

“INSTITUTIONAL DOLLARIZATION” OF ASIAN CURRENCIES¹

Hiroyuki NAKAI

Head of Asian Economies Research Unit, Economic Research Department
Nomura Research Institute, Ltd.

Abstract

Previous studies show that after the Currency / Economic crisis of 1997 and 1998, Asian currencies are again strengthening their linkages, or pegging, to the U.S. dollar. Our calculations also confirm such a trend. Volatility of Asian currencies' exchange rates to the U.S. dollar has fallen recently to the almost same levels as before the crisis. The volatility of Nominal Effective Exchange Rates has also diminished.

We could evaluate such situation as “Institutional Dollarization”, since players in Asian economies seem to welcome the nominal stability of the exchange rates to the U.S. dollar. From the trading side, the dollar-pegged zone comprises an increasing share of the trading partners for Asian economies. Multi national enterprises, which account for a large share in exports from Asian economies, also favor pegging to the U.S. dollar. Stable forex rates against the U.S. dollar are considered to help maintaining constant foreign direct investment inflow and export-oriented industrialization. And, under “Institutional Dollarization”, Asian economies can enjoy low interest rates, free capital movements, and stable forex rates simultaneously. De-internationalization of their own currencies also helps to stabilize forex rate movements.

But, at the same time, threats and side effects of “Institutional Dollarization” are now becoming apparent. The widening current account deficit in the United States, where the dollar is the currency, implies the risk of global currency rates adjustments. Some Asian central banks are heavily selling their own currencies to stabilize them against the U.S. dollar, while such interventions conflict with their domestic monetary policy in some economies. In addition, increasing weights of the U.S. dollar could erode their asset quality. Although de-internationalization of currencies weakens market pressure, it impedes the development of the forex futures and options market. Moreover, high open economic structure of Asia makes it very difficult to curb forex speculations.

We could conclude that in Asia, the side effects – or risks - of Dollarization are increasing to the level where gradual loosening of it should be considered. Assuming small price effects on exports from Asian economies, the negative impact of gradual appreciation to the real economy would be minor. On-going initiatives to improve Asian financial system, such as the ABMI (Asian Bond Market Initiative) would help smooth transition of Asian financial system out of the current dollarized situation through reducing dependence on the U.S. dollar. To be effective, such measures should be designed to offer benefits of de-Dollarization to economic players, such as exporting enterprises or investors.

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1. This paper is released for discussions at the AT10 meetings on February 3 and 4, 2004. Since further revision is considered, please do not quote or copy without permission of the author.

1 INTRODUCTION

1.1 Re-emergence of Pegs—or Strong Linkages—to the U.S. Dollar

It is commonly said that since the 1997-98 Currency / Economic Crisis (hereafter, “the Crisis”), Asian currencies have regained their linkages to the U.S. dollar. Most previous studies show that the U.S. dollar remains as key a determinant of Asian currency movements after the Crisis as it was before. For example, Fukuda and Kei (2001) observe this relationship with daily market data for the period Jan. 1998 to Dec. 1999, while McKinnon (2000) says that exchange rate targeting to the dollar is somehow inevitable for Asian currencies. Research on currency baskets in Ogawa and Shimizu (2003) seems to support such views.

Researchers list some reasons for the revival of strong linkages of Asian currencies to the U.S. dollar. We can identify four categories of reasons. They are:²

- 1 Medium of exchange - all exchange rates are quoted in terms of the U.S. dollar (Ogawa)
- 2 Settlement currency - most international trades are settled in the U.S. dollar (Fukuda and Kei)
- 3 Financing convenience -The U.S. dollar is quite convenient for borrowing and asset management while local currencies lack a method of long-term financing (McKinnon, 2003).
- 4 Increasing weight of the United States as trading partner (Fukuda and Kei; McKinnon, 2003).

Though these are persuasive arguments for pegging to the U.S. dollar, there is the room for further discussion, especially on the following three points. First, there is less urgency for Asian economies to rely on external financing. After the Crisis, the current account balances of most Asian economies turned positive, and they use such surpluses to repay existing external debt, such as facilities offered by the IMF.³ This means that the importance of reason number three has diminished drastically and that Asian economies do not have to stick to nominal stability to the U.S. dollar in order to secure capital inflow.

2. Categories one to three can be mentioned collectively as network externality. See Ogawa (2001).

3. South Korea and Thailand fully repaid emergency facilities offered by the IMF and other economies. Indonesia also suspended accepting new facilities from the IMF.

The second point is more fundamental. Why do Asian monetary authorities continue to prefer strong linkages of their currencies to the dollar even after the Crisis? It clearly showed the risk of pegging their currencies to the U.S. dollar against strong market forces for depreciation⁴. They have made huge efforts to reduce such risks by tightening regulation⁵ and by creating a regional assistance network under the Chaing Mai Initiative. Of course, assuming improved balance of payments achieved through current account surpluses and generally steady capital flows in and out of Asian economies, risk now lies mainly on the side of appreciation rather than depreciation. But, Japan's experience with the Smithsonian Agreement (1971) and Plaza Accord (1985) also shows that keeping the currency value artificially low is another risk⁶ while Asian monetary authorities should be familiar with this.

This leads to the third point. What does make (or force) Asian monetary authorities keep—or at least, accept—pegging their currencies to the U.S. dollar? Most of them are buying the dollar to curb the appreciation of their currencies and to keep nominal stability to the U.S. dollar, which could conflict with the domestic monetary situation. China or some ASEAN countries would be the case. From the view of traditional monetary economic theories, sticking too much to the nominal stability of the exchange rates is not rational.

1.2 Topics Discussed in this Paper

This paper examines the recent revival of pegging (or strong linkages) between Asian currencies and the U.S. dollar from the viewpoint of comparative intuitional analysis.⁷ Section 2 presents some quantitative analysis of the relationship between nominal rates to the U.S. dollar and effective exchange rates, since divergence of trading partners suggests that pegging to the dollar does not necessarily mean stable terms of trade.

Section 3 discusses the overview and rationale for pegging to the U.S. dollar, which we call “Institutional Dollarization”. We introduce a three-actor model, composed of the monetary authority, the business community (enterprises), and the economic policy authority. The business community and

4. Both external institutions as the IMF and domestic ones in crisis-hit economies share the same view after the crisis. See Nukul Commission (1998).

5. See sections 3 and 4

6. See MOF Japan (1992 and 2003b) and BOJ (1986).

7. In this paper, we adopt framework set by Aoki (2001).

the economic policy authority complain strongly to the monetary authority that currency appreciation would erode their export competitiveness, and the monetary authority should respect their opinions. In this sense, the monetary authorities are “forced” to continue pegging to the U.S. dollar. This regime is different from the traditional “beggar-thy-neighbor” policy, since the same two parties argued for keeping the peg to the U.S. dollar before the Crisis.

Section 4 covers side effects and risks for “Institutional Dollarization”. Section 5 summarizes the discussion in this paper and relates it to recent policy initiatives, such as the Asian Bond Market Initiative (ABMI) and other policy measures.

2 Quantitative analysis of forex rates and terms of trade

2.1 Nominal Effective Exchange Rate (NEER) and Nominal Exchange Rate to the U.S. Dollar

The system of (quasi) pegging to the U.S. dollar adopted by many Asian economies does not necessarily mean stable trading terms for them due to the diversification of trading partners. Hence, before discussing the “Institutional Dollarization” situation, we carry out some quantitative analyses to see the relationships between the movements of nominal forex rates and changes in the terms of trade for Asian countries.

In order to look at how their price competitiveness has changed, we calculated NEERs (nominal effective exchange rates) for ten Asian economies (China, Hong Kong, Korea, Taiwan, Singapore, Malaysia, Thailand, Indonesia, Philippines and Japan) based on the share of exports to various trading partners. Calculations cover the period January 1992 to October 2003 and are made on a monthly basis.⁸ We set 16 categories of trading partners, comprising the 10 Asian economies, the United States, Canada, the United Kingdom, the Euro Area, Australia, and others. Fifty percent of exports to other countries are assumed to be U.S. dollar-dominated. Export weights are based at 1991 nominal price.⁹

We then compared changes in the NEER to the volatility of the nominal exchange rate for each economy during four sub-periods: before the crisis (January 1992-March 1997), during the crisis

8. In this analysis, we do not calculate real (volume-based) numbers due to the constraints of price index data. Asian exports are heavily concentrated in electronics goods, whose prices are falling rapidly. Furthermore, weights in general price indexes (such as PPI) and those in exported goods are not inconsistent.

9. I did the same analysis changing the base year, but the results are almost same.

(April 1997-December 1998), the recovery period (January 1999-December 2001), and the most recent period (January 2002-October 2003). The results are shown in Figure 1, with the annualized change in the NEER on the vertical axis and the standard deviation of the nominal exchange rate against the U.S. dollar on the horizontal axis. Both numbers are calculated in monthly terms, and NEER changes are annualized. For each country, the figure plots the average for each of the four sub-periods.

Our observations could be summarized as follows. First, in the period before the Crisis, the average NEER for most economies (except China) was flat, neither appreciating nor depreciating, while the average standard deviation of the nominal exchange rate to the U.S. dollar was low, or close to zero. Then, during the Crisis, in most economies, volatility against the U.S. dollar increased while price competitiveness improved. For Hong Kong and China, however, neither was much affected. Finally, after the Crisis, price competitiveness for economies with a strong pegging policy (Hong Kong, China, and Malaysia) declined at first due to the stronger dollar and then improved in the most recent period in accordance with the weakening U.S. dollar. Other currencies returned largely to their pre-crisis situation with low volatility against the dollar.

