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1. Introduction

The years in 1990's have been marked by a series of currency crises in the international monetary system. In 1997, a currency crisis occurred in Thailand with the baht; this extended to other Asian currencies. When the Mexican currency crisis occurred in 1995, it was believed that a currency crisis would not happen in Asia because the Asian countries had developed. But two years later, the International Monetary Fund (IMF) convened a meeting of a number of interested countries and multinational institutions in Tokyo on August 11 to support the stabilization program for Thailand and agreed to finance it with 16 billion dollars.

When the Mexican currency crisis occurred, the main problem discussed was how improve the international monetary system by reforming the floating exchange rate system which often caused volatility and the misalignment of exchange rates, for example, about the possibitity of introducing the target zone system[1]. But these crises made the serious problem clear.

The main questions examined in this paper are as follows. Why have currency crises occurred so many times in 1990's? Are there any relationships between currency crises and liberalization of financial markets, which makes private capital flows increase and, if so, what are the implications of the international monetary system, which is likely to be a tripolar system-centered on the U. S. Dollar, the Deutsche Mark, and the Japanese yen? How should we manage the international monetary system to prevent a currency crisis and to realize stable worldwide economic growth under liberalization and integration of financial markets? These are wide-ranging and very complicated questions to which we offer tentative answers. We consider these questions by analyzing the two currency crises that occurred in Mexico and Thailand and the international cooperation against such a currency crisis.

The structure of the paper is as follows. Section 2 presents a brief description of the new characteristics of the international monetary system in the 1990's. Section 3 is devoted to analyzing the Japanese yen as an international currency in Asia. Sections 4 reviews the changes from protective policy to liberalization in financial markets in Asia. Section 5 and 6 deal with the Mexican currency crisis and some IMF reforms for coping with a currency crisis. Section 7 surveys international currency cooperation in Asian countries. Section 8 describes the Thai currency crisis in 1997.

Finally, Section 9 provides some concluding comments.

2. New Characteristics of the International Monetary System in 1990's

In 1990's, the international monetary system is characterized by three new economic issues: (1) the U. S. is critically dependent on foreign capital inflows to finance its huge external debt because its current account deficit has been increasing; (2) liberalization and globalization of financial markets have brought about unprecedentedly large capital flows; (3) the Deutsche Mark became a key currency in Europe along with U. S. dollar[2].

First, U. S. international transactions from 1990 to 1996 are provided in Table 1. The data show that the current account deficit increased from $ 7.4 billion in 1991 to $ 165.1 billion in 1996. The deficit results from (1) a much larger increases in the trade balance deficit, (2) a change from surplus to deficit in the investment income balance, (3) a permanent deficit in unilateral transfers that is attributable to U. S. Government grants. The second factor is evidence of a historic turning point in the U. S. international investment position. In 1980's, the U. S. was the largest creditor in the world and its investment income balance was the largeset surplus item in the current balance. However the U. S. has become the biggest debtor in the 1990's. This shows that the U. S. is locked in a vicious circle of international debt and repayment.

In the capital account, net recorded inflows were $ 215.7 billion in 1996, more than four times as the $ 48.1 billion of 1990. This shows that the U. S. has financed its current account deficits by capital account surpluses. An acceleration in these surpluses results from both the private capital inflows and official inflows. In private capital, year-to-year fluctuations in recorded flows have become larger, especially in securities transactions and in banking transactions. For instance, U. S. securities investment increased to $ 141.8 billion in 1993, which was almost $ 100 billion larger than the $ 46.4 billion of 1992. But next year, this decreased to $ 49.8 billion, which is almost $ 100 billion smaller. Consequently the securities investment balance turned from a $ 37.9 billion deficit to a $ 42.6 billion surplus. This is why the sharp increase of investments in developing countries, especially Mexico, on account of low interest rate in the U. S., drastically decreased owing to raising interest rates in 1994. On the other hand, the current balance deficit increased by $ 51.3 billion to $ 151.2 billion in 1994. U. S. banks had to finance $ 114.4 billion in the international financial market, which is shown in the line of banking transactions in Table 1. This mechanism is similar to that employed by indebted developing countries, but the U.S. Dollar is a key currency in the international currency system, and the U. S. can borrow and repay in its own national currency, so that the U. S. can finance its international deficit without difficulties.

The official account surplus is much greater than the private account surplus in the 1990's and, in contrast to private capital inflows, the official assets increase is rather stable. These official assets are mainly owned by developing countries and Japan. Table 2 show that nearly 80 percent of the increase in foreign exchange in the world was due to developing countries in 1990's. Within developing countries, almost two-third of this was attributable to a few countries called emerging market countries.

Table 1 U. S. International Transactions

(billions of dollars)

	1990	1991	1992	1993	1994	1995	1996	average
Ballance on current account	−92.7	−7.4	−61.5	−99.9	−151.2	−148.2	−165.1	−93.5
Ballance on goods	−109.0	−74.1	−96.1	−132.6	−166.1	−173.4	−187.7	−125.2
Ballance on services	29.0	44.7	56.6	57.8	59.9	68.4	73.5	52.7
Ballance on investment income	20.7	15.1	10.1	9.0	−9.3	−8.0	−8.4	6.3
Unilateral transfers, net	−33.4	6.9	−32.1	−34.1	−35.8	−35.1	−42.5	−27.3
Ballance on capital account	48.1	36.3	88.1	63.9	165.5	116.7	215.7	86.4
Ballance on private capital account	14.1	10.2	45.4	−6.5	121.1	16.9	86.9	33.5
Ballance on foreign direct investment	17.9	−9.4	−25.0	−31.5	0.1	−35.3	−4.3	−13.9
U. S. direct investment, net	−30.0	−31.4	−42.6	−72.6	−49.4	−95.5	−88.3	−53.6
Foreign direct investment in the U. S., net	47.9	22.0	17.6	41.1	49.4	60.2	84.0	39.7
Ballance on securities investment	−29.7	8.2	20.4	−37.9	42.6	95.6	181.0	16.5
U. S. securities investment, net	−28.8	−45.7	−46.4	−141.8	−49.8	−99.0	−104.5	−68.6
Foreign securities investment in the U. S., net	−0.9	53.9	66.8	103.9	92.4	194.6	285.5	85.1
U. S. Treasury securities, net	−2.5	18.8	36.9	24.1	33.8	99.3	153.8	35.1
U. S. securities other than U. S. Treasury securities, net	1.6	35.1	29.9	79.9	58.6	95.3	131.7	50.1
Ballance on claims and Liabillties repopted by U. S. banks, net	8.6	3.4	36.4	50.8	115.3	−43.8	−89.8	28.5
U. S. claims, net	12.4	−0.6	20.9	29.9	0.9	−69.1	−88.2	−0.9
U. S. liabilities, net	−3.8	4.0	15.5	20.9	114.4	25.3	−1.6	29.4
Claims and Liabilities reported by U. S. nonbanking concerns, net	17.3	8.0	13.6	12.1	−36.9	0.4	n.a.	2.4
Ballance on official assets, net		26.1	42.7	70.4	44.4	99.8	128.8	52.9
U. S. official reserve assets, net	−2.2	5.8	3.9	−1.4	5.3	−9.7	6.7	0.3
U. S. Government assets, other than official reserve assets, net	2.3	2.9	−1.7	−0.3	−0.3	−0.3	−0.7	0.4
Foreign official assets, in the U. S., net	33.9	17.4	40.5	72.1	39.4	109.8	122.8	52.2
Statistical discrepancy	44.5	−28.9	−26.4	36.0	−14.3	31.5	−53.1	7.1

