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CAPITAL FLOWS AND ECONOMIC CRISIS IN THAILAND

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I. INTRODUCTION

THE economic crisis in Thailand, which started with the flotation of its currency in July 1997, has been attributed to several factors. In my own research on the subject (Medhi 1999a, 1999b, for example), I have listed a total of six factors that contributed to the crisis: namely, financial sector mismanagement, excessive current account deficit, high domestic interest rates and uncontrolled capital flows, a rigid exchange rate, lack of economic leadership on the part of politicians, and decline in export performance. Other scholars of course have different opinions on the relevant causes of the crisis.

In the above mentioned article, I have pointed to uncontrolled capital inflows as one of the factors leading to the crisis, but the amount of attention given to that factor was not sufficient. Recently, many economists have focused upon the importance of excessive capital flows into Thailand as a major cause of currency problems that eventually led to the financial and economic crises. C. H. Kwan (1998), for example, lists rapid capital inflows into Thailand following the establishment of the Bangkok International Banking Facility (BIBF) as one of the three causes of its currency crisis.[1] Bhanupong Nidhiprabha (1999) sounds the alarm of the adverse consequences of capital flows long before the crisis struck. Chawin Leenabanchong (1999) had singles out the overflow of capital into Thailand as a major sin of the past that caused the present economic crisis. Prakarn Arphasil (1999) mentions the Thai authority's concern over the management of economic policies aiming toward stabilization, particularly impacts of foreign capital movements on the economy. In general, the adverse effects of excessive capital flows can be applied to other economies as well. For example, Taya Teizo of the Daiwa Institute of Research of Japan puts it very bluntly: it was neither loose fiscal policy nor excessive supply of central bank credit that precipitated the Asian crisis; it was excessive capital inflows and subsequent outflows (Taya 1999).

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[1] The other two being an overvalued fixed exchange rate and growing competition with China.

In this paper I would like to discuss the role of capital flows in bringing about the Thai economic crisis. Following this introduction, Section II concentrates on financial liberalization during the early 1990s leading up the massive inflow of foreign capital during the mid-1990s, and on the official responses to this new phenomena prior to the crisis. Section III assesses the status of capital flows in the Thai economy during the crisis, and evaluates the management of these capital flows at that time. Section IV is a conclusion that remarks upon policy concerning capital flows in the context of other economic policies.

II. FINANCIAL LIBERALIZATION, CAPITAL INFLOWS, AND THE GOVERNMENT RESPONSE

A. *Financial Reforms and Liberalization*

Strictly speaking, Thai governmental authorities have attempted to initiate reform in the Thai financial sector since the late 1970s. For example, in 1979 the Bank of Thailand established a repurchase market for government bonds at the Bank of Thailand with an eye to further developing Thailand's money market. In 1980, the government helped pass a law giving more freedom to financial institutions in setting their own interest charges. Unfortunately from 1980 to 1985, Thailand suffered economic difficulties brought on by the second oil shock and worldwide recession, which diverted the government's attention to giving priority to the maintenance of financial stability, rather than to the continuation of financial reforms. It was not until the late 1980s, when the economy regained its strength, that Thai authorities began to resume financial reform efforts in earnest.

It may be instructive to discuss the process of financial reform in Thailand in terms of the three Financial System Development Plans proposed by the Bank of Thailand. The First and Second Financial Plans which covered the periods 1990–92 and 1992–95, respectively, were successfully accomplished, and the Third Plan, covering the period from 1995 to the year 2000, was already in place when the crisis struck in mid-1997. During the first two plans, the Bank of Thailand aimed at achieving financial reforms in four areas of (1) liberalization of financial controls and other financial regulations, (2) improvement in financial institution standards, (3) development of financial instruments, and (4) development and improvement of the payments system.

(1) Liberalization of financial controls and other financial regulations included the lifting of ceilings on interest rates, substantial relaxation of exchange controls,[2]

[2] The acceptance of Article 8 of the International Monetary Fund Agreement by the Bank of Thailand on May 20, 1990 is said to the beginning of the financial liberalization process. This acceptance would force Thailand to observe three conditions: (1) allow unrestricted payments and transfers with respect to international current transactions; (2) refrain from preferential treatment regarding international payments including the use of multiple exchange rate system; and (3)

greater flexibility of financial institutions in managing their own assets, and the establishment, in 1993, of the Bangkok International Banking Facility (BIBF). As described in more detail later, the BIDF, in effect, set up offshore banking facilities for either raising funds overseas and lending them domestically (out-in lending), or raising funds overseas for lending outside Thailand (out-out lending).

(2) Improvement in financial institutions standards included the adoption of "capital adequacy" in their operations as specified by the Bank for International Settlements (BIS), which was to increase from 7 to 8 per cent (and later to 8.5 per cent). The Bank of Thailand also required commercial banks to double their cash reserves in expectation of bad debts, and keep adequate capital with regards to their foreign exchange transactions. A new financial authority, the Securities Exchange Commission (SEC), was set up in 1992 to oversee the operations of the securities market in Thailand. This effectively separated the Bank of Thailand from capital market oversight, so that it could concentrate solely on financial markets. Finally, the finance and securities business was allowed to separate operations into finance and securities companies, in order to ensure financial stability.

(3) Development of financial instruments saw the standardization of tax rates on income from various financial instruments, the abolition of income taxes of less than 10,000 baht from time deposits, the setting up of seven more mutual funds companies, the establishment of the Thailand Rating and Information Service (TRIS) as the first public-support credit rating company in Thailand to help promote the issuing of bonds and other debt instruments of private companies and public enterprises to private and institutional investors, the setting up of the first Export-Import Bank to take over the previous export-promotion activities of the Bank of Thailand, authorization for domestic private companies to float bonds overseas, and the setting up of the Bangkok Centre for Securities Trading for over-the-counter trading of securities and other debt instruments.

(4) The move to develop and improve payment systems saw the Bank of Thailand initiating greater use of electronic means to clear cheques and effect transfers for both large and smaller customers. Now, cheques in Bangkok can be cleared in one day, helping to reduce the small amount of daily unpaid accounts between banks which, in turn, helps reduce the destabilizing chain effect in case any bank is having payment difficulties.

