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NO to ¥E\$? Enhancing Economic Integration in East Asia through Closer Monetary Cooperation

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Philippine Institute for Development Studies

NO to ¥E\$?

Enhancing Economic Integration in East Asia through Closer Monetary Cooperation

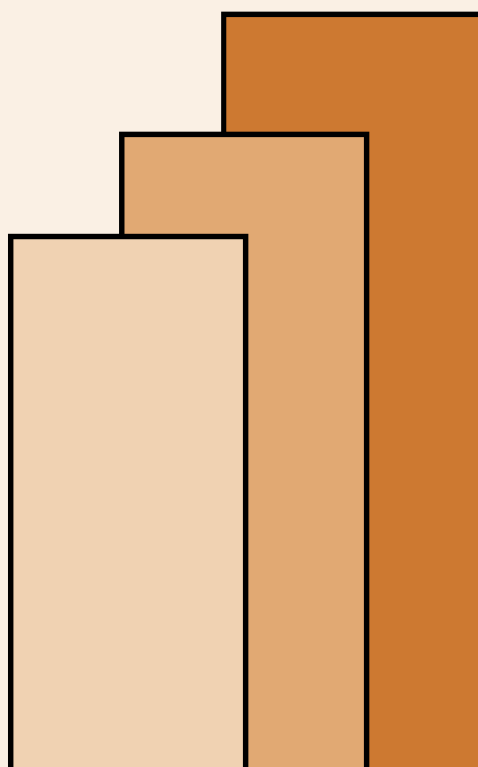
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and Victor Pontines*

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NO TO YES?

ENHANCING ECONOMIC INTEGRATION IN
EAST ASIA THROUGH CLOSER
MONETARY COOPERATION

JULY 2001

Mario B. Lamberte
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NO TO YES?

ENHANCING ECONOMIC INTEGRATION IN EAST ASIA THROUGH CLOSER MONETARY COOPERATION¹

Mario B. Lamberte, Ma. Melanie S. Milo and Victor Pontines²

Abstract

This paper has reviewed four major developments in the last 30 years: the collapse of the Bretton Woods arrangements; deepening of economic integration worldwide; the frequency and severity of the crises that affected not only developing economies but developed economies as well; and the formation of the Euroland. Against this background was the increasing intra-regional trade and investment in East Asia. Existing empirical studies generally show that East Asia has satisfied the economic criteria for an optimum currency area. This implies that East Asia will benefit from having a common monetary arrangement. However, this requires a strong political commitment, which admittedly is absent in East Asia at the moment. Should East Asia be able muster enough political will to go ahead with deeper economic integration, then it must also prepare itself for monetary integration. The paper then went on to review and assess the strengths and weaknesses of five possible common monetary arrangements for East Asia that can contribute to the stability of the financial system in the region and support the deepening of economic integration in the region. The best arrangement for a more integrated East Asian region is the East Asian common currency union, with the regional currency independently floating vis-à-vis other currencies in the world. However, given the present economic and political realities in East Asia, this arrangement should be considered as a long-term goal that could be accomplished over 2 or 3 decades. In the interim, it is better for East Asia to agree on a regional currency basket system consisting of the yen, the euro and the US dollar. During this transition period, East Asian economies should strive to work on the following pre-conditions: strengthening central bank independence, enhancing wage and price flexibility, strengthening the financial sector, and harmonizing monetary policy. The emerging arrangements under the CMI and the expanded ASEAN Surveillance Process are a constructive sign that East Asian economies can work together to advance their common interests. Success in these arrangements will eventually lead to greater monetary cooperation in the region.

Key words: optimum currency area; exchange rate arrangements; regional monetary cooperation; economic integration; common currency; East Asian dollar standard; dollarization; currency board system; currency basket system.

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² Respectively, President and Research Fellow of the Philippine Institute for Development Studies (PIDS) and Assistant Professor of De La Salle University. The authors thank Ms. Juanita Tolentino and Ms. Sharon Vital for their excellent research assistance.

I. Introduction

At first blush, the main title of this paper seems oxymoron because NO and YES are binary choices. One can never say no to yes or vice versa but can only say either yes or no. It also does not connote a continuum from NO to YES for the same reason that they are binary choices. It would certainly help the readers if we immediately declare that YES stands for the three most dominant currencies in the world today, namely, the yen, euro and US dollar, respectively. There is an increasing number of people who believe that the number of currencies in the world will eventually decline, especially after the successful launching of the euro in January 1999. Mundell (2000) will even be happy to see only one currency for the whole world. To him, the whole world is an optimal currency area. He, however, admits that this is not politically feasible at this time. His half-way house, therefore, is a multi-currency world consisting of the yen, euro and US dollar. The rest will eventually gravitate around these major currencies.³ This view seems to be gaining more adherents. For instance, some Latin American countries are thinking of fixing their currencies to or adopting as legal tender the US dollar. Over at the other two continents, some European countries are queuing up to join the European Monetary Union, while others together with some African countries are thinking of either fixing their currencies to or adopting the euro as legal tender.

What should East Asia do in this world of disappearing national currencies? Should they fix their currencies to or adopt as legal tender the yen, euro or the US dollar? If the answer is no, then should they retain their national currencies or create a common currency independently floating vis-à-vis other major currencies? Implicit in these questions, of course, is the assumption that regional economic integration in East Asia will proceed at a faster pace in the years to come. If this is the case, then East Asia will have to forge a firmer monetary cooperation to support the deepening of regional economic integration.

This paper explores the key issues and various views on monetary cooperation that can support the deepening of economic integration in the East Asian region. The

³ Cooper (2000) has also suggested to form a common currency union among industrial democracies: Europe, Japan and the United States that can be realized over a decade or two in the 21st century.

ultimate objective of this paper is to stimulate and contribute to the discussions and debates on regional monetary cooperation.

In line with Mundell's framework, we ask three key closely interrelated questions:

- (1) Is East Asia an optimal currency area?
- (2) If so, then what kind of monetary cooperative arrangement would be desirable for East Asia?
- (3) What are the existing initiatives in East Asia that can lend support to monetary cooperation in the region?

The next section briefly reviews the key developments in the last 30 years that directly relate to the questions posed above. The third section discusses views on the choice of optimal exchange rate regime and recent trends in exchange rate arrangements especially in East Asia. The fourth section reviews existing studies that verify the existence of an optimum currency area in East Asia. The fifth section discusses various proposals for a common monetary arrangement for East Asia. The sixth section discusses the existing building blocks for monetary cooperation in East Asia. The last section concludes the paper.

II. Developments in the Last 30 Years

To put the key issues to be discussed in this paper in a proper perspective, it might be useful to start with a discussion of major international developments in the last 30 years. Indeed, there were many, but we will single out only those that are deemed to have significant bearing on the key issues to be discussed below.

One major development that occurred in the last 30 years was the collapse of the Bretton Woods arrangements in 1971, which left countries in the world with no unifying exchange rate framework. Some countries, notably those that have large economies like the US, Japan, UK, Germany, etc., opted to float their currencies. Others adopted a fixed exchange rate regime, using one of the major currencies as the anchor currency. The rest opted to adopt intermediate regimes. Of course, there were

countries that changed their exchange rate regimes within the last 30 years for various reasons, albeit many did it in the wake of a severe balance of payments crisis. We will come back to this topic below.

Another major development was the deepening of economic integration worldwide. The success with several rounds of multilateral trade negotiations under the auspices of the GATT that eventually led to the establishment of WTO had partly contributed to it. This had been beefed up by intra-regional arrangements in several areas (e.g., NAFTA, AFTA, Mercusor, etc.) that aim to deepen intra-regional economic integration. Aside from the international and regional arrangements that had provided a wholesome environment for deeper international and regional economic integration, there were push and pull factors that had accelerated the pace of economic integration. The most prominent push factor was the rapid technological changes, especially occurring in the information and communication sectors, which had been quickly diffused across economic sectors and national boundaries. The pull factor was the liberalization undertaken by developed and developing countries in areas outside the framework of multilateral agreements to benefit from the on-going globalization. For example, many countries liberalized, albeit not completely, their capital markets and integrated them with the global financial market. With substantially liberalized capital markets in many countries, private capital flows occurred much more rapidly around the globe in huge amounts. More specifically, emerging market economies realized a total of US\$1.4 trillion in net private capital inflows during the period 1990-2000.

The last 30 years saw several major economic crises that severely affected not only developing economies (i.e., the debt crisis in the 1980s, the Mexican crisis in 1994, the 1997 East Asian financial crisis) but developed economies as well (i.e., world recession in 1982-1984, the ERM crises in 1992 and 1993). The nature of these crises might have differed from one another, but almost always, the exchange rate arrangements figured prominently in the discussions. This is most glaring in the case of the East Asian financial crisis. It leads to the realization that increasing financial integration carries with it other considerable risks, particularly financial contagion. Indeed, the pervasiveness of negative spill-over effects or contagion of currency crisis

as in the case of the East Asian financial crisis suggests the need for greater regional cooperation.

Finally, it must be noted that there are countries in Europe that have been trying to create an oasis of exchange rate stability in the desert of exchange rate instability following the collapse of the international monetary system in the 1970s. The project of monetary integration started with the “snake-in-the-tunnel” arrangement in 1972. With the establishment of the European Monetary System in 1979, the march towards greater monetary integration was restarted, using the Exchange Rate System as an instrument for limiting exchange rate fluctuations across members.⁴ This project culminated in the successful launching of the euro in Euroland (Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal, and Spain) on 1 January 1999.⁵ These countries surrender monetary sovereignty to a supra-national central bank in exchange for exchange rate stability among them. As Mundell pointed out, “[T]he euro may turn out to be more of an important change in the international monetary system than the breakdown of the Bretton Woods arrangements in 1971.” Indeed, this has sparked a new wave of interest in regional cooperative monetary arrangements in Africa, Asia and Latin America to enhance trade and deepen the capital market under an environment of exchange rate stability. It is, therefore, possible to have in the foreseeable future only a few currencies in the world that are independently floating. This may be a fitting time to reconsider exchange rate regimes in East Asia to deepen further economic integration in the region.

III. Trends in Exchange Rate Arrangements

Buiter (2000) has noted that currency regimes are under review not only in transition economies, developing countries and emerging markets, but also in some of the most industrially advanced countries of the world. The main driving force for such a review is the increasing awareness that countries, which have opened up their capital account, can no longer be indifferent to the exchange rate regime they adopt.

⁴ Cooper (2000) considers this as a re-creation of a mini-Bretton Woods system in Europe.

⁵ This is actually part of Phase A of the phased introduction of the euro (see Appendix A).

It is perhaps worthwhile to review at this point the principle of “impossible trinity” (Frankel 1999).⁶ This principle suggests that countries must give up one of the three objectives: exchange-rate stability, monetary independence, or financial-market integration. If a country intends to achieve both monetary independence and exchange-rate stability, then it must be ready to impose capital controls. A floating rate regime is consistent with the objective of attaining both monetary independence and financial-market integration. On the other hand, if a country wants to have both exchange-rate stability and full financial-market integration, then it should favor firm-fixing of its exchange rate. Thus, a country can only be on two sides of the triangle depicted in **Figure 1**. Clearly, when a country attains full financial-market integration, then it is left with only two choices: float or rigidly fix its exchange rate. Any of the intermediate exchange rate regimes will not be appropriate for this country.

Not everyone is convinced in toto of the dogma of the “impossible trinity” without adding some qualifications. For instance, Cooper (2000) has argued that “floating rates, independent monetary policy, and freedom of capital movements may also be incompatible, at least for countries with small and poorly developed domestic capital markets...” We will come back to this issue below when we discuss the exchange rate regimes pursued by East Asian economies.

In his paper, Fischer (2000) grouped IMF-member countries according to the degree of exchange rate flexibility using IMF classification. At one end are countries that are considered floaters, i.e., those that have adopted an exchange rate system described either as managed float with no specified central rate, or as independently floating. At the other end are hard pegs, i.e., those countries with currency boards, members of a currency union, or are into dollarization. In the middle are the countries adopting various kinds of soft pegs, such as the conventional fixed pegs, crawling pegs, horizontal bands, and crawling bands. He observed that the number of countries that adopted the intermediate exchange rate systems had considerably declined from 98 (62%) to 63 (34%) between 1991 and 1999 (**Figure 2**). On the other hand, the number of countries considered as hard pegs and floaters increased

⁶ Others call it “incompatible triangle”.

from 25 (16%) to 45 (24%) and from 36 (23%) to 77 (42%), respectively. Data show that more countries seem to be tilting towards the floating rate system. The same pattern can be observed if countries were segregated into developed, emerging markets and developing countries.

