



## Chapter 4

# Integrating financial markets

**F**inancial integration has had a troubled history in Asia. Decades of bank-dominated and highly directed lending have left financial markets relatively underdeveloped, while the 1997/98 financial crisis has left an understandable wariness of the risks of open capital markets. Unsurprisingly, then, this study finds that Asia's trade—and hence its trade-related bank claims—is much more integrated than its bond and equity markets.

Since the crisis, Asian policy makers have undertaken various reforms aimed at developing more stable and efficient financial systems. They have also recognized the importance of regional financial integration—in part as a safeguard against the vagaries of global markets, but also as a platform for regional development. Important initiatives have been launched, such as the ASEAN Surveillance Process, the Chiang Mai Initiative (CMI), the Asian Bond Markets Initiative (ABMI) established by ASEAN+3<sup>39</sup>, and the Asian Bond Fund (ABF) initiative set up by the Executives' Meeting of East Asia-Pacific Central Banks (EMEAP). Despite these efforts, regional financial integration remains patchy. This study finds that Asian financial markets are more integrated with global ones than with each other—and that Asia is less integrated than Europe in both respects.

Asia's limited financial development and integration carry clear and mounting costs. The absence of adequate regulatory and supervisory frameworks makes financial systems more vulnerable to risks. Asia's overdependence on bank finance is an additional risk; by providing an alternative financing source, efficient bond markets could act as a “spare tire.” The lack of liquid and well-functioning bond markets also limits the availability of long-term local currency

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<sup>39</sup> ASEAN countries plus the PRC, Japan, and the Republic of Korea.

funding for viable and profitable investment projects. This reduces the efficiency of capital allocation—and thus economic growth. With the rise of PRC and India, rapid growth in Asia generally, burgeoning regional trade, and Asia's vast savings and investment needs, the case for bolstering the development and integration of Asian financial markets is growing ever stronger.

Asia's financial underdevelopment is increasingly a constraint on the region's growing trade and investment links (set out in Chapter 3) and firms' resulting financing needs. Asia's huge savings are not invested as productively as they might be, while many of the region's pressing investment needs, notably in infrastructure, go unmet. Often, finance remains resolutely local; in other cases, it is intermediated and frequently invested outside the region. While the latter is not necessarily problematic, it is symptomatic of Asia's limited financial development. If Asian capital markets were more sophisticated and integrated, a greater volume of financial transactions would naturally be intermediated and invested in a region with such high savings rates and so many attractive investment opportunities.

## 4.1. The case for Asian financial integration

The case for Asia's financial development and integration is clear-cut, yet the rationale for regional, rather than global, financial integration requires careful nuance. In theory, global financial integration is preferable. If, say, Japanese investors seek more profitable opportunities overseas, they would do better to weigh up the merits of American, European, and even African assets, rather than focus on Asian ones alone. Likewise, if firms from the PRC are to seek funds from foreign investors, they would stand to gain most by tapping global markets, rather than limiting themselves to regional ones. In other words, there are potentially more opportunities for diversification—and thus higher risk-adjusted returns—from investing globally. Global financial markets tend to be deeper, more liquid, and more diversified.

In most of the world, though, practice does not conform to this (perhaps too) simple theory. A strong own-country and own-region effect in investment is often observed. While some of the regional bias to financial integration is doubtless due to inefficient regulations and harmful protectionism, geographic proximity may also have important advantages. Investors may have better information about

opportunities in their own region, or may simply feel more comfortable investing within it. Intermediation may be cheaper and easier in a regional financial center. Time zones still matter, as do personal contacts, while regional intermediaries may generate research that helps match local investors to local companies.

Yet the regional effect is surprisingly weak in Asia. Whereas European investors favor investing in Europe, Asian ones often prefer to invest outside the region. Perhaps Asian investors, scarred by the crisis, are particularly wary of regional risks and therefore keen to diversify outside Asia. Perhaps they have more information about opportunities in transparent global markets than in opaque Asian ones. This may have become a vicious circle—because Asian investors tend to invest outside the region, Asia may have less incentive to invest in improving the information, legal, and technical infrastructure of its capital markets than otherwise.

That is damaging in itself. But it also prevents Asia from reaping the broader benefits of deeper and more liquid regional markets. These could stimulate improvements in market information, oversight, and corporate governance. They could also eventually generate more sophisticated investment vehicles—such as venture capital funds—that would expand the range of financing options for fledgling companies, for instance, as well as for infrastructure projects.

In large part, though, the lack of regional integration can be traced back to deeper causes, such as the underdevelopment and weaknesses of national financial systems, and the patchiness of market opening and capital market liberalization across Asian economies. Given that most national bond markets remain fragmented and lack liquidity, it is perhaps not surprising that an integrated Asian market in government and corporate bonds has yet to develop. The consolidation of equity markets remains a proposal.<sup>40</sup> Asia is home to highly sophisticated global financial centers: notably two—Hong Kong, China and Singapore—which by some measures are ranked third and fourth in the world, respectively (see Section 4.4, Box 4.3). However, Asian economies remain hobbled by bank-dominated financial intermediation, underdeveloped capital markets, and the legacy of financial repression.

Clearly, financial-market development is a national, as well as a regional, priority. Regional financial institutions may help national

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<sup>40</sup> Eichengreen and Park (2004); Sheng and Teng (2007) also suggest the need to integrate the region's stock exchanges.

authorities develop and reform their financial sectors—and thus permit greater financial integration. Priorities include improving access to financial markets, boosting competition, and abolishing inefficient regulations. Carefully sequenced capital account liberalization is also vital. National capital markets need to be developed and connected to improve liquidity. Such measures may be easier and more rewarding regionally rather than nationally.

