of end-1997 was as follows:<sup>17</sup> industry received 55 percent; agro-industries, 5 percent; telecommunications, 10 percent; real estate, 6 percent; and finance companies, 10 percent. Since finance companies lent about a third of their BIBF borrowing to the real estate sector, total borrowing of the real estate sector from abroad probably amounted to only 10 percent of all BIBF loans. Direct corporate borrowing from abroad was composed of \$7.6 billion in capital market borrowing, \$17.7 billion in syndicated loans, and \$5.7 billion in other private bilateral borrowings. A total of 212 companies borrowed from 450 banks around the world; i.e., more banks than companies were involved in the borrowing. Out of total dollar lending, only 15 percent was conducted through Thai banks, while 85 percent was conducted through foreign banks.

### **The overvaluation of the baht**

BoT continued the basket peg in 1996, despite the significant devaluation of the yuan in 1994 and the weakening of the yen by 60 percent in 1995–1996, presumably to maintain policy credibility. However, a pegged exchange rate can burden the economy when the basket peg is no longer in line with trade flows. The appropriate policy response would be to (i) continue the peg regime, but at an officially devalued exchange rate; (ii) introduce a trade-weighted peg; or (iii) completely abandon the peg. In hindsight, all the policy options are preferable to the policies actually adopted.

### **The crisis**

From 1996 onward, the Government recognized that the economy was heating up, fueled by credit expansion, and that the current account deficit was widening, funded by increasingly large capital inflows. As a countermeasure, in March 1996, finance com-

panies were directed to maintain cash requirement of 7 percent of foreign borrowing with maturity of less than one year. In July 1996, the Bank for International Settlements (BIS) capital adequacy ratio for banks was raised from 8 to 8.5 percent, and for finance companies from 7 to 7.5 percent. The Government discouraged borrowing of foreign funds for nonproductive purposes (such as property development) by imposing an accounting rule that disallowed commercial banks to count them as assets.<sup>18</sup> However, the replacement of the central-bank governor and the minister of finance in mid-1996 reversed the modest slowdown policy. Toward end-1996, foreign investors had lost confidence in the economic policies. The stock market started to fall and speculators launched their first attack on the baht in August. The second attack hit in December. Since BoT failed to devalue the baht, more attacks followed on 14 February 1997 and 11 May 1997, which finally resulted in devaluation.

In September 1996, in response to the first attack on the baht, BoT started to intervene directly in the foreign exchange market, while continuing its normal Exchange Equalization Fund (EEF) operations. In the first half of 1997, BoT used swap and outright spot transactions. Open market operations slowed down domestic credit creation, mainly in the repurchase market, and sent overnight interbank rates, which ranged from 9 to 15 percent, soaring to as high as 30 percent in February 1997. During the temporary stability in the foreign exchange market in March–April 1997, BoT required 10 finance companies to raise capital. It created an agency to purchase and manage problem property loans from financial institutions. Fiscal policy continued to tighten. According to BoT sources, speculators all the while quietly borrowed baht in the foreign exchange swap market (a deep and liquid international market almost fully integrated with the domestic market). When economic fundamentals continued to deteriorate, speculators launched a concerted, massive attack in May 1997, selling all their accumulated baht positions, rapidly de-

pleting BoT's dollar reserves. By then, almost all foreign exchange reserves were used up by BoT in continued and futile attempts to defend the pegged exchange rate.

BoT was forced to temporarily and informally suspend baht convertibility by introducing capital controls on 15 May. Foreign exchange transactions and lending of baht were limited to nonresidents with a proven underlying trade or investment transaction. The policy made it harder for speculators to obtain the baht. Like the credit controls, the capital controls were extralegal and implemented by "moral suasion." They effectively created a two-tier foreign exchange market: the domestic market, with a normal supply of baht; and the offshore market, where the baht was becoming difficult to obtain. The offshore baht interest rate climbed to over 1,000 percent overnight. As substantial short baht positions were unwound due to high interest rates, the baht strengthened somewhat on the offshore market.

By mid-June, confidence returned to some extent. However, with the resignation of the finance minister, local firms' demand for US dollars to hedge their open foreign exchange exposure rapidly drained dollar reserves via the EEF window. As it had already spent \$8.7 billion in reserves to defend the currency and undertaken \$23 billion in forward contracts maturing over the coming 12 months, and as the crisis of confidence deepened, BoT floated the baht on 2 July 1997. The baht immediately dropped by 20 percent. By end-1997, it had depreciated by 93 percent and the stock market had fallen by 34 percent (in dollar terms) since June 1997.

According to BoT sources, the following considerations led it to maintain the peg for so long and at such enormous expense:

- Given the already-eroding confidence in the economy and the baht, BoT thought that tampering with the existing exchange rate mechanism (either by band widening, outright devaluation, or a total abandonment of the system) would result in a wholesale run on the baht and an im-

mediate currency crisis.

- Due to Thai corporations' large unhedged foreign currency debt, which greatly exceeded foreign exchange reserves, any such move would have forced those borrowers to close their exposure.

BoT wanted to buy time by defending the peg. However, the costs of its strategy were also substantial: not only were virtually all foreign exchange reserves lost to speculators, but the high interest rate policy that was necessary to maintain a strong baht also severely punished the export sector, which exacerbated the current account deficit, attracted further capital inflows, and thus increased the foreign debt.

#### **THE FLOATING EXCHANGE RATE REGIME**

The IMF adjustment program limits BoT intervention in the foreign exchange market. BoT now allows the baht to be determined largely by market forces, with sporadic intervention whose sole aim is to smoothen exchange rate movements in periods of apparent overshooting. The informal capital controls imposed in May 1997 were lifted in January 1998. As a result, the baht strengthened and the onshore and offshore exchange rates converged. However, BoT continues to maintain a maximum outstanding credit limit of B50 million per counterparty for Thai baht credit facilities (including, among others, foreign exchange swaps, interest rate swaps, currency swaps, options, and forward rate agreements).<sup>19</sup>

#### **Assessment of Policy Mix**

The combination of policies was disastrous: domestic loan expansion ceilings imposed by BoT were too high, encouraging real estate speculation; at the same time, BIBF borrowing was encouraged to maintain the peg in the face of a substantial dollar-baht interest differential and despite a substantial overvaluation due to considerable yen and yuan depreciation. A number of risks developed, but since they were

not recognized, they eventually spiraled out of control. A checklist of risks includes the following (McKinnon and Pill 1996):

- A sudden increase in the availability of loanable funds through capital inflows may encourage greater investment in risky prospects such as lending to real estate or securities market participants.
- Foreign exchange exposure is dramatically increased if the inflows are foreign-currency-denominated, while the banks enjoy a comparative advantage (informational or otherwise) in domestic lending in local currency. Managing such risks is more difficult if market participants have no experience or there is no market for derivatives.
- Real exchange rate risk rises because the profitability of traded goods industries falls as more capital flows in.
- Settlement risk increases if the payment system is incapable of dealing with the magnitude or direction of cross-border settlements.
- Liquidity risk rises if capital inflows are larger than those of domestic securities markets. If banks attempt to invest the inflows in domestic markets (say, in real estate), they may simply bid up the price of housing, helping create bubbles in real estate and equity prices, and inducing destabilizing “herding” or “fad” behavior among market participants (Shiller 1991).
- Risks arise from the supervisory and regulatory framework as regulators face larger and different challenges in assessing the risks borne by the institutions they supervise when capital inflows are considerable and the risks multiply. For example, regulations may be inappropriate for the new policy regime: banks may not identify problem assets, making it impossible to measure the quality of their portfolios.
- All of the above can lead to greater systemic risk. The chances of contagion between different banks will increase as credit, liquidity, and settlement risks rise.

## Policy Recommendations

### Anticyclical Recovery Policies

#### **POLICY OBJECTIVE: ECONOMIC RECOVERY**

There can be no doubt that the immediate problem for Thailand is recession, as evidenced by substantial negative economic growth rates. The primary short-term policy objective, therefore, must be to engineer an economic recovery. In order to achieve this objective, it is paramount that other policy objectives take secondary priority. Secondary objectives include (i) setting a political agenda to change the economic structure, (ii) opening the Thai market to foreign interests, and (iii) allowing foreigners to purchase Thai banks and land. While important, they constitute a separate policy agenda that is clearly not related to the primary policy objective of engineering economic recovery.