Glick (2000) did similar analysis of exchange rate regime change between 1982 and 1999 by controlling the effects of the growing number of countries over time. His results support those of Fischer's; that is, there is a trend of a shrinking middle (**Table 1**). There are even more developing countries that are moving towards greater exchange rate flexibility.

Fischer concludes that countries that are integrated or integrating into the international capital markets are fleeing the middle ground and are choosing either floating or hard peg. Soft peg will not be viable for a lengthy period for these countries. Sooner or later, a currency crisis will force them to choose either of the two corners. Some, in fact, blamed soft peg as contributing factors to the Mexican and East Asian crises. Even EMU countries that adopted adjustable pegs in their EMS were not spared from the crisis that struck them in 1992 and 1993. Fischer views the adoption of a much wider band after the EMS crises not as a permanent habitat but as a stepping stone towards the goal of monetary union.

Most of the East Asian economies embarked substantial liberalization of their capital markets in the late 1980s and early 1990s to attract foreign capital. Indeed, they were successful in that huge foreign capital flowed into the region, a substantial portion of which was highly volatile, short-term capital in the form of bank loans and portfolio flows (**Table 2**). But the sudden reversal of these flows put the currencies in these countries under severe stress. The currency crisis subsequently turned into banking and economic crises, marring the sterling performance of East Asian economies in the 1990s (**Table 3**).

Ito (1999) identified three common causes of the East Asian financial crisis: (1) the foreign exchange system, i.e., crisis-hit Asian countries adopted the dollar peg system which was incompatible with the monetary independence and capital mobility and encouraged capital inflows without regard for risk; (2) vulnerable financial

system, i.e., prudential regulations and supervision of financial institutions in crisis-hit countries were inadequate to deal with the maturity and currency mismatch; and (3) excessive short-term foreign debts of the private sector in the wake of capital account liberalization.

It did not take long for East Asian countries to realize the impossibility of simultaneously attaining all three objectives mentioned in **Figure 1**. Accordingly, in the wake of the financial crisis, all of them abandoned one of the objectives. East Asian countries moved away from the soft dollar peg to either floating or hard peg. They have adopted measures, albeit still incomplete, to strengthen prudential regulations and clean up non-performing loans of banks. They are also exerting efforts to develop the bond markets to reduce the dominance of banks in the financial system and lengthen the maturity structure of debt instruments. There are even discussions on the possibility of developing a regional bond market for East Asia (Rhee 2000, Park 2000).

Table 4 shows the exchange rate regimes of East Asia pre- and post-crisis according to IMF classification. One might ask at this point whether the exchange rates of those East Asian economies that claimed to be floaters are really floating. In their study of 39 countries in Africa, Europe, the Western Hemisphere, and Asia which includes some East Asian economies such as Indonesia, Korea, Malaysia, Philippines, Singapore, and Thailand, Calvo and Reinhart (2000) found that most of those who claimed to be floaters have actually limited the variability of their exchange rates compared to true floaters, such as the US and Japan. To dampen the fluctuations of their exchange rates, they actively intervened in the foreign exchange market by varying reserves, interest rates and reserve money growth. This “fear of floating” syndrome suggests that many economies in reality still pursue the intermediate exchange rate regime, which contradicts Fischer’s finding that the middle is hollowing out and that more countries have become floaters. There is, therefore, a big difference between what countries say they do as recorded by IMF and what they actually do.

McKinnon (2000) tried to verify the exchange rate policy pursued by East Asian economies before, during and after the recent financial crisis using weekly and

daily data. The results of using these two data sets are basically the same. High frequency pegging to the US dollar was found in these countries before the East Asian financial crisis, i.e., January 1994 - May 1997 (**Table 5**). During the crisis period, i.e., June 1997 – December 1998, East Asian economies, with the exception of China and Hong Kong, loosen up the pegging of their currencies to the US dollar. What is more interesting is that they have returned to high frequency pegging to the US dollar after the crisis, i.e., January 1999 – May 2000.

Calvo and Reinhart (2000) attributed the “fear of floating” syndrome to the credibility problems facing many countries, especially the emerging market economies. Accordingly, this lack of credibility problem occurs even in normal times. It is, therefore, understandable that when East Asian economies returned to high frequency pegging to the US dollar in the wake of the financial crisis, they have been trying to buy credibility by piling up reserves. As **Table 6** shows, the US whose economy is about four times as large as the economy of East Asian countries taken together has reserves lower than those of Korea and Singapore. Even UK’s reserves approximate those of Thailand’s despite the fact that its economy is more than four times larger than that of the latter.

Aside from credibility problem, Hausmann *et al.* (1999) found two other factors that constrain emerging market economies from freely floating their exchange rates. One is that these economies tend to have a higher pass-through from exchange rates to prices. East Asian countries are particularly concerned about inflation, hence, they tend to limit the variability of their exchange rates. The other is that emerging market economies tend to have a large portion of liabilities denominated in foreign currency and that most of these are short-term. Any depreciation can easily hurt those that have foreign-currency denominated liabilities. These include the government, banks and some private corporations. The East Asian financial crisis has clearly shown how large currency depreciations can quickly lead to bank and corporate bankruptcies due to their relatively high foreign currency exposure. Related to this issue, McKinnon (2000) attributes the tendency of East Asian countries to stabilize exchange rates against the dollar from day to day to the incomplete domestic financial markets. This is the “original sin” hypothesis propounded by Eichengreen and Hausman (1999). According to them, “original sin”

“... is a situation in which the domestic currency cannot be used to borrow abroad or to borrow long term, even domestically. In the presence of this incompleteness, financial fragility is unavoidable because domestic investments will have either a currency mismatch (projects that generate pesos will be financed with dollars) or a maturity mismatch (long-term projects will be financed with short-term loans.”

This issue is certainly related to the on-going efforts by individual East Asian countries to develop domestic bond markets and discussions on the feasibility of developing a regional bond market, which could form part of the regional financial arrangement. Indeed, the approach towards redeeming a country from the “original sin” is part and parcel of the bigger issues to be discussed below.

IV. East Asia: An Optimum Currency Area

Mundell (1961) pioneered the idea of optimum currency area (OCA), which was extended by McKinnon (1963) and Kenen ((1969). Interestingly, one of the questions Mundell asked in his seminal paper is the following: “...supposing that the Common Market countries proceed with their plans for economic union, should these countries allow each national currency to fluctuate, or would a single currency area be preferable?” Of course, this question was already answered by the recent formation of the Euroland.

The question this paper wants to raise is whether East Asia is an optimum currency area. Mundell defines OCA as the domain of a currency union where participating countries can attain internal and external balance simultaneously. McKinnon (1978) provides the following comprehensive definition of an OCA:

“A group of countries that are highly integrated in commodity trade, allow free factor movement, and have effective currency convertibility may be classified as an optimum currency area – an area where the establishment of a common monetary policy and virtually fixed exchange rates has potentially high social benefits. Within such area, discrete and unanticipated exchange-rate changes are highly disruptive...”

Whenever a country joins an OCA, it moves to the right side of **Figure 1**, which means that it must give up the objective of having an independent monetary policy. It also gives up the option of changing or adjusting the price of its currency due to an irrevocable fixing of the nominal exchange rate. Clearly, it loses effective

instruments for stabilization, which could be used for correcting internal or external imbalances. However, in an OCA, the loss of important macroeconomic policy instruments does not impose real and significant costs on the countries comprising the currency area. OCA, therefore, considers other economic features or characteristics of potential members in a currency area that afford an equivalent or greater flexibility in the economy in responding to economic shocks that will compensate for the loss of certain macroeconomic policy instruments. OCA theory suggests the importance of the following economic characteristics and features:

1. Wage flexibility and labor mobility

Mundell asked whether a shock to a country or region, a fall, or even a rise in the demand for its products, say, could be best dealt with by a change in the value of its currency against the rest, or by movements in labor or a change in wages and prices. Greater mobility of factor inputs, especially labor allows economies in a currency area affected by economic shocks, in particular asymmetric shocks⁷, to deal with it through migration to other country or region not affected by the shock. This will, therefore, lessen the need for an adjustment through the exchange rate.

If prices and wages of economies in a currency area are fully flexible, the *real* exchange rate will be flexible even though the nominal exchange rate is fixed (Kenen 1996). The flexibility in wages and prices make the nominal exchange rate redundant, and thus there is no case against fixing the nominal exchange rate.

2. Openness to mutual trade and the level of intra-regional trade linkages

The openness of countries can be measured by the relative size of their tradeables and the nontradeables sectors. As the relative share of the tradeable sector increases, the exchange rate becomes a less compelling adjustment tool since prices of tradeable goods are being determined on markets at the level of the currency area, which reduces the ability of the exchange rate to alter relative prices (Wyplosz 1997).

⁷ These are economic shocks that affect other countries in the currency area but not the others. They also mean economic shocks that affect differently all the countries in the currency area.

The more countries trade with each other, especially in a particular region, the more they will value bilateral or regional exchange rate stability. In other words, the greater is intra-regional trade, the greater are the benefits for countries in the region of forming a monetary union. This is because in a single currency the potential disruptions to intra-regional trade brought about by the relative price fluctuations and disturbances in the bilateral exchange rate are reduced, if not eliminated. The reduction or elimination in transaction cost is clearly the most visible gain from a monetary union.

3. Diversification and the relative importance of asymmetric disturbances

It matters to member countries in a single currency area or to potential members the size and nature of the shocks to which they are exposed. The greater and more dissimilar or asymmetric the shocks that countries experience, rather than the opposite of being symmetric, the higher the value of importance they will place on retaining an independent monetary policy and changes in the nominal exchange rate as an instrument of relative price adjustment. There are two opposing views that have emerged and widened the discussion in this area. One view asserts that the classical scenario of Mundell (1961), when a particular region or country experience a sudden shift in demand away from their products in favor of another country's product is unlikely to occur (European Commission 1990). The reasoning goes as follows. When intra-regional trade is to a large extent characterized as intra-industry, trade is based on the existence of economies of scale and product differentiation. This leads to a direction of trade in which countries export and import to each other the same categories of products. The more intra-regional trade intensifies, demand shocks as in the classical analysis of Mundell, will tend to be more symmetric, instead of being asymmetric. Thus, the smaller cost of a monetary union will be.

The opposite view, put forward by Krugman (1991), argues on the basis that that there is another feature of the dynamics of trade with economies of scale that makes Mundell's analysis relevant and appropriate. According to Krugman, on the contrary, higher intra-regional trade based on economies of scale also leads to regional concentration and agglomeration of industrial activities. The localization of

activities makes countries become more specialized than diversified so that they will be subjected to more rather than fewer asymmetric shocks (De Grauwe 2000).

Whichever outcome is true, it appears that in a currency area a more diversified economy is less likely to suffer country-specific shocks, and the exchange rate becomes a less compelling policy tool. In addition, when national economies are highly diversified, asymmetric shocks may occur less than in highly specialized national economies, and asymmetric shocks are more likely to affect industries or regions (i.e., industry-specific shocks) than individual countries (i.e., country-specific shocks). Hence, the greater the degree of diversification or economic similarity of individual economies in a single currency regime, the smaller will be the cost of a monetary union (Kenen 1996).

4. Degree of economic convergence

Although this has been less emphasized in the formal theory of OCA, recent studies on the economics of monetary union have started to acknowledge the importance of this characteristic. When countries in a single currency arrangement do not have wide dispersion in output per head and living standards, including unemployment rates, they are considered to have convergence in the level of economic and financial development. It is easier to integrate countries in a monetary union when they have similar and converging levels in income per capita and unemployment rates. Wide disparities and differences in economic and financial development are fraught with danger insofar as this will complicate efforts towards financial integration and regional cohesion, which is a necessary prerequisite to a successful monetary union (Bayoumi *et al.* 2000).

On the other hand, the benefits of a single currency must also be considered. Whereas, the costs of a single currency are situated in the macroeconomic arena, the primary benefits are allegedly found at the microeconomic level. The costs of exchanging one currency to another will disappear with a single currency (due to the elimination of foreign exchange transaction costs). The reduction or elimination in information costs due to the disappearance of comparing prices of different currencies will make it harder and difficult for firms to practice price discrimination across

national markets. The promotion of transparency in pricing will increase competition in the wholesale and retail stage, as consumers will be able to shop and compare prices across national markets of the single currency area. Due to the fixing of the nominal exchange rate, exchange rate risks and uncertainty disappears, and this will raise the volume and improve the allocation of investment.

