

# An Asian Currency for an Integrated Asia

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# **An Asian Currency for an Integrated Asia**

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## **1. Introduction: Key Issues**

In recent years East Asia has seen rapid advances in market-driven economic integration through cross-border trade, investment and finance. Following the Asian newly industrialized economies (NIEs) and middle-income Association of Southeast Asian Nations (ASEAN) members, China is the most recent participant in this integration process as a result of further opening of its economy to international trade in goods and services and foreign direct investment (FDI). Growing economic integration has strengthened macroeconomic linkages across those East Asian economies that have also opened financial markets and liberalized capital accounts.

The high and rising degree of economic interdependence in East Asia suggests that it is increasingly important for the region's economies to achieve intraregional exchange rate stability. Some recent key policymakers in East Asia are increasingly vocal about the need to create a monetary union in the region (for example, De Ocampo 2004; Kuroda 2004; and Chino 2004). The reason is that they believe that intraregional exchange rate stability is desirable for East Asia and a monetary union is the ultimate form to ensure it.

In reality, however, the region remains characterized by diverse, uncoordinated exchange rate arrangements. Japan and China, the two dominant countries in East Asia, respectively adopt an exchange rate regime akin to a pure float and a tightly managed US dollar-based regime. Most other economies—except for the small open economies of Hong Kong and Brunei Darussalam—adopt intermediate regimes of managed floating with the US dollar as the most important anchor currency. As it is becoming difficult to maintain intraregional rate stability through the traditional policy of dollar pegs, a regional framework for exchange rate regime coordination needs to be developed in East Asia.

Reflecting these issues, this paper asks the following questions:

- Is East Asia—or a group of countries in the region—ready for a regional single currency, satisfying optimum currency area (OCA) criteria?
- What is the practical first step towards regional monetary and exchange rate policy coordination and a roadmap to a future Asian monetary union?
- What are the most serious impediments to the formation of an East Asia-wide monetary union?

Essentially, East Asia faces three major policy challenges in identifying practical modalities for exchange rate coordination. First, to achieve intraregional exchange rate stability, there must be some convergence of exchange rate regimes in East Asia; the most realistic option is the adoption of similar managed floating regimes—rather than a

pure float or a rigid peg to an external currency. This requires China to exit from the current *de facto* US dollar-based crawling peg and adopt a more flexible regime. Second, given the limited degree of the Japanese yen's internationalization and the lack of the Chinese yuan's full convertibility, East Asia needs to secure a credible regional monetary anchor through a combination of some form of national inflation targeting and a currency basket system. An important challenge here is to find a suitable currency basket. Third, if the creation of an East Asian monetary zone—and possibly a regional single currency in the distant future—is desirable, the region needs to articulate the roadmap, or the required steps, toward closer monetary and exchange rate policy coordination.

The paper is organized as follows. Section 2 reviews how rapidly and deeply regional economic integration has been proceeding in East Asia in trade and FDI, finance, and macroeconomic activity. Section 3 tackles the question of whether an integrated East Asia requires a common currency. Section 4 explores policy steps to monetary and exchange rate policy coordination that may eventually lead to a monetary union in the region. Section 5 provides concluding remarks and policy implications.

## **2. Market-driven Economic Integration in East Asia**

Economic integration in East Asia has been deepening through the market-driven forces of cross-border trade, FDI, and finance. Trade in goods and services and FDI activities have expanded rapidly over the past twenty years thanks to the multilateral and unilateral trade liberalization processes.<sup>1</sup> International portfolio investments and banking flows, together with cross-border financial services activities, have also grown in many economies due to financial market deregulation and opening, and progressive capital account liberalization. The removal of various types of cross-border barriers and the geographical proximity of East Asian economies have created natural economic linkages among them. In a sense, regional economic integration has been a natural outcome of economic globalization.

***Integration through trade and FDI.*** The expansion of intraregional trade over the last several decades is remarkable. The share of East Asia's intraregional trade in its total trade has risen from 37% in 1980 to 55% in 2006 (Table 1).<sup>2</sup> This share is higher than the peak figure of 49% for the North American Free Trade Area (NAFTA), achieved in 2001, though still lower than the peak figure of 66% for the original 15 European Union countries (EU-15), achieved in 1990.<sup>3</sup> The intensity of regional trade in East Asia is also

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<sup>1</sup> The multilateral trade liberalization process has been governed by the World Trade Organization (WTO)—or its predecessor, the General Agreement on Tariffs and Trade (GATT)—and the unilateral trade and investment liberalization, based on “open regionalism,” has been pursued within the APEC framework.

<sup>2</sup> Here, East Asia includes fifteen economies—four Asian newly industrialized economies (Hong Kong; Korea; Singapore; and Taipei, China), ten ASEAN countries (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam), China, and Japan. Note that Singapore is an Asian NIE as well as an ASEAN member

<sup>3</sup> The original EU-15 comprises Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom.

comparable to that in the EU or NAFTA.<sup>4</sup> While the rising intraregional trade share has been premised on the existence of American and European markets for finished products, its relative dependence on these outside markets has been declining and is expected to further decline as demand for final products within East Asia continues to grow.

Favorable economic environments and the abundant supply of high-quality, low-wage labor have also contributed to the expansion of FDI. FDI inflows to East Asia over the past several decades have grown rapidly, at a rate much faster than the region's growth in trade. FDI inflows into East Asia have risen from 7% of world total FDI inflows in 1980 to 13% in 2006. Over the same period, East Asia's sustained dynamism fueled an increase in FDI outflows from 5% to 12% of world total outflows. Notably, many of these flows have become intraregional—from Japan and the newly industrialized economies (NIEs, i.e., Hong Kong; Korea; Singapore; and Taipei, China) to ASEAN and China, and from ASEAN to ASEAN and to China.

