

II Exchange Rate Policies: Lessons from the East Asian Currency Crisis

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Introduction

Looking back to the causes of the East Asian currency crisis, we have to consider the exchange rate regimes chosen by most troubled economies. Most of the East Asian countries pegged their currencies to the US dollar, which has been a key ingredient in the region's past record of strong, steady growth. It was this sort of exchange rate arrangement, however, that helped build up the troubles in the financial crisis beginning in July of 1997. Right now, most of the troubled countries abandoned their fixed rate systems. They have to rethink their exchange rate arrangements: to return to the old stability, to adopt a more rigid fixed one, like Indonesia has tried, to let their exchange rates float freely, or to allow the currencies to move within an exchange-rate band?

In this paper, firstly, I discuss what the mechanism was between the fixed rate system and the difficulties built up in those economies, concerning the close ties of those currencies to the US dollar and the serious appreciation of the currencies in their real terms. Secondly, I analysis the possibilities of future arrangements in this region. Finally, some suggestions will be made for China's exchange rate policy.

1. The pegged rate system and the Asian financial crisis

1-1 A glance at the truth of fixed rate systems that many Asian economies adopted before crisis.

It was commonly recognized that most of the Asian economies adopted the implicit pegging rate systems before the crisis broke out in 1997. Table 1 shows the truth of such pegging rate arrangements in selected Asian economies. The truth contains two aspects: One is that those economies chose fixed rate arrangements, even though many of them belonged to managed floats or independently float in the IMF category. The other one is that we can see the close ties of those currencies to the US dollar.

Table 1: Implicit Weights of UDS and JPY in Nominal Value of Selected Asian Currencies

Currency	Estimate from Frankel		Estimate from Kwan	
	USD	JPY	USD	JPY
Korean won	0.96	-0.01	0.84	0.17
Singapore dollar	0.75	0.13	0.75	0.18
Malaysian ringgit	0.78	0.07	0.87	0.16
Indonesian rupiah	0.95	0.16	0.97	0.01
Philippine peso	1.07	-0.01	1.07	0.03
Thai baht	0.91	0.05	0.86	0.09

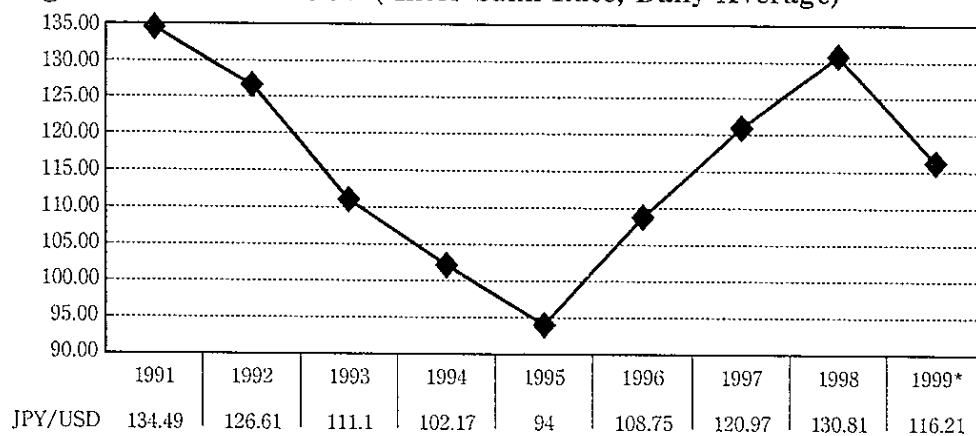
Source: World Economic Outlook, IMF, 1997.

1-2 Brief exam on the difficulties built up under the fixed rate regimes

1-2-1 Impact of USD and JPY exchange rate fluctuations

From the beginning of 1990s until 1995, USD experienced a sharp devaluation against JPY. We can see this from Figure 1. Accordingly, Asian currencies that were pegged to the USD experienced the same path in that period, i.e, depreciated seriously. However, since the spring of 1995, the dollar began to appreciate. The values of those currencies pegged to the dollar were increasing rapidly against the JPY in their nominal term. This posed more difficulties on the already bad situations of their current account balances. Table 2 shows that the ratio of current account deficit to GDP in Indonesia, Malaysia and Korea were increasing beginning in 1995.

