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## **FINANCIAL INTEGRATION IN ASIA: A MEDIUM-TERM AGENDA**

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Financial Integration in Asia:  
A Medium-Term Agenda?

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### **Abstract:**

Asia is a region whose financial integration has not kept pace with real integration. Asia's relative financial isolation has limited its exposure to the direct fallout of the global financial crisis (though it did not prevent trade links from exerting severe contractionary impact). Does this mean that Asia should continue to limit its financial integration, in order to limit its susceptibility to a large global financial shock? The paper argues that maintaining the status quo is not a sustainable policy option. Promoting financial integration could further strengthen real links within the region and also help limit financial dependence on the center countries of North America and Europe. In the process, Asia will create more demand for final goods from within and outside the region; Asia will intermediate more of its own financial resources for use within the region. In other words, this will help facilitate a transition of the current hub-and-spoke structure of world trade and finance, which has been the source of instability, to a more pluralistic structure. Regional cooperation is essential in the process.

## **I. INTRODUCTION**

The paper considers the implications of the current global economic crisis for future financial integration in Asia. Asia is a region whose financial integration has not kept pace with real integration. For one thing, the region is not very well integrated with the global financial system; the financial systems of many economies in the region are relatively underdeveloped; and many countries still restrict the cross-border flow of capital. Moreover, the region has been a net exporter of capital since the East Asian crisis. This has allowed many of its economies to avoid becoming susceptible to ebbs and flows of international capital and thereby developing balance-sheet vulnerabilities.

Although this has allowed the region to avoid the first round impact of the global financial crisis, it has not protected the region from the macroeconomic impact of what some call the worst economic crisis since the Great Depression. Indeed, the impact of the global recession has been severe in Asia, as the exports of final goods to the markets in North America and Western Europe collapsed. Despite the much ado about the decoupling of Asia, after all, the economies of emerging and industrial Asia have not been as immune to the catastrophic global economic meltdown as had been thought.

The recent experience is a reminder that trade and financial globalization is a double-edged sword. Globalization benefits the world by giving countries opportunities to exploit their comparative advantage to the fullest; it provides countries with opportunities to lend and borrow, to allocate resources in an efficient manner across space and time. As a result, when there is an economic boom in the center countries, most countries in the system participate in the global prosperity. By the same token, a large negative shock in the center countries could also have ripple effects throughout the entire system. It spreads quickly and profoundly affects the whole world. A globally integrated economy can be a dangerous place unless there is a safety mechanism to prevent the concentration of risks in the center and to diffuse the spread of negative shocks when they do occur.

The rest of the paper is organized as follows. Section II discusses the nature of Asia's output linkages both within the region and with the rest of the world. Section III discusses financial integration in Asia and how it compares with the level of real integration achieved. Section IV explores the implications of a region that is well integrated in the real sector, but not so much in the financial sector. Finally, Section V offers a few conclusions.

## **II ASIA'S INTRA- AND INTER-REGIONAL OUTPUT LINKAGES**

Economic integration has been progressing in Asia, mainly led by intra-regional trade in parts and components. Within ASEAN+3, for example, the share of intra-regional trade rose from around 30 percent during 1980-90 to over 38 percent in 2006; with Hong Kong and Taiwan included, the share was almost 55 percent (Rana, 2007). These figures were comparable to 67 percent in EU-25 and 44 percent in NAFTA.

Intra-regional trade provides a channel through which a shock in one economy affects the output of another economy within the region, both as final demand and as direct inputs into the production process. Closely related is intra-regional foreign direct investment (FDI), which has recently accounted for as much as half of the region's total FDI (Hattari and Rajan, 2008). Direct investment in plants and equipment, in particular, has created production networks in some industries that cut across national borders.

Theoretically, the impact of economic integration on the nature of output linkage is uncertain. If economic integration leads to greater specialization, it could result in weaker output synchronization. If the direct trade channel dominates (such that a positive output shock in one country, for example, is transmitted as a positive demand shock across borders), there is presumption that output synchronization increases with economic integration (Frankel and Rose, 1998). Greater economic integration can also mean that countries are increasingly faced with common shocks, in which case output synchronization is also expected to strengthen. This is an empirical issue.