The main driver behind economic integration through trade and FDI is the intraregional business activity of multinational manufacturing corporations—initially those from Japan, Europe, and the United States (US), followed by those from emerging East Asia. These multinational corporations (MNCs) have formed closely organized production networks and supply chains across East Asia, linked with the global market. These arrangements have emerged as a result of each MNC's business strategy that attempts to divide its whole production process into several sub-processes, and locate these sub-processes in different countries according to their comparative advantage—factor proportions and technological capabilities. Such business arrangements have promoted vertical intra-industry trade within East Asia in capital equipment, parts and components, intermediate inputs, semi-finished goods, and finished manufactured products.<sup>5</sup>

These trends accelerated in the wake of the Plaza Accord in 1985, when Japanese MNCs, compelled to reduce their domestic production activities due to the steep appreciation of the yen, began building regional production bases centering on emerging East Asia—initially in the Asian NIEs and later in middle-income ASEAN countries (such as Malaysia, Thailand, Philippines, and Indonesia).<sup>6</sup> Facing rising domestic costs, the NIEs soon began also investing in middle-income ASEAN economies and later, in the 1990s, in China. More recently, not only global MNCs from developed economies (such as Japan, Europe, and the US), but also firms from the NIEs and advanced ASEAN countries (like Malaysia and Thailand) have also been providing FDI to other ASEAN members (including Cambodia, Lao PDR, and Vietnam) and to China, contributing to the

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<sup>4</sup> Petri (2006) has found a rising regional trade bias in East Asia since the 1980s after the secular decline in the post-WWII period.

<sup>5</sup> See Kawai and Urata (1998), Fukao, Ishido, and Ito (2003), Kawai (2005b), and Athukorala (2005).

<sup>6</sup> In the late 1980s, China was not considered as an attractive production base for many global MNCs, including Japanese corporations, due to the country's tight restrictions over foreign firms' activities. Hence, the Asian NIEs and middle-income ASEAN countries were chosen as natural options for relocating Japanese MNCs' production activities abroad. With growing attractiveness of China as an FDI host in the 1990s, however, global MNCs—including those from Japan—began to expand their investment and business activities in China.

formation of a web of regional supply chains increasingly centered on China. The source country (area) breakdown of cumulative FDI inflows to East Asia over the period 1995–2005 deserves attention. Table 2 indicates that while global MNCs from the major industrialized countries remain important investors in several economies in emerging East Asia, the Asian NIEs' firms have become much more important, accounting for 35 percent of total FDI inflows to emerging East Asia—particularly in China and Vietnam. The table also indicates ASEAN 9 (non-Singaporean) firms are becoming active in emerging East Asia.

China is the world's largest emerging-market recipient of FDI inflows. It has benefited significantly from joining the global trading system (by becoming a member of the World Trade Organization), participating in regional production networks, and transforming itself into an assembly platform for regional and global manufacturing producers. China imports capital equipment, industrial materials, and intermediate inputs from neighboring economies, and exports finished manufactured products. As a rise in China's exports tends to stimulate its imports from other East Asian economies, its overall trade surplus tends to be accompanied by trade deficits vis-à-vis many regional economies. In this sense, China is building a complementary relationship within East Asia, while at the same time competing against several other emerging East Asian economies—particularly middle-income ASEAN countries—in global markets. This situation implies that exchange rate movements between the yuan and other emerging East Asian currencies have become increasingly relevant to trade and FDI.

***Financial integration.*** Financial markets are also integrating rapidly in East Asia due to the deregulation of domestic financial systems, opening of financial services, and progressive relaxation of capital and exchange controls. Foreign operations by developed country commercial banks and portfolio investment by institutional investors in developed markets have significantly strengthened linkages among the region's financial markets. Commercial banks in emerging East Asia have also been expanding their businesses in their neighbors. One result was a rising degree of cross-country correlations of regional interest rates and stock market returns across East Asia. The speed, scale, and extent of the contagion of the 1997–98 financial crisis symbolically affirmed this growing financial linkage.

Data analysis shows that levels of cross-market differentials in interest rates and bond yields have been declining in recent years.<sup>7</sup> Although the cross-market differences of money market interest rates rose significantly during the 1997–98 crisis, these differentials have begun to decline since 1999. Such declines in cross-market differentials are observed in both money market rates and long-term bond yields. For example, the average absolute values of uncovered interest rate differentials, after surging to over 3,000 basis points (for 3-month interbank lending rates) at the height of the crisis, have declined substantially to about half the pre-crisis level. The average absolute distance of the beta coefficient from unity has also declined substantially, particularly for 3-month interbank lending rates (though the decline has been less pronounced for 2-year and 10-

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<sup>7</sup> This part is drawn from ADB, *Asia Bond Monitor*, November 2005.

year bond yields).<sup>8</sup> Simple correlation analysis of stock returns demonstrates a relatively high level of co-movements in East Asia's equity markets, even after eliminating the global common factor, in comparison to those in money and bond markets.

Compared with trade and FDI integration, however, regional financial integration in East Asia has been less pronounced. Table 2 indicates that cross-border portfolio investment flows—particularly equity investment flows—have been expanding among the East Asian economies, but the share of intraregional portfolio investment flows in East Asia is still low (a mere 6% in 2005) compared with those of EU-15 (62%) and NAFTA (16%). An important reason for the limited degree of financial integration is that, apart from Japan, Hong Kong, and Singapore, many economies in East Asia still impose significant capital and exchange restrictions and other barriers, which impede free flows of financial capital. In particular, China and low-income ASEAN countries apply heavy controls and regulations. Another reason is that the domestic financial systems of many emerging market economies are still underdeveloped and shallow and, thus, cannot attract regional investors. East Asian investors tend to direct their international portfolios in North America and Europe, rather than in East Asia.

***Labor market integration.*** Labor market integration is even less pronounced than financial integration in East Asia, particularly in Northeast Asia including Japan and Korea. These two economies have maintained relatively tight restrictions over labor immigration. However, labor mobility is surprisingly high in Southeast Asia, particularly in Singapore, Malaysia and Thailand. Goto and Hamada (1994) presented some evidence to show that labor mobility in Southeast Asia might be as high as that in Europe even in the early 1990s. Eichengreen and Bayoumi (1999) note that labor markets are more flexible in East Asia than in Europe. Perhaps, reflecting the more flexible labor markets, the speed of adjustment to a shock is much faster in East Asia, indicating that the cost of permanently fixing the exchange rate—and foregoing monetary policy autonomy—is lower. Thus, flexible labor markets in East Asia reduce the importance of labor mobility as one of the OCA criteria. In addition, the recent initiatives for bilateral free trade agreements in the region are expected to stimulate labor mobility, particularly between Southeast and Northeast Asia.

