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# **On Determinants of the Yen Weight in the Implicit Basket System in East Asia**

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# On Determinants of the Yen Weight in the Implicit Basket System in East Asia\*

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## Abstract

After the Asian currency crisis, most Asian economies have adopted managed float regimes, with notable exception of China, Hong Kong, and Malaysia. Various studies have examined the weights of the dollar, the yen, and the euro, regarding floating is loosely managed with reference to the basket currency system. However, results are mixed, in that in some periods, the yen weight seems to be higher in some countries, and in some other periods, the Asian currencies seem to have gone back to the dollar peg. This paper seeks the determinants of the yen weight in Asian currencies. It is found that the yen weight tends to increase when the yen depreciates and when the domestic interest rates rise. The yen weight tends to decrease when the US interest rate rises. Asymmetry is observed among coefficients of variables between the lower and higher yen periods. In addition, the yen weight is less susceptible to the overall position of the US dollar vis-à-vis major currencies. It should also be noted that the peculiarity among countries seems large in handling the currency weights in the basket.

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## 1. Introduction

After the Asian currency crisis, most Asian countries have adopted managed float regimes. Various studies have examined the weights of the dollar, the yen, and the euro, regarding floating is loosely managed with reference to the basket currency system. However, results are mixed, in that in some periods, the yen weight seems to be higher in some countries, and in some other periods, the Asian currencies seem to have gone back to the dollar peg. This paper identifies the determinants of the yen weight in Asian currencies. It is found that the yen weight tends to increase when the yen depreciates to decrease when the US interest rate rises.

The basket currency regime has been proposed as a desirable system for East Asian countries that have diversified trade structure. Stabilizing the real effective exchange rate, as opposed to the nominal bilateral exchange rate vis-à-vis the US dollar, makes more sense from minimizing short-run fluctuation in trade accounts, avoiding sustained exchange rate misalignment and loss of competitiveness, and uninviting speculative capital inflows and its sudden reversal.

What would be an institutional framework that would ensure that the exchange rate would be stabilized against the real effective exchange rate? If the country can find and adopt a system that the actual exchange rate moves in line with the real effective exchange rate automatically, that would be desirable. One obvious candidate is that each country calculates their approximate real effective exchange rate movements and engineers the exchange rate toward that rate (by monetary policy, fiscal policy and interventions). They may adopt similar but different basket systems. However, the real effective exchange rate of Country A includes neighboring countries exchange rates. The choice of the exchange rate regimes of neighboring countries affects how the exchange rate would move for Country A. If a neighboring country is adopting a dollar peg (wrongly), then Country A is more likely to adopt the dollar peg, and they collectively move to a dollar peg. If neighboring countries adopt a basket system, then Country A has more incentive to adopt the basket system. The difficulty of finding a collectively optimal basket weight when there is interdependence of the dollar weight in the currency baskets of neighboring countries was first pointed out by Ogawa and Ito (2000).

The dollar and yen weights in the baskets of East Asian countries have changed over time since the de facto dollar peg was abandoned in 1997. In 1998, the correlation of some of the East Asian currencies with the Japanese yen rose, suggesting that the weight of the yen became high in those countries. However, the East Asian currencies seemed to move more with the US dollar in 1999-2002, suggesting that the yen weight was lowered. In 2003-2004, movements of the East Asian currencies vary from one to another. Singaporean dollar, Korean won and Thai baths movements suggest that they are on the more genuine basket system, while others tend to stabilize their currencies against the US dollar in nominal terms. This paper will describe how the yen weight among the East Asian currencies has changed since the Asian currency crisis and examine determinants of the yen weight across countries.

Our paper consists of the following four parts. Section 2 is devoted to the literature survey. Section 3 describes and examines the actual currency changes after the Asian currency crisis, by calculating the weights of the dollar, the yen and the euro in explaining the Asian currency fluctuations. Section 4 attempts to identify determinants of the yen weights in these basket economies. Major macro economic

indicators are tested for possible determinants. Section 5 extends this benchmark regression in order to explore whether the yen weights were different in the appreciation and depreciation stages of the yen vis-à-vis the dollar, and in the appreciation and depreciation stages of the dollar (against the euro as well as the yen). Section 6 concludes the paper.

## 2. Changing Views on the Optimal Exchange Rate Regime

Since the beginning of the Asian crisis, the economists' views on the appropriate exchange rate regime for emerging market economies have changed from one extreme to another. When the Thai baht was devalued on July 2, 1997, it has quickly become a consensus that the de facto dollar peg, combined with an open capital account, is a dangerous option. Many recommended emerging market economies to adopt the flexible exchange rate. Indeed, Asian countries moved to flexible exchange rate (floating or widening the band) soon after the baht was floated. However, flexible exchange rate is no defense against large capital outflows, since large depreciation of the currency imposes hardship on the financial institutions as well as corporations. The damaged balance sheet of banks put the whole financial system at risk.

A lesson was learnt that when the balance sheets of banks were already heavily dollar denominated, keeping the exchange rate peg at any cost might be another option. A resolve of keeping the interest high, even with harsh contractionary effects, in order to defend the peg may deter speculative attack. One such institution would be the currency board—automatic adjustment of domestic monetary base as capital flow comes in or out, and no open market operation of domestic bonds. The fact that Hong Kong (in the Asian crisis) and Argentina (in the Mexican crisis earlier) had survived the contagion effects had also given credibility to this view.

How to reconcile the two views, desirability of the flexible exchange rate and the dollar hard peg? Maybe the two extremes are safe, but not the middle ground—the bipolar view. Fischer (2001) most eloquently put forward this view. Emerging markets were recommended to adopt either the hard peg or completely free-floating exchange rate. However, there were only a few takers of this advice among emerging market economies. Opposing views were also expressed as an intermediate option: a basket, band, and crawl arrangement, such as Williamson (2000), Ito, Ogawa, and Sasaki (1998), Ohno (1999), and Ogawa and Ito (2002). The bipolar view lost a steam when Argentina's peg was broken in a chaotic economic crisis at the end of 2002.

Once the worst of the crisis was over, sometime between late 1998 and mid-1999, many East Asian countries have implicitly pursued a basket system, except the three dollar-peg countries: China, Hong Kong, and Malaysia (after September 1, 1998). However, once the economies have recovered from the trough, flexibilities of the exchange rate vis-à-vis the US dollar seem to have lost. Several countries, that were said to have adopted the flexible exchange rate regime, seemed to have moved back to a loose peg to the US dollar (see McKinnon (2000) and Ogawa (2002)). Similarly, there was strong movement toward stability of the exchange rate in terms of the US dollar among Latin American countries.

Calvo and Reinhart (2002) pioneered the study of de facto exchange rate regime, as opposed to the legally-professed regime, or de jure regime. They found that many countries de facto pursued quasi-fixed exchange rate system without declaring it. This is called as “fear of floating.” The taxonomy of the de

facto exchange rate regime has further been developed by other researchers like Reinhart and Rogoff (2002), and Levy-Yeyati and Sturzenegger (2002).

Williamson (1999), and Ogawa and Ito (2000) proposed that the East Asian countries should adopt a common, or at least, coordinated, currency basket. Ogawa and Kawasaki (2003) suggested the possibility of forming parallel basket groups in the take-off period prior to a unified basket in Asia. Ogawa and Shimizu (2006) proposed a pragmatic way of measuring deviations of each participant currency from the central rate in a virtual basket, using the weighted averages of trade weights and GDP sizes.

When the actual basket currency arrangement of East Asian countries is examined, there are several difficulties. First, many countries have adopted the basket without explicitly admitting it. Therefore, any behavior of the exchange rate is in a sense *de facto* rather than *de jure*. Second, even without explicit policy responses (monetary policy or intervention), the exchange rate may behave as if it is on the basket system by policy choice, because the market may move the exchange rate in the direction that would be consistent with the explicit basket system. In that sense, the exchange rate that behaves like the basket system may be market-driven basket system. Combining these two characters, we call the situation as the implicit basket system in East Asia.

Frankel and Wei (1993, 94), who developed a method of measuring weights of basket, negatively concluded to a question whether the yen has increased its weight in the Asian implicit basket system. Bénassy-Quéré (1999) applied that into the analysis in the developed countries, and Shimizu (2003) found that implicit basket system seemed to have been resurrected in several countries.

All of these studies combined suggest that since the basket system is implicit, the yen weight varies from a country to another, and from a year to another for the same country. It is our objective why some countries have put more weight on the yen than other countries, or why a country put more weight on the yen in a particular period than other periods. First, the history of the yen weight in major East Asian countries will be reviewed. The yen weight in the implicit basket was typically high in 1998-1999. However, at the same time that Asian countries resumed high growth and the euro firmly established itself in the international currency market, that is, in 2000-2001, a trend toward re-adopting the dollar peg à la McKinnon emerged. However, the yen weight increased somewhat in 2003-2004. Second, it will be attempted to identify determinants of the yen weight in the implicit basket system. Third, a particular hypothesis is examined, namely, whether the yen weight varied in the appreciation and depreciation stages of the yen vis-à-vis the US dollar. This hypothesis is similar to what Ogawa (2004) was interested in, namely there were asymmetric responses to the US dollar depreciation among East Asian currencies. We believe our analysis is relevant because it contributes to draw implications for designing a stable currency basket system in EA.

### 3. Estimating the implicit currency weights

#### 3.1 Analytical method

The general way of computing implicit basket weights can be expressed as the following way:

$$\Delta e_{i/k,t} = \alpha_0 + \sum_{h=1}^n \alpha_h \Delta e_{h/k,1} + \varepsilon_{i,t} \quad (1)$$

where  $e$  is the logarithm of nominal exchange rate,  $i$  is the name of currency,  $k$  is the numeraire currency,  $n$  is the number of implicitly weighted currencies,  $\alpha_h$ s are the implicit basket weights, and  $\varepsilon$  refers to disturbance.

Various options for the numeraire currency have been attempted in the literature. As reviewed in Bénassy-Quéré and Coeuré (2003), the Swiss franc, the pound sterling, the Australian dollar, a basket of currencies including Special Drawing Rights or a basket of Group of Seven currencies have been among popular options. We chose the Swiss franc as a traditional and the most popular option. Decomposing the currency into a weighted average of other currencies is another step. Shimizu (2003) selected four currencies in decomposing fluctuations of East Asian currencies: the US dollar, the yen, the deutsche mark, and the pound sterling. Since we hope to focus on the latest period, the dollar, the yen, and the euro are chosen below, with the euro is backwardly calculated by the formula for years before January 1999. Therefore, the general expression of (1) is rewritten as follows:

$$\Delta e_{i/CHF,t} = \alpha_0 + \alpha_1 \Delta e_{dollar/CHF,1} + \alpha_2 \Delta e_{¥/CHF,t} + \alpha_3 \Delta e_{euro/CHF,t} + \varepsilon_{i,t} \quad (2)$$

Nine economies are examined in our first-stage analysis: China, Hong Kong, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand. The sample period covers a decade from January 1995 to December 2004. Euro data before 1999 were computed by applying the euro conversion data at the end of 1998.<sup>1</sup> The exchange rates are those of closing rate of New York, taken from the Datastream.

#### 3.2 Implicit basket weights

The three currency weights are calculated from the daily data for three-month periods. Table 1 shows the results. In case of a rigid dollar peg, the weight of the dollar becomes a unity and the weights of other currencies zero, with high adjusted R-squared scores. The dollar peg is confirmed for the following four economies: China, Hong Kong, Malaysia, and Taiwan. The Chinese RMB was officially depreciated in 1994, and then pegged to the US dollar. Hong Kong, sticking to its currency board system, sustained a dollar peg. Malaysia, after experiencing flexible exchange rate system for more than a year, re-pegged the Ringgit to the US dollar, at US\$1 = Ringgit3.8 in September 1998. Taiwan changed its fluctuating range from NT\$26-28 per US dollar in the pre-crisis period to NT\$3-35 per US dollar in the post-crisis period. However, the range was stable enough that the econometric examination produced that it cannot be

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<sup>1</sup> The euro conversion rates are as follows: 1 euro = ATS13.7603 (Austria), BEF40.3399 (Belgium), FIM5.94573 (Finland), FRF6.55957 (France), DEM1.95583 (Germany), GRD340.750 (Greece), IEP0.787564 (Ireland), ITL1936.27 (Italy), LUF40.3399 (Luxemburg), NLG2.20371 (the Netherlands), ESP166.386 (Spain), and PTE200.486 (Portugal).

indistinguishable from a dollar peg.

The remained five countries demonstrate some signs of managing a basket currency regime, namely a reasonably large yen weight that is statistically significantly different from zero. The yen and euro weights in the Singaporean basket show steady movement. The yen weight in the Singaporean basket has fluctuated between 20 and 30 percent in the last three years. The Korean and Thai baskets also show significant weights on the yen and euro, although the non-dollar weights fluctuated widely in the last three years. The Indonesian and the Philippine baskets demonstrate less and varying weights on the yen.<sup>2</sup> Indonesia suffered most by the financial crisis in terms of currency depreciation and recession among the East Asian countries. The inflation rate also rose sharply in Indonesia, and inflation and depreciation reinforced each other in 1998-99. The Indonesian rupiah fluctuated widely, and so did weights of the dollar, the yen, and the euro. There are several periods in which the weight of the yen or the euro is off the scale (more than 2 or minus), and that is not the confirmation of any weights on the non-dollar currencies.

The Philippine peso also depreciated vis-à-vis the US dollar during the currency crisis but less so than Thai baht, Korean won, or Indonesian rupiah. However, the Philippine peso continued to decline unlike other Asian currencies. The weights of the yen and the euro occasionally show a coefficient to be significantly zero. The Philippine case is somewhere between Indonesia and the full dollar peg.