The Third Financial System Development Plan was launched in early 1995 to

accept local currencies of other member countries through current transactions. Several rounds of exchange control deregulations followed, which saw, for example, the Bank of Thailand granting all commercial banks the authority to approve most purchases of foreign exchange (except for the purpose of property or equity purchase overseas); measures allowing the repatriation of investment funds, dividends and profits as well as loan repayments and interest payment without requiring prior authorization, allowing unrestricted direct foreign investment by Thai residents to their affiliated companies abroad to an amount not exceeding U.S.$10 million, allowing the setting up of foreign exchange accounts in Thailand as well as baht accounts of nonresidents.

cover the periods from March 1995 to February 2000. It was different from the previous two plans in the sense that it was a result of coordination between three organizations: the Bank of Thailand, the Ministry of Finance, and the Securities Exchange Commission. This Third Plan aims at achieving seven major objectives:

1. Expand the current operations of financial institutions,
2. Further develop the domestic financial structure,
3. Promote efficiency in competition and the liberalization of the Thai financial system,
4. Promote the redistribution of economic prosperity from the center to the countryside,
5. Correct oversights in financial institutions and the financial system,
6. Foster financial personnel and proper financial ethics, and
7. Develop Thailand into a regional financial center.

Some measures contained in this third plan were the continuation of measures in the previous two plans. For example, with regards to an increase in competition in the banking system, five more commercial banks were allowed to setup; greater foreign bank operations (such as the establishment of more branches) was allowed up to 1997; new brokers in the stock market were to freely admitted within the plan period; and foreign investment by Thai nationals would be further encouraged. With regards to developing Thailand into a regional financial center, the government was urged to start with reforming the tax structure governing offshore banking activities, making them competitive with other regional financial centers. The creation of a "baht zone" in the Thai trade and investment with neighboring Indochinese countries would enhance the prospect of Thailand becoming the financial center of this subregion. The promotion of deposit and lending of foreign currencies in Thailand could lead to the Bangkok Interbank Offering Rate (BIBOR), another milestone of Thailand's drive toward becoming a regional financial center.

B. *Capital Inflows and Resulting Macroeconomic Effects*

It is quite obvious from the above financial reform measures that the Thai monetary authorities were quite serious about transforming the financial sector from a developing financial system to an advanced one. Unfortunately, the events which unfolded in 1996 and 1997 completely scuttled the above plans, one of the major causes being excessive capital inflows which led to later debilitating capital outflows.

Capital flows into Thailand can be classified in different ways. The Bank of Thailand classifies net private capital flows into bank and nonbank categories. Capital flows to commercial banks and BIBF are included in the bank category. In the nonbank category, five main items are included: direct investment, other foreign loans, portfolio investment, nonresident baht accounts, and trade credits. Tables I and II show net private capital flows or net flows of private financial accounts.

TABLE I

COMPOSITION OF NET FLOWS OF PRIVATE FINANCIAL ACCOUNTS, 1987–99

(Millions of bahts)

	Average		
	1987–91	1992–96	1997–99Q1
Bank		179,277	–336,781
	(6.5)	(50.4)	(86.5)
Nonbank		176,362	–52,609
	(93.5)	(49.6)	(13.5)
Direct investment		35,034	110,775
	(22.0)	(9.9)	(–28.4)
Other loans		7,472	–121,287
	(35.2)	(2.1)	(31.1)
Portfolio investment		66,840	57,239
	(9.1)	(18.8)	(–14.7)
Nonresident baht account		64,284	–94,461
	(17.5)	(18.1)	(24.3)
Trade credits and others		2,732	–8,170
		(0.8)	(2.1)
Total		355,639	–389,391

Source: Bank of Thailand. For 1987–91, Bhanupong Nidhiprabha (1998).
Note: Figures in parentheses are % of total net flows.

Table I shows that between 1992 and 1996 more than 355 billion bahts worth of capital flowed into Thailand. The pattern of capital inflows also changed. Between 1987 and 1991, most capital inflows came from nonbank sources (93.5 per cent). Financial liberalization during the early 1990s enabled commercial banks and off-shore banking facilities (BIBF) to effect enormous capital inflows, and changing the share of the bank-source capital inflows from 6.5 per cent for 1987–91 period to 50.4 per cent during1992–96. Here is the first evidence of the so-called success of capital-account opening in the financial liberalization packages.

External-sector financial liberalization was not the only factor in explaining the massive capital inflows from overseas. Another important factor causing capital to flow into Thailand was the interest differential between Thailand and foreign money markets. As shown in Table III, the prime lending rate in Thailand, the Minimum Lending Rate or MLR, has always been higher than foreign interest rates such as the LIBOR or the Federal Funds Rate, and this wide interest differential provided incentives for commercial banks and finance companies in Thailand to borrow funds from foreign markets and bring them into Thailand. These commercial banks no longer needed to depend entirely on local bank deposits as their major source of funds for lending. They could easily acquire money overseas, and cheaply. It is no wonder that the growth in bank lending exceeded the growth in bank deposits by a wide margin during 1994 and 1996, as shown in Figure 1.

TABLE II

NET FLOWS OF PRIVATE FINANCIAL ACCOUNTS

(Millions of bahts)

	1997				1998				1999
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Bank	61,218	935	−191,070	−124,108	−69,371	−156,573	−179,800	−155,011	−196,562
Commercial bank	39,132	−7,055	−146,919	−61,795	29,329	−70,811	−100,350	−26,515	−125,372
—Recap.	0	0	0	0	39,444	46,314	0	0	783
BIBF	22,087	7,989	−44,152	−62,313	−98,700	−85,762	−79,451	−128,496	−71,189
Nonbank	−15,104	−23,413	−31,405	21,457	−131,369	69,181	51,411	−81,404	−17,182
Direct investment	13,649	14,707	37,798	39,112	47,866	59,721	49,996	35,962	33,514
FDI	16,907	20,186	39,905	40,691	48,010	60,163	51,224	38,867	36,968
TDI	−3,258	−5,479	−2,107	−1,579	−144	−442	−1,230	−2,905	−3,454
Other loans	−2,971	−21,881	−28,266	−80,107	−96,661	−32,575	−30,257	−25,210	−45,934
Portfolio investment	13,191	31,775	78,246	15,768	21,037	1,914	−696	2,286	8,196
—Equity securities	10,744	22,830	68,546	20,201	21,159	−5,731	−3,158	4,562	8,528
—Debt securities	2,447	8,945	9,700	−4,433	−122	7,645	2,462	−2,276	−332
Nonresident baht a/c	−43,773	−46,583	−127,196	61,277	−102,971	45,944	32,375	−90,782	−11,675
Trade credit and others	4,800	−1,431	8,013	−14,593	−640	−5,823	−7	−3,660	−11,168
Total	46,114	−22,478	−222,475	−102,651	−200,740	−87,392	−128,389	−236,415	−213,744

Source: Financial Account and External Debt Analysis Section, International Department, Bank of Thailand.

