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### Weak Dollar: Cure or Disaster? –Causes and Consequences of Recent Weak Dollar–

Junggun Oh\*

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\* Institute for Monetary and Economic Research, the Bank of Korea, Seoul, 100-794, Korea. Tel: 82-2-759-5441. E-mail: [ojunggun@bok.or.kr](mailto:ojunggun@bok.or.kr)

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# Weak Dollar: Cure or Disaster?

## - Causes and Consequences of Recent Weak Dollar\* -

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Junggun Oh \*\*

### Abstract

The US current account deficit registered its largest ever ratio to GDP of more than 5 percent in 2004, which caused a steep depreciation of the dollar from mid-October 2004. This huge current account deficit mostly coincided with a fiscal deficit.

In spite of the recent steep depreciation of dollar, it does not seem easy to reach a new 'Plaza Accord' for its drastic devaluation mainly because the current international financial environment is substantially different from that in the mid-1980s. However, a run-up in US interest rates due to capital outflows from the US financial market in fear of exchange losses, and the subsequent tight monetary policy to contain the inflationary pressure resulting from the weakening of the dollar might lead to the global financial market instability, unless well-coordinated international countermeasures were to be put in place.

It is essential to increase mutual understanding on the real causes of global imbalances and to bring about some measures of international policy coordination to resolve it. The USA should try to reduce its fiscal deficit and increase domestic saving, while countries running a sizable current account surplus with the USA need to increase the flexibility of their exchange rate systems to avoid another global financial crisis.

Key words: Exchange Rate, Dollar, Twin Deficits

JEL Classification: F31 F33 F42

\*\* Institute for Monetary and Economic Research, the Bank of Korea, Seoul, 100-794, Korea. Tel: 82-2-759-5441. E-mail: [ojunggun@bok.or.kr](mailto:ojunggun@bok.or.kr)

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## I. Introduction

The US dollar has slid rapidly since mid-October last year. From that time, there have emerged a number of hot issues for the global economy: how much further will the dollar fall, why has it slid so dramatically, and what will be the effects on international financial markets and the global economy?

The USA seems to think that the main cause of the huge US current account deficit is the overvaluation of the US dollar, in particular, against East Asian currencies, and therefore its considerable depreciation will be inevitable to resolve the huge current account deficit: others argue that the US current account deficit reflects inadequate domestic saving (Obstfeld and Rogoff, 2004).

However, in spite of the recent steep depreciation of dollar, it does not seem easy to reach a new Plaza Accord for its drastic devaluation mainly because the current international financial environment is substantially different from that in the mid-1980s. On the other hand, some have raised concerns that an increase in US interest rates due both to capital outflows from the US financial market in fear of exchange loss and to the subsequent tight monetary policy to contain inflation pressure resulting from depreciation of dollar might lead to instability of the global financial market, unless appropriate countermeasures were to be introduced at the global level.

It is essential to increase mutual understanding as to the real causes of global imbalances and to introduce some degree of international policy coordination to avoid another global financial crisis. The USA is recommended to reduce its fiscal deficit and boost domestic saving, while countries with sizable current account surpluses, in particular, to the US, should try to increase the flexibility of their exchange rate systems.

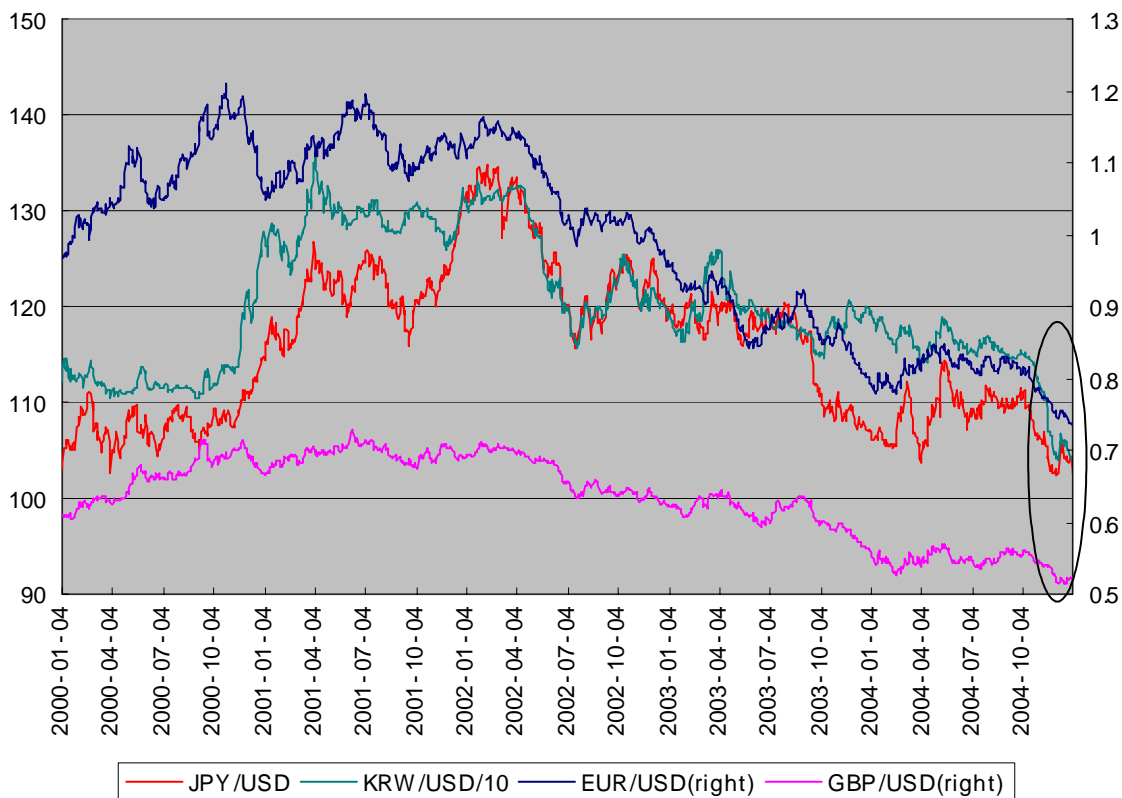
In the following Section II, the trend of the recent weakening of the US dollar will be briefly outlined. The causes and consequences of this recent fragility of the US dollar will be examined respectively in Sections III and IV. Finally, by way of conclusion, countermeasures to resolve the severe global imbalances and avoid another global financial crisis will be explored in Section V.

## II. Trends of Recent Weakening of US Dollar

The US dollar has rapidly declined since mid-October last year. As a result, for 2004 as a whole, it depreciated 7.6 percent against the euro and 7.5 percent against the UK pound. It also depreciated against East Asian currencies as well, i.e., 4.3 percent against the Japanese yen and 15.2 percent against the Korean won in 2004. In fact, the dollar began to weaken against major currencies from the beginning of 2002. It depreciated 52.4 percent against the euro, 31.9 percent against the pound, 28.1 percent against the yen, and 26.9 percent against the won during the three-year period from 2002 to 2004.

<Table 1>

Exchange rates of Selected Economies



Source: IFS, IMF

### III. Causes of the Recent Weakening of the US Dollar

As in the following national income identity, the current account ( $CA \equiv (X-M)$ ) in the external sector is identical to the amount of saving less investment in the internal sector. Accordingly, a current account deficit ( $\Delta CA \equiv \Delta (X-M)$ ) means that, in principal, saving is less than investment in the internal sector.

$$Y \equiv C + I + (G - T) + X - M \qquad Y - C - I - (G - T) = X - M$$
$$S (\equiv Y - C - (G - T)) - I \equiv X - M$$

Suppose that consumption and investment are stable in the short run as often seen in a normal economy. In such a case, the fiscal balance is an important factor determining the amount of saving and, as a result, the amount of the current account ( $CA \equiv (X-M)$ ) in the external sector. When the fiscal account is in deficit, the current account may also record a deficit. These are what are termed the twin deficits.

Twin deficits began to appear from 1982 in the USA since the fiscal deficit began to widen due to the implementation of the so-called supply side economic policy based on tax cuts (otherwise known as Reaganomics) and the heavy military spending of the Reagan administration (1981-1988). The ratio of the fiscal deficit to GDP substantially increased from its previous 1-2 percent level to the 4-5 percent level. As a result, the current account shifted into deficit in 1982 and continuously worsened. Thereafter the current account was further deteriorated as a result of the first Reagan administration's strong dollar policy pursued in spite of twin deficits. These twin deficits persisted until 1988.