Within Asia, there are at least two reasons to believe that interdependence is creating a co-movement of output. First, because most trade within Asia consists of intra-industry trade in parts and components,<sup>1</sup> it propagates common, industry-specific shocks across the region.<sup>2</sup> Second, because the US and Europe remain the principal export markets for Asia's final goods—accounting for over 40 percent of total exports—external demand shocks to Asian economies tend to be similar, as has been demonstrated in the current global crisis.

A number of recent studies confirm that the synchronization of Asian business cycles has greatly increased, mainly reflecting strengthening intra-regional trade links. Choe (2001) finds that, during 1981-90 and 1986-95, greater bilateral trade dependence was on average associated with greater business cycle synchronization among 10 East Asian countries (or 45 pairs)—the coefficient of trade intensity on correlation was larger (and usually more statistically significant) during the latter period. Likewise, Shin and Wang (2003) show that increasing trade had caused a greater co-movement of business cycles among 12 Asian countries during 1976-97, with intra-industry trade being the main channel through which output shocks were transmitted.<sup>3</sup>

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<sup>1</sup> More than 70 percent of intra-Asian trade consists of intermediate goods used in production (ADB, 2007).

<sup>2</sup> Rana (2007) shows intra-industry trade to be an important factor explaining the positive output correlations in Asia.

<sup>3</sup> Other recent studies that confirm the positive contribution of trade intensity to output synchronization in Asia include Shin and Sohn (2006) and Rana (2007).

At the same time, there is no evidence of decoupling from the rest of the world. Takagi and Kozuru (2008) use vector autoregression (VAR) methodology<sup>4</sup> to show that the output linkage of emerging Asia as a group strengthened both with Japan and with the rest of the world (consisting of the U.S. and Europe) following the Asian crisis. Specifically, although almost 90 percent of the variance of Asia's GDP (outside Japan) was explained by a regional shock before the Asian crisis, the percentage fell to 60 percent after the crisis (while those attributable to global and Japan shocks rose to 30 and 10 percent, respectively, from 10 and 0 percent); while regional GDP responded significantly only to a regional shock before the crisis, regional output became significantly responsive to all shocks following the crisis. Although some conflicting results were reported in the literature, the response of Asia to the recent global crisis leaves little room to deny that Asia is connected to the world in a serious way.

### III. FINANCIAL INTEGRATION IN ASIA

#### *Measuring Asia's financial openness*

There is presumption that the strengthening of output links in Asia has largely been driven by trade integration, with financial integration playing a smaller role. Imbs (2004, 2006) shows that stronger financial links could increase not only consumption correlations (as theory suggests) but also output correlations. But in the context of East Asia,<sup>5</sup> Shin and Sohn (2006) find little evidence of financial integration (proxied by monthly interest rate correlation) contributing to a co-movement of output during 1971-2003. The weaker financial-output link for Asia may well mean that financial integration in the region has not fully kept pace with real integration. In fact, there is good evidence to support such a view.

Financial integration can be measured in several ways, but no matter how it is defined, it has a strong policy component. Deeper financial integration would not take place unless policymakers explicitly make attempts to promote the development of domestic financial markets and to dismantle legal and regulatory restrictions on cross-border financial transactions. Asian economic integration has been largely a market-driven process. It is thus understandable that regional financial integration has lagged behind.

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<sup>4</sup> They considered a 3-region model, consisting of global, Japanese, and regional outputs. Asia included, in addition to Japan: China; Hong Kong; India; Indonesia; Korea; Malaysia; the Philippines; Singapore; Taiwan; and Thailand; and the rest of the world included: Belgium, France, Germany, Italy, the Netherlands, Spain, the United States, and the United Kingdom. Global and regional GDPs were the weighted averages of the individual country GDPs in the respective regions, with 2000 dollar-GDPs used as the weights. Their results were robust to the choice of ordering.

<sup>5</sup> East Asia includes China, Hong Kong, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore and Thailand.