Our findings are summarized as follows: First, re-intensifying a dollar peg, as argued by McKinnon for the period of 1999-2001, was not sustained except for China, Hong Kong, Taiwan, and Malaysia. Second, the least stable and most interrupted basket management is observed in Indonesia. Third, attempts of basket management seemed to have been intensified in Korea, Singapore, and Thailand. Especially, after the launch of euro at the beginning of 2001, the implicit basket system has stabilized in terms of their yen weights.

#### 4. Determinants of the yen weight

##### 4.1 Setup of model

We now proceed to examine if fluctuations in the yen weight observed in these economies reflect any economic fundamentals. The outcome of the last section suggests that we focus on the three countries: Korea, Singapore, and Thailand.

Determinants of yen weights are set as dependent variable. They are re-computed monthly by rolling regressions for the respective preceding three-month period by using the same database. The sample period is from the beginning of 1999 to December of 2004, because a chaotic period following the Asian currency crisis had been over by the end of 1998.

Figure 1 shows ups-and-downs of the yen weight in these three countries. A point estimate with a one standard deviation band is shown.

In the regression, we attempt to explain the fluctuation of the yen weight by some pre-determined variables, including (i) the yen/dollar exchange rate level ( $e$ ); (ii) the change in the yen/dollar exchange rate

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<sup>2</sup> During the period of Jan.2002 to Dec.2004, the number of quarters with the significant yen weight was 7 for Korea (3 at the 99% level, 3 at the 95 level, and 1 at the 90% level), 11 for Singapore (11, 0, 0), and 11 for Thailand (8, 2, 1). They exceeded 4 for Indonesia (1,1,2) and 5 for the Philippines (0,5,0) in total number of quarters and the degree of significance.

( $\Delta e$ ); (iii) changes in CPI ( $\Delta CPI$ ) of the country in question is higher; (iv) changes in industrial production ( $\Delta IP$ ); (v) changes in exports in US dollar ( $\Delta EXPORTS$ ); (vi) a change in the local short-term rates ( $\Delta LOCALINT$ ); and (vii) a change in the US short-term interest rates ( $\Delta USINT$ ). We suspect that some Asian countries tended to increase the yen weight when the yen was depreciating, and decrease the yen weight when the yen was appreciating, so that their export competitiveness can be maintained.

We also expect that the yen weight will increase when the changes in CPI of the country in question are higher, and when industrial production of the country in question is also higher. An increased yen weight will be accepted as well when exports of the country increase. The prediction is based on a hypothesis that the country will tolerate an appreciation of their currencies vis-à-vis the US dollar when the domestic economy is favorable.

In addition, impacts of the interest rate changes are examined. An increase in local short-term rates is expected to increase the yen weight by anticipating larger financial inflows which will boost domestic economies. On the contrary, a rise in the US short-term interest rates will force them to reduce the yen weight for the purpose of offsetting negative impact caused by increased capital outflows.<sup>3</sup>

The first-type regression here by the ordinary least squares is expressed as follows:

$$W_{i,t} = \beta_0 + \beta_1 e_{\$/\text{¥},t} + \beta_2 \Delta e_{\$/\text{¥},t} + \beta_3 \Delta CPI_{i,t} + \beta_4 \Delta IP_{i,t} + \beta_5 \Delta EXPORTS_{i,t} + \beta_6 \Delta LOCALINT_{i,t} + \beta_7 \Delta USINT_{i,t} + \varepsilon_{i,t} \quad (3)$$

where  $W$  stands for yen weight.

Monthly data of variables in (i) to (vii) are taken from IMF's International Financial Statistics CD-ROM (August 2005). Three types of pooled regressions, with or without a fixed effect, will be attempted: one including contemporaneous explanatory variables (t), and the rest with lagged variables of one (t-1) and two periods (t-2), respectively. Simultaneously, we apply an OLS regression on the country-by-country basis for the three economies in question ("local" regression, hereafter).

#### 4.2 Regression results

The regression results are shown in Table 2. Major findings are as follows: First, both coefficients of  $e$  and  $\Delta e$  are significant in the contemporaneous regression (including  $e$  and  $\Delta e$ ). Expected signs are confirmed: marginal depreciation in yen rates vis-à-vis the dollar leads to higher yen weights in the implicit basket. When the lagged values are used in the regression, the coefficient of  $\Delta e$  remains significant in the regression with the lagged variables, while the coefficient of  $e$  fails to be significant in the regression with the lagged variables.

Changes in the inflations rates ( $\Delta CPI$ ), industrial production ( $\Delta IP$ ), and export amount ( $\Delta EXPORTS$ ) are found to be insignificant in any regression.

Among short-term interest variables, changes in the US short-term interest rate ( $\Delta USINT$ ) are found

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<sup>3</sup> The data 60B. in the *IFS* are applied: money market rate for Korea and Thailand, three-month interbank rate for Singapore, and the Federal Funds rate for the US.



to be significantly affecting the yen weight. The coefficient is positive and significant at the 1% level in the three regressions with no fixed effects. The yen weight decreased as the US short-term interest rate rose. Meanwhile, local short-term interest rates ( $\Delta$ LOCALINT) did not influence, to a significant degree, the option in operating the currency weight.

Let us examine the above findings in the “local” regressions more closely. OLS regressions are applied for respective three countries. The results are shown in Table 3.

Singapore provides us with three significant variables:  $e$ ,  $\Delta$ LOCALINT, and  $\Delta$ USINT with the expected signs, while  $\Delta e$  failed to be significant.  $\Delta$ CPI,  $\Delta$ IP, and  $\Delta$ EXPORTS were not significant in these country-specific regressions as well. In Thailand, higher significance was found in  $\Delta e$  than in  $e$  with the expected signs, while short-term interest rates, both domestic and the US ( $\Delta$ LOCALINT and  $\Delta$ USINT), were not significant. In Korea, no more than two variables were significant in the contemporaneous regression, while expected signs are generally confirmed.

In these three countries, degree of influence varies among these regressors. The yen level ( $e$ ) affects the yen weight with the highest degree in Singapore, while the change in yen-dollar rates ( $\Delta e$ ) are most influential in Thailand. The CPI Inflation rate ( $\Delta$ CPI) is potent in Thailand, while changes in the domestic and the US interest rates ( $\Delta$ LOCALINT and  $\Delta$ USINT) are most influential in Singapore.

In short, changes in yen-dollar rates ( $\Delta e$ ) and the US short-term interest rates ( $\Delta$ USINT) are, thus, generally significant followed by the yen-dollar rate levels ( $e$ ). However, peculiarity among these three countries is large enough to shift significant variables and their degree of influence.

## 5. Consistency under appreciated yen and depreciated dollar

### 5.1 Appreciated yen case

This section explores if the responses of the yen weight to a yen appreciation and to a yen depreciation are symmetrical. In order to answer this question, two sets of dummy variables are introduced to the fundamental regression executed in the last section.

The first set of dummy variables is to differentiate yen appreciation and depreciation at a threshold of ¥115/dollar.<sup>4</sup> If the exchange rate is above this threshold, a lower yen dummy enters as the unity, and otherwise, zero, and if the exchange rate is below this threshold, a high yen dummy enters as the unity, and otherwise, zero.<sup>5</sup> The second set of dummy variables concern the spread from the past two-year moving averages of the yen levels.<sup>6</sup> If the current rate of the yen/dollar rate is above (below) the moving average, a lower (higher, resp.) yen dummy enters as one, and otherwise, zero. These dummies enter as coefficient dummies. In the regression extended in this section, changes in the yen-dollar rates ( $\Delta e$ ) are used, but not the level of the yen, since the previous section proved the level of the yen was insignificant in general.

As in the previous section, three types of regressions will be attempted: one contemporaneous regression ( $t$ ), and two lagged ones with ( $t-1$ ) and ( $t-2$ ) explanatory variables. A pooled estimation and a

<sup>4</sup> The average rate during the examined period (Jan.1999 to Dec.2004) is ¥115.45 to the dollar.

<sup>5</sup> Of the total number of observations, 66, lower yen periods add up to 39, compared with 33 higher yen months.

<sup>6</sup> Lower yen periods (19) is outnumbered by higher yen ones (51). This sample period is biased for yen’s appreciation on the moving average basis.

country-specific regression (“local” regression) will simultaneously be executed as well.

The results are tabulated in Tables 4 and 5. In Type 1 dummy case (Table 4), changes in the yen rate vis-à-vis the dollar ( $\Delta e$ ) are significant in the lower yen periods at the 5 per cent significance level with the one-period lag. Significance is generally higher in the yen’s appreciated periods:  $\Delta e$  stays significant throughout the regressions at least at the 10 percent significance level. However, in the non-pooled “local” regressions, significant  $\Delta e$  in higher yen periods can be observed nowhere than in Singapore. Coefficients are positive as expected. A depreciation in the yen-dollar rates will raise the yen weight in the basket in Singapore. However, in the other two countries,  $\Delta e$  failed to be significant in higher yen stages. In Thailand, significant  $\Delta e$  can be observed in lower yen periods, while not in higher ones. In addition, there is no significant  $\Delta e$  in Korea in both higher and lower yen stages.

In Type 2 dummy case (Table 5), on the other hand, significance in  $\Delta e$  decreases to some extent. Higher significance recorded in Type 1 dummy case disappears, while remaining significant in lower yen periods. This is the case for the “local” regressions: We can no more detect significance in  $\Delta e$  in higher yen periods for any country.

$\Delta \text{CPI}$  is found partially significant in Type 1 dummy case, while expected signs are not assured in higher yen periods. Among the three countries, Thailand is the most sensitive to  $\Delta \text{CPI}$  in lower yen periods. Higher significance cannot, if any, be observed in  $\Delta \text{IP}$  and  $\Delta \text{EXPORTS}$ .

$\Delta \text{USINT}$  is highly significant in pooled estimations with both Type 1 and 2 dummies. Signs are as expected: the yen weight decreased as the US short-term interest rate rose. Examining country by country in the “local” regressions, both  $\Delta \text{LOCALINT}$  and  $\Delta \text{USINT}$  are highly significant in Singapore at the 1 per cent significance level in lower yen stages, while not in higher yen stages. In Korea, high degree of significance in  $\Delta \text{USINT}$  is observed in higher yen periods in Type 2 case.

Overall, asymmetric reactions are found between the lower and higher yen stages. Changes in the yen-dollar rates ( $\Delta e$ ), CPI ( $\Delta \text{CPI}$ ), industrial production ( $\Delta \text{IP}$ ), and short-term domestic and US interest rates ( $\Delta \text{LOCALINT}$  and  $\Delta \text{USINT}$ ) play important roles. Altering threshold in dummy definition, from Type 1 to Type 2 dummy, provides a different set of significant variables. However, asymmetry between the lower and higher yen-dollar stages does not disappear.  $\Delta e$ ,  $\Delta \text{LOCALINT}$ , and  $\Delta \text{USINT}$  generally remain significant with the signs unchanged. In short, asymmetry cannot be denied by modifying thresholds of dummies.

## 5.2 Depreciated dollar case

Another extension is attempted on the basic regression in order to differentiate the dollar depreciation vis-à-vis the yen (yen appreciation) and the dollar depreciation vis-à-vis both the yen and the euro. The dollar depreciation may mean different impacts on the Asian economies, if it is only against the yen or it is against both the yen and the euro. Effects of the dollar depreciation (against both the yen and the euro) on the yen weight are explored. Weaker dollar dummies, which are defined as being depreciated vis-à-vis both the yen and euro, enter into the regression as coefficient dummy.<sup>7</sup> We again employ three-month

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<sup>7</sup> The number of weaker dollar periods is 26 in the 72 total observations.

moving average of the dollar rate each period. As in the above analysis, a pooled estimation and country-by-country OLS regressions (“local” regressions) are simultaneously executed.

Regression results are shown in Table 6. In the pooled estimation,  $\Delta e$  and  $\Delta USINT$  are significant regardless of the dollar rates. However, few of the other variables can join as significant in weaker dollar periods, except for  $\Delta CPI$  in the contemporaneous regression. Most variables realize expected signs, if not significant. When the dollar is low across the board, a rise in the yen weight will be contained even if the yen is being depreciated vis-à-vis the US dollar. This is the case for the change in US short-term interest rates ( $\Delta USINT$ ): when the dollar is bearish, a rise in the US interest rates will further reduce the yen weight.

These findings are, for the most part, confirmed in the three “local” regressions. Unlike in the higher yen periods, overall bearish dollar stages do not profoundly affect decision in controlling yen weights in the basket system.

However, Korea offers idiosyncratic information: when the dollar falls substantially, Korea decides to contain a rise in the yen weight even if the yen is being depreciated against the dollar. Compared to Singapore and Thailand, the degree of curtailing the yen weight’s rise is distinguished in Korea. Of these three countries allegedly adopting the implicit basket system, Korea is labeled the most sensitive to the US dollar level in adjusting the yen weight. On the contrary, Singapore and Thailand barely modify currency weights in the basket.

Overall, subsections 5.1 and 5.2 provides an intriguing contrast: the yen depreciation and appreciation vis-à-vis the US dollar causes asymmetric effect in managing the yen weight in the basket, while the dollar depreciation vis-à-vis both the yen and the dollar results in marginal influence. The bottom line is that, in these countries except for Korea, the yen weight is more susceptible to the yen-dollar rate than the dollar rate vis-à-vis other major currencies.

## 6. Conclusions

We have examined the implicit basket systems of the three East Asian countries from 1999 to 2004. McKinnon (1999) argued that the yen weight in these implicit baskets was higher in 1997-1998, but the dollar peg returned after the summer of 1998. We argue that this is not necessarily the case as the data are extended to 2004. Countries like Korea, Singapore, and Thailand had resumed some kind of an implicit basket system. This is especially so after 2002, as the yen weights have become significant and stable.

We then attempted to identify determinants of the yen weight in the implicit basket system. Three countries with relatively more stable basket management are chosen for our analysis. Among candidates, both level and change in yen-to-dollar rates were found to be significant in addition to the US short-term interest rate. Peculiarity among countries cannot also be overlooked.