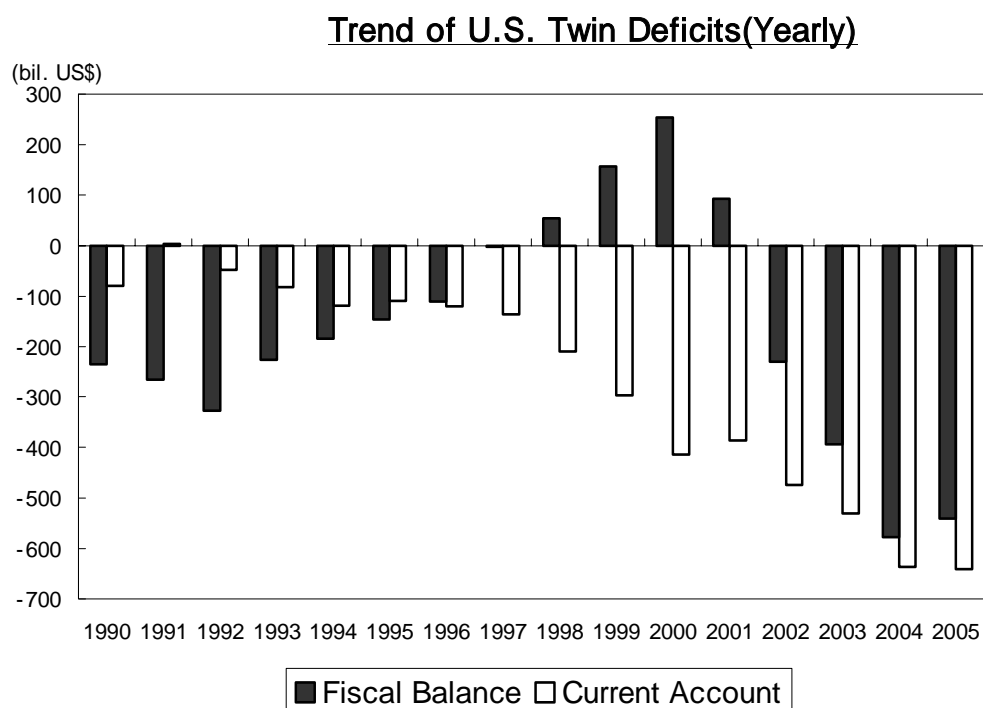
However, these twin deficits turned into "twin divergence" after 1989. The "twin divergence" means that the two accounts went in the opposite directions. In 1989 the fiscal deficit, after showing a slight improvement for a time, began to worsen again, while the current account deficit, which had shown a persistent deterioration until then, began to improve. After that, the US current account showed a sustained deficit and the fiscal balance also mostly ran a deficit except for four years from 1998 to 2001 when it benefited from the Clinton administration's (1993-2000) efforts for the fiscal rectitude.

Strikingly, during the Clinton administration period, the fiscal balance showed sustained improvement. Nevertheless, the current account position worsened continuously mainly because of a substantial increase in imports centering on IT goods as a result of the unprecedented decade-long high growth of the 1990s. As a result, both balances developed in opposite directions until 2001.

However, the fiscal balance again began to worsen from 2001 when the Bush administration was inaugurated, moving back into deficit in 2002, since then it has worsened. The current account deficit has also widened. This means that the twin deficits have again appeared since 2002.

In short, except for the single year of 1991, the current account has sustained a deficit, since it moved into the red in 1982, and eventually in 2004 the scale of the deficit marked a historical high of more than 5 percent of GDP. This external deficit mostly coincided with the fiscal deficit except in the late 1990s under Clinton. In the late 1990s, the dot-com investments boom in IT industries that had driven the unprecedented decade-long high growth in the 1990s also resulted in a current account deficit.

<Table 2>



Source: IFS, IMF

An increase in the current account deficit results in an increase in external debts. As the following identity shows, a change in net foreign assets (NFAs) is equal to the current account. A deterioration of the current account means a decrease in the stock of NFAs. The current account deficit has to be financed by a decrease in the foreign exchange reserves or an increase in foreign liabilities. If NFA is negative, i.e. foreign

liabilities are larger than foreign assets, these are external debts.

$$NFA_{t+1} \equiv NFA_t + CA_t \qquad CA_t \equiv NFA_{t+1} - NFA_t$$

Accordingly, an increase in the current account deficit results in a huge increase in external debts and a substantial depletion of foreign exchange reserves. Such an increase in the current account deficit and external debts together with the depletion of foreign exchange reserves lead to an increase in the market pressure for depreciation. Expectations of depreciation, i.e., expectations of the possibility of exchange losses may lead to capital outflows, and thus the overshooting of the depreciation.

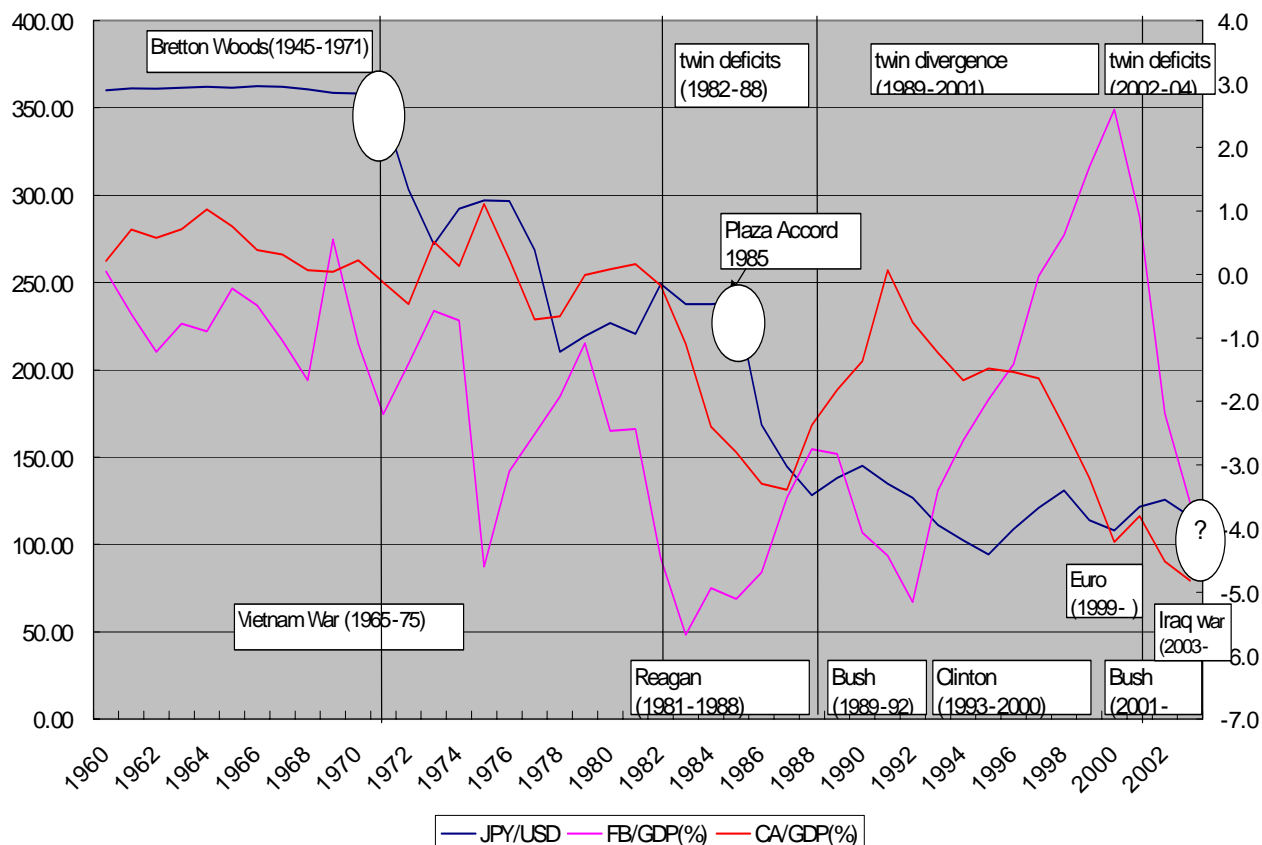
In the other channel, the exchange rate policy authority may introduce a depreciation policy to reverse the current account deficit. Market expectations of such a policy may also lead to depreciation to overshoot.