There are already several studies that empirically verified whether East Asia has satisfied the OCA criteria. Goto and Hamada (1994), who analyzed an extensive set of economic variables using 1990 data (such as money, interest rates, price levels, real GDP, investment, trade intensity, trade dependence, labor mobility and FDI), found that the degree of interdependence among East Asian countries was substantial, with some integration indicators showing higher integration than in Europe. They were also able to show that trade intensity was extremely high in many trading pairs in East Asia, frequently, exceeding the corresponding figures in European pairs. Kawai and Takagi (2000), using 1995 data replicated and updated the Goto and Hamada study, and also found out that results observed in 1990 have remained unchanged. As **Tables 7a** and **7b** show, there are seventeen pairs in East Asia that had particularly intense trade links with their trade intensity indices exceeding five (e.g., Laos-Cambodia, Cambodia-Thailand, Cambodia-Vietnam, China-Hong Kong, Laos-Thailand, Laos-Vietnam, Malaysia-Singapore, Singapore-Thailand). In contrast, for Western Europe only four pairs had trade intensity indices exceeding five (e.g., Sweden-Denmark, Sweden-Finland, Ireland-United Kingdom, Portugal-Spain). In terms of trade intensity, therefore, East Asia is a highly integrated region than Western Europe.

Another characteristic of East Asia is its high share of *intra-regional trade*. Excluding Japan, intra-regional trade amounted to 37 percent for exports, 35 percent for imports, and 36 percent for total trade during the period 1990-2000 (**Table 8**). If Japan were included, then these figures rise to 45 percent in exports, 49 percent in imports, and 47 percent in total trade during the same period. However, this is counterbalanced by ASEAN's relatively low share of intra-regional trade, which was 22 percent for exports, 18 percent for imports, and 20 percent for total trade. Since about half of international trade in East Asia is conducted within the region itself including Japan (excluding Japan is about one-third), this signifies that East Asia is a

far more self-contained area than ASEAN (Kawai and Takagi 2000). In addition, the high degree of *openness* of many of the countries in East Asia as evidenced by the value of exports and imports that either approaches or exceeds 100 percent of GDP suggests that many countries in East Asia would benefit from a common currency arrangement (**Table 9**). As explained earlier, there are sizable gains, particularly for small open economies, in an environment of exchange rate stability in terms of reduction in transaction cost.

In terms of similarity of trade structure, it can be observed from **Table 10** that there is a significant shift towards greater exports and imports of manufactures for most countries in East Asia. The overall trade in manufactures of Malaysia, Philippines, Singapore, Thailand, China, Hong Kong, Korea, Taiwan, and Japan accounted for three-fourths of their total trade by 1997, while during the same period, manufactures trade was a little more than half of total trade in Indonesia, and almost half of total trade for Myanmar and Brunei. This observed similarity in trade structure in East Asia greatly favors some form of a coordinated exchange rate arrangement (Williamson 1999).

Evidence on the size and correlation of macroeconomic disturbances indicate that East Asia, in particular ASEAN, does not go far like the case of the EU, in fulfilling and satisfying the so-called symmetry of disturbances criterion. Based on the econometric estimates of Bayoumi *et al.* (2000), their empirical results established three important and significant conclusions: first, demand and supply side disturbances are highly and positively correlated for most countries in East Asia, which again draw parallel and similar results with respect to the EU. Second, in contrast, the size of disturbances is larger in East Asia. Third, the speed of adjustment is much faster in Asia, specifically in ASEAN, which presumably reflects the region's more flexible labor markets. Goto and Hamada (1994) noted that migration between less- and more-developed East Asian economies was quite significant, suggesting that labor force had been quite responsive to changing economic conditions. Indeed, the presence of a large number of Filipino, Indonesian and Thai workers in Korea, Singapore, Taiwan and Hong Kong is very visible.

In a related study, Loayza, Lopez and Udide (1999) found significant short-run and also long-run co-movements within East Asia, comparable to those found within Europe.⁸ This again suggests the existence of a high degree of symmetry shocks in the region.

Eichengreen and Bayoumi (1996) noted that cross-border investment is quite intensive in East Asia, which could be promoted further if exchange risk were eliminated in the region. Kawai and Takagi (2000) compiled FDI inflows to East Asia during the period 1990-1998 and confirmed the Eichengreen-Bayoumi finding about cross-border investment intensity in East Asia (**Table 11**).

To summarize the various OCA criteria, Bayoumi *et al.* (2000) developed an “OCA index” which predicts the expected level of exchange rate variability for the four largest ASEAN countries (Malaysia, Thailand, Indonesia, and the Philippines).⁹ Using 1995 data, the predicted level of exchange rate variability (measured by the variance of the annual real bilateral exchange rate) across the four countries is uniformly in the 8-11 percent range. According to the authors, this is significant since this is not much higher than the 6-9 percent range observed for intra-EU exchange rates calculated using 1987 data. From this result, the authors made the conclusion that the four large ASEAN countries (Malaysia, Thailand, Indonesia, and the Philippines), insofar as their level of preparedness for monetary union are not very far from continental Europe in 1987. This issue is definitely an empirical matter, and it will be interesting to observe if the results are to be extended to a large grouping of East Asian countries.

The technical pre-requisites based on the optimum currency area criteria discussed above generally suggest that “the economies of East Asia would seem to be more or less plausible candidates for internationally-harmonized monetary policies as the members of the European Union” (Eichengreen and Bayoumi 1996). In fact, an exact and accurate fulfillment of technical requirements and the ‘necessary preconditions’ based on optimum currency area theory is near to impossible. Several

⁸ East Asia was represented by Indonesia, Korea, Malaysia, Singapore, Thailand, Taiwan and Japan.

⁹ For a complete exposition of the construction of the index and applied to EU data see their original paper, Bayoumi and Eichengreen (1997).

studies have claimed and established that Europe, that is, the European Union (EU) is neither an optimum currency area, nor the United States (another classic example of a working and operational single currency regime) when it decided to forge a monetary union way back in 1785.¹⁰ However, this did not preclude them in forging a monetary union.¹¹ This is an important point because Frankel and Rose (1997) found that some OCA criteria are endogenous. More specifically, they found strong positive relationship between the degree of bilateral trade intensity and the cross-country bilateral correlation of business cycle activity. This was confirmed by the finding of Bayoumi *et al.* (1999) that OCA indices indicate that European countries became better candidates for a monetary union after 1987. This only underlies the importance of a strong political commitment for advancing regional economic integration.

V. Desirable Common Monetary Arrangement

Determining whether East Asia has already substantially satisfied the OCA criteria is only the first part in deciding whether it is beneficial for the region to forge a common monetary arrangement in such a way that exchange rate uncertainty would be minimized, if not completely eliminated. The next part is determining what kind of fixed exchange rate zone is desirable for East Asia. Mundell (2000) pointed out that “[T]here is a wide spectrum of possibilities, ranging from the deep monetary integration of a single-currency zone to a looser union of separate currencies connected by fixed exchange rates.”¹² The former connotes complete monetary integration, while the rest are incomplete monetary integration. This directs our attention to alternative exchange rate regimes discussed in Section III. We will,

¹⁰ Actually, the US entered into an arrangement similar to the EMU when President Woodrow Wilson signed the Federal Reserve Act 88 years ago.

¹¹ In a recent study using data for the period 1969:Q1 to 1998:Q3, Kouparitsas (1999) has produced empirical results confirming that the US satisfies the four OCA criteria: (1) regions are exposed to similar sources of economic disturbances (common shocks); (2) the relative importance of these shocks across regions are similar (symmetric shocks); (3) regions have similar responses to common shocks (symmetric responses); and (4) if regions are subject to region-specific economic disturbances (idiosyncratic shocks), they are capable of quick adjustment.

¹² McKinnon (2000) makes a clear distinction between a “common monetary standard” and a “common currency”. According to him, “... a common monetary standard is one where participating countries keep, with some success, their exchange rates fixed against a common nominal anchor – possibly provided externally. Although exchange rates may remain fixed for many years (as in some East Asian countries before the crisis), longer term exchange rate uncertainty remains. In comparison, a ‘common currency’ provides an independent anchor and full long-run exchange rate certainty.”

therefore, review below five specific proposals for a common monetary arrangement for East Asia and assess their strengths and weaknesses.

1. East Asian Common Currency

If East Asia decides to deepen further economic integration, then it should accompany it with stronger monetary unification by creating a common Asian currency (Bayoumi *et al.* 1999). This, of course, requires the establishment of a supra-national East Asian Central Bank (EACB), and each member should be prepared to surrender their monetary sovereignty to this institution for better coordination of monetary policy. Considering the length and difficulty the Euroland hurdled in forging a monetary union, the march towards creating a single currency for East Asia could also be long and tedious for reasons discussed below. However, if indeed there is a political commitment to go ahead with this arrangement, Bayoumi *et al.* have proposed a transition period that would focus on five objectives.

(a) Strengthening Central Bank independence. Each potential member to a regional currency should strengthen the independence of their central banks to ensure price stability leading up to the formation of the monetary union. This requires not only formal but actual independence of the central banks. Even before the East Asian financial crisis, most countries in the region were already moving towards this direction by passing laws to establish an independent central bank in their own front yard. The Philippines, for instance, passed a law in 1993 that formally gives independence to the new Central Bank by providing a six-year fixed term for the Central Bank Governor and other members of the Monetary Board. Despite the appropriate legal framework, central banks in the region are still far from being truly independent. The recent sacking of the Central Bank Governor of Thailand and the intense pressure put up by legislators on the Central Bank Governor of the Philippines and by the Indonesian President on the Central Bank Governor and other members of the Monetary Board to resign are cases in point. It may take some time for East Asian economies to appreciate the long-term benefits of having a truly independent central bank. However, what is important is that the process has already started with the changes made in the legal framework for their central banks.

(b) Enhancing wage and price flexibility. Since exchange rates in the region will be virtually fixed with the adoption of a common currency, wage and price flexibility is needed for ensuring internal and external balance in each country. Some East Asian economies have still laws limiting wage and price flexibility. However, these are less pervasive now than in the past. For instance, there is now greater appreciation towards greater labor flexibility, while price controls are imposed only on a few key commodities.

(c) Strengthening the financial sector. The East Asian financial crisis has clearly demonstrated the case that a weak financial sector can greatly compromise the objective of an independent central bank to achieve the objective of price stability. Buitier (2000) pointed out that a central bank has short-term deep pockets, which at times may not be sufficient to deal with system-wide solvency problem unless it embarks on inflationary financing to salvage failing banks and keep itself afloat. To avert such problem, the short-term deep pockets of the central bank must be supplemented by the long-term deep pockets of the ministry of finance. However, the deficit of the government could go beyond manageable levels, creating more instability.¹³ This is why according to Bayoumi *et al.* the Maastricht Treaty addressed it, albeit indirectly, by limiting deficit financing after the inauguration of the monetary union.

Before the financial crisis, East Asian economies were enjoying either budget surpluses or significantly low budget deficits. The situation had greatly changed after the crisis when governments of crisis-hit economies had to undertake pump-priming activities and massive bail-outs of financial institutions and non-financial corporations.

(d) Harmonizing monetary policy over the transition. The potential members of the EMU aligned their monetary policy with that of the Bundesbank because of its superior record in managing inflation and the relative importance of the German economy in the area. This condition is clearly absent in East Asia. However,

¹³ Because the government will eventually force the central bank to buy its bonds, a case of inflationary financing.

Bayoumi *et al.* do not consider it as an insurmountable problem so long as potential members work more closely to avoid coordination failure.

(e) Creating barriers to exit. A monetary union that makes it easy for its members to exit will likely have a very short life span. This is because there is a strong temptation for members to break away from the arrangement if it finds the common monetary policy espoused by the supra-national central bank not in conformity with what it wants. Bowing to such pressure could seriously undermine the objective of price stability pursued by the supra-national central bank. Thus, Bayoumi *et al.* suggest that exit barriers similar to what the EU has created to make it more costly for members to disengage themselves from the arrangement. They pointed out that the monetary union is only one of the webs of political and economic agreements in EU, which rest on three pillars, namely, common economic policy, common social policy, and a common security policy.

A common currency in East Asia can certainly help develop the regional bond market if it is accompanied by honest-to-goodness reforms in corporate governance region-wide and standardization in the payments systems. Scale is important in successfully developing a bond market. The region can realize scale economies if large bond issues are floated in a large market. However, it only partially washes out the “original sin”. As long as the East Asian common currency is independently floating relative to the rest of currencies in the world, exchange risk still remains, which means that East Asia as a whole needs to develop hedging instruments.

The economic size of the monetary union in East Asia will be a big issue if Japan is excluded from the agreement. According to Mundell (2000), monetary mass matters a lot for a common currency area to be sustainable. He said, “[T]hink of currencies as ships on a stormy ocean. The most stable ship would be the largest.” When the Euroland was formed in 1999, the combined GDPs of the 11 member countries amounted to US\$6.5 trillion, making it the second largest economy in the world overnight. The eventual participation of UK, Norway, Sweden and other European countries eager to join the union can easily bring its economic size much closer to the US economy. In contrast, the combined GDPs of East Asian economies excluding Japan amounted to only US\$2.4 trillion.