To obtain a sense of just how Asia’s financial integration stands, relative to its past as well as to other regions of the world, we use saving-investment correlation. It is well known that such a measure of financial integration has several conceptual problems, but it can be obtained for a large number of economies on a consistent basis. Moreover, recent research indicates that it contains useful information about the broad direction of change in financial openness in a region (see Takagi and Taki 2008 for further discussion). For example, with the financial globalization of the 1990s and 2000s, there has been observed a substantial secular decline in saving-investment correlations in many parts of the world,<sup>6</sup> while work based on intra-national data has consistently shown that correlation within a sovereign nation is small or often nearly zero.<sup>7</sup>

Table 1 reports the estimates of  $\beta$  when the investment-to-GDP ratio is regressed over the saving-to-GDP ratio, as follows:

$$(I/Y)_i = \alpha + \beta (S/Y)_i + \varepsilon_i \quad (1)$$

where  $I$  is domestic investment;  $S$  is domestic saving;  $Y$  is domestic income;  $\alpha$  and  $\beta$  are coefficients to be estimated;  $\varepsilon$  is a random error term; and  $i$  is a country subscript. It was the seminal work of Feldstein and Horioka (1980) that first postulated that the coefficient ( $\beta$ )—henceforth referred to as the FH coefficient—would be unity in the complete absence of capital flows and zero under perfect capital mobility.

Three observations are immediate from the table. First, there is a strong indication that Asia’s average financial openness increased over the period: the estimated FH coefficient declined for both groups. The decline is particularly substantial for the seven advanced members of ASEAN+3, for which the estimate fell from 0.470 during 1990-1999 to 0.223 during 2000-06. This latter estimate (0.223) is not statistically significant.

Second, looking at other parts of the world, we cannot say that financial openness increased consistently over the same period. This is true especially of Europe, which most likely means that the degree of openness was already high during 1990-99. Financial openness changed little among the Western Hemisphere countries, despite the fact that the region was not as open as Europe to begin with. The extremely low estimates for Africa must be interpreted with care, because this could mean that the share of official

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<sup>6</sup> Taki (2008), for example, reports that the FH coefficient for OECD countries declined from 0.66 during 1975-79 to 0.10 during 2000-03.

<sup>7</sup> Taki (2008) reports that the coefficient for Japanese prefectures was consistently small over 1975-2004; the coefficient could even be negative, indicating the impact of fiscal transfers within a sovereign nation. Other studies based on intra-national data indicate a similar result, with a coefficient estimate ranging between -0.11 for the United States and 0.15 for China (Sinn, 1992; Boyreau-Debray and Wei, 2002).

development assistance in financing domestic investment is large (relative to GDP) in many countries [the coefficient for the CFA countries, however, is much larger].

**Table 1. Estimates of  $\beta$  for Regions and Country Groups, 1990-2006 <sup>1/</sup>**

Regions or country groups	1990-1999	2000-2006
Asia-Pacific: <sup>2/</sup>		
ASEAN+3 (10)	0.534 (0.067)	0.349 (0.169)
ASEAN+3 (7)	0.470 (0.103)	0.223 (0.162)
Europe:		
EU (27)	0.109 (0.141)	0.080 (0.078)
Euro Zone (15)	-0.131 (0.178)	0.049 (0.075)
Other parts of the world:		
MERCOSOUR (10)	0.229 (0.201)	0.284 (0.134)
Africa (38)	-0.063 (0.144)	0.092 (0.064)
CFA Franc Zone (12)	0.524 (0.375)	0.255 (0.080)
Other groupings:		
OECD (24)	0.152 (0.146)	0.020 (0.070)
G7 (7)	0.808 (0.141)	0.329 (0.168)

<sup>1/</sup> Figures in parentheses indicate the number of countries in each region or group (first column) and standard errors (second and third columns); depending on data availability, the list of countries in each region or group may not be exhaustive.

<sup>2/</sup> ASEAN+3 (7) includes Indonesia, Japan, Korea, Malaysia, Philippines, Singapore, and Thailand; ASEAN+3 (10) includes ASEAN+3 (7) plus Cambodia, China, and Vietnam.

Source: Takagi and Taki (2008), Table 2.