Regional institutions could also foster dialogue, information sharing, and peer pressure that promote financial development and integration, as well as best practices in financial regulation and supervision. They might also seek to upgrade and harmonize regulations and market practices and develop mutually recognized regional standards. Examples include providing technical support in implementing the Basel II international banking regulations, fostering domestic credit bureaus and rating agencies, sponsoring further training for supervisors and regulators, and encouraging the development of academic expertise in finance in the region. This would also facilitate financial integration, not least in securities markets, and could stimulate demand for regionally-oriented financial services and products.

The prize is huge. Cheaper, more efficiently allocated capital; faster economic growth; better risk sharing; more activity in established as well as emerging regional financial centers; better research; more sophisticated funding options; better investment decisions—all are vital given Asia's huge investment needs, not least in infrastructure. The upshot will be greater financial flows within the region.

Inevitably, though, more open financial markets entail risks as well as benefits. Rapid financial liberalization may make economies more vulnerable to financial contagion. It must therefore be accompanied by more effective regulation and supervision—sometimes national, sometimes international—as well as greater cooperation among regulatory and supervisory bodies. This may provide some insurance against the vagaries of international capital markets. Because the global financial architecture and international financial institutions remain largely unreformed since the crisis, there is scope for regional bodies and regional integration to step into the breach (UNCTAD 2007a, 35–6). Regional financial cooperation can—and should—complement global efforts, feeding off each other constructively.

One example is recent discussions among ASEAN+3 to develop a regional bond market. This would channel Asia's vast savings to rewarding long-term investments within the region, notably in infrastructure. Investing the region's savings within the region would

also help alleviate the global imbalances and the risks associated with the nature and timing of their unwinding. And it would be more profitable than accumulating vast foreign exchange reserves: instead of earning low yields on US Treasury bonds, central banks could achieve higher returns by investing a share in well-managed vehicles within the region. In short, Asia's financial integration could both bolster the region's economic growth and reduce its vulnerability to global shocks. Strengthening financial stability regionally would also bolster it globally.

The structure of the rest of the chapter is as follows. Section 4.2 charts Asia's financial development and reform since the crisis. Section 4.3 examines its financial integration, while Section 4.4 considers regional cooperation initiatives. Section 4.5 concludes with an agenda for future reform and cooperation.

## 4.2. Financial development and reform

The crisis had many causes, as discussed in Chapter 2. But it was partly rooted in major financial sector weaknesses common to economies across the region generally and to the larger ASEAN countries in particular. Among these were

- the banking sector's predominance in financial intermediation, the lack of long-term credit, and the underdevelopment of capital markets, especially of bond markets;
- weaknesses in regulatory and supervisory frameworks;
- a lack of strong domestic credit bureaus, the absence of a ratings-dependent culture among domestic debt issuers, and a reliance on weak accounting and reporting standards;
- a lack of competition in the domestic financial sector (banking, insurance, and bond markets);
- a lack of skilled financial operatives and agents; and
- poor corporate governance.

Since the crisis, reforms have focused on strengthening financial systems and aligning them with best practices, with a view to reducing their vulnerability to financial crisis.<sup>41</sup> For the most part, they have been quite effective. Financial markets are more sophisticated and better regulated than before.

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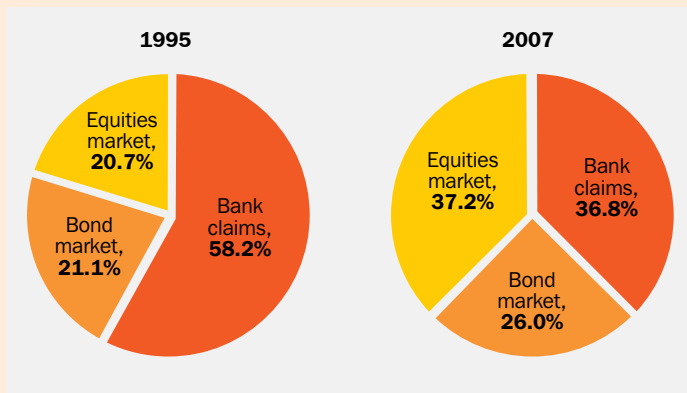
<sup>41</sup> See Kawai (2000) on the attempts of crisis-affected countries to restructure and strengthen their financial systems.

Attempts have been made to broaden access to credit by reforming banks and strengthening capital markets. Greater competition has been fostered, subject to prudent capital requirements. Increased private sector ownership and the entry of reputable foreign banks have also been encouraged. A healthier balance between banks and capital markets has also been sought, with a view to encouraging innovation and technology-based competition. Banking regulation and supervision have improved. Prudential banking regulations have been strengthened, as have governance and disclosure rules. Deposit insurance has been introduced and payments systems improved.

## Financial market development

Capital markets have grown rapidly since the crisis, in absolute terms, as a share of total financial assets, and as a share of GDP (figures 4.1 and 4.2 and Table A4.1 in the appendix to this chapter). This financial broadening and deepening has occurred faster in Asia than in the EU or US—albeit from a lower base. But while bond and equity markets have grown fast since the crisis, domestic banking systems still