Possibly the greatest economic stumbling block to a successful monetary integration in East Asia is their wide disparities in economic development levels as observed from their respective per capita income. For example, in 1999 Hong Kong and Singapore had a GDP per capita of US\$23,223 and US\$21,837, respectively, while that of Vietnam is only US\$372. Singapore's GDP per capita in 1999 was more than 30 times greater than Indonesia's GDP per capita of US\$674. This divergence in per capita income has important economic and political implications in a monetary union. In the case of the EU, with the eventual admission and enlargement in membership of the relatively poor and periphery countries from Southern Europe, known as the Club Med countries (e.g., Spain, Portugal, Greece, and Southern Italy), policies towards income convergence or 'bridging the income divide' between the richer and core Northern European member countries (except for Ireland), and the relatively poor or periphery Southern European countries have taken the utmost priority in the form of massive income transfers into poorer regions and into the Club Med countries, which were 'financed' wholly, through the EU Budget.¹⁴

If monetary union becomes a reality in East Asia, similar phenomenon will likely occur, this time on a larger scale than those observed in the EU. This is because the income disparity and divergence in East Asia is more severe than in the EU as noted above. Moreover, the financing of the income transfers to the poor countries and regions of the EU has taken a serious political dimension among member countries of the EU, especially the net contributors (i.e., the richer Northern European countries) to the EU budget.¹⁵ Specifically, the disproportionately large net contribution of Germany, which has continued to rise despite the very large economic cost of the re-unification of East and West Germany raises the issue of what constitutes an equitable and fair re-distribution and transfer of income to poorer member countries in a monetary union? (Tsoukalis 1997). A basic question will be for East Asia is that among the richer and developed countries, who will take on a

¹⁴ The Economist (30 June – 6 July 2001) reported that the EU spends 2.25 billion euro a year subsidizing olive farmers, who are located mainly in Spain, Greece, Portugal and Italy. In 2000 alone, 5.5 percent of the total 40.4 billion euro earmarked for agricultural subsidies went to olive farmers. Spanish farmers got around half of their income from Brussels.

¹⁵ For instance, Spain has raised concern that the EU enlargement will lower the union's average wealth, which will disqualify most Spanish regions from aid programs (The Economist, 9-15 June 2001).

leading role of being the so-called “paymaster” of a monetary union in East Asia, in the same way that Germany had been connoted to fulfill that role in the EU? On the assumption that a new Asian currency is created (as is most likely to be the case, just like the euro for the EU) in place of national currencies, will Japan (if it decides to be a member) have the willingness to fulfill this role and provide the focal monetary leadership and macroeconomic discipline (just like Germany does for the EU), now that the yen had been dispensed with?

A related argument is that the differences in political systems compounded by contemporary political rivalries render the task of monetary integration a daunting and difficult task in East Asia. For example, China had been for years a practicing socialist state and it is only within recent memory, that it tried its hand in experimenting with free market economics. On the other hand, its main rival Japan had been a ‘practicing democracy for 50 years’ (Bergsten 2000). In contrast, South Korea has its own economic and political dilemma to settle, with regard to its planned re-unification with its neighboring rival in the North (the financial cost of which will be definitely staggering). Ultimately, these systemic political differences would complicate efforts in securing agreement towards an equal sharing of burden among the developed countries of East Asia in the process of re-distribution and transfer of income to poorer members. In addition, the lack of economic and political cohesion makes the necessary establishment of mechanisms for adjusting and responding to economic shocks in a coordinated manner will be difficult and arduous.

One could think of a piecemeal approach in forming a monetary union in East Asia by starting those that have greater similarities in economic characteristics and political system. For instance, Korea and Thailand or Hong Kong, Indonesia, Malaysia, and Singapore, which were found by Bayoumi and Mauro (1999) to have similarities in macroeconomic shocks, could start the process. But then this raises the issue of sustainability as these groupings will not have a necessary monetary mass, as suggested by Mundell, to sail through stormy waters.

2. Dollarization

“Dollarization” is the adoption of a foreign currency as legal tender, and the essential abandonment of the use of national currency (Fischer 2000). The foreign currency could be the US dollar, yen, euro or any major currency outside the region. Participating countries in this monetary arrangement should simultaneously adopt dollarization according to a certain timetable and choose which foreign currency to adopt. For East Asia, the selection can immediately be narrowed down to the US dollar, because various studies have consistently shown that a yen bloc does not exist in East Asia and that the US dollar has been the main currency used in invoicing of trade (McKinnon 2000, Kim and Ryou 1999, Ogawa 2000).

Courchene and Harris (1999) have identified two approaches for dollarization. One is “market dollarization,” a situation in which private sector agents increasingly conduct their affairs in US dollars. This, of course, assumes that countries in the region have no laws disallowing the use of US dollars in domestic commercial and banking transactions.¹⁶ The US dollars can co-exist with domestic currencies. This arrangement would leave intact the institutional monetary institution in the member countries. However, the effectiveness of monetary policy can be undermined, especially if dollarization becomes very pervasive in these countries.

The other approach is “policy dollarization,” in which the participating economies agree to simultaneously abandon their currencies and adopt the US dollar as the sole legal tender. This amounts to importing US monetary policy, hence, the central banks in the member economies are no longer needed. Aside from importing the US inflation and interest rates, this arrangement will redeem the economies from the “original sin” (Eichengreen and Hausmann (1999)).¹⁷ Thus, economies in the region can focus on improving corporate governance and upgrading their payments system to develop their bond markets.

¹⁶ For instance, the Philippines repealed the Uniform Currency Act, which disallowed the use of foreign currency in any domestic transactions and contracts.

¹⁷ Glick (2000) has pointed out that dollarization may solve the problem of currency mismatches, but it does not necessarily eliminate maturity mismatches and country risk considerations.

There are, however, disadvantages with dollarization. One is that in formulating its monetary policy and inflation target, the US will not take into account the interest of the East Asian dollarized economies, which can impose significant economic costs on them. Another disadvantage is the loss in seigniorage. We have calculated the revenue realized by East Asian countries during the period 1995-1999, using two methodologies. The first method calculates seigniorage as the change in base money. This assumes that the components of base money are unremunerated. The second approach uses the inflation tax approach. The results are shown in **Tables 12a** and **12b**, respectively. Looking at the results of the first method, the average seigniorage for the period indicated appears to be significantly greater than 1 percent of GDP for all East Asian countries, except Korea and Singapore. Using this method for 39 sub-Saharan countries, Honohan and Lane (2000) estimated an average seigniorage of 1.6 percent of GDP for the region during the period 1990-1997. The second method yields seigniorage averaging from as low as 0.12 percent in Singapore to as high as 4.06 percent in Myanmar. The corresponding figures for Iceland were 0.18 percent for the first method and 0.07 percent for the second method (Buiter 2000). This suggests that East Asian countries will lose more from dollarization. Of course, this loss to East Asia will be a gain to the US. However, East Asian countries can regain part of its losses from dollarization by entering into an agreement with the US to share the seigniorage. Unfortunately, the US has yet to formulate a legal framework before it can enter into such agreement.¹⁸

Mundell (2000) pointed out that one of the costs of dollarization is political. In dollarization, the dollarized countries will have to surrender monetary sovereignty to the US. This is a far cry from the euro arrangement in which participating countries are represented in the ECB. This cost cannot be easily quantified and could vary a lot depending on the political temperament of East Asian countries.

¹⁸ According to Mundell (2000), US Senator Connie Mack submitted in 2000 a bill to address this issue. The bill is entitled: "International Monetary Stability Act of 2000" that aims to share seigniorage with officially dollarized countries.

3. Currency Board System

East Asian countries may agree to jointly fix their currencies to a common external anchor through a currency board system. Under this system, domestic currency issues are fully backed up by a foreign currency and the currency board stands ready to buy and sell foreign exchange at the fixed rate. Since there is no scope for domestic monetary policy, the central banks in member countries are no longer needed. Understandably, there is also no lender of last resort under this system. However, unlike dollarization, countries that adopt the currency board system still retain their national currencies. They, therefore, can enjoy the seigniorage. However, it can easily be offset by the cost of holding foreign currency.

In East Asia, only Hong Kong has a currency board system since 1983. It has caught a lot of attention lately because of its successful defense of its currency during the height of the East Asian financial crisis. In Latin America, only Argentina has a currency board system since 1991, and despite its recent problem, the system seems to be holding.¹⁹ Both systems use dollar as the external currency anchor. Hanke and Schuler (1993) have proposed a currency board system for the Americas with the US dollar as the common external anchor because they think it can facilitate the region's natural tendency to evolve toward a common currency area. In another continent, Honohan and Lane (2000) have proposed a currency board system for the proposed African Monetary Union (AMU) with the euro as the common external anchor.

In the event East Asian countries decide to adopt a currency board arrangement, it must address three issues. One is the common external anchor it should adopt. Although the US dollar is likely to be a strong candidate, the geographical distribution of East Asian countries' trade seems to militate against it (Bayoumi *et al.* 1999). As shown in **Table 8**, East Asian economies' total trade with Japan, US and EU averaged 17.2 percent, 17.7 percent and 14.1 percent, respectively, during the period 1990-1998. One way of dealing with this problem is to adopt a common-currency board peg to a basket of currencies, which most likely would

¹⁹ Recently, Domingo Cavallo, Argentina's Economic Minister, hinted to tie the peso half to the dollar and half to the euro, but only when the euro itself reaches parity with the dollar (The Economist June 2001). On 6 June 2001, the exchange rate was 1.18 euro/dollar.

consist the US dollar, yen and the euro, but this creates another set of problems, which we will discuss in detail below.

The second issue is whether participating countries should have their currency boards in their front yards or establish a joint currency board arrangement for all. The latter can save on costs and reinforce credibility.²⁰ However, the cost of setting up a joint currency board has to be considered carefully.

The third issue is the extent of the readiness of East Asian economies to make sacrifices to make the currency board arrangement work. The ordeal Hong Kong went through in defending its currency during the East Asian financial crisis should be considered thoroughly when East Asian economies begin to think seriously about a common currency board arrangement for the region.

The currency board system is particularly useful to countries that have a history of inflationary finance and fiscal credibility problems. These two problems, however, are not too serious in most East Asian economies before and after the crisis. Nevertheless, it can be a useful starter for forging deeper monetary cooperation in the region.

4. East Asian Dollar Standard

The East Asian dollar standard (EADS) was proposed by McKinnon (2000). It is a system in which participating countries in East Asia mutually link their currencies to the US dollar, which is the nominal anchor for their domestic price levels. McKinnon has pointed out that East Asian countries have already *informally* adopted this common monetary standard for quite some time even after the regional financial crisis. In particular he notes that

“The 1997-98 crisis revealed how the success of any one country pegging to the dollar as a nominal anchor depends heavily on also having its trading partners and competitors securely anchored as well. From this collective ‘nominal anchor’ perspective, East Asia has become a *natural currency area* over which one wants exchange rates to be stable.” (italics added)

²⁰ Honohan and Lane (1999) have proposed this option for the African monetary union.

This could be a corner stone for a monetary cooperation in East Asia. A member country whose currency is under great pressure may not have to resort to devaluation if it can temporarily borrow from other members in the country. Since firm-fixing under the EADS removes exchange rate risk, then domestic money will be as good as foreign money. It is in this system that the heterogeneous economies of East Asia can share better the risks from asymmetric shocks. Without going into dollarization, collective adoption of the EADS addresses the problems generated by “original sin”. East Asian countries with relatively sound fundamentals can easily forge a long-term exchange rate commitment and adopt a restoration rule explicitly.

The advantage of this regional monetary arrangement over the East Asian currency union and the joint currency board system is that it does not require a permanent institution to manage the system after member economies have agreed to it and put the system in place. However, for EADS to work effectively, McKinnon proposes the following rules:

- a. No net foreign exchange exposure by banks or other financial institutions with short-term assets or liabilities. Comprehensive capital controls are a second-best alternative. Corollary: in either case, the government must then make the dollar-based foreign exchange market on a day-to-day basis.
- b. Move from informal dollar pegging to official dollar parities. Treat these parities as long-term obligations to which the government is committed after any crisis. (This requires sticking to the restoration rule.)
- c. Make other institutional changes – improving legal recourse of creditors, greater accounting transparency, and so on – to lengthen the term structure of domestic finance by encouraging the development of bond and mortgage markets.

- d. Rationalize the position of Japan within the dollar-based East Asian system. US and Japan jointly to commit to a benchmark parity for the yen/dollar rate over the long term. But let the yen/dollar rate float freely on a day-to-day or week-to-week basis.