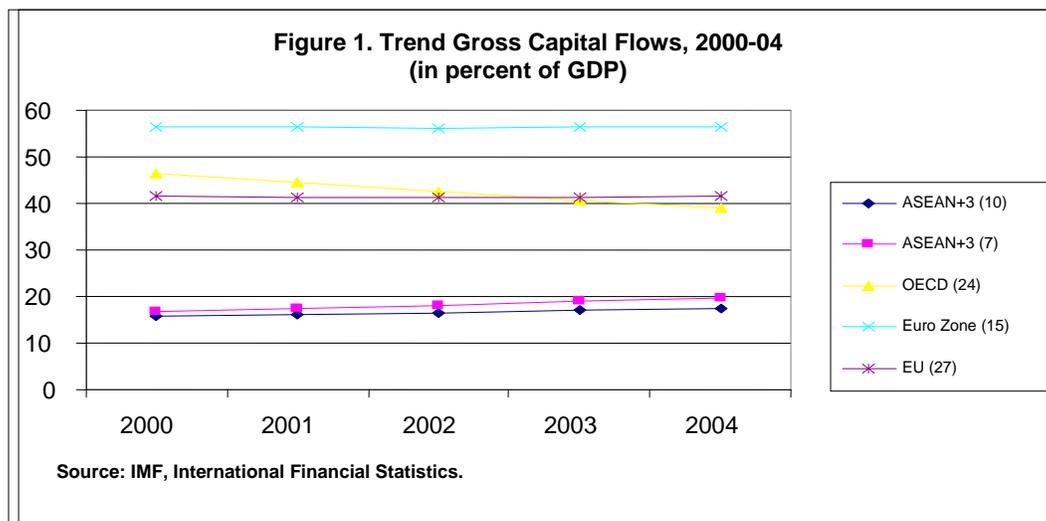
Third, comparing the coefficient estimates across regions and country groups, we note that the degree of financial openness in Asia, even for the later 2000-06 period, is not very high relative to Europe or the OECD membership. Asia's openness (of 0.22-0.35) appears comparable to the degree observed in the Western Hemisphere (0.28-.031).<sup>8</sup> Although comparison with Africa is difficult, Asia as a region remains among the world's least financially open—hence integrated—despite the great advances made in real integration over the years.

### ***Explaining Asia's limited financial integration***

The limited volume of cross-border capital flows observed in Asia is consistent with the region's low average financial openness (and integration). Kim et al. (2006), estimating

<sup>8</sup> The estimate of  $\beta$  for the G7 countries declined substantially over the period but remained high for the second period (0.329). This likely reflects the fact that they include large industrial countries, such as the United States, Japan, and Germany, for which the global budget constraint becomes more binding.

a gravity model of bilateral financial asset holdings for 1999-2003, found that the East Asia dummy had no additional explanatory power (indicating the lack of financial integration beyond what could be explained by trade) and concluded that financial links during 1999-2003 were almost entirely explained by trade. Indeed, the volume of autonomous capital flows in Asia is rather limited relative to other regions. For example, trend gross capital flows in ASEAN+3 over 2000-04 were only 15-18 percent of GDP, compared to 39-46 percent in the OECD, over 40 percent in the EU, and 55-56 percent in the Euro Zone (Figure 1).<sup>9</sup>