Figure 1: JPY Versus USD (Inter-bank Rate, Daily Average)



Source: www.Ornda.com/coverter/cc_table?lang=en

Table 2: Current Account Balance: Selected Asian Economies

(in percentage of GDP)

	1975 - 82	1983 - 89	1990	1991	1992	1993	1994	1995	1996	1997
Indonesia	-1.2	-3.5	-2.8	-3.4	-2.2	-1.5	-1.7	-3.3	-3.3	-2.9
Korea	-4.6	2.5	-0.9	-3.0	-1.5	0.1	-1.2	-2.0	-4.9	-2.9
Malaysia	-2.0	-0.7	-2.1	-8.8	-3.8	-4.8	-7.8	-10.0	-4.9	-5.8
Philippines	-6.5	-0.3	-6.1	-2.3	-1.6	-5.5	-4.6	-4.4	-4.7	-4.5
Singapore	-8.8	1.8	8.3	11.2	11.3	7.4	17.1	16.9	15.0	14.0
Thailand	-5.6	-3.2	-8.3	-7.7	-5.6	-5.0	-5.6	-8.0	-7.9	-3.9

Source: The World Economic Outlook, 1998.

1-2-2 Trilemma (triangle difficulties) with the fixed rate system

There is an iron law of open macroeconomic inconsistent trinity: only two of the three following features can be obtained at the same time: a fixed exchange rate, full capital mobility and monetary policy independence. Any pair is possible but any attempt at achieving all three will result in a currency crisis. The reason for the inconsistency is well known. Full capital mobility implies that short-term interest rates will be determined by the covered interest rate parity condition where the foreign interest rate

and forward exchange rate are predetermined. A country could determine the domestic interest rate or the spot exchange rate, but not both. Therefore, an attempt to set both domestic interest rate and exchange rate that are not consistent with the parity condition could give rise to incentives for significant short-term capital flows. If the exchange rate is fixed, or targeted to achieve objectives of current account, the central bank must stand ready to buy or sell its own currency in unlimited quantities. Money supply is fully demand-determined and monetary independence is lost. To recover independence, a country can either give up the fixed exchange rate target or recover control of its interest rate and demand for money by preventing capital movements. If the domestic interest rate is fixed, or targeted to achieve domestic stabilization objectives, the exchange rate has to be flexible. Therefore, the exchange rate cannot be used as an expenditure switching tool for the objectives of current account.

Briefly to say, under a free capital flow environment, if the domestic interest rate is fixed, or targeted to achieve domestic stabilization objectives, the exchange rate has to be flexible. Accordingly in Asia, the difficulties were induced by the failure in coping with surging capital inflow. Table 3 shows the truth of the rapid increase of private capital flows in those selected economies.

Table 3: Net Private Capital Inflow: Selected Asian Economies

(in percent of GDP)

	Indonesia	Korea	Malaysia	Philippine	Singapore	Thailand
1983 - 88*	1.5	- 1.1	3.1	- 2.0	5.0	3.1
1989 - 95*	4.2	2.1	8.8	2.7	3.8	10.2
1991	4.6	2.2	11.2	1.6	1.7	10.7
1992	2.5	2.4	15.1	2.0	- 2.7	8.7
1993	3.1	1.6	17.1	2.6	9.4	8.4
1994	3.9	3.1	1.5	5.0	2.5	8.6
1995	6.2	3.9	8.8	4.6	1.3	12.7
1996	6.3	4.9	9.6	9.8	- 10.1	9.3
1997	1.6	2.8	4.7	4.7	- 5.5	- 10.6

*Annual average

Source: International Monetary Fund, World Economic Outlook 1997.

The continuing inflows of capital caused a upward pressure on the their currencies and inflationary pressure. In order to relieve such pressures, several measures can be used. The first one is to change the value of their currencies or simply let the exchange rates have more flexibility. But unfortunately those economies firmly stick to their exchange rate anchor. The second choice is to sterilize the inflows by absorbing the extra money supply. But from their experiences we can see that their monetary policies were virtually "locked in" by the need of maintaining their pegged exchange rates in the circumstance of liberalized capital transactions. Besides, the relative small-sized bond markets limit the ability of the central banks to enforce the open market operation. Moreover, a higher reserve rate raised by the central banks in order to reduce the money

supply resulted in further increase of capital inflows. The third policy response is relying on the tightened fiscal policy. Obviously, there was less room for those economies. The last choice is the temporary capital control. Because it was thought to be too risky, a few economies introduced such tool of control.