Figure 1: Volatility of Nominal U.S. Dollar Exchange Rates for Asian Currencies and Changes in Nominal Effective Exchange Rates

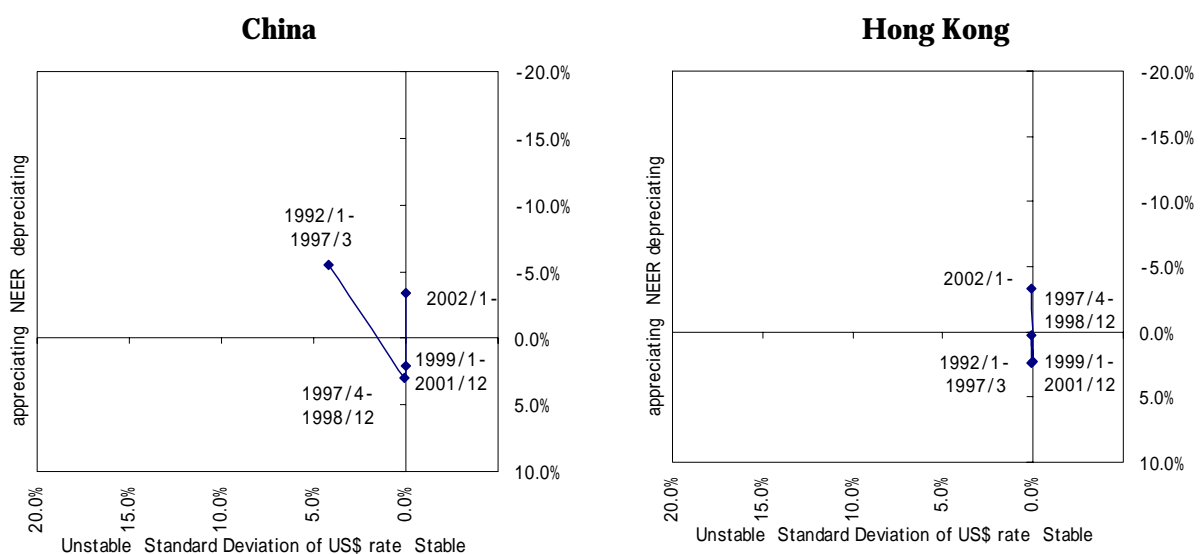
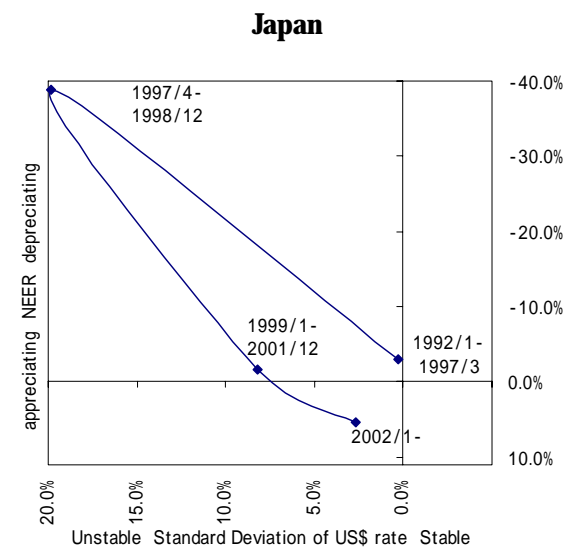
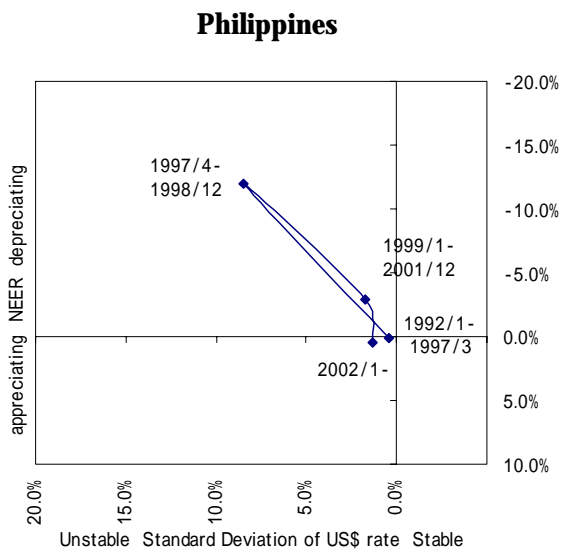
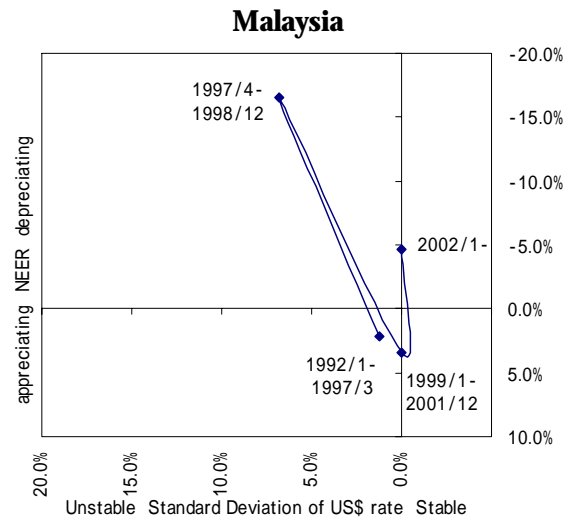
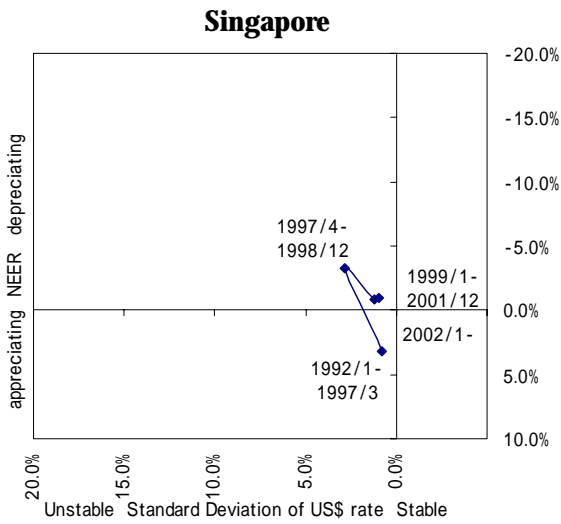
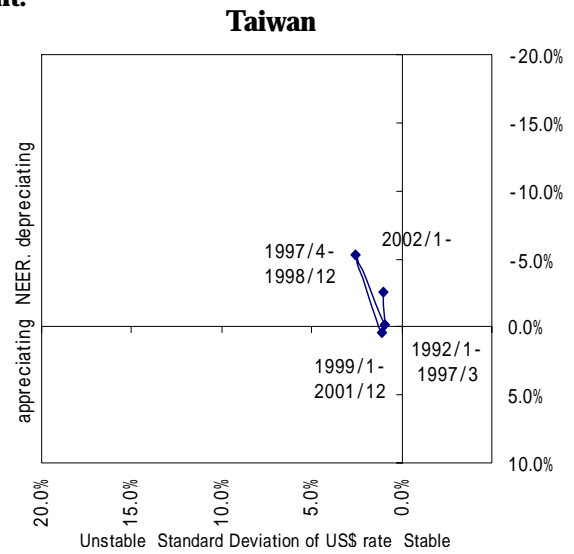
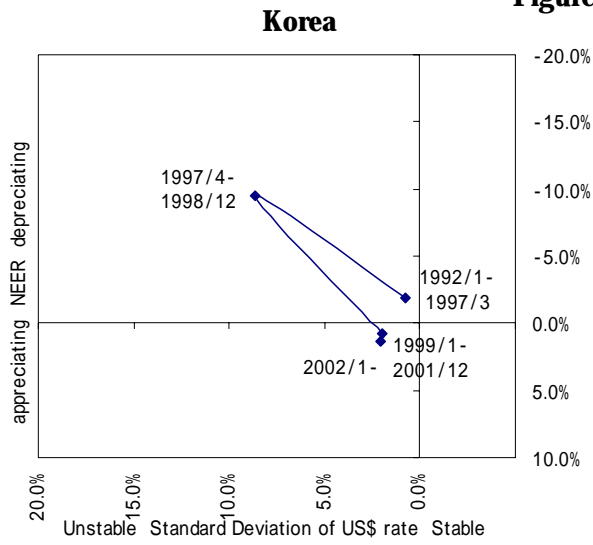


Figure 1: cont.



Source: Nomura Research Institute.

We can understand that linkages between the U.S. dollar and Asian currencies have reverted to the same level as before the Crisis. During the Crisis, volatilities of exchange rates to the U.S. dollar increased while competitiveness improved through NEER depreciation. Some economies also experienced depreciations in the NEER after the Crisis. For China, competitiveness was eroded to some extent during the Crisis in accordance with the U.S. dollar appreciation, then it has recovered with the weakened U.S. dollar.

If we call each country's January 1992 NEER level 100, then since the Crisis NEERs for most economies, including China, have been around 70 to 80. Hong Kong, Singapore and Japan experienced appreciation in NEER terms.

2.2 Income and Price Effects

As we just saw, Asian currencies depreciated drastically in NEER terms during the Crisis period, and then stabilized. Theoretically, such a big depreciation in the NEER might help the export recovery in Asia. How much did it actually help?

To see how movements in the NEER affect exports from Asian countries, we made two analyses. First, we checked the correlation between each country's export volume and variables representing income and price changes during the period 1992 to 2003. Export volumes were measured by real exports on a national income base, except for China, Hong Kong, and Singapore. Income effects were represented by a weighted average of the GDP growth rates of export destination countries. Price effects were measured by the change in the NEER. Correlation coefficients were calculated on year-on-year changes by quarter.

Table 1 shows the results of these correlations for the entire eleven-year period and for pre- and post-Crisis periods. The Crisis period (1997-Q2 to 1998-Q4) is excluded because the number of observations is insufficient. For the whole period, income effects seem meaningful for all economies while a price effect is observed only for two economies, China and Indonesia. Looking at the coefficients calculated on the pre-Crisis period, five countries experienced an income effect and the same number experienced a price effect. In the post-Crisis period, however, all nine countries experienced income effects while only six experienced price effects.