The basic regression was extended to explore if symmetry or asymmetry prevails in policy responses throughout lower-yen and higher-yen stages. In general, asymmetry was confirmed: the yen weight was highly sensitive to fluctuations in the yen-dollar rates and the US short-term interest rate in higher yen stages, while not in yen’s depreciation phases. In addition, the yen weight was found, in general, less susceptible to the US dollar rate levels vis-à-vis world major currencies than to the yen-dollar rate levels.

We commonly assume that the yen weight of the basket is stable, irrespective of changes of the yen-dollar rate or the dollar rate vis-à-vis the yen and the euro. However, the asymmetry we have obtained put a question on the widely-used specification of the basket system. The usual regression becomes unreliable, if the asymmetry is large and significant.

However, there remain research topics for the future. Results in our analysis have an important implication for the usual regression to determine the currency weights, à la Frankel and Wei (1993). Coefficients may be shifting as time passes. It is left for future research to capture time-varying coefficients.

<References>

- Bénassy-Quéré, Agnès (1999), “Optimal Pegs for East Asian Currencies,” *Journal of the Japanese and International Economies*, Vol.13, pp.44-60.
- Bénassy-Quéré, Agnès, and Benoît Coeuré (2003), “On the Identification of De Facto Currency Pegs,” mimeo.
- Calvo, Guillermo A., and Carmen M. Reinhart (2002), “Fear of Floating,” *The Quarterly Journal of Economics*, Vol.CXVII, No.2 (May), pp.379-408.
- Fischer, Stanley (2001), “Distinguished Lecture on Economics in Government, Exchange Rate Regimes: Is the Bipolar View Correct?” *Journal of Economic Perspectives*, Vol.15 No.2 (Spring), pp.3-24.
- Frankel, J., and S.J. Wei (1993), “Trade Blocs and Currency Blocs,” NBER Working Paper No.4335.
- Frankel, J., and S.J. Wei (1994), “Yen bloc or Dollar Bloc? Exchange Rate Policies of the East Asian Economies,” in Takatoshi Ito and Anne O. Krueger (eds.), *Macroeconomic Linkage: Savings, Exchange Rates, and Capital Flows*, Chicago: The University of Chicago Press, pp.295-333.
- Goldstein, Morris (2002), *Managed Floating Plus, Policy Analyses in International Economies 66*, Washington, DC: Institute for International Economies.
- Ito, Takatoshi, Eiji Ogawa, and Yuri Nagataki Sasaki (1998), “How did the Dollar Peg Fail in Asia?” *Journal of the Japanese and International Economies*, Vol.12, pp.256-304.
- Levy-Yeyati, Eduardo, and Federico Sturzenegger (2002), “Classifying Exchange Rate Regimes: Deeds and Words,” mimeo. Universidad Torcuato Di Terra.
- McKinnon, Ronald I. (2000), “After the Crisis, the East Asian Dollar Standard Resurrected: A Interpretation of High-Frequency Exchange-Rate Pegging,” Stanford University Economics Department Working Paper.
- Ohno, Kenichi (1999), “Exchange Rate Management in Developing Asia: Reassessment of the Pre-crisis Soft Dollar Zone,” ADBI Working Paper No.1.
- Ogawa, Eiji (2002), “The US Dollar in the International Monetary System after the Asian Crisis,” JBICI Discussion Paper No.1.
- Ogawa, Eiji (2004), “Regional Monetary Cooperation in East Asia against Asymmetric Responses to the US Dollar Depreciation,” *Journal of the Korean Economy*, Vol.5, No.2, pp.43-72.
- Ogawa, Eiji, and Takatoshi Ito (2000), “On the Desirability of a Regional Basket Currency Arrangement,” *Journal of the Japanese and International Economies*, Vol.5, No.2, pp.317-34.
- Ogawa, Eiji, and Kentaro Kawasaki (2003), “Possibility of Creating a Common Currency Basket in East Asia,” JBICI Discussion Paper No.5.
- Ogawa, Eiji, and Junko Shimizu (2006), “A Deviation Measurement for Coordinated Exchange Rate Policies in East Asia,” RIETI Discussion Paper 2006/01 06-E-002.
- Reinhart, Carmen M., and Keneeth S. Rogoff (2002), “The Modern History of Exchange Rate Arrangement,” A Reinterpretation,” NBER Working Paper 8963.
- Shimizu, Junko (2003), “How the Japanese Yen Affects Dollar Peg in East Asian Currencies?” *Kinyu Keizai Kenkyu*, No.20, pp.100-27 (in Japanese).
- Williamson, John (1999), “The Case for a Common Basket Peg for East Asian Currencies,” in Stefan

Collignon, Jean Pisani-Ferry, and Yung Chul Park (eds.), *Exchange Rate Policies in Emerging Asian Countries*, London: Routledge, pp.327-43.

Williamson, John (2000), *Exchange Rate Regimes for Emerging Markets: Reviving the Intermediate Option*, *Policy Analyses in International Economics* 60, Washington, DC: Institute for International Economies.

Table 1: Decomposed weights in the implicit basket system

(1) China

	Constant	USD	YEN	EURO	Adj. R-sq	D-W
1995Q1	0.000 ***	1.000 ***	0.000	-0.003	1.000	1.360
1995Q2	0.000 **	1.001 ***	-0.013	0.077 **	0.996	0.679
1995Q3	0.000 **	0.993 ***	0.016	0.016 **	1.000	1.466
1995Q4	0.000	1.001 ***	0.000	0.005	1.000	1.279
1996Q1	0.000 **	1.011 ***	-0.007 *	0.006	0.999	1.253
1996Q2	0.000 **	1.007 ***	-0.003	-0.009	1.000	1.656
1996Q3	0.000 ***	1.000 ***	0.001	-0.003	1.000	1.818
1996Q4	0.000	0.999 ***	0.001	-0.001	1.000	1.501
1997Q1	0.000	0.999 ***	0.001	-0.005 *	1.000	1.586
1997Q2	0.000	1.001 ***	-0.002	-0.006	0.998	2.480
1997Q3	0.000	0.999 ***	-0.001	-0.002	1.000	2.188
1997Q4	0.000 *	1.001 ***	-0.001	-0.001	1.000	1.543
1998Q1	0.000	0.999 ***	0.000	0.002	1.000	2.100
1998Q2	0.000	1.000 ***	0.001	0.001	1.000	2.234
1998Q3	0.000	0.999 ***	0.001	0.001	1.000	2.931
1998Q4	0.000	1.000 ***	0.000	-0.001	1.000	2.570
1999Q1	0.000	1.000 ***	-0.001 *	0.001	1.000	1.906
1999Q2	0.000	1.000 ***	-0.001	0.004	1.000	1.959
1999Q3	0.000	1.001 ***	0.000	-0.001	1.000	2.551
1999Q4	0.000	1.000 ***	0.000	-0.001	1.000	2.430
2000Q1	0.000	1.001 ***	0.000	0.004	1.000	1.772
2000Q2	0.000	1.000 ***	0.000	0.001	1.000	2.025
2000Q3	0.000	0.999 ***	0.001	-0.001	1.000	2.100
2000Q4	0.000	1.000 ***	-0.001	0.000	1.000	2.328
2001Q1	0.000	1.001 ***	0.000	-0.001	1.000	2.192
2001Q2	0.000	0.999 ***	0.001	-0.007 *	1.000	2.623
2001Q3	0.000	1.000 ***	0.000	0.000	1.000	2.551
2001Q4	0.000	1.000 ***	0.000	-0.001	1.000	1.691
2002Q1	0.000	1.002 ***	-0.001 ***	0.001	1.000	2.311
2002Q2	0.000	1.000 ***	0.000	0.000	1.000	2.117
2002Q3	0.000	1.000 ***	0.000	0.000	1.000	2.323
2002Q4	0.000	1.001 ***	0.000	-0.004 *	1.000	2.371
2003Q1	0.000	0.999 ***	0.000	0.003	1.000	2.425
2003Q2	0.000	1.000 ***	0.000	0.000	1.000	2.468
2003Q3	0.000	1.000 ***	0.001	0.000	1.000	2.409
2003Q4	0.000	1.000 ***	0.000	0.000	1.000	2.142
2004Q1	0.000	1.001 ***	0.000	-0.001	1.000	2.405
2004Q2	0.000	1.000 ***	-0.001 *	0.000	1.000	2.433
2004Q3	0.000	1.000 ***	0.001	0.000	1.000	2.700
2004Q4	0.000	1.000 ***	0.000	0.000	1.000	2.761
1997Q3-2001Q1	0.000	1.000 ***	0.000	0.000	1.000	2.306
2001Q2-2004Q4	0.000	1.000 ***	0.000	0.000	1.000	2.490
1997Q3-2004Q4	0.000	1.000 ***	0.000	0.000	1.000	2.343

Note: \*\*\*, \*\*, \* are significant at the 99%, 95% and 90% levels, respectively.

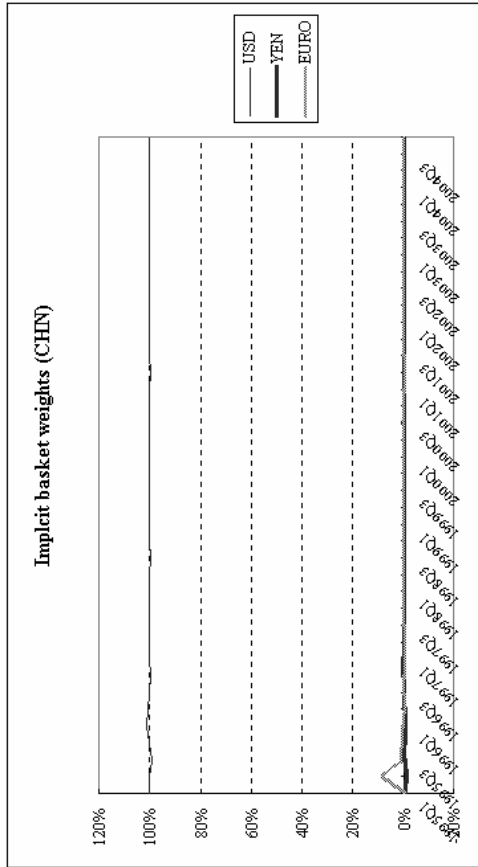


Table 1: Decomposed weights in the implicit basket system (continued)

(2) Hong Kong

	Constant	USD	YEN	EURO	Adj. R-sq	D.W
1995Q1	0.000	0.983 ***	0.003	0.043	0.999	1.840
1995Q2	0.000	1.003 ***	0.000	-0.017	1.000	2.438
1995Q3	0.000	0.986 ***	-0.003	0.026 *	1.000	2.418
1995Q4	0.000	0.999 ***	0.002	-0.006	1.000	2.310
1996Q1	0.000	0.984 ***	0.014	0.036	0.993	2.463
1996Q2	0.000	0.991 ***	0.007 **	0.009	0.999	1.949
1996Q3	0.000	1.000 ***	-0.005	-0.012	0.999	2.551
1996Q4	0.000	0.994 ***	0.003	0.008	1.000	2.139
1997Q1	0.000	1.000 ***	0.010 **	-0.011	0.999	2.174
1997Q2	0.000	1.004 ***	0.018 ***	0.000	0.996	2.919
1997Q3	0.000	0.991 ***	0.005	0.012	0.998	1.951
1997Q4	0.000	0.995 ***	0.024	-0.069	0.981	2.729
1998Q1	0.000	1.017 ***	0.024 **	-0.050	0.988	3.047
1998Q2	0.000	0.997 ***	0.006 *	0.004	0.997	2.983
1998Q3	0.000	0.999 ***	-0.001	0.007	0.999	2.029
1998Q4	0.000	1.001 ***	0.000	-0.007	1.000	2.242
1999Q1	0.000	0.997 ***	-0.001	0.009 *	1.000	2.500
1999Q2	0.000 *	0.999 ***	0.001	-0.010	1.000	1.917
1999Q3	0.000	1.001 ***	0.002	-0.008	1.000	2.911
1999Q4	0.000	0.994 ***	0.005 *	-0.001	0.999	2.302
2000Q1	0.000 ****	1.002 ****	0.000	-0.008	1.000	2.002
2000Q2	0.000 *	1.000 ***	-0.001	0.003	1.000	1.805
2000Q3	0.000	1.001 ***	-0.002	0.007 **	1.000	2.192
2000Q4	0.000	0.997 ***	0.002	-0.008	1.000	1.942
2001Q1	0.000	1.000 ***	-0.001	-0.002	1.000	2.681
2001Q2	0.000	0.999 ***	0.001	-0.003	1.000	2.141
2001Q3	0.000	1.000 ***	0.000	0.003 *	1.000	2.646
2001Q4	0.000	0.998 ***	0.003	0.001	1.000	2.457
2002Q1	0.000	1.005 ***	-0.004	-0.022	0.997	2.036
2002Q2	0.000	1.000 ***	0.001	0.004	1.000	2.447
2002Q3	0.000	1.003 ***	0.001	-0.023 **	1.000	2.976
2002Q4	0.000	0.999 ***	0.000	-0.001	1.000	2.185
2003Q1	0.000	1.000 ***	0.000	0.000	1.000	2.991
2003Q2	0.000	0.999 ***	0.000	0.000	1.000	3.224
2003Q3	0.000	0.919 ***	0.038 **	0.032	0.983	2.198
2003Q4	0.000	0.980 ***	0.014	0.072	0.984	1.974
2004Q1	0.000	0.984 ***	0.001	0.036 **	0.999	2.069
2004Q2	0.000	0.988 ***	0.008	0.018	0.999	2.427
2004Q3	0.000	0.989 ***	0.009 *	-0.012	0.999	2.689
2004Q4	0.000	0.955 ***	0.019 *	0.045	0.995	2.810
1997Q3-2001Q1	0.000	0.998 ***	0.003 **	-0.005	0.997	2.757
2001Q2-2004Q4	0.000	0.990 ***	0.006 ***	0.008	0.997	2.053
1997Q3-2004Q4	0.000	0.995 ***	0.004 ***	0.001	0.997	2.386

Note: \*\*\*, \*\*, \* are significant at the 99%, 95% and 90% levels, respectively.