As a result, there was serious exchange rate appreciation in their real term. Table 4 shows that the currencies of selected economies had appreciated sharply. In nominal term, these currencies had kept very limited changes in the period before crisis. However, in the real term, all of these currencies had already been over-valued seriously in the same period. This deteriorated the current account balance further. The bad external conditions plus domestic economic overheating, the weaknesses in financial system and huge financial bubble attributed to the crisis finally breaking up and the fixed rates were finally abandoned in the crisis. We can also see the truth from the column (1), that once the fixed rate was abandoned, there could be a very large scale of overshooting devaluation which happened in the middle of the crisis in stead of in a peaceful period.

Table 4: Exchange Rates of Selected Asian Economies

(appreciation: + ; depreciation: -)

	7 / 1 /1997 - 2 /23/1998(1)	In real term, Spring, 1997 (Basic period:1990)(2)	In nominal term 1990-spring, 1997 (per USD)(3)
Baht	- 45.1%	+12%	25.2 - 25.6
Ringgit	- 34.0%	+19%	Less than 10%
Pesos	- 35.1%	+23%	Less than 15%
Rupiah	- 72.7%	+ 8 %	—
HKD	—	+30%	7.8
Won	- 46.0%	—	—

Source: Jao Y. C. , 1998. Haihong Gao, 1998.

2. Possibilities of future choices of exchange rate arrangement for Asian Currencies

According to the latest report of IMF on the Exchange Rate Arrangements (1999), Korea, Philippines, Indonesia and Thailand were shifting to independently floatings. Singapore is adopting managed floating with no preannounced path for exchange rate. Malaysia is in pegged rate arrangement. It can be believed that those arrangements are only transitional ones. Once those economies get back on the track, they have to rethink their exchange rate arrangements.

Roughly speaking, there are three possibilities can be considered: returning to the old fixed rate arrangement, shifting to a freely floating rate, or, increasing flexibility compared with the rigid exchange rate regimes.

2-1 Returning to the old fixed rate (pegging to a solo currency): not the best choice

Basically there is only one reason behind above argument: the truth of irreversible trend of capital account liberalization and the willingness of maintaining monetary policy independence for those economies. It will be more difficult to maintain a fixed

rate if an economy doesn't want to lose the autonomy of monetary policy and doesn't want to lock the door to overseas investors.

2-2 Shifting to a freely floating rate: unrealistic

The reason is easily to be understood. Let us take a look at Table 5 that gives the factors in determining the choices of exchange rate regime suggested by the IMF (1997). Briefly to say, for Asia economies, some of the factors may support to choose a regime with less flexibility, some of them may support to hold a regime with more flexibility. But it is hardly to find a clear clue of a strong recommend for a freely floating rate system.

Table 5: Factors in the Choices of Exchange Rate Regime

Characteristics of Economy		Exchange Rate	
		Less Flexibility	More Flexibility
Size of economy	Larger		+
	Smaller	+	
Openness (Ratio of trade/GDP)	Higher	+	
	Lower		+
Diversified production/export structure	More		+
	Less	+	
Divergence of domestic inflation from world inflation	More		+
	Less	+	
Degree of economic/financial development	Greater		+
	Lower	+	
Labor mobility	Higher	+	
	Lower		+
Capital mobility	Higher		+
	Lower	+	
Foreign nominal shocks	More		+
	Less	+	
Domestic nominal shocks	More	+	
	Less		+
Real shocks	More		+
	Less	+	
Anti-inflation credibility of policy-makers	Higher		+
	Lower	+	

Source: IMF, World Economic Outlook, 1997.

2-3 Increasing flexibility compared with the old rigid exchange rate regimes: possible

There are two possibilities in regarding to a more flexible rate arrangement: increasing other currencies' weights in the basket or using a band to limit sever fluctuation.

Considering the first possibility, there is a need to increase JPY's weight in the basket, which is based on the fact of the close links of both trade transactions and capital transactions between Japan and other Asian economies. From table 6 of Economic Relations of 9 Asian Economies with Japan, US and EU, we can see that there is a solid

base of economic linkage between Japan and other 9 Asian economies. This truth makes it possible and necessary to increase the JPY's portion in other Asian currencies' exchange rate baskets.

Considering the second possibility, it is also possible to put a bond on exchange rate float in order to gain from both of the flexibility and fixity.

Table 6: Economic Relations of 9 Asian Economies with Japan, United States and EU

(in percent of total amount with the world)

	Japan	US	EU 15	EU 11
Trade (1997)	16%	17%	14%	10%
Direct Inward Investment (1997)	14%	14%	20%	—
Outstanding Claims (End of June 1998)	30%	5 %	50%	37%
Bilateral Aid (1996)	69%	2 %	24%	21%

Source: Website of BOJ.