Table 1: Correlation between Export volume of Asian countries and Income and Price Changes of Trading Partners

	Q1 1992 – Q1-2003		Q1 1992 – Q1 1997		Q1 1999 – Q1 2003	
	Income Effect	Price Effect	Income Effect	Price Effect	Income Effect	Price Effect
China	0.37	-0.42 a		-0.58	0.60	-0.60
Hong Kong	0.72		0.46 a		0.82 a	-0.82 c
Korea	0.64 a		0.62 c		0.92	
Taiwan	0.62		0.84 c		0.85	
Singapore	0.74				0.82	-0.57 c
Malaysia	0.83		0.54 a	-0.64 a	0.97	-0.65 c
Thailand	0.42 a			-0.65	0.83	
Indonesia	0.66 c	-0.50		-0.44 a	0.74 b	-0.66
Philippines	0.78		0.58	-0.65 b	0.87a	-0.28

Notes: Correlations on quarterly observations of year-on-year changes. Table shows the strongest correlation among lead times for income and price variables of up to 3 quarters with letters a, b, and c designating 1-, 2-, and 3-quarter leads. A blank cell indicates no correlations were larger than 0.33 in absolute value or code mismatching. Export volume for China is the volume of goods exports deflated by the PPI. For Hong Kong and Singapore it is domestic and non-oil exports deflated by the relevant export price index. For other economies export volume is GDP exports. Income effect refers to correlation of export volume with change in GDP growth rates of export destinations weighted by export amounts. Price effect refers to correlation of export volume with changes in nominal effective exchange rates based on destination of exports. Shaded cells indicate

Then, we made a regression analysis to examine more closely the six countries that appeared to experience both income and price effects in the post-Crisis period (1999-Q1 to 2003-Q1), applying one simple formula for all economies. Table 2 shows the results of regressions of the change in export volume in each of the six economies on both the income and price variables and a time trend. For all economies except Indonesia, the absolute size of the t-value is much larger for the income effect than for the price effect. The R-square statistic for the regression is above 0.8 for most economies, while it is around 0.5 for Indonesia and Singapore.

Table 2: Results of Export Regressions for Six Asian Economies
Q1 1999 to Q1 2003

Dependent Variable Change in Export Volume from:	Estimated coefficient on:				Adjusted R-square
	GDP Growth Rate of Export Destinations	% Change in Nominal Effective Exchange Rate	Time Trend		
China	3.859 (7.120)	-0.748c (-2.668)	1.256 (6.513)		0.817
Hong Kong	1.671a (8.607)	-1.181c (-5.331)	-0.125 (-1.399)		0.807
Singapore	2.452a (1.923)	-2.046c (-1.330)	-0.337 (-0.858)		0.461
Malaysia	3.918 (14.911)	-0.739 (-3.128)	-0.608 (-5.688)		0.916
Indonesia	3.466b (2.126)	-0.699 (-2.962)	-0.307 (-0.553)		0.526
Philippines	2.891 (4.201)	-0.554 (-1.808)	-0.576 (-2.138)		0.916

Note: All data are quarterly observation of year-on-year changes. Letters a, b, and c designating 1-, 2-, and 3-quarter leads on export volume. See note to Table 1 for definition of export volume. GDP growth rates of export destinations are weighted by export amounts. T-statistics in parentheses.

These results seem to suggest that income effects are generally larger than price effects for

exports from Asia, and this would be clearer for the period after the Crisis. Of course, we cannot ignore price effects on exports from Asia. Since the NEERs of Asian economies were relatively stable over the period of analysis except during the Crisis, it is possible that the income effects are underestimated. Using the change in the NEER to measure the price effect might contain some problems. Nevertheless, at least for the post-Crisis period, we can conclude that income effects are relatively larger while price effects are minor.

2.3 Changes in the Trade Structure of Asian Economies

Finally, we reviewed the change in the trade structure in Asia. To simplify the analysis, we categorized Asian economies into four groups and excluded trades within each group. We calculated the share of exports from four origin areas in Asia (China and Hong Kong; Korea and Taiwan; ASEAN-4 and Singapore; and Japan) going to various destinations in 1996 and 2002 (Table 3). Generally speaking, the weight of Japan as an export destination for other countries in Asia declined while that of China increased between the two years. The weight of the United States remained constant or increased slightly, while other OECD economies keep their positions.

Table 3: Change in Trade Structure of Asian Economies, 1996 - 2003

Percentage Share of Destination Area in Total Trade of Origin Area					
1996	China & Hong Kong		ASEAN-4 & Singapore		Japan
	Kong	Korea & Taiwan	Singapore		
US\$ & pegged area	27	41	36		39
United States	27	20	26		27
China & Hong Kong		21	10		11
Korea & Taiwan	9		8		13
ASEAN-4 & Singapore	8	14			17
Other Asia	16	14	8		31
UK, Canada, & Australia	6	5	8		6
Japan	23	12	20		
Euroland	16	10	15		12
Other	12	17	13		12
2002					
US\$ & pegged area	32	50	37		47
United States	30	21	24		29
China & Hong Kong		26	13		16
Malaysia	2	2			3
Korea & Taiwan	9		10		13
ASEAN-3 & Singapore	5	8			10
Other Asia	14	8	10		23
UK, Canada, & Australia	6	5	7		7
Japan	17	10	17		
Euroland	14	11	14		12
Other	17	16	15		12
Total trade (US\$ million)					
	1996	151,260	238,991	213,743	411,209
	2003	305,839	282,569	251,449	416,138

Source: Calculated from official statistics by Nomura Research Institute.

This situation is consistent with the revival of pegging to the U.S. dollar that we discussed in section 2.1. Together with the finding in section 2.2 that price (forex rates) changes do not have a large impact on the volume of exports from Asia, it seems to void the effectiveness of a “beggar-thy-neighbor” policy and to suggest that exporters would prefer stable terms of trade rather than price competitiveness. The increasing weight of exports to the United States and to strictly U.S. dollar pegged-economies (China, Hong Kong, and Malaysia) implies that stronger linkages to the U.S. dollar mean more stable terms of trade. Hence, those economies officially taking a floating currency policy (South Korea, Taiwan, ASEAN4 less Malaysia, and Singapore) are prompted to strengthen the linkage of their currencies to the U.S. dollar in order to enhance stability.¹⁰ As a result, it is quite natural that their currency policy turns into a so-called dirty-float, or quasi-pegging, system.

3 OVERVIEW AND RATIONALES FOR “INSTITUTIONAL DOLLARIZATION”

3.1 Overview of “Institutional Dollarization”

Given the findings in the previous section, we used a comparative institutional analysis approach to probe more deeply into why the Asian economies would choose to link their currencies more strongly with the U.S. dollar. Following this approach, the currency rate regime is considered as a rule, which is enforced by a rule enforcer and binds all actors. In Asia, central banks or monetary authorities are the rule enforcers since they have the strongest power to decide the currency regime while other actors can complain to the enforcer and request changes if they are not satisfied. Thus, the currency regime is the result of consensus among actors. In addition to the monetary authority, we identified a second actor from the public sector—the economic policy authority. This is because, while the target of the monetary authority is typically general price and financial system stability, the policy focus of ministries of industry or trade is generally towards economic growth. Exporting enterprises are the key actor from the private sector.

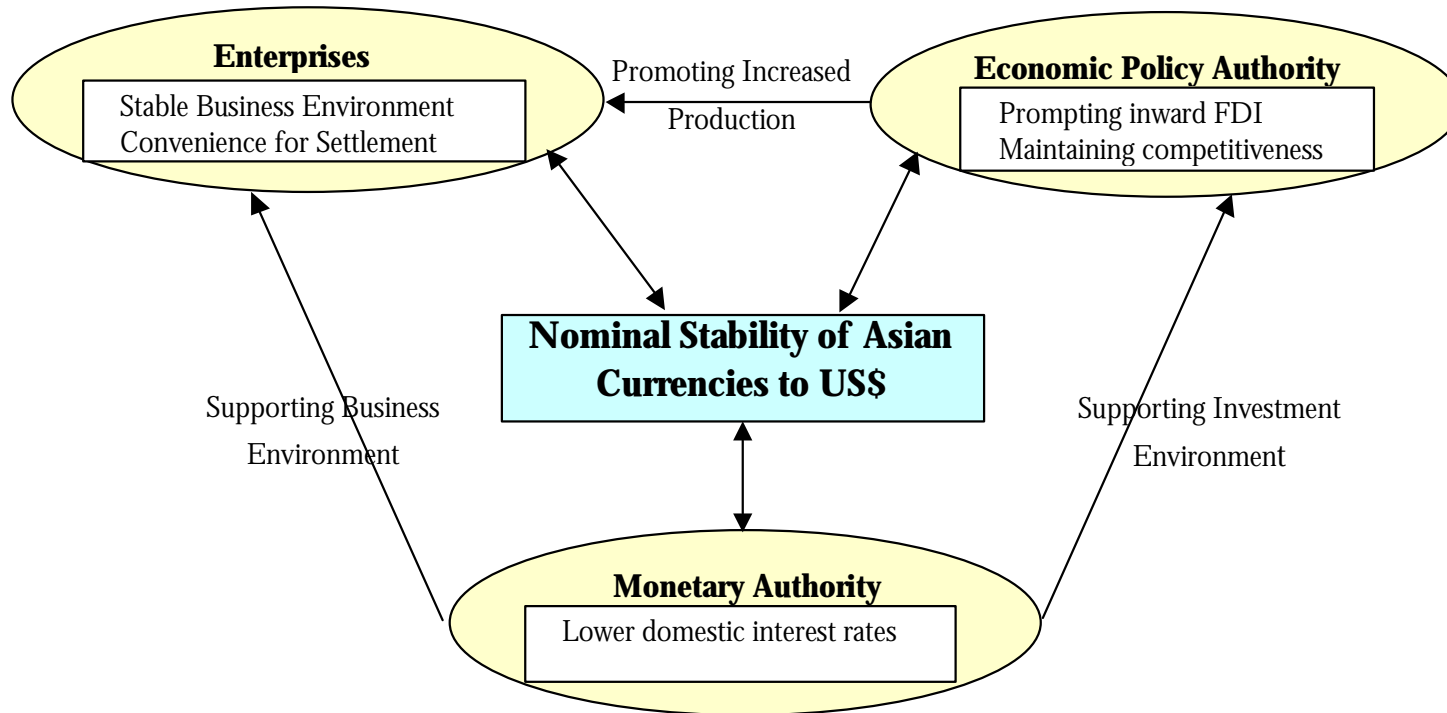
Figure 2 shows how interaction among these three actors enhances the linkage of Asian currencies to the U.S. dollar. That is why I refer to the recent situation in Asia as “Institutional Dollarization”. Without external threats, all three actors are happy to accept strong link between their

10. Assuming network externality of the U.S. dollar, this would be a kind of bandwagon effect.

domestic currency and the U.S. dollar.

