Foreign Capital Flows to Thailand:

Determinants and Impact

Ammar Siamwalla
Yos Vajragupta
Pakorn Vichyanond

Thailand Development Research Institute
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Preface

This report is an outcome of the effort exerted on Thailand as a country case study in the project on "Supply Side of Capital to Emerging Economies." It was funded by OXFAM as part of a research program on Global Capital Flows coordinated by Jacques Cailloux and Stephany Griffith-Jones at the institute of Development Studies (IDS), University of Sussex, U.K. It was presented and discussed at the IDS's workshop on 13-14 September 1999. The TDRI wishes to stress its sincere gratitude to OXFAM and IDS for their support.

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Part 1: Chronology

1. Introduction

1. Before 1997, relatively low yields in industrial countries together with impressive economic growth and attractive returns in developing economies motivated western investors to relocate their funds to money and capital markets in the east. It corresponded well with the trend towards trade globalization, international financial linkages, and expansion of production bases overseas. That was why the aggregate volume of net capital inflows to developing countries surged from US$ 100.8 billion in 1990 to US$ 338.1 billion in 1997. However, these net inflows plunged to US$ 275 billion in 1998 after the world was shaken by widespread financial crises (Table 1).

2. Thailand benefited a great deal from the Plaza Accord in 1985, because gluts of capital inflows from Japan in the form of foreign direct investment, as a result of surging value of yen, spurred up both investment and export activities. Concurrently, the Thai government was successful in achieving several consecutive years of cash balance surplus. The central authority believed that resource inflows represented a key driving force for continual economic expansion. After committing to the obligations under IMF's Article VIII, the Thai government decided to start dismantling its exchange controls in 1991 and liberalizing activities of financial institutions, but left its pegged exchange rate unchanged. Consequently, Thailand's net capital inflows grew rapidly from US$ 10.9 billion in 1990 to US$ 18.2 billion in 1996. However, once the market began to question Thailand's micro as well as macroeconomic situation and the capability of the government to maintain stability, both creditors and investors rapidly withdrew their funds and the scenario was exacerbated by debtors' (p)repayments and speculators' hedging (Table 2). The resulting capital outflows forced the Thai government to float the baht exchange rate in July 1997, sparking a series of financial crises in East Asia and other regions later on.

3. Private capital inflows to Thailand are hereby separated into 2 categories, bank and non-bank. The banking sector began to play an active role from 1993 onward after the Bangkok International Banking Facilities (BIBF) went into effect. The non-bank sector consists of foreign direct investment (FDI), loans, portfolio investment (PI), and non-resident baht account (NRB).

1990-92

4. Even since 1984 the Thai baht was tied to a basket of currencies, with a considerable weight (roughly 84%) given to the U.S. dollar. In effect, the baht value was practically pegged with the U.S. dollar, engendering negligible exchange risks upon dollar-denominated foreign borrowings. Substantially higher domestic interest rates together with

the above-mentioned small exchange risks induced the Thai non-bank sector to tap funds from abroad, especially under the categories of loans and NRB.

5. Large portions of net loan inflows went to financial institutions, trade, industry (especially electrical appliances), and real estate (Table 3). A majority of these funds came from Hong Kong and Singapore (Table 4).

1993-96

6. Since borrowings via BIBF enjoyed several distinct tax privileges as demonstrated in the following table, private Thai businesses shifted their foreign borrowings from loans to BIBF. Moreover, some FDI inflows, especially the Japanese ones, were rebooked under the BIBF category so as to gain access to tax privileges and satisfy BIBF requirements. Overall, BIBF increased the share of banks' net inflows from 21% in 1992 to 58% in 1993-96. Meanwhile, the loan category saw some outflows in 1993-94.

Tax privileges of BIBF

	Normal	BIBF
1. Corporate income tax	30%	10%
2. Specific business tax	3.3%	0%
3. Interest income withholding tax	10%	0%
4. Stamp duties	2%	0%

7. The majority of BIBF funds were channeled to the manufacturing sector (particularly electrical appliances), commerce, banking and finance (Table 5). As for loans, most net inflows were targeted towards financial institutions, while trade and real estate assumed subsidiary roles. Hong Kong and Singapore were primary sources of funds and later on by mid-1990's loans from Japan and the U.S. gained growing shares.

8. Financial liberalization via BIBF considerably enlarged the short-term portion of Thailand's external debt outstanding (Table 6), because most BIBF credits were on a short-term basis and continually rolled over for long-term uses. Tapping short-term funds in the world market was ordinarily cheaper than long-term borrowings. In order to discourage excessive BIBF inflows, the central authority in October 1995 decided to raise the minimum level of out-in BIBF (representing funds from abroad for domestic usage) from US$ 500,000 to US$ 2 million. Such measure curtailed the volume of BIBF net inflows afterward.

9. However, inflows via loans, PI, and NRB rose markedly in 1995-96, while those of BIBF subsided. That was a shift in a reverse order to the one at the commencement of BIBF in 1993-94. It clearly demonstrated that most of these short-term non-FDI credits were substitutable. Any controlling measures imposed upon one credit type but not its substitutes

are likely to be ineffective, because rational economic agents will shift their gears or directions towards the plausible and profitable routes.

10. More disturbing was the fact that private net capital inflows grew incessantly to such an extent that the country's external debt outstanding surged from US$ 52.1 billion in 1993 to US$ 90.5 billion in 1996. Worse yet, its short-term component swelled from 36% in 1990 to 50% in 1995, which made Thailand increasingly vulnerable to changes in market liquidity or foreign investors' confidence. Such a debt build-up was largely attributed to a simultaneous implementation of capital account liberalization and rigid exchange rates.

11. The period between 1993-96 saw a big jump in PI net inflows from US$ 386 million p.a. in 1990-92 to US$ 3,178 million p.a. That influx led to the booming of stock market index, P/E ratio, and market capitalization (Table 7). The establishment of the Securities and Exchange Commission in 1992 and widespread initial public offerings since then captured strong interest from foreign investors, especially when Thailand's economic growth remained attractive until 1995.

12. Singapore and Hong Kong were recorded as major players in the Thai stock market, especially after 1993 (Table 8). But those countries may not represent original sources, as other countries such as the U.S. and Japan channeled parts of their investment funds through Singapore and Hong Kong because of double tax agreements and custodianship.

13. Most PI entered as equity except in the years 1991, 1994, and 1996, during which private local companies issued a large volume of debt securities abroad in several formats such as convertible debentures, FRCD, subordinate debentures.

14. Although net inflows through NRB may not represent a major portion of total net inflows of the private sector, inflows and outflows of NRB amounted to more than 90% of total inflows and outflows since 1994. The underlying reason is that this NRB functioned as a nostro account serving various transactions such as interest arbitrage, stock transactions, and baht clearing for any foreign-exchange-related transactions. Another outstanding feature of NRB was its volatility due to its multifaceted functions.

15. In contrast to loans, PI, BIBF, and NRB, net inflows of FDI were much steadier, since investors aimed for returns in the long run. FDI investors were enticed by various special privileges from the government's Board of Investment and continually firm pace of macroeconomic expansion. In this category of funds, Japan stood out in 1990-91 as a result of stronger yen and consequential relocation of production plants to Thailand. Later on, Singapore, Hong Kong, and the U.S. played more active roles (Table 9). Sectorwise, industry (especially electrical appliances, machinery & transportation) absorbed the largest proportion of FDI, whereas trade and real estate commanded less but still significant shares (Table 10).

1997-98

16. Continually rising value of the baht (because of the surging US dollar to which the baht was tightly pegged) in the midst of several macroeconomic problems (e.g. threatening current account deficit, mounting short-term external debt, export stagnancy) notably weakened foreign investors' confidence in the Thai economy. These led rating agencies (Moody's and S&P) to lower Thailand's short-term external debt credibility (from P1 to P2 in September 1996) and downgraded Thailand's creditworthiness in both foreign and local currencies (from A to A- and AA to AA- respectively in September 1997).

17. Considerable appreciation of the baht against non-US currencies since the third quarter of 1996 gave rise to strong pressure against the baht. Such pressures largely came from withdrawal of funds by foreign investors and (p)repayments of domestic debtors due to slackening confidence in the prevailing exchange rate, not due to the attack on the baht by speculators or hedge funds. However, from the beginning of 1997 onward these speculators certainly exacerbated the situation when the country's economic status, stability of financial system, property market difficulties, and baht exchange rate stability all became questionable. The attacks by hedge fund speculators were extremely strong in January, February, and May 1997, as evidenced by a gigantic reduction of the Bank of Thailand's international reserves from US$ 38.7 billions in January 1997 to US$ 2.5 billions in May 1997. NRB accounts were heavily used by foreigners as a means of speculative transactions, engendering outflows of NRB throughout the first half of 1997. The situation was aggravated by the above-mentioned lower credit rating to such an extent that a drastic reduction of net capital inflows in the first quarter of 1997 became net outflows in the second quarter spearheaded by the banking sector.

18. The Bank of Thailand employed several means to prohibit or constrain the baht speculation. For instance, the short-term baht interest rates were kept very high, while commercial banks were advised to refrain from accommodating foreign speculators' demand for foreign exchange. In addition, onshore and offshore foreign exchange markets were split with credit restrictions imposed upon non-residents. Nonetheless, these counteracting measures did not help much in subduing capital outflows and the Thai government found it inevitable to float the baht in July 1997.

19. After the float, net capital outflows peaked in the third quarter of 1997 and the baht kept on depreciating versus the US dollar until its minimum was reached at 56 baht per US dollar in January 1998. The exchange rate stayed above 40 baht per US dollar throughout the first three quarters of 1998 before it stabilized at around 36-38 baht per US dollar from the fourth quarter onward.

20. The banking sector, including BIBF, received the biggest impact of the financial crisis, with commercial banks recording net outflows since the second quarter of 1997

followed by BIBF in the third quarter. Weakening investor confidence and slackening economic activities made foreign creditors unwilling to roll over BIBF credits. Meanwhile, uncertain exchange rates motivated debtors to (p)repay their obligations, resulting in high net capital outflows throughout the second half of 1997. Those BIBF outflows primarily belonged to the manufacturing, commerce, and banking & finance.

21. Although short-term interest rates in Thailand climbed to as high as 20% during the crisis, deteriorating confidence and exchange rate uncertainties led to streams of loan outflows, especially the short-term ones towards the end of 1997 and beginning of 1998. Most of these loan outflows went from the financial and real estate sectors as demanded by creditors in Singapore, Hong Kong, and the U.S.

22. The net capital outflows through NRB have one notable characteristic. Whenever NRB scored huge net outflows (e.g. as in Q3 of 1997 and Q1 as well as Q4 of 1998), the baht exchange rate registered a drastic movement. An underlying reason for such coincidence is that one of the NRB's functions is to clear the settlement of baht-foreign exchange transactions.

23. PI net inflows jumped in the second and third quarter of 1997 as the price/earnings ratio in the stock market dipped below 10 for the first time in the 1990's (Table 2). However, PI decreased to a large extent in 1998, becoming negative for the second and third quarter, since Thai economic growth in 1998 dropped to –8%. The sentiment was particularly poor for financial institutions, as their NPL grew to a record high level, necessitating substantial recapitalization and corporate debt restructuring. In the meantime, booming activities in the US economy and stock market recaptured investment funds back from emerging economies including Thailand (Table 11). What should be noted is that though investors from the U.S., China, and Belgium retrieved funds from Thailand, the ones from Hong Kong, Singapore, and U.K. still injected net inflows. Table 11 clearly demonstrates that foreign portfolio investors were not the parties who instigated the 1997 crisis at all. In fact, they did the contrary, i.e. they brought in net capital inflows a year and a half continually, i.e. from the beginning of 1997 until the middle of 1998 (Table 2). Typically, foreign portfolio investors command very strong momentum and therefore represent highly influential players in the local stock market. That is evident from the fact that Stock Exchange of Thailand index mostly moved in accordance with the net transactions of foreign portfolio investors (see Figure A).

24. FDI, in contrast, was not at all affected by the crisis and the economic recession. On the contrary, it grew to a remarkable degree in 1997-98 after the baht was floated. That must have been attributed to a large number of ongoing projects, which are long-term commitments, and a number of mergers and acquisitions occasioned by financial troubles. The increases in FDI helped cushion the private sector's net outflows in other capital categories.