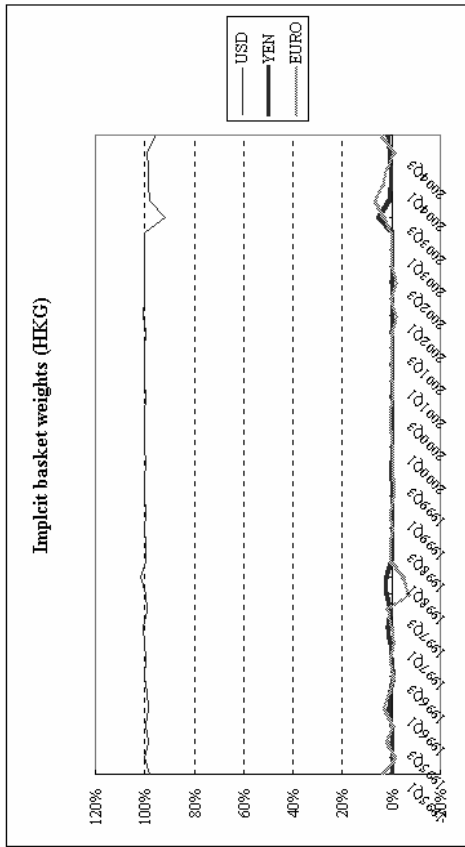




Table 1: Decomposed weights in the implicit basket system (continued)

(3) Indonesia

	Constant	USD	YEN	EURO	Adj. R-sq	D.W
1995Q1	0.000	1.009 ***	-0.026	0.038	0.954	2.223
1995Q2	0.000	1.003 ***	0.000	-0.046	0.993	1.667
1995Q3	0.000 *	1.011 ***	-0.029	-0.167	0.955	1.698
1995Q4	0.000	1.025 ***	0.045	-0.040	0.935	2.119
1996Q1	0.000	1.064 ***	-0.065	0.024	0.877	2.462
1996Q2	0.000	0.972 ***	0.000	0.100	0.956	1.843
1996Q3	0.000	0.957 ***	0.025	-0.030	0.830	2.144
1996Q4	0.000 ***	1.016 ***	-0.015	-0.016	0.988	1.755
1997Q1	0.000 *	1.030 ***	-0.004	-0.013	0.966	1.980
1997Q2	0.000	1.000 ***	0.004	0.031	0.949	2.045
1997Q3	0.005 *	0.754 *	0.260	-0.882	0.067	1.481
1997Q4	0.005	1.978	-0.633	0.838	0.039	1.782
1998Q1	0.011	-0.912	5.474 ***	0.367	0.137	1.628
1998Q2	0.011	-0.343	0.171	7.617 **	0.028	2.393
1998Q3	0.005	0.647	0.107	1.115	0.024	1.801
1998Q4	-0.004	0.363	0.222	0.511	-0.008	2.167
1999Q1	0.001	0.538	0.205	2.718 **	0.245	1.901
1999Q2	-0.004 *	1.107 **	0.105	0.962	0.091	2.148
1999Q3	0.004	0.569	0.408	1.207	0.084	1.569
1999Q4	-0.001	0.139	0.513 *	1.117	0.051	1.447
2000Q1	0.001	1.005 ****	0.181	0.811	0.486	2.149
2000Q2	0.002 *	1.079 ***	0.074	-0.114	0.360	1.759
2000Q3	0.000	1.455 ***	0.089	1.125 **	0.435	2.079
2000Q4	0.001	0.918 ***	0.136	-0.099	0.471	2.284
2001Q1	0.002	1.411 ***	-0.242	-0.044	0.446	2.290
2001Q2	0.002	1.355 ***	0.333	-1.212	0.423	1.623
2001Q3	-0.003	1.614 ***	-0.477	0.090	0.221	1.774
2001Q4	0.001	0.918 **	0.038	-0.667	0.187	1.752
2002Q1	-0.001	0.893 ***	-0.042	-0.368	0.343	1.771
2002Q2	-0.002	0.983 ***	-0.138	-0.091	0.236	2.062
2002Q3	0.000	0.507 ***	0.081	1.021 **	0.367	2.219
2002Q4	0.000	1.007 ***	0.175	-0.582	0.410	2.144
2003Q1	0.000	0.839 ***	0.083	-0.085	0.722	2.113
2003Q2	-0.001	0.706 ***	0.164	0.339	0.584	2.124
2003Q3	0.000	0.917 ***	0.246 *	-0.150	0.662	1.873
2003Q4	0.000	0.927 ***	-0.101	0.274	0.780	2.216
2004Q1	0.000	0.741 ***	0.158 **	0.292 *	0.871	2.201
2004Q2	0.001 *	0.881 ***	0.144	0.407	0.706	1.960
2004Q3	-0.001	0.713 ***	0.408 *	-1.467 **	0.355	2.252
2004Q4	0.001	0.661 ***	0.285 ***	0.180	0.733	2.084
1997Q3-2001Q1	0.001	0.695 ***	0.484 ***	0.749	0.054	1.939
2001Q2-2004Q4	0.000	0.892 ***	0.121 **	-0.055	0.378	1.914
1997Q3-2004Q4	0.001	0.731 ***	0.377 ***	0.375	0.076	1.935

Note: \*\*\*, \*\*, \* are significant at the 99%, 95% and 90% levels, respectively.

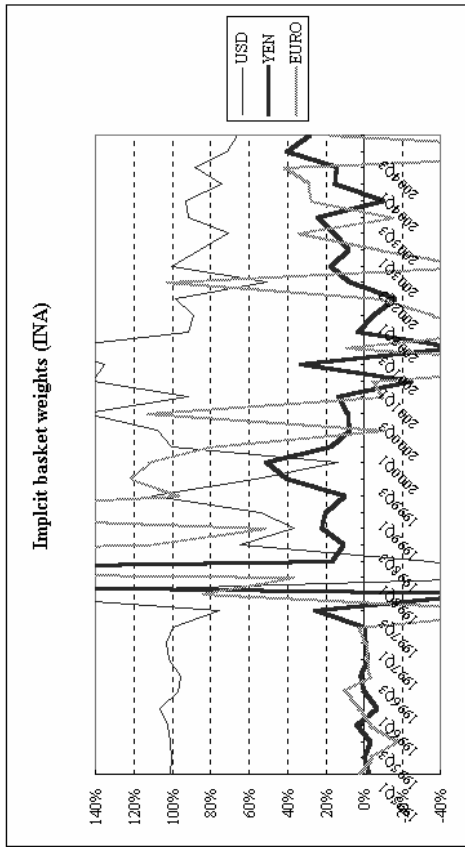


Table 1: Decomposed weights in the implicit basket system (continued)

(4) Korea

	Constant	USD	YEN	EURO	Adj. R-sq	D.W
1995Q1	0.000	1.094 ***	0.076 **	-0.271	0.941	2.083
1995Q2	0.000	1.025 ***	0.037	-0.071	0.975	2.137
1995Q3	0.000	0.868 ***	0.159 ***	0.229	0.849	1.796
1995Q4	0.000	0.915 ***	0.017	0.120	0.883	2.000
1996Q1	0.000	0.789 ***	0.162 **	0.007	0.820	1.992
1996Q2	0.000	0.883 ***	0.086 *	-0.164	0.778	1.346
1996Q3	0.000	0.765 ***	0.091	0.220	0.808	2.052
1996Q4	0.000	0.897 ***	0.088	0.061	0.875	1.448
1997Q1	0.001 **	1.149 ***	-0.014	-0.037	0.814	1.594
1997Q2	0.000	0.999 ***	-0.007	-0.076	0.976	2.392
1997Q3	0.000 **	0.976 ***	-0.008	0.060	0.934	2.627
1997Q4	0.010	1.988	-0.628	-0.863	-0.004	1.449
1998Q1	-0.003	1.424 **	-0.206	0.459	0.051	1.842
1998Q2	0.000	0.449	0.121	1.438 **	0.139	1.871
1998Q3	0.000	1.354 ***	-0.049	-1.132	0.257	1.841
1998Q4	-0.002	1.313 ***	0.160 *	-0.634	0.556	1.951
1999Q1	0.000	0.734 ***	0.110	0.362	0.306	1.447
1999Q2	-0.001 **	0.884 ***	0.046	0.206	0.613	1.777
1999Q3	0.001 *	1.122 ***	0.031	-0.890 *	0.838	1.803
1999Q4	-0.001 **	0.993 ***	-0.028	0.382	0.708	1.948
2000Q1	0.000	1.014 ***	0.109	-0.321	0.766	2.000
2000Q2	0.000	1.085 ***	-0.010	-0.015	0.876	1.537
2000Q3	0.000	0.928 ***	0.101	-0.041	0.878	1.892
2000Q4	0.001	0.764 ***	0.557 **	-0.168	0.490	2.608
2001Q1	0.001	0.910 ***	0.304 ***	0.373	0.689	2.550
2001Q2	0.000	0.814 ***	0.380 ***	-0.222	0.704	2.218
2001Q3	0.000	0.972 ***	0.114	0.053	0.759	2.648
2001Q4	0.000	0.754 ***	0.436 ***	-0.044	0.746	2.237
2002Q1	0.000	0.843 ***	0.116	-0.063	0.535	2.323
2002Q2	-0.002 **	1.038 ***	-0.020	-0.295	0.527	2.204
2002Q3	0.000	0.514 ***	0.442 ***	-0.445	0.337	2.411
2002Q4	0.000	0.615 ***	0.381 **	-0.679	0.214	2.734
2003Q1	0.001	0.807 ***	0.147	0.007	0.467	2.196
2003Q2	-0.001	0.669 ***	0.232	0.148	0.387	2.995
2003Q3	0.000	0.787 ***	0.172 *	-0.029	0.737	2.483
2003Q4	0.001 *	0.665 ***	0.073	1.193 ***	0.654	2.466
2004Q1	-0.001	0.758 ***	0.165 **	0.038	0.852	2.258
2004Q2	0.000	0.816 ***	0.174 **	0.296	0.769	2.348
2004Q3	0.000	0.804 ***	0.198 ***	-0.007	0.871	2.325
2004Q4	-0.001 **	0.680 ***	0.359 ***	0.641 *	0.687	2.111
1997Q3-2001Q1	0.000	1.056 ***	0.065	0.003	0.172	1.636
2001Q2-2004Q4	0.000	0.765 ***	0.243 ***	0.055	0.623	2.460
1997Q3-2004Q4	0.000	0.929 ***	0.120 ***	0.027	0.249	1.710

Note: \*\*\*, \*\*, \* are significant at the 99%, 95% and 90% levels, respectively.

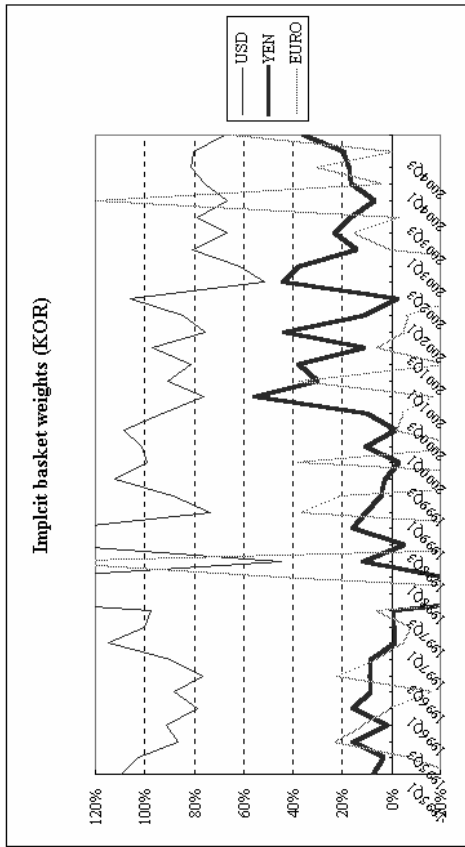


Table 1: Decomposed weights in the implicit basket system (continued)

(5) Malaysia

	Constant	USD	YEN	EURO	Adj. R-sq	D.W
1995Q1	0.000	0.930 ***	0.068 ***	-0.008	0.981	2.151
1995Q2	-0.001 *	0.889 ***	0.063	0.071	0.945	1.811
1995Q3	0.000	0.807 ***	0.138 ***	-0.028	0.949	1.956
1995Q4	0.000	0.824 ***	0.098 **	0.076	0.863	2.123
1996Q1	0.000	0.806 ***	0.127 ***	0.156	0.933	1.918
1996Q2	0.000	0.959 ***	0.017	-0.123	0.863	2.036
1996Q3	0.000	0.960 ***	0.001	-0.018	0.977	2.001
1996Q4	0.000	0.896 ***	0.073 ***	0.048	0.971	1.749
1997Q1	0.000	0.932 ***	0.094 *	-0.126	0.895	2.188
1997Q2	0.000	0.885 ***	0.008	-0.060	0.837	1.922
1997Q3	0.004 ***	0.942 ***	-0.145	-0.231	0.177	1.751
1997Q4	0.002	0.621	0.117	1.350 *	0.245	1.768
1998Q1	0.000	0.569	1.697 ***	3.287 *	0.262	1.914
1998Q2	0.002	0.244	0.766 ***	0.803	0.288	1.936
1998Q3	-0.001	0.520 **	0.226 *	0.568	0.221	1.595
1998Q4	0.000	1.010 ***	0.005	-0.015	0.997	2.983
1999Q1	0.000	1.029 ***	-0.009	0.043	0.991	2.898
1999Q2	0.000	0.999 ***	0.001	-0.007	1.000	3.124
1999Q3	0.000	0.997 ***	-0.001	0.009	1.000	2.883
1999Q4	0.000	1.000 ***	0.000	0.003	1.000	3.204
2000Q1	0.000	1.000 ***	0.000	0.001	1.000	2.983
2000Q2	0.000	1.000 ***	0.000	0.000	1.000	2.985
2000Q3	0.000	1.000 ***	0.000	0.000	1.000	2.999
2000Q4	0.000	1.002 ***	-0.002 *	-0.001	1.000	2.579
2001Q1	0.000	1.002 ***	0.001	0.000	1.000	2.654
2001Q2	0.000	1.004 ***	-0.004	0.000	0.999	2.974
2001Q3	0.000	0.995 ***	0.003	-0.003	1.000	2.503
2001Q4	0.000	0.999 ***	0.002	0.014 *	1.000	2.194
2002Q1	0.000	1.012 ***	-0.004	-0.006	0.998	3.048
2002Q2	0.000	1.000 ***	0.000	0.011	0.999	3.115
2002Q3	0.000	0.998 ***	0.001	0.010	0.999	2.938
2002Q4	0.000	0.993 ***	0.005	0.004	0.999	2.897
2003Q1	0.000	1.002 ***	-0.003	-0.013	0.999	2.899
2003Q2	0.000	1.009 ***	0.007	-0.027 *	0.998	2.880
2003Q3	0.000	0.987 ***	0.001	-0.010	0.996	2.934
2003Q4	0.000	1.000 ***	0.002	0.029	0.996	2.942
2004Q1	0.000	1.012 ***	-0.008	0.017	0.998	3.055
2004Q2	0.000	1.005 ***	-0.004	-0.006	0.999	2.516
2004Q3	0.000	1.000 ***	0.000	0.000	1.000	2.046
2004Q4	0.000	1.000 ***	0.000	0.003 *	1.000	2.790
1997Q3-2001Q1	0.000	0.827 ***	0.189 ***	0.352 ***	0.326	1.866
2001Q2-2004Q4	0.000	1.002 ***	-0.001	-0.001	0.999	2.983
1997Q3-2004Q4	0.000	0.885 ***	0.132 ***	0.189 ***	0.481	1.860

Note: \*\*\*, \*\*, \* are significant at the 99%, 95% and 90% levels, respectively.