McKinnon considers rules (a) as the stick designed to force banks out of the business of being international short-term intermediaries. Fischer (2000) agrees with the wisdom of this prudential regulation, but he points out that it may not be enough to lessen a country's vulnerability to a currency crisis since corporations can still directly access foreign loans.²¹ Comprehensive capital control as mentioned by McKinnon in this rule is another option, but then it could prevent transactions that are otherwise profitable.

Rules (b) and (c) are considered by McKinnon as carrots. The credibility of the restoration rule is indeed a big problem in this system. The exchange rate is allowed to move during crisis period, but it is supposed to back to the original rate once the crisis subsides according to this restoration rule. However, predicting when a crisis occurs is a difficult one. Rule (d) is indeed a recognition that given the geographical diversity of East Asian countries' trade EADS works better if there are no large swings in the yen/dollar rate as happened before the regional financial crisis. But then again why not include the euro since East Asian trade with the EU is also quite significant. This raises the question of the feasibility of the EADS since it is conceived as a regional monetary standard that heavily depends on the commitment of the US and Japan to minimize the fluctuations of bilateral exchange rates. Also, a return to an announced peg is an open invitation to speculative attacks (Glick 2000).

²¹ For instance, the Philippine central bank has recently re-introduced its currency risk protection program, which is some kind of a non-deliverable forward, to encourage non-financial corporations not to speculate at times when regional currency markets become volatile.

5. Regional Currency Basket System

The geographical distribution of trade and extent of competition among East Asian countries in world markets require a common basket peg. Williamson (1999), Ogawa and Ito (2000), Kawai and Takagi (2001) and many others have suggested this system. For East Asian countries, it would involve a mutual agreement among them to fix their currencies to a basket of currencies, consisting of the yen, the euro and the dollar.

The instability of the effective exchange rates of the East Asian countries can have significant impact on their economies. Kawai and Takagi (2001) provided an empirical support for this system. More specifically, they found that in East Asian economies, “both real output and prices respond considerably to a change in the real effective exchange rate, suggesting that the policy framework that stabilized the real effective exchange rate would be important in ensuring macroeconomic stability.” Kwan (1998) also found that the yen/dollar exchange rate has a significant impact on output growth in nine Asian economies. The common basket peg is intended to address the instability of the effective exchange rate.

In their paper, Ogawa and Ito were able to demonstrate that the optimal currency basket for East Asia is that which gives the yen more weight than what other studies had suggested. East Asian countries, therefore, need to mutually agree on this rather than be left to their own selves in determining the currency weights to avoid coordination failure. If they do, then they should simultaneously move to a common currency basket peg. The common weights that have been suggested are 0.4 for the US dollar and 0.3 each for the yen and euro.

Williamson (2000) has proposed a common basket peg with BBC rules. BBC stands for band, basket and crawl, respectively. The wide band (up to +/- 15%) affords countries with certain flexibility to developments in the exchange markets. In severe crisis, however, countries may be allowed more flexibility, but they should abide by the restoration rule to lend credibility to such a system. Only when the shock is sufficiently large and permanent that a revision in the rate to bring it to the new equilibrium rate is allowed.

The system suggested above is flexible enough to allow each country to choose their respective exchange rate systems with respect to the common basket (Williamson 2000). Thus, Hong Kong may continue with its currency board system, except that it fixes its currency to the common basket instead of to the dollar alone.

Some would look at this regional cooperative arrangement as an intermediate step towards developing an Asian common currency (Park 2000, Mundell 2000). Considering that some OCA criteria are endogenous, this arrangement can work well towards developing a stronger commitment for deeper economic and monetary integration in the region.

This proposal has not escaped criticisms from various authors. One criticism is that currency basket lacks transparency, a commodity that emerging market economies cannot forego in this world that increasingly demand for greater openness.²² To address this issue, Ogawa and Ito have proposed to publish the typical currency basket unit for the region, which they call the Asian Currency Unit or ACU. Agreeing to a common basket of currencies with common weights may both be difficult to achieve, both politically and economically. The total trade weights of East Asian economies with Japan, US and EU shown in **Table 8** show considerable variation. To deal with this problem, each East Asian economy may be allowed to use different trade weights suited to its condition. But as McKinnon (2000) pointed out, the commonality of the East Asian monetary standard would be lost.

McKinnon (2000) has pointed out that targeting the real exchange rate means that the exchange rate cannot anchor the domestic price level. He has also pointed out the proposed trade weights are necessarily ambiguous and do not take into account the preponderance of dollar invoicing of trade in East Asia. More importantly, the basket currency system does not encourage capital market integration. As Mundell (2000) has indicated, “[I]f a currency is absolutely fixed to the dollar or the euro, then you

²² Mundell’s (2000) comments on this issue are quite amusing. “In countries that used one in the past, the authorities kept saying yes, we have a basket, but we are not going to tell you what the proportions of the currencies in the basket are. This is opposite to transparency. Clever econometricians working on this topic tried to determine what the basket was. They could figure it out for some time, but they usually caught the authorities changing the basket. As implemented in the past, it’s not been a stable basket.”

will get the interest rate of that area..... That kind of integration is not straightforward or as transparent with multiple-currency basket.”

VI. Building Blocks

Any kind of monetary cooperative arrangement requires strong political commitment. The deeper the monetary cooperative arrangement, such as the East Asian common currency arrangement discussed above, the stronger the political commitment is needed. This seems to be an ingredient lacking in Asia that it cannot replicate what EU has done. Europe has a long tradition of *integrationist* thinking with roots that expand for several centuries (Bayoumi *et al.* 2000). The fear of another war accelerated the translation of that integrationist thinking into a reality. The approach was not by conquest of land by a ruler, but unification of political and economic borders in which the “‘conquered’ nations gain a seat in an international High Authority and all people involved prosper” (Jones undated). Although the creation of the euro and the ECB did not feature as among the key objectives of European integration when it was started almost 50 years ago, they were the inevitable consequence of having a strong political commitment towards greater regional integration.

East Asia may not have a long tradition of integrationist thinking, but certainly it is becoming more aware of the need for greater integration to benefit from globalization. The experience from other regional groupings that have forged regional cooperation can certainly add more spark to the kind of cooperation contemplated for the East Asian region. The devastating effect of the regional financial crisis can serve as a rallying point for greater regional cooperation. In fact, some building blocks have already been established that may serve as springboard for deeper regional economic integration. Without political commitment, these regional cooperative efforts would not have materialized. It would be worthwhile to mention them here.

Some steps had already been taken by East Asian countries to move towards greater monetary cooperation even before the outbreak of the Asian crisis in mid-

1997, and as a result of the Mexican crisis in 1994. In particular, the Hong Kong Monetary Authority and the central banks of Australia, Malaysia, Indonesia and Thailand entered into repurchase agreements in November 1995. They were later joined by the Philippines, Singapore and Japan. These agreements, by allowing the central banks to borrow dollars from one another to the value of the US Treasury certificates of the borrowing governments, were to enable them to intervene more heavily at short notice. In 1996, Australia and Japan organized the first governor-level Executive Meeting of East Asia and Pacific Central Banks (EMEAP) in Tokyo (Manzano and Moreno 1998). The participants discussed possible cooperation in foreign currency markets, and on installing regional mechanisms to defend currencies against speculative attacks. But as foreseen by Eichengreen and Bayoumi (1996), these unassuming measures proved “insufficient to repel an all-out attack on an Asian currency comparable to the Mexican or ERM crises.”

It should also be noted that some regional integration projects were underway when the Asian crisis broke out in 1997, particularly under the Association of Southeast Asian Nations (ASEAN) and the Asia-Pacific Economic Cooperation (APEC). But both did not play any significant role during the crisis. In the case of ASEAN, this was attributed to the inability of trade-based integration to avoid the emergence of, or deal with financial crises and limit their intensity. The lack of any meaningful response from APEC, on the other hand, was seen as confirming its status as more of a dialogue scheme and not a genuine regional integration (Dieter 2000).²³ Thus, the focus has been on how to deepen economic integration through policy coordination and institutionalization in the region, which could be undertaken through the ASEAN and/or APEC.

With regard to ASEAN, the need to intensify financial cooperation was underscored in the light of the Asian crisis. Thus, ASEAN’s heads of government

²³ It is to be noted that in November 1997, deputies of 14 economies in the Asia-Pacific region including Japan and the US gathered in Manila to craft the so-called Manila Framework, which is a regional response to the crisis. The framework calls for: (1) a mechanism for regional surveillance to complement the global surveillance of the IMF; (2) enhanced economic and technical cooperation, particularly in strengthening domestic financial systems and regulatory capacities; (3) measures to strengthen the IMF’s capacity to respond to financial crises; and (4) a cooperative financing arrangement that would supplement IMF resources. As everybody knows, however, this was merely a consolation prize granted by the US and IMF to East Asia for not going ahead with the proposed Asian Monetary Fund, which both had objected from the very beginning.

resolved in December 1997 to deepen financial and macroeconomic cooperation by promoting closer consultations on macroeconomic and financial policies, and promoting the liberalization and development of the financial services sector, in addition to reiterating their commitment to deepen economic integration through AFTA. The Hanoi Plan of Action was released in 1998, which consisted of the measures and actions that ASEAN intended to take, singly and jointly, to respond to the challenges of globalization. To strengthen macroeconomic and financial cooperation, the Plan called for the following actions: (i) maintain regional macroeconomic and financial stability; (ii) strengthen financial systems; (iii) promote the liberalization of the financial services sector; (iv) intensify cooperation on money, tax and insurance matters; and (v) develop ASEAN capital markets. Another important issue that was raised by the Hanoi Plan of Action, in terms of intensifying cooperation in money matters, was to study the feasibility of establishing an ASEAN currency and exchange rate system.

At the First ASEAN Finance Ministers' Meeting in March 1997, it was noted that the original ASEAN Swap Arrangement, which was established in 1977, was about to expire in a few months. The Ministers decided to renew it in a special meeting in December 1997, as a quick response mechanism for member countries facing financial crises. At their second meeting in February 1998, the Ministers endorsed the Bilateral Payment Arrangement (BPA), which promoted the use of regional currencies for settlements to encourage intra-regional trade, and more importantly to reduce their dependence on the greenback and thus reduce risks of exchange rate volatility. The BPA was initially implemented on a voluntary basis, with a view to developing the facility into a multilateral arrangement later on. The ASEAN + 3 Finance Ministers (including Japan, China and the Republic of Korea) then agreed to further strengthen the existing regional financing arrangement through the "Chiang Mai Initiative" (CMI for short) in May 2000. This initiative involves an expanded ASEAN Swap Arrangement that would include all ASEAN countries (the original arrangement consisted of the five founding member countries of ASEAN), and a network of bilateral swap arrangements among the ASEAN countries, China,

Japan and the Republic of Korea.²⁴ The actual implementation of the ASEAN Swap Arrangement will start by mid-2001, to be followed within six months by the implementation of the ASEAN Arrangement to Borrow and the ASEAN Bilateral Repurchase Agreements.²⁵ These will complete the first building block of the East Asian financial cooperation (Chaipravat 2001).

Another major initiative aimed at maintaining regional macroeconomic and financial stability was the ASEAN Surveillance Process (ASP), which the ASEAN finance ministers drew up in October 1998. The ASP has two major elements: monitoring of global, as well as regional and national economic and financial developments, intended to keep track of the ASEAN countries' recovery process and detect any sign of recurring vulnerability in any of the member countries; and peer review, which provides the forum at which ASEAN finance ministers exchange views and information on developments in their domestic economies and policies, and if necessary consider unilateral or collective action to counter potential threats to any member economy.

Overall, regional initiatives with respect to monetary cooperation in Asia are still tentative. In contrast, regional cooperation with respect to macroprudential monitoring is more positive. In particular, the ASP has proven to be an important mechanism for better monitoring of the ASEAN economies, and has aided ministerial discussions on key policy issues. The operational setup has been put in place²⁶, and a series of peer reviews has been conducted to date. In addition to the ASEAN Finance Ministers' Meeting, other institutional bodies involved in the ASP are the ASEAN Senior Finance Officials Meeting and the ASEAN Central Banks Forum. The latter were established to evaluate potential economic and financial risks of member countries, highlight policy options and implications, and encourage early action to minimize such risks. The ASEAN + 3 financial cooperation also aimed to set up a

²⁴ The ASEAN swap arrangement was expanded to include ten member countries under the CMI and the total amount of the facility was raised from the initial amount of US\$200 million to US\$1 billion (Park 2001).

²⁵ During the ASEAN + 3 meeting held in Honolulu, Hawaii in May 2001, three bi-lateral agreements worth US\$6 billion were already signed.

²⁶ Surveillance-related activities are supported by the ASEAN Surveillance Coordinating Unit (ASCU) based at the ASEAN Secretariat in Jakarta, and the ASEAN Surveillance Technical Support Unit (ASTSU) based at the Asian Development Bank's Regional Economic Monitoring Unit.

system of monitoring capital flows, and to strengthen the regional surveillance mechanism in East Asia.