Economic growth is driven by credit creation. The economy predictably moved into recession because aggregate private and central-bank credit creation has been shrinking. For an economic recovery to take place, this aggregate must expand. The necessary policies are the following:

#### **Short-term policy recommendations**

*Central-bank credit creation must expand.* This can be achieved by central-bank purchases of private sector assets. Since the bond market is underdeveloped, and since the real estate market suffers from excess capacity and the financial system from excess bad debts, the most efficient way of central-bank reflation and of addressing the other problems is for BoT to purchase real estate in the open market and purchase bad debts from the banking system. Prices should be established by market forces. This means that banks have to accept large discounts on their loan portfolio (a problem addressed below). Should the central bank incur losses in the process, it should write them off by creating fresh credit. The central bank should also step up purchases of corpo-

rate paper and encourage companies to issue bonds and commercial paper. It should undertake regulatory steps to increase liquidity and depth in the commercial paper market. This includes beefing up accounting standards and encouraging the creation of more credit-rating agencies. BoT can encourage increased bond issuance by paying a premium for corporate paper. This way, corporate bond issuance will rise and the central bank can increasingly act as banker to the nation while commercial banks are still burdened with bad debt.

*The credit crunch problem must be solved.* Commercial banks reduced their loan extension, producing a credit crunch, because the bad-debt problem rendered them more risk-averse while bad-debt write-offs and provisioning reduced their capital adequacy. The solution can only be the full-scale write-off of all bad debts and the recapitalization of the banking system. An elegant solution is (i) for the banks to issue preferred stock, to be purchased by the central bank; and (ii) for the banks to sell bad debts, either securitized or not, to the central bank or to a newly created disposal agency (a “bad bank”), which itself is capitalized by the central bank. Various schemes are possible in order to meet different political, fiscal, legal, or accounting requirements. However, the economic outcome will be the same—banks will clean up their balance sheets. Reduced risk aversion and increased capital adequacy will raise their supply of credit.

Further micromeasures to enhance credit availability, especially to small firms, should include regulations to discourage banks from applying a simple collateralization technique when assessing loan applications. The technique systematically underestimates the risks involved due to the macroeconomic systemic risk externality of collateral values endogenous to aggregate bank loans (Werner 1997).<sup>20</sup> Therefore, the bank capital adequacy requirements could include different risk weightings for collateralized loans and loans that use cash-flow projections

and other flow data. A shift toward the latter will be necessary to stimulate loan growth in an environment of declining asset (and hence collateral) values. Other regulatory and fiscal measures to enhance incentives for banks to write off bad debts, such as full tax deductibility, would further accelerate the process of restoring bank balance sheets and increasing loan growth. The Government attempted to partially implement the policies; BoT loans to four banks (First Bangkok City Bank, Bangkok Metropolitan Bank, Bangkok Bank of Commerce, and Siam City Bank) were converted into capital in February–March 1998.

### OBSTACLES TO IMPLEMENTATION

While economic recovery through expansion of credit creation is desirable, the IMF letters of intent are likely to pose an insurmountable obstacle to its implementation. IMF puts a cap on net domestic assets of the central bank (effectively, the central bank’s balance sheet) at the end of each quarter. Moreover, it severely restricts the ability of the banking system to create credit. In other words, IMF policies prevent achievement of the primary policy objective of creating an economic recovery. Were IMF to support this objective, a renegotiation should substantially raise the current ceiling on net domestic credit creation. However, revealed preference indicates that IMF’s policy objective is to stabilize the exchange rate. As the third and fourth letters of intent show, this objective has been overachieved, as the overly restrictive monetary policies imposed by IMF have produced a far bigger economic recession than anticipated by the Government, boosting foreign exchange reserves and the current account surplus. This shows that less emphasis on external stability and greater emphasis on internal stability would have been far more beneficial for Thailand.

In the third and fourth letters of intent (late May 1998), IMF loosened some of its restrictions on fis-

cal policy. However, monetary policy and especially domestic credit expansion targets remain tight. Some observers have argued that tight money is necessary to stabilize the exchange rate while fiscal policy can be used to support the economy. However, there is a serious flaw in this argument. Fiscal policy will not on a net basis stimulate the economy as a whole. In a credit crunch situation, where there is excess demand for credit, fiscal stimulation is insufficient to achieve the potential growth rate. A necessary condition is an increase in credit creation. Fiscal stimulus such as Government spending superficially seems to add to domestic demand. However, fiscal policy does not automatically result in credit creation. In order to fund its own spending, the Government must issue bonds, which will drain scarce liquidity from the private sector. Indeed, where credit creation is stagnant, every baht spent by the Government is likely to keep one baht out of the private sector. Therefore, given a choice between fiscal and monetary policies, expansionary monetary policy (with tight fiscal policy) is clearly superior to expansionary fiscal policy (with tight monetary policy). However, there is no reason why both monetary and fiscal policies should not be stimulatory. Clearly, IMF policies that keep monetary policy tight while allowing some fiscal leeway cannot generate an economic recovery.

An alternative way to recapitalize the banking system is to sell banks' bad debts and equity to other agents, such as foreigners. This would shore up foreign exchange reserves and function as a debt-equity swap, as foreign debt is swapped into foreign ownership of the domestic banking system. However, long-term costs of this strategy, such as the loss of influence over the credit-creating financial institutions, should be considered. IMF policies, which have prevented a reflation of the central bank and recapitalization of the banking system, are supportive of swapping foreign debt into foreign equity holdings of the banking system. Which policy is preferable is ultimately a political question.<sup>21</sup>

## Other Policy Recommendations: Lessons to Learn

### FOREIGN EXCHANGE REGIME

The choice of foreign exchange regime for Thailand is now between (i) the continuation of the free (or, more realistically, managed) float and (ii) the re-establishment of some form of a pegged exchange rate regime. It is recommended that the current float be maintained until sufficient foreign exchange reserves have been built up and while the currency remains relatively stable. At a later stage, the introduction of a trade-weighted peg or triangular peg (referenced to the dollar, euro, and yen) may be considered. Finally, depending on Japan's political decisions, increased use of the yen in Asia might provide an alternative to the previous dollar-based system.

Should a further round of currency instability and depreciation of currencies occur in Southeast Asia (triggered by a devaluation of the yuan, for instance, or of another Asian currency), and should the Japanese Government be unwilling to support an Asian currency regime, then the Thai Government and private sector should consider proposals to rationalize the use of the dollar in Southeast Asia. One such proposal is the introduction of an ASEAN-wide financing scheme, which could be organized by the private sector, such as the ASEAN Banking Council. Exporters and importers would coordinate their trade together with their commercial bankers. Although trade is denominated in dollars, an IOU would be issued by the trade-financing bank, calculated at the spot rate, denominated in the local currency. The IOU would then be presented to the central bank of the other country. Thus, the trade would be effectively accounted for as an asset or liability of the central banks. Although all central banks prefer the dollar due to the time lag between issuance and claim or clearing, a compulsory currency insurance fund could be set up, insuring the central banks against large movements in the rate of the dollar against ASEAN currencies. Should central banks be unwill-



ing to support this scheme, then any commercial bank in ASEAN could act as a clearing bank. Given the continued deterioration of private bank balance sheets in Asia, few private banks might, however, be able to fulfill such a role without backing from Governments or international institutions. An alternative suggestion is to expand the role of the Asian Development Bank as a currency-clearing bank in Asia and of Asian support facilities such as the Miyazawa Plan. However, this scheme would only be useful to the extent that it minimizes the use of the dollar for intra-ASEAN trade.

### MANAGEMENT OF CAPITAL FLOWS AND FOREIGN EXCHANGE RESERVES

We know from the ex-post accounting identity  $I - S = F$  ( $F$  = current account deficit or foreign capital inflow;  $I$  = investment;  $S$  = saving) that if capital inflows rise, but do not go hand in hand with an increase in investment, they result in a drop in domestic savings and increase in consumption. Moreover, capital inflows, especially the short-term portfolio type, are volatile. A country heavily dependent on them risks their sudden withdrawal and a resulting balance-of-payments crisis with the threat of default.

#### Policies to prevent excessive short-term capital inflows

##### *Foreign push factors*

- Capital inflows can be partly exogenous. If foreign investors suddenly decide that a specific country is attractive for portfolio investment, their herd behavior can produce a sudden, large inflow, which can disappear equally suddenly. Measures should therefore be taken to discourage short-term capital flows and encourage long-term foreign direct investment.
- McKinnon (1973, 1993) has argued that deposits held by foreign residents in domestic banks should be subject to the same level of reserve requirements as domestic deposits. This amounts

to an implicit tax on foreign deposits, which raises the effective real interest rate for domestic borrowers. The scheme can be fine-tuned by differential reserve requirements for investment and consumption borrowing and lump-sum taxes (McKinnon and Pill 1996). Without such requirements, there is a potentially destabilizing bias toward capital inflows.<sup>22</sup>

- Reserve requirements on short-term capital flows can be enhanced by administrative controls.
- Foreign direct investment can be encouraged. It is less volatile than short-term capital flows and bypasses the banking system, posing smaller risks to the balance of payments. The tools to encourage foreign direct investment include tax incentives, efficient administrative procedures, and liberal laws concerning, for instance, joint ventures with local partners. In Japan, such policy was successful in the 1950s and 1960s.