***Macroeconomic interdependence.*** An important consequence of these growing real and financial linkages—although the latter is limited—is the heightened macroeconomic interdependence and business cycle co-movements within East Asia. Growth rates of real macroeconomic activities have become increasingly synchronized. Using annual data for 1980–2002, Kawai and Motonishi (2005) demonstrate that the real activity variables—such as growth rates of real GDP, real personal consumption, and real fixed investment—were highly correlated among major economies in East Asia, notably among Japan; Korea; Taipei, China; Singapore; Malaysia; and Thailand with Indonesia and the Philippines beginning to join this group. However, real activity variables of China and low-income ASEAN members were not highly correlated with those of other East Asian economies. Surprisingly, East Asia's real activity variables were not strongly correlated with US or European real activity variables.

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<sup>8</sup> The beta coefficient takes the value of unity for full co-movements of interest rates.

Using annual GDP data for 11 of the ASEAN+3 countries for which data are available (except Brunei Darussalam and Cambodia), Rana (2007) provides simple 10-year moving correlations between real GDP growth of individual ASEAN+3 members and the group as a whole (excluding the reference member) from 1989 to 2005. He shows that correlations have been increasing, especially after the financial crisis, suggesting greater synchronization of business cycles among ASEAN+3.<sup>9</sup> Correlations have been converging towards 0.8–0.9 in the Philippines, Indonesia, Japan, Malaysia, and Thailand. They are a bit lower (between 0.6 and 0.7) in Lao PDR, China, Singapore, and Vietnam. On the other hand, correlations of business cycles of the ASEAN+3 group as a whole with those of the US and the EU countries (proxied by France, Germany, and Italy), however, are falling over time. We have extended his analysis for period 1990–2007 and found stronger correlations between Japan and other ASEAN+3 countries than between the US/EU and ASEAN+3 countries (See Figures 1-3). This holds true if the year 1998 is excluded from the sample, although the correlations between Japan and other ASEAN+3 countries become less strong.

These results suggest that emerging East Asia's real activity variables tend to be more highly correlated with those of Japan than with those of the US and the EU. One interpretation for this is that major East Asian economies—including Japan and its emerging neighbors—are subject to common supply shocks, which are different from shocks hitting the US or the EU.<sup>10</sup> China did not exhibit strong business cycle co-movements with other East Asian economies in early years, largely due to its limited financial openness and linkages with these economies during those years. In more recent years, however, the country appears to show positive co-movements as its economy becomes more market-based, as it opens its financial markets, and as it becomes more integrated regionally and globally.

### ***3. Optimum Currency Area Criteria and Macroeconomic/Structural Convergence***

Deep market integration in East Asia suggests that the region is emerging as one satisfying optimum currency area (OCA) conditions. One of the lessons from European monetary integration leading up to the introduction of the euro in 1999 and the accession of new member states to the EU and the euro zone in the subsequent period is that macroeconomic and structural convergence is critical if a group of economies is to form, or join, a common currency area as equal (or symmetric) partners. Macroeconomic convergence criteria were explicitly embedded into the Maastricht Treaty and are still required when a new EU member state joins the euro zone, while structural convergence has been made explicit for countries considering EU accession—well before considering to join the euro zone.

***Is East Asia an OCA?*** If the exchange rate is fixed permanently and irreversibly among economies—including through the adoption of a single, common currency—together with free mobility of goods, services, money, capital and labor, then an area comprising

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<sup>9</sup> The only exception is Korea, where correlation appears to be falling somewhat after 1998.

<sup>10</sup> See Bayoumi and Eichengreen (1994) for evidence up to the early 1990s.

such fixed-exchange rate economies is called a “currency area.” According to the theory of “optimum currency areas” developed by Mundell (1961) and McKinnon (1963), a currency area is optimum—that is, the economies are indeed better off adopting permanently fixed exchange rates, or forming a currency area—under the following conditions:

- Openness to the area members;
- Product, factor and financial market integration;
- Symmetry of shocks affecting the area members;
- Similarity of preferences over output-inflation tradeoffs; and
- Willingness to coordinate on supporting policies such as fiscal policies.

These are often called the OCA criteria. The first three criteria are the most fundamental because they reflect the intrinsic nature of the economies while the last two are additional, weaker conditions.<sup>11</sup>

The consensus among experts on the applicability of OCA criteria in East Asia is that this region as a whole may not be an optimum currency area, but several sub-groups of the region’s economies may form such currency areas (see Watanabe and Ogura, 2006).

Mundell (2005) argues that there are many benefits from Asian monetary integration, including: greater trade and investment; alternatives for countries forced out of the US dollar area; stronger voice in world affairs; cushion in crises; avoidance of exchange rate conflict; better monetary policy; reduced destabilizing speculation; regional decision-making; and a more efficient Asian economy.

**Macroeconomic convergence.** Strictly speaking, macroeconomic convergence of economies among economies is not part of OCA criteria; it is not a prerequisite for a single currency area. For example, a country suffering from high inflation can unilaterally peg its exchange rate to the currency of a low, stable inflation country so that the pegging country can import low and stable inflation policy from the anchor country. This was one of the reasons for a high inflation country—like Italy—to join ERM as this allowed the country to import Bundesbank’s non-inflationary monetary policy through currency pegging to the Deutschemark.<sup>12</sup> In the case of such unilateral—or asymmetric—currency pegging, *ex-ante* macroeconomic convergence is not a prerequisite, although successful pegging would eventually require a certain degree of *ex-post* macroeconomic convergence.

Nonetheless, a high degree of *ex-ante* macroeconomic convergence is critical once countries decide to join a single currency area as equal—or symmetric—partners, as in

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<sup>11</sup> Since these criteria can vary across countries and over time, no single exchange rate regime is right for all countries or at all times as discussed by Frankel (1999).

<sup>12</sup> The reason the ERM (or the earlier Snake) did not require *ex-ante* macroeconomic convergence was that there was perhaps an implicit assumption that Germany would provide a stable anchor currency and other countries would stabilize their currencies against the Deutschemark, thereby importing non-inflationary policy from Germany. This may explain why the ERM functioned as an asymmetric exchange rate system, despite the fact that it was designed initially as a symmetric arrangement.



the case of the formation of the Economic and Monetary Union (EMU) in Europe. The reason is that without macroeconomic convergence, it will be difficult for a group of economies experiencing differential inflation rates and fiscal deficits to agree on a common, non-inflationary monetary policy. This is one important reason why the Maastricht convergence criteria—on inflation rates, interest rates, fiscal deficits, public debt and exchange rate stability—were introduced early in the 1990s to encourage European Monetary System (EMS) countries to achieve convergence of monetary and fiscal conditions before they become eligible for EMU membership..