Finally, the ASEAN also adopted a 12-point common position on reforming the international financial architecture to deal with financial crises, as well as drew up a framework to facilitate the development of ASEAN bond markets.

The cooperative efforts discussed above, while paling in comparison with those of Europe that led them to the creation of the EMU, nevertheless indicate ASEAN's capacity for dialogue and consensus. Certainly they can be considered as the first few steps towards forging a stronger political commitment for regional integration in East Asia. The success of the CMI will eventually build momentum for developing bolder monetary cooperative arrangements in the region.

VII. Concluding Remarks and Recommendations

If we closely scrutinize the East Asian landscape, we cannot help but notice one important thing; that is, increasing regional economic integration. Although the extent of intra-regional trade varies greatly among East Asian economies, yet we see it increasing through the years. The process of economic integration in East Asia may be slow, but what is certain is that it will never be reversed. As other regions in the world, such as EU, Mercosur, CFA and NAFTA, deepen their economic integration, East Asia will certainly be put under pressure to accelerate further the process of integration in the region. Thus, eventually East Asia will have to grapple with the issue of forging a closer regional monetary integration.

Consider this. In their study, Rose and Engel (2000) found that "trade between members of a currency union (e.g., Brunei and Singapore) is indeed much higher than trade between comparable countries with their own currencies, by a factor of over three." This confirms Mundell's (2000) argument that free trade areas and currency areas (zones of fixed exchange rates) reinforce one another. As East Asia, therefore, marches towards greater economic integration, it must accept the necessity of establishing a zone of fixed exchange rates in the region. Consider the costs of not

doing it. When Brazil depreciated its currency, Argentina's currency appreciated, tilting the trade balance in favor of the former (Eichengreen 1998). In 1993, Argentina responded by imposing higher tariffs on certain Brazilian products. Three years after, Argentina's currency depreciated vis-à-vis Brazil's currency, producing trade surplus to the former. This time, it was Brazil's turn to impose additional tariffs to contain the surge of imports from Argentina. These incidents have threatened to break the Mercosur apart. The same happened in EU when the Italian lira depreciated sharply vis-à-vis the German DM after it left the ERM in 1992. Germans poured to Italy to buy German cars, prompting the parent companies to revoke those franchises in Italy that sold cars to non-residents (Mundell 2000). All this suggests that intra-regional trade and investment can be hampered by exchange rate fluctuations.

This paper has reviewed four major developments in the last 30 years: the collapse of the Bretton Woods arrangements; deepening of economic integration worldwide; the frequency and severity of the crises that affected not only developing economies but developed economies as well; and the formation of the Euroland. Against this background was the increasing intra-regional trade and investment in East Asia. If this trend is going to accelerate, then East Asia has to deal sooner with the issue of what type of monetary arrangement it should have to support such trend. The paper then discussed the recent trends in exchange rate arrangements to provide a background to the kind of exchange rate arrangement that East Asia as a whole might adopt in the future. With increasing economic integration in the region, the paper reviewed the optimum currency area criteria as suggested by Mundell and others and found that the existing empirical studies generally support the argument that East Asia has satisfied the economic criteria for an optimum currency area. This implies that East Asia will benefit from having a common monetary arrangement. However, this requires a strong political commitment, which admittedly is absent in East Asia at the moment.

Should East Asia be able muster enough political will to go ahead with deeper economic integration, then it must also prepare itself for monetary integration. The paper then went on to review and assess the strengths and weaknesses of five possible common monetary arrangements for East Asia that can contribute to the stability of the financial system in the region and support the deepening of economic integration

in the region. These are: East Asian common currency; dollarization; currency board system; East Asian dollar standard; and regional currency basket system. The best arrangement for a more integrated East Asian region is the East Asian common currency union, with the regional currency independently floating vis-à-vis other currencies in the world. This carries with it the advantages of “transparency, saving in information and transactions costs, and sense of permanence that does not exist with separate currencies connected by fixed exchange rates” (Mundell 2000). Given the present economic and political realities in East Asia, this arrangement should be considered as a long-term goal that could be accomplished over 2 or 3 decades.

In the interim, it is better for East Asia to agree on a regional currency basket system consisting of the yen, the euro and the US dollar. Initially, each participating country should be allowed to determine the weights of these currencies in this basket with a sufficiently wide band to allow for greater flexibility. This avoids the usual problem associated with fixing to a single currency. Once experience is gained and credibility in this system is earned, then participating economies should converge toward a regional currency basket system consisting of the same currencies but with common weights, such as .40 for the US dollar and .30 each for yen and euro. A +/- 15% band will afford participating countries with sufficient flexibility to developments in the exchange market.

During this transition period, East Asian economies should strive to work on the four pre-conditions outlined by Bayoumi *et al.*, namely, strengthening central bank independence, enhancing wage and price flexibility, strengthening the financial sector, and harmonizing monetary policy. The emerging arrangements under the CMI and the expanded ASEAN Surveillance Process are a constructive sign that East Asian economies can work together to advance their common interests. Success in these arrangements will eventually lead to greater monetary cooperation in the region.

Finally, we should not forget to mention that national currency is unquestionably one of the symbols of national sovereignty. We might add a national football or basketball team in the list of symbols as suggested by Buiter (1999). Should symbols be more valued than economic prosperity?

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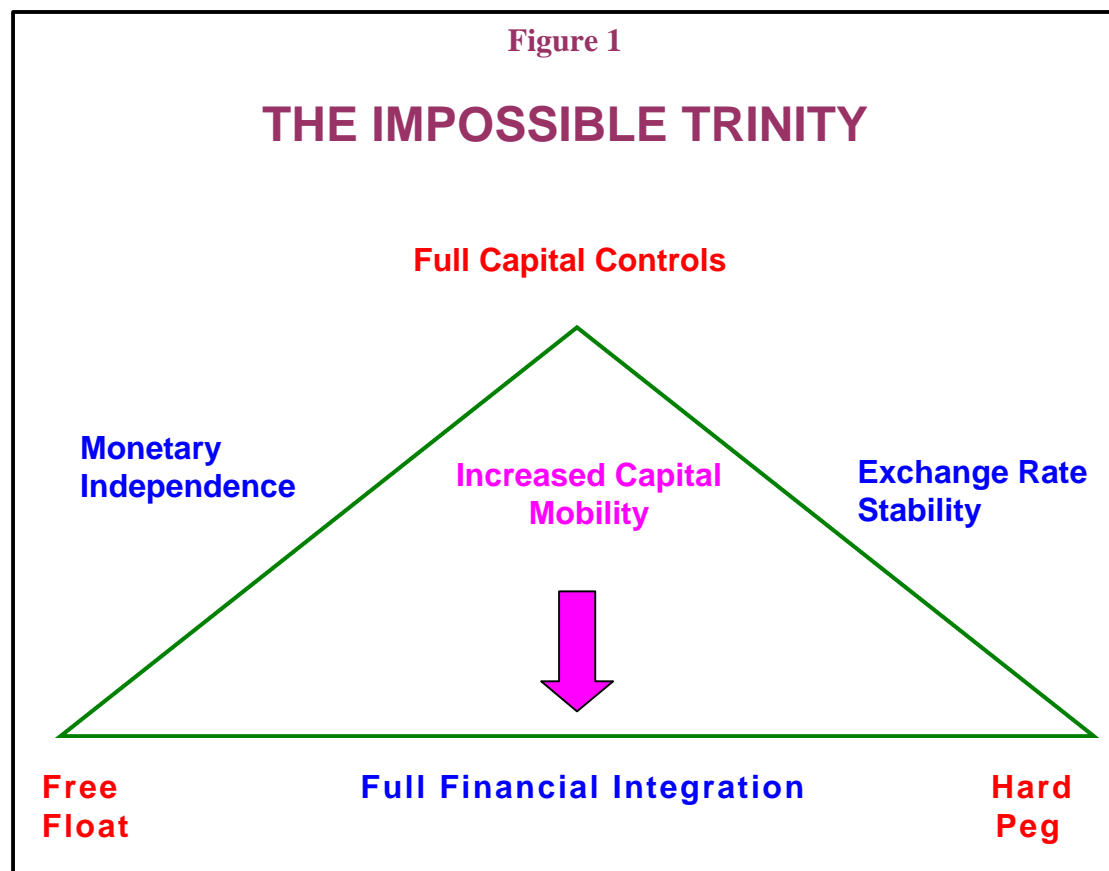
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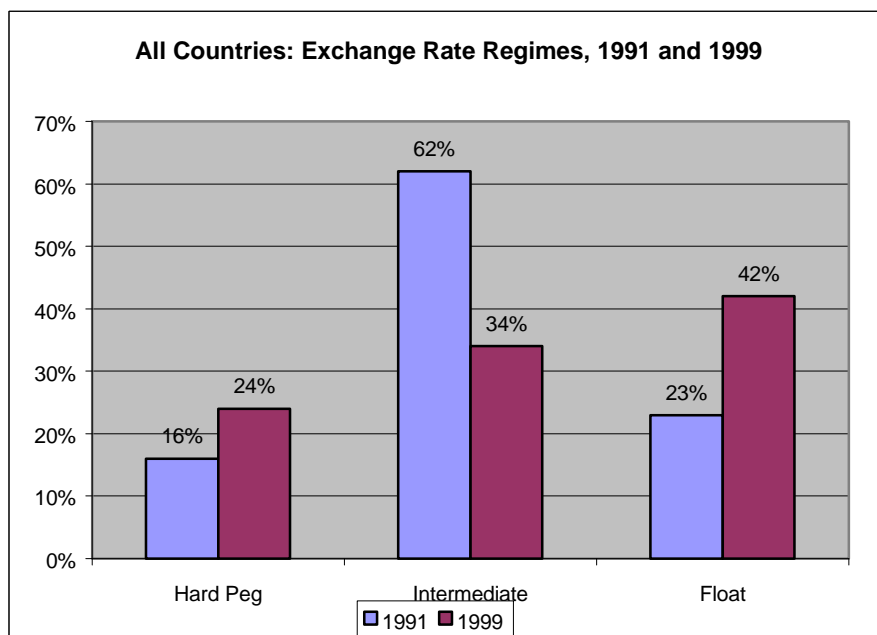
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Source: Frankel (1999).

Figure 2

Source: Fischer (2000).

Table 1. Exchange Rate Regime Transition Matrix, 1982 to 1999

		<i>All Countries</i> Regime in 1999						1982 Totals (freq. in %)
		Hard peg	Peg	Basket Peg	Bands and Crawls	Managed Float	Independent Float	
Regime In 1982	Hard Peg	20	0	0	0	0	0	20 (14%)
	Peg	2	19	0	5	9	12	47 (32%)
	Basket Peg	2	6	9	4	6	10	37 (25%)
	Bands and Crawls	8	0	0	1	0	4	13 (9%)
	Managed Float	3	1	2	5	1	8	20 (14%)
	Independent Float	0	1	0	2	0	6	9 (6%)
	1999 totals (freq. In %)	35 (24%)	27 (18%)	11 (8%)	17 (12%)	16 (11%)	40 (27%)	146
		<i>Developing Countries</i> Regime in 1999						1982 Totals (freq. in %)
		Hard peg	Peg	Basket Peg	Bands and Crawls	Managed Float	Independent Float	
Regime In 1982	Hard Peg	20	0	0	0	0	0	20 (17%)
	Peg	1	19	0	5	8	12	45 (37%)
	Basket Peg	1	6	9	3	5	9	33 (27%)
	Bands and Crawls	0	0	0	1	0	4	4 (3%)
	Managed Float	2	1	2	3	1	6	15 (12%)
	Independent Float	0	1	0	2	0	1	4 (3%)
	1999 totals (freq. In %)	24 (20%)	27 (22%)	11 (9%)	13 (11%)	14 (12%)	32 (26%)	121

Note: The entry for cell (x,y) indicates the number of countries with regime x in 1982 and regime y in 1999; e.g. cell (2,6) = 12 indicates that 12 countries had a peg in 1982 and an independent float in 1999.

Source: Reuven Glick (2000)

Table 2
Net Capital Flows to Indonesia, Korea, Thailand, Malaysia and Philippines, 1995-99
(in billion US \$)

Type of Capital Flow	1995	1996	1997	1998 ^e	1999 ^f
Current Account Balance	-41	-54.6	-26.3	58.5	43.2
External Financing	81.5	100.6	28.8	-0.5	-1.2
Private Flows	79	103.2	-1.1	-28.3	-4.8
Equity Investment	15.9	19.7	3.6	8.5	18.7
Direct	4.9	5.8	6.8	6.4	14.2
Portfolio	11	13.9	3.2	2.1	4.5
Private Creditors	3.1	83.5	-4.7	-36.8	-23.4
Commercial Banks	53.2	65.3	-25.6	-35	-18.8
Nonbanks	9.9	18.2	21	-1.7	-4.6
Official Flows	2.5	-2.6	29.9	27.8	3.5
Financial Institutions	-0.3	-2	22.1	21.6	-2
Bilateral Creditors	2.9	-0.6	7.4	6.1	5.5
Resident Lending/Others	-26.5	-26.8	-35	-16.9	-14.9
Reserves (excluding Gold) ^a	-14	-19.3	32.5	-41.1	-27

Notes: a) - denotes increase

e) Estimates

f) Forecast

Source: Rajan (1999).