##### *Domestic pull factors*

- These include credit controls on unproductive and consumptive borrowing such as consumer borrowing via credit cards and mortgage finance.
- Any large differential between domestic interest rates and dollar interest rates should be avoided as long as the currency is pegged to the dollar. Obviously, an interest rate differential, together with the explicit or implicit guarantee to maintain the peg, will encourage borrowing from abroad.
- Moving to a floating exchange rate or otherwise diversified exchange rate system may be advisable.
- To prevent the dramatic falls in private savings due to overborrowing, incentives to enhance individual savings are helpful. They may include the introduction of a fully funded compulsory saving program such as the compulsory social security contributions to a Singapore-style provident fund (which was also successfully introduced in Chile in the 1980s).

## REGULATORY POLICY: LIBERALIZATION AND SEQUENCING ISSUES

Many multilateral organizations favor liberalization in their policy recommendations. Government restrictions on financial services, for instance, are usually considered Pareto suboptimal. BoT has been a fervent supporter of liberalization of the financial sector, inviting international competition in order to reduce the influence of the families who own commercial banks. However, the purported benefits of liberalization can be demonstrated only in theoretical economic models based on highly unrealistic assumptions and derived from the experience of the UK or US. In the Thai case, the premature opening of the capital account in the face of a fixed exchange rate and a large interest differential invited substantial capital inflows and was a recipe for disaster. However, the recent academic research literature cautions against an oversimplified liberalization approach.

Liberalization is not always beneficial. As two decades worth of economics literature points out, the sequence of liberalization of both the capital account and the banking system is crucial to a successful opening of an economy (see, for instance, McKinnon [1982, 1993]). In particular, it is well recognized that opening just the capital account, while the rest of the economic system remains unchanged, invites calamity, especially in the case of a fixed exchange rate system. It is therefore relevant to question the motivation of IMF, GATT, WTO, and the US Treasury when they push countries to adopt this strategy.

As for the banking system, international institutions often argue that direct credit controls are not efficient, as free-market forces are superior in allocating credit. However, in a world of imperfect information, credit controls have often proven to be an effective tool of monetary policy, since imperfect information results in non-Walrasian market outcomes—rationing, for instance—which render quantity variables superior to price variables as a policy tool and economic indicator. Especially because

changes in the interest rate had a direct impact on capital inflows, in the hands of the central bank, which has discretionary power over the banks, quantitative credit controls were a powerful tool to keep credit creation in check. Ethical problems exist, however, due to the extralegality of its character.

The problem with applying credit controls in the 1990s was not that the controls were ineffective. The biggest problem was that the credit growth targets set by BoT were far too large, encouraging further competition between banks as they strove to achieve those targets. Specifically, the targets for BIBF loans were too big. Although BoT closely monitored the sectoral allocation of credit and was fully aware of the rapid expansion of real-estate-related and speculative credit, it failed to use the credit controls to curb such activity. On the contrary, by setting liberal credit growth targets, BoT directly encouraged and fueled the extension of real estate and speculative loans, which are a core cause of the current economic malaise.

Regulatory responsibility not only falls on the regulators of the borrowers, but also on the regulators of the lenders. Loan decisions involve an agreement between lender and borrower. Many borrowers of offshore funds were private sector firms. Most of the lenders were foreign private sector banks. Responsibility for the consequences of the bad-debt problem therefore also lies with the lenders. Indeed, since both lenders and borrowers are private sector institutions, market forces could have been allowed to deal with the evolving problem. Borrowers would have defaulted and lenders would have had to write off their loans. Thus, responsibility lies with the bank supervisors in the lending countries. Responsibility also lies with multilateral organizations, as they pushed Thailand to prematurely open the capital account and partially deregulate financial markets despite known serious sequencing problems. Bilateral and multilateral pressure groups argued that market forces—i.e., more competition through opening up—would enhance economic development and welfare.

However, this reasoning is based on faulty analysis. Consequently, regulation of the way in which such bilateral and multilateral lobbies exert political pressure on sovereign countries should be considered.

### **INVESTMENT POLICY AND THE RISKS OF SHIFTING TOWARD MARKET FUNDING**

In many economic models, liberalization of the financial sector encourages capital accumulation (for example, through the positive effect of raising real interest rates on deposits, increasing savings rates, reducing welfare losses due to inefficiency, facilitating fund-raising by firms, etc.). The theoretical foundation for such arguments is that perfect and efficient markets ensure Pareto-efficient resource allocation. However, an expanding body of literature (see, for instance, Greenwald and Stiglitz [1986]) shows that incomplete markets (due to asymmetric information, for example) do not achieve Pareto efficiency. Meade's (1955) second-best theorem also demonstrates that in the presence of distortions, the removal of one distortion may not enhance welfare. Consequently, the impact of financial liberalization is not clear.

Bank-centered economic systems are often characterized by quantitative (and usually qualitative) credit controls, regulated interest rates, and implicit guarantees of banks against default. Specifically, credit controls are often used, as in Thailand, as the main tool to implement macroeconomic investment policies that directed resources to investments in certain sectors or industries. Since such sectors were usually of a productive nature, bank credit creation was matched by an increase in output. Such investment policies that make use of credit allocation have been highly successful in Japan; Korea; Taipei, China; and Thailand. A shift from such an economic system to a capital-market-based system via financial liberalization carries specific risks. In the bank-centered system, the regulations (including quantitative credit controls) reduce the risk of excessive credit creation. There is therefore usually no prudential su-

pervisory and regulatory framework in place. However, if interest rates are deregulated and the banking industry suddenly shifts from a cartel-like structure to competition, banks have incentives to maximize loan growth by lowering credit standards as they compete for market share. Since bank behavior continues to be shaped by the previous regulatory regime (with implicit Government guarantees against default), they become prone to taking on excessive risks. Credit boom-bust cycles with banking crises have taken place virtually each time a country started to liberalize financial markets (examples are Japan, UK, and Scandinavian countries in the 1980s, and Thailand in the 1990s).

It is therefore recommended that financial liberalization be accompanied by tight monitoring by the central bank of credit aggregates and by immediate quantitative tightening policies if total credit growth accelerates due to financial liberalization. Informal credit controls that enable the central bank to continue to implement explicit or implicit investment policies probably provide the simplest and most effective tool, although in theory they contradict the spirit of liberalization. However, this indicates that perhaps the efficacy of liberalization itself needs to be reconsidered. Especially given the severity of the economic downturn, countercyclical investment policies implemented via credit allocation are likely to prove highly successful. Specifically, credit creation could be kick-started by funding the entire public sector borrowing requirement exclusively via loan contracts between the Government and the private banking system. Fiscal stimulation policies should also be financed this way, allowing the Government to implement investment policies, which will be funded by private bank credit creation. Since the problem of the ongoing credit crunch is the risk-aversion of banks, lending to a zero-risk borrower such as the Government will be highly welcome. As banks extend credit to the Government, total credit creation in the economy expands and GDP recovers. Meanwhile, by implementing investment policies, the Government can either directly or indirectly (by guid-

ing or guaranteeing private sector projects) allocate resources to high-value-added activities.

## MECHANISMS AND INDICATORS FOR MONITORING AND CRISIS PREVENTION

### Quantitative and qualitative monitoring of credit aggregates

In theory, the solution to the moral-hazard problem in the banking system would be to withdraw the implicit guarantee of bank deposits. Banks would then behave efficiently and provide the correct information signals to the market. However, there are two problems with this solution:

- *A time-consistency problem* (McKinnon and Pill 1996). *Ex ante*, authorities must deny any responsibility for bank deposits in order to instill market discipline. *Ex post* financial crisis, however, the authorities must bail out at least the larger banks in order to keep the stability of the financial system, avoid bank runs, and preserve international confidence. Banks know that they are special, because they create purchasing power and maintain the monetary system. A public denial of deposit insurance is therefore not credible and banks will always behave as if they have deposit insurance.
- *The fallacy-of-composition problem* (Werner 1997). To the extent that banks extend real estate loans with land as collateral, a systemic risk externality is built up, as each bank considers the land price as an exogenous variable. However, as the loan-valuation ratio is decided and loans are provided for real estate transactions, credit creation takes place, while the amount of land is by definition fixed. As more purchasing power is extended to an unchanged real estate market, real estate prices must rise. Thus, in aggregate, the amount of real estate loans supplied by banks influences land prices. While an individual bank considers the land price as given and unlikely to be influenced by its own actions, all banks together determine the land price, rendering it en-

dogenous to the collective behavior of banks. Hence, even when deciding on conservative loan-valuation ratios, banks systemically underestimate the overall credit risk, as the entire land-price level is being driven up by the collective action of the banks. This problem is exacerbated as banks tend to follow each other's behavior in order not to lag behind competitors.