As shown in Table 4, it is clear that East Asia has not achieved macroeconomic convergence in terms of inflation rates, interest rates, fiscal deficits and fiscal debt (Maastricht convergence criteria). There is no exchange rate stabilization mechanism in the region.

***Structural convergence.*** Structural convergence—such as industrial structure, financial sector development, capital account openness, institutional and policy frameworks, and market infrastructure—is not part of OCA criteria, and it was never part of the Maastricht convergence criteria. A country without strong economic structures and foundations—and, hence, most likely without sound macroeconomic policy institutions like a credible, independent central bank and a disciplines fiscal authority—can still unilaterally peg its exchange rate to the currency of a country with strong structures and institutions.

During the recent negotiations of EU accession of Central and Eastern European countries as well as some CIS countries, these candidate countries have almost always been required to go through structural reforms, various liberalization measures and improve the quality of policy and institutional frameworks. Once admitted to the EU, new member states can be considered for joining the euro zone. Those EU member states wishing to join the euro zone must satisfy the Maastricht macroeconomic convergence criteria in order to seriously qualify for consideration. The idea here is that to become a full (and symmetric) member of the euro zone, each candidate country must first improve the quality of economic structures, foundations, and institutions so that it becomes similar structurally to those in the EU and then demonstrate a sufficient degree of macroeconomic convergence vis-à-vis incumbent countries so that it can pursue low and stable macroeconomic performance.

It is well understood that East Asia has not achieved structural convergence. Differentials in per-capita incomes, industrial structures, institutional quality and various foundations for a well-functioning market economy are wide among the East Asian economies. To consider the possibility of a monetary union in East Asia, the first priority for developing and emerging economies in the region is to continue to pursue policy, institutional and structural reforms so as to strengthen domestic economic and structural fundamentals, improve institutional quality as well as domestic macroeconomic performance, and eventually achieve structural and macroeconomic convergence.

#### **4. East Asia's Exchange Rate Issues**

***Lack of exchange rate policy coordination.*** The scale of interdependence among East Asian economies has risen to a level almost matching that in Europe, at least Europe in the 1980s-90s. Given the heightened interdependence of economies in the region and its weak interdependence with U.S. business cycles, it may be argued that these East Asian countries should aim to stabilize intra-regional exchange rates through policy coordination rather than through stability vis-à-vis the U.S. dollar. The ultimate goal in this move, it might be thought, might be the creation of an Asian common currency.

Despite close and rising interdependence of East Asian economies, however, no exchange rate policy coordination has been in place in East Asia. Moreover, the region's exchange rate regimes are in serious disarray. In contrast to the pre-crisis period, where many emerging market economies in East Asia maintained *de jure* or *de facto* US dollar pegged regimes, the post-crisis period exhibits a greater diversity in exchange rate regimes. The two giant economies in the region, Japan and China, adopt different exchange rate regimes—Japan a free float and China a heavily managed, crawling peg regime targeted at the US dollar.

***Global imbalances and capital inflows.*** Given the persistent global payments imbalance and rapid accumulation of foreign exchange reserves, abrupt changes in international investor tolerance (or expectations) could put downward pressure on the US dollar and upward pressure on many East Asian currencies. A loss of confidence in the US economy due to the worsening subprime loan problem or a possible economic recession could trigger a portfolio shift away from US dollar assets to other currencies. In addition, East Asia also faces the challenge of surges in short-term capital inflows and the consequent upward pressure on currency values. These inflows are often directed to asset markets—for investment in equities and real property—and hence, if not managed properly, can be a source of macroeconomic and financial sector vulnerabilities. Policy to allow currency appreciation is advisable in the presence of domestic inflationary pressure and incipient asset price bubbles, but it can also damage the country's international price competitiveness vis-à-vis neighboring countries. So these problems may not be resolved through individual national policies alone. One of the most reasonable policy options is to allow “collective” currency appreciation, which does not differentially affect individual countries' relative price competitiveness.<sup>13</sup>

Joint currency appreciation requires a convergence of exchange rate regimes in East Asia to ensure intraregional exchange rate stability. For this to happen, the existing policy dialogue processes among the region's finance ministers (such as ASEAN+3) and central bank governors (such as EMEAP) can play a critical role. Clearly the first step is to adopt a regime that allows greater currency flexibility vis-à-vis the US dollar. China's yuan

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<sup>13</sup> Collective currency appreciation would spread the adjustment cost across East Asia, thus minimizing individual country costs. Simple calculation would indicate that a 20% collective appreciation of East Asian currencies vis-à-vis the US dollar implies only a 9% effective (or trade-weighted) appreciation against trading partners—given the intra-regional trade share of 55%—even if all other non-East Asian currencies remain stable vis-à-vis the dollar. To the extent that other currencies also appreciate vis-à-vis the dollar, the degree of effective appreciation of the East Asian currencies would be more limited.

reevaluation in July 2005 and its shift to a managed crawling peg—followed by Malaysia’s similar shift to a managed float—suggest the beginning of such coordination.

***Dollar, yen, or yuan as East Asia’s anchor?*** Even when there is a strong case for some exchange rate policy coordination in East Asia, the issue is how a mechanism can be introduced to achieve such coordination in the region. There are at least two ways to do this. One is for each economy to stabilize its currency to a common key currency or a common basket of key (and other) currencies. The other way is for these economies to jointly create a regional, cooperative system similar to the Snake or Exchange Rate Mechanism (ERM) in Europe. Given that economic (particularly structural) convergence among the East Asian economies is not sufficiently advanced—and that political relationships are not sufficiently mature to support the creation of a tightly coordinated regional system—the first option appears more realistic. Only with sufficient economic convergence—and with strong political consensus—East Asia may move to the stage of joint exchange rate stabilization.

Given East Asia’s diverse economic relationship with the major countries and areas in the world, the traditional practice of choosing the US dollar as the region’s sole monetary anchor is no longer the best policy. An obvious alternative is to choose the yen and/or the yuan as a monetary anchor, given the size and importance of Japan and China in East Asia. However, the yen’s power waned in the 1990s due to Japan’s lost decade following the bursting of asset price bubbles, though it still has potential to play a critical role. In addition, over time Japan’s relative economic size its import absorptive capacity are expected to decline while that of China will rise rapidly, surpassing Japan in the next ten years.