25. Overall, private capital flows responded very well to policy measures. For instance, before 1993 when BIBF credits were not available, most net inflows came in under the category of non-bank loans. In 1993-94 the BIBF credits, which gave special privileges to borrowers, were opted by various parties. But such selection declined markedly in 1995-96 when the authorities raised the minimum level of out-in BIBF in order to reduce the short-term portion of the country's external debt. By 1997-98 the country experienced net outflows of both non-bank loans and BIBF because of exchange rate floatation (Table 2). The other two contrasting types of capital inflows were FDI and PI. Fluctuations of PI were largely attributed to sources in Hong Kong and Singapore (Table 8). Meanwhile, the stream of FDI was more stable and largely dominated by Japan, Hong Kong, Singapore, and the U.S. (Table 9). Most of those FDI were absorbed by the industrial sector (particularly electrical appliances and chemicals), trade, and real estate (Table 10). Net inflows of FDI and those of loans (Table 3) as well as BIBF (Table 5) immediately indicate that the following sectors attracted strong attention from foreign investors: real estate, electrical appliances, and trade. These capital inflows generated not only asset price inflation or economic bubbling but also dangerous current account deficits or excessive spending.

Figure A: SET Index and Net Foreign Purchases

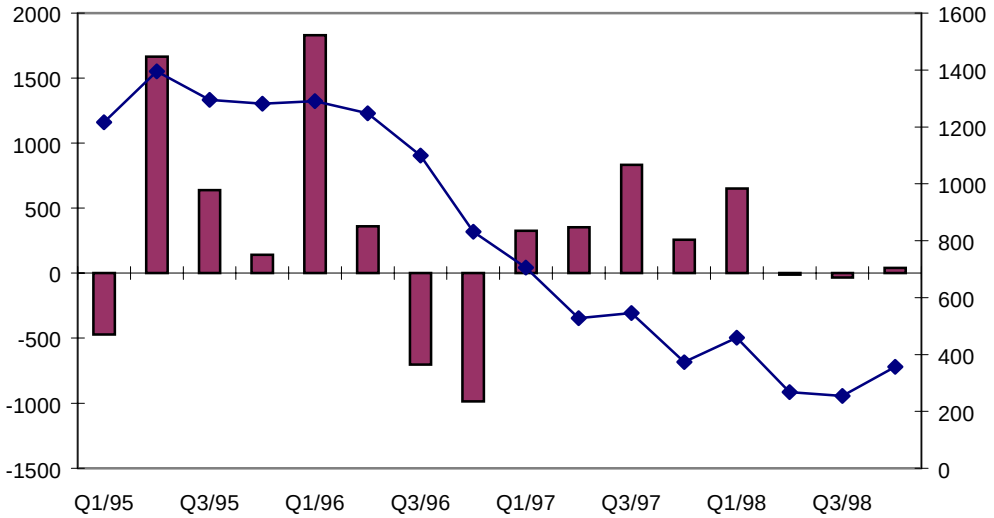

Table 1: Net Long-term Resource Flows to Developing Countries, 1990-98

Unit: Billions of US$

	1990	1991	1992	1993	1994	1995	1996	1997	1998[p]
Net long-term resource flows	100.8	123.1	152.3	220.2	223.6	254.9	308.1	338.1	275.0
Official flows	56.9	62.6	54.0	53.3	45.5	53.4	32.2	39.1	47.9
Private flows	43.9	60.5	98.3	167.0	178.1	201.5	275.9	299.0	227.1
From international capital market	19.4	26.2	52.2	100.0	89.6	96.1	149.5	135.5	72.1
Private debt flows	15.7	18.6	38.1	49.0	54.4	60.0	100.3	105.3	58.0
Portfolio equity flows	3.7	7.6	14.1	51.0	35.2	36.1	49.2	30.2	14.1
Foreign direct investment	24.5	34.4	46.1	67.0	88.5	105.4	126.4	163.4	155.0

Note: p = preliminary

Source: Global Development Finance, 1999, World Bank.

Table 2: Net Flows of Private Financial Account into Thailand

Unit: Millions of US$

	1990	1991	1992	1993	1994	1995	1996	1997	1998	Q1/97	Q2/97	Q3/97	Q4/97	Q1/98	Q2/98	Q3/98	Q4/98
1. Bank	1,594	-259	1,933	3,599	13,925	11,236	5,007	-6,442	-13,944	2,369	36	-5,799	-3,048	-1,472	-3,883	-4,394	-4,195
1.1 Commercial bank	1,594	-259	1,933	-4,039	3,837	3,103	428	-4,735	-4,310	1,515	-273	-4,459	-1,518	623	-1,756	-2,459	-718
1.2 BIBF	0	0	0	7,638	10,087	8,133	4,579	-1,707	-9,634	855	309	-1,340	-1,531	-2,095	-2,127	-1,935	-3,478
2. Non Bank	9,333	10,544	7,415	6,717	-1,910	9,561	13,183	-1,916	-2,024	-585	-905	-953	527	-2,788	1,716	1,252	-2,203
2.1 Direct Investment	2,391	1,848	1,979	1,439	902	1,168	1,454	3,205	4,688	528	568	1,147	961	1,016	1,481	1,218	973
2.1.1 Foreign Direct Investment	2,531	2,016	2,116	1,732	1,323	2,004	2,270	3,645	4,810	654	780	1,211	999	1,019	1,492	1,248	1,052
2.1.2 Thai Direct Investment	-140	-168	-136	-293	-421	-837	-816	-441	-123	-126	-212	-64	-39	-3	-11	-30	-79
2.2 Other Loans	4,495	5,638	2,725	-2,420	-5,838	1,530	5,451	-3,786	-4,279	-115	-846	-858	-1,968	-2,052	-808	-737	-682
2.3 Portfolio Investment	450	151	556	4,848	1,095	3,283	3,485	4,501	539	511	1,228	2,375	387	447	47	-17	62
2.3.1 Equity Securities	450	36	454	2,682	-409	2,120	1,123	3,875	354	416	882	2,081	496	449	-142	-77	123
2.3.2 Debt Securities	0	115	102	2,166	1,504	1,164	2,362	626	185	95	346	294	-109	-3	190	60	-62
2.4 Non-Resident Baht A/C	1,342	2,057	1,754	2,682	2,036	3,381	2,913	-5,850	-2,715	-1,694	-1,800	-3,861	1,505	-2,186	1,139	789	-2,457
2.5 Trade Credits	655	745	307	539	456	256	-146	-242	-494	252	-68	13	-439	-185	-92	-160	-57
2.6 Others	0	105	92	-370	-560	-58	25	257	237	-67	13	230	81	172	-52	160	-42
Total Private Capital (net)	**10,927**	**10,284**	**9,348**	**10,316**	**12,014**	**20,797**	**18,190**	**-8,358**	**-15,968**	**1,785**	**-869**	**-6,753**	**-2,521**	**-4,261**	**-2,167**	**-3,142**	**-6,398**

Source: Bank of Thailand.

Table 3: Net Flows of Foreign Direct Loans Classified by Sectors

Unit: Millions of US$

	1990	1991	1992	1993	1994	1995	1996	1997
1. Financial Institutions	383	488	965	874	538	1,993	834	-2,129
2. Trade	829	638	158	-22	-536	426	866	-333
3. Construction	135	95	2	17	-30	-16	191	-39
4. Mining & Quarrying	-10	25	-14	-34	-31	1	19	-44
5. Agricultural	72	2	24	-27	-11	15	-11	-1
6. Industry	1,843	3,032	1,466	1,043	-66	2,234	2,269	-583
6.1 Food	287	215	119	-41	-3	172	227	-199
6.2 Textiles	204	363	112	205	-66	82	-8	-61
6.3 Metal & Non-metal	194	354	146	3	-114	161	406	175
6.4 Electrical appliances	362	429	257	-84	-140	375	305	-346
6.5 Machinery & Transport	200	369	-51	65	-227	180	353	-52
6.6 Chemicals	214	213	120	231	86	644	526	119
6.7 Petroleum products	80	320	458	488	413	79	69	-71
6.8 Construction materials	199	438	251	125	65	386	320	-83
6.9 Other industry	103	331	53	51	-80	155	71	-65
7. Services	99	71	59	-4	33	326	332	165
8. Investment	0	210	-152	87	-55	738	795	-93
9. Real estate	752	1,012	220	-180	407	445	977	-855
9.1 Housing & real estate	611	889	133	-178	360	419	898	-803
9.2 Hotel & restaurant	140	123	87	-2	47	26	79	-53
9.3 Other services	0	0	0	0	0	0	0	0
10. Others	392	65	-3	1	99	-19	-47	-20
Total	4,495	5,638	2,725	1,755	348	6,145	6,223	-3,933

Source: Bank of Thailand.

Table 4: Net Flows of Foreign Direct Loans Classified by Countries

Unit: Millions of US$

	1990	1991	1992	1993	1994	1995	1996	1997
Japan	365	344	232	645	190	257	752	393
USA	335	479	23	-284	-127	158	1,002	-438
Canada	0	-10	0	-21	-4	1	-9	-1
Hong Kong	1,076	1,518	822	1,418	64	979	976	-580
Taiwan	29	88	82	-15	-10	-10	29	34
Switzerland	46	3	48	7	-1	-44	-4	-95
Australia	39	11	9	-56	-4	-77	11	14
New Zealand	0	0	0	0	0	0	0	1
S. Korea	20	5	0	46	39	238	-22	-161
China	0	-1	8	7	-1	-1	15	-19
ASEAN	2,180	2,785	1,116	1,093	-182	3,883	3,284	-2,529
- Singapore	2,179	2,746	1,121	1,110	-175	3,894	3,279	-2,575
- Malaysia	0	0	0	0	5	2	6	44
- Philippines	0	38	-4	-17	-11	-12	-1	-2
- Indonesia	1	0	0	1	0	0	0	3
- Brunei	0	1	-1	0	0	0	0	0
EU	332	371	351	-70	-42	604	331	-320
- UK	128	211	187	38	-98	482	418	-219
- Germany	19	17	22	-10	11	-7	5	-88
- France	75	113	28	-81	-28	-9	-19	-49
- Netherlands	12	6	91	-37	-9	63	60	161
- Italy	1	1	0	9	16	3	0	-1
- Luxembourg	0	9	1	3	96	87	-120	-57
- Denmark	0	0	-31	-3	-6	0	-7	-6
- Belgium	96	14	43	11	-25	-15	-6	-57
- Spain	0	1	3	-3	0	0	0	0
- Portugal	0	0	0	0	0	0	0	0
- Ireland	0	0	7	3	1	0	0	-4
- Greece	0	0	0	0	0	0	0	0
Others	75	43	34	-1,016	427	155	-142	-231
Total	4,495	5,638	2,725	1,755	348	6,145	6,223	-3,933

Source: Bank of Thailand.

Table 5: BIBF Flows (Out-In) Classified by Sectors

Unit: Millions of US$

	1993	1994	1995	1996	1997	1998	Q1/97	Q2/97	Q3/97	Q4/97	Q1/98	Q2/98	Q3/98	Q4/98
1. Priority sector	3,944	4,061	4,975	4,036	10,520	-7,173	875	97	5,542	4,006	-3,591	749	-1,844	-2,487
1.1 Agriculture	91	64	72	19	74	-120	-8	-19	42	59	-53	-17	-19	-30
1.2 Mining	24	64	220	87	322	-229	-4	27	152	147	-40	-32	-32	-124
1.3 Manufacturing	3,218	3,741	4,699	3,882	9,836	-6,451	882	166	5,157	3,630	-3,322	808	-1,678	-2,260
1.4 Exports	599	191	-44	-4	242	-294	12	-81	167	145	-153	-12	-58	-70
1.5 Wholesale trade in agricultural products	12	0	28	52	45	-80	-8	4	24	25	-23	2	-56	-3
2. Less priority sector	595	478	81	-135	85	-397	-101	-27	137	76	-250	-27	-76	-43
2.1 Service for entertainment	8	16	40	63	26	-55	-46	43	30	0	-53	0	-2	0
2.2 Import of luxurious goods	52	4	12	32	80	-62	12	39	12	17	-34	0	-19	-8
2.3 Personal consumption	32	8	52	-4	-57	-9	-58	-4	0	5	-6	0	0	-3
2.4 Luxurious resident condominium	503	450	-23	-226	36	-270	-8	-104	94	54	-157	-27	-54	-32
3. General sectors	3,217	5,852	3,954	1,117	6,391	-7,496	410	-383	3,961	2,402	-3,498	-635	-1,739	-1,624
3.1 Construction	186	330	93	246	339	-446	12	-46	249	125	-214	12	-144	-100
3.2 Commerce	1,042	1,612	676	337	1,957	-1,884	279	-155	1,135	698	-923	52	-387	-625
3.3 Banking and finance	574	2,281	2,330	-392	1,102	-2,386	70	-216	829	420	-1,074	-278	-555	-479
3.4 Real estate	610	357	43	-67	254	-494	66	-108	203	93	-310	-35	-95	-54
3.5 Public utility	186	629	180	585	1,203	-619	46	-19	704	472	-344	-52	-132	-92
3.6 Hotel and restaurant	317	306	430	233	599	-897	4	-8	340	263	-280	-275	-212	-130
3.7 General housing finance	8	4	-4	-4	-1	-2	-4	0	0	2	-2	2	-2	0
3.8 Others	293	333	206	179	938	-768	-62	170	501	329	-350	-62	-212	-143
Total	7,756	10,391	9,010	5,018	16,995	-15,065	1,184	-313	9,640	6,484	-7,340	87	-3,658	-4,154

Source: Bank of Thailand.