3. China's exchange rate policy

3-1 Summary of evolution of China's exchange rate system

Appendix 1 gives a brief description of China's exchange rate policy and exchange system reforms. Briefly to say, the RMB's exchange rate system experienced from a multiple rate system to a two-tiers one, and finally shifted to a single managed float regime in 1994. This process has taken 20 years.

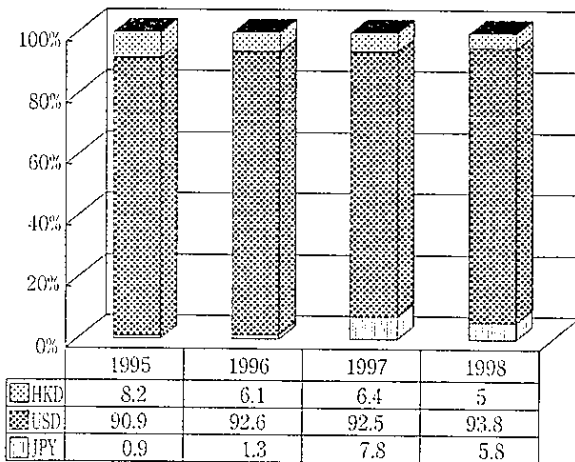
3-2 Current situation

De facto Pegging to the USD

It is hardly to find any figures of the weighs of pegging for the RMB's exchange rate basket from an open channel. However, it can be mirrored by Figure 2 that contains

Figure 2: Foreign Exchange Transactions in China's FOREX Market

(currency structure, %)



Source: The People Bank of China Quarterly Statistical Bulletin, No. 1, 1999

the characteristics of China's foreign exchange market transactions.

From Figure 2, we can see: (1) There are only three currencies allowed to be transacted in China's For ex market: USD, JPY and HKD. (2) The USD is dominating the whole market transactions. (3) The JPY accounts for less than 10% of overall market transactions.

It can reflect to some extent the fact that USD is the major denominated currency for external transactions between China and its major external transaction partners. In the

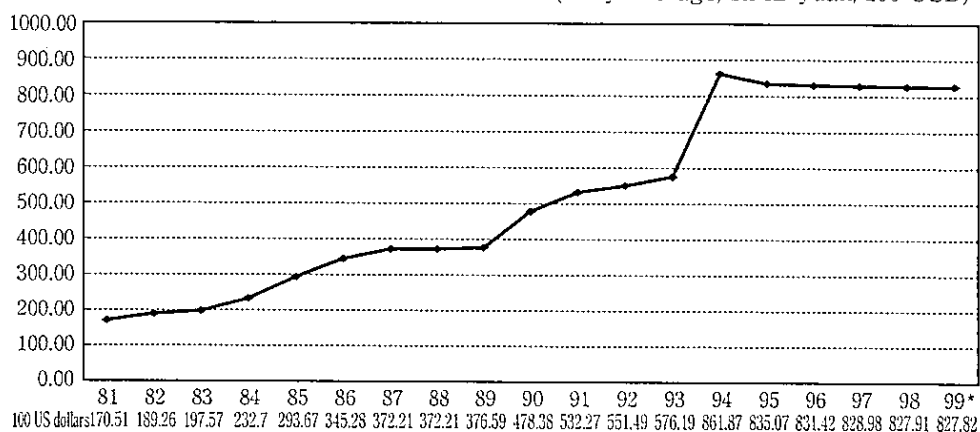
other words, the USD is the major settlement currency in China's external transactions.

Stability of RMB

Since the once for all devaluation of RMB in 1994, the rate of RMB has been stable and a little appreciation. Even though most of the Asian currencies devaluated sharply in this crisis, the RMB kept stable all the time, which contributed a lot to the whole region's getting off the recession. Figure 3 reflects the whole path of RMB's value since China began its reform on the foreign exchange system.

Figure 3: Exchange Rate of RMB against USD

(daily average, RMB yuan/100 USD)



*Daily average of the period from January 1 to October 19, 1999.

Source: China Statistical Yearbook, 1998; Chinese official announcement.

Basically there are three reasons: (1) Good performance of China's current account balance. (2) Sound structure of China's foreign debt. (3) Controls on foreign exchange system. The absence of capital account convertibility in China means that the ability of capital to flow in and out of the country instantaneously is limited and speculators, either foreigners or Chinese, have no way to short sell the currency on the belief that the RMB is overvalued and is likely to depreciate. To some extent, we can say that it is the strict control over capital transactions that let China survive this Asian financial crisis.