After the breakdown of the Bretton Woods system in August 15, 1971, the US dollar showed a continuous underlying depreciation over the long term. Finally the G7 agreed on what was called the Plaza Accord to engineer a dramatic depreciation of the US dollar, in particular, against the Japanese yen in September 1985 after the US current account deficit registered 118 billion dollar (2.8 percent of GDP), exceeding the 100 billion dollar mark for the first time in US history.

Since 2002, the US current account has again worsened. In 2003 it stood out 531 billion dollars, topping 500 billion dollars for the first time. In 2004 it is estimated to have worsened further reaching more than 5 percent of GDP for the first time in US history. Accordingly, the sustainability of the US current account deficit has become a hot issue. In a consequence, the market pressure for depreciation of the US dollar has increased, and, in addition, the news of the possibility of the US exchange rate policy authority tolerating a depreciation of the US dollar ahead of the US presidential election in November 2004 led to some overshooting in the market. Eventually the US dollar duly slipped down rapidly from mid-October 2004.

<Table 3>

Fiscal Balance, Current Account and Exchange Rate in the US(1960-2003)



Source: IFS, IMF

In order to see the relationship between the exchange rate and the current account in the USA, Granger causality tests and VAR analysis were carried out using quarterly data from 1<sup>st</sup> quarter 1982 to 3<sup>rd</sup> quarter 2004. The yen/dollar exchange rate and real effective exchange rate were used. Unit root tests on both variables show that they are I(1) (See Appendix Table 1). Accordingly, first differences of the variables are used for tests.

In a case using the yen/dollar exchange rate, Granger causality test results show that there are no significant Granger causes running between the exchange rate and the current account. But VAR analysis shows some significant effects of a current account shock on the exchange rate, while there is no significant effect of an exchange rate shock on the current account (See Appendix Table 2, and Figure 1).

In the other case using the real effective exchange rate, Granger causality test results show that the real effective exchange rate does not cause the current account, while the



current account cause the real effective exchange rate. But VAR analysis does not show clearly significant effects between the real effective exchange rate and the current account (See Appendix Table 3, and Figure 2).

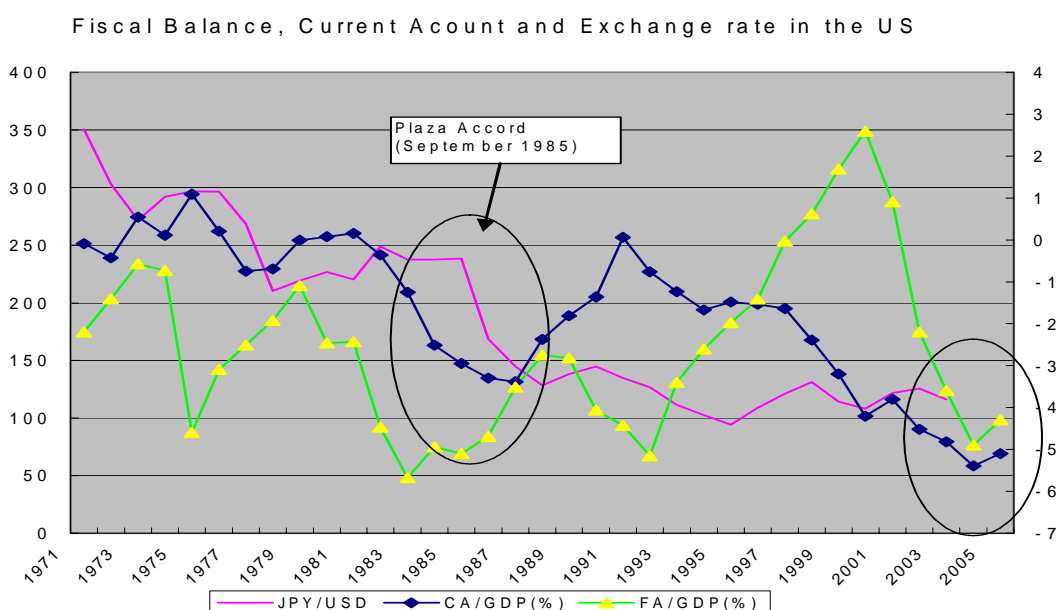
#### IV. Consequences of the Recent Weakening of the US Dollar

Regarding the recent weakening of the US dollar, two issues may be raised: first, whether a second Plaza Accord can be agreed; and second, whether an increase in US interest rates due to depreciation of the dollar may bring instability to global financial markets.

On the first issue, it does not look easy to reach another Plaza Accord, mainly because the current international financial environment differs substantially from that of the mid-1980s in various aspects.

First of all, the economic situation of the target countries whose currencies should appreciate is very different. In the mid-1980s, the main target country was Japan, then enjoying a huge current account surplus. At that time, Japan could absorb shocks from the steep appreciation of yen with the help of the sustained huge surplus and its possession of high-level core technologies. In addition, Japan had already adopted a flexible exchange rate system.

<Table 4>



Source: IFS, IMF

Since 2002, the US current account has again worsened. In 2003 it stood out 531 billion dollars, topping 500 billion dollars for the first time. In 2004 it is estimated to have worsened further reaching more than 5 percent of GDP for the first time in US history. Accordingly, the sustainability of the US current account deficit has become a hot issue. In a consequence, the market pressure for depreciation of the US dollar has increased, and, in addition, the news of the possibility of the US exchange rate policy authority tolerating a depreciation of the US dollar ahead of the US presidential election in November 2004 led to some overshooting in the market. Eventually the US dollar duly slipped down rapidly from mid-October 2004.

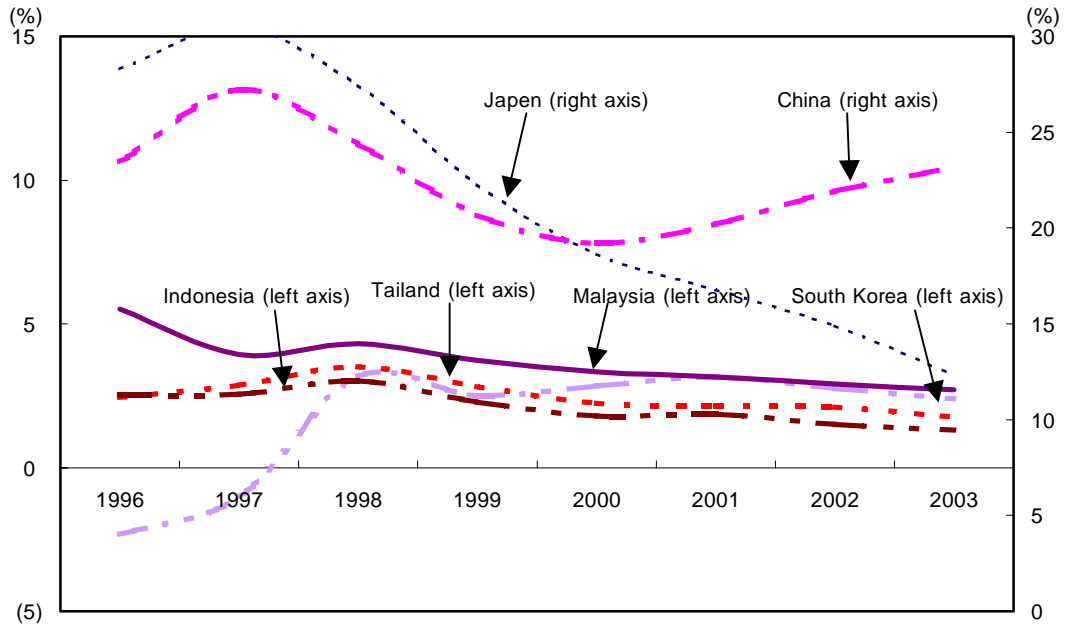
On the other hand, the current main target country is China, accounting for 23 percent of the US trade deficit in 2003 and with an increasing trend. In recent years, most other East Asian countries including Japan and Korea have shown a decreasing trend in their share of the US market occupation ratio with that of Japan registering 12 percent in 2003 and that of Korea barely reaching 2.4 percent.