Table 6: External Debt Outstanding

Unit: Millions of US$

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Public Sector	11,514	12,810	13,068	14,171	15,714	16,402	16,805	17,166	20,290
Long-term	11,257	12,105	12,518	14,171	15,534	16,317	16,751	17,146	20,140
Short-term	257	705	550	0	180	85	54	20	150
Private Sector	17,793	25,068	30,553	37,936	49,152	66,166	73,731	69,093	54,666
Long-term	7,633	10,382	12,189	15,302	20,153	25,155	36,172	34,277	31,293
Short-term	10,160	14,686	18,364	22,634	28,999	41,011	37,559	34,816	23,373
Commercial Bank	4,233	4,477	6,263	5,279	9,865	14,436	10,682	9,488	7,074
Long-term	286	338	731	1,263	3,451	4,443	2,314	3,824	3,753
Short-term	3,947	4,139	5,532	4,016	6,414	9,993	8,368	5,664	3,321
BIBF	0	0	0	7,740	18,111	27,503	31,187	30,079	21,892
Long-term	0	0	0	1,385	2,969	3,799	10,697	10,317	6,946
Short-term	0	0	0	6,355	15,142	23,704	20,490	19,762	14,946
Non-Bank	13,560	20,591	24,290	24,917	21,176	24,227	31,862	29,526	25,700
Long-term	7,347	10,044	11,458	12,654	13,733	16,913	23,161	20,136	20,594
Short-term	6,213	10,547	12,832	12,263	7,443	7,314	8,701	9,390	5,106
Monetary Authorities	1	0	0	0	0	0	0	7,157	11,204
Use of IMF credit									3,239
Others									7,965
Total	29,308	37,878	43,621	52,107	64,866	82,568	90,536	93,416	86,160
Long-term	18,891	22,487	24,707	29,473	35,687	41,472	52,923	58,580	62,637
Short-term	10,417	15,391	18,914	22,634	29,179	41,096	37,613	34,836	23,523

Source: Bank of Thailand.

Table 7: Interest Rates, Exchange Rate, and Stock Indicators

	Interbank (%)	1m LIBOR (%)	Interbank-LIBOR (%)	Exchange Rate (Baht per US$)	Market Capitalization (Millions of US$)	P/E Ratio
Q1/90	10.32	8.35	1.97	25.76	25,844	24.3
Q2/90	12.02	8.36	3.66	25.88	33,769	28.8
Q3/90	14.71	8.16	6.55	25.51	22,497	15.6
Q4/90	14.43	8.15	6.28	25.09	24,451	13.8
Q1/91	13.64	6.79	6.85	25.24	35,347	19.5
Q2/91	12.81	6.05	6.76	25.62	31,473	16.5
Q3/91	10.70	5.79	4.91	25.66	29,031	13.7
Q4/91	7.46	5.06	2.41	25.44	35,269	15.6
Q1/92	5.48	4.23	1.25	25.43	47,049	16.8
Q2/92	7.66	3.97	3.69	25.49	43,459	15.6
Q3/92	7.38	3.37	4.00	25.22	54,126	16.8
Q4/92	7.21	3.43	3.78	25.36	58,551	16.3
Q1/93	8.12	3.19	4.93	25.45	58,718	15.0
Q2/93	8.60	3.17	5.43	25.19	62,278	16.0
Q3/93	6.34	3.17	3.17	25.20	70,573	16.4
Q4/93	3.10	3.24	-0.13	25.33	131,285	26.1
Q1/94	7.24	3.39	3.85	25.38	104,602	22.9
Q2/94	8.00	4.19	3.81	25.17	115,078	21.8
Q3/94	7.35	4.73	2.62	24.97	143,038	24.3
Q4/94	6.41	5.53	0.88	24.99	132,099	19.5
Q1/95	13.30	6.06	7.23	24.93	126,933	19.1
Q2/95	11.14	6.08	5.06	24.60	151,076	22.3
Q3/95	9.24	5.88	3.36	24.91	143,504	19.9
Q4/95	10.17	5.67	4.50	25.12	141,918	19.8
Q1/96	7.30	5.24	2.06	25.23	145,267	20.0
Q2/96	7.24	5.21	2.03	25.28	142,425	18.4
Q3/96	11.41	5.24	6.17	25.30	130,544	16.6
Q4/96	10.97	5.33	5.65	25.46	100,522	12.0
Q1/97	11.31	5.35	5.96	25.84	84,139	10.6
Q2/97	11.99	5.55	6.44	25.87	62,413	8.6
Q3/97	19.32	5.52	13.80	32.95	51,333	9.7
Q4/97	20.15	5.68	14.46	40.71	27,837	6.6
Q1/98	20.64	5.54	15.10	47.11	31,339	13.3
Q2/98	18.03	5.54	12.49	40.33	22,919	10.7
Q3/98	9.52	5.51	4.00	41.06	21,885	9.5
Q4/98	3.84	5.27	-1.43	36.95	34,322	10.0

Source: Bank of Thailand and Stock Exchange of Thailand.

Table 8: Net Flows of Portfolio Investment Classified by Countries

Unit: Millions of US$

	1990	1991	1992	1993	1994	1995	1996	1997	1998	Q1/97	Q2/97	Q3/97	Q4/97	Q1/98	Q2/98	Q3/98	Q4/98
Japan	49	-30	-45	21	-5	40	22	22	-5	-1	1	-12	34	-5	5	0	0
USA	236	21	-28	148	187	47	48	-298	-150	45	49	-6	-386	-150	-184	-58	-79
Canada	-81	1	7	32	12	1	1	-1	0	0	3	-2	-2	0	0	0	0
Hong Kong	348	286	813	402	227	261	-176	1,260	191	72	75	917	196	191	85	81	155
Taiwan	123	0	-4	-9	-23	-20	3	28	-2	-2	23	7	0	-2	14	3	-9
Switzerland	-1,004	-70	0	-11	-5	104	40	19	11	-7	3	18	5	11	-1	-6	1
Australia	14	-2	1	15	4	79	26	16	3	0	16	1	0	3	0	0	0
New Zealand	0	0	0	0	0	-1	0	-11	0	-11	0	0	0	0	0	0	0
S. Korea	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0
China	0	0	3	0	0	-1	-2	1	-141	1	0	0	0	-141	-131	-153	-66
ASEAN	27	-92	-74	2,023	-77	1,471	1,038	1,789	423	141	485	811	352	423	73	60	134
- Singapore	23	-91	-73	2,021	-86	1,471	1,038	1,791	409	141	492	808	350	409	72	59	134
- Malaysia	4	0	-2	0	3	0	0	2	1	-1	0	1	1	1	1	1	0
- Philippines	0	0	3	0	8	0	0	3	0	0	4	0	-1	0	0	0	0
- Indonesia	0	-2	-2	2	-2	0	0	-7	13	1	-11	2	2	13	0	0	1
- Brunei	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EU	740	-76	-279	13	-825	131	150	1,021	37	173	226	346	276	37	-107	-94	-45
- UK	820	-70	-277	346	-445	347	178	949	81	77	215	367	289	81	34	-9	10
- Germany	-4	1	3	-3	1	16	8	35	10	1	-2	32	3	10	5	17	0
- France	-9	-4	0	-1	9	0	30	28	-3	-5	34	-1	0	-3	-1	-3	-4
- Netherlands	-53	8	26	-318	-329	-184	-106	-68	3	-12	-14	-37	-5	3	-17	-10	4
- Italy	0	0	0	0	0	0	-2	2	0	0	1	1	0	0	0	0	0
- Luxembourg	19	2	-4	-7	-14	22	8	-12	9	-14	6	-4	0	9	-4	-3	0
- Denmark	0	0	0	0	-1	0	0	-1	0	0	0	-1	0	0	1	0	0
- Belgium	-33	-14	-26	-4	-47	-72	34	91	-64	125	-14	-10	-11	-64	-124	-87	-55
- Spain	0	0	0	0	0	0	0	-1	0	0	0	-1	0	0	0	0	0
- Portugal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Ireland	0	0	0	0	0	0	0	-1	0	0	0	-1	-1	0	0	0	0
- Greece	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Others	-2	-1	59	48	96	5	-25	27	81	4	2	1	21	81	104	90	32
Total	450	36	454	2,682	-409	2,120	1,123	3,875	449	416	882	2,081	496	449	-142	-77	123

Source: Bank of Thailand.

Table 9: Net Flows of Foreign Direct Investment Classified by Countries

Unit: Millions of US$

	1990	1991	1992	1993	1994	1995	1996	1997	1998	Q1/97	Q2/97	Q3/97	Q4/97	Q1/98	Q2/98	Q3/98	Q4/98
Japan	1,093	612	342	306	123	557	523	1,346	1,536	248	306	537	254	317	506	374	338
USA	241	232	465	286	156	260	429	785	917	174	118	227	265	237	264	147	268
Canada	4	6	4	6	5	-2	1	1	3	-1	0	0	2	1	2	0	0
Hong Kong	275	454	573	194	319	279	215	438	458	87	71	88	193	102	76	191	90
Taiwan	280	108	88	49	83	97	138	134	82	6	31	40	56	-10	8	50	34
Switzerland	29	48	31	11	27	16	52	126	57	15	47	36	28	9	42	7	-1
Australia	5	72	7	8	11	25	34	119	47	22	17	55	25	24	4	12	6
New Zealand	1	3	0	0	0	0	2	1	0	0	0	1	0	0	0	0	0
S. Korea	19	12	10	15	13	12	25	30	96	5	13	5	6	4	21	13	58
China	4	2	-4	7	-1	2	4	-8	4	0	-1	-2	-5	3	2	-1	0
ASEAN	261	258	284	60	196	160	308	306	547	2	32	164	108	156	253	101	37
- Singapore	240	254	267	61	184	136	275	279	520	-7	25	160	101	146	249	89	36
- Malaysia	18	1	5	-8	2	11	21	12	17	6	1	2	3	3	2	11	1
- Philippines	0	0	5	0	2	1	2	8	7	1	2	2	3	6	0	0	0
- Indonesia	3	3	7	7	8	12	10	7	3	2	4	0	1	1	2	0	0
- Brunei	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EU	165	156	273	241	105	152	153	339	773	98	139	43	60	165	290	348	-30
- UK	44	10	127	161	44	55	57	124	125	63	24	5	31	21	29	150	-75
- Germany	45	33	24	25	30	38	42	65	93	4	27	11	23	12	35	26	20
- France	27	49	66	79	39	72	30	1	221	7	-5	6	-7	15	140	25	40
- Netherlands	25	29	27	30	-25	87	-40	156	293	31	90	16	18	114	67	131	-20
- Italy	2	3	3	8	7	-6	2	3	4	0	1	1	1	0	4	0	0
- Luxembourg	0	0	8	1	3	1	4	-7	1	-5	0	0	-2	0	0	0	1
- Denmark	3	2	11	-57	6	5	2	1	2	0	1	0	0	0	0	0	1
- Belgium	18	28	5	-6	0	-101	56	-2	33	-1	0	2	-4	1	16	13	2
- Spain	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
- Portugal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Ireland	0	0	1	0	0	0	0	-2	1	-4	1	0	0	0	-1	1	0
- Greece	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Others	155	56	45	550	289	447	385	28	290	-3	7	16	8	11	21	6	251
Total	2,531	2,016	2,116	1,732	1,323	2,004	2,270	3,645	4,810	654	780	1,211	999	1,019	1,492	1,248	1,052

Source: Bank of Thailand.