**Figure 4.1. Increasing share of capital markets**  
Share in total financial assets in Integrating Asia

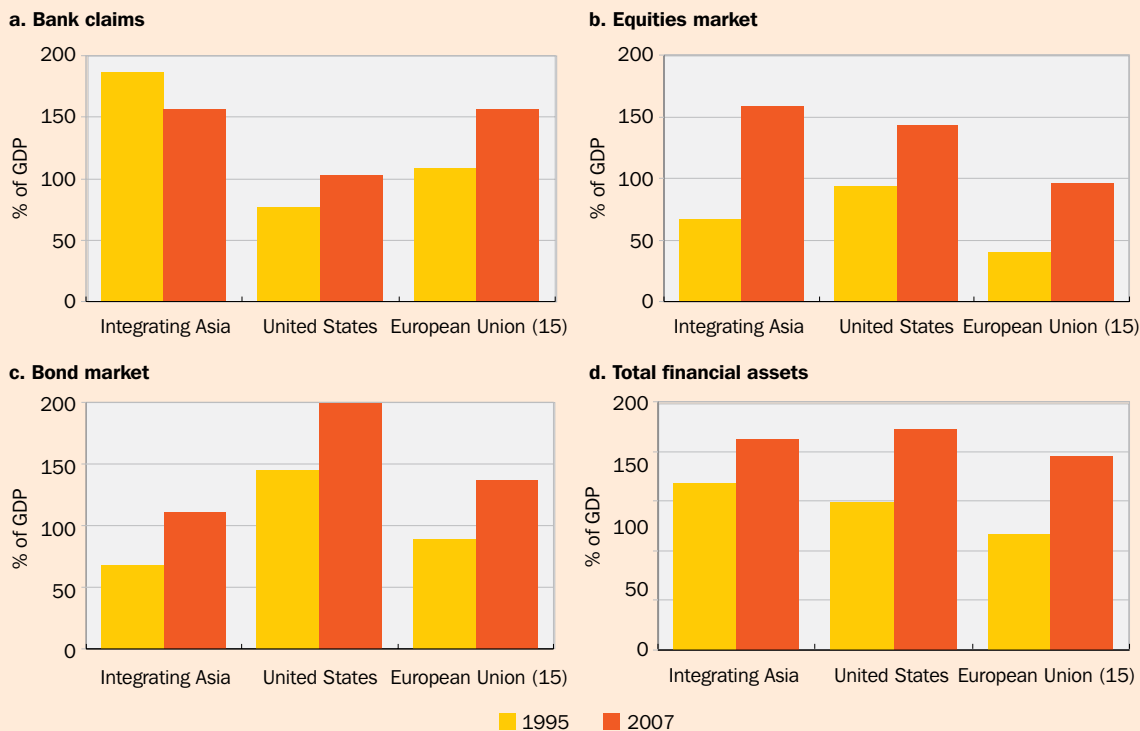


GDP = gross domestic product.

Integrating Asia = 11 economies for which data on financial markets are available: the People's Republic of China; Hong Kong, China; India; Indonesia; Japan; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; and Thailand. European Union includes its first 15 members.

Sources: Data from AsianBondsOnline 2007. Available: <http://www.asianbondsonline.adb.org>; IMF 2007b. Direction of Trade Statistics. Available: <http://www.imf.org>; BIS 2008. Available: <http://www.bis.org/statistics>; World Bank 2008a. Doing Business. Available: <http://www.doingbusiness.org>; and World Federation of Exchanges 2008. Available: <http://www.world-exchanges.org> (accessed May 2008).

**Figure 4.2. Trends in financial deepening, 1995 and 2007**



GDP = gross domestic product.

Integrating Asia = 11 economies for which data on financial markets are available: the People's Republic of China; Hong Kong, China; India; Indonesia; Japan; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; and Thailand.

European Union includes its first 15 members.

Sources: Data from AsianBondsOnline 2007. Available: <http://www.asianbondsonline.adb.org>; IMF 2007b. Direction of Trade Statistics.

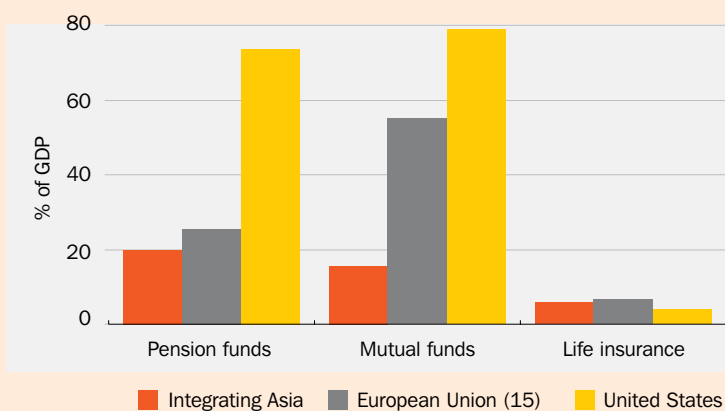
Available: <http://www.imf.org>; BIS 2008. Available: <http://www.bis.org/statistics>; World Bank 2008a. Doing Business. Available: <http://www.doingbusiness.org>; and World Federation of Exchanges 2008. Available: <http://www.world-exchanges.org> (accessed May 2008).

play a dominant role in Asian financial systems.<sup>42</sup> This reliance on bank intermediation makes the real sector unhealthily vulnerable to financial-sector shocks.

Some of Asia's financial markets are as large as—or even larger than—those of economies at similar income levels. Yet financial sector growth is uneven. Markets are often shallow and fragmented. Except in Japan and the Republic of Korea (and, to a lesser extent, Malaysia),

<sup>42</sup> Figure 4.2 shows that as a share of GDP, Asia's financial markets are large compared to those of the EU and US. However, the shares are much lower if Japan is excluded from Integrating Asia. In 2007, in fact, Japan accounted for 47% of Integrating Asia's total financial assets, and its ratio of total financial assets to GDP was 52% (see Table A4.1b in the Appendix to this chapter).



**Figure 4.3. Growing markets for institutional investors, 2006**

GDP = gross domestic product.

Notes:

Integrating Asia includes 11 economies for which data are available: People's Republic of China; Hong Kong, China; India; Indonesia; Japan; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; and Thailand.

European Union includes its first 15 members.

Source: Economist Intelligence Unit. 2008. Country Finance Reports 2008.

Available: <http://www.eiu.com> (accessed May).

bond markets account for a smaller share of GDP than in the EU or US. While the importance of institutional investors has been rising—a sign of greater financial sophistication—it remains much lower than in Europe and the US (Figure 4.3 and Table A4.2 in the appendix to this chapter). The further development of insurance companies, pension funds, and mutual funds—which provide improved investment choices for small investors and a wider pool of capital for firms—needs to be encouraged.