Nevertheless, Chinese internal economic conditions do not appear conducive to absorbing the shocks from a sizable appreciation of yuan in the short run mainly because of low-level technologies; high unemployment, particularly, in the rural areas; high nonperforming loan ratios in the financial sector and so on. In addition, the structure of the Chinese trade surplus also seems fragile because it is based, in principle, on imports of intermediate goods mostly from neighboring East Asian emerging economies and exports of assembled final goods, mostly to the US market. Notably too, China currently maintains a de facto fixed exchange rate system.

Moreover, the current Japanese economic situation is very different from that in the mid-1980s. At present, Japan is struggling to recover from a decade-long recession. The USA, at the moment, also seems to find it difficult to reduce its fiscal deficit mainly owing to the protracted Iraq war, which does not seem likely to come to an end in the short run, and to homeland security being strengthened since the terrorist attacks of September 11, 2001. In the mid-1980s, the USA was able to reduce its fiscal deficit from around 5 percent of GDP to 3 percent. Considering these international financial conditions, it would seem difficult to reach international coordination for a substantial depreciation of the US dollar as in the mid-1980s.

<Table 5>

Ratios of Composition of U.S. Trade Deficit by Country



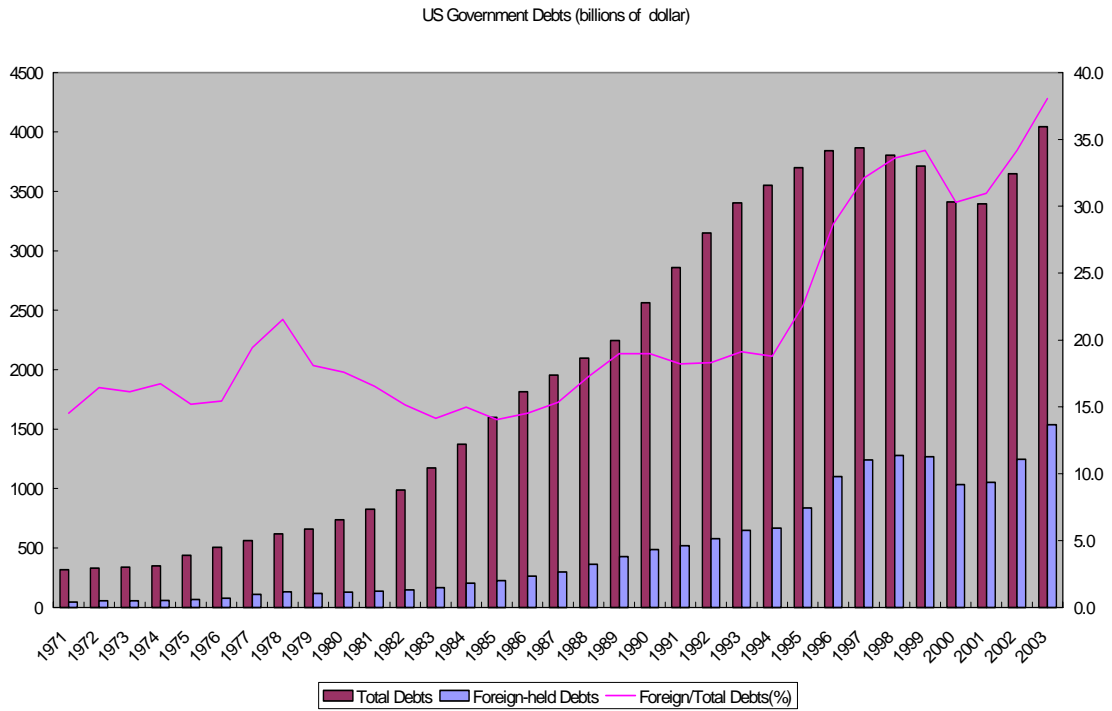
Source: US Department of Commerce

On the second issue of whether an increase in the US interest rates due to depreciation of the dollar may lead to the instability of global financial markets, there may be some possibility of this happening unless appropriate countermeasures can be introduced at the global level.

Since the 1980s, US government debt has increased substantially due to the sustained widening of the fiscal deficit in the US. Such debt reached 4043 billion dollars in 2003. The ratio of foreign financing to total debts has also considerably increased, standing at 38 percent in 2003.

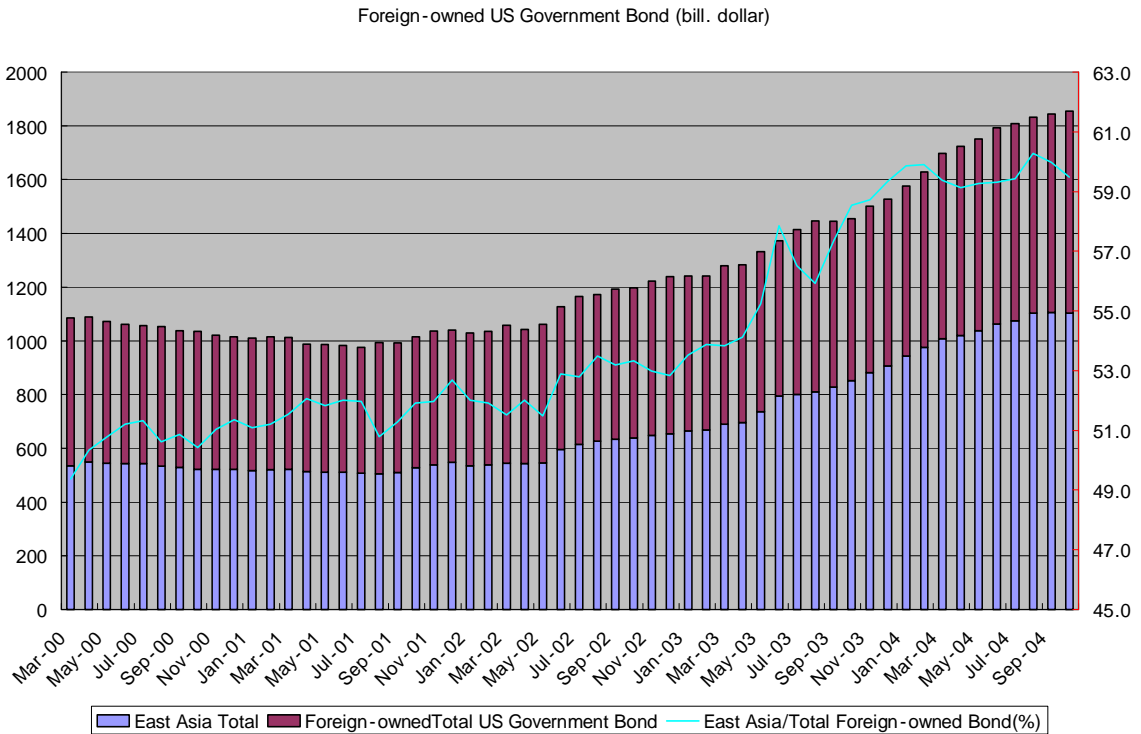
Foreign financing was mostly accomplished by issuance of government bonds. As of the end of October 2004, the amount of US bonds held by foreigners reached 1855 billion dollars. Among them, the amount held by East Asian economies recorded 1104 billion dollars, 59 percent of total foreign-held US government bonds.