Table 10: Net Flows of Foreign Direct Investment Classified by Sectors

Unit: Millions of US$

	1990	1991	1992	1993	1994	1995	1996	1997	1998	Q1/97	Q2/97	Q3/97	Q4/97	Q1/98	Q2/98	Q3/98	Q4/98
1. Financial Institutions	177	268	258	65	7	26	72	108	497	10	8	52	38	114	132	201	50
2. Trade	506	303	280	219	341	446	545	1,045	840	201	145	445	254	158	271	166	245
3. Construction	129	130	573	152	70	36	70	170	145	27	53	-8	98	62	67	-9	25
4. Mining & Quarrying	45	81	123	126	52	57	19	21	63	8	9	-5	9	6	19	4	34
5. Agricultural	30	23	-6	13	-6	9	2	1	0	0	0	0	1	0	0	0	0
6. Industry	1,213	935	365	452	512	567	709	1,820	2,035	355	378	629	459	425	587	485	538
6.1 Food	63	61	51	39	43	39	45	233	73	115	13	78	27	9	44	8	12
6.2 Textiles	70	45	58	-9	35	38	49	41	96	8	0	6	27	-21	20	79	17
6.3 Metal & Non-metal	113	87	67	95	45	92	113	215	313	58	64	45	49	97	85	122	10
6.4 Electrical appliances	418	352	233	142	59	234	241	608	246	144	188	177	99	25	99	140	-17
6.5 Machinery & Transport	97	90	43	62	12	145	109	387	678	-12	58	283	58	99	226	100	253
6.6 Chemicals	169	151	64	202	33	94	183	165	213	-4	41	17	111	48	83	44	38
6.7 Petroleum products	118	-15	-273	191	31	-161	-250	9	311	1	-2	-11	21	124	-2	3	187
6.8 Construction materials	0	6	15	4	5	25	3	-10	-2	5	-1	-7	-7	0	2	-4	0
6.9 Other industry	165	159	109	-274	248	62	216	172	108	40	17	41	74	46	30	-7	39
7. Services	80	65	85	19	56	88	125	294	294	39	135	41	80	49	115	85	46
8. Investment	0	0	8	-16	146	-79	-21	30	309	0	14	3	13	46	39	206	18
9. Real estate	329	142	382	695	472	854	753	110	489	16	34	32	27	141	141	106	102
9.1 Housing & real estate	211	209	358	664	473	844	737	102	488	16	30	30	27	141	140	106	101
9.2 Hotel & restaurant	119	-67	24	34	-1	7	12	8	2	1	5	2	0	0	1	0	1
9.3 Other services	0	0	0	-3	0	2	3	0	0	0	0	0	0	0	0	0	0
10. Others	22	69	48	7	-327	-1	-4	47	139	0	3	22	21	18	121	4	-5
Total	2,531	2,016	2,116	1,732	1,323	2,004	2,270	3,645	4,810	654	780	1,211	999	1,019	1,492	1,248	1,052

Source: Bank of Thailand.

Table 11: Equity Investment Classified by Investors

Unit: Millions of US$

Period	Institutions[1]			Foreigners			Local Investors			Turnover
	Buy	Sell	Net	Buy	Sell	Net	Buy	Sell	Net	
Q1/95	1,794	1,758	36	3,904	4,376	-471	8,197	7,761	436	13,895
Q2/95	2,571	2,477	94	5,635	3,971	1,664	12,267	14,025	-1,758	20,473
Q3/95	2,040	2,178	-138	4,325	3,686	639	10,296	10,796	-500	16,660
Q4/95	1,748	1,830	-83	3,287	3,147	140	5,706	5,763	-57	10,740
Q1/96	1,754	2,399	-645	6,479	4,649	1,829	9,750	10,934	-1,184	17,982
Q2/96	1,598	1,801	-204	4,438	4,078	360	5,879	6,035	-156	11,914
Q3/96	1,327	1,315	13	3,669	4,374	-705	5,780	5,087	693	10,776
Q4/96	1,425	1,293	133	3,460	4,446	-986	5,938	5,085	854	10,824
Q1/97	1,044	1,435	-391	4,179	3,853	326	4,658	4,593	65	9,881
Q2/97	938	1,075	-137	4,393	4,041	352	3,339	3,555	-215	8,670
Q3/97	591	775	-184	4,208	3,377	832	4,267	4,914	-647	9,066
Q4/97	257	325	-68	1,707	1,449	258	1,751	1,941	-190	3,715
Q1/98	306	345	-39	2,710	2,060	650	2,601	3,213	-611	5,618
Q2/98	143	167	-24	1,211	1,223	-11	1,059	1,023	36	2,413
Q3/98	143	228	-85	1,028	1,062	-34	1,853	1,735	119	3,024
Q4/98	555	473	83	2,501	2,462	39	6,930	7,052	-122	9,987

Note: [1] Institutions refer to domestic brokers, mutual fund companies, and provident fund companies

Source: Stock Exchange of Thailand.

Part 2: Determinants

2. Foreign Direct Investment (FDI)

26. Among various types of net capital inflows, FDI was outstanding in its stability. It barely fluctuated with market liquidity or other short-term disturbances, because investors' primary concerns were long-term oriented. After the baht was floated and financial crisis erupted in 1997, FDI rose to a notable extent. That was largely attributed to a surge of problem companies seeking takeover partners. In addition, 38% depreciation of the baht raised the purchasing power of foreign investors and encouraged acquisitions.

27. Typically, the following factors motivate FDI or relocation of production base.

- Exchange rate shift
- Promising growth of recipient economy
- Cheap and/or good quality inputs
- Special privileges granted by recipient government
- Political stability and firm economic policies as well as fundamentals

28. Thailand possessed all the above-mentioned features (e.g. real GDP growth of 8% p.a. in 1990-95, low wages, Board of Investment privileges, and plentiful economic fundamentals). Unsurprisingly, the high volume of FDI prevailed steadily throughout. Even in 1998 when real GDP fell drastically, FDI remained active.

29. Flows of FDI into Thailand were dominated by the ones from Japan. That was largely due to stronger yen while the baht was kept intact. Other source countries of FDI included Hong Kong, U.S., ASEAN, and EU. The industries which captured strong interest from FDI were electronics, chemicals, metals, and property. It is notable that a majority of promoted investment projects were export-oriented. Taiwanese investors quoted Thailand as "a key linkage between Asia and Europe, comprising abundant raw materials as well as good quality staff, reasonable land prices and wages, together with accommodative government policies."[1] Japanese FDI, on the other hand, cited "maintain/expand the sales volume in the local market" as the first reason for relocation of production base to Thailand.[2] Nevertheless, "exports," "exploring new market," "secure inexpensive labor," and "spread production bases overseas," ranked as second reasons for Japanese FDI in Thailand (Table 12). What is noticeable is that Japanese investors cared less about "making use of preferential treatments for foreign capital."

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1 Foreign Direct Investment in Thailand, 1997, Board of Investment, p.6.

2 EXIM Review, Volume 19, Number 1, 1999, Research Institute for International Investment and Development, The Export-Import Bank of Japan, p.31.

Table 12: Reasons for Japanese FDI in Thailand

(Unit: Percent**)**

	94	95	96	97	98	Ave.
1. Maintain/expand the sales volume in the local market	46.7	59.0	55.6	58.3	57.4	55.4
2. Explore new markets	25.0	33.6	35.7	36.9	27.9	31.8
3. Exports to Japan	31.5	32.8	27.0	31.0	23.5	29.2
4. Exports to third countries	21.7	33.6	31.7	40.5	33.8	32.3
5. Spread production bases overseas	25.0	29.5	33.3	29.8	36.8	30.9
6. Secure inexpensive labor	31.5	39.3	32.5	36.9	29.4	33.9
7. Supply parts to assembly manufactures	16.3	36.9	34.1	28.6	25.0	28.2
8. Make use of preferential treatments for foreign capital	2.0	9.0	13.5	14.3	10.3	9.8
9. Avoid foreign exchange risk	5.4	12.3	9.5	9.5	8.8	9.1
10. Develop new products designed for the local market needs	3.3	5.7	6.3	8.3	0.0	4.7

Source: EXIM Review, Volume 19, Number 1, 1999, p.30

30. Among the three formats of FDI (100% ownership, joint ventures, acquisition/equity participation) 60% of Japanese FDI in Asia took the format of joint ventures in 1994-98 (in contrast with the ones in U.S.-Canada-EU, most of which were wholly-owned affiliates). The reasons supporting joint ventures were:

(a) host countries had restrictions on foreign ownership
(b) need to acquire local business know-how
(c) need to secure local sales networks

31. Thailand was ranked third behind China and U.S.A. by Japanese investors. In the automobile industry, Thailand was perceived to command some advantages because it had accommodating markets and served as export base for other regions.

32. “Stability of the local currency” was the largest challenge cited by 69.1% of the Japanese firms responding in Thailand. Only 25.2% of respondents enjoyed improvement in price competitiveness as a result of currency devaluation in ASEAN, because “we rely on imports for parts and materials.”

3. NON-FDI

33. Other than foreign direct investment (FDI), private capital flows were volatile. They were channeled via several different formats such as loans, portfolio investment, non-resident baht account, trade credits, and commercial banking facilities. Nevertheless, they carry one common characteristics, being sensitive to opportunity costs or rates of return, confidence-affecting factors, and policy measures. They therefore can easily substitute for one another in response to policy measures aimed at one but not another type of non-FDI private capital flows.

34. In the first half of 1990's weak economic performances of many industrial countries led to accommodative monetary policies, abundant liquidity, and low interest rates. These in turn depressed dividend yields as well as ratios of corporate earnings to equity values. Declines in asset yields in industrial countries made emerging countries an increasingly attractive investment opportunity. Moreover, exchange rates in East Asian countries were tightly linked to the U.S. dollar, entailing little exchange risks to investment flows from industrial countries. On the part of recipient countries, their efforts to liberalize capital transactions facilitated flows of funds across border. In addition, international wealth-holders were impressed by Asia's stronger momentum of economic growth, moderate inflation, and higher interest rates (Table 13). Therefore, East Asia received plentiful capital inflows from industrial countries in 1990-96.

Table 13: Important Economic Statistics

Economic Growth **Unit: Percent**

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
- USA	3.1	3.9	2.5	0.8	-1.0	2.7	2.2	3.5	2.0	2.8	3.8
- UK	4.8	5.0	2.2	0.4	-2.0	-0.5	2.1	4.3	2.7	2.2	3.3
- Germany	1.4	3.6	3.7	5.7	3.2	2.2	-1.2	2.9	1.8	1.4	2.2
- Japan	4.1	6.2	4.7	4.8	3.8	1.0	0.3	0.6	1.5	3.9	0.9
ASEAN-4											
- Thailand	9.5	13.3	12.2	11.2	8.6	8.1	8.4	8.9	8.8	5.5	-0.4
- Malaysia	5.4	8.9	9.2	9.7	8.6	7.8	8.3	9.2	9.5	8.6	7.8
- Indonesia	4.9	5.8	7.5	7.2	7.0	6.5	6.5	7.5	8.2	8.0	4.6
- Philippines	4.3	6.8	6.2	3.0	-0.6	0.3	2.1	4.4	4.8	5.8	9.7

Inflation **Unit: Percent**

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
- USA	3.7	4.0	4.8	5.4	4.2	3.0	3.0	2.6	2.8	2.9	2.3
- UK	4.1	4.9	7.8	9.5	5.9	3.7	1.6	2.5	3.4	2.9	2.8
- Germany	0.2	1.3	2.8	2.7	3.6	5.1	4.5	2.7	1.8	1.5	1.8
- Japan	0.1	0.7	2.3	3.1	3.3	1.7	1.3	0.7	-0.1	0.1	1.7
ASEAN-4											
- Thailand	2.5	3.8	5.4	6.0	5.7	4.1	3.4	5.0	5.8	5.8	5.6
- Malaysia	0.3	2.6	2.8	2.6	4.4	4.8	3.5	3.7	5.3	3.5	2.7
- Indonesia	9.3	8.0	6.4	7.8	9.4	7.5	12.5	9.6	9.0	6.6	11.6
- Philippines	3.8	8.8	12.2	14.1	18.7	8.9	7.6	9.1	8.1	8.4	5.1

Table 13 (continued)

Current Account/GDP **Unit: Percent**

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
- USA	-3.5	-2.5	-1.9	-1.6	-0.2	-1.0	-1.5	-2.1	-1.8	-1.9	-2.1
- UK	-1.2	-3.5	-4.3	-3.3	-1.4	-1.7	-1.7	-0.3	-0.5	0.1	0.6
- Germany	4.2	4.2	4.7	3.2	-1.0	-1.0	-0.7	-1.0	-1.0	-0.6	-0.3
- Japan	3.6	2.7	2.0	1.2	2.0	3.0	3.1	2.8	2.2	1.4	2.2
ASEAN-4											
- Thailand	-0.7	-2.7	-3.5	-8.5	-7.7	-5.7	-5.1	-5.6	-7.9	-7.9	-2.0
- Malaysia	8.1	5.4	0.8	-2.0	-8.9	-3.8	-4.8	-7.8	-10.0	-4.9	-4.2
- Indonesia	-2.8	-1.7	-1.2	-2.8	-3.7	-2.2	-1.3	-1.6	-3.3	-3.3	-1.8
- Philippines	-1.3	-1.0	-3.4	-6.1	-2.3	-1.9	-5.5	-4.6	-4.4	-4.7	-5.2

Exchange Rates **Unit: Per U.S. dollar**

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
- UK	1.6389	1.7814	1.6397	1.7847	1.7694	1.7655	1.5020	1.5316	1.5785	1.5617	1.6388
- Germany	1.7974	1.7562	1.8800	1.6157	1.6595	1.5617	1.6533	1.6228	1.4331	1.5048	1.7337
- Japan	144.64	128.15	137.96	144.79	134.71	126.65	111.20	102.21	94.06	108.78	121.06
ASEAN-4											
- Thailand	25.72	25.29	25.70	25.59	25.52	25.40	25.32	25.15	24.92	25.34	31.37
- Malaysia	2.5196	2.6188	2.7088	2.7049	2.7501	2.5474	2.5741	2.6243	2.5044	2.5159	2.8178
- Indonesia	1643.8	1685.7	1770.1	1842.8	1950.3	2029.9	2087.1	2160.8	2248.6	2342.3	3029.7
- Philippines	20.57	21.10	21.74	24.31	27.48	25.51	27.12	26.42	25.71	26.22	30.95