TABLE III

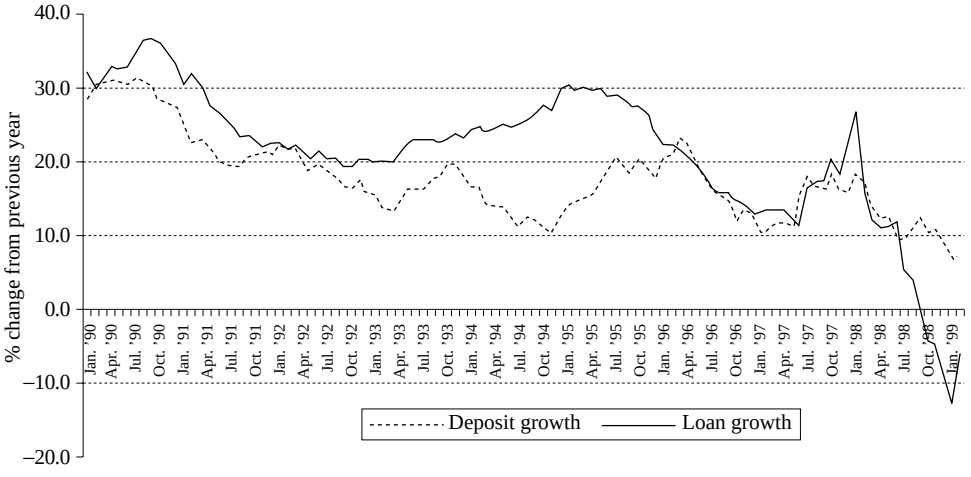
INTEREST RATE DIFFERENTIALS

Year/Qtr.	MLR	LIBOR	Fed. Funds Rate	Fixed 12 Mo.	Differential	
					MLR – Fixed	MLR – LIBOR
1992 Q1	12.50	4.20	4.00	9.83	2.67	8.30
Q2	12.00	3.90	3.75	8.67	3.33	8.10
Q3	12.00	3.10	3.00	9.00	3.00	8.90
Q4	11.50	3.00	3.00	8.67	2.83	8.50
1993 Q1	11.25	3.10	3.00	8.50	2.75	8.15
Q2	11.25	3.10	3.00	8.50	2.75	8.15
Q3	11.25	3.10	3.00	8.50	2.75	8.15
Q4	10.50	3.00	3.00	7.33	3.17	7.50
1994 Q1	10.00	3.70	3.50	6.67	3.33	6.30
Q2	11.00	4.60	4.25	7.17	3.83	6.40
Q3	11.50	5.10	4.75	7.75	3.75	6.40
Q4	11.75	6.00	5.50	8.17	3.58	5.75
1995 Q1	13.00	6.10	6.00	9.08	3.92	6.90
Q2	13.50	6.10	6.00	10.25	3.25	7.40
Q3	13.50	5.90	5.75	10.25	3.25	7.60
Q4	13.75	5.90	5.50	10.25	3.50	7.85
1996 Q1	13.75	5.38	5.25	10.00	3.75	8.37
Q2	13.25	5.52	5.25	9.33	3.92	7.73
Q3	13.25	5.63	5.25	8.81	4.44	7.62
Q4	13.25	5.50	5.25	8.00	5.25	7.75
1997 Q1	13.13	5.40	5.24	8.88	4.25	7.73
Q2	12.88	5.54	5.52	8.46	4.42	7.34
Q3	13.92	5.54	5.56	10.75	3.17	8.38
Q4	14.92	5.65	5.55	11.00	3.92	9.27
1998 Q1	15.38	5.54	6.13	11.00	4.38	9.84
Q2	15.38	5.54	6.00	11.00	4.38	9.84
Q3	14.96	5.51	5.75	9.79	5.17	9.45
Q4	12.63	5.27	4.75	6.54	6.08	7.36
1999 Q1	10.42	4.84	5.13	5.29	5.13	5.57

Source: Bhanupong Nidhiprabha (1998). For 1997–99, *Monthly Bulletin* (Bank of Thailand), various issues.

The role of BIBF in raising foreign capital from the time of its establishment in 1993 straight through the crisis deserves special attention. BIBF facilities allowed licensed banks to mobilize funds from abroad (either as borrowings or deposits) and either on-lend the funds to Thai residents (out-in transactions) or to nonresidents (out-out transactions). All lending had to be done in foreign currency. The Bank of Thailand promoted these offshore banking facilities as part of its plan to transform Bangkok into a regional financial center. The Thai private sector was also

Fig. 1. Bank Deposits and Loan Growth



able to benefit from the more convenient access to the international capital market. Since Thailand's capital account is fully open on the inflow side and there are no restrictions on foreign borrowing by the private sector, the introduction of BIBF made such borrowing more convenient with the presence of many offshore banks in Thailand. Several incentives were offered to licensed banks, such as a reduction in corporate income taxes from 30 per cent to 10 per cent, exemptions from specific sales taxes, exemptions from stamp duties, and exemptions from taxation on the permanent establishment of offices in Thailand.

Despite this increased convenience for local Thai firms, the Thai authorities probably would have liked the BIBF to generate more out-out activities rather than out-in activities (see Table IV and Figure 2). As it turned out, all the lending in the first two years was almost completely of the out-in variety. Only from the beginning of 1995 could one see any out-out lending, while out-in lending continued to climb. Figure 2 shows this lopsided concentration of BIBF lending by offshore banks to local firms. Before the crisis in 1997, total BIBF lending was more than 1.2 trillion bahts, jumping to more than 2 trillion due to the drastic devaluation of the local currency. In short, if massive capital inflows were to blame for all the economic ills and the crisis that followed, the BIBF must share part of the responsibility.