From the viewpoint of exporting enterprises, stronger linkage to the U.S. dollar is convenient since most of their trades are settled in dollars. Nominal stability to the dollar also offers accounting and management conveniences to subsidiaries of multinational enterprises. On the other hand, the finding of weak price effects suggest that exporting enterprises do not have strong preferences for depreciation of their domestic currencies. Their interest is in a level of the exchange rate that does not erode their competitiveness. Given Asian currencies' "bandwagon" style linkages to the U.S. dollar, what they want is to maintain the nominal stability to the U.S. dollar.

Figure 2: Framework of "Institutional Dollarization"



Reflecting the stance of exporting enterprises, economic policy authorities also demand the same. Given the highly open structure of Asian economies, the top priority of economic policy authorities is to support exporting industries. In addition, since the U.S. dollar is the key business currency, maintaining nominal stability to the U.S. dollar helps Asian economies to attract inward foreign direct investment.

With lower domestic inflation rates and relatively weak domestic demand in the aftermath of the Crisis, the monetary authorities in Asian economies do not have a big problem maintaining nominal stability to the U.S. dollar in the current situation, since this means accepting lower U.S. dollar interest rates.

That is the framework of “Institutional Dollarization”. Under this regime, all three actors in Asian economies have motivations to maintain the strong linkage between domestic currency rates and the U.S. dollar, at least in the short-term.¹¹

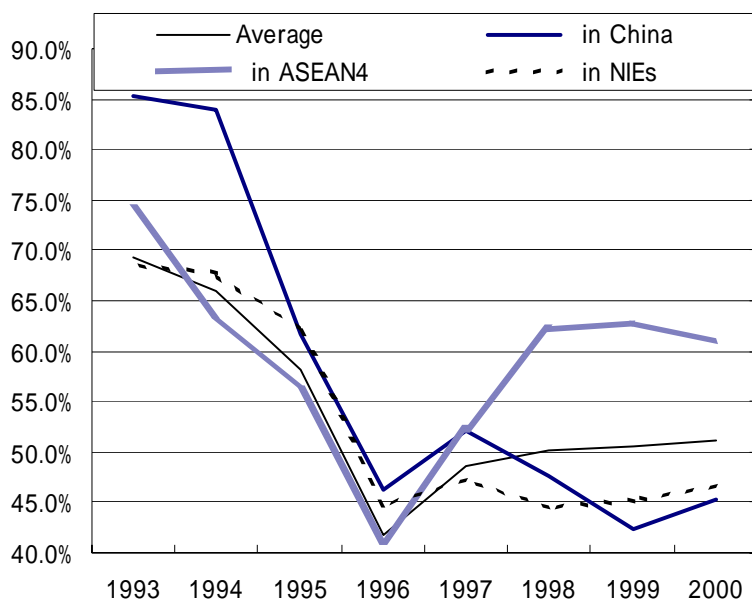
3.2 Who is Exporting to Whom?

The World Bank (1993) once discussed how the Asian economies, especially the ASEAN countries, succeeded with export-oriented industrialization by introducing inward foreign direct investment.¹² Though such favorable appraisals have been heard rarely since the Crisis, the subsidiaries and affiliates of multinational enterprises have already established strong franchises in Asian economies and they are playing a big role. In Malaysia and Thailand, for example, the combined sales of some Japanese enterprise groups reach single-digit percentages of GDP. Moreover, most foreign-related enterprises operating in Asian economies are export oriented. According to a survey by Japan’s METI, exports accounted for an average of 51.2% of the aggregate sales of Japan-affiliated companies in Asia for the fiscal year ended March 2001 (Figure 3). The percentage of exports is much higher for the ASEAN-4, while numbers are in downtrend as a whole. Also, according to official statistics for China, more than 50% of China’s exports are made by foreign-owned or foreign-affiliated firms (Figure 4).

11. We examined risks on “Institutional Dollarization” in Section 4.

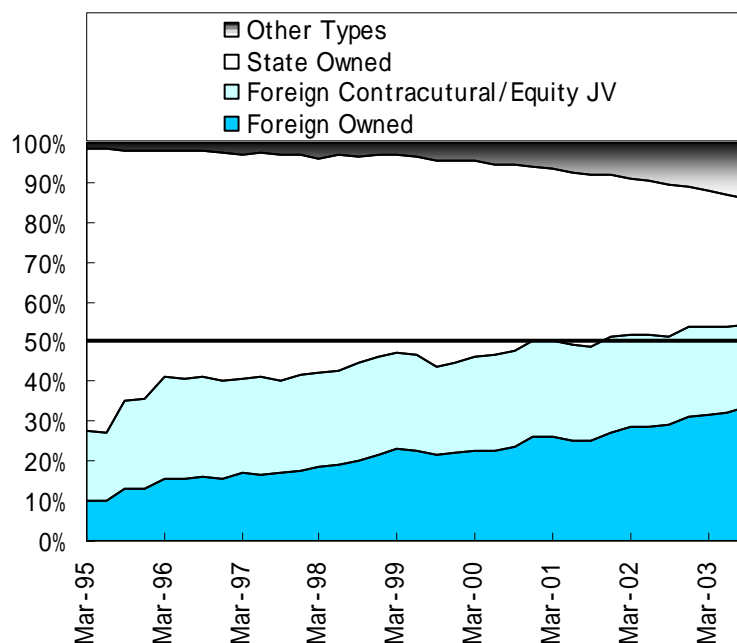
12. This would not be the case for Korea, Taiwan and Japan, since these three have not relied on foreign enterprises for industrialization. But, multinational enterprises headquartered in each economy have same attitude since they have many franchises across Asia.

Figure 3: Weight of Exports in Total Sales of Japanese-related Manufacturers in Asia



Source: METI/MITI.

Figure 4: Contributions to Chinese Exports by Type of Exporter



Source: Chinese official statistics.

The large role of foreign enterprises in Asian economies has two implications. First is the content of the pressures from exporting enterprises on forex rates. Assuming that multinational enterprises keep their global books in a currency other than Asian local ones, they would not gain

much benefit from local currency depreciation since that would only reduce their local-currency costs, such as personnel. At the same time, depreciation could impose forex evaluation losses for their assets. Hence, as a whole, the business community in Asian economies demands not “beggar-thy-neighbor”-style currency depreciation but just stable exchange rates.

The second implication is the possible conflict of interest between nation-states and multinational enterprises. Susan Strange (1996) pointed this out with reference to advanced economies. Conflicts within one nation-state are already observed in some advanced economies with respect to exports from Asia, with the style of confrontation between locally operating manufacturers and others. For example, in 2001 the Japanese government discussed introducing safeguards against towel imports from China to protect “Japanese” manufacturers. But they never executed the safeguards of strong opposition from some Japanese towel makers that had already shifted their facilities to China who were supported by the Chinese government. Though at first glance this seems to be an inter-governmental dispute between Japan and China, at the bottom line it is a domestic Japanese matter. Given greater presence of multinational enterprises in Asia, we can understand that such kinds of conflict are becoming common in Asia.

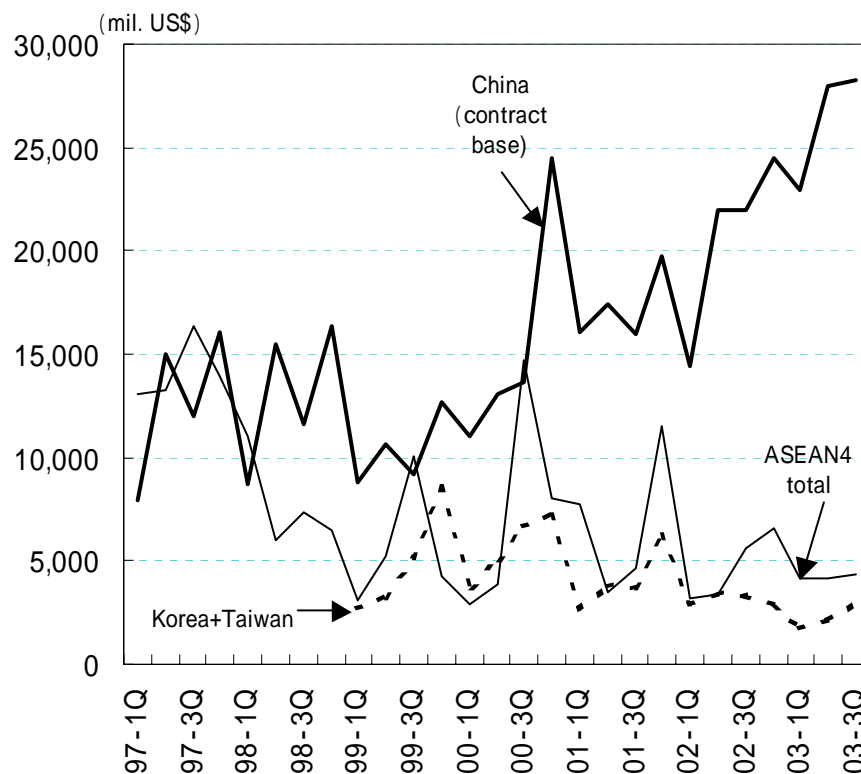
3.3 Race to Attract FDI

To achieve FDI-led industrialization, Asian governments were generous to foreign enterprises and made efforts to attract FDI.¹³ Though their current accounts moved into surplus after the Crisis and their need for financing has fallen, Asian economies are still eager to attract FDI because of its non-financial benefits, such as technology transfers and sophisticated job opportunities.

Currently, the ASEAN economies lag behind China in attracting FDI (Figure 5). Hence, they are now intensively pursuing policy measures to improve the business environment for multinational enterprises, as seen in the formation of AFTA (ASEAN Free Trade Area). In this context, Asian governments would also be motivated to keep their nominal currency rates against the U.S. dollar stable in order to attract FDI from export-oriented industries.

13. We should point out that government stances vary according to the industry. Generally speaking, Asian governments are generous to export-oriented manufacturing industries while delaying liberalization in service industries.

Figure 5: FDI to Asian Economies



3.4 De-internationalization of Local Currencies

In terms of monetary policy, the current situation in Asia is quite interesting because the problem of the “two-corner solution” does not seem to exist; Asian monetary authorities are achieving three targets—stable forex rates, free capital movements, and independent monetary policy—simultaneously, while in theory, only two out of three can be satisfied at the same time. Moreover, given the current low rates of inflation, they can keep the nominal stability of exchange rates to the U.S. dollar and accept the lower interest rate in the U.S. as the global interest rate.