### Policies to avoid excessive credit creation for speculative purposes

- Introduction of a mandated loan-valuation ratio of 50 percent or less and imposition of conservative land-price valuation methods or indices.
- Use of quantitative policies to curb credit creation.
- Implementation of credit controls that distinguish between borrowing for productive and unproductive or consumptive purposes. The latter should be curbed via informal credit guidance of the banking system by the central bank. In Japan and Taipei, China, through the 1970s, for instance, consumer borrowing, including via credit cards and mortgage finance, was severely restricted.
- Imposition of temporary real estate transaction taxes.
- Increase in capital and reserve requirements.
- Improvement of bank regulation, information disclosure, and rule enforcement.

### Checklist of variables to be monitored

Variables that need to be monitored closely and, if necessary, trigger the appropriate policy response should include the following:

- Absolute amount of gross and net foreign exchange reserves, monitored in short-time intervals (ideally, weekly).
- Total foreign debt, broken down into term structure and denomination; short-term debt as a percentage of foreign exchange reserves.
- Total domestic credit creation (central bank plus private bank claims on the nonfinancial sector),

compared to nominal GDP growth. Warning signal if the gap widens.

- Sectoral breakdown of credit creation (by industry). Warning signal if use of credit increases for nonproductive purposes.
- Loan-valuation ratios of average real estate loans of banks.
- Inflation—not only consumer price inflation, but also asset prices (stocks and real estate).
- Volume of margin loan positions.
- Actual economic growth versus macroeconomic estimate of potential economic growth.
- Trade-weighted effective exchange rate versus actual exchange rate.

## **RULE-BASED AND ACCOUNTABLE**

### **PUBLIC AUCTIONS**

Public auctions in the wide sense include personnel policies of the public sector (human resource auctions) as well as the disposal of bad assets by the Financial Sector Restructuring Authority (FRA). Clear and fair rules governing public auctions must be drawn up and made public. The makers of the rules must also be held accountable to the public.

#### **BoT personnel policies**

There is no work published concerning BoT personnel policies. It must suffice to mention here that according to testimonies recorded in Bangkok in 1998, a substantial number of BoT staff members appear to be related to each other by blood or marriage. The obvious policy recommendations are therefore to (i) disclose all relationships between and among BoT staff members and (ii) implement strict policies that avoid conflicts of interest. For instance, only one member of an extended family should be allowed to work at BoT. Selection and screening of applicants according to objective criteria should be sourced out to an independent recruitment agency, which itself should be replaced at two-year intervals and selected by public bidding.

#### **FRA handling of bad-debt disposal process**

Allegations of foul play have emerged against FRA concerning some crucial aspects of the asset disposal process. A requirement for appointment as FRA's law firm (which would thus gain primary access to information), which was not publicly announced, was that the law firm should have 50 lawyers or more in Bangkok. Only one law firm, a foreign firm, has 50 lawyers or more in Bangkok. Local firms, had they been aware of the requirement, could have increased their staff accordingly.

#### **Criteria for closing finance companies**

The criteria for closing the 56 finance companies were not disclosed in advance. Through its preferential interest rates, BoT encouraged finance companies to borrow from FIDF. Even sound finance companies were given opportunities to profit by borrowing at a subsidized rate from FIDF and then investing the liquidity elsewhere. As a result, FIDF lost virtually all its funds, amounting to an estimated \$1 billion. Later, however, it was announced that the criterion for closing the finance companies was whether or not they had borrowed from FIDF. Even apparently solvent finance companies were closed down. Since the finance companies had only followed market incentives, they can hardly be blamed for their behavior. Again, a heavy responsibility falls on BoT for misguided policies.

#### **IMF letters of intent**

Apparently, two versions of each letter of intent exist—a full version with all the details, which is not publicized, and an official version, which is publicly disclosed but does not include pertinent details. IMF has long demanded greater disclosure of information. It should therefore set a good example.

#### **DISCLOSURE OF ECONOMIC DATA**

An important reason the crisis occurred is that data available to BoT were not made public. Had the public known the data earlier, it would have pro-

vided pressure in the form of market forces as well as public opinion, which would have forced BoT to correct its monetary policy much sooner. Much stricter requirements concerning data disclosure are crucial for improving macroeconomic management and for avoiding a similar crisis in the future. While BoT has begun to disclose details of its foreign currency reserves and forward positions, it is still not disclosing other, perhaps even more important, data.

The central bank has access to monthly data on an almost real-time basis concerning the key variables that drive economic activity: bank assets, bank credit creation, credit expansion broken down by industrial sector, and the detailed breakdown of BoT's own activities and those of affiliated institutions such as FIDF. However, hardly any of the data are published or made accessible to the public. For instance, frequent publication (at least monthly) of detailed FIDF accounts is necessary. BoT data releases concerning the aggregated bank balance sheet and the sectoral breakdown of loans are done only quarterly and semiannually. Monthly data appear to exist and should be made available to the public via the Internet, together with long time series for past data. Economic intelligence is of paramount value and insiders will always want to hide information or to disclose distorted information. In order to ensure accuracy and timely disclosure of all the relevant data series, independent outside auditors, who will be changed regularly, should be employed.

#### **CENTRAL-BANK REFORM AND FUTURE POLICY REGIME**

Most of Thailand's economic woes can be traced to policies taken by its central bank. Due to lack of disclosure and supervision, BoT could continue expansionary credit creation, "guiding" commercial banks to lend more for speculative activities. Its policy to keep domestic interest rates high attracted short-

term capital inflows. The continuation of the basket-peg system, which BoT insisted on, made lending to Thailand a one-way bet and also encouraged short-term capital inflows. Finally, BoT's handling of the crisis was misguided, as it did not abandon the pegged exchange rate until it had squandered virtually all of its foreign exchange reserves.

Given this track record, one can recommend a reform of BoT—its institutional setup, personnel, personnel policies, monetary policies, policy implementation tools—and require that it disclose information and be accountable to the elected representatives of the people, as the Nukul Commission recommended (Nukul 1998). The excessive concentration of decision-making power in the hands of a small number of unelected technocrats should be reduced. Specifically, BoT needs to be more transparent in its monitoring of the economy, its dealings with the financial system, the tools of monetary policy it implements, the policies it adopts, and the data it uses for decision making.

The postcrisis BoT has stated that it would like to shift its monetary policy to a regime that explicitly targets inflation and that it would like its performance to be judged according to whether it can achieve that inflation target, and not whether there is general economic and financial stability. Inflation targeting is a policy that does not address current (or past) policy needs. Excessive consumer price inflation may have been a problem in Weimar Germany, resulting in a Bundesbank policy dominated by the anti-inflation goal. However, the biggest policy mistake of BoT is not excessive inflation. It is excessive business cycles that are due to excessive credit creation followed by a banking crisis and subsequent credit crunch. Indeed, a similar credit boom-bust cycle already occurred in the early 1980s. It would be far more pertinent to target nominal GDP growth by keeping the nominal growth rate close to the potential growth rate.

## Notes

<sup>1</sup>The maximum potential growth rate is a function of the quantity of factor inputs and the efficiency with which they are used to produce output (productivity).

<sup>2</sup>As per the fourth letter of intent with IMF, 26 May 1998.

<sup>3</sup>This was confirmed by testimonies from officials of the Bank of Thailand (BoT), the Ministry of Finance, as well as private sector observers.

<sup>4</sup>The sales and purchase operations were undertaken through the Exchange Equalization Fund (EEF), which is effectively a part of BoT. Given the substantial volume of capital inflows in 1995–1996, it became the largest avenue for central-bank credit creation.

<sup>5</sup>This is according to present and former BoT staff who were interviewed.

<sup>6</sup>Banks must maintain required reserves on average with no carry-over provision over a fortnightly period (from the 8th day of the month to the 22nd and from the 23rd to the 7th) using the average level of deposit/liabilities of the previous period as a base). However, day-to-day fluctuations in bank reserves can be quite large.

<sup>7</sup>The repurchase market was established in 1979, and includes banks, finance companies, State enterprises, specialized financial institutions, and the Financial Institutions Development Fund (FIDF), which is linked to BoT itself. It operates on the basis of competitive auction, with BoT acting as central counterpart to all members. Since BoT is the registrar in all current eligible securities in this repurchase market, delivery and settlements can be done simply by book-entry transfers with BoT. There are seven maturities (overnight, 7 days, 14 days, 1 month, 2 months, 3 months, and 6 months), but volume is highest at the short end. Orders are processed on a price/time priority basis. The best bid or offer and last-matched prices are publicized immediately.