## Financial sector reforms

Financial regulation and supervision have improved dramatically since the crisis, but much remains to be done. Reforms have focused on strengthening financial systems and aligning them with best practices to bolster their efficiency and reduce their vulnerability to crisis. First, attempts have been made to broaden access to credit by reforming banks while strengthening bond and equity markets as a platform for allocating capital to larger institutions. Such reforms have also sought to bolster financial sector efficiency and innovation. Second, competition in the banking sector has been increased by easing entry rules, notably for foreign banks, and encouraging greater

private sector ownership, subject to prudent capital requirements. Third, reforms have sought to promote appropriate business conduct and greater financial integrity. Sound and independent regulatory regimes have been established, prudential banking regulations strengthened, the private monitoring of banks encouraged, corporate governance and financial disclosure improved, and deposit insurance and sufficient protections for debt and equity holders introduced. Payments systems have also been improved.

Many Asian economies have committed themselves to a variety of globally accepted standards and codes. They have adopted the Bank of International Settlements' Basel banking rules, International Organization of Securities Commission (IOSCO) standards for bond and equity markets, International Association of Insurance Supervisors (IAIS) rules for insurance, and Committee on Payments and Settlement Systems (CPSS) regulations for payments systems. Asia complies fairly well with these standards compared to other regions. Many Asian economies are now aiming to comply with the new Basel II Core Principles (BCP).<sup>43</sup>

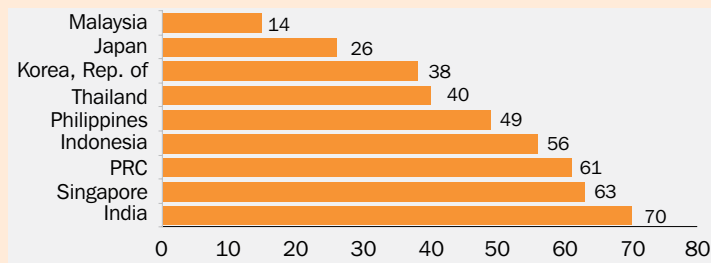
Even so, much remains to be done. Still dominant, state-owned banks require overhauling, and privatization needs to continue. Incentives for the private monitoring of banks by international rating agencies need to be enhanced. Banking regulators also need strengthening, especially in preparation for adopting the more stringent Basel II risk-based supervisory standards. Implementing Basel II requires regional cooperation, but it cannot proceed at the same pace across Asian economies because of their varying financial sophistication and development and differing commitment to change. Ongoing liberalization efforts and emerging regional financial integration may help drive further regulatory and governance reforms.

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<sup>43</sup> Reports on Observance of Standards and Codes provide added evidence on improvements in supervision, regulation, and compliance with BCP, IOSCO, IAIS, and CPSS standards. Advanced economies in Asia outperformed their Organisation for Economic Co-operation and Development (OECD) peers in all categories. However, less developed Asia (India, Indonesia, Philippines, Sri Lanka, and Thailand) exhibited lower compliance with BCP than the average for middle-income countries. Most less developed Asian countries were noncompliant with respect to information sharing between supervisors, ownership, prudential regulation and requirements, on- and off-site supervision, remedial measures, and cross-border banking. Further, no supervisor in the IMF sample practiced consolidated supervision or incorporated country risk control. In contrast with compliance with BCP, Asian economies exhibited marginally higher compliance with IOSCO and IAIS. In general, assessed Asian systems exhibited deficiencies similar to those of other regions.

**Figure 4.4. Banking efficiency is improving**

Overall ranking among 95 countries in 2006



PRC = People's Republic of China.

Source: World Bank. 2008b. Financial Sector Development Indicators.

Available: <http://www.fsd.org/> (accessed April 2008).

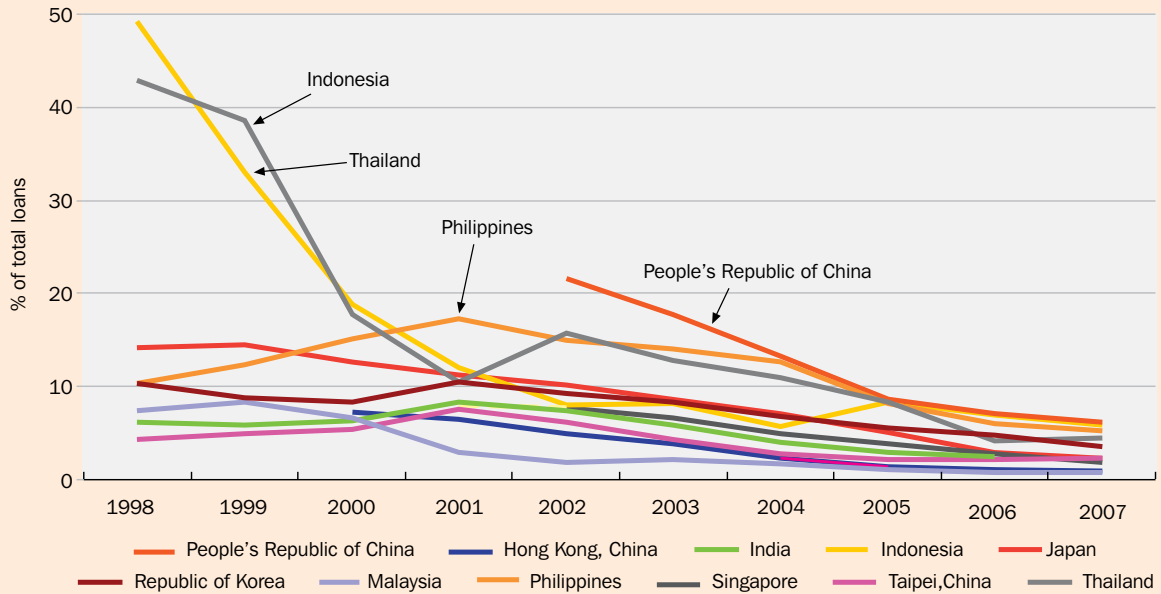
Financial and prudential reforms have improved banking sector performance across the region. Banks' operating efficiency has improved. According to World Bank indexes, some Asian banking systems now rank quite highly internationally (Figure 4.4).<sup>44</sup>