3-3 Future possible changes

In the short term, it is suggested to increase the weight of other currencies, including JPY and EURO. Two points here needed to support such argument.

(1) There is a mismatch between RMB's pegging weights and the structure of China's trade partners and capital flow directions. We have seen that the USD is the major invoiced currency in China's external transactions. It accounted for above 90% of China's Forex market transactions. JPY accounts only less than 10%. However, such close link between RMB and USD can hardly be mirrored by the relations in terms of trade and capital flow between China and the US. From Table 7 and 8, we can see that Japan is the first largest trade partner of China. US placed at No. 3. In terms of foreign capital inflows, Japan is the second main source of China's use of foreign capital, while

US is as the third largest one. Therefore, it is reasonable to think about enhancing the weight of JPY in RMB's pegging basket.

(2) There is still an outside condition need to be established, such as the convenience in using other currencies beside the US dollar-e.g JPY as an international currency. For instance, there are much needed improvements of short-term financial market in Japan, such as repo or TB market, in terms of openness to non-resident participation, diversification of variety instruments, etc.

Table 7: China's Foreign Trade with Related Countries and Territories
(1997, Customs Statistics, Millions of USD)

	Total	Rank	Exports	Rank	Imports	Rank
Japan	60812.82 (18.7%)	1	31819.82 (17.4%)	3	28992.98 (20.4%)	1
HKSAR	50771.03 (15.6%)	2	43780.76 (24%)	1	6990.21 (4.9%)	
US	48992.9 (15.1%)	3	32694.8 (17.9%)	2	16298.1 (11.5%)	3
Euro 11	34354.3 (10.6%)	4	18850.75 (10.3%)	4	15503.55 (10.9%)	4
Korea	24045.47 (7.4%)	5	9116.27 (5%)		14929.2 (10.5%)	
Taiwan	19838.21 (6.1%)	6	3396.48 (1.9%)		16441.73 (11.6%)	2
UK	25791.66 (1.8%)	7	3813.38 (2.9%)		1978.28 (1.4%)	
Canada	3912.13 (1.2%)	8	1905.05 (1%)		2007.08 (1.4%)	
Total	325057.45		182696.64		52387.34	

Source: China Statistical Yearbook, 1998.

In the medium and longer term, it is necessary to find a way to exit the pegging rate smoothly. There are basically two considerations behind this choice. One is the irreversible trend of capital account liberalization. The other is the willingness of maintaining monetary policy independence for Chinese monetary authority.

China's current pegging rate is supported by the strict restrictions over capital transactions. There are two aspects of the controls: One is the controls on entry of foreign exchange market, which, in the matter of fact, restrict the demand for and supply of foreign exchange; another is the heavy intervention of the Chinese government in foreign exchange market. China didn't experience the crisis like that of Thailand and of some other Asian economies. The most important reason is that Chinese currency is not convertible for capital account transactions. To some extent, however, this is a short-term insulation. China's capital account liberalization will be realized sooner or later, which has become an unenviable step in the process of China's economic reform and development.

Regarding to the second consideration, in order not to be trapped by the macro-

Table 8: Amount of Foreign Capital Actually Used

(by selected country and territory, million of USD)

	Total	Rank	Foreign Loans	Rank	Foreign Direct and Other Investment	Rank
HKSAR	21651.11 (33.6%)	1	100 (0.8%)		21551.11 (41.1%)	1
Japan	6325.97 (9.8%)	2	1935.6 (16.1%)	1	4390.37 (8.4%)	2
US	4161.17 (6.5%)	3	700 (5.8%)	3	3461.17 (6.6%)	3
Taiwan	334.34 (5.2%)	4	0		3342.34 (6.4%)	
Euro 11	3189.74 (5.0%)	5	915.57 (7.6%)	2	2274.17 (4.3%)	
Singapore	2806.96 (4.4%)	6	200 (1.7%)		2606.96 (5.0%)	
Korea	2242.63 (3.5%)	7	15 (0.1%)		2227.63 (4.3%)	
UK	2019.96 (3.1%)	8	160.4 (1.3%)		1859.56 (3.6%)	
Total	66408.34	12021	52387.34			

Source: China Statistical Yearbook, 1998.

economic trilemma and not to duplicate the tragedy of what happened in the troubled economies in Asian crisis, China should actively establish some preconditions for an opened capital account. One of the preconditions is to let the exchange rate of RMB be more flexible. It might be one of the lessons we draw from the Asian financial crisis.