<Table 6>



Source: IFS, IMF

<Table 7>



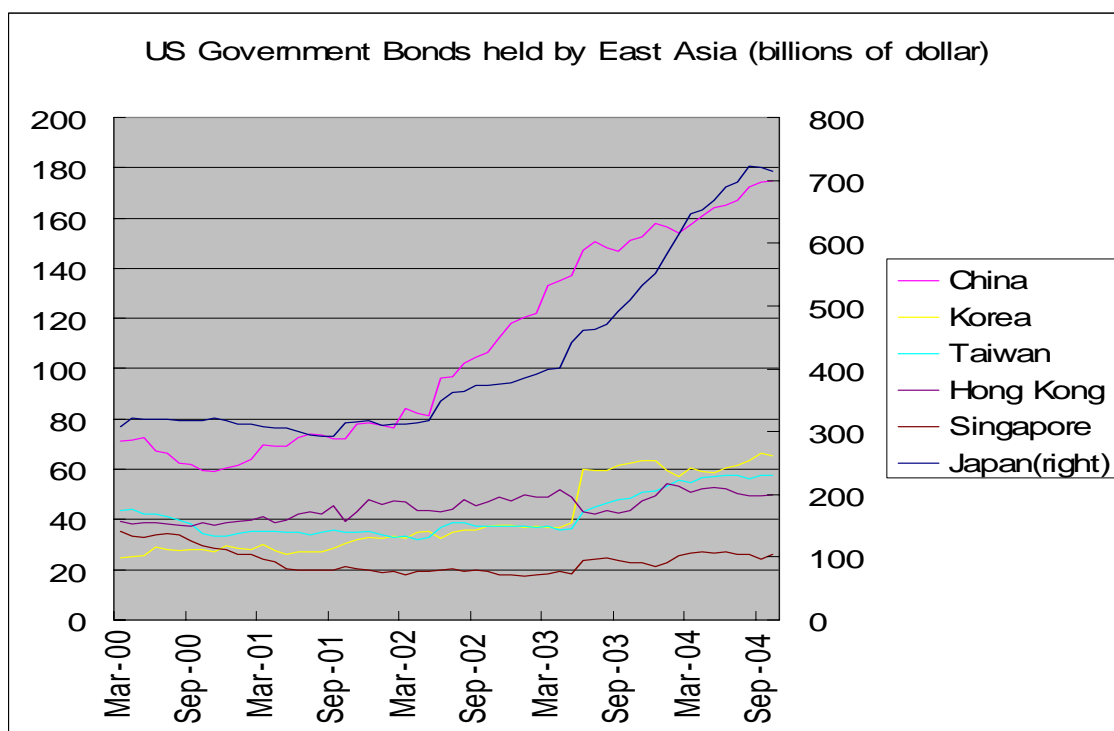
Source: US Department of the Treasury

Among East Asian countries, Japan held 715 billion dollars, China 175 billion dollars, Korea 66 billion dollars, Taiwan 58 billion dollars, Hong Kong 50 billion dollars, Singapore 26 billion dollars, and Thailand 15 billion dollars as of the end of October 2004.

Taking into account this huge amount of US bonds held by foreigners, and in particular, by East Asian economies, expectation of a depreciation of US dollar may bring about a rise in fears of exchange loss, and as a consequence, may give rise to capital outflows from the US financial markets.

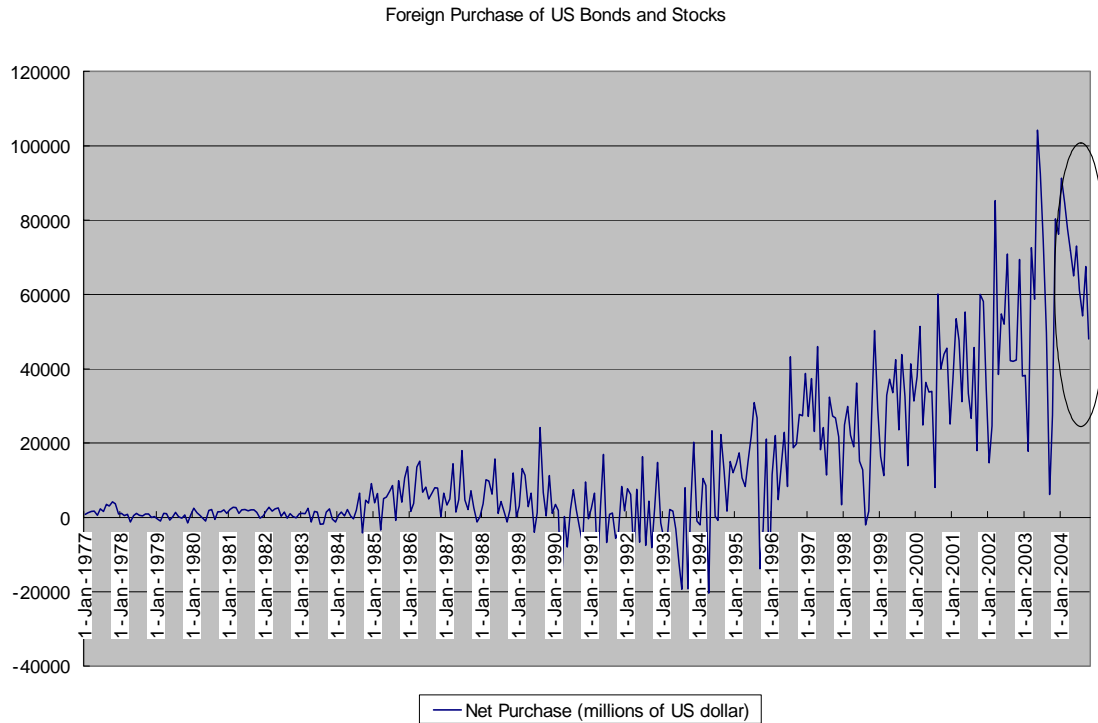
In October 2004 when the dollar began to depreciate steeply, the amount of net foreign purchases of US bonds and stocks fell to 48.1 billion dollars as against 67.5 billion dollars in September 2004. In October 2004, most East Asian economies did not increase their US bond holdings in spite of a substantial increase in their foreign exchange holdings. Even Japan reduced its US bond holdings by 15 billion dollars in October 2004. This means that most East Asian economies are trying to diversify their foreign exchange holdings into other currencies in order to hedge exchange rate risks.

<Table 8>



Source: US Department of the Treasury

<Table 9>



Source: US Department of the Treasury

Capital outflows may raise interest rates in the domestic financial market. In addition, the monetary authority may raise interest rates to contain inflation pressure due to depreciation. Accordingly, it may be assumed that expectations of depreciation may cause a rise in interest rates through capital outflows in order to escape exchange loss and the tight monetary policy needed in order to contain inflationary pressures resulting from depreciation.

A rise in interest rates may spark a decrease in stock prices. In October 1987, there occurred the “Black Monday” stock market crash. The fall in stock prices in October 1987 was partly caused by the run-up in interest rates following the steep depreciation of the dollar after 1985 Plaza Accord. Needless to say, black Monday affected global financial markets through a contagion effect.

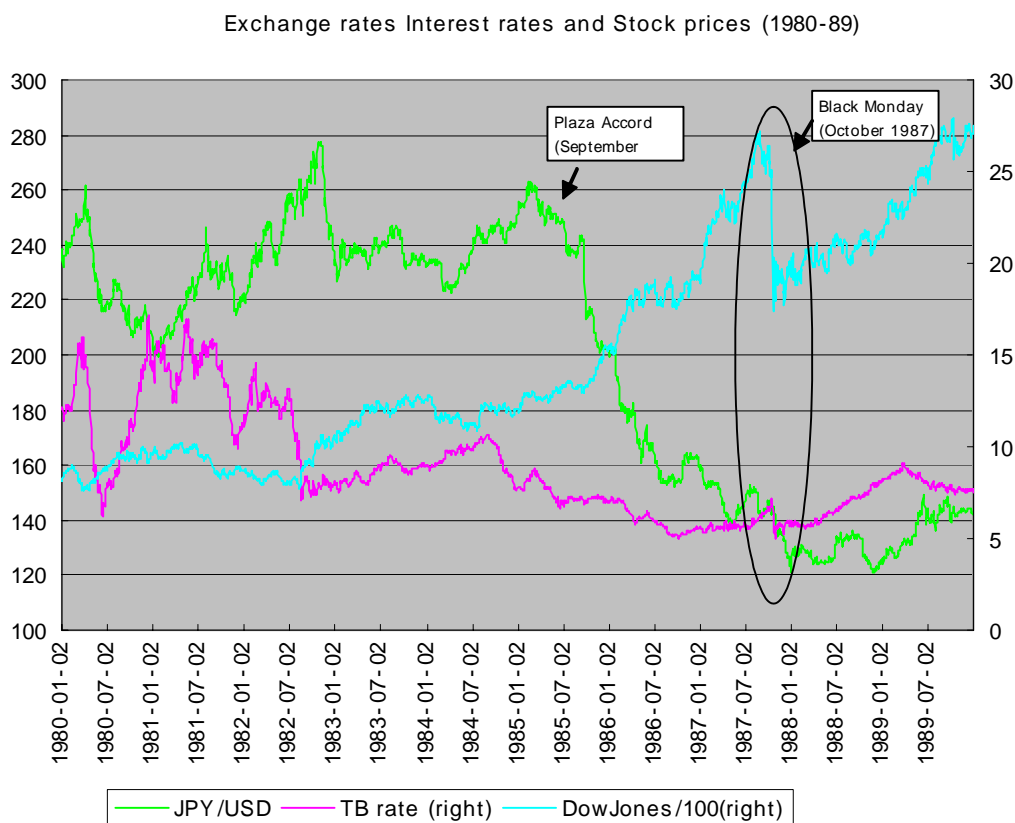
At the moment, an important issue is whether a rise in US interest rates following depreciation of the US dollar as well as capital outflows from the US stock market anticipating further dollar depreciation will bring about another black Monday stock market crash. The risk of a financial crisis is by no means negligible.