Banks' asset quality has also markedly improved—as seen in the decline in nonperforming loans (Figure 4.5)—as have capital-adequacy ratios. These improvements have boosted banks' bottom lines, with sectoral returns on equity returning to precrisis levels. Part of the improvement in asset quality and profitability may be traced back to the creation of asset management companies (AMCs) in several Asian countries to liquidate the recoverable assets of insolvent (or illiquid) banks in the aftermath of the crisis. AMCs enabled banks to strengthen their balance sheets (and income statements) by allowing them to pool bad loans and sell lower quality assets (in the form of AMC-structured securities backed by cash flows from these assets), boosting liquidity and, in principle, encouraging banks to continue lending.

While Asian banks may have become more efficient, securities markets have not improved much, as the World Bank's indicator of stock market efficiency highlights. This is a composite index that measures price synchronicity, trading based on private information,

<sup>44</sup> Banking efficiency is a composite index covering traditional measures of bank profitability and efficiency (such as the ratio of operating expenses to total assets) but also information on the structure of banking systems and measures of competitiveness.

**Figure 4.5. Declining nonperforming loan ratios**



**Notes:**

Reported nonperforming loans (NPLs) are gross classified loan ratio of retail banks. The measurement of NPLs follows official definitions and differs across economies depending on loan classification (for example, whether a 3- or 6-month rule is used), the treatment of accrued interest, and whether specific provisioning is deducted from the NPL measure. The table excludes NPLs transferred from bank balance sheets to asset management companies. For Malaysia and the Philippines, reported NPLs are net of specific provisioning.

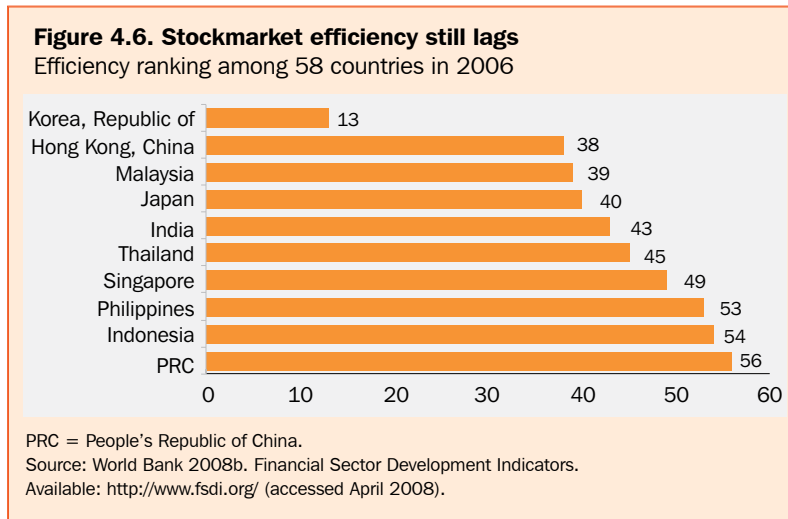
Sources: CEIC Data. 2008. Available: <http://www.ceicdata.com>; IMF. 2007b. Global Financial Stability Report. Available: <http://www.imf.org/external/pubs/ft/GFSR/index.htm>; World Bank 2008b.

and real transactions costs.<sup>45</sup> Figure 4.6 shows that markets in Asia generally still rank poorly internationally.

The lack of price synchronicity may reflect markets' vulnerability to manipulation—and thus regulatory and supervisory weaknesses. Information issues may also be a function of the relatively small size of individual Asian markets, as it may not be profitable to spend large sums gathering data on the few issuers of securities. There may also be a lack of competition in the brokerage sector.

A recent ADB study suggests that in the immediate future, Asian equity markets have greater potential for development than bond

<sup>45</sup> Price synchronicity measures the extent to which daily stock prices are informative about individual firms' performance. Trading based on private information refers to the prevalence of trading influenced by privileged information. Real transactions costs measure barriers to efficiency by assessing daily returns data for listed stocks.



markets (Lindgren 2006). But significant constraints exist. Individual Asian developing stock markets are inefficiently small and fragmented. This makes them more vulnerable to internal and external shocks and makes trading more expensive, stunting their growth and preventing them from becoming deeper and more liquid.

To bolster their efficiency, Asia's stock exchanges need to be integrated more closely. Together, they could develop a wider product base, increase liquidity, and lower transaction costs. Perhaps initially through bilateral links—but possibly ultimately through deeper, even multilateral, ties—the exchanges should provide a platform for cross-border trading in stocks listed on domestic Asian exchanges, as well as consolidating exchange and after-trade services. This will not be easy: challenges, notably logistical and political-economy considerations, abound. And because Asia's economies are at different stages of development, the product base, sophistication, and institutional structures of their equity markets will inevitably vary. In any case, systemic reforms of securities markets need to continue to bolster financial stability and soundness, and complement banking sector reforms.

Securities markets also depend on the soundness of individual issuers and are stymied by weak corporate governance rules. Extensive reforms have already been introduced. These include improving the frequency and quality of information that management is required to disclose to shareholders and the general public, strengthening auditors' independence, enhancing minority shareholders' participation in corporate

decision making, making boards of directors more effective and independent of management, reducing the likelihood of related-party transactions that would hurt minority shareholders, imposing and enforcing harsher penalties for inappropriate corporate conduct, making banks more efficient and more responsible as lenders, and reforming bankruptcy proceedings. But further reforms remain to be implemented, notably in improving external auditing and disclosure.