Concluding remarks

One of the lessons we draw from the Asian financial crisis is that there are two important elements that we have to consider when we choose or adjust exchange rate policy: severe exchange rate fluctuation of major currencies and the triangle difficulties in the circumstance of capital account liberalization.

Both of the above elements recommend that China should shift its exchange rate regime from current rigid one to a more flexible one.

The usage of JPY will be increasing, which depends on both of the economic and financial linkage between Japan and other Asian economies and the willingness/real and efficient actions of Japan's government to enhance the JPY's status as a major international currency.

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Appendix: Chronology of China's Exchange System Reforms

Period	Exchange rate system/policy	RMB value Chinese Yuan/per USD
Before 1980	Single pegging rate system: official rate Chinese economy was closed to the outside world and was centrally planned. Accordingly, China imposed planned and rigid controls on foreign exchange. All foreign exchange incomes and expenditures were centralized in the hand of government. The Bank of China (BOC) handled all foreign exchange transactions and was the solo authorized foreign exchange bank in China.	Official rate devalued several times from 2.26 in 1955 to 1.5 in 1980.
1980-1984	Multiple rate system: official rate, rate for internal settlement of trade transactions and swap market rate. On April 17, 1980, China assumed its seat on the executive Board of the IMF and accepted the transitional arrangements stimulated in Article 14 of the IMF General Agreement in light of domestic economy and position of balance of payment. A market-oriented approach has been gradually introduced to the foreign exchange management system. A significant step adopted for the reform of China's foreign exchange system was the establishment of 12 experimental foreign exchange swap markets in 1980. The participants of the foreign exchange market began to include a limited numbers of state-owned and domestic collective enterprises. Those domestic enterprises have a priority of retaining foreign exchange in form of retention quotas or selling their foreign exchange to other domestic enterprises authorized to buy it. The BOC was not the only traders in China's foreign exchange market. Actually it began to act as broker for the transactions between authorized domestic enterprises. All transactions were executed at a banded rate of internal settlement that was higher than the fixed official rate.	Official rate devalued from 1.5 to 2.8. The rate for internal settlement of trade transactions stood at 2.8. The swap market rate fluctuated around 2.8 with a band of 5-10%.
1985	Two ties rates: official rate and swap rated. The use of the settlement rate was disconnected.	
1986-1993 Continue...	Managed floating system with parallel rates: the official rate was changed from a pegging to a basket to a system of managed floating. The exchange rate of the swap markets was allowed to float without any band In 1986, the permission of trading in Chinese foreign exchange market began to spread to FFEs in China. In 1988, the first opened foreign exchange center in Shanghai began to operate, which was followed by establishment of 80 centers across the country. At that time, all domestic entities that were allowed to retain foreign exchange earnings were also allowed to trade in the centers. The scope of the participants was continually broadened. In 1991, individuals were allowed to transact foreign exchange, both of selling and purchasing, in these centers.	The official rate continued to be devalued from 2.8 to 5.8.

1994-present	<p>Single managed float rate system: the official and swap market rates were unified at the prevailing swap market rate which was basically determined by the market forces.</p> <p>The inter-bank market that based on the swap centers was established in 1994. China's Foreign Exchange Trading Center (CFETC) began to operate. Foreign exchange quotas were abolished. Domestic enterprises were incorporated into a system of sale and purchase of foreign exchange with domestic banks. RMB convertibility under current account transactions was partially realized.</p> <p>On December 1, 1996, China accepted Article 8 of the IMF Agreement and realized the full convertibility of RMB under current account transactions. In line with this effort, a series of reforms and deregulations on China's foreign exchange system were conducted.</p> <p>On January 14 1997, the State Council approved the amendments of the Foreign Exchange Regulations of the People's Republic of China, turning the reform package for China's foreign exchange system into rules and regulations. Following the approval of the State Council, some domestic enterprises were allowed to retain a certain amount of foreign exchange without time limit and to participate the transactions with authorized banks.</p>	<p>An once for all devaluation: from 5.8 to 8.7-single rate determined in the swap center.</p> <p>RMB has been stable and a little appreciation.</p>
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Source: The State Administration of Foreign Exchange (SAFE), Annual Report 1996, 1997. Gao, Haihong (1999), "Liberalizing China's Capital Account: Lessons from Thailand", (will be published in the Working Paper Series of Institute of Southeast Asian Studies in Singapore, 1999). Hong, Zhihua, etc. (1998), Laws and Regulations on Foreign Exchange Management: Explanation and Illustration, China's Law Press, 1998.