<sup>8</sup>As a result, BoT started to issue BoT bonds in August 1995, with maturities ranging from one month to two years. Each type of paper was auctioned according to a pre-announced schedule. Scripless, the BoT bond was thought to facilitate trading. Since BoT sterilized the monetary effect of the BoT bond issuance through purchases of State enterprise bonds, it effectively replaced illiquid State enterprise paper with the more liquid BoT bonds. In

1996, BoT also started issuing FIDF bonds—FIDF is effectively part of BoT—and Property Loan Management Organization bonds. In practice, BoT bond issuance has not been sufficient to sterilize the monetization of the large capital inflows, as in 1996, when, despite a substantial increase in the issuance of the central-bank bonds, net credit creation of the central bank continued to expand rapidly. When capital flows reversed in 1997, BoT failed to purchase back the bonds quickly enough, exacerbating the tight liquidity situation.

<sup>9</sup>Since the reintroduction of partial capital controls in May 1997, the swap market has shrunk sharply, reducing BoT's intervention. Instead of direct transactions in the open market through agent banks, BoT has switched to an auction process for its daily swap operations. Local banks must submit their bids to BoT's foreign exchange desk before 12:30 p.m., providing details concerning amount, premium, and maturity (overnight to one year). The swap transactions are then allotted by BoT at its discretion, based on overall policy, foreign exchange market conditions, and the exposure of the individual banks concerned.

<sup>10</sup>The credit controls were known by various names in different countries. In the UK it was a "corse," in France "*encadrement de credit*," in Japan and Korea "window guidance."

<sup>11</sup>This plan was proposed and supported by Finance Minister Tarrin, who is currently again finance minister.

<sup>12</sup>BoT Governor Chavalit Thanachanan commented in June 1990: "I would like to mention in this context that only 68 (out of a total of 152) members of the IMF have assumed Article 8 status; and of these 68, only 10 are countries in the Asian region. It is thus no exaggeration to say that with this decision, Thailand has joined a select group of countries that maintain an exchange system free of restrictions and that are characterized by highly successful economic and financial performance" (Rhee and Chang 1991: 79).

<sup>13</sup>This reason was cited by the former BoT governor.

<sup>14</sup>This fallacy is based on a misunderstanding of the role of banks. Due to the recent emphasis on "microfoundations," banks are commonly regarded as "financial intermediaries" that accumulate deposits and other funds in the short-term markets, which they then invest for the long term. However, on a macroeconomic level, banks fulfil the crucial public-goods function of creating the bulk of the money supply through the process of credit creation.



<sup>15</sup>This is well documented in the finance and development literature. A review is provided by World Bank (1990).

<sup>16</sup>See Schadler et al. (1993) and Fischer and Reisen (1993).

<sup>17</sup>Estimates by Siam Commercial Bank.

<sup>18</sup>The net open position of commercial banks could not exceed 20 percent of capital funds (capital and reserves). Since net open position is equal to foreign borrowings less foreign assets, if property loans did not count as assets, the subsequent reduction in assets would force banks to reduce their foreign borrowing accordingly.

<sup>19</sup>Bona fide investment and trade activities are excluded from this ceiling.

<sup>20</sup>Such criteria might also underestimate risks if not implemented prudently because individual firms' cash-flow projections are affected by potentially misguided macro-

economic projections. For instance, foreign banks continued to lend to local Thai companies based on cash-flow projections that assumed a continuation of the high growth rates Thailand had recorded previously. However, this type of risk can be minimized by bank-lending guidance undertaken by the central bank, which should monitor total credit creation and thus be able to predict economic growth.

<sup>21</sup>Democratically elected representatives of the Thai people, however, were not consulted in the IMF decision-making process.

<sup>22</sup>In a banking sector model without moral hazard and with perfect information, such reserve requirements may introduce an inefficient distortion. However, in reality, information is asymmetric and moral hazard does exist. Moreover, such measures will reduce the macroeconomic systemic risk, and by avoiding the classic credit boom-bust cycle, the government acts in a welfare-enhancing way.

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## Appendix 1

**Methodology of Study****TWO TYPES OF GOVERNMENT****INTERVENTION**

Due to market imperfections, many developing economies have achieved high economic growth rates only by resorting to government intervention that focused on maximizing factor inputs in the early stages of economic development. However, government intervention in this context is often misunderstood. It can take the form of activist intervention in markets in order to directly shape resource allocation, as in the socialist countries. Or it may involve the design, construction, and monitoring of incentive structures that will incline agents to work toward the policy objective without micromanagement or activist policy intervention. In other words, it can mean organizing and reorganizing the economic system so that the outcome of optimizing behavior of individual agents or groups of agents coincides with the overall government goal of achieving high growth. While the recent mainstream economic literature has demonstrated the inefficiency and often high cost of the first (activist) form of government intervention, the most recent literature increasingly supports the second type of government intervention. As the discussion of long-term Thai macroeconomic management will show (Appendix 2), regulations and government intervention have often been linked to good macroeconomic performance.

**BANK-CENTERED VS. CAPITAL-MARKET-CENTERED RESOURCE ALLOCATION**

In many countries, including Germany and Japan, policymakers have found that high growth can be achieved by favoring big business, which separates ownership from control and tempers the influence of shareholders by cross-shareholding and monitoring through main banks. Managers have greater incentives to reinvest their resources instead of

paying them out in the form of dividends.<sup>1</sup> Consequently, companies are focused more on long-term scale maximization, as opposed to short-term profit maximization. Meanwhile, monitoring by stakeholding banks provides the necessary discipline for managers to operate efficiently. The logic of this type of economic organization inevitably leads to an emphasis on banks in resource allocation and underdeveloped capital markets, which divert the incentives of managers away from scale maximization.<sup>2</sup> In practice, there is a single dominant bank or universal bank, which provides for the funding needs of an enterprise group (the main bank in Japan or Hausbank in Germany, for example). The economic system in Thailand is a similar bank-centered system.<sup>3</sup> The Thai economy is characterized by organizational government intervention, and the bank-centered paradigm is usually neglected. Policy conclusions usually derive from a simplistic application of the capital-market-centered model of the UK or US. The different nature of the Thai system, however, cannot fail to have implications for policy recommendations, which should be tailored to the specific situation of each country.

**CREDIT MARKETS DO NOT CLEAR**

Stiglitz and Weiss (1981) show that banks ration credit even in equilibrium due to imperfect information. This implies that there is always an excess demand for credit among firms (especially smaller ones), which creates an additional powerful tool for resource allocation and development policy: governmental “guidance” of commercial bank credit,

<sup>1</sup>Economic growth is due to productive investment conducted by companies. The main stakeholders in large-scale businesses are employers, managers, and shareholders. If the government aims to maximize economic growth, it can achieve this by creating incentive structures that encourage firms to maximize growth, as opposed to profit pay-outs.

<sup>2</sup>For more details, see the work of Aoki and Dore (1994).

<sup>3</sup>See, for instance, Hoontrakul (1995) and the literature cited therein.

while interest rates are kept low by regulations.<sup>4</sup> Even when the adverse selection and incentive effects of high interest rates do not produce credit rationing, moderate financial restraint on lending rates reduces default rates and increases the social returns to lending. Stiglitz and Uy (1996) refer to financial restraint to describe a regime where regulations keep interest rates low. Since, in addition to allocating purchasing power, banks also perform the unique role of creating purchasing power (through “credit creation”)—a role that capital markets cannot play—bank-centered economic systems represent a potentially attractive mechanism for fast economic development in a world of imperfect markets. In such systems, governmental “guidance” or direction of credit toward high-productivity sectors of the economy has proven to be a powerful tool for economic development (see World Bank [1993] and the literature cited therein). Throughout the postwar era, Thailand has implemented policies to direct credit. Such practice has been associated with strong economic performance.

Based on the latest findings concerning the credit market and the macroeconomic role of bank credit creation, it appears that among the cyclical macroeconomic management policies (fiscal, monetary, and exchange rate), monetary policy plays a special role. This study attempts to reflect the latest findings in economic theory in its methodology, especially con-

cerning the economic structure and the monetary transmission mechanism.<sup>5</sup>

<sup>5</sup>The traditional monetary transmission mechanism is built on the assumption of perfect markets. In the standard model, there is a stable relationship between the “real” economy and the financial sector (the constant velocity assumption, which defines a stable money-demand function). In Walrasian equilibrium, the interest rate equalizes demand and supply for money. There is a unique inverse relationship between the quantity of money and its price, the interest rate. With sticky prices, a change in the (short-term) nominal interest rate (e.g., effected by the central bank) results in a change in the real rate, which determines consumption, investment, and output in the economy. In the long run, as prices adjust, monetary policy has no real effects. The key monetary policy tool in this model is the interest rate. Since the model assumes perfect substitutability between bond markets (and other capital markets) and bank lending, there is no special role for the banking system (which is therefore also usually not explicitly included in standard models, whether IS-LM-based or not). The conventional macroeconomic theory has been embodied in large-scale macroeconomic models and underlies the analyses of many economists.