As China continues its strong growth performance, the yuan’s international role will rise over time, but decades will have to pass before it becomes fully convertible and can assume an international currency status equivalent to that of the US dollar, the euro, or the yen. Some East Asian economies—particularly those with strong trade ties with China—may consider pegging their currencies to the yuan as desirable from trade perspectives, but many other economies with increasingly open capital accounts will have little incentive to do so because of the limited usefulness of the yuan for international settlement, clearance, financing and liquidity holding. It will take a long time for China to establish a truly independent, credible central bank and to put in place strong prudential and supervisory frameworks governing its financial systems.

Other East Asian economies, however robust their monetary policies, are too small for their currencies to take on a meaningful international role. This clearly makes it desirable—even necessary—to introduce a mechanism for intraregional exchange rate stability based on a currency basket, as no single currency is capable of playing a monetary anchor role at least in the near future.

***Currency basket system.*** Three options can be considered for the region’s currency basket:

- a G3 currency basket comprising the US dollar, the euro, and the yen;

- a G3-plus currency basket comprising the US dollar, the euro, the yen, and emerging East Asian currencies; and
- an Asian Currency Unit (ACU)—an appropriately weighted basket of East Asian currencies including the yen, yuan, won, baht, ringgit, etc.

The first two options above would not require a substantial degree of policy coordination because they rely on external nominal anchors. But the third option requires a high degree of monetary policy coordination, as a regional nominal anchor would have to be jointly established—and neither Japan nor China is likely to play the sole leadership role at least for now. The first option is the simplest, and the third option the most complex. One of the advantages of the second option is that it will be easier to move to the third option at a later stage by reducing weights on the dollar and the euro to zero.

So long as Japan continues to maintain its current free float, it would make sense for other economies in East Asia, including China, to adopt a G3 basket system (the first option). By so doing, they could enjoy more stable effective exchange rates, with less susceptibility to dollar-yen and dollar-euro fluctuations than a standard US dollar-based system. Korea and Thailand, in recent years and without any formal commitment, appear to have already adopted a regime resembling a G3 basket system. Singapore has already been managing its exchange rate in a manner of a G3-plus basket system (the second option) as its basket apparently includes the US dollar, the euro, the yen and other major and regional currencies. In July 2005, China and Malaysia also started to move in this direction.

By agreeing on the adoption of a G3 or G3-plus currency basket, East Asian economies will have in place a mechanism through which collective exchange rate adjustment can be engineered. First, this system is particularly suited to China as adopting a freely flexible exchange rate regime is ill-advised unless the country is confident of the depth, functioning and maturity of its money markets and the health of its banking sector, and is ready for advanced liberalization of capital accounts. Until then a G3 or G3 basket system would serve China best in striking the difficult balance between maintaining a certain degree of exchange rate stability while allowing sufficient exchange rate flexibility against the US dollar—particularly given the backdrop of US current account deficits and China's rising surpluses and official reserves. Second, this system can protect East Asia as a whole against the possibility of a sharp fall in the value of the US dollar in the face of mounting global payments imbalances and/or surging capital inflows.

#### **4. Steps towards an Asian Monetary Union**

The deepening regional economic integration and rising business cycle synchronization within East Asia suggest that the region would be better off by maintaining intraregionally stable exchange rates. But, currently, there exists no coordination of exchange rate or monetary policies across East Asia as each country wishes to pursue its own domestic objectives. To pursue policy coordination, a gradual, step-by-step approach is appropriate. The first step is to coordinate informally on

exchange rate regimes by moving toward greater exchange rate flexibility vis-à-vis the US dollar. The second step is to initiate exchange rate policy coordination to ensure some intraregional rate stability without rigid coordination of monetary policy. The third step is to adopt tightly agreed exchange rate and monetary policy coordination (see Table 8).

**Table 8. Steps toward Exchange Rate and Monetary Policy Coordination**

<b>Progress</b>	<b>Exchange Rate Policy</b>	<b>Institutions</b>	<b>Trade-Investment</b>
<b>Current State</b>	Uncoordinated exchange rate arrangements	CMI; ASEAN+3 ERPD; EMEAP; Asian Bond Markets Initiative	Uncoordinated FTAs (Asian noodle bowl)
<b>Informal Coordination (exchange rate regime coordination)</b>	Move to greater rate flexibility vs. USD; G3 or G3-plus currency basket as a loose reference; Asian Currency Unit as a surveillance indicator	CMI multilateralization; effective ERPD by ASEAN+3 finance ministers & central bank governors; Forum for financial supervisors & capital market regulators	Coordination and harmonization among FTAs (cumulation of rules of origin within East Asia)
<b>Formal, but Loose Coordination (exchange rate policy coordination)</b>	G3-plus currency basket system with well-defined rules for intraregional rate stability	Independent secretariat for a multilateralized CMI & enhanced ERPD w/due diligence; Regional infrastructure for capital markets	East Asian FTA (ASEAN+3 or ASEAN+6)
<b>Tight Coordination (monetary policy coordination)</b>	“Asian Snake” or “Asian Exchange Rate Mechanism (ERM)”	Asian Monetary Fund; Regional financial supervisory & regulatory authority	Asian Customs Union
<b>Complete Coordination</b>	Asian Monetary Union	Asian Central Bank	Asian Common Market

*Informal coordination of exchange rate regimes.* The first step is the introduction of informal policies that attempt to achieve both greater exchange rate flexibility vis-à-vis the US dollar and some exchange rate stability within East Asia by using a basket of G3-plus currencies (the US dollar, the euro, the yen and emerging East Asian currencies) as a loose reference. This can be done by those economies under US dollar pegs to increase exchange rate flexibility and by all emerging East Asian economies to adopt managed floating targeted at a G3-plus currency basket—as is currently practiced by Singapore. The currency weights in the basket could vary across countries, at least initially. How strictly countries stabilize currencies to this basket could depend in each case on country conditions and preferences. National monetary authorities can maintain most of their autonomous policymaking by combining an appropriately defined inflation targeting policy and basket-based managed floating. At this stage, an Asian Currency Unit (ACU) index—as a weighted average of the yen and emerging East Asian currencies—can also be introduced as a tool for measuring the degree of joint movements of East Asian currencies and the degree of divergence of each currency movement from the regional average set by the ACU.<sup>14</sup> Once China moves to a more flexible exchange rate regime, ACU index movements and divergences of component currency movements can provide more meaningful information.