Sources: U. S. Dept. of Commerce, Survey of Current Business, June 1995, April 1997.
Note: n. a. Not available

Table 2 Foreign Exchange Reserves of Selected Countries, 1980–96

(billions of dollars)

	1980	1990	1991	1992	1993	1994	1995	1996
All countries	378	787	897	903	981	1056	1264	1477
Industrial Countries	210	499	517	499	516	544	649	722
Japan	22	65	62	63	89	109	170	207
Germany	44	59	58	87	73	68	77	76
Developing Countries	85	288	380	405	475	526	669	756
China	2	27	43	20	21	49	74	109
Indonecia	5	7	9	10	11	11	13	18
Korea	3	13	13	17	20	24	32	33
Malaysia	4	9	10	17	27	24	23	26
Philippine	3	1	3	4	5	6	6	10
Singapore	6	26	34	40	55	55	68	77
Thailand	2	12	17	20	24	27	35	37
India	6	1	4	6	10	16	18	20
Mexico	3	9	17	19	26	6	15	19
Brazil	5	7	8	23	31	35	50	58
Argentina	6	4	6	10	13	13	14	18
Chile	3	6	7	9	10	12	14	15
Venezuera	6	8	10	9	9	7	6	11
Subtotal of 13 countries	54	129	182	205	262	284	367	451

Source: IMF, Internatinal Financial Statistics (various issues)

It is very important that the increase in these countries has been dependent on large capital inflows from developed countries because the current accounts of most countries were in deficit during this period. Emerging market countries have taken steps to liberalize financial markets and improve their financial infrastructure to aggressively introduce foreign capital.

Introducing foreign private capital inflows, they have strongly intervened in the foreign exchange markets to fix their exchange rate to the U. S. Dollar. Consequently foreign reserves have been accumulated rapidly, and their domestic amounts of currency supply increase on the other side. Low interest rates and high shares prices have been resulted, and a good circulation between capital inflows and the prosperity of the financial market has been achieved in these countries.

The international finance of the U. S. current account deficit is very unstable because the acumulation of the foreign reserves has been dependent on speculative capital flows. The U. S. has to manage financial policy carefully so that developing countries will continuously invest in the U. S. financial markets and so that the investors in the developed countries will invest in the developing countries. The large and

Table 3 German Financial Institutions' Liabilities to Foreign Banks

(Billions of DM)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Total	132.5	139.4	142.2	168.3	196.3	246.0	253.3	297.0	328.1	402.3	463.7	486.5
Sight deposit	26.5	29.7	27.5	31.6	40.8	54.6	58.8	66.7	82.9	111.6	116.9	147.1
Time deposits	103.5	106.2	111.3	133.4	150.6	182.1	184.2	219.7	236	283.7	339.7	335.7
Short term	47.1	46.4	50.5	63.1	71.2	74.5	88.3	119.2	122.5	150.8	191.6	172.0
Medium and long term	56.4	59.8	60.8	70.3	79.4	107.5	95.9	100.5	113.5	132.9	148.2	163.7

Source: Deutsche Bundesbank, Monthly Report (various issues).

smooth international capital flows are necessary to the U. S. and the maintenance of the confidence of the dollar as a key currency. This point is the second characteristic in the international currency system.

Finally, we examine the third characteristic. Since the late 1980's, the Deutsche Mark has had the position of being a key currency in Europe. It is used together with the dollar, especially as a interbank vehicle currency between third countries.

The functional expansion of the Deutsche Mark as an international currency has strengthened under the currency cooperation of the EU countries based on the development of the EMS. It was accelerated after EU countries used the Deutsche Mark as an intervention currency, a role of the U. S. Dollar before the middle of the 1980's, to stabilize their exchange rates. The sight deposit of the foreign bank possessions in the Deutsche Mark, which is used for international settlement, has been increasing rapidly since the end of the 1980's (Table 3)[3]. This amount is already larger than that of the dollar in the U. S..

The fixed rate system in EMS changed greatly with the currency crises in 1992 and in 1993. Especially in 1993, EU countries intervened by a total amount 107 billion marks to protect the EMS from July 8 to August 1[4]. This amount of intervention by the Deutsche Mark was 64 percent of the total reserves in the Deutsche Mark held by all developed countries at the time, and was considered to be equal to almost 90 percent of EU countries' holdings. But they could not maintain exchange rates and were forced to widen the existing margins of exchange rate fluctuations from ± 2.25 percent and ± 6 percent to ± 15 percent except for between Germany and the Netherlands, which have maintained the previous narrow band. However, the EU had prepared the EMS to reduce the influence of the U. S. Dollar and to expand the role of the European currencies, especially the Deutsche Mark. The internationalization of the Deutsche Mark, which leads to both the development of the financial market in German and to the greater mobility of private capital, has prepared the conditions for powerful speculation, so that the EU was virtually forced to give up the fixed rate system. Every time a large-scale speculation flows in, the German financial market expands in scale.

Moreover, the EU is going to introduce the Euro, a single European currency, on or near the scheduled date of January 1999. It is a matter for argument whether the Euro will be strong or not, but the European Central Bank established in the future will put great emphasis on establishing its credibility as soon as possible. So after a transition period, the Euro will attain its new position in the international monetary

Table 4 Japan Currency Denomination of Foreign Trade, Selected Years

(In percent)

	1970	1975	1980	1983	1987	1992	1995	1996	1997
Exports									
Japanese Yen	0.9	17.5	29.4	40.5	33.4	40.1	36.0	35.2	35.8
Other	99.1	82.5	70.6	59.5	65.3	59.9	64.0	64.8	64.2
U. S. Dollar	—	—	—	—	55.6	46.6	52.5	53.3	52.8
Imports									
Japanese Yen	0.3	0.9	2.4	3.0	10.6	17.0	22.7	20.6	18.9
Other	99.7	99.1	97.6	97.0	89.4	83.0	77.3	79.4	81.1
U. S. Dollar	—	—	—	—	81.7	74.5	70.2	72.4	74.0

Sources: Japan, Ministry of Finance, International Finance Bureau, Annual Report, various issues; Ministry of International Trade and Industry, International Trade Administration Bureau, Yushutunyu kessaitukadate doukou chousa (The research on trade invoicing currencies)
Note: In 1992, 1995, 1996 the Data are ones in September. In 1997 the Data are ones in March.

system. Then the Euro is sure to be more used in the international market than the Deutsche Mark in the 1990's. On the other hand, the current account deficits in the U. S., which are likely to continue at least for the decade of the 2000's, will raise doubts about future stability and the value of the Dollar[5].

The regional currency system, which makes the Deutsche Mark as a key currency, and the Euro in the near future, is expanding in the dollar-centered international system. Consequently this is a factor in the system that has made it possible to have large-scale capital flows and increased volatility between key currencies when a currency crisis has occurred.