Two factors are important for this situation. First is the current account surplus of Asian economies, which continues since just after the Crisis. Such surplus enables Asian monetary authorities to accumulate huge foreign exchange reserves. Second is the “de-internationalization” of local currencies. Except for China and Malaysia, Asian economies have maintained freedom of capital accounts, but the currency regime has changed through de-internationalization.¹⁴ The Crisis-hit economies in ASEAN (Thailand, Malaysia, and Indonesia) have “de-internationalized” their

14. Malaysia introduced capital controls in September 1998, and then lifted them in May 2001.

currencies to exclude non-residents from holding local currencies in cash while maintaining the freedom of capital movements. (For Thailand, Malaysia, and China see Table 4.) South Korea also maintains stricter regulations on won holdings by non-residents.

Seeing recent market movements, this de-internationalization policy seems to be effective for stabilizing the monetary situation. Restrictions on local-currency cash holdings by non-residents minimize speculative forex trades and help to keep the efficiency of domestic monetary policy. According to the ADBI (2003), considering the highly open nature of Asian economies, such regulations should be inevitable and should make the list of policy recommendations.¹⁵

I agree that current nominal stability of Asian currencies to the U.S. dollar owes much to de-internationalization. But, at the same time, we should remember that this also has the side effect of intensifying exporting enterprises' reliance on foreign currencies. Since trade settlement in local currencies is prohibited, exporters must use hard foreign currencies, and the U.S. dollar is dominant in this area. This would eventually strengthen the motivation of export enterprises to seek stable nominal forex rates against the U.S. dollar. Strict regulation would also impede efficient cash management adopted by multinational enterprises.¹⁶ Furthermore, de-internationalization would squeeze the liquidity of the futures and options markets in that currency. This means that exporters and investors could not access hedging tools, and it would further strengthen their expectations for nominal stability to the U.S. dollar as the key currency.

Related to this point, the Chinese government is taking a different stance, while it is also under pressure to let the renminbi appreciate. As shown in Table 4, Chinese authorities are not adopting the de-internationalizing approach and they recently liberalized limited renminbi operations in Hong Kong. We can understand that this is due to another policy target, that of opening the domestic financial market to foreign institutions in conjunction with China's entry to the WTO. But, it is also possible to think that the Chinese authorities prefer to make the renminbi an international currency in the long term. With GDP around US\$1,287 billion China is not a small economy. The scale of Malaysia's

15. See ADBI (2003) pp. 158-159

16. To ease this problem, Malaysia allowed a Japanese business group to set up an in-house non-bank financial institution.

economy in comparison is only US\$95 billion, Thailand's only US\$126 billion, and Indonesia's only US\$174 billion.¹⁷ Considering the extent of China's influence due to its economic size and rapid pace of growth, de-internationalization of the renminbi cannot be the best option for China.

17. 2002 numbers.

Table 4: Regulations on Foreign Exchange Transactions in Thailand, Malaysia, and China

	Thailand	Malaysia	China
Residents			
Export Proceeds	<ul style="list-style-type: none"> • Proceeds exceeding 500,000 baht equivalent should be collected within 120 days and converted to baht or deposited to foreign currency account in authorized domestic bank within 7 days from acceptance. • Non-trade current transaction proceeds should be treated in same manner irrelevant of amount 	<ul style="list-style-type: none"> • Only settled in foreign currency. • Exporters should convert to ringgit, but they may withhold up to US\$10 million equivalent with Bank Negara permission 	<ul style="list-style-type: none"> • Only settled in foreign currency. • Exporters should convert to renminbi, but they can withhold foreign currency deposits with PBOC permission
Import Payments	<ul style="list-style-type: none"> • No restrictions on foreign currency purchase for imports • Payment by baht limited to 50,000 maximum 	<ul style="list-style-type: none"> • No restrictions on foreign currency purchase for imports • Payment by ringgit not allowed 	<ul style="list-style-type: none"> • No restrictions on foreign currency purchase for imports • Payment by renminbi not currently allowed
Foreign currency Deposits	<ul style="list-style-type: none"> • Balances limited to equivalent of US\$5 million for companies and US\$0.5 million for individuals 	<ul style="list-style-type: none"> • Bank Negara approval required for each case 	<ul style="list-style-type: none"> • Allowed only for individuals; companies require PBOC permission • Converting renminbi to foreign currencies for deposit is prohibited
Non-residents			
Deposits to domestic banks	<ul style="list-style-type: none"> • Allowed only for settlement purposes (including securities investment) • Other deposits should have maturities longer than 6 months 	<ul style="list-style-type: none"> • Allowed only for investments into Malaysia • Transfer of off-shore ringgit balance into Malaysia is strictly prohibited 	<ul style="list-style-type: none"> • Only deposit is allowed, including exchanging foreign currency to renminbi • Re-exchange of renminbi to foreign currency is prohibited
Direct Investments	<ul style="list-style-type: none"> • Sent foreign currencies should be converted to baht within 7 days or deposited to foreign currency account in authorized domestic bank 	<ul style="list-style-type: none"> • Sent foreign currencies should be converted to ringgit 	<ul style="list-style-type: none"> • Unless PBOC permits, sent foreign currencies should be converted to renminbi
Credit offerings to non-residents	<ul style="list-style-type: none"> • Each domestic financial institution (including branches) can lend up to 50 million baht per company group 	<ul style="list-style-type: none"> • No allowed 	
Off-shore	<ul style="list-style-type: none"> • Strictly controlled • Forex/credit transactions in baht between residents and non-residents should be reported to Bank of Thailand • Financial institutions in Thailand prohibited from participating in baht non-deliverable forward (NDF) trading 	<ul style="list-style-type: none"> • Not allowed, including exchange at airports. 	<ul style="list-style-type: none"> • Allowing offshore renminbi deposit-taking/settlement business to individuals for financial institutions in Hong Kong • Financial institutions in Hong Kong allowed to conduct deposit-taking/ settlement business for individuals

Source: Bank of Thailand, Bank Negara Malaysia, People's Bank of China.

4 RISK FACTORS FOR “INSTITUTIONAL DOLLARIZATION”

4.1 Outside Risks and Domestic Risks

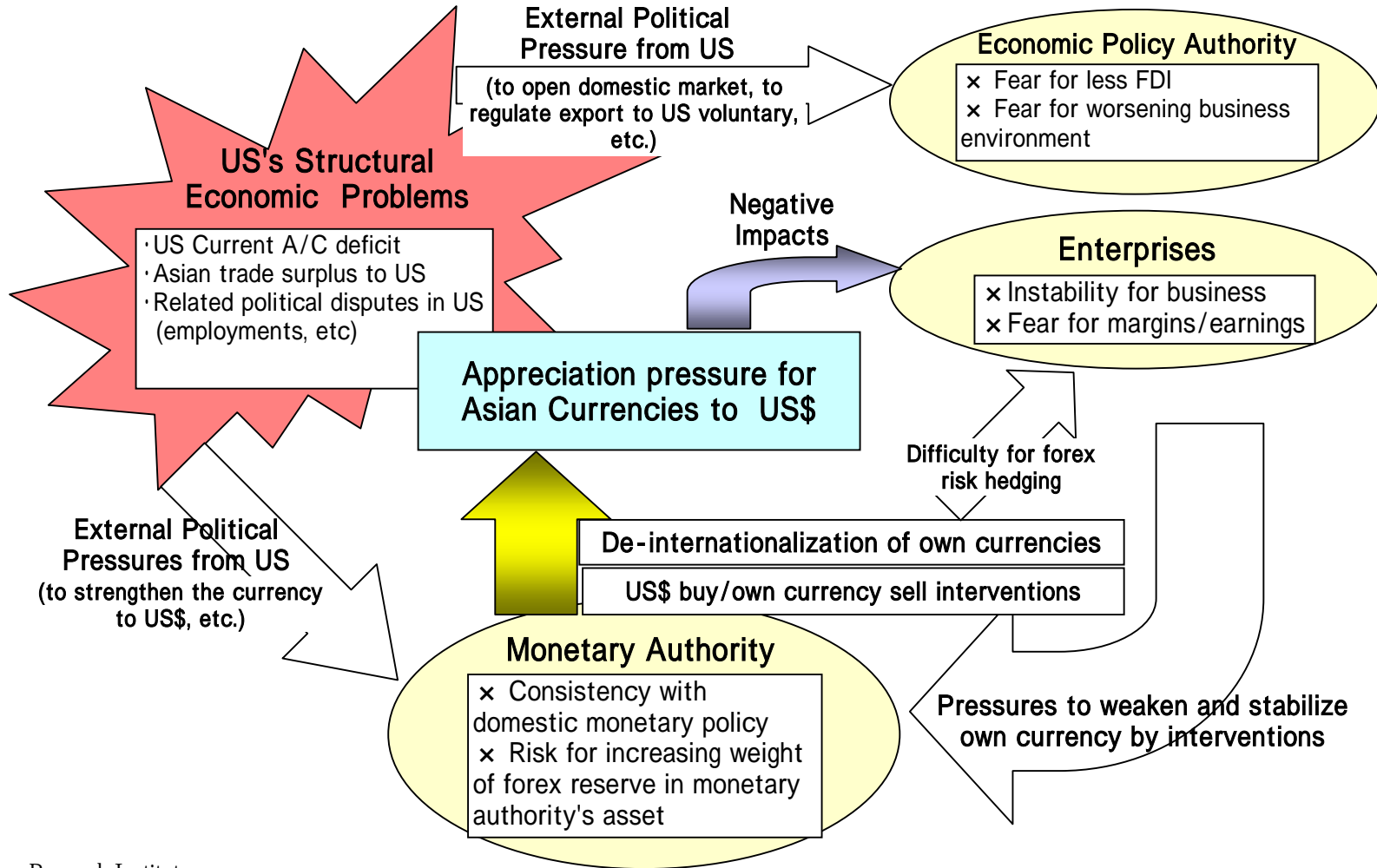
Now we turn to consider the factors that might upset the “Institutional Dollarization” regime in Asia. Figure 6 gives an overview. In contrast to the pre-Crisis situation, both the current account surpluses of Asian economies and the stable capital account flow nurture pressure for appreciation of Asian currencies in the forex market, while the U.S. trade account deficits with Asian economies tend to be political issues in the United States, where the public is quite nervous about the threat to domestic employment. Hence, in a pre-election season, pressure for currency appreciation is also coming from the political side.