This informal currency coordination should be complemented by enhanced financial cooperation. This includes a multilateralized CMI and more effective regional

<sup>14</sup> The ACU could also be developed for invoicing trade-related transactions and serving as a denomination for local currency bond issues. See Kawai (2007b).

economic surveillance (ERPD). ERPD should focus more intensively on frank discussions, with “peer review” elements, and on exchange rate issues by using an ACU index and divergence indicators.<sup>15</sup> ASEAN+3 finance ministers and central bank governors are encouraged to work closely to strengthen their policy dialogue. In addition, a regional forum for financial sector supervisors and capital market regulators may be established to facilitate information exchange, policy dialogue, and mutual cooperation among them.

***Formal exchange rate policy coordination.*** The second step is the joint adoption of a formal policy of stabilizing intraregional exchange rates using a common basket of G3-plus currencies (i.e., the US dollar, the euro, and the ACU) as a reference. The basket stabilization policy will have to be clearly defined with transparent rules on exchange rate parity against the common basket, a relatively wide exchange rate band (like  $\pm 10\%$ ) around the central rate, and adjustment of both the central rate and the band—along the lines proposed by Williamson (2005). The authorities would allow greater exchange rate flexibility vis-à-vis the US dollar while enjoying a lesser degree of national monetary policy autonomy. The ACU index should continue to serve as an important indicator in measuring joint movements and divergences of East Asian currencies, and its use in the financial markets should be encouraged.

Supporting institutional arrangements should be developed to a much greater extent. An independent secretariat will have to be created to support a fully multilateralized, enlarged CMI that is more independent of IMF programs, and much more enhanced ERPD, with advanced “peer review” and “due diligence” elements, for ASEAN+3 finance ministers and central bank governors. Various regional entities—including for credit guarantees and enhancements, and regional settlements and clearance—will become fully operational to support the development of local currency bond markets. Coordination of financial supervisors and capital market regulators will have to be strengthened for regional harmonization starting with mutual recognition of supervisory and regulatory practices with minimum standards.

***Tight, systematic coordination of exchange rate and monetary policies.*** The third step is the launch of more systematic exchange rate and monetary policy coordination to create a regional monetary anchor. Here, two approaches are possible—the “European” approach and the “parallel currency” approach (Eichengreen, 2006). Under the “European” approach, a common basket peg similar to the snake or exchange rate mechanism (ERM) could be introduced. All currencies will become freely flexible vis-à-vis external currencies, such as the US dollar and the euro, but maintain intraregional stability through joint stabilization of individual currencies to the ACU. The mechanism should

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<sup>15</sup> Interesting remarks have been made by Adams (2006), Under Secretary for International Affairs of the US Treasury at the time. He states: “With respect to an Asian Currency Unit (ACU), there has been some confusion about the US position on this topic. ... We do not see the ACU as a competitor to the dollar. ... We believe that greater exchange rate flexibility is desirable for the region, but are open-minded as to whether that involves currency cooperation within the region.” On broader regional financial cooperation, while he wants to see more “clarity on the CMI” with regard to the amounts available absent IMF programs and the conditions imposed by CMI creditors, he states “we ... support regional cooperation that is consistent with multilateral frameworks.”

include well-defined monetary policy and intervention rules so as to provide a credible monetary anchor within East Asia as well as a fully elaborated short-term liquidity support arrangement, which is large and speedy enough for frequent interventions in the region's currency markets.<sup>16</sup> Fiscal policy rules may also be designed to lend credibility to the exchange rate stabilization scheme. The “parallel currency” approach could be considered in the absence of strong political will. This approach involves issuance of an ACU as a parallel legal tender together with national currencies, issuance of ACU-denominated bonds, and the establishment of a clearing and settlement system for ACU transactions. In the longer term, as the volume of ACU transactions increases, the ACU could develop into the sole legal tender within the region. The centralized reserve pool could then be converted into an Asian Central Bank.<sup>17</sup>

A practical approach is to take a multi-track, multi-speed approach, whereby economies ready for deeper policy coordination begin the process while others prepare to join later. A group of economies that are sufficiently integrated—Japan and Korea; China and Hong Kong; or Singapore, Malaysia, and Brunei Darussalam—and with sufficient political commitment, may wish at this stage to initiate subregional currency stabilization schemes. Each subregional group could intensify exchange rate and monetary policy coordination while allowing the possibility for others to join them subsequently. Over time these groups may start negotiations to integrate into a larger monetary zone.

The final stage is complete monetary policy integration and a full delegation of monetary policy making to a regional supra-national authority. In its ultimate form, a single regional currency may be introduced. But this is a long-run possibility for the region.

## 5. Conclusion

Judging from the OCA criteria, one can argue that entire East Asia—the ASEAN+3 group plus Hong Kong and Taipei, China—is not an optimum currency area. For example, low-income ASEAN economies have yet to develop their basic institutions and policy frameworks before they become legitimate members to embark on regional monetary policy coordination. Though China is deepening its economic integration with other East Asian economies in terms of trade and FDI, it is not well integrated in terms of financial and macroeconomic activity. China will have to achieve further financial sector reform

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<sup>16</sup> Under the ERM of the European Monetary System, the deutschemark emerged as a *de facto* anchor currency despite the system having been designed as a symmetric exchange rate stabilization scheme. In Asia, it is also possible for the yen, the yuan, or another currency to play such an asymmetric, monetary anchor role, but the choice will be left to the natural evolution of non-inflationary policymaking and credibility of the region's central banks.

<sup>17</sup> The appeal of the “parallel currency” approach is dictated more by economic forces (i.e., market forces) than by politics. This is consistent with the greater emphasis placed by East Asian countries on market-led rather than policy-led integration. It also accommodates the fact that the East Asian political context is very different compared with that of Europe. An underlying commitment to political solidarity drove the transition to a monetary union in Europe. Europe also considered the parallel currency approach, but it was abandoned in favor of the Maastricht process because of the strong political commitment that existed at the time.

and capital account liberalization in order to integrate itself fully with other East Asian members. However, several economies in the region, including Japan, Korea, Singapore, Malaysia and Thailand are well-integrated with each other in terms of trade, finance and macroeconomic activity. Indonesia and the Philippines are close to this league. These economies can form a currency area, at least from economic perspectives. The view that OCA criteria are endogenous would suggest that once these economies fix the exchange rates or form a monetary union, economic integration will deepen and the degree of symmetry of supply shocks will heighten.