3. The Japanese Yen as an International Currency

We next examine the Japanese yen as an international currency to consider the international monetary system in Asia and the possibility of a tripolar currency regime. As is often pointed out, internationalization of the yen has advanced, but the yen has not been used fully yet as an international currency even in Asia, compared with the Deutsche Mark[6], because international uses of the yen are largely between the countries that include Japan. In other words, it is essential for an international currency to be used for the dealings between third countries, especially in the interbank exchange markets, because among developed countries many currencies have been used as an invoicing currency in international trade and as an investment and a borrowing currency. Thus, we examine the present condition of trade denominated in yen between the third countries. The currency-invoicing patterns of Japan's trade from 1970 to 1997 are provided in Table 4. The share of Japan's exports denominated in yen rose from 0.9 percent in 1970 to 40.5 percent in 1983. After a fall to 33.4 percent in 1987 this share fluctuated from 33.4 percent (1987) to 40.1 percent (1992). With regard to imports, the yen's share rose from 0.3 percent in 1970 to 22.7

Table 5 Regional Breakdown of Japan's Trade Balance by Invoicing Currencies

(billions of yen)

	1990	1993.3	1994.3	1995.3	1996.3	1997.3
Total Trade Balance	767	1577	1462	1297	1120	813
Trade balance denominated in dollar	−299	−27	152	260	23	−361
Trade balance denominated in yen	862	1292	1049	935	863	921
trade balance denominated in other currencies	204	307	261	102	234	253
United States	469	483	520	478	344	379
Trade balance denominated in dollar	366	381	376	419	300	294
Trade balance denominated in yen	103	98	143	62	43	84
trade balance denominated in other currencies	−0.1	2	0.5	−2.6	1	1
EU Countries	301	339	240	261	216	131
Trade balance denominated in dollar	−12	−31	−13	−3	15	−2
Trade balance denominated in yen	174	168	88	71	57	7
trade balance denominated in other currencies	139	202	165	194	145	126
East and South Asia	249	696	681	818	820	825
Trade balance denominated in dollar	−71	121	176	352	283	222
Trade balance denominated in yen	305	544	483	435	515	571
trade balance denominated in other currencies	15	31	22	31	23	32

Sources: Ministry of International Trade and Industry, International Trade Administration Bureau, Yushutunyu kessaitukadate doukou chousa (The research on trade invoicing currencies), various issues, Japan Tariff Association, The Summary Report on Trade of Japan, various issues.

percent in 1995, and declined to 18.9 percent in 1997.

A regional breakdown of Japan's trade balance by invoicing currencies is presented in Table 5. These data show that the trade balance denominated in U. S. Dollar was in deficit by $ 361 billion in March 1997, compared to a large surplus of $ 813 billion for all regions. On the other hand, the trade surplus denominated in yen was larger than the total surplus. This shows that Japan has a trade surplus denominated in yen to almost all the countries except oil exporting countries. The regions, where the share of yen invoicing of import was high, included developing countries, especially South and East Asia, and Japan had trade surplus denominated in yen to those regions. For the shortages of the yen, those countries had to get yen for external payment to Japan[7].

We examine this problem taking South Korea as an example. The currency-invoicing patterns of export for South Korea, which is thought to be one of the most exported countries in the yen, are provided in Table 6. These data show that the exports of South Korea were usually denominated in dollars and the share of exports denominated in yen was 6.5 percent in 1995. We can estimate the amount of exports denominated in yen which South Korea received by exporting to third countries except Japan from 1987 to 1991. These exports increased from $ 372 million in 1987

Table 6 Currencies Breakdown of Korean Trade Balance and Current Balance

(millions of dollars)

	Trade Balance					Current Balance				
	Total	Dollar	Yen	Mark	others	Total	Dollar	Yen	Mark	others
1990	−156	5,291	−2,973	−1,216	−1,259	−763	3,261	−1,026	−1,164	−1,834
1991	−3,133	4,336	−4,525	−1,453	−1,492	−5,010	1,295	−2,830	−1,341	−2,132
1992	3,652	10,183	−4,779	−549	−1,203	793	6,655	−3,394	−512	−1,956
1993	1,166	8,381	−5,507	−501	−1,207	−1,648	4,814	−3,903	−421	−2,138
1994	848	11,731	−7,468	−1,332	−2,084	−2,531	7,399	−5,627	−1,192	−3,111
1995	−6,736	4,902	−8,238	−1,847	−1,553	−11,664	−1,072	−5,637	−1,774	−3,181
1996	−13,150	−305	−8,523	−2,233	−2,089	−21,858	−9,011	−6,415	−2,178	−4,254

Sources: The Bank of Korea, Monthly Bulletin, various issues.

to $887 million in 1988 and decreased to $430 million in 1991. Compared with all exports, these were only 1.6% in 1988. It is clear that there was only a small amount of exports denominated in yen to third countries excluding Japan during this period. After 1991, the share of the Japan's imports denominated in yen from NIES increased to 50.7 % (47.5% in dollars) in March 1995, but decreased to 35.6% (62.1% in dollars) in March 1997. The receipts from exports denominated in yen in South Korea has hardly increased recently. So, we conclude that the yen was not used between third countries excluding Japan even in Asia.

Next, we consider the yen traded on Tokyo foreign exchange market. The share of the currencies in the Tokyo market in April 1995 is presented in table 7. The data show that transactions against the yen increased by 81.1 percent but almost all was dealing against the Dollar. Excluding the dealing against the dollar, the share against the yen fell only 5.5 % and much the rest of it was against the Deutsche Mark. It is clear that even in Tokyo market there are few transactions in Asian currencies except the yen.

Table 7 Percentage share of total turnover by currencies traded, April 1995

	US dollar against			Other currencies against				Yen against (a)+(b)
					Yen against (b)			
		Yen (a)	DM			Yen (a)	Stering	
Total	93.7	75.6	11.7	6.3	5.5	3.7	0.2	81.1
	(+0.9)	(+8.2)	(▲2.5)	(▲0.9)	(▲0.5)	(+0.3)	(▲1.0)	(+7.7)
Japanese banks	93.9	79.3	10.1	6.1	5.8	3.4	0.2	85.1
	(+0.4)	(+4.7)	(▲0.6)	(▲0.4)	(▲0.3)	(+0.3)	(▲1.3)	(+4.4)
Foreign banks	93.5	71.7	13.4	6.5	5.2	4.1	0.2	76.9
	(+1.7)	(+15.1)	(▲6.0)	(▲1.7)	(▲0.7)	(+0.1)	(▲0.5)	(+14.4)

Source: Bank of Japan, Tokyo-Gaikoku-Kawase-Sijo no Torihikidaka Chousa (April, 1995), (The Research of Tokyo foreign exchange market, April, 1995.), September 1995.
Note: the inside of ( ) is the change from 1992 to 1995.

In November 1, 1996, a foreign exchange market where foreign banks and trading firms can trade directly between the yen and the Won was established in South Korea. Until that time, they could only trade currencies against the Dollar, and if they needed yen, they first had to buy dollars and then sell the dollars to buy yen. Although the market was liberalized, there have been few direct transactions between the yen and the Won. The volume of these transactions per day was less than 1 billion yen, though the volume of the Dollar/Won market reached almost 200 billion yen and 20-30% of the transactions were exchanged to the yen. The transaction cost of the Yen/Won market was much the same as the Dollar/Won market and the market was too small for market participants to meet customers[8]. In other words, Japanese banks have not made good use of this market to respond to demands for the yen. Therefore the yen has been little used as an international medium of exchange in the interbank markets even in Asia. We might conclude that the Dollar is being as a key currency in Asia even today. Therefore, these say paradoxically that there is much room left for the internationalization of the yen.