To neutralize such pressures for appreciation, Asian monetary authorities have two types of tools. The first is the regulation toward “de-internationalization” as already discussed in section 3.4, and the other is U.S.-dollar-buying/own-currency-selling interventions. Unlike the opposite type of intervention, such interventions seem limitless. But, as Japan learned from the Smithsonian Agreement (1971), they are also subject to constraints from expansion of domestic liquidity and effectiveness to control fund inflow.

4.2 U.S. Current Account Deficit Problem

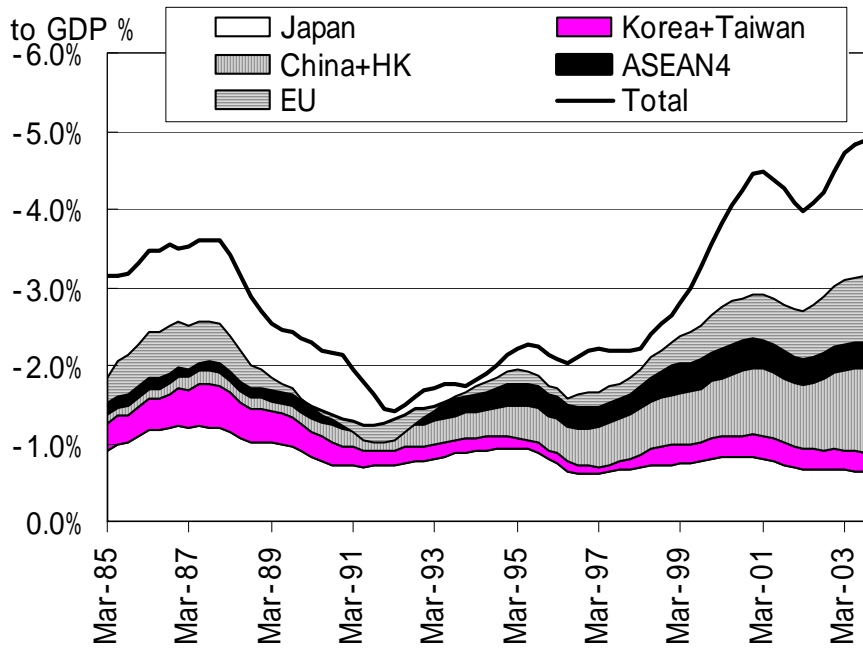
The United States is the biggest export destination for most Asian economies, while its current account deficit has expanded recently and reached the historically high level of around 5% of GDP. Moreover, a breakdown of the main components of the current account shows that now China is the main source of the U.S. trade deficit (Figure 7). Other Asian economies are also enjoying trade surpluses with the United States, but the weight is relatively small. The trade surpluses of Korea and Taiwan measure 0.1-0.2% of U.S. GDP each while the combined surplus of the ASEAN economies amounts to 0.3% of U.S. GNP. Moreover, China’s share of U.S. imports has also expanded and now exceeds that of Japan, while other Asian economies are only keeping their positions (Figure 8).

Figure 6: Risks for "Institutional Dollarization"



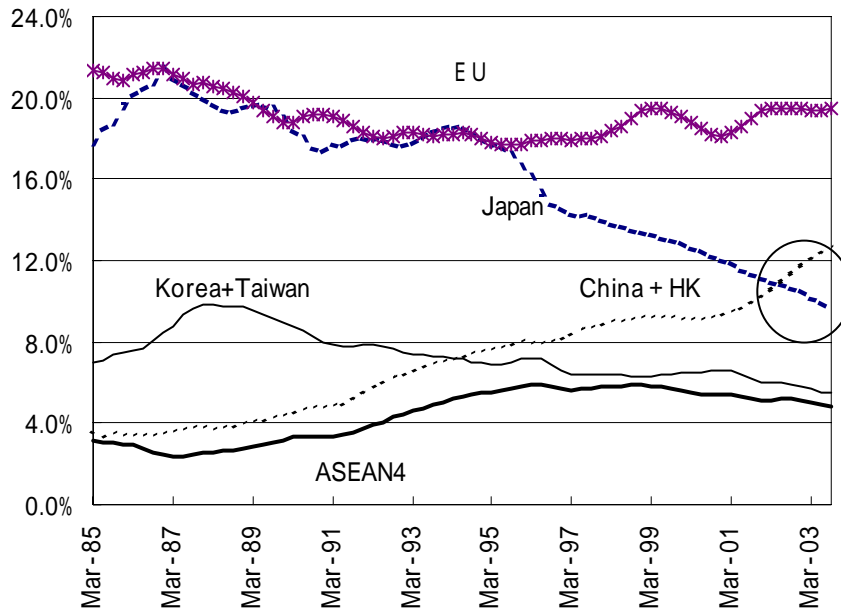
Source: Nomura Research Institute

Figure 7: Trade Deficit by Region, as Share of GDP



Source: U.S. Department of Commerce.

Figure 8: Share of U.S. Imports by Region of Origin



Source: U.S. Department of Commerce.

The size of the U.S. current account deficit raises concerns about its sustainability. Hence, Asian currencies are exposed to the risk of global forex rate adjustments to the U.S. dollar, just as with

the Smithsonian Agreement (1971) or the Plaza Accord (1985). But, the current situation is different from these cases. The Smithsonian Agreement involved an appreciation of major currencies against the U.S. dollar and kept the fixed-rate regime.¹⁸ At the time of Plaza Accord, all major currencies were floated. From the viewpoint of effectiveness in adjusting U.S. trade imbalances, the current situation is a mixture of a Smithsonian-style fixed rate regime and a Plaza-type floating regime. Among the United States' major trading partners, the G7 economies are adopting a floating system while China is following a fixed-rate (or peg) system with respect to the U.S. dollar. Other Asian currencies are also under quasi-pegging to the U.S. dollar.

China is the biggest contributor to the U.S. current account deficit, with a surplus amounting to 1.1% of U.S. GDP. The EU is the second with 0.8%, while Japan is the third with 0.6%. So far as the renminbi is pegged to the U.S. dollar, adjustments through price effects cannot work for China, which accounts for one-fifth of the U.S. current account deficit. At the time of the Plaza Accord, Japan accounted for one-third of the U.S. trade deficit and the Japanese yen experienced the biggest appreciation to the U.S. dollar. For now, we can expect the renminbi to appreciate only to the extent that Chinese government allows.

Since the G7 currencies and other Asian currencies except the renminbi are floated, they can appreciate against the U.S. dollar through coordinated interventions. But, because the renminbi is pegged to the dollar, depreciation of the U.S. dollar means that Chinese exports become more price competitive in other economies. Considering that some Asian and G7 economies are also suffering trade deficits with China, they cannot support depreciation of the U.S. dollar as long as the renminbi is pegged to it.

These considerations mean that floating the Chinese renminbi is necessary to ensure that global forex rate adjustments are effective in fixing the U.S. current account deficit through the price effect.¹⁹

18. But the fixed-rate regime could not be maintained and transferred to float system after the agreement. The British pound changed in June 1972, followed by other major currencies in February 1973. MOF Japan (1992) pp. 435-477.

19. I do not discuss the efficiency and adequacy of using global forex rate adjustments to adjust trade account problems here, but such matter seems to be always discussed when currency appreciation becomes the issue. For discussion of the Japanese case at the Smithsonian Agreement, see MOF Japan, *op.cit.*, pp. 372-375. In addition, globally developed operations by multinational enterprises might also diminish the effectiveness of global rate adjustments. See section 2.2 and Susan Strange (1996).

Statements by Treasury Secretary Snow and other U.S. officials calling for “greater flexibility” of the renminbi seem to be based on such recognition, and these statements nurture the expectation of renminbi appreciation. Currencies of other Asian economies that have trade surpluses with the United States and that are under a quasi-pegging regime also share the same pressure.

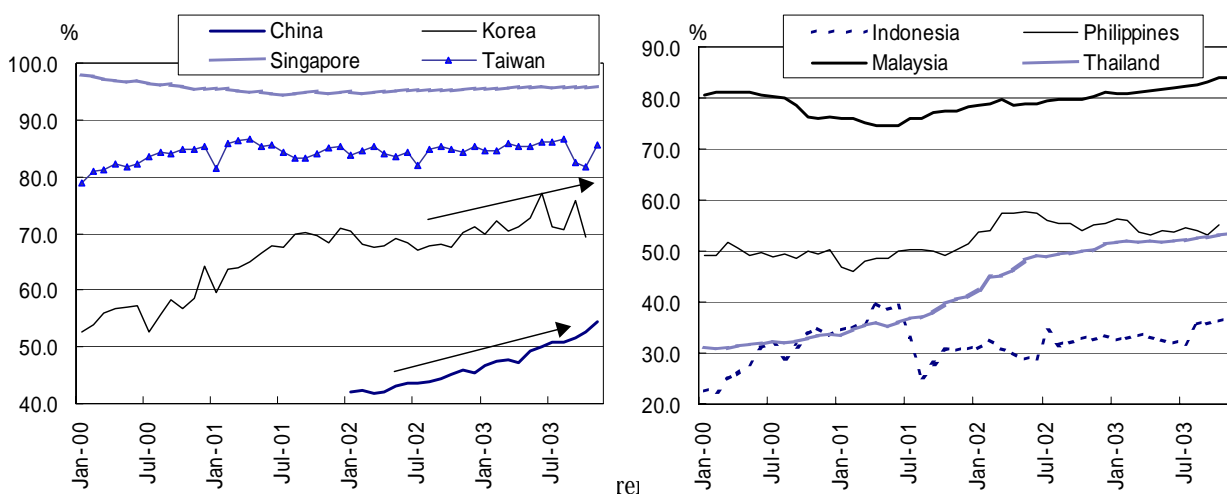
4.3 Conflict with Domestic Monetary Policies

The stance of the U.S. government combined with expectations in the financial markets is putting pressure on Asian currencies to appreciate. But, under the “Institutional Dollarization” regime, Asian monetary authorities cannot let their currencies appreciate in the foreign exchange markets. Since nominal stability is the agreed rule under this regime, exporting enterprises and economic policy authorities will request monetary authorities to stop such appreciation and keep stability against the U.S. dollar.