However, over the past two decades, the standard model has increasingly been criticized by a rapidly expanding literature. In particular, several “anomalies” have occurred in a number of countries, which have been impossible to reconcile with the generally accepted relationship of money, economic activity, and prices. They include the apparent velocity decline and resulting “breakdown” of the money-demand function in several Anglo-Saxon countries, Scandinavia, many Asian countries, and Japan; and the occurrence of significant asset price rises, often dubbed “bubbles,” especially in Japan, Korea, Thailand, UK, and Scandinavian countries. Standard theory and models failed to forecast and later to explain the size and extent of the business cycles observed in many countries in the 1980s and 1990s. (For a discussion of the British experience, see Goodhart [1989]; Muellbauer [1992]; and Church, Smith, and Wallis [1994]. For a discussion of the Japanese experience see Werner [1997].) Moreover, the standard model has failed to explain how fairly small changes in short-term interest rates can produce large changes in economic activity, influencing long-term investment and durable consumption, for instance.

The failure of the traditional theory has given rise to a new body of research on the monetary transmission mechanism and the role of financial systems in the macroeconomy (Bernanke and Blinder 1988; Gertler 1988; Jaffee and Stiglitz 1992; Gertler and Gilchrist 1992; Bernanke 1992; Kashyap, Steil, and Wilcox 1993; Allsopp and Mayer 1994; Werner 1997). The new argument can be summarized briefly: with the more realistic assumption of imperfect information, the credit market does not clear and equilibrium credit rationing occurs (Stiglitz and Weiss 1981). It implies that interest rates and the quantity of credit are not uniquely inversely related (i.e., a reduction in interest rates may not increase the quantity of credit and vice versa). It also implies that there is constant excess demand for credit, rendering credit supply-determined. Further, imperfect information combined with large monitoring costs results in imperfect substitutability between bank lending and other sources of capital for some borrowers (such as households and small firms). Combined with the assumption that the central bank can affect the volume of bank credit through its open market operations, there is a distinct transmission mechanism via the quantity of credit, which can be used by the central bank. Moreover, this approach suggests that quantitative (and/or qualitative) “guidance” by the central bank of commercial bank credit may be an effective tool for cyclical as well as structural macroeconomic management policy. By ensuring the allocation of resources to productive activities, economic growth can be kept close to potential with minimum inflation.

Using the often-neglected fact that banks are “special” in a macroeconomic sense due to their ability to create credit, Werner (1997) demonstrates that a reformulated “quantity theory,” which centers on disaggregated credit, explains the major “anomalies” of the traditional model. Credit creation used for GDP-based transactions is likely to show a proportional and stable causal relationship with nominal GDP, while credit creation used for non-GDP-based transactions (such as speculative financial and real estate transactions) is likely to be directly related to asset prices.

<sup>4</sup>The approach has not been popular in the theoretical neoclassical literature, presumably because it acknowledges the existence of institutional rigidities, monopolistic firms, regulated international commodities markets, and, most important of all, imperfect information, which “distort” all prices and imply that few markets, least of all the credit market, actually clear. However, it has been challenged by a vast body of literature that has proven theoretically and empirically superior. For more details, see the literature on the relationship between financial sector development and economic growth (Goldsmith 1969, 1983; Cameron et al. 1967; the empirical support by Gupta [1984] and Jung [1986], who found causality from financial development to economic growth; King and Levine 1993); on financial repression (McKinnon 1973; Shaw 1973; Fry 1983); on asymmetric information in the credit market (Stiglitz and Weiss 1981; Stiglitz and Greenwald 1993); and on the Japanese main bank system (Sheard 1989; Aoki and Dore 1994). Also see the World Bank report on the “East Asian miracle” for a detailed survey of the successful credit policies adopted in the bank-centered Asian economies.

## Appendix 2

## Macroeconomic Management and Economic Development

Thailand's postwar economic system is a variant of the bank-centered economic structure observed in Germany and Japan. It emerged in the mid-1920s. Until then, Thailand's economy had been largely agrarian, with rice, teak, tin, and rubber making up 90 percent of exports. Economic growth was steady but modest. Macroeconomic management policy was one of benign neglect. The extraterritorial privileges enjoyed by colonial capital and the Government's lack of fiscal autonomy, which prevented support to indigenous industries, were the main impediments to growth. Although treaty provisions concerning import and export dues were renegotiated and, in the late 1920s, new company laws and some initial tariff protection enabled modest import substitution, the absolute monarchy was increasingly criticized for neglecting national interest and failing to support the development of indigenous industry and commerce.

### POST-COUP D'ETAT

The call for drastic changes in political and economic management culminated in the 1932 coup d'etat, which triggered economic reform. Influenced by German and Japanese thinkers, the new military-led Government opted for active State guidance of the economy. The unequal treaties with foreign powers were abrogated and protective import tariffs imposed in pursuit of an import-substitution strategy. Many publicly owned and Government-run firms were created in order to foster new industries. Private indigenous enterprise was supported and "guided" by the State. Resources were allocated to favored industries either by direct Government investment or through guided credit of private banks that were at the center of business groups.<sup>1</sup>

<sup>1</sup>Legal reform included protection for patents and trademarks, and modern labor law. The Government established the Board of Trade and the Siamese Chamber of Commerce. Government-owned industries ranged from export, import, transport, and insurance companies to those necessary for military suppliers.

After the shift from near-*laissez-faire* to active State-led interventionism, economic growth picked up sharply, generating a trade surplus, which was used to establish a central bank in 1942. As the Pacific War proceeded, Thailand increasingly leaned toward a controlled economy. Partly driven by its military needs, the Government assumed a monopoly position in key economic sectors such as the rice trade (the largest industry) and the salt, rubber, and tobacco industries. The Government surplus derived from the paddy, and distribution was invested in creating import-substituting industries and public utilities.<sup>2</sup>

After the war, the momentum of State-led modernization, investment, and economic growth continued unabated until the 1950s. Before 1945, 30 State enterprises and public companies were born. Another 19 were founded in 1946–1952, and 37 in 1952–1956. After 1951, the model of Government control over the rice industry was applied to several other industries, including match production, hotels, and gold dealing. Yet, during and after the war, private industry continued to prosper. The system of State-led, bureaucratic paternalism laid the foundation of the modern Thai economy.<sup>3</sup>

### POST-WORLD BANK

The next phase in Thai economic development policy began with an International Bank for Reconstruction and Development (IBRD) mission to Thailand in 1959. The IBRD report recommended shifting emphasis from Government-owned to private industries.<sup>4</sup> Over the next five years, the report's major recommendations were implemented:

<sup>2</sup>Many such investments were financed through the Thai Industrial Development Company, which was established in 1942.

<sup>3</sup>The high degree of institutional continuity from prewar to postwar economic systems is symbolized by the continued leadership role taken by Phibun, who was head of Government for most of 1932–1957.

<sup>4</sup>US President John F. Kennedy wrote personally to Sarit, the head of government, about the IBRD report: "I would like to ask you to study this document seriously. Even though this report does not show the formal US policy towards Thailand, I think it provides the basis of our aid" (Phongpaichit and Baker 1995:127).



- State enterprises in the distribution sector were disbanded.
- Some State factories were privatized.
- No new State enterprises (except for public utilities) were formed.
- Emphasis was placed on educational and administrative development.<sup>5</sup>

Although laws allowed foreign firms to repatriate profits and made it easier for foreigners to occupy land, domestic business remained influential enough to keep tariff protection in place to support import substitution. The tariff structure encouraged capital-goods imports while discouraging consumer goods imports. The weighted average tariff for consumer goods was 42 percent for durables and 34 percent for nondurables in the 1950s and 1960s, but only 19 percent for capital goods. Growth was supported by these institutional changes as well as by (i) a continued rise in factor inputs, especially capital and labor; (ii) strong external demand; and (iii) a large inflow of foreign direct investment. Foreign investment took the form mainly of aid and direct long-term investment, as opposed to more volatile portfolio investment.<sup>6</sup>

In the 1960s, economic growth averaged about 8 percent per year in real GDP terms, with inflation at a modest 2 percent. Manufacturing GDP grew 10.9 percent per year during the first plan period in 1961–1966, 9.2 percent in the second, and 8.4 percent in the third. Increased world demand for primary goods

<sup>5</sup>On the administrative level, the Budget Bureau, National Statistical Office, Board of Investments, and the National Economic Development Board (NEDB, later NESDB), were created. Middle-level staff members in most ministries were drawn from a generation of US-educated technocrats. With the help of US advisers, NEDB drafted five-year economic plans.