4. Liberalization in Financial Markets and Foreign Exchange Markets in Asia.

From the late 1980's, the liberalization of financial markets and foreign exchange markets has advanced rapidly in Asian countries. The dollar depreciation after the Plaza Agreement in 1985 had a dramatic influence on Asian countries. Many Asian countries, especially the NIES, rapidly expanded exports by pegging their currencies to the dollar. For examples, Korea's exports to U. S. increased $ 10.8 billion in 1985 to $ 21.5 billion in 1988; in the same period, Taiwan's exports increased from $ 14.8 billion to $ 23.5 billion; Singapore's exports increased from $ 4.8 billion to $ 9.4 billion; Hong Kong's exports increased from $ 9.3 billion to $ 15.7 billion. As results of increasing trade surpluses, the foreign reserves in these countries increased sharply. Faced with rapidly increasing imports, the U. S. criticized these countries for increasing exports by their policy of pegging their exchange rates to the dollar, which was possible by strictly restricting foreign exchange transactions, and asked for deregulation of foreign transactions and appreciation of their currencies. The NIES were initially offended by the U. S. demands but gradually changed their policy to one of deregulation. Taiwan changed its Foreign Exchange Control in 1987 in order to liberalize (1) the holding of foreign exchange by abolishing the foreign exchange concentration system, (2) exchange transactions on current transactions, (3) securities investments less than $ 5 million a year and (4) overseas remittance of interest and dividends[9]. Korea improved financial markets to introduce foreign investment and accepted the obligations of Article 8 of IMF in November 1988. The ASEAN countries followed the NIES, Indonesia in 1988; Thailand in 1990; the Philippines in 1995.

The windfall due to the dollar depreciation provided some prerequisites for the next development of East Asian countries. First Japan made large direct investments in the East Asian countries. Secondly, the NIES were able to deregulate exchange control and liberalize financial markets as a result of increases in exports and foreign reserves. Thirdly, the exchange rates of the NIES, in the same way as Japan,

appreciated on account of repeated trade frictions and deregulation of exchange markets. Forth, the expansion of both foreign direct investments and securities investments in the NIES became a starting point for liberalization.

Consequently, faced with increasing labor costs, voluntary trade restrictions and an appreciating exchange rate, the NIES rapidly increased foreign investment into ASEAN countries after the end of 1980's. They had a comparative advantage in labor intensive industries and could make good use advantages in the ASEAN countries, which were almost the same as the NIES figure 10 years ago with respect to exchange rates, labor costs and trade promotion policies.

The ASEAN countries, in parallel with the rapid increases of foreign investment from Japan and the NIES, adopted a foreign capital preferential policy as much as possible. So the ASEAN countries competed with each other in deregulating exchange markets and liberalizing financial markets. Furthermore each ASEAN country wanted its financial market to be an international financial market and to develop high wage industries in the country. For example, in 1987 Thailand established a stock market for foreigners and Indonesia liberalized securities investment by foreigners and authorized stock ownership by foreigners up 49% for listed stocks. As a result of liberalization, there were massive foreign capital flows to the ASEAN countries. The amount of foreign direct investment into the 8 Asian countries increased from $ 10.7 billion in 1990 to $ 49.7 billion in 1995 and securities investment increased from − $ 0.4 billion in 1990 to $ 22.2 billion in 1995 (Table 8). Although they deregulated foreign exchange markets, they stabilized their exchange rates to limit exchange risk for the foreign investors and increased foreign reserves in spite of current account deficits. This favorable relation between increasing capital inflows and the accumulation of foreign reserves was changed after the Mexican currency crisis in the end of 1994.

5. The Mexican Currency Crisis

The Mexican currency crisis occurred after the peso depreciated 15% relative to the Dollar on December 20, 1994[10]. Although Mexico had fixed the Peso/Dollar exchange rate since 1991, it devaluated the exchange rate to stop the selling of the peso in the market which saw the peso overvalued of the official exchange rate. But this depreciation caused overreaction and the selling of the peso because it was expected that the peso would be depreciated yet again. Mexico gave up intervention in the foreign exchange market to keep foreign reserves that had dropped to just $ 6 billion. Mexico changed to a fluctuating exchange rate system on December 22 and the peso depreciated almost 40% in only 10 days. The confusion in the exchange market spread to the capital markets. The overnight interest rate jumped up 40% and the yield of Cetes, a representative government bond, jumped up 90%. In contrast, the stock market fell rapidly. This confusion spread to both the Latin American countries and to the Asian countries, where stock markets and currencies fell as well.

To deal with the crisis, the U. S. quickly announced that it would give Mexico a credit facility of $ 6 billion; Canada gave 1 billion Canadian dollars. This was on December 22 after 2 days of the depreciation. Then on January 2, 1995, the U. S. announced a support package totaling $ 18 billion (another $ 9 billion by U. S., $ 5

Table 8 Foreign Capital Inflows in Major Asian Countries. 1990-1995

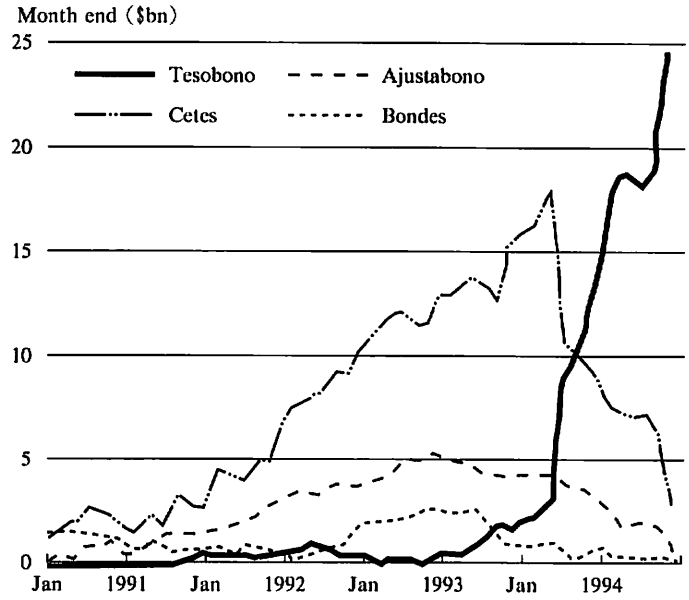
(millions of dollars)