To achieve stability these economies have two policy options. First is the de-internationalization of their currencies, which we examined in section 3.4. Such regulatory measures would be effective only to curb speculative transactions, however; they cannot stop fund inflow from current account transactions, since most Asian economies are now subject to Article 8 of the IMF accord. In addition, inward investments, both securities and direct investments, compose a large part of their capital inflow.

Hence, to absorb currency appreciation pressures from incoming funds, they should use the second tool—intervention involving selling their own currency and buying the U.S. dollar in the forex market. Reflecting strong funds inflow, most Asian monetary authorities have increased their reserves of foreign exchange, and the weight of foreign exchange to total assets has increased drastically since 2000 (Figure 9). Though this increase tends to be pointed to as evidence of the amazing recovery of the Asian economies, the expansion of forex reserves also brings some risks from the point of view of domestic monetary policies.

Figure 9: Weight of Foreign Currency Assets to Total Assets at Asian Monetary Authorities



Source: Official statistics.

First is the balance sheet risk for Asian monetary authorities. Except in Hong Kong and Singapore, monetary authorities in most Asian economies adopt a controlled currency system and their debts are predominately in their own currencies. Hence, if their currency appreciates against the U.S. dollar, they will experience losses in the value of their forex reserves. For example, at the time of the Smithsonian Agreement in 1971, the Bank of Japan recognized a loss of ¥450.8 billion on its foreign currency assets.²⁰ Recently, some Asian monetary authorities have started to use accumulated forex reserves for another purpose, but this is just a means to transfer their forex rate risks to other institutions.²¹

Given that the central bank is the ultimate supplier of liquidity, such losses would not be a big impediment for day-to-day monetary operations, as was shown in the case of Japan above. Ironically, erosion of central banks could even be welcomed since that would ease the pressure for currency appreciation. But, generally speaking, evaluation losses on forex reserves tend to ignite political

20. Though the BOJ cleared forex losses in March 1972, Gaitame-tokkai (the government fund for forex intervention) carried over the loss. See MOF Japan (1992) pp. 431-433.

21. In January 2004, the Chinese government announced that it used US\$45 billion (around 10% of its forex reserve) for capital injections to two of the four big state-owned banks. It is reported that these two banks issued preferred stocks in exchange for the U.S. dollar assets. Hence, the officials transferred the forex risk on the US\$45 billion to these two banks or the holding companies that has the preferred stock.

Singapore transferred most of its forex reserve to the Government Investment Corporation (GIC). South Korea is reportedly considering setting up such an agency. In December 2003 the Chinese government injected capital to state-owned commercial banks using forex reserves, not government bonds. This would also aim to reduce forex loss risk for PBOC, the central bank.

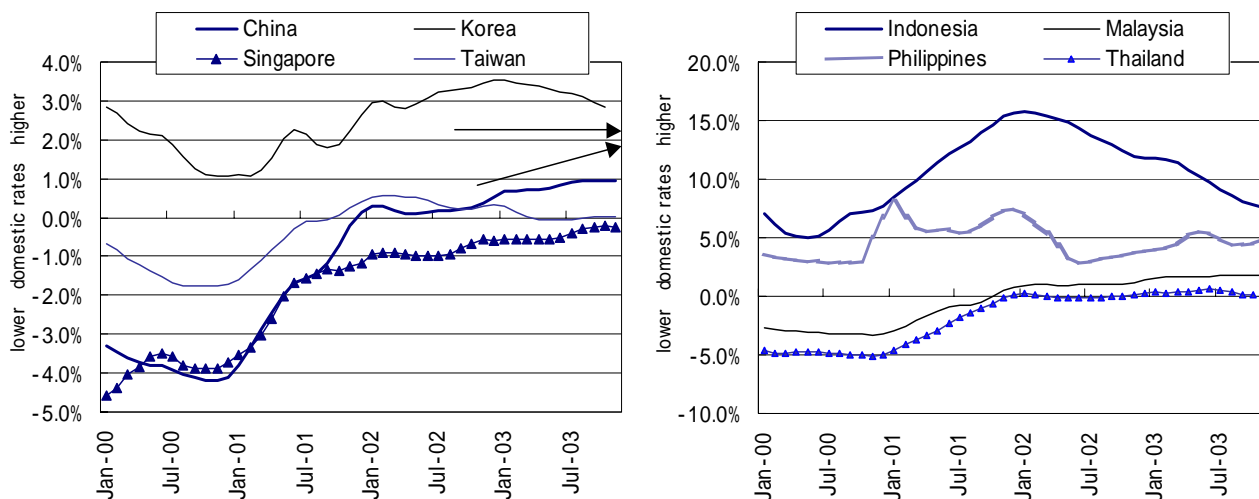
disputes, which expose monetary authorities to criticism from the public. Hence, we can conclude that higher levels of forex reserves would reduce the flexibility of the monetary authority's forex rate policies because of concerns for evaluation losses.

The second problem is the conflict with domestic policy. Interventions involving own-currency-selling and U.S.-dollar-buying should have some easing effects on the domestic monetary situation since they expand the book of the monetary authority. This is apparent when such interventions are not sterilized, or financed by base money, which usually carries no interest. Such interventions are compatible with domestic monetary policies when inflationary pressures (in both the real economy and the asset market) are weak.

Currently, inflationary pressures in the real economy in Asia are generally still calm while some property markets in China and in some ASEAN countries show signs of overheating. Chinese monetary policy has already shifted toward tightening, and some other Asian monetary authorities are expected to follow. In order to be consistent with this monetary policy, they should sterilize the proceeds of foreign exchange interventions. Japan is somehow an exception since it is free from such conflicts under the current "zero-interest rate " regime, and Japanese authorities can continue de-sterilizing policy.

When some Asian monetary authorities sterilize funds for forex reserves to minimize the monetary easing effects, they issue notes or collect longer term deposits from banking institutions and pay interest to them. But, in China and South Korea, domestic interest rates are higher than interest rates on U.S. dollar assets. This means that intervention imposes cost on the monetary authorities and their capacity to absorb these costs would limit the amount of funds available for intervention (Figure 10).

Figure 10: Interest Rates Differences between United States and Asia



Note: Interest rate differences are calculated between rates of major operation tools by Asian authorities and U.S. government securities with relevant term.
Source: Official statistics

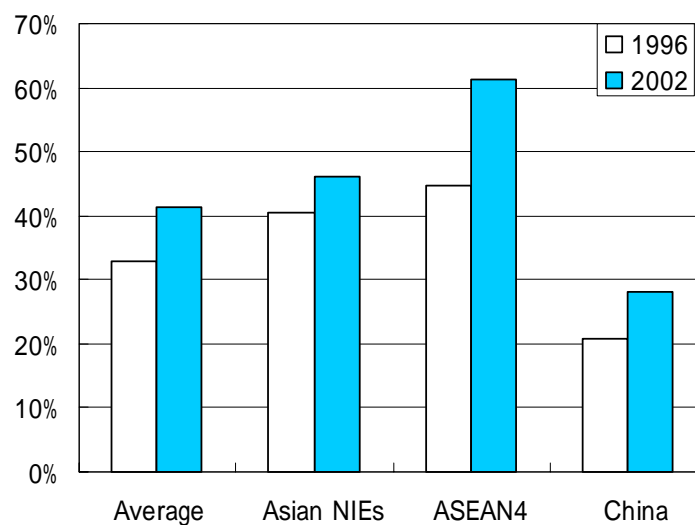
The foregoing analysis implies that although central banks have the ability to create domestic liquidity and sell it in the forex market, they cannot do so without limit. For interventions involving selling the domestic currency and buying foreign currency, consistency with domestic monetary policy becomes the issue. Unlike the situation with adverse direction intervention which is constrained by the size of a country’s forex reserves, there is no apparent limit to creating domestic liquidity. Japan’s experience with the Smithsonian Agreement seems to suggest that this would work to delay adjustments in the currency regime and result in a shock when such adjustment eventually occurs.

4.4 Extreme Openness of Asian Economies

It is needless to point out the “small and open” nature of the Asian economies. Though China’s economy is relatively large, it has a similar degree of openness. As Figure 11 shows, currency depreciations after the Crisis pushed the weight of exports in GDP even higher for most Asian economies. For example, from 1996 to 2002 the weight of exports in GDP expanded from 40.4% to 46.1% on average for the Asian NIEs and from 44.8% to 61.2% for the ASEAN 4.²² Though China was not hit by the Crisis, exports increased from 20.9% to 28.1% of its GDP as a consequence of its amazing economic growth led by exports.

22. Weighted average based on 1999 nominal GDP amount.

Figure 11: Weight of Exports in GDP of Asian Economies, 1996 and 2002



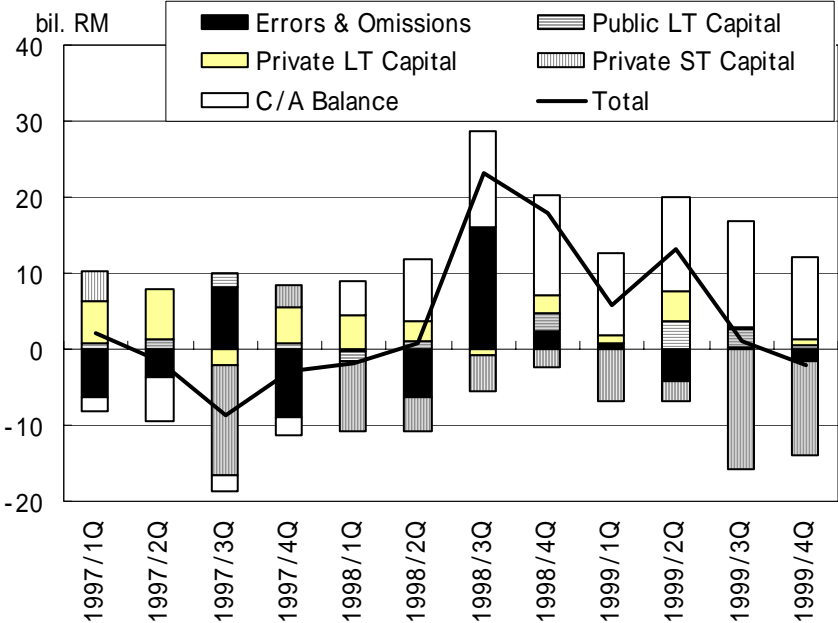
Note: Numbers are in Nominal base.
Source: Official statistics

The high degree of openness of Asian economies implies that exporting businesses are quite common and access to foreign currencies is easy for most economic entities. These conditions would limit the effectiveness of any regulations adopted by monetary authorities to curb capital flows. In addition, inflow of FDI could also be an issue. Here, I would like to examine two cases, Malaysia and China.