If such instability of global financial markets could not be prevented, the fall out in

the financial markets could well be larger than from the crash in 1987 since the US current account deficit is now almost twice as large as it was in the mid-1980s in terms of its ratio to GDP (Economist, 2004a). The world economy would then be severely damaged due to an increase in the difficulty of direct financing.

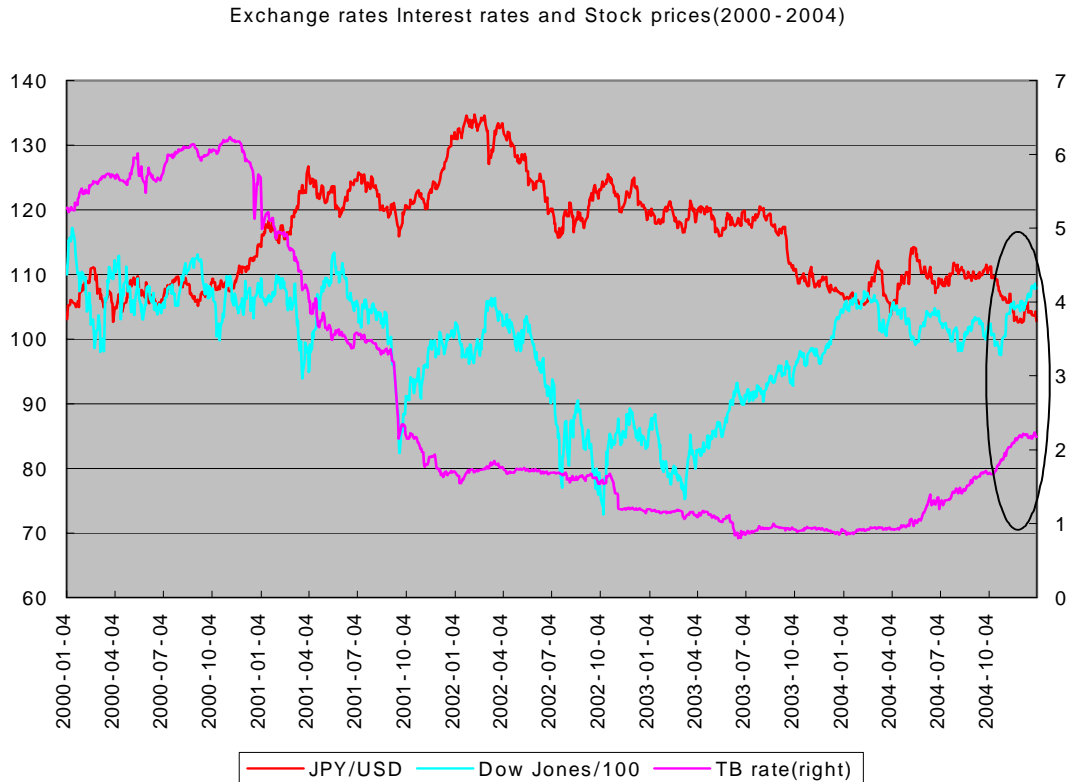
The role of the US dollar as the key currency would be inevitably weakened, and an important change in the international monetary system might take place as well. Obstfeld and Rogoff see more parallels today with the dollar's collapse in the 1970s in terms of large fiscal deficits, loose monetary policy and rising oil prices (2004).

<Table 10>



Source: FRB Saint Louis and Yahoo Finance

<Table 11>



Source: FRB Saint Louis and Yahoo Finance

In order to examine the relationships among exchange rates, interest rates and stock prices, Granger causality tests and VAR analysis were carried out using daily data from the beginning of January 2002 to the end of December 2004. The yen/dollar exchange rate, the 3-month Treasury bill rate, and the Dow Jones industrial average index were used.

Unit root tests on the three variables show them all to be I(1) (See Appendix Table 4). Accordingly, first differences are used for tests. Test results show that the exchange rate does not cause the interest rate, while the interest rate causes the exchange rate (See Appendix Table 5, and Figure 3).

In order to reflect recent trends, the same tests were carried out using daily data from the beginning of January 2004 to the end of December 2004. The test results for that period show that the exchange rate significantly causes the interest rate, while the interest rate does not cause the exchange rate (See Appendix Figure 4).



## V. Countermeasures

Taking into account the recent international financial market environment, the recent weakening of the US dollar seems structural rather than temporary or cyclical, and accordingly, the situation is not one that is easy to stabilize in the short run. Here one of the major obstacles is the considerable difference in interpretations of the causes of the huge US current account deficit of over 5 percent of GDP, the first on this scale in US history.

The USA seems to think that the main cause of its huge current account deficit is the overvaluation of the US dollar, in particular, against East Asian currencies, while others argue that the US current account deficit reflects inadequate domestic saving. Without an increase in saving, even a big fall in the dollar would make only a small dent in US current account deficit (Obstfeld and Rogoff, 2004).

In fact, fiscal expenditures such as military and homeland security expenditures may be assumed to be less exchange rate elastic than private consumption and investment. In this case, a current account deficit resulted mainly from the exchange rate inelastic fiscal deficit rather than from exchange rate elastic private consumption and investment cannot be resolved simply with a change in the exchange rate without an accompanying reduction of the fiscal deficit itself. Of course, depreciation could also partly contribute to a decrease in the current account deficit through changes in domestic saving and investment resulted from changes in the prices of imports and exports.

Therefore, it is essential to increase mutual understanding as to the real causes of global imbalances. The USA should try to reduce its fiscal deficit and to increase domestic saving, while countries with sizable current account surpluses, in particular, against the USA, need to increase the flexibility of their exchange rate systems to escape a global financial crisis.

<Appendix Table 1>

<Quarterly Data Analysis(Period: 1982:1 - 2004.3)>

Unit Root Test Results

variables \ period	No. of lags	1982.1 - 2004.3
CA	4	1.853(0.999)
dCA	0	-7.104(0.000***)
lnE	3	-1.993(0.289)
dlnE	2	-4.220(0.001***)
lnREER	3	-2.141(0.229)
dlnREER	2	-3.924(0.003***)

Notes: 1) Figures indicate t-statistics and those in parentheses show MacKinnon one-sided p-values.

2) ADF tests include a constant term.

3) Number of lags is chosen based on AIC

<Appendix Table 2>

Granger Causality Test Results

H <sub>0</sub>		No. of lags			
		1	2	4	6
dCA	→ dlnE	2.219 (0.139)	1.086 (0.343)	0.233 (0.918)	0.212 (0.971)
dlnE	→ dCA	0.050 (0.822)	0.371 (0.690)	0.187 (0.944)	1.276 (0.279)

Notes: 1) Figures indicate F-Statistics and those in parentheses indicate p-values.

2) \*\*\*, \*\* and \* represent significance at the 1%, 5% and 10% levels respectively.

<Appendix Table 3>

**Granger Causality Test Results**

		No. of lags				
		1	2	4	6	
$H_0$						
dCA	$\longrightarrow$	dlnREER	1.231 (0.270)	1.093 (0.339)	2.388* (0.058)	2.047* (0.070)
dlnREER	$\longrightarrow$	dCA	0.720 (0.398)	0.340 (0.712)	0.792 (0.533)	1.224 (0.304)

Notes: 1) Figures indicate F-Statistics and those in parentheses indicate p-values.