		1990	1991	1992	1993	1994	1995	Total
Korea	Current Account	−1.745	−8,291	−3,939	1,016	−3,855	−8,251	−25,065
	Direct Investment	788	1,180	727	588	809	1,776	5,868
	Portfolio Investment	82	2,442	4,857	10,298	7,097	11,136	35,912
	Other Investment	5,142	10,478	4,263	−2,345	13,085	21,233	51,856
Taiwan	Current Account	10,925	12,015	8,154	6,714	6,154	5,474	49,436
	Direct Investment	1,330	1,271	879	917	1,375	1,559	7,331
	Portfolio Investment	−69	786	1,149	2,399	2,902	2,729	9,896
	Other Investment	5,066	3,127	795	3,246	6,474	804	19,512
Singapore	Current Account	3,181	4,688	6,155	5,173	11,950	15,093	46,240
	Direct Investment	5,575	4,879	2,351	5,016	5,588	6,912	30,321
	Portfolio Investment	573	−242	458	1,046	1,152	342	3,329
	Other Investment	−44	−2,801	2,732	3,237	4,384	−2,716	4,792
Indonesia	Current Account	−2,988	−4,260	−2,780	−2,106	−2,790	−7,023	−21,947
	Direct Investment	1,093	1,482	1,777	2,004	2,109	4,348	12,813
	Portfolio Investment	−93	−12	−88	1,805	1,100	4,100	6,812
	Other Investment	3,495	4,227	4,440	1,963	630	2,541	17,296
Malaysia	Current Account	−870	−4,183	−2,167	−2,809	−4,147	−7,362	−21,538
	Direct Investment	2,332	3,998	5,183	5,006	4,348	4,132	24,999
	Portfolio Investment	−255	170	−1,122	−709	−1,649	−440	−4,005
	Other Investment	−87	497	3,181	7,434	−1,870	3,251	12,406
Philippine	Current Account	−2,695	−1,034	−1,000	−2,983	−2,840	−1,980	−12,532
	Direct Investment	530	544	228	1,025	1,457	1,478	5,262
	Portfolio Investment	−50	125	155	897	901	2,619	4,647
	Other Investment	1,577	2,273	2,940	2,455	3,540	3,040	15,825
Thailand	Current Account	−7,281	−7,571	−6,355	−7,047	−8,419	−13,554	−50,227
	Direct Investment	2,444	2,014	2,116	1,726	640	2,068	11,008
	Portfolio Investment	−38	−81	927	5,455	2,486	4,083	12,832
	Other Investment	6,996	9,642	7,025	7,551	12,544	19,383	63,141
China	Current Account	11,878	13,083	6,188	−11,702	6,532	1,618	27,597
	Direct Investment	3,487	4,366	11,156	27,515	33,787	35,849	116,160
	Portfolio Investment	0	565	393	3,646	3,923	710	9,237
	Other Investment	1,070	4,500	−4,082	−576	−1,496	4,122	3,538
Total	Current Account	−3,701	−12,256	−10,053	−25,631	−15,519	−36,552	−103,712
	Direct Investment	10,674	13,584	21,187	37,864	43,150	49,651	176,110
	Portfolio Investment	−354	3,209	5,122	21,392	13,858	22,208	65,435
	Other Investment	18,193	31,617	17,767	16,482	26,433	53,570	164,062

Sources: IMF, International Financial Statistics, various issues. The Republic of China, The Central Bank of China, Financial statistics Monthly; Taiwan District, various issues.

Note: Major categories of other investment are transactions in currency and deposit, loans, trade credit, and arrears.

Figure 1 Mexico: foreign holdings of government securities



Source: Financial Times, Jan 27, 1995.

billion by central banks of developed countries through BIS, $3 billion by private money center banks' group). This package was raised to $40 billion on January 13, and finally to $52.8 billion.

The direct causes of this currency crisis were (1) an increase in the trade deficit, (2) a decrease in capital inflow, (3) a decrease of foreign reserves in a fixed rate system. In Mexico, foreign reserves had been increasing until 1994 although the trade deficit had been increasing since 1991, because capital inflows were larger than the trade deficit. Curtailment of capital inflows was thought to be the real cause. The reason for curtailment was not only the political confusion caused by the assassination of the presidential candidate of the ruling party but also by increases in interest rates in the U. S. as a result of a tight money policy. Figure 1 shows that the Mexican government was dependent on the finance of the Tesobono whose principal and interest were paid in dollars. By means of the Tesobono Mexico succeeded to induce foreign capital in and the total amount issued of the Tesobono that had to be redeemed in 1995 was $28 billion with foreigners holding $17 billion. But, the foreign reserves of Mexico were almost cut by half between March and April, and rapidly decreased in November to December. The rapid decrease in foreign reserves corresponded to a conversion from financial assets in pesos to those in dollars. The large capital flight had occurred in Mexico because financial markets in the peso were large and very liquid.

The characteristic of this crisis was that a sudden and huge capital flight occurred in an emerging market country, into which there had been a large capital inflow from developed countries. This caused the crisis to spread to other indebted countries at once.

The countries that had depended on foreign capital inflows had to intervene in the exchange market and raise interest rates to maintain their fixed exchange rates.

As a result of rising interest rates both stock markets and securities markets fell and caused a full-scale capital flight. At the some time, many countries that had invested foreign reserves in the U. S. financial markets, TB and other treasury securities, found that they would suffer from decreases in appraised value if they sold their assets in the markets to obtain intervention money when the U. S. financial markets were unstable after the Mexico currency crisis. They could not sell their financial assets in a large quantity. The seriousness of this problem was shown by the swift action of the U. S. and the large sum necessary for the support plan to prevent the spread of the crisis. In other words, it is clear that the dollar-centered system would have a serious impact if the currency crisis spread to other indebted countries, because many emerging market countries would sell their dollar assets if they were forced to sell the foreign reserves to obtain the money for intervention.

The Mexican crisis did not become an international financial crisis as a result of the large-scale international financial support. The structure, however, for bringing about a crisis is still in existence today.

6. IMF Reforms Coping with a Currency Crisis

After the Mexican currency crisis, the arguments for IMF reforms were focused on the necessity of new institutions with the IMF that would prevent a currency crisis and increase resources for coping with it. The reason was that the IMF could neither participate in the first international support package of $ 18 billion nor decide on a support plan for the $ 78 billion offered Mexico of the end of January. Furthermore, some countries, such as Germany, abstained from voting on increasing the support plan to $ 178 billion in the Executive Board in February to indicate their opposition to the initiative of the United States.

Therefore the necessity of IMF reforms was argued among the developed countries and the Group of Seven (G7) countries. The economic communique of the Halifax Summit of 1995 offered proposals to strengthen the IMF. These asked the IMF to exercise improved surveillance over its members' policies and make a new emergency source of conditional but rapidly disbursable funds. In this reform plan both prior regulations and posterior regulations were strengthened to prevent and cope with a currency crisis.

As to prior regulations, they asked the IMF to (1) establish benchmarks for the timely publication of key economic and financial data, (2) establish a procedure for the regular public identification of countries that comply with these benchmarks, (3) provide policy advice to all governments and deliver messages to countries that appear to be avoiding necessary actions. Then the IMF asked its member countries to report standard sets of data fully and in a timely manner to permit more accurate market assessments. To cope with a failure of preventive measures they asked the IMF to establish a new standing procedure, the Emergency Financing Mechanism, that would provide faster access to IMF arrangements with strong conditionality and larger disbursements in crisis situations. The standpoint of these reform plans is that the IMF's policy of promoting liberalization and privatization was correct and a currency crisis could be prevented by improving financial markets in developing countries in accordance with IMF advice. Unfortunately if a crisis happens, the IMF

Table 9 NAB (New Arrangements to Borrow)

millins of SDRs

	NAB	GAB		NAB	GAB
United States	6712	4,250	Austria	412	—
Deutsche Bundesbank	3557	2,380	Denmark	371	—
Japan	3557	2,125	Finland	340	—
United Kingdom	2577	1,700	Luxembourg	340	—
France	2577	1,700	Spain	672	—
Italy	1772	1,105	Norway	383	—
Canada	1396	892.5	Kuwait	345	—
Netherlands	1316	850	Hong Kong	340	—
Belgium	967	595	Korea	340	—
Swiss National Bank	1557	1,020	Malaysia	340	—
Svveriges Riksbank	859	382.5	Thailand	340	—
Saudi Arabia	1780	1,500	Singapore	340	—
Australia	810	—	Total	34,000	17,000

Source: IMF, Press Release No. 97/5, Jan 27, 1997. (about US $ 48 billion)
Note: Saudi Arabia is associated with the NAB.

is responsible for stopping the spread of a currency crisis. So the role of the IMF is (1) to prepare the market order, (2) to monitor its membership, (3) to advise on appropriate policy and (4) to provide funds as the lender of last resort.