The most serious impediments to the formation of an East Asia-wide single currency may include:

- reluctance to lose national sovereignty over economic policymaking;
- diversity of economic and political systems and of policy and institutional quality; and
- lack of integrationist tradition, political commitments, mutual trust, and the supporting institutions.

Sharing a long-term vision for the future of East Asia helps to strengthen regional economic policy coordination and, in this regard, the recent initiative to create an “East Asia Economic Community” helps greatly. In addition, further economic integration will promote further economic regionalism and trust building.

There are additional challenges for the region. First, the regional economies should accelerate institutionalization of trade and investment integration by creating an East Asia-wide FTA, an important basis for the formal institutionalization of financial and macroeconomic integration. For this purpose, regional trade agreements that are currently under negotiation need to avoid the counterproductive “spaghetti bowl” effect and maintain WTO consistency. This requires conscious efforts to maintain consistency and coherence across the multiplicity of bilateral FTAs and to achieve a “WTO-plus” (see Kawai and Wignaraja, 2007)

Second, the regional economies must make greater efforts to strengthen regional financial cooperation—the reserve pooling arrangement (Chiang Mai Initiative [CMI]), regional economic surveillance (Economic Review and Policy Dialogue [ERPD]), and Asian Bond Markets Initiative (ABMI) under ASEAN+3. Once the region achieves substantial enhancement of the CMI through further enlargement, full multilateralization, and meaningful reduction in its IMF linkages, and once the region strengthens its capacity to formulate independent adjustment policy—through its own secretariat—in the event of another liquidity crisis, East Asia will have effectively established its own monetary fund that can contribute to regional, as well as global, financial stability without creating fears of moral hazard. For this purpose greater collaboration between the region’s finance ministers and central bank governors will be required. Greater coordination and harmonization will also be necessary among the region’s financial supervisors and capital market regulators.

Third, it is time to initiate exchange rate policy coordination. The immediate step would be for the regional economies to discuss exchange rate issues as part of enhanced



economic surveillance, for which Asian Currency Unit (ACU) indexes will be a useful instrument. The next step is the adoption of a common G-3-plus currency basket system based on the the U.S. dollar, the euro and the ACU. Greater political support for economic policy coordination could eventually lead to further institutional integration capable of supporting intraregional exchange rate stability. For this purpose substantial convergence will have to be achieved across countries in the region in terms of economic, financial, and structural conditions, performance, and policies.

Finally, it is important to pursue further structural reforms on the part of all economies, particularly in China and many ASEAN countries. China must make efforts to strengthen its financial sector and achieve capital account liberalization at a sequenced manner with an integrated program. An integrated ASEAN is essential as a hub for East Asian economic, financial and monetary integration. The middle-income member states of ASEAN must reform their economies to cope with greater international competition, particularly vis-à-vis China, while its low-income members must pursue institutional and governance reforms to enable them to benefit from real and financial integration.

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**Table 1. Intraregional Trade Share, 1980–2006 (%)<sup>a</sup>**

<b>Region</b>	<b>1980</b>	<b>1985</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
<b>Asian NIEs (4)<sup>b</sup></b>	8.6	9.2	11.9	15.5	15.5	15.3	15.8	15.2	14.6	13.9	13.6
<b>ASEAN (10)<sup>c</sup></b>	17.9	20.3	18.8	24.0	24.7	24.1	24.4	26.6	26.7	27.2	27.2
<b>ASEAN + PRC + Korea + HK + Taipei,China (14)</b>	22.7	27.2	33.0	39.1	40.6	41.1	43.4	44.7	45.2	45.5	45.8
<b>ASEAN+3 (13)<sup>d</sup></b>	30.2	30.2	29.4	37.6	37.3	37.1	37.9	39.0	39.2	38.9	38.3
<b>ASEAN+3 + HK + Taipei,China (15)</b>	36.8	39.0	43.1	51.9	52.1	51.9	53.8	55.4	55.9	55.4	54.5
<b>ASEAN+6 (16)<sup>e</sup></b>	34.6	34.8	33.7	40.8	40.5	40.6	41.3	42.4	43.0	43.1	42.6
<b>ASEAN+6+ HK + Taipei,China (18)</b>	40.5	42.7	46.3	54.5	54.6	54.5	56.3	57.7	58.5	58.4	57.6
<b>NAFTA (3)</b>	33.8	38.7	37.9	43.1	48.8	49.1	48.4	47.4	46.4	46.1	44.3
<b>MERCOSUR</b>	11.1	7.2	10.9	19.2	20.3	17.9	13.6	14.7	15.2	15.5	15.7
<b>Old EU (15)</b>	60.7	59.8	66.2	64.2	62.3	62.2	62.5	63.0	62.2	60.4	59.5
<b>New EU (27)</b>	61.5	60.0	66.8	66.9	66.3	66.7	67.4	68.1	67.6	66.2	65.8

*Notes:* (a) Intraregional trade share is computed as  $X_{ii} / [(X_{iw} + X_{wi}) / 2]$ , where  $X_{ii}$  is the value of intraregional exports,  $X_{iw}$  is the value of the region's total exports to the world, and  $X_{wi}$  is the value of the world's total exports to the region.  
(b) Asian newly industrializing economies (NIEs) = Hong Kong (HK); Korea; Singapore; and Taipei,China.  
(c) Association of Southeast Asian Nations (ASEAN) = Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.  
(d) ASEAN+3 = 10 ASEAN countries, PRC, Japan, and Korea.  
(e) ASEAN+6 = 13 ASEAN+3 countries, Australia, New Zealand, and India.

*Sources:* IMF, *Direction of Trade Statistics*, CD-ROM (June 2007). Data for Taipei,China for 1989–2006 sourced from the Bureau of Foreign Trade website, and for 1980–1985 from the *Statistical Yearbook* published by the Directorate-General of Budget, Accounting and Statistics.