<sup>6</sup>Against the background of the Korean War, Cold War, and Vietnam War, the role of the US increased. In 1951–1975, it spent about \$2.5 billion in Thailand on military aid, installations, and troop upkeep. Nonmilitary aid rose to over \$3 billion. World Bank loans to Thailand amounted to almost \$500 million, mostly for public utility projects. Private capital inflows were also substantial: in the late 1960s, they amounted to about B1 billion per year, rising to about B1.5 billion per year in the 1970s. While foreign investment was initially mainly from the US, Japanese investment surpassed US investment in 1973 as Thailand traded more and more with Japan. Nevertheless, foreign capital supplied only 12 percent of total gross capital formation in 1964–1972, and in 1979, 500 of the largest firms were Thai-owned.

and US-funded investments in the transportation sector boosted agricultural exports. The addition of strong capital inflows in the form of foreign direct investment created an unusually strong balance-of-payments situation. Unlike other countries with similar investment-led development strategies, Thailand had few problems with the balance-of-payments constraint.<sup>7</sup>

## POST-OIL SHOCK

By the mid-1970s, the interventionist State-led growth model was still fully intact: the exchange rate was fixed to the US dollar, price controls regulated prices of essential goods, and interest rate ceilings restricted bank behavior. Meanwhile, the Government invested in infrastructure and human resources, and provided foreign investment incentives. With the oil crisis, real growth slowed in the 1970s, although it remained high at almost 7 percent on average. Inflation, however, jumped to 7 percent. The current account recorded a deficit of more than 5 percent of GDP.

These problems, plus the success of the export-oriented economies of Japan; Korea; and Taipei, China; and pressure from the Bank of Thailand (BoT) internally and the World Bank externally, strengthened the case for replacing Thailand's import-substitution approach in favor of export orientation. The fourth five-year plan (1977–1981) advocated an export strategy with an accompanying reduction in import tariffs. However, in reality, changes were small. Due to resistance from ministries and departments that admin-

<sup>7</sup>This was also supported by prudent macroeconomic management, which slowed domestic demand (using credit controls and other tools) when the balance-of-payments deficit appeared to be rising to unacceptable levels. Foreign funds have traditionally augmented domestic savings. The ratio of foreign assets to GDP has traditionally been high in Thailand in order to maintain confidence in the baht and help attract foreign investment. However, since the late 1960s, this ratio declined rapidly. But the banks are generally net borrowers abroad, so their contribution is usually negative. Thus, the drop in foreign assets was due to the fall in BoT foreign exchange reserves, about which there was some early concern. For instance, Panitchpakdi (1981) argues that the reserves helped to deal with short-term economic fluctuations and maintain the stability of the baht.

istered the import licenses, tariffs actually increased in 1973–1981 and the average level of effective protection doubled in 1970–1980.

By 1980, Thailand was still essentially an agricultural and domestic-demand-oriented country. Over 70 percent of the population depended on the agricultural sector. Only 8 percent of the labor force worked in manufacturing and only 13 percent of the population was urban. The top four export items were still rice, tapioca, rubber, and tin, together accounting for 32 percent of all exports. Textiles ranked fifth. Meanwhile, economic growth slowed to only 4.7 percent in real terms in 1980–1984.

### POST-1983–1985 CRISIS

In the first half of the 1980s, the dollar strengthened. With the fixed exchange rate system, Thailand's exports slowed sharply. Refusing to devalue the currency, the Government instead dampened domestic demand in order to restore balance-of-payments equilibrium. A main tool was the imposition of quantitative credit controls, administered by BoT, which required commercial banks to restrict credit growth rate in the first half of 1984 to 9 percent of the 1983 level of credit outstanding and to 18 percent for the rest of the year. The drastic credit restraint program lasted eight months and had a substantial impact on the economy. As credit creation virtually stopped, domestic demand slumped. Asset prices dropped, including stock and land prices. Twelve finance companies were on the verge of default. The Ministry of Finance set up the Financial Institutions Development Fund (FIDF), de facto operated by BoT, to rescue them as well as two minor banks. Eventually, the Government liquidated 24 finance companies and merged another 9, while BoT took over 17, which were subsequently sold. Finally, in November 1984, the baht was devalued and its direct link to the US dollar broken. Instead, an undisclosed "basket" of currencies of major trading partners was used to peg the exchange rate. The dollar weight in this basket was estimated at 80 percent.

The crisis of 1983/84 forced the long-delayed implementation of an export-oriented strategy. Reforms included (i) reduction in import taxes for materials used in manufacturing exports, (ii) special BoT credit facilities for exporters, and (iii) Board of Investment support of foreign investment in export industries. Meanwhile, a lower budget ceiling and tighter controls were imposed on State enterprises. Helped by a sharp fall in oil prices and the dramatic surge of the yen in 1985–1987, the policies significantly boosted exports of goods and services. Since 1985, exports grew at 17.8 percent a year in volume terms, with manufacturing exports, such as textiles, garments, and canned food continuing to increase substantially in the late 1980s. They represented an important structural change in the economy away from agricultural products. In addition, revenue from tourism grew rapidly. While rising by 10–15 percent during the first half of the 1980s, it rose by 34 percent in 1987, during the Visit Thailand Year campaign.

As BoT sharply raised credit growth targets for commercial bank lending, economic growth accelerated from 1985 onward.<sup>8</sup> Real GDP grew 13.2 percent in 1988 and continued to grow at double-digit rates until the end of the decade. Exports were the most dynamic sector of the economy. In 1985–1991, total exports almost quadrupled in value. Manufactured exports rose almost sixfold. In 1990, they accounted for 75 percent of total exports. It can thus be said that in the mid- to late 1980s, the economy was successfully reoriented toward exports and its balance shifted very much in favor of the manufacturing sector. The exports-GDP and imports-GDP ratios rose significantly (Table A2.1). The composition of imports changed from consumer goods to intermediate inputs, while manufacturing goods accounted for an increasing share of total exports. Consumption as a percentage of GDP continued to fall in the 1980s.

<sup>8</sup>Despite prevailing pessimism, economist Olarn Chairprawat (1988) correctly predicted this "golden age" for the Thai economy.

**Table A2.1: Ratios of Exports and Imports to GDP (percent)**

Year	Exports/GDP	Imports/GDP
1980	24.1	30.4
1981	23.8	30.1
1982	22.9	24.6
1983	20.1	27.3
1984	21.9	26.2
1985	23.2	25.9
1986	25.6	23.6
1987	28.9	28.3
1988	33.0	34.4
1989	34.9	37.5
1990	34.1	41.7
1991	36.0	42.5

Source: Bank of Thailand.

### BANK-CENTERED RESOURCE ALLOCATION AND MONETARY TRANSMISSION

Before the 1932 coup, monetary policy was passive as the balance of payments determined the domestic money supply in a one-to-one relationship. High foreign exchange reserves were maintained in order to guarantee economic autonomy and sustain international confidence. Since the coup, the banking system has been at the core of resource allocation and cyclical macroeconomic management policies.

Formed in the 1940s and largely owned by a small number of families, banks rapidly came to dominate the business world, as they were at the core of business groups. Bank-loan growth as well as loan allocation were subject to the informal but de facto binding “guidance” of BoT. At the end of the 1950s, there were 12 Thai and 9 foreign banks. In 1982, there were 16 Thai and 14 foreign banks.<sup>9</sup> However, the foreign banks accounted for a mere 5 percent of total bank assets. Rapid branching out of banks (in 1960, there were 252 commercial bank offices; in 1986, 1,891) helped collect rural surplus savings and raise the sav-

<sup>9</sup>The Siam Commercial Bank, the first domestically owned bank, was established in 1904. Before the 1932 coup, the main banks were branches of foreign banks engaged largely in trade financing. In 1940, there were three Thai-owned and six foreign-owned banks.

ings rate. The ratio of commercial bank assets to GDP increased from only 21 percent in 1962 to 124 percent in 1996 (Tables A2.2 and A2.3). The banks formed an oligopolistic cartel. Competition was restricted by regulations governing interest rates, entry of new banks, and expansion of bank offices.<sup>10</sup>

Banking activity has been highly concentrated. In 1980, 70 percent of all private sector credits from commercial banks were extended to less than 20,000 customers. In 1983, loans in excess of B1 million accounted for 72 percent of all loans; small loans made up only 28 percent (World Bank 1983). This was partly the result of BoT’s interest rate ceiling policy, which implied that banks could not reflect the higher risk and overhead costs of lending to small firms by raising interest charges. Banks, therefore, preferred to lend to large-lot customers. However, the regulated interest rates virtually guaranteed the banks high profits in the form of the margin between the deposit and loan rates.<sup>11</sup>

Banks were also forced to extend credit to the Government when they were required to hold Government bonds as part of the reserve requirement and as a precondition for obtaining permission to open new branches.<sup>12</sup> Due to the crucial importance of

<sup>10</sup>Stiglitz and Uy (1996) argue that barriers to entry may be welfare-enhancing. The case for restrictions is based on the following:

- Prudential concerns, or concerns that excessively competitive banking systems with low profit rates are also excessively fragile. (This is of relevance in the discussion of the 1990s crisis.)
- Efficiency concerns, or concerns that fewer and larger banks may reap economies of scale in information gathering and monitoring.
- The infant-industry argument, or the concern that domestic banks need protection until they can compete with foreign banks on an equal footing.