Interest Rates **Unit: Percent**

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
- USA	6.9	7.7	9.1	8.2	5.8	3.7	3.2	4.6	5.9	5.4	5.1
- UK	8.6	8.6	11.5	12.5	10.3	7.5	4.0	3.7	4.1	3.1	n.a.
- Germany	3.2	3.3	5.5	7.1	7.6	8.0	6.3	4.5	3.9	2.8	3.3
- Japan	1.8	1.8	2.0	3.6	4.1	3.4	2.1	1.7	0.9	0.3	0.3
ASEAN-4											
- Thailand	9.5	9.5	9.5	12.3	13.7	8.9	8.6	8.5	11.6	10.3	10.5
- Malaysia	3.2	4.1	4.9	5.9	7.2	8.0	7.0	4.9	5.9	7.1	7.8
- Indonesia	16.8	17.7	18.6	17.5	23.3	19.6	14.6	12.5	16.7	17.3	20.0
- Philippines	8.2	11.3	14.1	19.5	18.8	14.3	9.6	10.5	9.4	9.7	10.2

Periodical Averages

	Economic Growth (%)		Current Account/GDP (%)		Inflation (%)	
	1987-89	1990-97	1987-89	1990-97	1987-89	1990-97
Thailand	11.7	7.4	-2.3	-6.3	3.9	5.2
Malaysia	7.8	8.7	4.8	-5.8	1.9	3.8
Indonesia	6.1	6.9	-1.9	-2.5	7.9	9.3
Philippines	5.8	3.7	-1.9	-4.3	8.3	10.0

Sources: International Financial Statistics, 1998;
Bank of Thailand's Key Economic Indicators, various issues.

35. Financial liberalization measures undertaken in Thailand in the first half of 1990's helped strengthen confidence of foreign investors in several respects. The first milestone was Thailand's acceptance of the obligations under the Article VIII of the IMF on May 21, 1990. That was followed by three rounds of exchange control dismantlement, the aim of which was to keep the foreign exchange regime in line with globalization and growing mobility of capital.

36. The first round, instituted in May 1990, allowed commercial banks to authorize foreign exchange transactions in trade-related activities without prior approval from the Bank of Thailand and increased the limit on foreign exchange purchases to facilitate transfers and travel expenses. Commercial banks were also permitted to remit funds for debt repayment, sale of stocks, or liquidation of business within certain limits.

37. The second round, in April 1991, lifted most controls related to capital account transactions. For the first time, unincorporated Thai entities could open foreign currency accounts provided that the funds originated from abroad. Exporters were allowed to accept baht payments from non-resident baht accounts without prior approval from the central bank and to use their export proceeds to service external obligations.

38. The third round of foreign exchange liberalization, in February 1994, raised the limit on outward transfer of direct investment by residents, increased the limit on bank notes to be taken to countries bordering Thailand including Vietnam, abolished the limit on travel expenses, and allowed residents to use foreign exchange proceeds that originated abroad to service their external payments. Relaxation of these exchange controls aimed at a more active role of market forces and a greater utilization of the baht in regional trade.

39. The Bangkok International Banking Facilities (BIBF) was established in March 1993 as a means for developing international financial services and for mobilizing capital to support regional economic growth and development. BIBF may also have been adopted so as to strengthen competition in domestic financial markets without setting up new commercial banks or finance companies. BIBF received tax privileges on juristic income tax, special business tax, and interest income tax.

40. On the price front, the authority on June 1, 1989 removed interest rate ceilings on commercial banks' time deposits with maturities longer than one year. Interest rate ceilings on savings deposits (7.25%) and short-term time deposits (9.5%) were deleted on January 8, 1992 and ceilings on loan rates (15%) ended five months later on. By June 1, 1992 all interest rate ceilings were abolished for commercial banks and finance companies as well as credit fonciers.

41. Differences in interest rates and the pace of economic growth, together with financial liberalization as well as stable exchange rate of the baht, attracted a growing stream of net capital inflows to Thailand, from 2-6% of GDP in 1980's to 9-12% of GDP in 1990-96. As the surge in FDI and equity investment was less dramatic, most of the inflows were in the form of loans. These vigorous foreign borrowings resulted in Thailand's swelling external debt outstanding, which more than tripled from US$ 29 billion in 1990 to US$ 94 billion in mid-1997. In relative terms, total foreign debt outstanding surged from 34% of GDP in 1990 to 59% of GDP in mid-1997. A majority of these inflows went to the private sector, as the Thai

government commanded nine consecutive years of surplus (1988-96) on its cash balance. That was why private external debts accounted for an increasing portion of the country's total debt outstanding, rising from 61% in 1990 to 81% in 1996. Such predominance shortened the external debt profile (short-term debts representing 50% in 1995 instead of 15% in 1987) because most credits that private entities had access to were of short-term maturities. The shortening of the country's external debt maturity profile raised the degree of volatility as well as vulnerability.

42. The volatility is unquestionable in the case of non-FDI capital flows as demonstrated in Table 14. During the 1990's net inflows of FDI stayed within the range of 1.1-3.3% of GDP throughout. Non-FDI net inflows, in contrast, moved from 12.6% of GDP in 1995 to –14.9% of GDP in 1997. In other words, almost all volatility of private net capital inflows was due to non-FDI categories.

Table 14: Thailand's Private Net Capital Inflows

Unit: Percent of GDP

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Total Private Net Capital Inflows	13.3	9.0	9.7	7.6	9.0	14.0	7.8	-11.7	-9.8
FDI	2.6	1.9	1.9	1.2	1.1	1.4	1.2	3.2	3.3
Non-FDI	10.7	7.1	7.8	6.3	7.9	12.6	6.7	-14.9	-13.1

Source: Bank of Thailand.

43. Capital influx and financial deregulation led to excessive spending or investment, credit extension, and declining asset quality. The economic bubble affected not only real estate but also automotive industry, private hospitals, steel bars, and petrochemicals.

44. On the part of the private sector, constantly energetic momentum (real economic growth of 12.2% p.a. in 1988-90 and 8.6% p.a. in 1991-95) easily tempted businessmen to heavily invest, especially when they had immediate access to cheap foreign funding in the midst of stable exchange rates. However, they tended to mismanage their financial positions by (a) relying too much upon debt, instead of equity, financing, (b) maturity mismatching which necessitated frequent debt roll-overs, and (c) leaving their net foreign exchange positions uncovered. These financial weaknesses lowered the extent of financial institutions' asset quality to an alarming degree.

45. The situation was aggravated by shortcomings of domestic banks and finance companies. In contrast with foreign banks, local units were frequently incompetent in evaluating credit applications or cash-flows analysis. Instead, they often resorted to collateral

or asset-based decision-making. Local banks and finance companies hardly tapped long-term deposits while granting too much overdraft facilities for long-term fund uses. Such maturity mismatch entailed liquidity risks to both borrowers and lenders.

46. Interviews with foreign banks in Thailand, representing either bank branches or representative offices, revealed that credit extension was primarily based on corporate rating as indicated by data from annual reports and financial status. Collateral did not receive much attention. Instead, these foreign banks place emphasis upon exchange risks, especially after the baht was floated. Nonetheless, in credit extension, foreign commercial banks had neither industry nor currency limits. They were only subject to the country limits as specified by their headquarters. Such country limits often varied, hinging upon country rating and relevant factors as deemed important by those banks.

47. Overall, the central authority was to bear the blame for three accounts; (a) liberalizing the country's capital account without freeing up the baht exchange rate, (b) prematurely liberalizing practices of domestic financial institutions, and (c) failing to prudently examine plus supervise those local financial institutions. Unsurprisingly, the period preceding the financial crisis saw marked deterioration on both micro- and macro-scenario.

48. On the micro side, the number of ailing commercial banks and finance companies troubled by doubtful assets and liquidity shortages grew at a shocking pace. What was more distressing was that the Bank of Thailand had to cope with these predicaments in the absence of deposit insurance institute. The central bank thus found it inevitable to offer financial rescues to numerous unhealthy banks and finance companies even though such assistance definitely worsened the country's macroeconomic imbalances.

49. On the macro side, Thailand's current account deficit rose to 8% of GDP in 1995-96 as a result of export downturn and superfluous spending largely funded by foreign capital. Government's effort to restrain domestic credit extension proved fruitless, since the non-bank private sector resorted to foreign credits instead. In the meantime, the excess of Thai over U.S. inflation, spurred by external borrowing, increased markedly and was not rectified by any exchange rate move. In contrast, the baht was tightly pegged with the U.S. dollar, whose value climbed continually and considerably between mid-1995 and mid-1997. The rising value of the baht, together with growing excess inflation, dampened exports which were already suffering a slump. Overall, the pegging exchange rate regime hurt the country's current account by encouraging more spending on imports via foreign borrowing and discouraging exports via prices.

50. What should be noted as well is that the policy measures implemented by the Thai government were too little and too late. In 1995 the authority tightened regulations on foreign borrowing, e.g. raising the minimum amount for BIBF inflows, imposing 7% reserve requirement on short-term external debts. By 1996 and the first half of 1997 investor

confidence deteriorated to a large degree due to threatening current account deficits, appreciating value of the dollar and the baht, ailing banks and finance companies, and growing excess inflation (Table 15). The anticipated baht devaluation triggered a flood of capital outflows to liquidate short-term foreign debts or to speculate against the baht. Such huge outflows resulted in a plunge of central bank's foreign exchange reserves which made floating of the baht unavoidable on July 2, 1997, the onset of Asian financial crisis.

Table 15
Thailand's Current Account Balance and Domestic Inflation

	Current Account Balance as a % of GDP	Thai-U.S. Inflation Differential percent
1982	-3.2	-1.0
1983	-7.8	0.6
1984	-5.1	-3.4
1985	-4.1	-1.2
1986	0.6	0.0
1987	-0.8	-1.2
1988	-2.6	-0.3
1989	-3.5	0.6
1990	-8.5	0.6
1991	-7.7	1.5
1992	-5.7	1.0
1993	-5.1	0.3
1994	-5.6	2.5
1995	-8.1	3.0
1996	-8.0	3.0

Source: Bank of Thailand.

51. After the baht's exchange rate was floated, the currency nosedived from 26 baht per U.S. dollar in June 1997 to 47 baht in December 1997 and 56 baht in January 1998. But it stabilized around 36-37 baht towards the end of 1998.

52. Capital flows thus far exerted more pressure upon exchange rates than their current account counterparts. The principal reason was that capital flows included not only trade financing but also capital and speculative investment.

53. What made capital flows volatile and therefore formidable was that they hinged upon numerous factors as well as a subjective degree of confidence. For instance, according to one recent survey, the following seven factors, which are hardly steady according to multifarious interpretations, strongly affect investor confidence.

- Political stability
- Competence of economic management team
- External account, including trade balance, current account, and balance of payments
- Efficiency and stability in the financial system

- Foreign exchange reserves
- Asset quality of financial institutions
- Policy inconsistency or rigidity

4. Econometric Investigation

54. While there are several forms of capital inflows (e.g. foreign direct investment, portfolio investment, loans, non-resident baht account), there are various factors as well affecting these inflows (e.g. economic growth potential, stock market returns, interest rate differentials, exchange rate volatility, and macroeconomic stability). These factors influence capital inflows either directly (e.g. interest rate on loans) or indirectly (e.g. affecting investor confidence in recipient economy). Though there are numerous theoretical assertions about how each factor affect each type of capital inflows, there is little empirical work. This investigation thus has two objectives: (a) to test statistically the influences of each factor on different kinds of capital inflows, (b) to pinpoint the different degrees of those influences.

55. The degree of influence is measured by standardized coefficients obtained from OLS estimated equations, which link each type of capital inflow to possibly pertinent explanatory variables $(FC_i = d + \sum_{i=1}^{n} B_i X_i)$. The estimation utilizes monthly data from January 1988 to June 1998. The tested explanatory variables are:

- Interest rate differentials
- Returns from the Stock Exchange of Thailand
- Volatility of baht exchange rates versus U.S. dollar, yen, Singapore dollar
- Forward cover or swap premium
- Indicators of macroeconomic stability, e.g. current account deficits, inflation differentials, foreign exchange reserves/imports ratio
- Indicators of economic activities, e.g. private sector's electricity consumption, manufacturing production index

56. Besides, some dummies were also included to reflect crucial impact of economic or political changes, e.g. government turnover, shifts in exchange rate system, and variations of country's credibility as evaluated by credit rating agencies. Results of this econometric investigation as shown in Tables 16-19 are close to expectations for each type of capital inflows. Meanwhile, the following points deserve some attention.