As pointed out by the Bank of Thailand (1996a, 1996b), the establishment of BIBF led to two important changes in the structure of Thailand's balance of payments and external debt. The first was, of course, the rapid growth of offshore borrowing by Thai residents through BIBF. This growth reflected both a switch in new borrowing to BIBF and shifts in capital inflows from other types of financing to BIBF. We call these shifts "rebooking" borrowing by existing commercial bank

TABLE IV

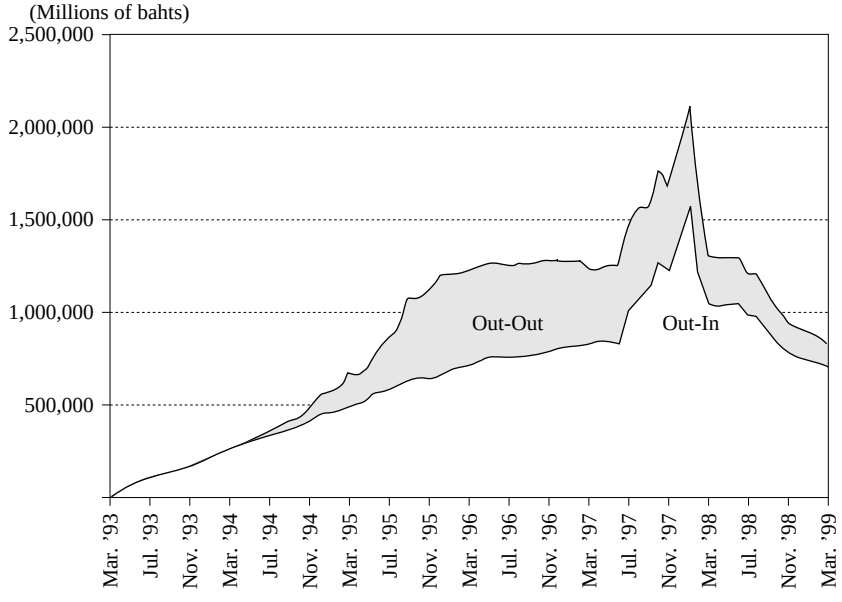
BANGKOK INTERNATIONAL BANKING FACILITIES (BIBF) LENDING

(Millions of bahts)

End of Period	1993	1994	1995	1996	1997	1998	1999 Q1
Out-In	197,024.4	456,643.0	680,517.2	807,633.2	1,411,362.9	767,029.4	709,042.6
Thai banks	126,690.9	189,826.3	254,561.8	330,040.2	514,058.1	213,504.1	181,020.8
Foreign banks with full branch(es) in Thailand	50,768.1	102,249.1	152,370.9	222,794.9	690,449.9	431,931.1	411,406.9
Other BIBF units	19,565.4	164,567.6	273,584.5	254,798.1	206,854.9	121,594.2	116,614.9
Out-Out	3,789.2	100,833.2	517,044.5	482,558.5	471,081.7	148,493.7	119,266.0
Thai banks	2,563.2	11,587.5	10,818.3	16,318.0	35,363.0	28,982.1	26,041.1
Foreign banks with full branch(es) in Thailand	348.2	1,996.3	4,847.8	9,363.3	264,348.3	89,131.7	67,818.5
Other BIBF Units	877.8	87,249.4	501,378.4	456,877.2	171,370.4	30,379.9	25,406.4
Total	200,813.6	557,476.2	1,197,561.7	1,290,191.7	1,882,444.6	915,523.1	828,308.6
Thai banks	129,254.1	201,413.8	265,380.1	346,358.2	549,421.1	242,486.2	207,061.9
Foreign banks with full branch(es) in Thailand	51,116.3	104,245.4	157,218.7	232,158.2	954,798.2	521,062.8	479,225.4
Other BIBF units	20,443.2	251,817.0	774,962.9	711,675.3	378,225.3	151,974.1	142,021.3

Source: Bank of Thailand.

Fig. 2. BIBF Lending, 1993–99



and the nonbank private sector into BIBF accounts. The extent of this rebooking was quite large, as evidenced in the sudden drop in the percentage of foreign direct investment (FDI) within the balance of payments between 1993 and 1994. The second change was a significant shortening of Thailand's external debt maturity, which came about partly as a result of a change in the way in which BIBF banks made funds available to local borrowers. When the BIBF funded their domestic long-term loans through overseas revolving facilities, balance of payments accounting would record these transactions as short-term. Therefore, with the rapid growth of BIBF lending, the reported short-term liabilities of banks in Thailand increased dramatically, mainly reflecting such short-term funding by BIBF. Despite the insistence by the Bank of Thailand that a large part of these short-term capital inflows were for long-term projects and that the bulk of short-term liabilities of Thai banks were not related to speculative inflows or activities, the sheer size and the speed of the increase is overall short-term liabilities put Thailand at great risk.[3] At the end of 1995, Thailand's total external debt amounted to some U.S.$82.6 billion, of which total private debt accounted for about U.S.$66.2 billion or about 80 per cent. Of these private sector debts, about 63 per cent were short-term debts, the bulk of which were incurred through BIBF. The ratio of short-term debt to total private debt has declined somewhat in later years to about half at the end of 1997.

[3] For example, only about 10 per cent of BIBF loans were allocated to real estate development. See, Bank of Thailand (1996b, p. 17).