<sup>11</sup>An institutional detail of relevance for the discussion of the 1997 crisis is that most commercial bank credit takes the form of short-term overdraft loans. It is standard practice for short-term loans to be rolled over, effectively rendering them long-term loans.

<sup>12</sup>Until 1955, the entire Government debt was held by the central bank. In 1960, BoT still held 80 percent of the domestic Government debt while commercial banks held only 5 percent. When banks were allowed to count bond holdings as required reserves, bond holdings at banks rose. By the early 1980s, the share of BoT bond holdings had dropped to about one third and that of the banks had risen to one third. (The Government Savings Bank held one fifth.)

banks for monetary policy, BoT de facto supervised the banks, with the implicit guarantee not to let them go under. During the crisis of 1983/84, the Government and BoT organized rescue operations, establishing FIDF rather than allowing weak institutions to default.

BoT used the following as monetary policy tools: (i) interest ceilings; (ii) compulsory minimum requirements on the banks' capital adequacy ratio; (iii) loan rate at which commercial banks could borrow from the central bank; and, most important, (iv) direct credit controls or "credit guidance." The loan rate changed quite frequently. However, from the 1960s, commercial banks began to borrow more abroad, rendering the loan rate less effective.<sup>13</sup> The key monetary policy, as in many countries, has been direct guidance of the quantity and allocation of credit through credit controls over the private commercial banks, administered by BoT.<sup>14</sup>

The credit controls took the form of both quantitative and qualitative guidance. In qualitative guidance, an important official policy tool has been commercial banks' obligation to lend to agriculture.<sup>15</sup> Other credit guidance instruments include privileged rediscount facilities for loans to manufacturing, agriculture, and exports. The main platforms to implement the policies are the meetings BoT holds with senior bank staff members where the banks' loan portfolios are discussed. Twice a year, banks present their lending plans, which are then assessed and

<sup>13</sup>This has been recognized as a problem in the literature (Nontapunthawat 1973, 1978).

<sup>14</sup>In addition, the Government also used specialized agencies (such as the Bank for Agriculture and Agricultural Cooperatives [BAAC], the Industrial Finance Company of Thailand, the Small Industries Finance Organization, and the Government Housing Bank) to allocate credit. However, they have different macroeconomic functions, as they are not credit-creating institutions.

<sup>15</sup>In 1975, banks were forced to allocate 5 percent of their deposits for agricultural credit. The figure was raised to 15 percent in 1980, of which 2 percent could be loans to agribusiness. In early 1987, it was further increased to 20 percent, but included rural small- and medium-scale industries. Since most banks found it difficult to administer rural loans, many followed the rule by depositing money with BAAC. (In 1981, 57 percent of commercial bank credit to agriculture was lent to farmers via BAAC.)

**Table A2.2: Financial Sector Development: Ratio of Commercial Bank Assets to GDP (%)**

Year	Ratio
1962	21
1970	37
1980	50

Sources: Jansen (1990) and Rozenal (1970).

modified by BoT. However, monitoring of lending takes place much more frequently.<sup>16</sup>

It is fair to say that despite the many postwar reforms, the institutional framework of the economy remained as it was from the late 1930s to 1950s: one based on Government guidance and credit allocation via the banking system, while capital markets remained underdeveloped. Forced savings produced a high savings ratio (still around 25 percent of GDP in the 1980s [Table A2.4]), while credit allocation to productive sectors raised economic growth.

## STRUCTURAL PROBLEMS OF ECONOMIC DEVELOPMENT

While the sixth economic and social development plan (1987–1991) emphasized social development, and the seventh plan's (1991–1996) theme was sustainable development, social and environmental problems remain serious. Per capita income in Thailand rose sharply in recent years: from \$800 in 1985, it doubled by 1991, and rose to \$2,400 in 1994. However, income inequality remained a problem even in the late 1980s. The agricultural sector continued to account for more than half of employment, although its share of GDP had fallen to about 11 percent in the 1990s (Table A2.5). This implies that the majority of the population failed to share in the income gains due to industrialization, as agricultural labor productivity lagged behind.

<sup>16</sup>The credit controls were effective. Credit rationing has been demonstrated by Rozenal (1970) and Vongvivanond (1980), who showed that in the 1960s and 1970s, commercial banks held substantial excess reserves and could have extended more credit than they had.

**Table A2.3: Ratio of Total Assets and Foreign Assets to GDP**

Year	Total Assets of Commercial Banks (B million)	Foreign Assets (B million)	GDP (B million)	Total Assets/GDP (percent)	Foreign Assets/GDP (percent)
1982	426,069	26,377	841,569	50.6	3.1
1983	540,049	24,583	920,989	58.6	2.7
1984	649,359	30,791	988,070	65.7	3.1
1985	713,877	33,655	1,056,496	67.6	3.2
1986	776,691	41,952	1,133,397	68.5	3.7
1987	903,339	38,553	1,299,913	69.5	3.0
1988	1,144,646	44,989	1,559,804	73.4	2.9
1989	1,426,670	70,213	1,856,992	76.8	3.8
1990	1,806,564	56,366	2,183,545	82.7	2.6
1991	2,169,914	72,600	2,506,635	86.6	2.9
1992	2,555,619	77,728	2,830,914	90.3	2.7
1993	3,206,218	157,503	3,170,258	101.1	5.0
1994	4,065,063	169,101	3,630,805	112.0	4.7
1995	5,045,026	235,898	4,188,929	120.4	5.6
1996	5,688,070	179,985	4,598,288	123.7	3.9
1997	7,369,995	470,492	na	na	na
1998: Q1	7,035,724	360,853	na	na	na
Q2	7,253,889	465,780	na	na	na

na = not available.  
Source: Bank of Thailand.

**Table A2.4: Ratio of Savings to GDP**

Year	Savings (B million)	GDP (B million)	Savings/GDP (percent)
1980	146,803	662,482	22.2
1981	159,720	760,356	21.0
1982	188,815	841,569	22.4
1983	202,796	920,989	22.0
1984	222,520	988,070	22.5
1985	244,497	1,056,496	23.1
1986	276,895	1,133,397	24.4
1987	357,480	1,299,913	27.5
1988	499,528	1,559,804	32.0
1989	633,008	1,856,992	34.1
1990	721,083	2,183,545	33.0
1991	869,093	2,506,635	34.7

Source: Bank of Thailand.

Economic success in the 1980s did not narrow the gap between rich and poor or between urban and rural areas. Growth was unbalanced, and in-

**Table A2.5: Employment in Agriculture and Agricultural Share of GDP**

Year	Total Employment (thousand persons)	Employment in Agriculture Sector (thousand persons)	Agriculture/GDP (percent)
1992	30,622	17,209	12.4
1993	30,452	16,149	10.6
1994	29,906	15,041	10.7
1995	30,877	14,418	10.8
1996	31,220	14,161	10.7

Source: Ministry of Labor and Social Welfare and National Statistical Bureau.

come and wealth disparities continued to widen. This was exacerbated by the boom in land and real estate speculation, which further concentrated wealth in the hands of a few. The share of industrial production in GDP rose from 28.7 percent in 1991 to 31.4 percent in 1994, while that of agricultural production dropped from 13.3 to 10.7 percent

for the same period. However, given that agriculture continued to employ about half the labor force, the majority continued to receive low pay while a small group in industry received high pay.<sup>17</sup>

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<sup>17</sup>In 1992, the average income of agricultural workers was only \$385 per person and rising by 11 percent (the lowest rise), while in the industrial and commercial sectors it was \$460 and increasing by 17 percent. White-collar incomes were much higher still.

The low-income strata, whether urban or rural, continued to endure a low quality of life. Slums proliferated as rural workers migrated en masse to Bangkok. Rapid industrialization also caused deforestation, pollution, and other serious environmental problems. The eighth development plan (1996–2001) was supposed to address some of the issues through rural and communal planning. However, with fiscal spending cuts, its policies are likely to suffer.