57. Foreign direct investment (Table 16) Export performance is the most significant explanatory variable, demonstrating the long-term relationship and the Board of Investment's role. Current account deficit, or the second rank, is probably there because it correlates with foreign investors' confidence. As for the exchange rates, volatility of baht per yen has stronger impact than those versus other currencies. That could be partly due to the fact that

Japan accounted for 38% of all foreign direct investment, or more than other countries.

Table 16: Foreign Direct Investment Inflows

	Variables	Standardized Coefficients	T-Statistics
1st	Export Performance[1]	0.308**	6.094
2nd	Current Account Deficit	-0.158**	-3.968
3rd	Growth Performance[2]	0.041*	1.895
4th	Baht per Yen Volatility	-0.035*	-1.551

* Significant at 10% level, ** Significant at 5% level

R^2 adjusted = 0.962 D.W. = 2.23

[1]Export value is used as a proxy for the export performance.

[2]Due to lack of monthly data, the private sector use of electricity is used as a proxy for the growth performance.

58. Portfolio investment (Table 17) Economic fundamental factors (e.g. manufacturing production index, stock exchange index) are equally important to technical factors (e.g. baht per U.S. dollar volatility, forward cover, and interest rate differentials). In contrast, the adequacy of foreign exchange reserves (in terms of import expenses) is not very meaningful to foreigners in the stock market as well as direct investment.

Table 17: Portfolio Investment Inflows

	Variables	Standardized Coefficients	T-Statistics
1st	Growth Performance[1]	0.267**	4.203
2nd	Baht per Dollar Volatility	-0.245**	-2.750
3rd	Stock Market Performance[2]	0.244**	5.545
4th	Swap Rate	-0.236**	-2.399
5th	Interest Rate Differential	0.224**	2.311

* Significant at 10% level, ** Significant at 5% level

R^2 adjusted = 0.842 D.W. = 2.11

[1] Due to lack of monthly data, manufacturing index is used as a proxy for the growth performance.

[2] Stock Exchange of Thailand (SET) index is used as a proxy for the stock market performance.

59. Loans (Table 18) Interest rate differentials and exchange risks are primary determinants of loan inflows. But it is notable that the latter commands more weight than the former. In other words, in negotiating cross-border credits, lenders and borrowers gave more attention to exchange rate stability than to differences of interest rates. This outcome is particularly consistent with the actual situation in 1997-98. During such period, exorbitant interest rates of the baht could not attract much capital inflows because the baht value was under heavy pressure. And when the baht retrieved its stability, even though Thai interest rates were less than a half, there were more capital inflows than during the crisis.

Table 18: Loan Inflows

	Variables	Standardized Coefficients	T-Statistics
1st	Swap Rate	-0.405**	-4.272
2nd	Interest Rate Differential	0.302**	2.514
3rd	Baht per Dollar Volatility	-0.173**	-1.933
4th	Reserves to Imports Ratio	0.148*	1.701

* Significant at 10% level, ** Significant at 5% level

R^2 adjusted = 0.764 D.W. = 1.96

60. Non-resident baht account (Table 19) It is unsurprising that deposit rate differentials, forward cover or swap rate, and stock market index represent important determinants as to whether foreign investors will shift their funds to invest in Thailand or not. But the following three points are noticeable.

- The foreign exchange reserves to imports ratio, which in a way signifies investor confidence as to how much the debtor country can satisfy its external debt obligations, receives the heaviest weight from foreign investors, and more than that of interest rate differentials. This corresponds well with the fact that these non-resident baht deposits (the amounts of which exceeded those of other types of capital inflows) tended to have short maturities and easily fluctuated depending whether there was any news affecting investor confidence or not.
- Interest rate differentials are more important than the stock market index.
- The deposit rate differential which is statistically significant is the one between that of baht and that of Singapore dollar, not U.S. dollar or yen. Furthermore, the baht volatility which is statistically important is the baht versus Singapore dollar, not U.S. dollar or yen. That corresponds well with the fact that most (roughly 60%) of all non-resident baht deposits came from Singapore.

Table 19: Non-Resident Baht Account Inflows

	Variables	Standardized Coefficients	T-Statistics
1st	Reserves to Imports	0.124**	2.075
2nd	Deposit Rate Differential	0.112**	3.028
3rd	Swap Rate	-0.084*	-1.777
4th	Stock Market Performance	0.071*	1.804
5th	Baht to Sing. Dollar Volatility	-0.061*	-1.623

* Significant at 10% level, ** Significant at 5% level

R^2 adjusted = 0.922 D.W. = 2.23

61. Foreign investors' confidence represents a very crucial determinant of capital inflows to Thailand. That is immediately evident from the weight of current account deficit in case of foreign direct investment (Table 16), growth performance in case of portfolio investment (Table 17), reserves to imports ratio in both cases of loans (Table 18) and non-resident baht account (Table 19).

62. Inflation differences between those in Thailand and abroad are not statistically significant. That may be because Thailand was successful in keeping its price stability most of the time in the past, so this factor hardly affected foreign investors' confidence.

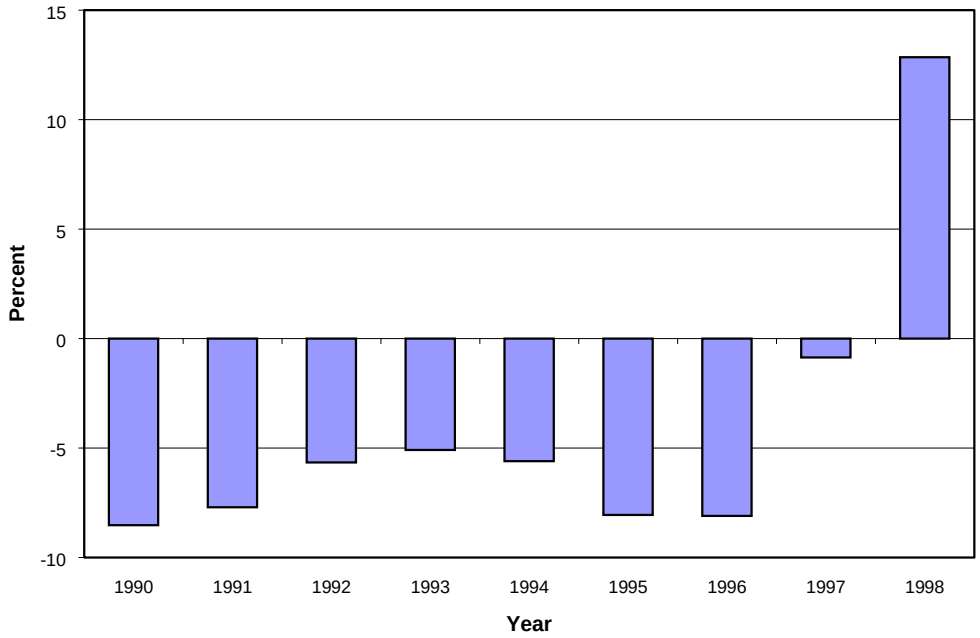
Part 3: Impact on the Economy

63. Part 2 has examined the influence of the economy on the volume of capital flows, it remains to trace the impact of capital flows on the economy. In doing so, it is convenient to split the discussion into pre- and post-crisis periods as the economic mechanisms whereby the flows are translated into economic consequences are different.

5. Pre-crisis

64. The volume of capital inflows during the pre-crisis period had an enormous impact on the macroeconomy. The most obvious consequence is excess aggregate demand. Within the tradable sector, this excess demand found an outlet in an expansion of the current account deficit, which grew continuously, until it reached 8 per cent of GDP in 1996, on the eve of the crisis. Among the non-tradable goods, the excess demand led to a rapid increase in their prices relative to the prices of tradable goods or a decline in the real exchange rate. Figures B and C show these impacts.

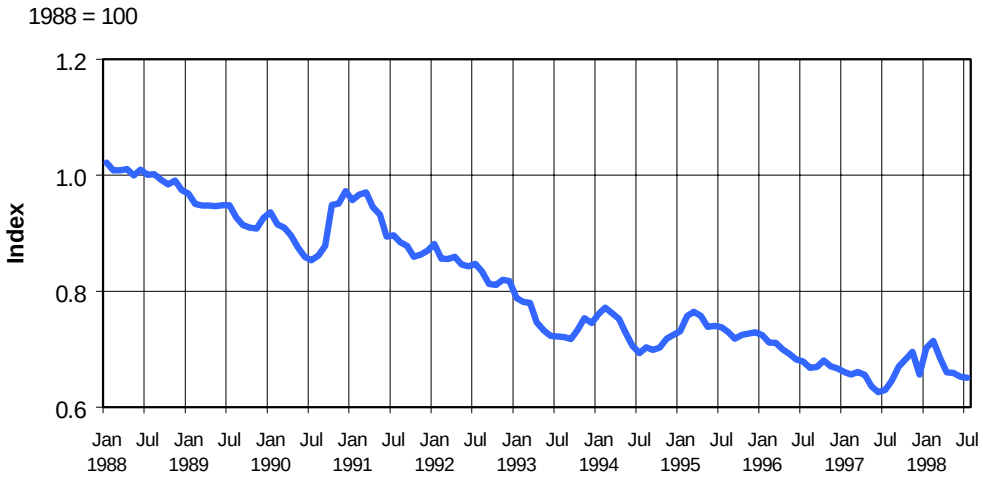
Figure B: Thailand's Current Account



Source: Bank of Thailand

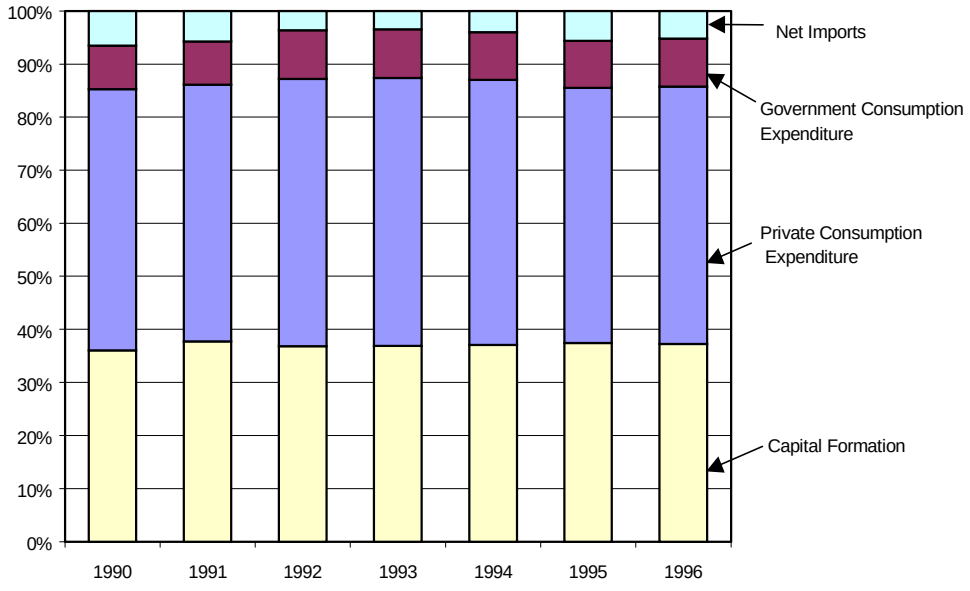
65. It has been claimed that in Asia, most of the capital inflows went into investment rather than consumption. This is not quite accurate, at least as far as Thailand is concerned. While it is true that the share of investment in national expenditure was very high, around 40 per cent, this high share preceded the large influx of capital, and remained remarkably unaffected by the capital inflows (see Figure D).