Governments also need to continue to facilitate improvements in trading, payments, and settlement systems to reduce operational risks, improve investor protection, and develop secondary markets for private and government bond trading. The development of local currency bond markets—which ensure the availability of long-term investment funds

#### **Box 4.1. Reforming India's financial sector**

**S**ustaining India's rapid growth requires an increasing supply of efficiently intermediated capital. But the economy is still suffering from the vestiges of financial repression. Pervasive government intervention in the financial sector was manifested in heavy state ownership, high statutory reserve requirements, extensive directed lending to priority sectors (including mandatory holdings of government securities by banks), regulated interest rates, credit ceilings, and other controls. Capital markets were underdeveloped, with stock markets fragmented across the country and the main one acting in the interest of its members. Derivative markets did not exist and comprehensive capital controls prevented companies from circumventing domestic controls by borrowing abroad.

Financial market reform began in the wake of the balance-of-payments crisis in 1991. This sought to promote a diversified, efficient, and competitive financial system. The Government has allowed the exchange rate to gradually float (as opposed to a crawling peg), and full current account convertibility has been introduced, with de facto capital-account convertibility for

nonresidents and calibrated liberalization for residents.

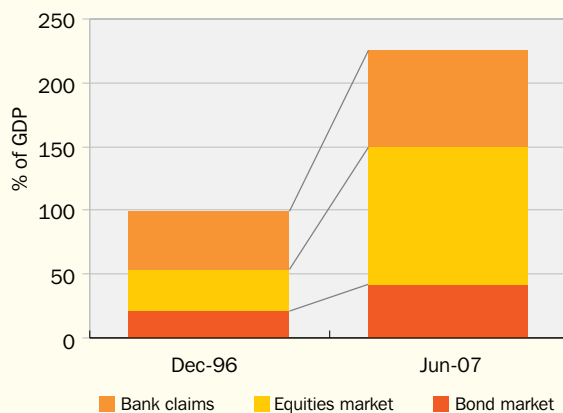
Reform of the banking system has been gradual and sequenced, focusing on improving prudential control, recapitalizing public sector banks, and introducing greater competition. Work to introduce the new Basel II regulatory system is under way. A dozen private Indian banks have been created, and some 30 new foreign banks had started operations by the end of 2006. Prudential reforms have been undertaken. These include the establishment in 1994 of a board of financial supervision within the Reserve Bank of India, substantially tightened rules on bad loans, and the convergence of regulatory norms with international best practices. Various legal and technology-related measures have likewise been introduced, such as the strengthening of credit information and creditors' rights, and the development of a dedicated communication backbone for banks. Interest rates have also been deregulated.

Much effort has gone into strengthening India's capital markets, particularly through the creation of institutions such as the country's securities and exchange board in 1992, an

while avoiding maturity and currency mismatches—is particularly important. Regulatory capacity needs to be continually strengthened to promote stability and innovation. Supervisory capacity also needs to be improved, notably in crisis prevention and resolution.

To sum up, while Asian financial markets are deeper, more sophisticated, and better regulated than they were a decade ago, huge progress is still needed, both for its own sake and as a prerequisite for greater financial integration. A summary of the financial sector reforms undertaken in selected Asian countries since the crisis and of the challenges ahead is presented in Table A4.3 in the Appendix to this chapter. The challenges that India faces in developing its financial sector are discussed in Box 4.1.

**Figure. B4.1. Trends in financial deepening in India: December 1996 and June 2007**



GDP = gross domestic product.

Sources: Data from AsianBondsOnline 2007. Available: <http://asianbondsonline.adb.org>; IMF 2007b Available: <http://www.imf.org>; BIS 2008. Available: <http://www.bis.org>; World Bank 2008b, and World Federation of Exchanges 2007. Available: <http://www.world-exchanges.org/> (all accessed May 2008).

insurance market regulator in 1999, and a pension market regulator in 2004. The National Stock Exchange was likewise created in the mid-1990s. By one measure—the number of transactions—this is now the world’s third largest exchange. Derivatives trading on the National Stock

Exchange started in 2000, and the Indian market is now the tenth largest in the world for futures contracts on single stocks and indexes.

While the market for government bonds has grown steadily, largely due to the need to finance the fiscal deficit, both the government and corporate bond markets have been stymied by regulation and remain small compared to both the bank and equities markets (Figure B4.1). Only in 2005 did the bond market become an electronic order market.

Since the mid-1990s, India’s financial system has been gradually deregulated and opened up to international financial markets. It is now more efficient and robust. Bank and financial intermediation, however, remain relatively low, and most banks remain largely controlled by public sector institutions.

Deepening financial intermediation in India requires better regulation and greater transparency, as well as stronger institutions and legal frameworks. Ongoing reforms seek to improve the regulatory framework, strengthen payments and settlement systems, and bolster integration with global financial markets (Government of India, Planning Commission [2008]).

## 4.3 Regional financial integration: evidence and obstacles

How has Asian financial integration evolved over the past decade? Are the prices of financial assets across Asia converging? Is the share of Asian assets in investors' portfolios increasing?

In economic terms, integration implies price convergence. Fully integrated financial markets imply that traders can perform transactions freely anywhere within an area. In a financially integrated region, therefore, prices for similar financial assets—i.e., those with similar expected risk-adjusted returns—should converge. Arbitrage will tend to erode price differentials that may have arisen due to market power, different regulations, and imperfect flows of information. Financial integration therefore implies greater co-movement of prices in the region and is typically accompanied by an increase in the share of financial assets traded within the region and that held by regional participants.

Greater regional integration also affects macroeconomic variables. In a financially integrated region, an economy's investment and savings can increasingly diverge, as it is free to borrow and lend with other economies in the region. Fluctuations in national consumption may thus become less dependent on changes in national output—the consumption-smoothing effect. National and regional consumption may also become increasingly correlated.