Malaysia's balance of payments data for 1997 to 1999 are shown in Figure 12. Though Malaysia is a nation-state with more than 20 million people, it is quite open, and the amount of exports is almost equivalent to that of GDP in national income base. Before the Crisis, Malaysia's currency, the ringgit, circulated in Singapore and many non-residents had ringgit notes and bank accounts there. With so many channels, ranging from carrying notes to slipping in current transactions it was difficult for the central bank, Bank Negara, to control ringgit capital flows. As seen in Figure 12, after the Crisis Malaysia had a large deficit not only in short-term capital but also in errors and omissions, while it ran a surplus on the current account from the first quarter of 1998. That was why Malaysia introduced strong measures in September 1998. The purpose of these notorious "capital control" measures was to stop the ringgit outflow by de-internationalizing the currency. To achieve this, Malaysia banned all offshore ringgit holdings in any form, whether bank accounts or notes. This measure was quite effective, and Malaysia recorded a huge BOP surplus in the third quarter of 1998, but the success

involved some accompanying trade-off. The strong measures eroded investors' confidence and Malaysia is still suffering from less capital inflow compared with other Asian economies.

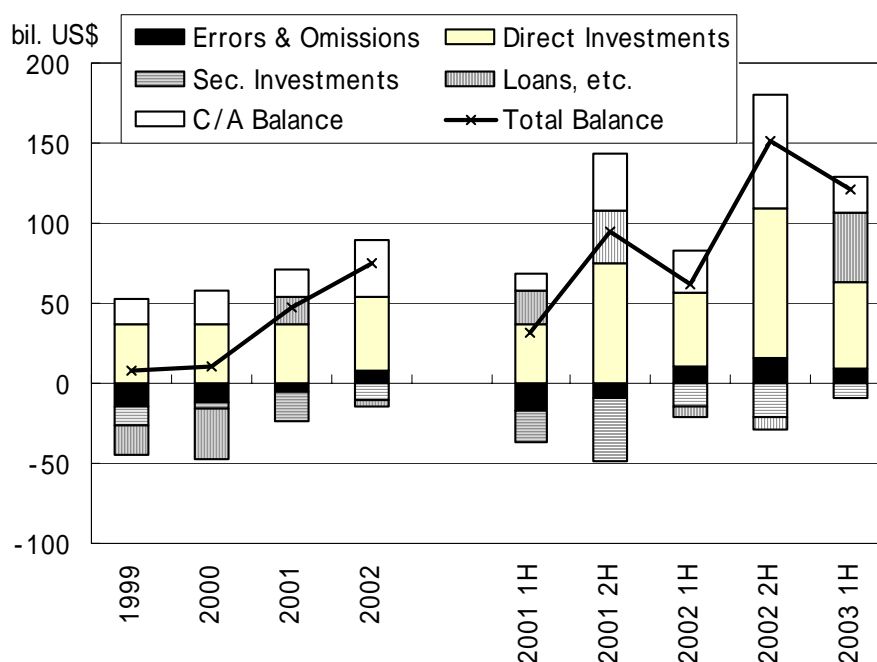
Figure 12: Malaysia's Balance of Payments, 1997-99



Source: Bank Negara statistics.

The second example relates to China's balance of payments situation which is displayed in Figure 13. Until recently the errors and omissions item in China's balance of payments was consistently negative because Chinese residents sent funds abroad, but this item has moved into surplus as funds returned to China with the expectation of renminbi appreciation. Furthermore, direct investment has been the biggest surplus item in China's balance of payments. Given the current economic situation in China, it is impossible to limit FDI inflows. The income gap between the coastal and inland areas is wide, but the government cannot increase expenditures because its fiscal position is becoming weaker. Hence, as a way to narrow the gap, the government is launching a "Western Development" plan to try to introduce FDI to inland areas. The coastal areas also need FDI to support their continued development. This situation suggests that the renminbi will continue to be under pressure to appreciate as long as China's economy is expected to grow at a high pace.

Figure 13: China's Balance of Payments, 1999-2003(1H)



Source: People's Bank of China statistics.

5 CONCLUSIONS

5.1 Risks of sticking to one regime

If we are to take a sympathetic view of the central bank management team's action, we could assume they probably would have been attacked for being imprudent if they changed the foreign exchange regime in the midst of an impending crisis. However, we can also say they undertook their action without considering a key question...."Are we defending something which is defenseless?". Nukul Commission (1998), p.49.

They (officials in BOJ and MOF) considered that recent Japanese current account surplus mainly owed to strict regulations and protections, not to improvements in economic fundamentals. Hence, the appreciation of the yen, which seemed doubtful in effects and would bring big negative impacts, was not their first policy option. Instead they preferred to 'expose the Japanese economy more to the outer environment', or to liberalize the Japanese economy through deregulation and stimulating domestic demand, and to achieve the balance through the expansion of imports. MOF Japan (1992) p. 373.²³

To summarize our analysis, we can say that there are both advantages and risks to dollarization and that the risks are institutional and structural. The advantages of dollarization are mainly apparent to exporters and investors, who seek stable terms of trade and investment. Under pressure from exporters

23. Translated by the author.

and investors, as well as from economic policy authorities, Asian monetary authorities try to maintain the nominal stability of their currency to the U.S. dollar by using various policy tools, ranging from de-internationalization of their currencies to intervention in the forex markets. Reflecting the present current account surpluses and stable capital flows, their efforts are now on the side of stopping appreciation.

But the side effects of such operations and policies, or the disadvantages of “Institutional Dollarization”, are seen in the current monetary situation. The monetary easing effects that accompany foreign currency (U.S. dollar) buying operations conflict with domestic monetary policies, while over-accumulation of forex reserves poses a potential risk to the soundness of the central banks. In addition, measures by Asian monetary authorities to de-internationalize their currencies would strengthen the dependence of exporters and investors on the U.S. dollar. The highly open nature of Asian economies makes it very difficult to control expectations of currency appreciation (depreciation) and to curb the speculative inflow (outflow) of money. Not only short-term capital but also current transactions could be the problem.

Moreover, since the U.S. dollar is the currency of the United States, the present structural weakness of the U.S. economy, such as the large current account deficit, also threatens the stability of nominal exchange rates of Asian currencies against the U.S. dollar. Sometimes this could result in sharp adjustments of forex rates, which could impose big shocks to Asian economies.

Overall, this analysis suggests the difficulty, or impossibility, of Asian economies keeping their currencies nominally stable to the U.S. dollar. The two quotations at the beginning of this section clearly show this predicament. The first one refers to the case of Thailand in 1997 and the second to Japan in 1971. Based on these previous experiences, we could say that Asian monetary authorities should retain a flexible foreign exchange rate policy. Moreover, these earlier experiences also suggest that the harder the monetary authorities stick to the U.S. dollar peg, the larger will be the economic shocks when they come.

5.2 How to ease the pressure for “Institutional Dollarization”?

It is easy to talk in favor of flexible forex rate policy or gradual loosening the “pegs” of Asian

currencies to the U.S. dollar. This approach would benefit Asia since it could reduce the risk to their economic policy operations, and it should also be welcomed by the United States, which has a trade deficit with Asian economies. Moreover, assuming the price effect on exports from Asian economies is small, gradual currency appreciation would not do much harm to the real economy.

In order to achieve such flexibility, however, we face the difficult task of easing the pressures supporting “Institutional Dollarization”. McKinnon and Schnabl (2003) assert that the “original sin” of the emerging economy is the lack of long-term capital markets, but the extreme openness of Asian economies is the main source of “Institutional Dollarization” pressure. Furthermore, we also know that Asia achieved economic development through export-oriented industrialization by introducing FDI for more than 20 years. Hence, various kinds of initiatives or structural adjustments are required to ease such pressure.

On the financial system side, on-going initiatives to improve domestic financial systems, such as the ABMI (Asian Bond Market Initiative), would help smooth the transition of Asian financial systems out of dollarization. A long-term bond market is one necessary condition for developing a futures and options market for Asian currencies. Such a market would offer good hedging tools for traders and investors while it would increase exchange rate volatility to some extent.

On this point, the relationship between internationalization of the currency and development of forex futures is a kind of “chicken and egg” problem. Market liquidity is another necessary condition for developing a forex futures and options market, but de-internationalization of the currency dries up liquidity while helping to keep nominal stability to the U.S. dollar. At the same time, a developed capital market can also reduce the reliance to foreign currency funding. The recent turnaround to positive current account balances means that Asian economies are now in a general situation of over-saving, which should also prompt more efficient domestic financial resource allocation through the bond market.

From the trading side, reducing the dependence on the U.S. dollar is necessary, and the first step would be to prompt the use of other hard currencies, such as the yen or the euro, for trade settlement. An option for promoting this shift is to change the exchange rate anchor from the U.S. dollar alone to

a basket composed of several hard currencies including the yen and euro.²⁴ Assuming Asian economies' share of trade within the region is increasing (see section 2.3), targeting to a currency basket composed of Asian currencies could be a desirable option. But de-internationalization of the currency again becomes an obstacle.

There are many other possible policy initiatives, and, as the rule-enforcers for the currency regime, the monetary authorities could introduce such measures if they want to. On this point, our analysis suggests that such measures should be designed to offer the benefits of “de-dollarization” to economic players (exporting enterprises, investors) and to economic policy authorities, which recognize the advantages of “Dollarization”. Otherwise, these actors would try to find loopholes and continue to prefer a “Dollarized” situation. The extreme openness of Asian economies allows these actors to take such actions.

The two quotations at the beginning of section 5.1 also suggest the importance of changing the attitudes and expectations of economic players other than the monetary authorities. In the case of Japan, though more than 30 years have passed since the Smithsonian Agreement, public opinion is still nervous about yen appreciation. This attitude justifies the dangerously out-of-line accumulation of forex reserves, which now exceeds ¥79 trillion, and the budget limit is going to be expanded to ¥140 trillion. Although the risks of “Institutional Dollarization” are now becoming apparent on the monetary policy side in Asia, the sense of caution does not seem to be shared equally by all economic players.

24. Singapore has already adopted this approach.

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