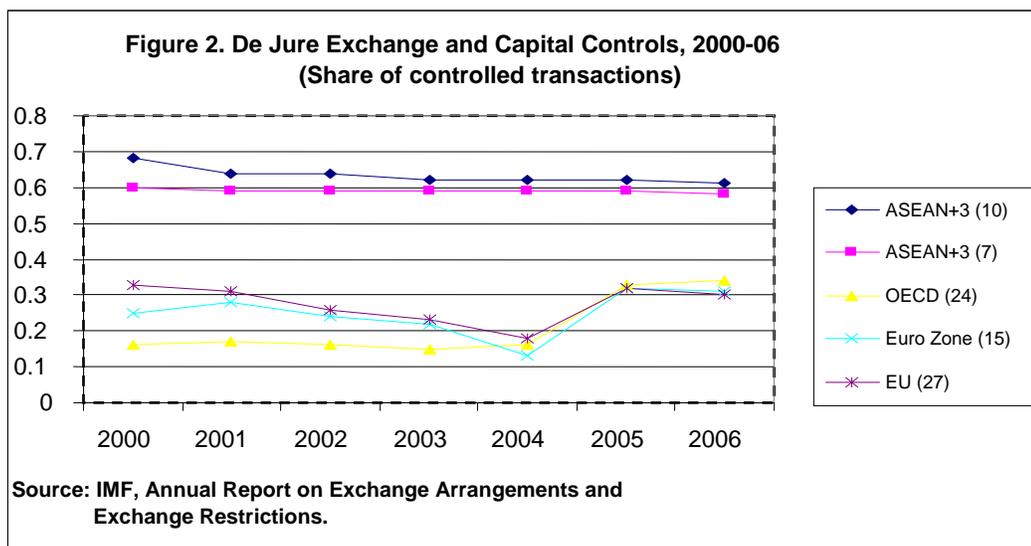


Moreover, for the capital transactions that do take place, Asian economies are financially more connected with the global financial centers outside the region than with each other (see Eichengreen and Park 2004 for cross-border bank credit flows; Kim et al. 2006 for cross-border securities and bank assets). Cowen et al. (2006), based on the IMF's portfolio survey, showed that Asia's portfolio liabilities to other Asian countries amounted to only 2¼ percent of regional GDP in 2004, less than one-third the liabilities to either North America or the European Union (EU). ADB (2008) noted that Asia held less than 10 percent its total portfolio assets within the region in 2006, while the share held in the US was nearly 30 percent; for portfolio liabilities, the corresponding shares were 11 percent (within the region) and nearly 40 percent (in the US). A substantial portion of Asia's savings appears to be recycled back to the region through the global financial centers in the US and Europe.

Capital account restrictions and financial underdevelopment are among the factors responsible for the lack of financial integration in Asia. First, Asia as a region still

<sup>9</sup> The HP filter was used to remove cyclicity from the volatile time-series of capital flows. Each region or country group in Figure 1 includes fewer countries than Table 1 because of data limitation.

maintains a wide range of restrictions on capital transactions (though some economies in the region have a highly open capital account regime). In terms of the IMF's de jure measures of exchange and capital controls, Asia not only remains more restrictive than groups of industrial countries, but also has little changed since the Asian crisis (Figure 2).<sup>10</sup> In fact, Asia's exchange and capital control regimes are among the most restrictive in the world, comparable to Sub-Saharan Africa (where the index has also been in the 0.6 range).<sup>11</sup>



Second, Asia's financial markets are underdeveloped relative to the advanced markets of North America and Europe. Poor corporate governance rules, inadequate accounting standards, and weak regulatory and legal frameworks are hampering the development of capital markets (ADB, 2008). According to the World Bank's financial sector development indicators, Asia's stock markets (including those in Japan and Singapore) rank low in the efficiency rating.<sup>12</sup> Except in some economies, the lack of deep corporate bond markets in particular is limiting the availability of long-term financing to viable investment opportunities. The banking system has improved considerably since the Asian crisis, but there remains room for further reforms in enhancing competition, promoting consolidation, and strengthening risk management skills.

<sup>10</sup> The de jure index is based on 14 types of restrictions on foreign exchange and capital transactions.

<sup>11</sup> This figure excludes the CFA zone, where the index has been around 0.9, the most restrictive in the world.

<sup>12</sup> To give just a few examples, among the 58 countries rated in 2006, China ranked 56<sup>th</sup>, Indonesia 54<sup>th</sup>, the Philippines 53<sup>rd</sup>, Singapore 49<sup>th</sup>, and Thailand 45<sup>th</sup>.

#### **IV. SHOULD ASIA PROMOTE FINANCIAL INTEGRATION?**

Asia has reaped the benefits of real integration without a commensurate increase in financial integration. Asia's relative financial isolation has limited its exposure to the first round fallout of the current global financial crisis. Also, Asia does not seem to have suffered too much by relying on world financial centers to intermediate its rather limited flow of financial resources (at least as a share of GDP). Does this mean that Asia should continue to pursue the policy of limited financial integration? Not necessarily. A convincing case can be made for promoting financial integration.

First, maintaining the status quo is not a sustainable policy option for Asia. Asia needs an efficient financial system for its own sake. The lack of liquid and well-functioning bond markets is limiting the availability of long-term local currency funding for viable and profitable investment projects. Financial underdevelopment is also acting as a constraint on the region's growing trade and investment links. But with better financial systems, financial integration will be a natural consequence.