**Table 2. Emerging East Asia's Foreign Direct Investment Inflows, 1995–2005 (%)**

FDI Inflows to:	Source Regions/Countries of FDI Inflows to Emerging East Asia						Total (US\$Mill)
	United States %	European Union %	Japan %	Asian NIEs %	ASEAN 9 %	%	
<b>Asian NIEs</b>	16.8	15.8	8.1	5.2	3.9	100.0	(437,999)
<b>Hong Kong</b>	5.1	7.4	5.7	5.3	1.8	100.0	(215,999)
<b>Korea</b>	22.4	40.1	13.3	4.1	7.4	100.0	( 55,975)
<b>Singapore</b>	31.7	19.3	8.5	4.0	5.8	100.0	(142,748)
<b>Taipei,China</b>	19.9	13.1	15.5	14.2	2.5	100.0	( 23,277)
<b>ASEAN 9</b>	18.4	29.1	19.1	29.2	4.2	100.0	(116,413)
<b>Indonesia</b>	5.7	50.9	3.3	15.0	9.3	100.0	( 11,839)
<b>Malaysia</b>	27.4	23.4	13.6	22.0	2.1	100.0	( 44,651)
<b>Philippines</b>	23.4	10.3	23.1	16.9	1.1	100.0	( 13,709)
<b>Thailand</b>	10.5	10.5	25.1	27.6	0.9	100.0	( 37,428)
<b>Vietnam</b>	4.8	19.1	14.4	39.2	6.6	100.0	( 18,225)
<b>PRC</b>	8.1	8.1	8.6	54.0	1.6	100.0	(537,163)
<b>Total</b>	13.9	14.7	10.5	34.9	3.1	100.0	(992,516)

Notes: (a) NIE = newly industrializing economy; FDI = foreign direct investment.

(b) FDI recipient data compiled by Institute for International Trade and Investment (IITI) are adjusted to make them consistent with BOP figures.

Sources: UNCTAD, *World Investment Report 2006*; IMF, *International Financial Statistics*; ASEAN Secretariat for Singapore and ASEAN 9 data; *China Statistical Yearbook* for PRC data; OECD publication for Korea data; IITI for Hong Kong and Taipei,China data.



**Table 3. Cross-border Portfolio Investment Flows, 2005 (Billion USD, Percentage of total)**

Investment from	Investment to:				
	NAFTA	EU-15	East Asia	ROW	World Total
<i>Total Portfolio Investment</i>					
<b>NAFTA</b>	743 (15.6)	1,890 (39.6)	827 (17.2)	1,315 (27.5)	4,775 (100.0)
<b>EU-15</b>	2,127 (17.6)	7,592 (61.6)	661 ( 5.4)	1,937 (15.7)	12,316 (100.0)
<b>East Asia</b>	895 (33.2)	914 (33.9)	157 ( 5.8)	729 (27.1)	2,693 (100.0)
<b>Rest of the World</b>	1,716 (42.2)	1,505 (37.0)	146 ( 3.6)	697 (17.2)	4,064 (100.0)
<b>World Total</b>	5,480 (23.0)	11,901 (49.9)	1,790 ( 7.5)	4,677 (19.6)	23,848 (100.0)
<i>Long-term Debt Securities Investment</i>					
<b>NAFTA</b>	244 (22.4)	441 (40.4)	58 ( 5.3)	348 (31.9)	1,091 (100.0)
<b>EU-15</b>	1,100 (14.8)	5,008 (67.5)	151 ( 2.0)	1,157 (15.6)	7,415 (100.0)
<b>East Asia</b>	669 (33.9)	717 (36.4)	51 ( 2.6)	536 (27.2)	1,972 (100.0)
<b>Rest of the World</b>	1,432 (48.9)	1,041 (35.5)	73 ( 2.5)	386 (13.2)	2,931 (100.0)
<b>World Total</b>	3,444 (25.7)	7,207 (53.7)	332 ( 2.5)	2,427 (18.1)	13,409 (100.0)
<i>Equity Securities Investment</i>					
<b>NAFTA</b>	499 (13.5)	1,449 (39.3)	769 (20.9)	967 (26.2)	3,684 (100.0)
<b>EU-15</b>	1,027 (21.0)	2,584 (52.7)	510 (10.4)	780 (15.9)	4,901 (100.0)
<b>East Asia</b>	226 (31.3)	197 (27.3)	106 (14.7)	193 (26.8)	721 (100.0)
<b>Rest of the World</b>	284 (25.1)	464 (41.0)	73 ( 6.4)	311 (27.4)	1,133 (100.0)
<b>World Total</b>	2,036 (19.5)	4,694 (45.0)	1,458 (14.0)	2,250 (21.6)	10,439 (100.0)

Note: NAFTA = North American Free Trade Area; EU-15 = Old European Union-15 countries; East Asia = Japan,

Korea, PRC, Hong Kong, Singapore, Indonesia, Malaysia, Philippines, Thailand, and Vietnam.

Source: International Monetary Fund, *Coordinated Portfolio Investment Survey*, December 2005.

**Table 4: Divergence in East Asian Macroeconomic Indicators (2005)**

	Public Sector Debt (% of GDP) <sup>1/</sup>	Fiscal Balance of Central Government (% of GDP)	Inflation Rate (%)	Interest Rate (%) <sup>2/</sup>
Japan	...	-5,2	-0,3	0,1
China	19,2	-1,6	1,8	2,5
NIEs-3				
Hong Kong, China	...	0,3	1,1	3,2
Republic of Korea	22,0	0,8	2,7	3,7
Taiwan	30,3	-1,0	2,3	1,5
ASEAN				
Brunei Darussalam	...	...	0.9 <sup>3/</sup>	...
Cambodia	...	-3,1	5,8	...
Indonesia	58,3	-0,5	10,5	10,3
Lao PDR	...	-6,0	7,2	...
Malaysia	68,9	-3,8	3	2,9
Myanmar	...	-6.0 <sup>3/</sup>	4.5 <sup>3/</sup>	...
Philippines	101,3	-2,7	7,6	7,0
Singapore	...	8,0	0,4	2,3
Thailand	49,4	0,1	4,5	3,3
Viet Nam	40,8	-2,3	8,3	...

<sup>1/</sup> Refers to consolidated government debt except for Indonesia, S. Korea, and Taiwan which refer to central government debt while Philippines refer to nonfinancial public sector debt.

<sup>2/</sup> Money market rate.

<sup>3/</sup> As of 2004.

Sources: Asia Economic Monitor (December 2006), Asian Development Outlook (2006), and Bloomberg.

Source: Kreinin and Plummer (2008).