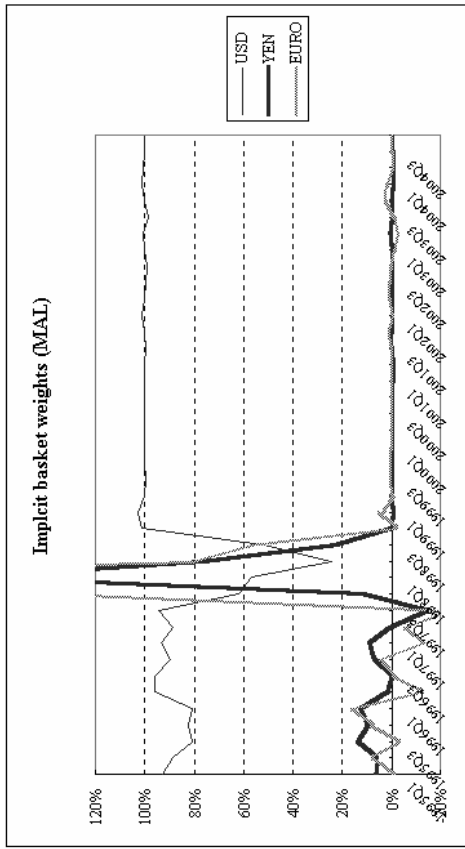


Table 1: Decomposed weights in the implicit basket system (continued)

(6) The Philippines

	Constant	USD	YEN	EURO	Adj. R-sq	D.W
1995Q1	0.001 *	0.984 ***	0.257 ***	-0.441	0.744	2.770
1995Q2	0.000	1.017 ***	-0.028	0.039	0.969	2.100
1995Q3	0.000	0.982 ***	0.012	0.163	0.969	1.675
1995Q4	0.000	0.990 ***	0.044	-0.097	0.874	2.107
1996Q1	0.000	1.018 ***	-0.018	-0.005	0.981	2.289
1996Q2	0.000	1.039 ***	-0.008	-0.083	0.988	2.154
1996Q3	0.000	0.995 ***	0.002	-0.009	0.994	2.070
1996Q4	0.000	1.000 ***	-0.003	-0.002	0.996	2.045
1997Q1	0.000	1.002 ***	0.000	0.000	0.997	2.045
1997Q2	0.000	1.003 ***	0.000	0.020	0.998	2.392
1997Q3	0.004 *	0.315	0.245	-0.765	0.001	1.683
1997Q4	0.002	0.893 *	0.119	0.339	0.133	1.398
1998Q1	0.000	0.997 **	0.842 ***	2.227 **	0.363	1.512
1998Q2	0.001	0.553	0.309	-0.038	0.026	2.582
1998Q3	0.001	0.932 ***	0.230 **	0.054	0.490	1.704
1998Q4	-0.001 *	1.065 ***	0.118 *	-0.177	0.653	2.065
1999Q1	0.000	0.741 ***	0.244 ***	0.304	0.574	1.934
1999Q2	0.000	1.036 ***	0.062	0.016	0.809	2.120
1999Q3	0.001 **	0.899 ***	-0.018	0.100	0.672	2.307
1999Q4	0.000	0.947 ***	-0.003	0.112	0.634	2.096
2000Q1	0.000	0.987 ***	0.037	0.195	0.820	2.108
2000Q2	0.001 **	0.910 ***	0.058	-0.149	0.814	1.267
2000Q3	0.001 **	1.101 ***	-0.079	-0.086	0.819	2.038
2000Q4	0.002	1.500 ***	-0.623 **	-0.980 *	0.300	2.114
2001Q1	0.000	0.909 **	0.504 *	0.920	0.279	2.084
2001Q2	0.001	1.112 ***	0.072	-0.298	0.632	2.136
2001Q3	0.000	1.037 ***	-0.028	0.086	0.559	2.574
2001Q4	0.000	1.118 ***	-0.128	-0.341 **	0.840	1.688
2002Q1	0.000	0.983 ***	0.103 **	-0.282 *	0.823	2.899
2002Q2	0.000	0.947 ***	-0.128	-0.213	0.417	2.696
2002Q3	0.001	0.678 ***	0.161 **	0.339 **	0.835	1.804
2002Q4	0.001	0.790 ***	0.038	-0.083	0.445	2.774
2003Q1	0.000	0.995 ***	0.059	0.406	0.846	1.559
2003Q2	0.000	0.771 ***	0.140	0.277	0.722	2.368
2003Q3	0.001	0.946 ***	0.051	-0.314	0.628	3.097
2003Q4	0.000	1.072 ***	0.028	-0.119	0.747	2.569
2004Q1	0.000	0.850 ***	0.088 **	0.087	0.951	2.211
2004Q2	0.000	0.957 ***	0.079	-0.257	0.875	1.829
2004Q3	0.000	0.910 ***	0.088 **	0.005	0.961	1.902
2004Q4	0.000	0.913 ***	0.059 **	0.162 *	0.971	2.200
1997Q3-2001Q1	0.001 *	0.877 ***	0.181 ***	0.065	0.289	1.834
2001Q2-2004Q4	0.000	0.922 ***	0.064 ***	-0.031	0.730	2.509
1997Q3-2004Q4	0.000 **	0.881 ***	0.147 ***	0.018	0.402	1.908

Note: \*\*\*, \*\*, \* are significant at the 99%, 95% and 90% levels, respectively.

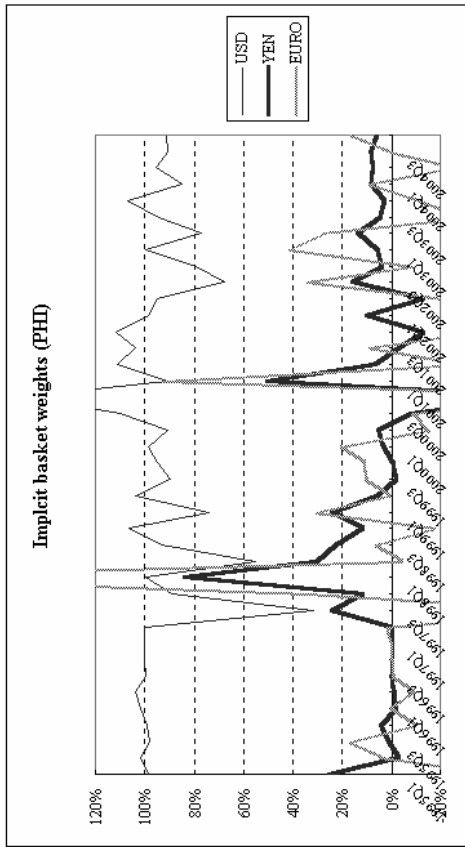


Table 1: Decomposed weights in the implicit basket system (continued)

(7) Singapore

	Constant	USD	YEN	EURO	Adj. R-sq	D.W
1995Q1	0.000	0.828 ***	0.281 ***	-0.305	0.905	2.453
1995Q2	0.000	0.865 ***	0.103 ***	0.081	0.969	2.017
1995Q3	0.000	0.630 ***	0.197 ***	0.228	0.890	1.983
1995Q4	0.000	0.777 ***	0.129 ***	0.016	0.841	2.334
1996Q1	0.000	0.741 ***	0.138 **	-0.064	0.829	2.277
1996Q2	0.000	0.912 ***	0.064 ***	-0.109	0.970	2.196
1996Q3	0.000	0.836 ***	0.032	0.209	0.943	2.367
1996Q4	0.000	0.786 ***	0.122 ***	0.083	0.962	1.900
1997Q1	0.000	0.812 ***	0.077 *	0.157	0.918	2.074
1997Q2	0.000	0.751 ***	0.140 ***	0.225 ***	0.944	2.598
1997Q3	0.001	0.908 ***	0.005	0.054	0.540	2.094
1997Q4	0.001	0.739 ***	0.153	0.500	0.568	1.962
1998Q1	-0.001	0.438 **	0.796 ***	0.783	0.413	2.264
1998Q2	0.000	0.344	0.713 ***	0.861 *	0.471	2.038
1998Q3	0.000	0.673 ***	0.333 ***	0.045	0.482	2.257
1998Q4	0.000	0.579 ***	0.203 ***	0.634 **	0.728	2.162
1999Q1	0.000	0.784 ***	0.134 ***	0.487 **	0.804	2.243
1999Q2	0.000	0.889 ***	0.128 **	0.382	0.754	2.105
1999Q3	0.000	0.695 ***	0.148 ***	0.598	0.779	2.373
1999Q4	0.000	0.899 ***	0.038	-0.025	0.801	2.022
2000Q1	0.000	0.722 ***	0.184 ***	0.133	0.868	2.195
2000Q2	0.000	0.932 ***	0.088 **	0.043	0.930	1.421
2000Q3	0.000	0.941 ***	0.054	0.082	0.945	1.731
2000Q4	0.000	0.737 ***	0.211 ***	0.089	0.903	2.247
2001Q1	0.000 *	0.831 ***	0.118 ***	0.293 ***	0.938	2.295
2001Q2	0.000	0.845 ***	0.209 ***	-0.170	0.913	2.077
2001Q3	0.000	0.678 ***	0.328 ***	0.047	0.822	1.745
2001Q4	0.000	0.716 ***	0.279 ***	0.009	0.875	1.624
2002Q1	0.000	0.850 ***	0.234 ***	-0.073	0.898	2.183
2002Q2	0.000	0.676 ***	0.226 ***	0.063	0.879	2.091
2002Q3	0.000	0.594 ***	0.365 ***	0.132	0.917	2.426
2002Q4	0.000	0.757 ***	0.354 ***	-0.351	0.796	2.513
2003Q1	0.000	0.600 ***	0.314 ***	0.007	0.888	2.537
2003Q2	0.000	0.615 ***	0.232 ***	0.188	0.823	2.074
2003Q3	0.000	0.630 ***	0.307 ***	0.325 ***	0.906	2.320
2003Q4	0.000	0.733 ***	0.045	0.554 ***	0.922	1.960
2004Q1	0.000	0.603 ***	0.214 ***	0.087	0.908	2.493
2004Q2	0.000	0.563 ***	0.328 ***	0.225 *	0.915	2.121
2004Q3	0.000 *	0.649 ***	0.271 ***	-0.051	0.933	1.736
2004Q4	0.000	0.558 ***	0.230 ***	0.204	0.875	2.456
1997Q3-2001Q1	0.000	0.704 ***	0.252 ***	0.299 ***	0.624	2.185
2001Q2-2004Q4	0.000	0.651 ***	0.273 ***	0.084 **	0.881	2.120
1997Q3-2004Q4	0.000	0.676 ***	0.238 ***	0.200 ***	0.716	2.178

Note: \*\*\*, \*\*, \* are significant at the 99%, 95% and 90% levels, respectively.