On April 16,1996, the IMF decided to provide new economic and financial data according to the Special Data Dissemination Standard. The newly established SDDS, set standards for the economic data covering the real, fiscal, financial, and external sectors with the components, periodicity and timeliness specified for the several data categories, such as the GDP on a quarterly basis published within one quarter, and international reserve data on a monthly basis within one week[11]. Some 42 countries were publishing the data as of April 16,1997.

On April 25, 1997, the IMF decided to strengthen the surveillance of the banking and financial sectors and agreed to the issuance of Press Information Notices on a voluntary basis, following the conclusion of Article IV consultations. In the Press Information Notices, the IMF assessed the member country's economic prospects and policies to increase the transparency of the IMF assessment while preserving the integrity and confidentiality of the Article IV consultation process[12].

On the other hand, the IMF adopted a decision on New Arrangements to Borrow (NAB)[13]. The participant countries in the NAB will make loans to the IMF when supplementary resources are needed to forestall or cope with an impairment of the international monetary system. The amount of the resources of the NAB is up to SDR 34 billion (about $ 48 billion). The amounts of the credit arrangements of the participants in the NAB are shown in Table 9. The main contents of the NAB are (1) the managing director of the IMF has very strong authority concerning a pro-

posal for NAB, but on the contrary, each participant can only approach the IMF; (2) a decision becomes effective if more than 80% of total credit arrangements of participants, but neither the prospective drawer nor participants unable to make the loan required to the IMF in the NAB loses voting rights; (3) the procedure of the borrowing is distinguished in the participating countries and the non-participating countries; if an applicant country is not a participant, it can only await a decision made by the managing director, who determines that the crisis cannot be contained by the existing credit tranches and who decides whether a NAB is needed or not in consultation with the executive directors and participants; (4) the structive of the NAB is made giving careful consideration to the creditor, for example, the IMF shall pay interest equal to the market interest rate to the creditor four times a year; (5) the NAB is the facility of first and principal resource, but the amount available under the NAB is the maximum combined amount available under the General Arrangements to Borrow (GAB), which is not replaced by the NAB.

As a result of the NAB, the IMF doubled the amount of financial resources and can quickly make a decision for disbursement. Developed countries can meet the NAB with a small additional loan to the IMF and in fact need not increase their financial expenditure to the NAB because the loan to the IMF will be handled as a market transaction. The system recognizes to the powerful opposition to financial expenditure on the part of developed countries, especially the U. S.. Furthermore, the developed countries practically monopolize the power of decision against new participants.

By such the new systems can we prevent for a spread of a currency crisis? We have some problems to take into consideration. First is the problem of the economic data. The IMF has to depend on economic data that are mainly published by the member countries, so it is uncertain whether the economic data reflects the actual condition properly, especially in the case of developing countries.

Second is the problem between state sovereignty and the authority of the IMF. An economic policy is decided in the politics of each country and what the IMF can do is only to monitor and advise. So, if the market judges that its policy is wrong, speculation surely will appear and a currency crisis will occur.

Third is the responsibility of the IMF when it advises member countries based on monitoring. This problem divides into two cases. In the first case, if a member country does not follow advice, the IMF must announce a confrontation officially. It is unacceptable for the IMF to keep it secret. As a result its announcement is likely to trigger capital flight and a currency crisis. If so, how should the IMF take responsibility? When a currency crisis is real, can the IMF reject an application? If the IMF accepts an application to stabilize the international monetary system, the country has no incentives to follow the IMF advice. In the second case, can a currency crisis be prevented by following the IMF advice? When it occurs in the country after following IMF advice, the IMF will have to play a role as the lender that is responsible for monitoring and advice.

Fourth is the matter of expanded resources. The IMF depends on the quota that the member countries invest and cannot issue any money like a central bank. So it is uncertain whether the existing resources including the NAB are large enough to prevent a spread of a currency crisis, because accumulation of financial resources have been proceeding in the international financial markets and in the market of each

country day by day.

Fifth, the purpose of the NAB is not to rescue the country concerned but to prevent the spread of a crisis. So there is the possibility that the disbursement of the NAB may be delayed because the interests of the IMF and the country are at odds. If so, a confused situation may extend over a long period.

Last, a partial safety net, such as the NAB, encourages the moral hazards of financial institutions and increases excessive international speculation and capital flight. The object of the regulation in the IMF is not the financial institutions but the countries concerned. Therefore, the relief fund for a currency crisis is likely to be used as a relief fund to the speculators of the developed countries. In other words, by supplying the foreign currency, the IMF is essentially guaranteeing conversion to the international currency from the national currency which will certainly suffer a large exchange loss. If so, the IMF helps the speculators to speculate and paves the way for the next crisis. Actually, such dealings happened in the Mexican currency crisis and a large sum of tax in the developed countries was spent to cope with it. In the developing countries, including the emerging market countries, the management of the financial institutions is not transparent to the public. The regulations by the BIS are neither enough nor suitable for the historical peculiarity of developing countries that are liberalizing rapidly. Although it is necessary to raise the transparency of the international financial institutions and make a prior regulation for them as well as for countries, this is unlikely to be realized in the near future. Therefore, the existing partial international safety net is insufficient to cope with a currency crisis.

7. International Currency Cooperation in Asian Countries

Even after the Mexican currency crisis, the Asian countries have been adopting a growth policy that depends on unstable foreign capital inflows. As mentioned in section 4, the Asian countries have advanced the liberalization of their financial and exchange markets, but in some points they have only modified former policies.

First, they have expanded the exchange rate band, though they have continued to peg the exchange rate to the dollar. This is intended to enhance investment risk against pure, short-term speculation while guaranteeing low exchange risk for useful capital inflows by fixing the rate of exchange.

Secondly, the Asian countries began to change their management of foreign reserves and have attached greater importance to the yen. The monetary authorities of many Asian countries that have large trade deficits in yen, as mentioned in section 4, usually exchange dollars for yen in the international foreign exchange markets to supply the yen to traders that have to pay in yen in the foreign exchange markets in their countries. After the Mexican crisis large capital flights from their financial markets were turned to Japan. So in their foreign exchange markets they had to buy their domestic currencies and to sell yen to traders. But they did not have enough money in yen because they had the major part of their foreign reserves in dollars. Therefore they had to buy yen by selling dollars in the international foreign exchange markets, such as Tokyo, even when the yen was appreciating against the dollar due to international exchange speculation. In other words they promoted the speculation and increased their exchange losses by their own dealings. That was the reason that

they suffered considerable losses from exchange fluctuation and monetary disturbance after the Mexican crisis.

Thirdly, they advanced to regional currency cooperation. The major purposes were (1) to secure enough intervention money without selling financial assets in the market to prevent the fall of their prices; (2) to make arrangements for intervention by the yen in Asian markets.

