Asymmetric responses of East Asian currencies to the US dollar depreciation for reducing the US current account deficits

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Abstract

In this paper, we investigate responses of East Asian currencies to the US dollar depreciation in the near future. First, we show that a significant depreciation of the US dollar will be necessary in order to reduce the current account deficits. Second, we show that the responses of the East Asian currencies to a sudden and sharp depreciation of the US dollar will differ with countries because of the different degree of linkages of the East Asian currencies to the US dollar. Based on the above analyses, a regional coordination of the exchange rate policy is necessary to the East Asian countries to response appropriately to a possible depreciation of the US dollar in the near future.

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1. Introduction

The United States have been faced with the increasing current account deficits in the recent years. Its current account deficits were recorded over 6% of GDP in 2005. We remember that the current account deficits were over 3% of GDP in the mid of 1980s when the US dollar made a
large depreciation after the Plaza Accord in September 1985. It is regarded that the recent current account deficits are going beyond a dangerous level by comparing the recent situation with that in the mid of 1980s.

Some researchers question whether the current account deficits of the United States are sustainable in the current level of the exchange rates of the US dollar because the current account deficits began to increase again and have reached to 6% of GDP.¹ Now, we might need another “Plaza Accord” once again. However, we have already observed the recent appreciations of the euro, the Japanese yen, and some East Asian currencies which are floating against the US dollar, and the simultaneous depreciation of the other East Asian currencies, which are fixed with dollar, against the above currencies. The asymmetric responses to the US dollar depreciation were pointed out by Ogawa (2004).

In this paper, we show that some depreciation of the US dollar against the other currencies is necessary in order to reduce the US current account deficits from the current level to the permissible range, say 2 or 3% of GDP. Then, we make estimation of the linkages between the East Asian currencies and the US dollar to point out that the US dollar depreciation will have asymmetric effects on the East Asian currencies.²

This paper contains the following analyses. First, we estimate the vector autoregression (VAR) models which contain the exchange rates of the US dollar and the current account components in the next section.³ Second, we conduct the regressions a la Frankel and Wei (1994) to estimate linkages of the East Asian currencies to the US dollar with considering the effects of the infrequent revaluation in Section 3. Then we discuss the implications to the exchange rate regimes of the East Asian region. Based on the above analyses, we conclude this paper in the last section.

2. Effects of the US dollar depreciation shock on the US current account deficits

In this section, we investigate how impact depreciation of the US dollar would give on the current account deficits in the United States and how much depreciation of the US dollar is needed to reduce the current account deficits to a permissible level. First, we explain the methodology and the data used in our analysis, and then we implement preliminary analyses. After the process, we estimate the VAR models which are explained the first subsection. We show impulse responses to the exchange rate shocks to investigate impact of the US dollar depreciation to the US current account in the last subsection.

2.1. Methodology and the data

We simulate how much depreciation of the US dollar is needed for its current account sustainability given estimated parameters of vector autoregression models. Three VAR models

¹ Kudo and Ogawa (2003) conclude that the US current account deficits are unsustainable from the three views suggested by Mann (2002) while Matsubayashi (2005) does not reject the hypothesis of the sustainability of the US current account deficits. McKinnon (2001) pointed out that the US dollar might be supported by the international dollar standard.

² Ogawa and Sakane (2006) identify the Chinese exchange rate policy after the announcement of the reform on July 21, 2005. Added to the Frankel and Wei (1994)’s regression, they employ the Kalman filter method. Ohno and Fukuda (2003) use the high frequency (intra daily) data to exclude the correlated shocks among the currencies in the investigation.

³ Ogawa and Kudo (2004) investigate some cases of the dollar fall against other currencies with VAR analysis, and conclude that the large dollar depreciation will be inevitable near future.
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