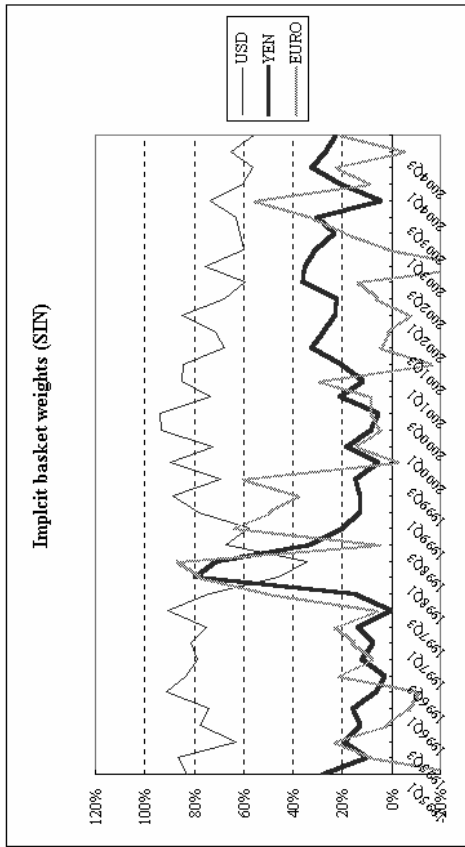


Table 1: Decomposed weights in the implicit basket system (continued)

(8) Thailand

	Constant	USD	YEN	EURO	Adj. R-sq	D.W
1995Q1	0.000	0.891 ***	0.045 ***	0.072	0.988	2.499
1995Q2	0.000	0.861 ***	0.092 ***	-0.013	0.994	2.582
1995Q3	0.000	0.877 ***	0.084 ***	-0.014	0.993	2.582
1995Q4	0.000	0.860 ***	0.098 ***	0.071	0.979	2.565
1996Q1	0.000	0.918 ***	0.066 **	-0.071	0.961	2.242
1996Q2	0.000	0.962 ***	0.031 *	-0.089	0.971	2.556
1996Q3	0.000	0.960 ***	0.053 *	-0.124	0.967	2.598
1996Q4	0.000	0.893 ***	0.055 ***	0.029	0.984	2.204
1997Q1	0.000	0.844 ***	0.097 ***	0.048	0.981	1.890
1997Q2	-0.001	0.760 *	0.281	0.966	0.175	1.988
1997Q3	0.006 *	0.521	-0.185	-0.055	-0.084	1.975
1997Q4	0.004 *	0.638	0.193	1.158	0.184	2.110
1998Q1	-0.003	0.226	1.092 **	2.185	0.125	1.634
1998Q2	0.001	0.612 *	0.653 ***	0.525	0.288	1.977
1998Q3	-0.001	0.487 ***	0.269 ***	0.426	0.329	1.874
1998Q4	-0.001	0.914 ***	0.086	0.134	0.700	1.963
1999Q1	0.000	0.665 ***	0.166 *	0.883 **	0.458	2.671
1999Q2	0.000	0.892 ***	0.079	0.303	0.692	2.151
1999Q3	0.002 **	0.827 ***	0.069	0.176	0.531	2.122
1999Q4	-0.001	0.595 ***	0.133	0.653	0.282	1.878
2000Q1	0.000	0.759 ***	0.219 ****	0.059	0.742	2.344
2000Q2	0.001	0.985 ***	0.038	0.032	0.843	1.959
2000Q3	0.001	0.844 ***	0.158	0.078	0.652	2.246
2000Q4	0.000	0.777 ***	0.360 **	0.485	0.600	1.690
2001Q1	0.000	0.723 ***	0.295 ***	0.327	0.812	1.906
2001Q2	0.000	0.945 ***	0.133 ***	-0.500 ***	0.896	2.286
2001Q3	0.000	0.936 ***	0.119 *	-0.004	0.864	2.179
2001Q4	0.000	0.887 ***	0.179 ***	-0.071	0.930	1.724
2002Q1	0.000	0.841 ***	0.197 ***	-0.247 **	0.892	2.158
2002Q2	-0.001	0.989 ***	-0.283 *	-0.049	0.411	2.795
2002Q3	0.001	0.372 ***	0.325 ***	0.663 **	0.633	2.114
2002Q4	0.000	0.886 ***	0.207 ***	-0.916 ***	0.646	2.554
2003Q1	0.000	0.743 ***	0.199 ***	0.005	0.865	2.196
2003Q2	0.000	0.675 ***	0.264 **	0.137	0.725	2.707
2003Q3	0.000	0.741 ***	0.267 ***	0.124	0.827	2.585
2003Q4	0.000	0.729 ***	0.077	0.409 *	0.858	1.711
2004Q1	0.000	0.790 ***	0.091 **	0.210 *	0.935	1.690
2004Q2	0.000	0.786 ***	0.234 ***	0.069	0.894	2.097
2004Q3	0.000	0.793 ***	0.151 ***	-0.025	0.920	2.123
2004Q4	-0.001 *	0.612 ***	0.280 ***	0.337 *	0.846	2.045
1997Q3-2001Q1	0.001	0.697 ***	0.254 ***	0.476 ***	0.243	1.903
2001Q2-2004Q4	0.000	0.762 ***	0.181 ***	0.045	0.788	2.412
1997Q3-2004Q4	0.000	0.712 ***	0.233 ***	0.282 ***	0.352	1.940

Note: \*\*\*, \*\*, \* are significant at the 99%, 95% and 90% levels, respectively.

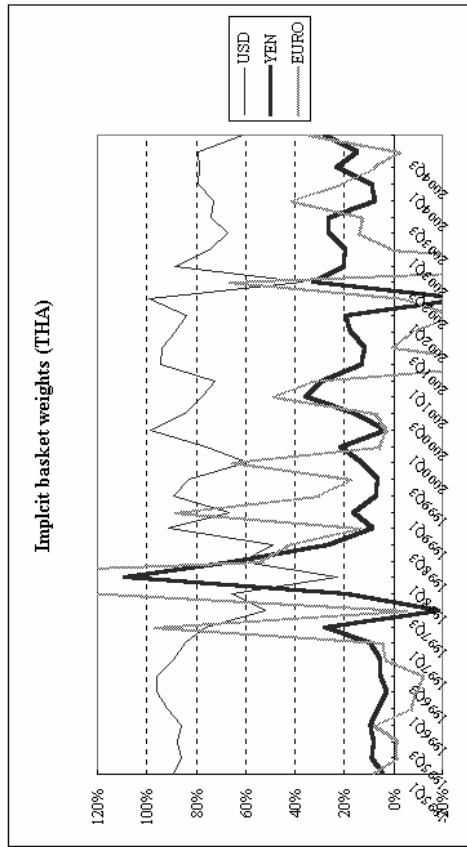


Table 1: Decomposed weights in the implicit basket system (continued)

(9) Taiwan

	Constant	USD	YEN	EURO	Adj. R-sq	D.W
1995Q1	0.000	0.981 ***	-0.023	0.080	0.975	1.911
1995Q2	0.000	0.870 ***	0.155 **	0.067	0.836	2.149
1995Q3	0.001	1.036 ***	0.043	-0.173	0.835	2.161
1995Q4	0.000	0.965 ***	0.072	-0.056	0.745	1.804
1996Q1	0.000	0.848 ***	0.050	0.110	0.872	2.513
1996Q2	0.000	0.833 ***	0.131 **	-0.428 *	0.728	2.089
1996Q3	0.000	0.934 ***	0.016	0.047	0.970	2.731
1996Q4	0.000	0.956 ***	0.028 **	0.066 **	0.994	1.884
1997Q1	0.000	0.966 ***	0.001	-0.006	0.973	2.022
1997Q2	0.000 *	0.988 ***	-0.002	-0.057	0.983	1.878
1997Q3	0.000 *	1.034 ***	-0.038	-0.013	0.904	0.762
1997Q4	0.002	0.564 **	0.099	1.133 **	0.446	1.425
1998Q1	0.000	0.778 ***	0.232 **	0.781 **	0.511	1.292
1998Q2	0.001	0.840 ***	0.092 *	0.336	0.535	2.170
1998Q3	0.000	0.994 ***	0.036 *	-0.055	0.938	1.668
1998Q4	-0.001 *	0.978 ***	0.103 ***	-0.256	0.883	1.993
1999Q1	0.000	0.884 ***	0.022	0.207	0.830	1.872
1999Q2	0.000 ***	0.988 ***	0.036 **	0.038	0.970	1.511
1999Q3	0.000 *	0.978 ***	0.005	-0.096	0.979	2.097
1999Q4	0.000	0.994 ***	-0.005	-0.007	0.969	2.334
2000Q1	0.000	0.837 ***	-0.035	-0.785	0.213	2.888
2000Q2	0.000	1.045 ***	-0.055 *	-0.032	0.946	2.318
2000Q3	0.000	1.137 ***	-0.140	-0.053	0.732	2.818
2000Q4	0.001 **	0.802 ***	0.115	0.018	0.755	1.452
2001Q1	0.000	0.887 ***	0.071 *	0.099	0.896	2.155
2001Q2	0.001	1.124 ***	-0.153	0.213	0.606	2.113
2001Q3	0.000	1.035 ***	-0.003	0.042	0.942	2.005
2001Q4	0.000	0.927 ***	0.075 **	-0.037	0.977	1.447
2002Q1	0.000	0.973 ***	0.042 ***	-0.113 **	0.973	2.736
2002Q2	0.000 ***	0.881 ***	0.067 **	0.021	0.965	1.591
2002Q3	0.001 **	0.749 ***	0.110 *	0.019	0.862	1.888
2002Q4	0.000	0.940 ***	0.027	-0.080	0.842	1.914
2003Q1	0.000	0.909 ***	0.059	-0.029	0.913	2.219
2003Q2	0.000	0.994 ***	-0.021	-0.077	0.967	2.411
2003Q3	0.000	0.873 ***	0.119 ***	0.132	0.953	2.652
2003Q4	0.000	0.955 ***	-0.019	0.156	0.946	2.367
2004Q1	0.000 **	0.885 ***	0.014	0.126	0.930	2.341
2004Q2	0.000	0.886 ***	0.110 *	-0.063	0.831	2.335
2004Q3	0.000	0.981 ***	0.077	-0.346	0.853	2.384
2004Q4	-0.001 **	0.866 ***	0.294 ***	0.133	0.816	2.505
1997Q3-2001Q1	0.000	0.901 ***	0.054 ***	0.126 **	0.671	2.009
2001Q2-2004Q4	0.000	0.911 ***	0.040 ***	0.038	0.874	2.094
1997Q3-2004Q4	0.000	0.904 ***	0.052 ***	0.087 **	0.760	2.027

Note: \*\*\*, \*\*, \* are significant at the 99%, 95% and 90% levels, respectively.

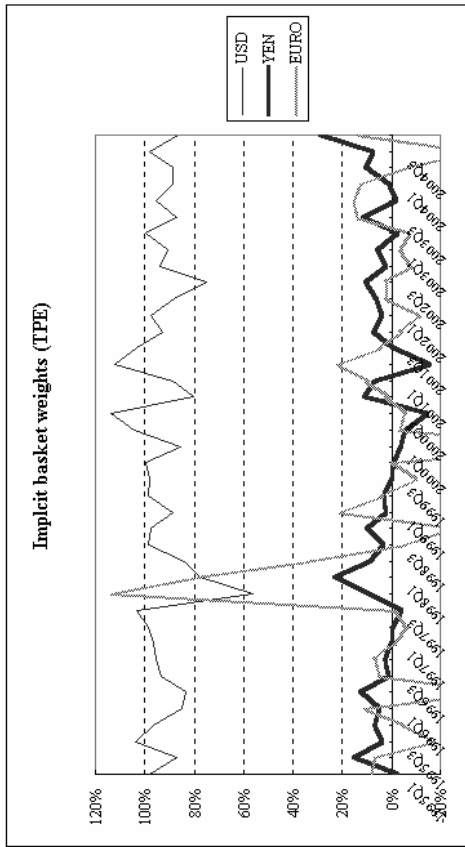
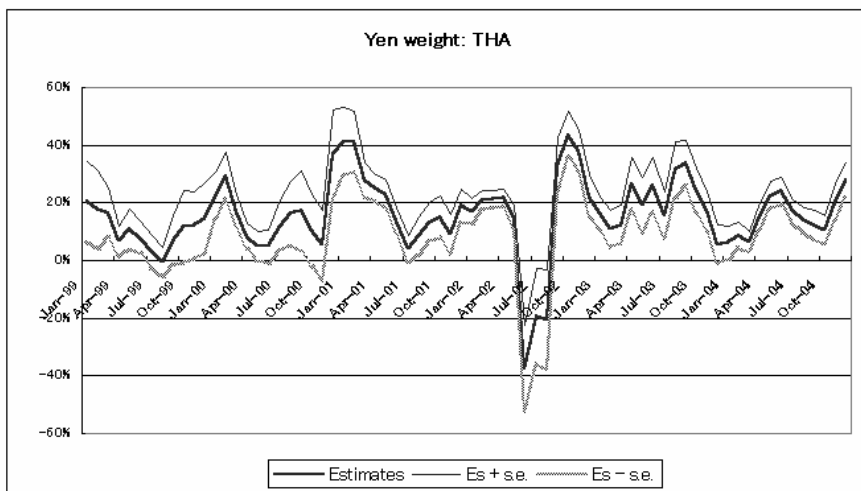
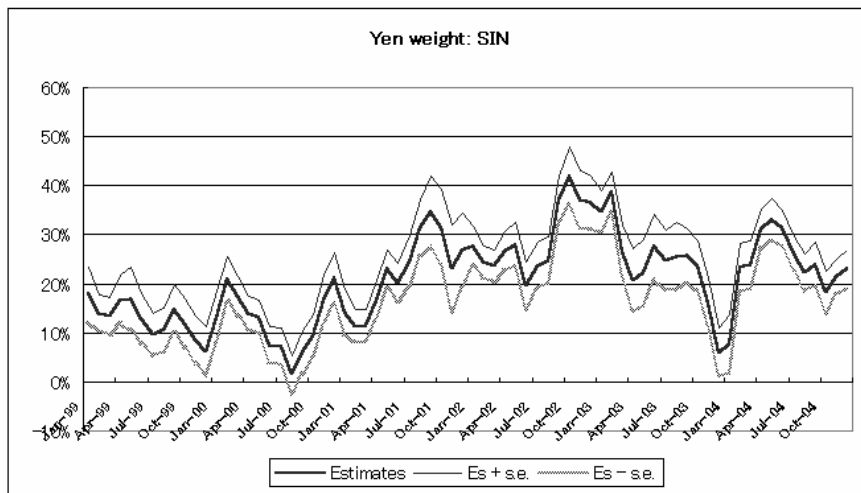
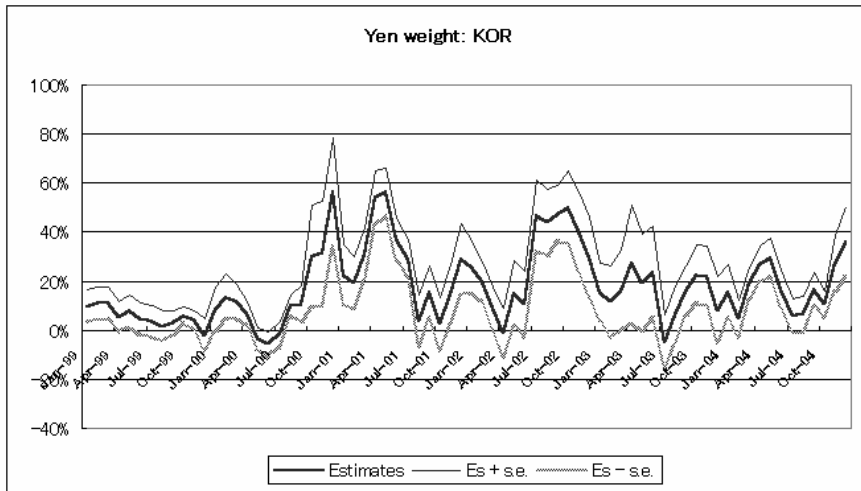