Figure C: Relatives Prices of Tradable to Nontradable Goods



Source: Department of Business Economic **Month/Year**

Figure D: Components of Expenditure on GDP 1990-1996



Source: The National Economic and Social Development Board

66. The high saving rate that accompanied the high investment rate, amid a relatively undeveloped long-term and equity market, implies that banks and finance companies played major intermediary roles. (Finance companies in Thailand are deposit-taking institutions that function almost like banks). After 1993, a rising portion of the capital inflows documented in Part 1 of this paper went to the BIBF among whom local financial

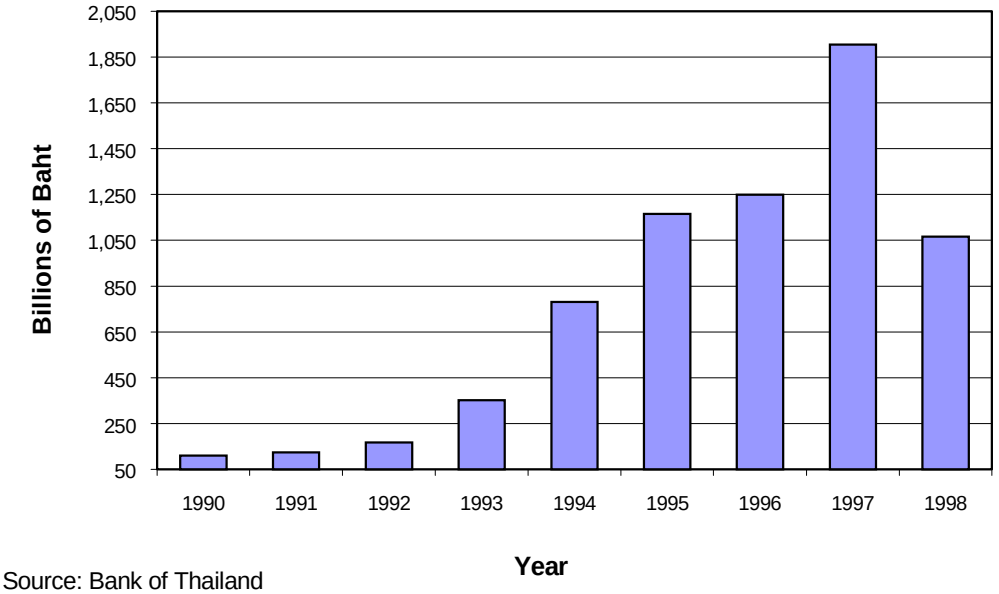
institutions were major players. It is therefore essential to give a brief description of these financial institutions.

67. Thai banks and finance companies long played a very important role in channeling savings to investment. Like financial institutions everywhere, they were subject to stringent regulations, and before 1990, interest rate floors and ceilings were set by the authorities. Their lending portfolios were lightly controlled by the central bank (lightly compared to countries like Korea or India). The only explicit credit rule stipulated by the Bank of Thailand was that a certain proportion (between 14 and 20 per cent) of commercial banks' lending be allocated to rural areas. Occasionally, there were instructions from the central bank varying the amounts of these required rural credits. But these regulations and controls were gradually lifted in the early 1990s.

68. Until August 1997, Thailand did not have any explicit deposit insurance system, although the government had occasions to bail out both banks and finance companies. When these bailouts became necessary, as for example during the early 1980s, depositors received refunds but not immediately and not with interest. Later on, in the 1990s when such bailout became unavoidable again, the government was kind enough to provide interest payments. In August 1997, to head off a bank run, the government enacted an explicit guarantee to all depositors and local as well as foreign creditors.

69. As exchange controls began to be dismantled along with domestic financial liberalization, commercial banks and finance companies tapped funds from foreign sources to a larger extent for their operations. This reliance on foreign resources can be seen in Figure E which shows gross foreign liabilities of the banks. These inflows made the banking system increasingly vulnerable. One index of such vulnerability is the ratio of combined net foreign assets of the central bank and commercial banks to M2, as shown in Figure F.

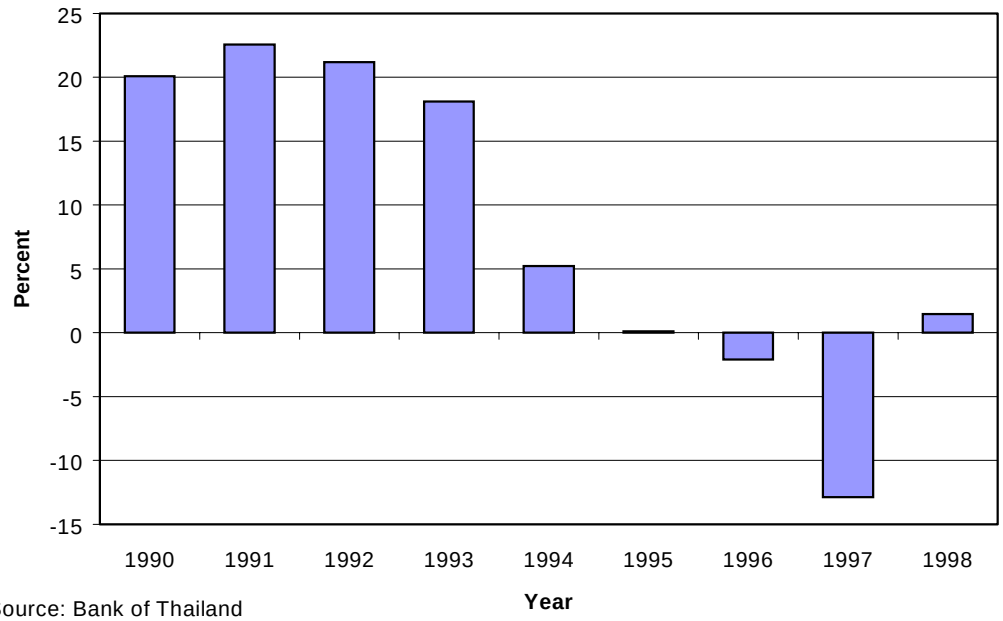
Figure E: Gross Foreign Liabilities of The Central Bank and Commercial Banks in Thailand



Source: Bank of Thailand

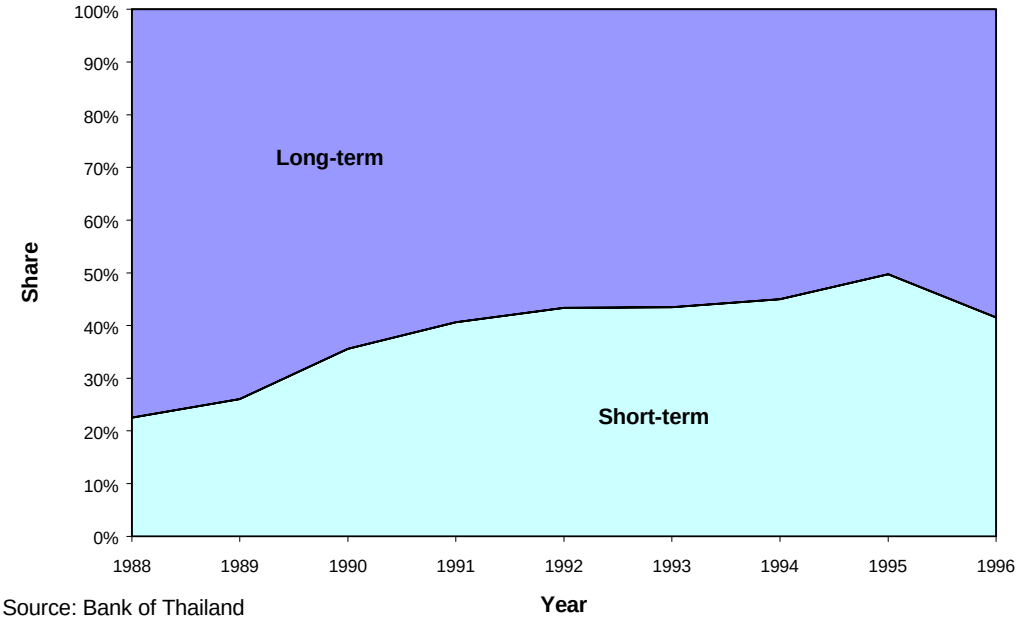
70. This ratio steadily declined and finally moved into negative territory. Such decline was mainly caused by the increase in commercial banks' foreign liabilities. Another index of vulnerability is the short-term portion of external debt outstanding, since the larger ratio means more rollover is required. In Thailand this ratio surged from 22% in 1988 to 50% in 1995-96 (see figure G).

Figure F: Ratio of Net Foreign Assets to M2



Source: Bank of Thailand

Figure G: Total External Debt Outstanding

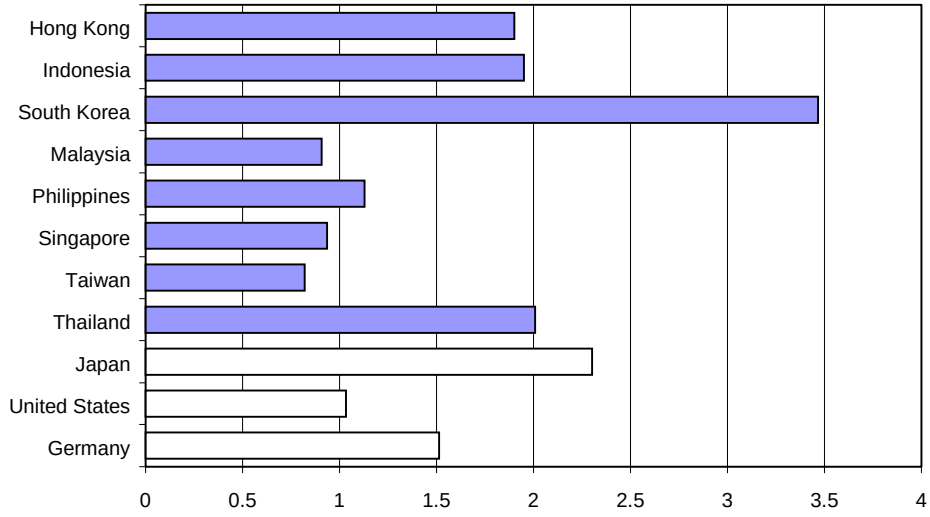


Source: Bank of Thailand

71. The central bank did try to limit the foreign exchange exposure of financial institutions by limiting their net foreign exchange open position to 15-20% of their capital funds. But the financial institutions were not effectively constrained by this regulation, as they could on-lend to their domestic customers in dollars. While the financial institutions were seemingly insulated from exchange risks, their customers were not (very few of final borrowers covered their dollar liabilities). What the regulation did, in effect, was to convert exchange risks into credit risks.

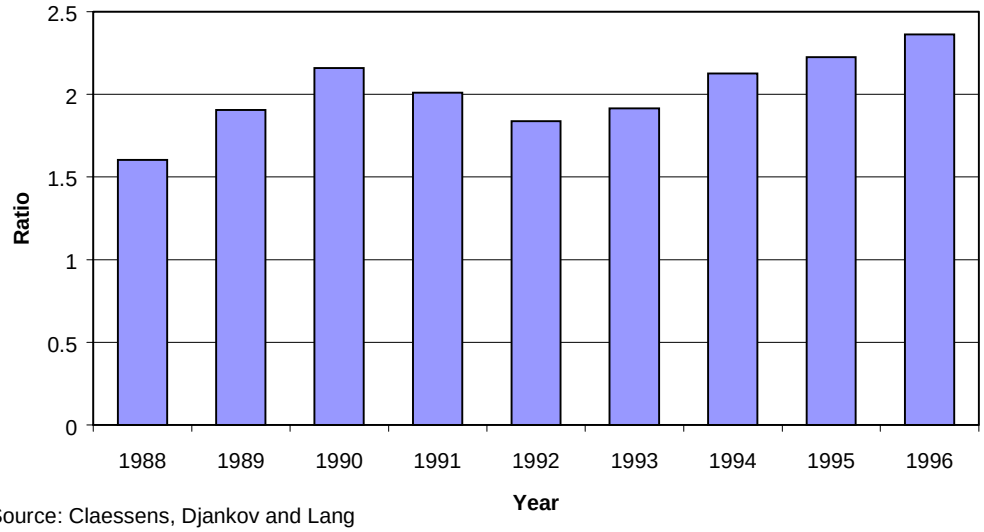
72. This credit risk was quite high since Thai corporations were highly geared due to 5 explicit reasons. First, from 1990 onwards the Thai central bank liberalized exchange controls to a large extent, especially after 1993 when Bangkok International Banking Facilities were established as a means to promote Thailand to become a regional financial center. Second, foreign interest rates exceeded local rates on some occasions. Third, amid such scenario, the baht exchange rate was kept around 25 baht per U.S. dollar with very low volatility. Fourth, debt, instead of equity, financing helped preserve ownership among large Thai families. This particular feature fit very well with the Asian culture. Finally, according to the revenue code, the burden arising from debt financing, i.e. interest payments, are tax deductible, whereas those that stem from equity financing, i.e. dividend payments, are not. Figures H and I demonstrate that Thailand's debt/equity ratio was not only high relative to those in other countries but also rising to some extent.

Figure H: Ratio of Debt to Equity (Average 1988-1996)



Source: Claessens, Djankov and Lang

Figure I: Debt to Equity Ratio of the Listed Non-financial Corporations in Thailand (1988-1996)



Source: Claessens, Djankov and Lang

73. Problems also occurred on the lender side, as foreign money was mostly committed on a short-term basis, while the money involved was used by the banks and end-users to finance long-term investments, e.g. property sector. This maturity mismatching became a major problem both before and after the crisis.