Although the outcome of financial system development does not discriminate between regional and global integration, given the nature of information asymmetry in financial transactions, it should bias towards intra-regional financial integration. The fact that Asia's savings are mostly intermediated abroad is a reflection of the greater efficiency of the financial centers outside the region; as the financial systems in Asia improve in efficiency, geographic proximity, closer time zones, and more intense personal contacts within the region should begin to create a certain "home" bias which has so far been totally absent in Asia (ADB, 2008).

Second, financial integration should not be left as an outcome of financial system development but should be actively promoted. Financial integration facilitates further real integration. Imbs (2006), based on a sample of 41 countries over 1960-2000, found that more financially integrated economies (in terms of cross asset holdings) tended to have more synchronized output movements, even after the effects of finance on trade and specialization were accounted for. Intra-regional financial integration is expected to strengthen trade and investment links both by creating new opportunities and by lowering the transactions costs of cross-border activities. A more closely linked Asia will be a greater source of demand for final goods from both within and outside the region.

In sum, the emergence of a "home" bias and the strengthening of real links are expected to work together to mitigate the danger that the region's vulnerability to global shocks will increase as a result of financial integration. Larger "point-to-point" trade and capital flows within the region will be an insurance against the adverse impact of global shocks that originate outside the region. This will represent a transformation of the current "hub-and-spoke structure" of world trade and finance, which has been the source of instability, to a more pluralistic structure (see Figures 5 and 6 for schematic representations). It will be a more stable world for all parties.

Figure 3. The Hub-and-Spoke Structure of World Trade and Finance

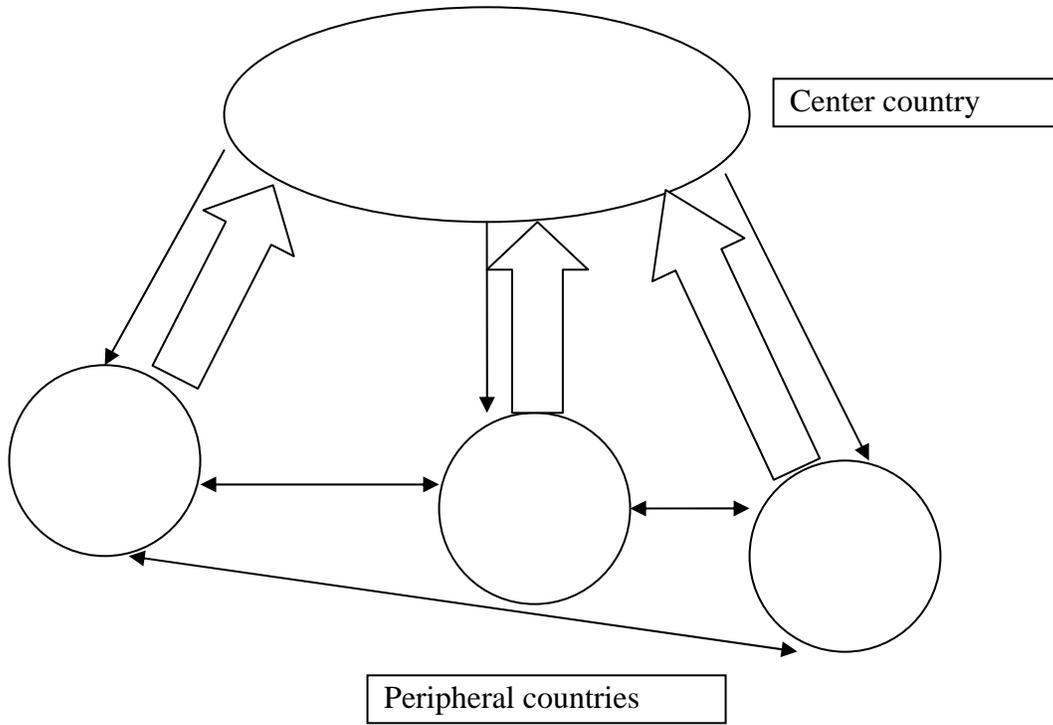
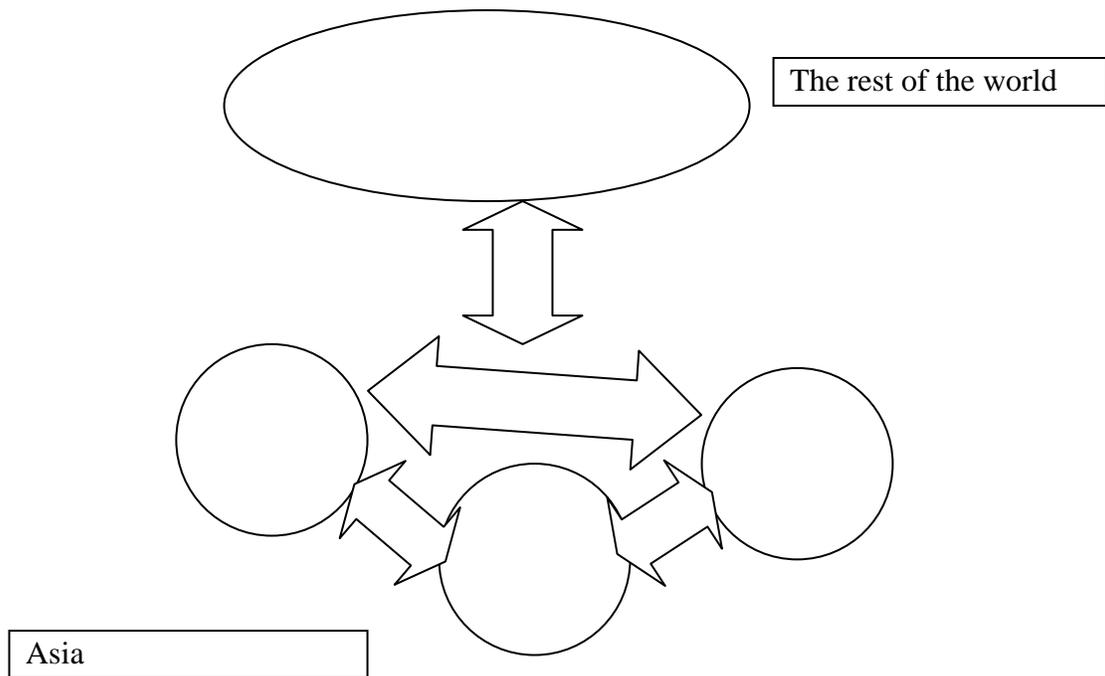