Apart from greater exposure to risk of sudden capital outflows, the influx of cheap capital into Thailand also created several other related problems. Although it may be argued that not a large proportion of these foreign funds was officially lent to the real estate sector or for speculative purposes in the stock market, the truth is that inflows of easy money generated income and wealth effects typical of a boom or bubble economy. A "get-rich-quick" attitude spread pervasively among the middle class and business community. We often saw manufacturers redirecting their bank loans away from the production sector to invest in real estate or the stock market during the boom period.[4] The adoption of a free capital movement system in a fixed exchange rate regime made it very difficult, if not impossible, for the Bank of Thailand to use its monetary policy to promote stability in the macroeconomic system. If the monetary authorities used high interest rates to deter credit expansion, banks and finance companies could always get their cheap loans from outside or through BIBF. High interest rates in fact stimulated greater inflow of capital from cheaper sources. The poor export performance of 1996 triggered the first wave of doubts concerning the ability of Thailand to service its large current account deficit. And despite a reasonable enough belief on the part of the Bank of Thailand that the current account deficit, which was more than compensated by enormous capital inflows, was nothing to worry about, the depletion of foreign reserves that occurred as a result of its failure to defend against a speculative attack on the baht during 1996 and the first half of 1997 brought about a currency crisis which later turned into an economic crisis.[5]

C. *Official Responses*

The Thai monetary authorities did recognize all the above problems associated with large, rapid short-term capital inflows and were trying to do something about it. When the Bank of Thailand realized that short-term capital inflows had become excessive, it introduced a number of measures aimed at discouraging such inflows and influencing the maturity structure of foreign borrowing by banks. The following are some of those measures:

(a) Effective from August 8, 1995, commercial banks were required to deposit at the Bank of Thailand (with no interest) 7 per cent of their nonresident baht deposits with maturity of less than one year. This measure aimed at increasing the

[4] The Mitsubishi Motors Corp. in Thailand was involved in a case similar to this. One of its large dealers used almost all of its sales receipts from Mitsubishi cars to invest in its extra real property business instead of turning them over to the company right away. Without proper payments to the company, car ownership papers could not be processed. Several buyers, who had paid for the cars in full, had to wait up to one year to get their ownership papers. The car dealer had had problems with its investment in real estate even before the crisis and could not pay back the "unintended loans" to the company.

[5] The Bank of Thailand had valid reasons to feel less threatened about the high and rising current account deficit. See those reasons in Appendix.

cost of raising short-term deposits from abroad and led to lower rates for short-term nonresident deposits.

(b) Effective from April 4, 1996, finance companies were required to do the same as commercial banks referred in (a).

(c) Effective from June 23, 1996, commercial banks, BIBF, and finance companies were required to deposit at the Bank of Thailand 7 per cent of their new short-term external borrowings on a gross basis. This measure was aimed at influencing the maturity structure of foreign borrowing by banks from short to longer term maturity.

The above measures helped reduce the relative share of short-term capital somewhat. From the peak of about 50 per cent of all external debts in 1995, the share of short-term external debt fell to less than 33 per cent in June 1998. Yet, as the Bank of Thailand observed, the decline in short-term debt was not strong enough to prevent capital flight, as foreign capital continued to flow out from the second quarter of the 1997 in line with weakened economic fundamentals, such as poor export performance amidst continued current account deficits (see Bank of Thailand [1998], Box D).

Despite the difficulties in enforcing monetary policy under the conditions of free capital movement and fixed exchange rates, the Bank of Thailand did attempt to introduce contractionary monetary policy in 1995 to cope with current account deficits and inflation. According to Bhanupong (1998, p. 208), the maximum rate of bank credit expansion was set at 24 per cent in 1995, and with the aim of slowing down the overheated economy, the maximum credit growth was reduced to 21 per cent in 1996. The maximum loan-deposit ratio of 117 was also imposed in 1995, but apparently this was not strong enough to dampen growth and discourage loan demand. Bhanupong argues that such policy could only discourage foreign borrowing by banks that were not able to generate domestic deposits to keep up with their loan growth; thus it could not deter foreign borrowing among those banks that could attract adequate deposits.

One well-known policy measure that a central bank can use to cope with excessive inflows of foreign capital is the sterilization process. This is usually done through open market operations, where the government absorbs excess liquidity through sales of government bonds or other debt instruments. It has been often argued that sterilization through open market operations was not feasible in Thailand, because the supply of government bonds was too limited. Although the Bank of Thailand could issue its own bonds, the amount would be insignificant compared to the size of capital inflows. Again, according to Bhanupong (1998), sterilization would have been costly if the interest rate on domestic bonds were higher than the rate which foreign exchange reserves could earn in the international money market. For him, sterilization would continue to be an excessively costly means to insulate the monetary base from capital inflows as long as the thirty-year U.S. Treasury bond yield

was below 7 per cent, and the interest rate on fixed deposits in Thailand was over 10 per cent.

However, a study by Chawin (1999) has shown that the Bank of Thailand succeeded in conducting some forms of sterilization. In his estimation model, the inflow of foreign capital will lead to increases in the international reserves resulting in pressure to increase the domestic money supply. In order to neutralize the effects of these inflows on domestic credit creation, increases in capital inflows must lead to a fall in commercial bank credit and vice versa. A time-series study using data from 1984 to 1998 regressing the total capital flows on commercial bank credits shows the expected result: that is, commercial bank credit is negatively related to total capital flows, although the percentage change in commercial bank credit is smaller than the percentage change in total capital flows.[6]

Another official response to large capital inflows was the use of forward premiums on foreign exchange. In the case of the baht, any news or rumors about its depreciation would move the forward rate up and down. This forward rate also changed in response to changes in interest rate differentials. An analysis by Bhanupong (1998) shows that a rising implied interest rate, or the cost of forward-covered foreign borrowings, helped deter capital inflows, which would be larger in the absence of upward adjustments in the forward premium rate.