As for the (1), in November 1995, the Hong Kong Monetary Authority (HKMA), along with the central banks of Thailand, Indonesia and Malaysia, reached an agreement for cooperation with intervention money on the security of U. S. Treasury Bills in an emergency. Then in April 1997, Japan, with Australia, Hong Kong, Indonesia, Malaysia, Philippine, Singapore and Thailand, came to an agreement on cooperation with foreign currency in an emergency. They mutually agreed to raise an intervention fund in dollars by selling U.S. Treasury Bills with repurchase agreements when their domestic currencies fell rapidly. The amount of the accommodating currency was less than $ 1 billion and that would be repayed after a crisis was over.

As for the (2), in February 1997, the Bank of Japan agreed with the HKMA and the Monetary Authority of Singapore (MAS) that the HKMA and the MAS, in response to a request from the Bank of Japan, would intervene by selling the yen in their exchange markets as consignment intervention, when the yen is rapidly appreciating against the dollar. Therefore the yen will be used in an emergency in the main international financial markets in Asia, Tokyo, Hong Kong, Singapore as well.

In addition to these agreements, consultations about currency cooperation were held in the region. But currency cooperation in this region has just been begun and no new organizations have been established as in Europe. Next we examine how the Asian countries cooperated when the currency crisis occurred in Thailand and spread over some Asian countries in 1997.

8. The Thai Currency Crisis in 1997

The Thai currency crisis occurred beginning in May, 1997. The baht fell to 26.30 baht to the dollar on May 14, well below its official trading band of 25.84 to 25.88, and fell about 45 percent to a historical low of 37.60 on September 3. The fall was accelerated after July 2 when the baht was put on a managed floating exchange rate system.

The external value of the baht had been determined on the basis of a weighted basket of currencies of Thailand's major trading partners and had been stabilized in the restricted official trading band. The intervention currency was the U. S. dollar and practically the baht had been fixed to the dollar.

As for the background of the crisis, Thailand faced economic dullness, because the exports that had supported its economy had decreased by 0.2% over last year after an interval of 13 years[14]. The decrease of exports was attributed to (1) a decline in international competitive power due to the overvalued baht which had been pegged to the dollar and which had appreciated relative to the main developed countries' currencies, especially the yen by about 50%, in two years; (2) intensified price competition in the region where some countries, such as China, had increased exports

thanks to low prices and expanded production capacity that exceeded demand. The current account deficit increased 49 billion baht to 384 billion baht (about $ 15.2 billion) in 1996.

Furthermore, there was a serious bad debt problem in the banking system that had originated in the real estate depression[15]. The stock market of Thailand, where bank and securities company stocks figured prominently, fell rapidly in 1997 and recorded the lowest price in 8 years on May 14. Then the baht was sold in a large quantity by investors worried that a suitable economic policy would not be adopted by the coalition government. The Thai crisis was different from the Mexican case, in that the crisis occurred as a result of problems internal to Thailand, not because the U. S. did not change to a tight money policy.

Against heavy selling pressure, Thailand, Hong Kong, Singapore and Malaysia jointly intervened in the foreign exchange markets to stabilize the value of the baht on May 14, 1997[16]. This cooperative intervention was done for the first time in the Asian region. The amount of intervention was several billion dollars, mainly by Thailand, Hong Kong bought only a few hundred million of baht in the Hong Kong market and Singapore sold about $ 100 million in baht in the Singapore market. This intervention was rather symbolic because intervention was largely done by using Thai funds. In spite of the cooperative intervention, as mentioned before, it proved impossible to keep the baht inside the official trading band. This intervention was characterized by the failure to use Tokyo, the biggest international exchange market in Asia, and the use of Singapore and Hong Kong, because it was not possible to intervene effectively in the Tokyo market where there were few transactions in Asian currencies such as the baht. Then Japan tried to intervene by saying that Japan was already prepared to intervene in the markets as soon as Thailand asked. After the crisis, being concerned about the decline of the Tokyo market, Japan began to be involved actively.

As a result of the failure of cooperative intervention, Thailand adopted a speculation repression plan by intentionally making it difficult for foreigners and speculators to acquire the baht. The Bank of Thailand effectively separated the domestic and offshore markets and squeezed offshore banks. The interest rates available to overseas banks soared to an annualized 1,200% for three-day loans; the rate had been below 10% before the crisis. By this powerful regulative policy the baht strengthened again for some time[17]. This policy was indeed effective at that moment. But, the more liberalization advances, the less the basis for this type of policy.

In spite of the separation policy, the local interbank rate also soared to 20% because many borrowers were already facing a cash crunch. So this credit squeeze policy made the economy worse and drove share prices down. Therefore capital inflows stopped and capital flight occurred on a large scale.

After a period of stable conditions, the baht began to fall in spite of the stabilizing policy. On July 2, Thailand gave up stabilizing the exchange rate and changed to a managed floating exchange rate system. The baht depreciated rapidly after this decision. Thailand announced officially an economic reconstruction plan and requested the IMF to arrange a stand-by credit of $ 120-150 billion on August 5. This came after much hesitation because Thailand was trying to avoid tight regulation by the IMF.

After accepting the request for the loan, the IMF had a conference with Asian

Table 10 Breakdown of contributors to the Thailand Bailout Plan

(billions of dollars)

IMF	4	Korea	0.5
Japan	4	Indonesia	0.5
Hong Kong	1	Asian Developing Bank	1
Singapore	1	World Bank	1
Malaysia	1	(Expected: China)	1
Australia	1	Total	16

Source: The Asian Wall Street Journal, August 12 1997.

nations in Tokyo on August 11. They assembled a bailout fund valued at $16 billion to help stabilize the Thai economy and the weakened baht[18]. The breakdown is shown in Table 10. The U. S. and several other Western countries took part in the meeting but offered no direct assistance. The characteristics of this package were that (1) Japan took an active initiative, in contrast to cooperative intervention in May; (2) the main countries in Asia, even China, took part in the support package; (3) in contrast, the U. S. and other Western countries offered no direct assistance; (4) private banks did not participate in the assistance. Then the BIS decided to accommodate Thailand with a bridging loan totalling $3.3 billion; the U. S. would take part in the bridging loan. Immediately after these decisions, it was officially announced by the Bank of Thailand that the amount of the intervention had been about $27.4 billion, including future exchange contracts of $23.4 billion that would have to be settled within a year. It was equivalent to 10% of the Thailand GDP in 1996 and almost the same as its $27.9 billion of the foreign reserves as of August 14[19]. This shows that Thailand had to prevent falling the baht rate in the future market by intervening in the future exchange market to show the Thai policy of keeping a fixed rate to the dollar. If Thailand could keep the baht rate for more one or two months, speculators would suffer serious losses because many of future dealings were three-month contracts. The IMF and the U.S. demanding a floating baht rate from Thailand instead of giving assistance promoted speculation in a sense.

In the same way as the Mexican currency crisis, the Thai currency crisis spread to other Asian countries, because many investors thought that Thailand's problems were a model for other economies in the region. Many Asian countries came under heavy selling pressure in the foreign exchange markets. They drove up interest rates rapidly to protect their currencies. As a result share prices fell more and capital outflows increased as well.