Table 3
GDP Growth Rates of Selected East Asian Countries, 1995-1999
(in percent)

Country	1995	1996	1997	1998	1999
Cambodia	6.7	5.5	3.7	1.8	5
China	10.5	9.6	8.8	7.8	7.1
Hong Kong	3.9	4.5	5	-5.1	3
Indonesia	8.2	7.8	4.7	-13.2	0.2
Korea	8.9	6.7	5	-6.7	10.7
Laos	7	6.9	6.9	4	5.2
Malaysia	9.8	10	7.5	-7.5	5.4
Myanmar	6.9	6.4	5.7	5.8	5.7
Philippines	4.7	5.8	5.2	-0.6	3.3
Singapore	8	7.5	8.4	0.4	5.4
Taiwan	6.4	6.1	6.7	4.6	5.7
Thailand	8.9	5.9	-1.7	-10.2	4.2
Vietnam	9.5	9.3	8.2	5.8	4.8

Source: Key Indicators of Developing Asian and Pacific Countries, 2000.

Table 4
Exchange Rate Regimes According to IMF Classification, East Asia

Country	Exchange Rate Arrangement	
	1990	1999
Cambodia		MF
China	FP	FP
Hong Kong, SAR	CBA	CBA
Indonesia	MF	IF
Korea	MF	IF
Malaysia	FP (Basket)	FP
Myanmar	FP (SDR)	FP
Philippines	IF	IF
Singapore	MF	MF
Taiwan POC	MF	MF
Thailand	FP (Basket)	IF
Vietnam	MF	HB

Key:

MF- Managed float with no pre-announced exchange rate path

FP- Other conventional fixed pegs

CBA – Currency board

IF – Independently floating

HB – Pegged rate in horizontal band

Source: IMF International Financial Statistics (September 1990 and March 2000)

Table 5
High-Frequency Pegging to the US Dollar, East Asia

Country	Pre-Crisis Period		Crisis Period		Post-Crisis Period	
	USD Coefficient: β_2 (S.E.)	R-Square	USD Coefficient: β_2 (S.E.)	R-Square	USD Coefficient: β_2 (S.E.)	R-Square
China	0.996 (0.003)	0.995	1.001 (0.000)	1.000	1.000 (0.000)	1.000
Hong Kong	1.000 (0.002)	0.998	1.000 (0.003)	0.998	0.998 (0.001)	1.000
Indonesia	0.999 (0.008)	0.965	0.550 (0.388)	0.038	0.848 (0.163)	0.182
Korea	1.021 (0.016)	0.883	1.086 (0.226)	0.087	0.957 (0.045)	0.706
Malaysia	0.886 (0.014)	0.889	0.755 (0.138)	0.161	1.000 (0.000)	1.000
Philippines	0.987 (0.018)	0.836	0.788 (0.125)	0.196	0.945 (0.040)	0.741
Singapore	0.817 (0.012)	0.905	0.727 (0.061)	0.447	0.818 (0.026)	0.848
Thailand	0.955 (0.012)	0.923	0.688 (0.165)	0.107	0.858 (0.049)	0.639
Taiwan	1.015 (0.012)	0.928	0.930 (0.050)	0.552	0.986 (0.024)	0.883

Equation:

$$(\% \Delta \text{ local currency})_{\text{SWF}} = \beta_1 + \beta_2 (\% \Delta \text{ USD})_{\text{SWF}} + \beta_3 (\% \Delta \text{ JPY})_{\text{SWF}} + \beta_4 (\% \Delta \text{ DEM})_{\text{SWF}} + \hat{a}$$

USD – US dollar; JPY – Japanese yen; DEM – German marks; SWF – Swiss franc.

Source: McKinnon (August 2000).

Table 6
Gross International Reserves and Gross Domestic Product of Selected Countries, 1999

East Asian Countries, excluding Japan ¹			Japan, United States and the European Union		
Country	Gross International Reserves ² (in millions of US\$)	Gross Domestic Product ³ (in millions of US\$)	Country	Gross International Reserves ² (in millions of US\$)	Gross Domestic Product ³ (in millions of US\$)
Brunei		5,600	Japan	286,916	4,348,950
Cambodia	393	3,008	United States	60,500	9,256,100
China	157,728	991,200	European Union	203,564	6,505,217
Hong Kong	96,236	158,845	Austria	14,868	209,994
Indonesia	26,445	140,964	Belgium	10,932	249,307
Korea	73,987	406,940	Finland	8,102	129,384
Laos	101	1,292	France	39,701	1,432,240
Malaysia	30,588	78,735	Germany	51,039	2,111,975
Philippines	13,230	76,468	Ireland	5,324	93,414
Singapore	76,843	84,947	Italy	22,427	1,170,999
Taiwan	106,200	288,576	Luxembourg	77	715
Thailand	34,063	124,371	Netherlands	10,206	398,359
Vietnam	2,098 ⁴	28,500	Portugal	8,321	113,262
			Spain	32,567	595,568
			Norway	20,400	152,943
			Sweden	15,019	238,682
			United Kingdom	35,870	550,612
Total	617,913	2,389,446	Total	622,269	21,052,504

1 Myanmar was not included

2 Figures exclude the amount of gold reserves.

3 Based on nominal GDP figures. The GDP of the European Union countries were converted using the 1999 average exchange rate of the EURO against the US dollar (.9386/US\$)

4 Based on 1998 data.

Sources: *International Financial Statistics*, March 2001; *Key Indicators of Developing Asian and Pacific Countries 2000*, Volume XXXI; and *The CIA World Factbook 2000*.

Table 7a
Trade Intensity in East Asia

Trade Intensity Indices in East Asia, 1995

	Brunei	Cambodia	China	Hong Kong SAR	Indonesia	Japan	Korea	Laos	Malaysia	Myanmar	Philippines	Singapore	Taiwan	Thailand	Vietnam
Brunei Darussalam															
Cambodia	0.00														
China	0.18	1.09													
Hong Kong SAR	0.13	0.83	9.37												
Indonesia	0.75	5.96	1.39	0.98											
Japan	4.25	0.64	2.33	1.53	3.75										
Korea	3.40	0.00	2.23	1.63	3.01	2.72									
Laos	0.00	15.92	2.14	0.26	0.20	0.52	0.00								
Malaysia	3.36	3.43	0.72	1.08	1.64	2.37	1.38	0.08							
Myanmar	0.25	0.00	8.05	1.12	5.20	1.04	0.00	0.00	5.62						
Philippines	0.80	0.04	0.91	1.80	1.84	2.89	1.73	0.00	1.40	0.14					
Singapore	11.92	13.12	0.92	1.91	2.07	1.90	1.78	1.96	10.93	11.25	2.73				
Taiwan	0.79	0.90	0.57	4.36	2.16	2.78	1.29	0.55	1.69	0.91	2.33	1.93			
Thailand	5.53	22.14	0.95	1.09	1.54	3.25	1.09	39.79	2.43	0.94	2.15	5.22	1.75		
Vietnam	0.01	42.75	2.42	1.71	2.53	2.12	4.30	78.69	1.67	0.00	2.34	7.02	4.60	3.05	
United States	0.30	0.14	0.94	1.15	0.91	1.91	1.54	0.06	1.22	0.22	1.88	1.20	1.67	1.02	0.21
European Union (EU)	0.29	0.07	0.34	0.35	0.46	0.40	0.33	0.26	0.36	0.18	0.34	0.33	0.35	0.41	0.27

Source: Kawai and Takagi (2000).

Table 7b
Trade Intensity in Western Europe

Trade Intensity Indices in Western Europe, 1995

	Austria	Belgium-Lux.	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Netherlands	Portugal	Spain	Sweden	UK	US
Austria															
Belgium-Luxembourg	0.82														
Denmark	0.96	0.96													
Finland	0.99	0.98	4.19												
France	0.89	2.95	1.05	0.78											
Germany	4.41	2.18	2.46	1.53	2.06										
Greece	1.12	1.09	1.37	1.15	1.38	1.81									
Ireland	0.44	1.03	1.21	0.94	1.33	1.20	1.10								
Italy	2.18	1.35	1.05	0.78	2.50	2.07	4.03	0.82							
Netherlands	0.98	3.65	1.55	1.26	1.58	2.48	1.47	1.52	1.08						
Portugal	0.71	1.10	1.71	1.07	2.34	1.80	0.77	0.63	1.75	1.24					
Spain	0.83	1.14	0.89	1.02	3.56	1.66	1.82	0.93	2.39	1.16	10.04				
Sweden	1.10	1.41	8.08	8.54	1.01	1.71	1.01	1.25	0.89	1.57	1.19	0.89			
United Kingdom	0.60	1.61	1.57	1.96	1.74	1.47	1.21	5.93	1.25	1.89	1.70	1.64	1.96		
United States	0.24	0.49	0.30	0.44	0.42	0.48	0.39	0.77	0.47	0.47	0.26	0.35	0.51	0.88	
Japan	0.23	0.33	0.43	0.49	0.28	0.48	0.28	0.61	0.31	0.44	0.22	0.25	0.40	0.55	1.91

Source: Kawai and Takagi (2000)

Table 8
Regional Breakdown of East Asian Trade, Average for 1990-98 (Share of Total)

Exports

Exports\Exports to	ASEAN	Other EA	EA-14	EA-14 & Japan	Japan	U.S.	EU	(percent) ROW
Brunei Darussalam	21.1	16.3	37.4	93.0	55.6	2.7	2.2	2.1
Cambodia	56.8	5.5	62.3	69.0	6.7	6.0	18.6	6.4
Indonesia	14.2	16.6	30.8	60.1	29.3	13.8	14.5	11.5
Laos	46.5	5.3	51.9	62.6	10.7	2.6	18.0	16.8
Malaysia	28.2	13.6	41.7	54.9	13.2	19.2	14.8	11.0
Myanmar	22.2	20.4	42.6	50.0	7.4	7.2	8.4	34.4
Philippines	10.1	11.4	21.5	38.5	17.0	36.5	18.2	6.7
Singapore	26.1	17.2	43.2	50.9	7.7	19.6	14.4	15.1
Thailand	17.3	11.0	28.3	44.8	16.5	20.7	18.2	16.3
Vietnam	20.3	18.1	38.4	62.8	24.4	2.0	12.2	23.0
China	6.3	35.4	41.7	58.4	16.7	15.1	12.2	14.2
Hong Kong SAR	6.6	36.2	42.8	48.5	5.7	22.7	16.1	12.7
Korea	12.4	16.4	28.8	42.8	14.0	21.4	12.8	23.0
Taiwan	11.7	22.6	34.3	45.2	11.0	27.0	15.0	12.8
ASEAN	22.1	14.9	37.0	52.4	15.4	19.1	15.2	13.3
EA - 14	13.6	23.7	37.2	50.1	12.9	20.7	14.5	14.6
EA -14 & Japan	13.8	23.2	37.0	45.4	8.3	23.7	15.6	15.3

Continued, table 8

Imports

Imports\Imports from	ASEAN	Other EA	EA-14	EA-14 & Japan	Japan	U.S.	EU	(percent) ROW
Brunei Darussalam	41.5	6.3	47.8	58.6	10.8	14.0	21.4	6.0
Cambodia	57.5	13.6	71.2	81.1	9.9	1.6	9.7	7.6
Indonesia	11.5	15.6	27.2	49.2	22.1	11.8	20.2	18.7
Laos	61.8	8.8	70.6	80.0	9.4	0.5	3.7	15.8
Malaysia	19.9	13.7	33.7	58.5	24.9	16.6	14.2	10.6
Myanmar	41.7	31.6	73.2	82.7	9.5	1.4	9.0	7.0
Philippines	11.3	17.6	28.9	50.1	21.2	19.5	11.0	19.4
Singapore	21.2	13.9	35.2	55.2	20.0	16.3	13.4	15.1
Thailand	13.1	13.0	26.1	54.6	28.4	12.1	15.2	18.2
Vietnam	28.4	26.4	54.8	64.7	9.9	1.0	10.2	24.0
China	7.0	29.2	36.1	55.6	19.5	11.7	15.0	17.7
Hong Kong SAR	9.1	50.7	59.9	75.1	15.2	7.6	10.3	7.0
Korea	8.0	7.5	15.5	38.5	23.0	22.2	13.1	26.2
Taiwan	9.9	7.9	17.7	46.2	28.5	21.0	14.9	17.8
ASEAN	18.0	14.6	32.7	55.2	22.6	14.8	14.5	15.5
EA - 14	12.1	22.5	34.6	56.0	21.4	14.6	13.5	15.8
EA -14 & Japan	12.7	21.5	34.2	49.4	15.3	17.0	13.8	19.8

continued, table 8

Total Trade (Exports plus Imports)