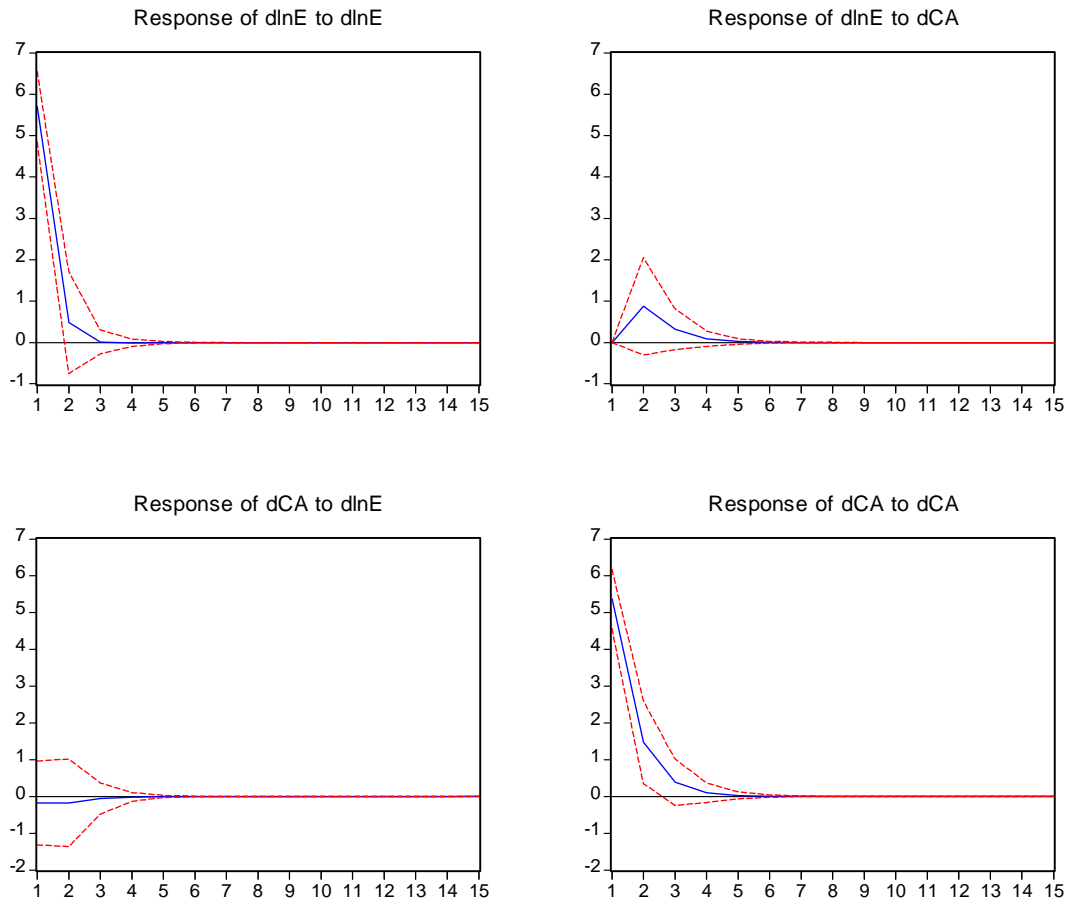
2) \*\*\*, \*\* and \* represent significance at the 1%, 5% and 10% levels respectively.

<Appendix Figure 1>

### Impulse Response Analysis

(Lag=1 based on AIC)

Response to Cholesky One S.D. Innovations  $\pm 2$  S.E.

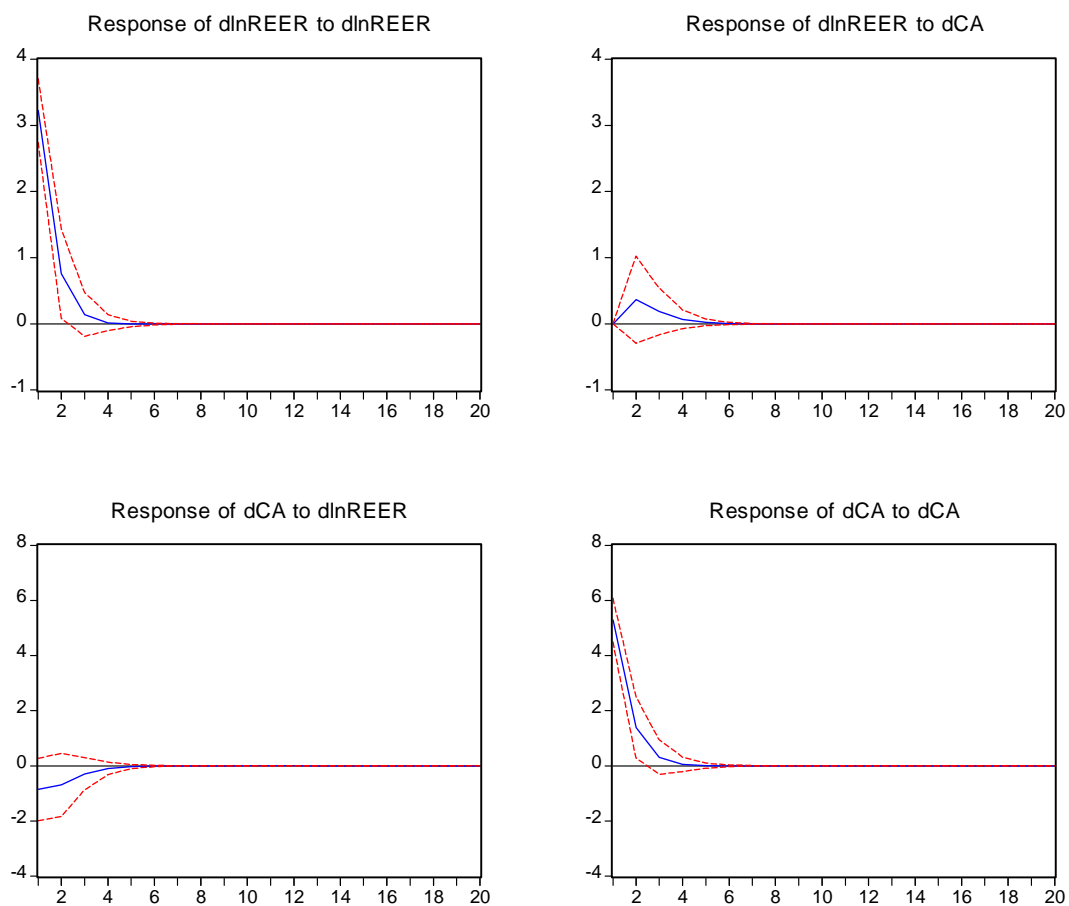


<Appendix Figure 2>

### Impulse Response Analysis

(Lag=1 based on AIC)

Response to Cholesky One S.D. Innovations  $\pm 2$  S.E.



&lt;Appendix Table 4&gt;

## &lt;Daily Data Analysis&gt;

Unit Root Test Results

variables \ period	No. of lags	2002.1 - 2004.12		2004.1 - 2004.11	
			No. of lags		No. of lags
I	10	0.102(0.965)	10	0.636(0.990)	
dI	9	-7.129(0.000***)	9	-3.991(0.001***)	
lnE	0	-1.272(0.643)	0	-1.553(0.504)	
dlnE	0	-28.442(0.000***)	0	-16.223(0.000***)	
lnS	1	-1.392(0.587)	0	-1.793(0.383)	
dlnS	0	-29.156(0.000***)	0	-14.784(0.000***)	

Notes: 1) Figures indicate t-statistics and those in parentheses show MacKinnon one-sided p-values.

2) \*\*\*, \*\*, and \* represent significance at the 1%, 5% and 10% levels respectively. 3) ADF tests include a constant term.

4) Number of lags is chosen based on AIC.

&lt;Appendix Table 5&gt;

Granger Causality Test Results

No. of lags H <sub>0</sub>		1	2	4	5	6
		Period: 2002.1 - 2004.12				
dlnE	→ dl	1.999 (0.157)	0.787 (0.455)	0.386 (0.818)	1.121 (0.301)	1.102 (0.359)
dl	→ dlnE	8.511*** (0.003)	4.461** (0.011)	3.353*** (0.009)	2.610** (0.023)	2.338** (0.030)
Period: 2004.1 - 2004.12						
dlnE	→ dl	7.328*** (0.007)	3.667** (0.027)	2.659 (0.033)	2.288** (0.046)	1.909* (0.080)
dl	→ dlnE	1.075 (0.300)	1.270 (0.282)	1.700 (0.150)	1.158 (0.330)	0.906 (0.491)

Notes: 1) Figures indicate F-Statistics and those in parentheses indicate p-values.