Finally, four years of grappling with the problems of excessive capital inflows brought Thailand to the final showdown in the foreign exchange market. It was alluded to earlier how the defense of the baht failed, culminating in its flotation and subsequent sinking. In the closing part of this section, I would like to cite the report of the Commission to Study and Recommend Measures to Improve the Efficiency in the Management of the Financial System of Thailand, the Nukul Commission Report for short (Nukul 1998), criticizing the Bank of Thailand for the way it handled exchange rate management. Criticism included a lack of coordination among the governor and his deputy governors; an insistence on the part of policy makers at the bank to protect and maintain a virtually fixed exchange rate system; the lack of guidance from top government leaders; especially the Finance Minister and the Prime Minister himself; the adoption of the swap system in the foreign market that masked the serious nature of currency attack; and the careless ways in which pre-

[6] The estimation equation used by Chawin is:

$$K = K_0 - b\Delta CBC,$$

where K is total capital flows; K_0 represents capital flows which are not directly related to domestic credit creation such as foreign direct investment; b is a parameter called the offset coefficient. If b is close to 1, it can be interpreted that there appears to be a full offset through sterilization, and vice versa for b close to zero. The result of the estimation reported by Chawin is:

$$K = 206{,}191.3 - 0.73\Delta CBC, \quad R^2 = 0.33, \ F\text{-stat.} = 5.91.$$
$$(4.16) \qquad (-2.43)$$

Both estimated coefficient and constant are statistically significant at the 99 per cent level. See Chawin (1999, p. 11).

cious foreign exchange reserves were squandered within a short period of time.[7] According to the Nukul report, out of the U.S.$38.65 billion in reserves at the beginning of 1997, the bank used more than U.S.$36 billion to defend the baht. By mid-May 1997, only U.S.$2.5 billion of reserves were left in the bank. It was no longer possible for the bank to defend the baht. The end came on June 29, 1997, when the government decided to let go of the peg system, then waited until mid-year accounts were closed on July 1, 1997 to announce the flotation of the baht in early morning of July 2.

III. CAPITAL FLOWS AND CAPITAL MANAGEMENT DURING THE CRISIS

A. *Capital Flows during the Crisis*

Capital outflows, which had already started in December 1996, accelerated after the flotation of the baht. A debt run had occurred. As shown in Table II, the outflow of capital increased ten times in the third quarter of 1997 compared to the second quarter (−222.5 billion baht in Q3/1997 as against −22.5 billion baht in Q2/1997). Table II also shows that hundreds of billions of bahts worth of capital have continued to flow out of the country during every quarter since 1997. Of course there were some inflows of capital carried out by the bank and nonbank sectors, including standby credits under the IMF rescue package and other loans from the World Bank, the Asian Development Bank, the Japanese Overseas Economic Cooperation Fund, and the Export-Import Bank of Japan, but these inflows were much smaller by comparison. The enormous outflows put a tremendous squeeze on the domestic liquidity situation, and this so-called credit crunch forced several firms to go bankrupt. As shown in Table I, capital outflows during the past two years since 1997 through first quarter 1999 amounted to some 389,391 billion bahts. These outflows were larger than the total amount of inflows between 1992 and 1996.

Looking into details of net capital flows over the past two years of economic

[7] In a recent article, the Bank of Thailand has defended its practice of foreign exchange swapping during the severe speculative attacks on the baht in 1996 and 1997 (Bank of Thailand 1998). Since sterilization was not feasible due to a shortage of bond issues, capital outflows resulting from speculative activities could be partially neutralized by a swap arrangement, whereby the bank buys local currency using its foreign reserves with a plan to sell it later. In this way the pressure on domestic liquidity and interest rates associated with capital outflows would not occur with this buy/sell swap. This is true in normal foreign exchange transactions; but under abnormal and repeated speculative attacks, the bank must have had large enough foreign reserves not only to sell foreign currency in the spot market but also to inject local currency back into the market by drawing down on its foreign reserves position. The situation became very complicated when the attacks involved not only the spot market but the forward market as well. The Nukul Commission was of the opinion that the bank should not have artificially created a balanced position through swap arrangements, but should have assessed the threat on its reserves squarely and retreat when the loss of reserves became intolerable.

crisis, one notices that more serious outflows occurred in the bank sector (–336,781 billion baht) compared to the nonbank sector (–52,609 billion baht). Table I shows that net capital flow was positive for two items: direct investment and portfolio investment. Foreign direct investment was, as a rule, not new investment, but rather replenishment of the capital of existing firms, especially Japanese firms. The total net flow of FDI was about 110,775 billion bahts for the two years of crisis. Inflow of capital for portfolio investment purposes continued throughout the crisis, in order to exploit the securities market, whose values had become very cheap due to economic recession. Table II shows a more detailed breakdown of the net capital flows. The outflows through BIBF were as drastic as the inflows during the early 1990s, reaching the highest level of –128,496 billion bahts in the fourth quarter of 1998. Two large inflows of funds for commercial bank recapitalization during the first two quarters of 1998 had helped the overall figures somewhat. Otherwise, the magnitude and severity of capital outflows from Thailand during the crisis is as bad as we mentioned at the beginning of this article.

Nonbank net capital flows classified by country offer another interesting picture. Information on these nonbank net capital flows by country is provided by the Bank of Thailand in its publication, the *Monthly Bulletin*. On portfolio investment, the data in the *Monthly Bulletin* shows the United States as the major country trading with Thailand that generated the largest outflows of portfolio investment. In the fourth quarter of 1997, for example, as much as 15,714 million bahts were withdrawn from Thailand back to the United States. On the contrary, Hong Kong and Singapore continued to provide sources of portfolio investment as they had done in the past. Japan's role regarding this type of investment was by and large negligible, since Japanese firms and individuals were not as a rule interested in this type of investment. The Japanese were much more active in equity investment, but so were the Americans. These countries were the two largest suppliers of foreign capital for equity purpose. Concerning FDI, Japan by far provided the largest source of foreign funds, followed by the United States. So, it seems that to a small extent, nonbank sector capital flows counterbalanced the dramatic outflows of capital from the bank sector.

B. *Capital Management during the Crisis*

At the end of the first quarter 1999, capital still continued to flow out of Thailand. When is this situation going to stop?[8] As long as confidence among foreign investors is not restored, capital outflow cannot be reverted. One of the very first condi-

[8] It was reported in the *Nation*, a daily newspaper, on Monday July 12, 1999 that according to the Governor of the Bank of Thailand, the total capital outflow during the first six months of 1999 amounted to some U.S.$6 billion and that this trend would continue for some time. Furthermore, the Bank of Thailand was not in a position to do anything to change this trend since the foreign debt payment by the private sector was the major reason for this outflow.

tions that will revive investor confidence is regaining stability in the exchange rate, which Thailand did achieve after about half a year into the crisis. The depreciation of the baht had proceeded very rapidly from 26 baht to the U.S. dollar on July 1, 1997 to 55 baht at the end of January 1998. Since then the baht has stabilized. From the peak of 55 baht to the U.S. dollar, the baht appreciated to around 41 and 42 baht for several months. Then from October 1998 onward, the exchange rate fluctuated in a narrow range between 36 and 38 baht. The baht seemed to have found its stable position.