### Price convergence

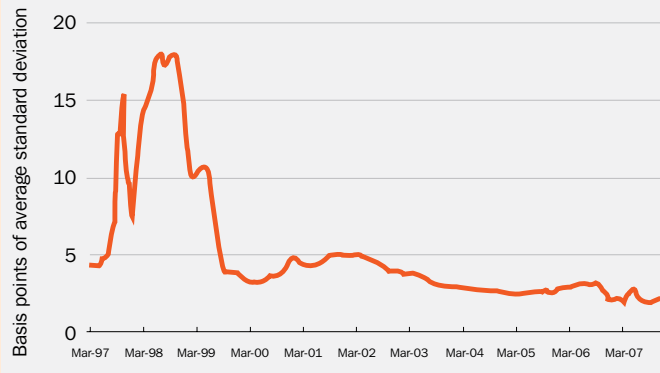
Interest rates in Asian economies have increasingly converged over the past decade (Kim and Lee 2008). Figures 4.7 and 4.8 illustrate how cross-country money market rate and bond yield differentials have fallen dramatically since the crisis. The standard deviation of the cross-country variation of overnight money market rate differentials from US rates dropped considerably after 1999, as Figure 4.7 shows. Until 2007, though, it was still generally above the comparable figure for the EU prior to the euro's introduction. The standard deviation of the absolute average cross-market long-term government bond yield spread over benchmark US Treasury bonds, shown in Figure 4.8, has been falling since 1999, although it remained substantial until 2005. Since March 2007, it has fallen to a new low, with an average standard deviation of about 2 basis points.

While the dispersion of interest rates in the region has declined over the past decade, it has remained substantial until very recently



**Figure 4.7. Declining interbank rate differentials**

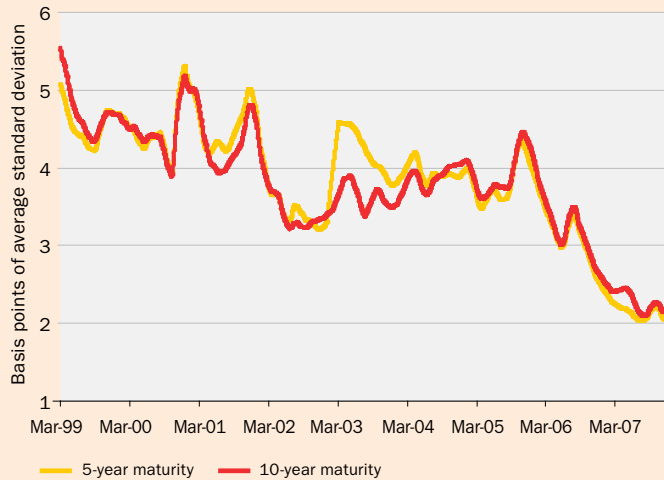
(Standard deviation of cross-market overnight interbank rate differentials)



Notes: Average standard deviation (61-day) of government bond yield spreads of 10 Asian currencies (for which data are available) over the dollar. The currencies are the yuan, Hong Kong dollar, rupiah, yen, won, ringgit, peso, Singapore dollar, New Taiwan dollar, and baht. Source: Data from Bloomberg 2007. Available: <http://www.bloomberg.com> (accessed December 2007).

**Figure 4.8. Converging bond yields**

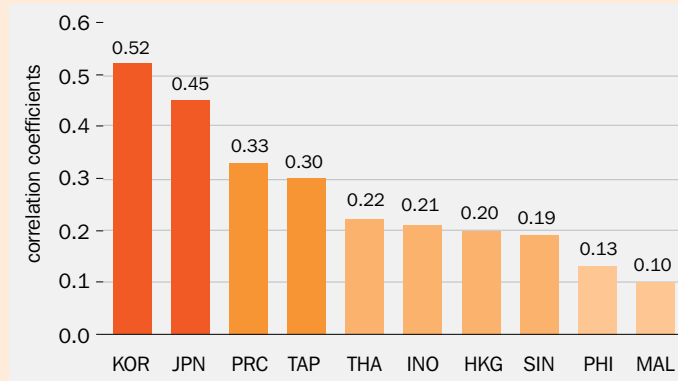
(standard deviation of cross-market bond-yield spread differentials)



Notes: Average standard deviation (61-day) of government bond yield spreads of 10 Asian currencies (for which data are available) over the dollar. The currencies are the yuan, Hong Kong dollar, rupiah, yen, won, ringgit, peso, Singapore dollar, New Taiwan dollar, and baht. Source: Data from Bloomberg 2007. Available: <http://www.bloomberg.com> (accessed December 2007).

**Figure 4.9. Correlation of stock price indexes in Integrating Asia**

Absolute changes in the average of bilateral correlation coefficients precrisis (1990:Q2–1996:Q4); postcrisis (2000:Q1–2006:Q2)



HKG = Hong Kong, China; JPN=Japan; KOR=Republic of Korea; INO=Indonesia; MAL=Malaysia; PHI=Philippines; PRC=People's Republic of China; SIN=Singapore; TAP=Taipei,China; THA=Thailand; US=United States.

Source: Asian Development Bank staff elaborations based on Bloomberg data, Available: <http://www.bloomberg.com>.

(Poonpatibul, Tanboon, and Leelapornchai 2006). Indeed, tests of covered interest parity are rejected for several Asian countries, implying little change from the pre-crisis situation.<sup>46</sup> Covered interest parity requires that in an integrated financial market, the domestic interest rate equal the world interest rate plus the forward discount on domestic currency.<sup>47</sup>

In terms of co-movement, the bilateral correlations of equity-price indexes across markets have risen over the past decade, as shown in Figure 4.9 and documented in greater detail in Tables A4.4 and A4.5 in the Appendix to this chapter. This is not necessarily proof of greater regional financial integration; it may simply reflect growing links among most Asian bourses via the US or Europe. Nevertheless, Figure 4.9 shows that bilateral correlations among Asian bourses are generally higher in both the pre- and post-crisis periods than bilateral correlations with the US equity market: 80% of bilateral correlations

<sup>46</sup> For example, Garcia-Herrero and Wooldridge (2007). The covered interest parity was consistently rejected due to a non-zero constant term prior to the crisis.