Figure 1: Re-computed yen weights for Korea, Singapore and Thailand





**Table 2: Determinants of the yen weight with the basic model**

Number Dependent variable Regression	Contemporaneous		Lagged(-1)		Lagged(-2)	
	(1) Yen weight Pooled OLS	(2) Yen weight Pooled OLS	(3) Yen weight Pooled OLS	(4) Yen weight Pooled OLS	(5) Yen weight Pooled OLS	(6) Yen weight Pooled OLS
Constant	-0.949 (0.596)		-0.398 (0.693)		0.130 (0.779)	
Yen level	0.249 ** (0.125)	0.278 ** (0.122)	0.132 (0.146)	0.163 (0.138)	0.020 (0.164)	0.056 (0.155)
Yen change	1.056 *** (0.370)	1.052 *** (0.362)	1.110 *** (0.393)	1.097 *** (0.379)	1.016 ** (0.398)	0.997 ** (0.389)
CPI	-0.660 (2.086)	-0.444 (2.079)	2.033 (2.597)	2.167 (2.593)	1.620 (2.801)	1.572 (2.837)
IP	0.057 (0.104)	0.071 (0.099)	0.145 (0.118)	0.157 (0.118)	0.140 (0.117)	0.147 (0.117)
Exports	-0.093 (0.110)	-0.112 (0.111)	-0.144 (0.141)	-0.159 (0.139)	-0.006 (0.132)	-0.018 (0.125)
Local ST interest rate	-0.312 (0.662)	-2.088 (1.920)	-0.455 (0.638)	-2.184 (1.654)	-0.482 (0.620)	-2.242 (1.565)
US ST interest rate	-1.265 *** (0.397)	-0.821 (0.656)	-1.160 *** (0.408)	-0.717 (0.620)	-1.063 ** (0.413)	-0.596 (0.623)
Fixed effects						
Korea		-1.017		-0.475		0.033
Singapore		-1.048		-0.506		-0.001
Thailand		-1.097		-0.555		-0.049
Adjusted R-squared	0.090	0.111	0.071	0.093	0.041	0.063

Notes :

1. Standard errors are in parentheses.
2. \*\*\*, \*\*, \* are significant at the 99%, 95% and 90% levels, respectively.
3. White heteroskedasticity-consistent standard errors and covariances are applied.

Table 3: Determinants of the yen weight with the basic model ("Local" regression)

Dependent variable	Korea			Singapore			Thailand		
	Contemporaneous		Lagged (-1)	Contemporaneous		Lagged (-1)	Contemporaneous		Lagged (-1)
	Yen weight	OLS	Yen weight	OLS	Yen weight	OLS	Yen weight	OLS	Yen weight
Constant	-0.875 (1.304)	-0.824 (1.403)	-0.733 (1.485)	-1.553 ** (0.617)	-1.564 ** (0.664)	-1.428 ** (0.639)	-0.306 (1.123)	1.057 (1.255)	2.808 * (1.543)
Yen level	0.157 (0.287)	0.191 (0.301)	0.185 (0.319)	0.384 *** (0.127)	0.384 *** (0.137)	0.356 *** (0.133)	0.100 (0.240)	-0.189 (0.266)	-0.553 * (0.328)
Yen change	1.440 ** (0.693)	0.934 (0.765)	0.767 (0.910)	0.187 (0.288)	0.228 (0.304)	0.420 (0.370)	1.591 ** (0.711)	2.129 *** (0.698)	1.761 *** (0.634)
CPI	-3.703 (3.433)	1.771 (4.690)	6.085 (4.576)	-2.121 (1.920)	-1.466 (1.911)	0.515 (2.230)	9.797 * (5.387)	9.398 ** (4.376)	-4.035 (5.078)
IP	0.256 (0.483)	0.082 (0.364)	-0.059 (0.632)	-0.089 (0.090)	-0.001 (0.090)	0.022 (0.101)	0.361 (0.257)	0.488 * (0.281)	0.505 (0.338)
Exports	-0.109 (0.415)	0.025 (0.370)	0.191 (0.382)	0.032 (0.117)	-0.044 (0.115)	0.023 (0.107)	-0.262 (0.196)	-0.411 (0.283)	-0.190 (0.237)
Local ST interest rate	10.010 (7.576)	3.253 (4.129)	0.918 (2.613)	5.129 ** (2.364)	7.112 ** (2.783)	6.129 ** (2.874)	-1.278 (2.922)	-0.128 (2.941)	0.123 (3.334)
US ST interest rate	-3.914 ** (2.109)	-1.733 (1.301)	-0.768 (1.216)	-4.387 *** (0.786)	-4.955 *** (0.981)	-4.570 *** (1.022)	0.026 (0.859)	-0.266 (0.818)	-0.623 (0.861)
Adjusted R-squared	0.066	-0.040	-0.033	0.529	0.505	0.455	0.057	0.145	0.065

Notes:

1. Standard errors are in parentheses.
2. \*\*\*, \*\*, \* are significant at the 99%, 95% and 90% levels, respectively.
3. White heteroskedasticity-consistent standard errors and covariances are applied.

Table 4: Determinants of yen weights in lower or higher yen stages

Model Dependent variable Dummy type Regression	(1) Contemporaneous		(3) Lagged(-1)		(5) Lagged(-2)	
	Yen weights		Yen weights		Yen weights	
	Type 1 Pooled OLS	Type 2 Pooled OLS	Type 2 Pooled OLS	Type 2 Pooled OLS	Type 1 Pooled OLS	Type 1 Pooled OLS
Constant	0.238 *** (0.019)		0.231 *** (0.018)		0.220 *** (0.020)	
Lower yen: Yen change	1.128 (0.718)	1.160 * (0.696)	1.395 ** (0.675)	1.376 ** (0.638)	0.606 (0.566)	0.550 (0.566)
Lower yen: CFI	4.173 (3.413)	4.301 (3.456)	7.374 ** (3.587)	7.484 ** (3.506)	2.282 (4.342)	2.053 (4.238)
Lower yen: IP	0.072 (0.160)	0.078 (0.149)	0.164 (0.169)	0.185 (0.169)	0.195 (0.169)	0.232 (0.162)
Lower yen: Exports	-0.083 (0.187)	-0.089 (0.177)	-0.186 (0.206)	-0.215 (0.201)	-0.027 (0.207)	-0.066 (0.187)
Lower yen: Local ST int	-0.214 (0.941)	-1.883 (2.039)	-0.373 (0.883)	-2.751 (1.749)	-0.278 (0.801)	-3.088 * (1.789)
Lower yen: US ST int	-1.237 * (0.738)	-0.879 (0.885)	-0.978 (0.638)	-0.413 (0.769)	-0.415 (0.663)	0.286 (0.865)
Higher yen: Yen change	1.150 *** (0.421)	1.145 *** (0.428)	0.632 * (0.335)	0.624 * (0.333)	1.015 ** (0.421)	1.021 ** (0.423)
Higher yen: CFI	-5.691 ** (2.385)	-5.396 ** (2.323)	-2.628 (3.770)	-2.719 (3.763)	2.064 (3.336)	1.597 (3.425)
Higher yen: IP	0.008 (0.127)	0.033 (0.132)	0.055 (0.153)	0.065 (0.151)	0.073 (0.145)	0.048 (0.157)
Higher yen: Exports	-0.118 (0.128)	-0.158 (0.147)	0.035 (0.131)	0.056 (0.123)	0.064 (0.119)	0.076 (0.115)
Higher yen: Local ST int	-0.644 (0.774)	-2.673 (2.132)	-0.915 (0.830)	-3.678 * (1.939)	-1.045 (0.749)	-4.253 ** (1.988)
Higher yen: US ST int	-1.320 *** (0.359)	-0.794 (0.652)	-1.203 *** (0.396)	-0.497 (0.647)	-1.066 *** (0.407)	-0.248 (0.687)
Fixed effects						
Korea		0.309		0.330		0.340
Singapore		0.276		0.274		0.266
Thailand		0.227		0.224		0.217
Adjusted R-squared	0.087	0.110	0.092	0.121	0.050	0.083

Table 4: Determinants of yen weights in lower or higher yen stages (continued)

Number Dependent variable Dummy type Regression	Korea			Singapore			Thailand		
	Lagged (-1)			Lagged (-1)			Lagged (-1)		
	(1) Contemporaneous Yen weight Type 1 OLS	(2) Lagged (-1) Yen weight Type 1 OLS	(3) Lagged (-2) Yen weight Type 1 OLS	(4) Contemporaneous Yen weight Type 1 OLS	(5) Lagged (-1) Yen weight Type 1 OLS	(6) Lagged (-2) Yen weight Type 1 OLS	(7) Contemporaneous Yen weight Type 1 OLS	(8) Lagged (-1) Yen weight Type 1 OLS	(9) Lagged (-2) Yen weight Type 1 OLS
Constant	-0.193 (0.287)	0.179 (0.140)	0.256 ** (0.119)	0.298 *** (0.023)	0.284 *** (0.021)	0.280 *** (0.023)	0.189 *** (0.053)	0.205 *** (0.049)	0.234 *** (0.054)
Lower yen: Yen change	0.929 (1.301)	0.636 (1.266)	-0.418 (1.366)	-0.104 (0.424)	-0.261 (0.341)	-0.245 (0.428)	2.655 * (1.453)	3.820 *** (1.083)	1.722 * (1.002)
Lower yen: CFI	-1.099 (5.503)	6.326 (6.562)	7.578 (6.934)	-1.583 (2.969)	-0.448 (2.544)	-0.852 (2.872)	17.881 ** (8.060)	20.279 *** (5.871)	0.501 (6.796)
Lower yen: IP	0.747 (0.752)	0.106 (0.778)	-0.221 (0.811)	-0.111 (0.117)	-0.133 (0.105)	-0.017 (0.131)	0.394 (0.440)	0.884 ** (0.427)	1.337 * (0.670)
Lower yen: Exports	-0.582 (0.675)	-0.115 (0.521)	0.352 (0.505)	0.031 (0.145)	0.127 (0.127)	0.065 (0.150)	-0.052 (0.384)	-0.471 (0.388)	-0.526 (0.333)
Lower yen: Local ST int	11.680 (7.726)	0.626 (4.086)	-2.268 (3.242)	9.261 *** (3.264)	13.289 *** (3.778)	12.512 *** (2.971)	-3.119 (2.904)	-3.765 (2.937)	-5.920 (3.612)
Lower yen: US ST int	-3.919 (2.624)	-0.346 (2.238)	1.446 (2.046)	-6.664 *** (1.301)	-7.919 *** (1.577)	-7.333 *** (1.187)	0.327 (1.444)	-0.063 (1.077)	0.941 (1.455)
Higher yen: Yen change	1.306 (1.002)	0.543 (0.786)	1.438 (1.052)	0.846 ** (0.369)	0.873 ** (0.382)	1.146 ** (0.520)	1.193 (0.744)	0.412 (0.581)	0.806 (0.523)
Higher yen: CFI	-7.276 * (4.318)	-2.677 (6.961)	6.277 (4.821)	-3.535 (3.324)	-2.380 (2.943)	2.290 (2.937)	-2.982 (4.894)	-4.638 (6.623)	-8.942 (7.916)
Higher yen: IP	-0.401 (0.682)	-0.142 (0.820)	0.545 (0.970)	-0.043 (0.139)	0.141 (0.192)	0.121 (0.163)	0.151 (0.332)	-0.037 (0.340)	-0.255 (0.371)
Higher yen: Exports	0.380 (0.538)	0.356 (0.511)	-0.170 (0.500)	0.018 (0.195)	-0.163 (0.132)	0.052 (0.111)	-0.360 (0.273)	0.054 (0.316)	0.206 (0.270)
Higher yen: Local ST int	11.756 (8.224)	0.100 (3.690)	-2.669 (3.145)	-4.597 (3.394)	-3.216 (3.000)	-4.049 (4.040)	0.135 (4.004)	-2.681 (4.490)	-3.597 (4.175)
Higher yen: US ST int	-4.421 * (2.285)	-1.020 (1.497)	-0.232 (1.439)	-0.931 (1.318)	-1.312 (1.136)	-1.078 (1.512)	-0.728 (0.893)	-0.111 (1.115)	-0.232 (0.995)
Adjusted R-squared	0.015	-0.074	-0.035	0.526	0.580	0.548	0.078	0.275	0.027

Notes:

1. Standard errors are in parentheses.
2. \*\*\*, \*\*, \* are significant at the 99%, 95% and 90% levels, respectively.
3. White heteroskedasticity-consistent standard errors and covariances are applied.