Stabilization did not come easily. The Thai government under the leadership of Chuan Leekpai, the Prime Minister, and Tarrin Nimmanahaeminda, the Finance Minister, went through a painful period of adjustment on all fronts. First, the financial sector was totally restructured. Unhealthy banks and finance companies were closed down, while those which remained were asked to recapitalize as quickly as possible either by themselves, through participation from stable foreign banks or by joining the government scheme. The assets of the failed banks and finance companies were either auctioned off or taken over quickly by two special financial institutions, the Financial Restructuring Authority (FRA) and the Asset Management Corporation (AMC), which were created especially for the purpose of this financial restructuring. Monetary policy was designed and implemented to maintain a stable growth in the money supply to prevent inflation. As for fiscal policy, the IMF first asked the Thai government to cut down on public expenditure and increase the consumption tax. This was mainly to save as much public funds as possible to pay back the bail-out loans that the Thai banking sector had borrowed from the central bank. However, this contractionary fiscal policy caused too severe a contraction in the economy, so the policy stance was reversed. Toward the end of 1997, the Thai government was asked to spend more and act as a stimulator of aggregate demand in the overall economy. Current accounts improved quickly. A dramatic fall in imports combined with improved performance in exports (at least in terms of bahts) caused a reversal in the current account balance from deficit to surplus. Corporate debt restructuring, which was regarded as a necessary precondition for reducing the huge non-performing loans (NPLs), received a quick start, but became bogged down again by the inability of the government to change the bankruptcy and foreclosure laws quickly enough. Once a new bankruptcy law was passed in late 1998, however, the prospects for corporate restructuring have become much more promising. The Bank of Thailand is now trying to play an active part in mediating corporate debt restructuring. It is expected that the majority of outstanding corporate debts will be restructured by the end of 1999, so that commercial banks can begin providing credit again after their long fight with NPLs.

In order to manage capital flows during the crisis, the current government has depended on several international organizations for foreign funds. The IMF of course provided the first batch of funds worth U.S.$17.2 billion to replenish depleted for-

eign reserves. The Thai government also borrowed from the World Bank, Asian Development Bank, and various Japanese government agencies as mentioned earlier. This borrowing helped the Thai government carry out necessary social safety-net spending for the general public in education, health, social welfare, and public works. The largest borrowing was from the Japanese government under the so-called New Miyazawa Initiative worth more than U.S.$1.85 billion. These foreign funds coupled with internal policies to stimulate domestic demand, such as increased budget deficits and tax reduction, are expected to lift the Thai economy out of recession and crisis within the next couple of years.

As capital starts to flow back into Thailand, the same question may be asked: How much capital should be allowed to flow into Thailand and in what forms? We have learned from the past that short-term capital lent out unwisely created the troubles that brought about the economic crisis. The issue of a sustainable level of capital flow should become a relevant topic in the near future. Already, several researchers have tried to set some conditions to guide the government toward a sustainable level of capital flow. Chawin (1999), for example, used the economic model constructed by Uri Dadush et al. (1997) to test the sustainability of past capital flow in Thailand with an eye to adopting some rules for future flows. Defining sustainable capital inflow (SCF) as the difference between export growth and interest rates weighted by the foreign liability to export ratio,[9] Chawin found that for the period between 1986 and 1997, the average foreign liability to export ratio was about 1.48, while the average growth in exports and interest rates were 19.49 and 6.22, respectively. This meant that the sustainable capital flow should on average be about 1.48 (19.49 – 6.22) = 19.64 per cent of average export value of about U.S.$32,263 million, or approximately U.S.$6,338 million per year. This amount of sustainable capital inflow was consistently smaller than the actual inflow, indicating over-financing of the current account deficit in Thailand. During 1996–97, the SCF became negative, reflecting the fact that export growth rates fell below interest rates. In 1997 capital flow was reversed as an outcome of a slowdown in export growth and the unsustainable current account deficit from previous periods.

Thus far it has often been taken for granted that large short-term debt puts a country at risk when the run on the debt occurs and large amounts of capital flow out of the country. Recently, Rodrik and Velasco (1999) have constructed a model to depict the optimal level of short-term borrowing: not too much, not too little. There are several implications for Thailand from the results of their study. For example, they concluded that (1) runs could only occur when investors incurred significantly large amounts of short-term debt; (2) the larger the stock of short-term debt, the larger the size of a run, if it occurs; (3) that the larger the stock of short-term debt, the larger the real consequences (in terms of costly liquidation and re-

[9] $SCF = k$ (export growth – interest rate) / export, where k is a target foreign liability to export ratio.

duced output and consumption) of a run, if it occurs; and (4) distorted incentives could readily cause investors to take on short-term debt, even if doing so is socially costly. They also observed that there was a tight relationship between the magnitude of the collapse in growth, as a result of capital outflows, inducing crisis, and the pre-existing short-term foreign debt exposure measured in relation to reserves. This relationship could be explained in part by greater downward pressure on the exchange rate when the economy becomes highly illiquid in the aftermath of capital outflow. A collapse of the exchange rate caused by financial panic causes trouble in private-sector balance sheets and absorption, bringing about strong recessionary effects in the short run. Rodrik and Velasco claim that in the case of East Asia, there was indeed a strong correlation between short-term debt and the extent of currency depreciation following the collapse of the Thai baht in July 1997. In other words, those countries having high short-term debt to foreign reserve ratios (the Republic of Korea, Indonesia, and Thailand) experienced greater depreciation of their currencies than those countries having low ratios (the Philippines, Malaysia, and Taiwan).