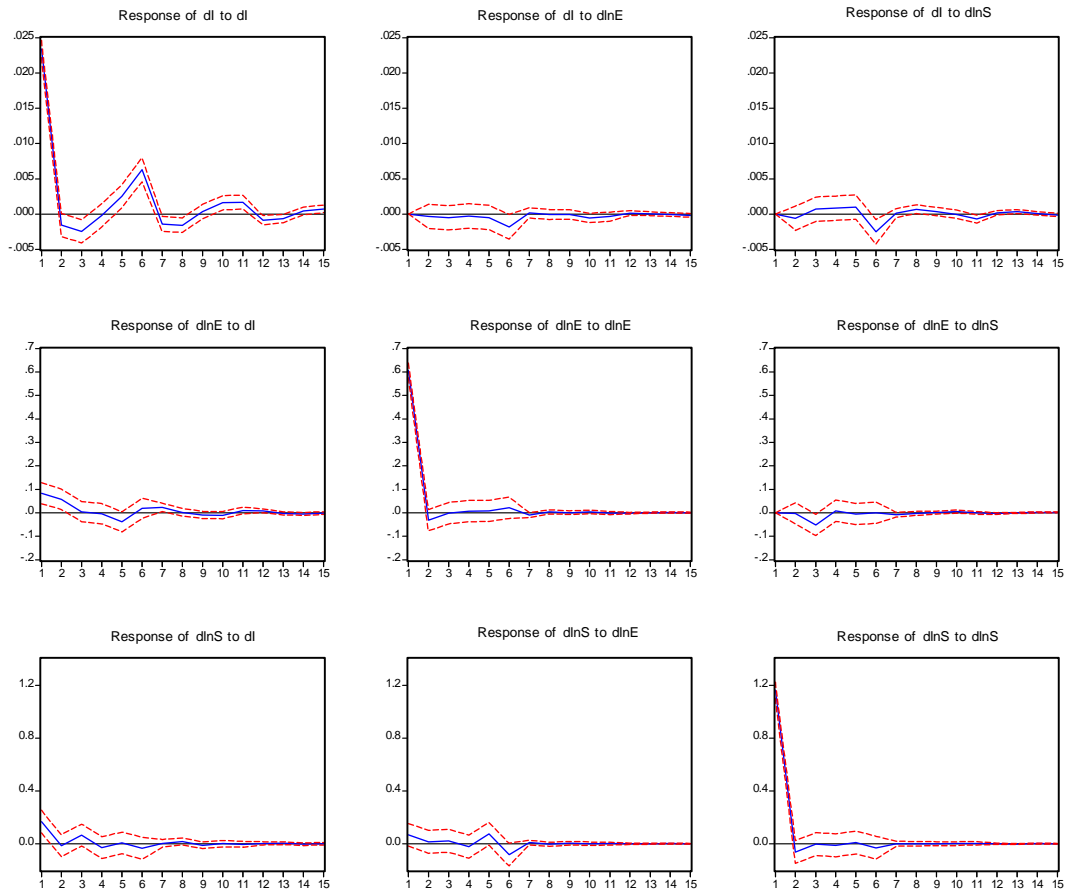
2) \*\*\*, \*\*, and \* represent significance at the 1%, 5% and 10% levels respectively.

<Appendix Figure 3>

### Impulse Response Analysis(2002.1-2004.12)

(Lags=5 based on AIC)

Response to Cholesky One S.D. Innovations  $\pm 2$  S.E.

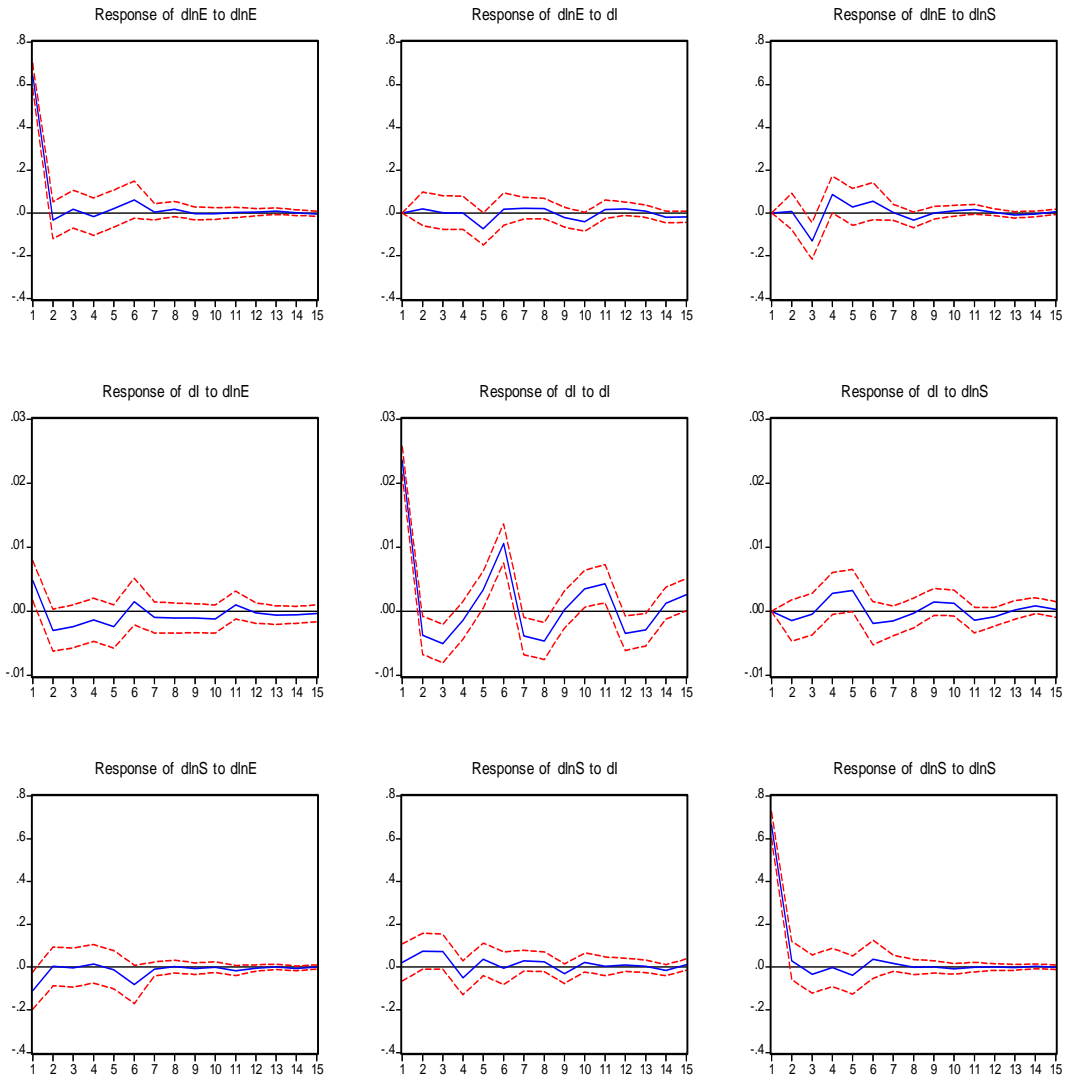


<Appendix Figure 4>

### Impulse Response Analysis(2004.1-12)

(Lags=5 based on AIC)

Response to Cholesky One S.D. Innovations  $\pm 2$  S.E.





## References

- Economist (2004a), “A Further Steep Decline in the Dollar Seems Inevitable,” October 28<sup>th</sup>.
- Economist (2004b), “How Low Might the Dollar Sink?” November 11<sup>th</sup>.
- Obstfeld and Rogoff (2004), “The Unsustainable US Current Account Position Revisited”, *NBER Working Paper 10869*, NBER.
- Oh, Junggun (2004), “Exchange Rate Policies in a Small Open Emerging Economy: Lessons from the East Asian Financial Crisis”, *BOK Institute Working Paper 202*, The Bank of Korea Institute.
- Summers, Lawrence H. (2004), “The US Current Account Deficit and the Global Economy,” The 2004 Per Jacobsson Lecture.