Table 5: Determinants of yen weights in lower or higher yen stages

Model	Contemporaneous		Lagged(-1)		Lagged(-2)	
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable	Yen weight	Yen weight	Yen weight	Yen weight	Yen weight	Yen weight
Dummy type	Type 2	Type 2	Type 2	Type 2	Type 2	Type 2
Regression	Pooled OLS	Pooled OLS	Pooled OLS	Pooled OLS	Pooled OLS	Pooled OLS
Constant	0.233 *** (0.018)		0.224 *** (0.019)		0.220 *** (0.019)	
Lower yen: Yen change	1.477 * (0.842)	1.457 * (0.816)	1.689 ** (0.798)	1.688 ** (0.784)	1.601 * (0.912)	1.578 * (0.896)
Lower yen: CFI	3.740 (5.196)	3.677 (5.297)	1.777 (6.067)	2.379 (6.066)	-1.126 (6.274)	-0.656 (6.110)
Lower yen: IP	0.248 (0.253)	0.268 (0.267)	0.485 (0.332)	0.496 (0.343)	0.501 * (0.270)	0.534 * (0.291)
Lower yen: Exports	-0.038 (0.223)	-0.054 (0.217)	-0.398 (0.335)	-0.395 (0.323)	0.135 (0.297)	0.114 (0.287)
Lower yen: Local ST int	-0.426 (1.258)	-2.188 (2.016)	-0.207 (1.213)	-2.272 (1.792)	-0.313 (1.103)	-2.175 (1.841)
Lower yen: US ST int	0.161 (0.893)	0.604 (1.043)	0.192 (0.816)	0.715 (0.941)	0.464 (0.829)	0.953 (0.969)
Higher yen: Yen change	0.554 (0.375)	0.576 (0.369)	0.188 (0.365)	0.196 (0.352)	0.190 (0.402)	0.193 (0.393)
Higher yen: CFI	-2.529 (2.077)	-2.260 (2.044)	1.658 (2.515)	1.524 (2.453)	3.415 (2.400)	3.108 (2.360)
Higher yen: IP	-0.037 (0.119)	-0.024 (0.106)	-0.001 (0.119)	0.013 (0.109)	0.020 (0.128)	0.019 (0.121)
Higher yen: Exports	-0.035 (0.120)	-0.039 (0.119)	0.081 (0.121)	0.058 (0.112)	-0.007 (0.149)	-0.017 (0.137)
Higher yen: Local ST int	-0.359 (0.642)	-2.245 (1.850)	-0.578 (0.623)	-2.625 (1.627)	-0.598 (0.580)	-2.370 (1.518)
Higher yen: US ST int	-1.862 *** (0.374)	-1.421 ** (0.604)	-1.742 *** (0.376)	-1.267 ** (0.568)	-1.680 *** (0.386)	-1.260 ** (0.549)
Fixed effects						
Korea		0.305		0.305		0.293
Singapore		0.271		0.264		0.258
Thailand		0.223		0.215		0.208
Adjusted R-squared	0.158	0.181	0.172	0.198	0.169	0.195

Table 5: Determinants of yen weights in lower or higher yen stages (continued)

Number Dependent variable Dummy type Regression	Korea			Singapore			Thailand		
	(2)			(5)			(8)		
	Contemporaneous Type 2 OLS	Lagged (-1) Type 2 OLS	Lagged (-2) Type 2 OLS	Contemporaneous Type 2 OLS	Lagged (-1) Type 2 OLS	Lagged (-2) Type 2 OLS	Contemporaneous Type 2 OLS	Lagged (-1) Type 2 OLS	Lagged (-2) Type 2 OLS
Constant	-0.108 (0.234)	0.089 (0.131)	0.125 (0.090)	0.301 *** (0.020)	0.300 *** (0.019)	0.302 *** (0.023)	0.150 *** (0.055)	0.144 *** (0.043)	0.169 *** (0.047)
Lower yen: Yen change	2.025 (1.664)	3.059 * (1.750)	3.726 ** (1.718)	-0.341 (0.489)	-0.239 (0.515)	-0.383 (0.557)	1.375 (1.243)	2.496 ** (1.243)	2.169 (1.758)
Lower yen: CFI	-13.215 (9.841)	-5.111 (7.240)	4.191 (7.144)	1.289 (3.670)	2.496 (3.308)	0.387 (4.992)	19.393 * (11.198)	20.557 *** (6.815)	-1.384 (8.940)
Lower yen: IP	0.353 (1.024)	-0.139 (1.421)	0.197 (1.213)	-0.243 (0.169)	-0.101 (0.105)	-0.012 (0.143)	1.794 ** (0.797)	1.685 ** (0.719)	1.752 (1.172)
Lower yen: Exports	-0.065 (1.139)	0.649 (1.430)	1.064 (1.114)	0.275 (0.179)	0.123 (0.124)	0.081 (0.148)	-0.580 (0.531)	-0.926 * (0.548)	-0.195 (0.697)
Lower yen: Local ST int	7.113 (6.641)	0.691 (4.426)	-1.476 (3.680)	9.534 *** (3.425)	13.888 *** (3.088)	9.227 ** (3.490)	-3.834 (2.759)	-3.459 (2.986)	-4.833 (3.603)
Lower yen: US ST int	2.097 (3.380)	3.446 (3.079)	3.951 (2.919)	-6.603 *** (1.613)	-8.493 *** (1.429)	-6.000 *** (1.500)	2.705 ** (1.046)	1.905 * (1.114)	2.641 * (1.455)
Higher yen: Yen change	0.288 (0.730)	-0.558 (0.812)	-0.638 (0.886)	0.554 * (0.306)	0.416 (0.326)	0.605 (0.479)	0.947 (0.810)	0.891 (0.726)	0.785 (0.665)
Higher yen: CFI	-4.482 (3.718)	2.332 (4.578)	4.997 (4.241)	-3.288 (2.430)	-2.038 (1.938)	1.447 (1.773)	4.803 (4.745)	5.392 (4.911)	2.803 (4.535)
Higher yen: IP	0.109 (0.521)	-0.124 (0.575)	-0.730 (0.532)	-0.059 (0.118)	0.023 (0.116)	0.056 (0.128)	-0.089 (0.218)	0.036 (0.261)	0.121 (0.292)
Higher yen: Exports	0.053 (0.387)	0.227 (0.335)	0.554 * (0.322)	-0.021 (0.160)	-0.030 (0.151)	0.025 (0.136)	-0.197 (0.260)	0.110 (0.206)	-0.390 (0.344)
Higher yen: Local ST int	9.486 (6.419)	3.216 (3.436)	1.992 (2.082)	-1.160 (2.553)	-2.916 (2.038)	-2.923 (3.630)	2.039 (4.235)	3.408 (3.408)	0.230 (3.223)
Higher yen: US ST int	-4.855 *** (1.772)	-3.109 ** (1.218)	-2.750 *** (0.922)	-2.598 *** (0.938)	-1.922 *** (0.777)	-2.062 (1.298)	-1.213 (0.921)	-1.202 (0.857)	-0.856 (0.900)
Adjusted R-squared	0.222	0.184	0.247	0.301	0.533	0.483	0.170	0.240	0.155

Notes :

1. Standard errors are in parenthesis.
2. \*\*\*, \*\*, \* are significant at the 99%, 95% and 90% levels, respectively.
3. White heteroskedasticity-consistent standard errors and covariances are applied.

Table 6: Determinants of yen weights in weaker dollar phases

Model	Contemporaneous		Lagged(-1)		Lagged(-2)	
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable	Yen weight	Yen weight	Yen weight	Yen weight	Yen weight	Yen weight
Regression	Pooled OLS	Pooled OLS	Pooled OLS	Pooled OLS	Pooled OLS	Pooled OLS
Constant	0.232 *** (0.020)		0.247 *** (0.019)		0.240 *** (0.020)	
Yen change	1.453 *** (0.411)	1.468 *** (0.425)	1.363 *** (0.468)	1.363 *** (0.460)	0.898 * (0.475)	0.880 * (0.474)
CPI	2.467 (2.439)	2.713 (2.456)	3.390 (2.964)	3.407 (3.005)	2.276 (3.761)	2.034 (3.882)
IP	0.100 (0.139)	0.119 (0.145)	0.106 (0.128)	0.123 (0.137)	0.077 (0.147)	0.092 (0.143)
Exports	-0.206 (0.152)	-0.216 (0.163)	-0.097 (0.139)	-0.117 (0.145)	-0.055 (0.131)	-0.067 (0.127)
Local ST int	-0.135 (0.826)	-0.706 (2.010)	-0.276 (0.796)	-1.345 (1.716)	-0.203 (0.746)	-2.171 (1.687)
US ST int	-1.463 *** (0.497)	-1.325 * (0.697)	-1.531 *** (0.487)	-1.277 ** (0.652)	-1.310 ** (0.506)	-0.849 (0.705)
Weaker dollar: Yen change	-1.330 (0.993)	-1.347 (0.958)	-0.616 (0.766)	-0.599 (0.758)	0.197 (0.750)	0.268 (0.752)
Weaker dollar: CPI	-10.484 ** (4.262)	-10.281 ** (4.339)	-7.297 (5.445)	-6.677 (5.482)	-1.372 (4.972)	-1.029 (4.934)
Weaker dollar: IP	-0.081 (0.229)	-0.108 (0.215)	0.081 (0.270)	0.066 (0.262)	0.126 (0.260)	0.104 (0.257)
Weaker dollar: Exports	0.355 (0.245)	0.351 (0.239)	-0.123 (0.346)	-0.094 (0.326)	0.153 (0.341)	0.160 (0.314)
Weaker dollar: Local ST int	0.196 (1.147)	0.254 (1.166)	-0.310 (1.159)	-0.338 (1.205)	-0.883 (1.075)	-1.045 (1.125)
Weaker dollar: US ST int	-0.993 (0.722)	-1.039 (0.725)	-0.880 (0.797)	-0.860 (0.786)	-0.595 (0.847)	-0.493 (0.840)
Fixed effects						
Korea		0.254		0.290		0.322
Singapore		0.260		0.279		0.278
Thailand		0.212		0.231		0.231
Adjusted R-squared	0.097	0.114	0.076	0.096	0.045	0.068

Table 6: Determinants of yen weights in weaker dollar phases (continued)

Number Dependent variable Regression	Korea			Singapore			Thailand		
	Contemporaneous (1)	Lagged (-1) (2)	Lagged (-2) (3)	Contemporaneous (4)	Lagged (-1) (5)	Lagged (-2) (6)	Contemporaneous (7)	Lagged (-1) (8)	Lagged (-2) (9)
Constant	-0.267 (0.273)	0.019 (0.157)	0.145 (0.114)	0.287 *** (0.023)	0.289 *** (0.026)	0.286 *** (0.028)	0.164 *** (0.048)	0.165 *** (0.054)	0.232 *** (0.060)
Yen change	2.374 ** (0.977)	1.838 * (1.049)	1.206 (1.230)	0.518 (0.370)	0.180 (0.319)	0.188 (0.441)	1.755 *** (0.553)	2.392 *** (0.787)	0.884 (0.735)
CPI	2.193 (3.855)	4.951 (5.528)	8.348 (6.861)	-3.554 (2.146)	-3.303 * (1.857)	1.150 (2.253)	11.762 ** (4.742)	12.013 ** (5.260)	-6.493 (7.087)
IP	0.271 (0.595)	0.364 (0.675)	-0.223 (0.963)	-0.157 (0.098)	-0.044 (0.104)	0.049 (0.117)	0.433 (0.273)	0.179 (0.305)	0.088 (0.411)
Exports	-0.062 (0.493)	-0.149 (0.451)	0.084 (0.538)	0.014 (0.109)	-0.040 (0.141)	0.034 (0.130)	-0.532 ** (0.264)	-0.216 (0.232)	-0.228 (0.211)
Local ST int	12.762 * (7.477)	5.220 (4.101)	1.616 (2.640)	4.830 (3.048)	7.774 * (3.914)	7.624 ** (3.411)	-1.631 (2.945)	-0.769 (3.059)	-3.902 (3.128)
US ST int	-4.258 * (2.226)	-2.367 (1.696)	-1.254 (1.386)	-4.690 *** (1.104)	-5.839 *** (1.405)	-5.792 *** (1.233)	0.247 (0.940)	0.111 (0.913)	0.483 (1.035)
Weaker dollar: Yen change	-3.494 ** (1.474)	-2.778 * (1.446)	-1.658 (1.763)	-0.175 (0.715)	0.904 (0.704)	1.432 (0.933)	0.308 (2.186)	-1.051 (1.402)	1.460 (1.378)
Weaker dollar: CPI	-16.412 *** (5.565)	-18.456 ** (9.131)	-8.570 (8.058)	-0.159 (4.711)	1.615 (5.839)	-1.087 (6.207)	-9.777 (14.583)	-3.568 (11.673)	6.501 (9.624)
Weaker dollar: IP	0.476 (0.974)	-0.810 (0.993)	0.408 (1.211)	0.148 (0.186)	0.133 (0.201)	-0.060 (0.238)	-0.347 (0.772)	0.833 (0.815)	1.023 (0.803)
Weaker dollar: Exports	-0.419 (1.709)	0.511 (0.670)	0.116 (0.711)	0.095 (0.323)	-0.025 (0.237)	0.009 (0.213)	0.885 ** (0.425)	-0.555 (0.828)	-0.151 (0.798)
Weaker dollar: Local ST int	1.142 (1.689)	1.699 (1.956)	0.758 (1.769)	-3.052 (5.498)	-5.941 (5.809)	-7.024 (5.836)	4.840 (4.867)	1.220 (4.537)	-2.618 (6.028)
Weaker dollar: US ST int	-1.689 (1.748)	-3.712 * (2.042)	-3.020 (1.979)	1.397 (2.304)	2.618 (2.791)	3.446 (2.810)	-2.808 * (1.615)	-1.810 (2.139)	-0.233 (3.216)
Adjusted R-squared	0.105	0.011	-0.037	0.429	0.421	0.397	0.052	0.127	0.010

Notes :

1. Standard errors are in parentheses.
2. \*\*\*, \*\*, \* are significant at the 99%, 95% and 90% levels, respectively.
3. White heteroskedasticity-consistent standard errors and covariances are applied.