Figure 4. The Pluralistic Structure of World Trade and Finance



Regional cooperation is essential in the process. First, cooperation facilitates financial integration at the regional level by promoting the harmonization of standards and regulations; through the sharing of best practices, it helps establish a more resilient financial system. Second, regional cooperation promotes sound macroeconomic policies that are consistent with financial stability, through peer pressure and surveillance (designed to allow policymakers to take account of the cross-border spillovers of each other's policies). Third, as a last resort measure, a regional crisis management facility—complementing the global facilities provided by the International Monetary Fund—would give the region's policymakers additional confidence with which to go forward.

## V. CONCLUSION

The paper has provided evidence—corroborated by a growing empirical literature—that Asia's financial integration has not kept pace with its real integration. Driven mostly by increasing intra-regional trade in parts and components, output synchronization has risen within the region in recent years; at the same time, the output link with the rest of the world has also strengthened. On the other hand, Asia remains among the least financially open regions of the world; and, if anything, the region is more integrated with world financial centers outside the region than within the region. Although this has allowed the region to remain relatively unscathed by the first round fallout of the recent global financial crisis, maintaining the policy of relative financial isolation is not a sustainable option for Asia.

First and foremost, Asia needs an efficient financial system for its own sake, but with more efficient financial systems comes greater financial integration. Second, paradoxically, actively promoting greater financial integration will benefit both the region and the world. Given the nature of information asymmetry in financial transactions, promoting financial integration is expected to bias toward intra-regional integration, which in turn will strengthen trade and investment links within Asia. A more closely linked Asia will create demand for final goods from within and outside the region. It will help prevent the concentration of risks in the center and diffuse the spread of any negative shock that may originate in the center.

To make the needed paradigm shift, Asian policymakers must begin by making concerted efforts to develop a deep, efficient, and well-supervised financial system, and liberalizing a substantial portion of restrictions on cross-border capital transactions. Regional cooperation is essential, not only to push the process forward but to give additional confidence to the authorities.

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