6. The Run-up to the Crisis

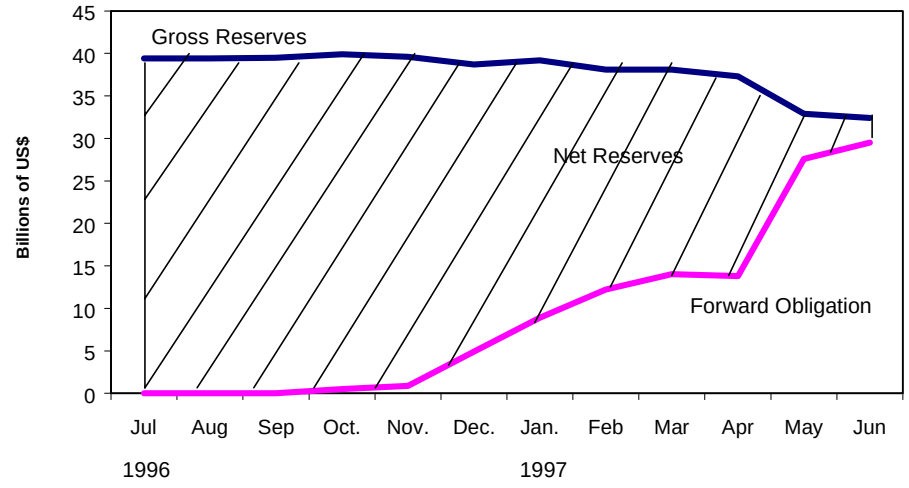
74. Beginning in 1996, signs emerged that the Thai economy was heading towards a crisis. In fact, the property sector encountered troubles since 1994. The main turning point came with news release of dramatically falling export growth rate, which dropped from double digit levels to zero in one year. By September, over-exposure and problem loans in the property sector led Moody's to reduce their rating of the country.

75. Nonetheless, funds were still coming in throughout 1996, and indeed the first quarter of 1997. The global financial markets chose to respond to predicaments in Thailand by attacking it at perhaps its most vulnerable point, namely, its exchange rate. Speculative strikes were launched, allegedly by hedge-funds, first in November 1996, then February 1997, and a truly massive one in May 1997.

76. The central bank chose to counter these attacks by engaging in swap operations. Instead of selling its dollar reserves in the spot market alone to support the baht, which would over time lead to a rise in interest rates, it simultaneously sold baht for dollars in the spot market and covered it with a reverse trade in the future. The effect of this is basically the same as if it has sterilized the support operations. However, in selling baht in the spot

market, it handed the currency to foreigners who could use it to turn around and attack the baht again and again. This operation was halted on May 15, 1997, when after the latest and most severe attack, the Bank of Thailand told Thai banks to cease lending baht funds to foreigners, and to try and close down the offshore baht market. This measure effectively stopped the speculators and indeed imposed severe losses on them, but it was too late because by then net reserves of the central bank dwindled down to near zero (see Figure J). Six weeks later, on 2 July 1997, the baht was floated.

Figure J: Thailand's Net International Reserves



Source: Bank of Thailand

77. The reluctance of the central bank to engage in a conventional defense of the baht by selling dollars in the spot market can be partly explained by the weakness of local financial institutions, particularly finance companies. The property sector was by the beginning of 1997 truly sick, threatening to pull down many of these institutions. The central bank was forced to provide liquidity to them. In the first quarter of 1997, the central bank began to exert pressure on them to increase capital. When sixteen finance companies were unable to comply, it suspended them from operations, thereby triggering a bank run.

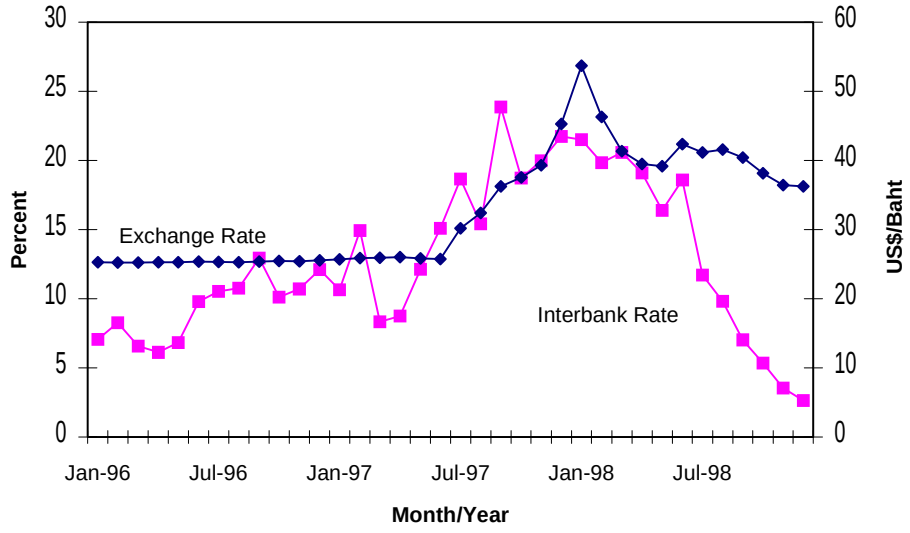
78. The problems with finance companies may appear to be independent of the speculative attacks in the currency markets. But in fact, they happened simultaneously and, as we believe, were closely related. As earlier stated, although there is no guarantee for depositors at the banks and finance companies, political considerations suggest that the government could not stand idly by and let them go bankrupt. The government would then be liable to a sum that in the end turned out to be very large, negating years of fiscal prudence before 1997. It is this consideration that added fuel to the speculative fire, engulfing the baht.

7. The Crisis and Aftermath

79. As already noted, capital continued to flow into Thailand until the third quarter of 1997. The speculative attacks on the baht did not appear in any of the numbers we showed in Part I, for they were entirely central bank operations which were disguised as off-balance-sheet items. The important point was that, while confidence was low, it did not lead to a mass exodus of credit–until 2nd July.

80. Once that happened, the outflow was massive, as were the effects on the economy. The situation was aggravated when the contagion spread to other Asian countries, and the effects rebounded back to Thailand. A good measure of the results of the panic was the exchange rate (see Figure K). It was only after May 1998 that the baht stabilized at a level, which placed the price of a dollar at about 50 per cent above the level prevailing before 2nd July 1997. This was the largest currency depreciation Thailand has experienced in the last four decades. In addition, the wide fluctuations in exchange rates considerably weakened market confidence, and capital continued to flow out, thus debilitating growth prospects. In its earlier stages, the currency depreciation was accompanied by a very sharp increase in interest rates (see Figure K).

Figure K: Exchange Rate and Interest Rate Movements



Source: Bank of Thailand

81. The depreciation of the baht led to rather anomalous results. There was, first of all, little increase in exports. While growth to the U.S. and European markets was high, this was offset by declines in exports to Asian markets which constituted a half of Thailand's export markets. Second, the inflation rate was relatively mild, considering the size of the depreciation. The consumer price index rose about 10 per cent in the first year after the devaluation and remained flat thereafter.

82. The sluggish exports together with a sharp fall in investment occasioned by the exodus of capital led to a severe contraction of the economy. Preliminary estimates indicated that the gross national product (GNP) in 1998 fell 8.5 per cent below that in 1997. The number of unemployed in February 1998 was 1.1 million more than a year before, and the number of underemployed (those working less than 20 hours a week) was another 0.8 million, out of a total labor force of 30 million. In the beginning, the situation was not helped by the insistence of the International Monetary Fund that the Thai government ran a budget surplus of 1 per cent. Later on in February 1998, this policy was modified to permit a deficit of 3 per cent. In its later explanation, the Fund claimed that the earlier deflationary policy was dictated by its fear of inflation, which could have arisen as a result of an export boom, and that misestimate of the export growth was in turn due to its failure to predict the contagion effect.

83. The combination of a depreciated currency, high interest rates and declining GNP played havoc with corporate balance sheets. Many companies became insolvent, and more were unable to service their loans. The knock-on effects on the finance sector were enormous. Already in August 1997, additional 42 finance companies were suspended. With the sixteen suspended in May 1997, this brought the total to 58. Of these, all but two were permanently closed down. Later, half a dozen more finance companies were taken over by the government, as were four banks. Despite this massive shake-up of the financial sector, the situation remains far from healthy. The loans classified as non-performing amounted to an incredible level of 47 per cent of total loans. The fiscal cost of these financial failures is estimated to reach 15-20 per cent of GNP.

84. All these adverse effects on the economy lessened confidence further and induced a greater exodus of capital, the opposite of boom times when the strong showing of economy encouraged inflows. Such reinforcing feedback mechanism makes reliance on foreign capital flows a dangerous policy option.

Part 4: Lessons Learnt

85. The story outlined above offers a number of lessons to Thailand, and we believe, for other countries that are entering or in the same stage of development that Thailand was in the 1990s. We divide our account of the lessons learnt into two parts. The first part is what set of policies to engage in during “normal” times, in order to prevent entering into a crisis. The second part deals with the set of policies to undertake when unfortunately the country could not avoid a crisis.

86. First, we would like to repeat what has now become a cliché but nevertheless needs reiteration: a fixed exchange rate regime, an open capital account, and an independent monetary policy are mutually incompatible. The real question is which of these three, or which combination of these three to give up. Clearly, each country has its own political economy, which makes the choice somewhat unique. To give up only the independent monetary policy, while retaining the other two policies, implies that the country must have a Currency Board, an option that is not viable for most countries. Such a choice would tie the economy unnecessarily to the ups and downs of another country, such as the U.S. with which the home currency is tied.

87. Of the remaining two options, many countries would like to retain a fixed exchange rate regime, as that has many desirable features for the agents in the economy. Most businessmen, when asked, will vote overwhelmingly for a fixed exchange rate regime. However, whether that is the best option for the country as a whole is another matter. In the specific case of Thailand, a further point must be borne in mind. As the peg does require adjustment from time to time, it requires the willingness and ability to do so with somewhat precise timing. Experience has shown that the Thai authorities were invariably reluctant to adjust the peg, postponing the action until the very last minute, as was the case in 1997, when the adjustment costs were very great.

88. Is an open capital account equally desirable? The one clearly desirable feature for any developing country is to be open to foreign direct investment, as that brings in foreign technology and know-how. Besides, the flows of foreign direct investment are far less volatile than other items in the capital account. For these other items, events in Thailand and elsewhere in Asia have shown that, on a net basis, there is little to be gained from having an open capital account. The flows were very volatile, dependent on many considerations other than relative rates of return, such as political stability, manias and panics in other countries.

89. In particular, when a country rushes into liberalization of the currency and capital markets without sufficient preparatory steps, then to have an open capital account can be very dangerous. For a country to benefit from the world capital market, it must have in place a balanced and sophisticated capital market of its own. Most Asian countries, and

Thailand in particular, had been overly dependent on banks and finance companies to intermediate funds between savers and spenders. True, the equity market was being developed, but it never adequately complemented the bank-based system. Indeed, it is arguable that the appearance of an equity market undermined the control that traditional "main-line" banks exerted over companies. The crisis has also shown that the legal structure that underlay these markets are very undeveloped. That the foreign bankers and investors, who should have known better, also discovered these weaknesses as the rest of us is a telling indictment of the workings of the international capital markets.

90. The opening of the capital markets also undermined Thailand's banking and financial system. This is because, having liberalized rapidly, the central bank did not sufficiently revise its supervisory roles to match the increasing riskiness that such a system entailed. This was a major policy mistake underlying the Thai crisis.

91. Note that the arguments against open capital account still remain even if the exchange rate is allowed to float, for in that case the volatility of the flows would translate itself into the volatility of the exchange rate. It can be argued that the flexibility of the exchange rate will lessen the volatility of the flows (Krugman, 1979), but since capital flows depend on so many other extraneous factors as well, we do not believe that the reduction of the capital flow volatility as a result of exchange rate flexibility will be substantial.

92. If capital flows ought to be controlled, what instruments should be deployed for best results? The most market-friendly, which even the IMF seems to have found acceptable, is to levy a tax or a tax-equivalent on capital inflows. Chile, for example, used to require that foreigners bringing in foreign funds deposit a certain proportion, interest free, with the central bank. This amount can vary to allow the central bank to control the volumes of capital inflows.

93. A second instrument that could be deployed is to prevent foreigners from acquiring large quantities of the home currency. This instrument was used by the Bank of Thailand when the baht was under attack in May 1997 (but it has since been withdrawn, apparently at the urging of the IMF), and also by the Malaysian central bank in September 1998. Indeed, Singapore has employed this measure for a long time.

94. Discussion of this last instrument and its timing brings us to the instruments that could be deployed once a crisis has occurred. Preventing foreigners from acquiring the home currency has been noted. The Malaysians have actually prevented foreign portfolio investors from repatriating their capital for a year (although that measure was partially rescinded before the year was out). The introduction of this measure was widely criticized in the international capital markets, for it did look very close to being a debt moratorium, although it is interesting to note how quickly the Malaysians have been "forgiven" in the international markets for their trespass.

95. We would like to venture a proposal that developing countries should hold a Malaysia-like set of measures always in reserve and announce that they could use them in the future if there is a pressing circumstance such as a mass exodus (or influx) of capital. This would of course raise the required yield on capital flowing in from outside, and be a tax-like measure that would “add the grain of sand to the machinery of international capital flow.”

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