The Philippines depreciated the peso by expanding the official trading band for peso without making any announcement of the width on 11 July. The peso fell rapidly about 11% in a day and the peso rate was effectively entrusted to the markets. Indonesia, coped for a while by using an expanding the band, finally changed to the managed floating rate system after 15 August. Malaysia and Singapore did not set up a rate band and put off intervention in the market, accepting inevitable depreciation. In only two months, both the exchange rates and share prices fell to historical lows. The exchange rate in Thailand depreciated 32% to the dollar, 20% in Indonesia and 17% in Malaysia. The share prices in Thailand fell 73% relative to the January 1994

peak, in Indonesia 35%, in Malaysia 44%, in the Philippines 40% and in Singapore 26%[20]. These Asian countries fell into a vicious circle in which falls in the currency and the stock prices caused a chain reaction.

Although the regional crisis did not cause a crisis of the international currency system itself, many Asian countries suffered serious economical damage. The progress of the currency crisis reveals the following points, (1) international speculation was so large that Asian countries failed to prevent the spread of the currency crisis even though various prevention plans had been made and quite large foreign reserves had been accumulated. (2) The effectiveness of the regulative policy that Thailand tried to depend on at first had already declined as a result of having promoted a liberalization policy. (3) Many Asian countries, that had been included in the dollar area and that had supported the dollar by investing their foreign reserves in U.S. government securities, changed from the fixed rate system to the managed floating rate system. As a result they will have to reconsider their usual foreign reserve policy. (4) Japan vividly indicated that it would take the initiative on the occasion of the currency crisis in Asia and as a result the international role of the yen will necessarily increase in this region. (5) The U. S. and other Western countries would not substantially bear the burden of the currency crisis. Therefore, (6) the Asian countries will have to strengthen their international financial cooperation, including making some provision for financial safety nets in the region in order to protect their economies from misalignment and to limit the volatility of their currencies in the face of strong speculation.

9. Conclusion

The Thai currency crisis spread through the Asian countries and had a great influence on the Asian currency system. Thailand held large foreign reserves but spent almost the full amount on intervention and squeezed offshore banks by controlling the financial markets, but failed in stabilizing the baht. The regulative policy had already lost its effect in stabilizing the currency as a result of promoting liberalization in this region. The liberalized policies have already proceeded to the point that they can not be turn back. In addition financial service negotiations with the WTO have started, and the developed countries, especially U. S., are asking Asian countries for more liberalization under the WTO regime.

In spite of some regional arrangements, Asian countries could not prevent the currency crisis and its spread. But it was clear that the IMF and main Western countries were not responsible for the regional currency crisis but for the stabilization of the international monetary system. Moreover the developed countries had no room for additional financial expenditure because of the need to decrease their budget deficits, one of the most serious political problems in developed countries. Fortunately the U. S. financial markets were prosperous, especially share prices were near historical highs , so the Thailand currency crisis did not cause a global crisis. But these good conditions will not necessarily last for a long time. In some sense, the funds necessary to cope with an international financial crisis may be very large, because almost all the foreign reserves of Thailand ran out and a large fund of $16 billion was necessary even for this regional currency crisis. Therefore the possibility

that a currency crisis might change into an international financial crisis did not disappear in spite of the NAB, the total amount of which is 34 billion SDRs, in the IMF.

On the other hand, many Asian countries are setting up self-defense plans. They have strengthened the regional cooperation systems and Japan is involved actively in the role of a creditor. The movement of the Asian countries that had supported the dollar system has contributed to increased insecurity in the U. S. financial markets and expanded fluctuations in the exchange rate between the dollar and the yen. But the rapid fluctuations caused the Asian countries to suffer serious damage. Trying to avoid future damage, they can be expected to use the yen in the region every time a currency speculation occurs. In some sense, international speculation helps the integration of Asian financial markets and helps the internationalization of the yen. In other words, independent countermeasures of countries and regions destroys the unification of the dollar-centered system and makes the total system more unstable.

The integration of financial markets and large-scale private capital movements have made the international monetary system sensitive to a currency crisis. Besides the dollar-centered international monetary system will be replaced by a complex bipolar system that will be dominated by the dollar and the Euro developed from the Deutsche Mark and in which the yen will function as a regional international currency. In this system, it is politically difficult to have international cooperation without taking the interests of each country into consideration in a currency crisis. New institutions intended to confine a currency crisis to a country or a region may have limited effect because they are based on the continuation of the dollar-centered system. In this system the volatility and the misalignment of exchange rates may be much greater than ever before and we may suffer serious damages from repeated currency crises. If we want to avoid such an unstable system, we must change from a system of reacting to currency crisis by providing after the fact safety nets and shift to planning responses that will work after liberalization. These are the lessons we can draw from the repeated currency crises.

Notes

1) See, for example, Bretton Woods Commission (1994), Williamson & Henning (1994), Bergsten (1996). Eichengreen (1994) emphasized that because of the expansion of global financial markets the alternative monetary system would be a floating rate system if a country did not participate in a monetary union and practically denied the possibility of the target zone system.
2) Masuda (1996), pp. 150-53.
3) See Inoue (1994) Inoue (1994) analized internatinal use of the Deutsche Mark and proved that the Deutsche Mark had been used as a vehicle currency for interbank transactions in the European exchange markets since about 1987.
4) Deutsche Bundesbank (1993), pp. 83-89.
5) C.Fred Bergsten (1997), pp. 85-88. Bergsten (1997) points out that the dollar will have its first real competitor and the international monetary system will become a bipolar currency system dominated by the dollar and the Euro.
6) For a comprehensive review on the international use of the yen, see Tavlas and Ozeki (1992), Yamamoto (1994), Inoue (1994).
7) Masuda (1995) Traders usually get the yen from the spot foreign exchange markets in their countries to sell national currencies against authorized foreign exchange banks. In general, their banks are supplied yen by the central bank, which holds the foreign

reserves.

8) Nihon Keizai Shinbun (October 9, 1996).
9) Taiwan kenkyujo (1989), pp. 303-309.
10) See IMF (1996b), Ito (1995), Takagake (1997). IMF (1996b), Ito (1995) argued that the main cause of the Mexican currency crisis was capital flight by Mexican investors. But Takagake (1997) analyzed the international structure of the crisis. He especially emphasized the cumulative debt problems in the 1980's and the NAFTA.
11) IMF (1996a), pp. 113-116.
12) IMF (1997c) describes the details of the SDDS.
13) IMF (1997b), pp. 33-35. The details of the NAB were explained in the IMF (1997a).
14) For a comprehensive review on economic growth, see Kochhar, Dicks-Mireaux, Horvath, Mecagni, Offerdal and Zhou (1996). They pointed that Thailand began the period with relatively small macroeconomic imbalances and structural distortions and faced a relatively less severe adjustment problem.
15) Suzuki taiyou (1996) described financial markets in Thailand which had been liberalized in the 1990's and pointed out that Thailand should reconsider foreign capital inflows that became rapidly short-term. Matsumura (1997) analyzed the real estate agencies and bad debt problems of the financial institutions. He also pointed out that there are intimate relations between selling the baht in foreign exchange market and domestic financial crisis.
16) Sherer and Darren (1997a).
17) Sherer and Darren (1997b).
18) Sapsford and Sherer (1997).
19) Nihon Keizai Shinbun (August 22, 1997).
20) Nihon Keizai Shinbun (August 29, 1997).

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