IV. CONCLUDING REMARKS: CAPITAL CONTROLS VS. FREE CAPITAL MOBILITY

In this article I have discussed the importance of capital inflows in generating the rapid expansion experienced by the Thai economy during the latter half of the 1980s and the first half of the 1990s. These massive inflow in response to both government policy to liberalize the Thai financial sector and interest rate differentials between Thai and overseas money markets contributed to a bubble economy in Thailand, where over-lending and over-spending for speculative purposes in the real estate sector and in stock market finally led to the collapse of the economy. Then ensuing massive capital outflow caused a massive credit crunch in Thailand, leaving a mountain of unpaid debts. The Thai government has slowly put the economy back into shape by heavy foreign borrowing to inject liquidity into the system, increasing government spending, restructuring the existing financial system and corporate debt, maintaining a stable exchange rate and monetary policy, encouraging inflows of foreign investment, and so on. Although capital still continues to flow out of the country even today, two years after the outbreak of crisis, this is to be expected, since the magnitude of foreign debt accumulated by the Thai private sector over the years was simply enormous. However, as the confidence of foreign investors returns, capital will flow back into Thailand. This crisis had taught us an expensive lesson to be careful with the way in which we make use capital inflows.

As a result of the economic crisis that spread out from Thailand all over East Asia, several doubts have been raised as to the proper role of such flows in the future. While the importance of such flows is still recognized in capital-scarce de-

veloping economies, a pertinent question has been raised: should foreign capital be controlled or allowed to move freely? Literature abounds which argues the pros and cons of capital controls and capital mobility, but as far as Thailand is concerned, there is no controversy regarding this issue. Throughout the crisis, capital moved in and out of Thailand freely. Despite its heavy debt burden and foreign exchange losses, the Thai government continued to honor its forward exchange contracts, never declared a debt moratorium, quietly reformed its financial sector based on market principles and best practices in developed economies. This strict adherence to efficient and transparent market-based structural reforms earned Thailand renewed trust among foreign investors and traders. Of course, Thailand is likely to go along with the new changes occurring in international financial architecture, but for the time being, the Thai government is likely to pursue a free capital mobility course in its dealing with the outside world.

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APPENDIX

WHY THE BANK OF THAILAND DID NOT WORRY MUCH ABOUT CURRENT ACCOUNT DEFICITS EARLIER ON

It is now well known that one of the factors bringing about the collapse of the Thai economy in 1997 was its inability to shake off its large and chronic current account deficit (CAD). Although no one would argue in defense of such a large and chronic CAD, the Bank of Thailand, the main Thai monetary authority, did try to soften and allay fears regarding this huge CAD, as the following account shows.

At the forefront of the major financial crisis that broke out in Thailand in January 1995 was an article that appeared in the *Asian Wall Street Journal* analyzing the reasons behind the Mexican financial crisis and the subsequent collapse of its peso, and attempting to link Mexican economic conditions with those of Thailand, particularly the similar chronic balance of current account deficits that lead to the same currency devaluation. This article had an immediate and devastating effect on the confidence of foreign investors in the Thai stock market, as they began to dump their large stocks in the domestic market, effectively triggering panic selling in all markets. The fear of baht devaluation generated a massive rush to convert bahts to U.S. dollars, putting serious pressure on domestic liquidity and dollar reserves. Thai authorities were forced to make a public announcement that devaluation would not occur; and various emergency measures were implemented: such as the injection of money through the repurchase market and loan window, and a twenty-four-hour swap facility between bahts and U.S. dollars. These measures revived the investor confidence, and the crisis was over within a few weeks.

It is true that Thailand's deficit is large and chronic; but can it be said that such a deficit in a growing and dynamic economy like Thailand is unacceptable? The crisis of January 1995 and the subsequent calming down of the stock and exchange markets after strong reaction on the part of Thai authorities proved that the root cause of this event was a crisis of confidence rather than a real one. This was indeed

the position of officials of the Bank of Thailand who wanted to give the impression that although Thailand's current account deficit was large, it was not unsustainable. What were the bases for such thinking? And how true were they?

In its first issue of a new publication called Bank of Thailand *Economic Focus* released just before Christmas 1995, the Economic Research Department tackled the problems of Thailand's current account deficit head-on. It first analyzed the causes of the high deficit in 1995 by noting the following three important features:

1. With exports rising rapidly by 25.3 per cent—almost double the growth of world trade in volume terms—the rise in the trade deficit in 1995 did not reflect a change in Thailand's international competitiveness. Instead, it reflected the strength of domestic demand, as well as the effects of other temporary factors.
2. Among the various demand components, private investment was perhaps the most important factor behind the growth in imports and the deficit. Private consumption and other temporary factors, such as government imports, were also important, but only secondary factors.
3. A terms-of-trade shock caused by a surge in the price of raw materials as well as the appreciation of the yen and the deutsche mark during the first half of the year also contributed significantly to the deficit through higher import prices. Import prices in local currency were estimated to have increased by 10 per cent during the first nine months.

Based on the above interpretation, the bank raised the important question of whether the deficit was sustainable: that is, could it be managed without seriously risking the overall health of the economy. Sustainability, of course, is often assessed in terms of the cause of the deficit, the financing of the deficit, the strength of the real economy, and the soundness of the economy's overall financial position. Under these criteria, the bank was of the opinion that the present current account deficit was sustainable, giving the following evidence:

- The deficit reflected the strengthening of investment and not increased consumption;
- The deficit occurred on the backdrop of strong GDP and export growth;
- In the absence of any fiscal problems, Thailand's fiscal position was strong;
- High quality capital inflows more than financed the deficit; and
- Thailand owned high international reserves with low external debt.

The Bank of Thailand said in conclusion that the current account deficit in 1995 should not be allowed to mask the strong economic fundamentals of the Thai economy. It pointed out that during the past three decades, Thailand had recorded perhaps one of the most impressive macroeconomic performances in terms of growth and stability. Real GDP growth averaged 7.7 per cent annually, with inflation averaging 3.3 per cent. This strong performance was facilitated by a number of important attributes that continue at present: a tradition of cautious and conservative financial policies; liberal and outward-looking trade and investment policies; high

saving ratios; large and expanding domestic markets; an able pool of human capital; and a government that encourages private sector development with minimum intervention.

With the benefit of hindsight, it is difficult to disagree with the Bank of Thailand; but from the time of this publication, overall economic conditions started to deteriorate quickly. Many have held the Bank of Thailand responsible for the current economic crisis; but, to be fair, it did have sound reasons for its stance. It is unfortunate that the rising deficit could not be arrested in time, as this is one of the most important preconditions for maintaining the country's economic stability in the medium term, and this will have to be achieved decisively and orderly, even if a tighter fiscal and monetary policy is required.