Trading Economies\Trade With	ASEAN	Other EA	EA-14	EA-14 & Japan	Japan	U.S.	EU	(percent) ROW
Brunei Darussalam	30.2	11.8	42.0	78.4	36.4	7.3	10.4	3.9
Cambodia	58.8	10.6	69.4	78.4	9.0	3.5	11.6	6.5
Indonesia	12.9	16.2	29.1	55.1	26.0	13.0	17.1	14.8
Laos	55.3	7.6	62.9	74.0	11.1	1.2	8.5	16.3
Malaysia	24.0	13.6	37.7	56.6	19.0	17.9	14.6	10.8
Myanmar	34.8	27.8	62.6	71.3	8.7	3.3	8.7	16.6
Philippines	10.8	15.1	25.9	45.4	19.5	26.3	13.9	14.3
Singapore	23.5	15.5	39.1	53.1	14.1	17.9	13.9	15.1
Thailand	15.1	12.1	27.2	50.2	23.0	16.0	16.6	17.3
Vietnam	24.8	23.0	47.8	64.1	16.3	1.4	11.0	23.5
China	6.6	32.4	39.0	57.1	18.1	13.5	13.5	15.9
Hong Kong SAR	7.9	43.7	51.6	62.1	10.6	15.0	13.1	9.8
Korea	10.1	11.9	22.0	40.6	18.6	21.7	13.0	24.6
Taiwan	10.8	15.6	26.5	45.7	19.2	24.2	15.0	15.1
ASEAN	19.9	14.7	34.7	53.8	19.1	16.9	14.8	14.5
EA - 14	12.8	23.1	35.9	53.0	17.2	17.7	14.1	15.2
EA -14 & Japan	13.3	22.4	35.6	47.3	11.7	20.5	14.8	17.5

Notes: Other EA includes China, Hong Kong SAR, Korea and Taiwan. EA-14 includes ASEAN and other EA.

ROW is Rest of the World.

Source: Kawai and Takagi (2000).

Table 9
Openness in East Asia and the European Union Countries
(Total Trade as a Ratio of GDP)

East Asia									percent
	1990	1991	1992	1993	1994	1995	1996	1997	1998
Brunei Darussalam	89.50	101.30	96.40	97.90	93.80	85.60	91.00	85.30	83.40
Cambodia	n.a.	n.a.	35.80	37.50	51.20	69.50	54.60	58.30	62.80
Indonesia	41.50	42.90	44.00	41.20	40.70	42.60	40.80	44.10	80.90
Laos	30.50	25.90	35.70	50.70	56.00	51.00	54.00	61.70	73.10
Malaysia	137.50	150.90	138.30	144.60	163.40	173.60	155.40	157.50	181.60
Myanmar	2.50	3.60	2.90	2.40	2.10	2.10	1.60	1.60	1.50
Philippines	47.70	47.70	47.60	55.00	56.10	61.80	65.80	77.30	93.60
Singapore	309.80	292.10	277.30	277.00	286.10	290.40	280.30	270.60	254.30
Thailand	65.70	67.20	65.60	66.30	69.10	75.70	70.60	80.70	87.50
Vietnam	54.20	43.20	50.80	50.60	60.00	62.90	76.30	73.10	n.a.
China	32.50	36.00	39.60	44.90	43.60	39.70	35.50	36.20	33.80
Hong Kong SAR	220.20	231.10	241.20	236.10	239.50	263.20	246.10	228.50	215.40
Korea	53.40	52.00	50.30	48.00	49.30	53.20	53.80	58.90	70.30
Taiwan	76.10	77.60	72.40	72.70	74.00	82.70	79.70	83.00	82.70
Japan	17.60	16.20	15.40	14.10	14.30	15.20	16.50	18.10	17.70

European Union									percent
	1990	1991	1992	1993	1994	1995	1996	1997	1998
Austria	56.60	55.10	52.60	48.60	51.20	53.70	54.90	59.90	61.80
Belgium	n.a.	n.a.	n.a.	112.30	117.90	122.60	126.40	135.70	137.00
Denmark	50.50	51.00	51.80	48.80	50.30	52.40	51.40	54.00	53.10
Finland	39.70	37.00	42.50	49.10	54.00	53.80	54.20	57.70	60.90
France	37.70	37.40	36.00	33.10	35.20	36.90	30.90	40.30	41.80
Germany	n.a.	46.10	41.80	38.10	39.70	41.10	42.00	45.80	47.60
Greece	33.60	34.00	33.60	33.00	28.50	29.20	27.20	26.90	19.30
Ireland	97.60	97.30	97.40	104.10	110.20	118.40	117.40	120.20	133.20
Italy	32.20	30.60	30.10	32.10	35.50	40.40	37.90	39.30	39.60
Luxembourg	129.40	125.40	113.00	102.80	100.30	99.40	95.70	99.80	88.10
Netherlands	91.00	89.90	85.40	84.30	88.00	93.70	95.20	102.70	101.90
Portugal	60.30	54.60	51.50	47.40	51.40	54.00	54.90	58.30	57.40
Spain	29.10	28.70	28.50	29.40	34.10	36.50	38.40	42.70	43.80
Sweden	48.70	44.00	42.90	49.80	57.00	62.50	62.70	65.30	67.60
United Kingdom	42.00	39.00	39.30	41.10	42.20	45.80	47.60	45.80	43.20

Note: Openness is defined as the ratio of total trade (exports plus imports) to nominal GDP.

Source: Kawai and Takagi (2001)

Table 10
Manufacturing Trade in East Asia, 1990 and 1997
(Share of Total Trade)

	1990			1997		
	Exports	Imports	Total Trade	Exports	Imports	Total Trade
Brunei Darussalam	2.60	78.40	26.20	1.30	82.50	39.50
Cambodia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indonesia	37.00	78.00	55.80	43.30	74.70	57.10
Laos	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Malaysia	55.40	80.20	67.80	76.80	85.00	80.80
Myanmar	3.80	58.60	39.40	12.40	57.70	43.40
Philippines	41.40	54.50	49.40	84.60	78.50	80.80
Singapore	72.30	74.80	73.60	85.20	83.70	84.50
Thailand	63.70	76.50	71.20	71.20	79.60	75.60
Vietnam	28.60	13.20	20.40	20.60	22.10	21.50
China	72.30	80.80	76.20	86.70	79.40	83.50
Hong Kong SAR	92.50	84.50	88.50	93.90	88.30	90.90
Korea	93.80	65.60	79.30	89.40	67.10	77.40
Taiwan	93.50	70.90	83.30	95.60	76.00	86.10
Japan	96.60	46.80	74.20	95.40	56.90	78.30

Note: Manufacturing goods are defined by SITC 5+6+7+8.

Source: Kawai and Takagi (2001).

Table 11
FDI Inflows to East Asia, 1990-1998
 (millions of US dollars; percent of total)

Investors	Recipients				
	ASEAN ^(a)	China	Korea	Taiwan ROC	Total
Japan	57,693 (19.2)	29,715 (5.5)	2,769 (10.5)	4,935 (22.7)	95,112 (10.7)
USA	35,082 (11.7)	42,658 (7.9)	9,331 (35.3)	3,885 (17.8)	90,956 (10.3)
Europe	40,375 (13.4)	27,311 (5.1)	8,935 (33.8)	2,484 (11.4)	79,105 (8.9)
ASEAN	27,493 (9.1)	33,421 (6.2)	3,271 (12.4)	1,108 (5.1)	65,293 (7.4)
Other East Asia (b)	46,731 (15.5)	336,132 (62.4)	551 (2.1)	1,571 (7.2)	384,985 (43.4)
Total, including others	301,074 (100.0)	538,477 (100.0)	26,422 (100.0)	21,778 (100.0)	887,751 (100.0)

(a) 1991-98 for Brunei and Vietnam; 1992-98 for the Philippines; and 1994-98 for Cambodia

(b) Hong Kong SAR, Korea, and Taiwan ROC only.

Source: Kawai and Takagi (2001).

Table 12a
Seigniorage, East Asian Countries: Method 1
(% of GDP)

Country	Seigniorage					
	1995	1996	1997	1998	1999	Average
Cambodia	0.39637693	1.71168322	1.09325274	2.5532675	1.15960781	1.38283764
China	6.05356258	8.96926679	6.09653515	1.10816125	2.98425427	5.04235601
Hong Kong	0.28597957	0.34899329	0.42188679	0.16336241	11.3226137	2.50856715
Indonesia	0.90360253	1.82812336	2.24918153	3.2278969	1.91561259	2.02488338
Korea	1.08705446	-0.85619589	-0.7068541	-0.40399636	1.60900248	0.14580212
Malaysia	4.33893841	8.9172828	6.85730908	-12.2099032	12.2446047	4.02964635
Myanmar	4.47985792	5.03017753	4.37220721	3.65891964	2.30447779	3.96912802
Philippines	1.48163694	3.82153874	-0.84641694	0.23149877	3.96842878	1.73133726
Singapore	1.23778502	0.89258664	0.71974713	-1.84726664	3.30182455	0.86093534
Thailand	1.77752294	1.18476728	1.533645	-0.51338467	5.91549895	1.9796099

Note: Seigniorage = $(M_t - M_{t-1})/GDP_{t-1}$

where M_t = base money

GDP_t = gross domestic product, nominal

Source of raw data: International Financial Statistics.

Table 12b
Seigniorage, East Asian Countries: Method 2
(% of GDP)

Country	1995	1996	1997	1998	1999	Average
Cambodia	0.31033778	0.28519786	0.40909924	0.80169036	0.29334951	0.41993495
China	5.03918834	2.5193753	1.01284098	-0.32809338	-0.54522998	1.53961625
Hong Kong	0.67473177	0.4385827	0.38978104	0.20364781	-0.3043747	0.28047372
Indonesia	0.48218546	0.39946357	0.36648635	3.16315327	1.55274514	1.19280676
Korea	0.25350992	0.29788795	0.23967045	0.37159776	0.03830703	0.24019462
Malaysia	0.59959546	0.65407128	0.67793998	1.6663334	0.51618874	0.82282577
Myanmar	4.06019142	2.56412306	4.40060434	7.0319847	2.2682968	4.06504006
Philippines	0.95887941	1.06541	0.82533035	1.1477256	0.72048681	0.94356643
Singapore	0.22437482	0.1749425	0.27024086	-0.04722287	0.00987844	0.12644275
Thailand	0.45509889	0.51360447	0.53688405	0.93357805	0.03534165	0.49490142

Note: Seigniorage = $\delta_t(M_{t-1}/GDP_t)$

where: δ_t = inflation rate

M_{t-1} = base money

GDP_t = gross domestic product, nominal

Sources of raw data: International Financial Statistics and Key Indicators of Developing Asian and Pacific Countries 2000.

Appendix A

The Phased Introduction of the Euro

<p style="text-align: center;">Phase A Early 1998</p> <p style="text-align: center;">To be completed by January 1, 1999</p>	<p>Exchange rates are irrevocably fixed against the euro. The ECB and ECSB established to be in charge of EU monetary policy. First wave members of the EMU chosen and bilateral exchange rate parities of member countries to be fixed.</p> <p>ECB formally in charge of monetary and foreign exchange rate policy. Production of euro notes and coins starts. Introduction of euro as book money. Stocks and bonds (particularly for maturities later than January 1, 2002) are denominated in euros. Irrevocable fixing of conversion rates between member countries currencies and the euro. National currencies remain in circulation as legal tender. The TARGET Settlement System^a for cross-border payments will become operational.</p>
<p style="text-align: center;">Phase B To be completed by January 1, 2002 (Maximum duration three years)</p>	<p>Euro banknotes are introduced. Monetary and exchange rate policy interventions to be conducted in euros. Inter-bank, capital, monetary and exchange markets operate in euros. Retailers and service providers must display prices in euros and national currencies. Business transactions may be conducted in either the euro or the national currencies. Withdrawal of national banknotes and coins initiated.</p>
<p style="text-align: center;">Phase C To be completed by July 1, 2002</p>	<p>Completion of the changeover, as the euro becomes the sole legal tender and the national currencies are withdrawn.</p>

Note: a) Trans-European Automated Real-Time Gross Settlement (RTGS) Express Transfer.
Source: Rajan (1999).