<sup>47</sup> The covered interest parity is the most used interest parity measure because it involves the fewest onerous assumptions; when it does not hold, it suggests a lack of market integration. See, for example, Gochoco-Bautista (2005).

among Asian exchanges have increased between the two periods, and all such correlations are positive in the post-crisis period.

In contrast, the bilateral correlations of bond and money market rates do not suggest a high degree of co-movement. They are particularly low for local currency bond returns, especially compared with developed country correlations (these are 0.8 or higher for Germany, the United Kingdom, and the US, for example).

## Quantity indicators

In quantitative terms, regional financial integration has been increasing. Table 4.1 details how cross-border portfolio holdings of assets and liabilities have evolved.<sup>48</sup> Excluding Japan, 15 Asian economies (Asia-15)<sup>49</sup> held more than a quarter of their total portfolio assets within the region in 2006, up from 15% in 2001. Their holdings of US assets, in contrast, declined from 19.6% of the total in 2001 to 14.5% in 2006. Thus, by portfolio asset holdings, the Asia-15 are now more integrated with each other than with the US. But if Japan is included, the picture markedly changes. As Japan holds very few Asian assets (2.2% of its total assets in 2006) and invests more in the US (34.0%), the share of assets held intraregionally by the Asia-15 plus Japan is a mere 9.7%, while the share held in the US is 28.4%. Even among the Asia-15, Asian holdings of US assets and US holdings of Asian assets have risen in absolute terms, and as a share of GDP (Table 4.2). This may imply that integration with the US has also increased.<sup>50</sup>

The geographical distribution of Asia's portfolio liabilities is similar to that of its assets. But most Asian economies (except Hong Kong, China; Japan; and Singapore) have a larger share of cross-border portfolio liabilities held within the region. Among the Asia-15, the share of total liabilities held within the region rose from 13.7% in 2001 to 19.3% in 2006. Including Japan, the figure was only 11.1% in 2006. The US remains the main source of international

<sup>48</sup> The figures are from the IMF's Coordinated Portfolio Investment Survey, which was first conducted in 1997, and has been repeated annually since 2001 (IMF 2007a). In each case, the bilateral positions of the source countries in 223 destination countries and territories are reported. Hence, although the PRC and Taipei, China do not report data on international asset holdings, their liabilities data are gathered from the bilateral position of the source countries. Total portfolio investments are divided between debt and equities.

<sup>49</sup> Brunei Darussalam; Cambodia; the PRC; Hong Kong, China; India; Indonesia; the Republic of Korea; the Lao People's Democratic Republic; Malaysia; Myanmar; the Philippines; Singapore; Taipei, China; Thailand; and Viet Nam.

<sup>50</sup> More detailed figures on the distribution of Asian economies' portfolio assets and liabilities are available in Kim and Lee (2008).

**Table 4.1. Deepening financial integration: portfolio investment (\$ billion)**

Reporting economy	Assets invested in				Total assets	Liabilities received from				Total liabilities
	IA less Japan	Japan	IA	US		IA less Japan	Japan	IA	US	
<b>2001</b>										
IA less Japan	48.6	20.0	68.6	63.6	324.8	48.6	21.8	70.4	125.0	354.0
Share	15.0%	6.2%	21.1%	19.6%	100.0%	13.7%	6.1%	19.8%	35.3%	100.0%
Japan	21.75		21.8	490.2	1,289.8	20.0		20.0	197.8	542.3
Share	1.7%		1.7%	38.0%	100.0%	3.7%		3.7%	36.5%	100.0%
IA	70.4	20.0	90.4	553.8	1,614.6	68.6	21.8	90.4	322.8	896.3
Share	4.4%	1.2%	5.6%	34.3%	100.0%	7.7%	2.4%	10.1%	36.0%	100.0%
<b>2006</b>										
IA less Japan	238.4	28.2	266.6	136.8	941.9	238.4	50.8	289.1	467.4	1,233.4
Share	25.3%	3.0%	28.3%	14.5%	100.0%	19.3%	4.1%	23.4%	37.9%	100.0%
Japan	50.6		50.6	797.6	2,343.5	28.2		28.2	585.6	1,434.9
Share	2.2%		2.2%	34.2%	100.0%	2.0%		2.0%	40.8%	100.0%
IA	289.1	28.2	317.4	934.4	3,285.3	266.6	50.8	317.4	1,053.0	2,850.4
Share	8.8%	0.9%	9.7%	28.4%	100.0%	9.4%	1.8%	11.2%	36.9%	100.0%

IA = Integrating Asia, US = United States.

Note: Integrating Asia includes Brunei Darussalam; Cambodia; People's Republic of China; Hong Kong, China; India; Indonesia; Japan; Republic of Korea; Lao People's Democratic Republic; Malaysia; Myanmar; Philippines; Singapore; Taipei, China; Thailand; and Viet Nam.

Source: Asian Development Bank staff computations based on IMF 2007a. Coordinated Portfolio Investment Survey. Available: <http://www.imf.org/external/np/sta/pi/cpis/htm>.

portfolio investment in the region, consistently accounting for some 36–37% of the total in 2001–2006 among Asia-15 plus Japan.

In short, Table 4.1 shows that while Asian financial integration has been rising, it remains limited. The region is more integrated with global financial markets, especially when Japan is included.

As a share of GDP, two economies—Hong Kong, China and Singapore—have relatively large cross-border portfolio asset and liability holdings. Among the Asia-15, international portfolio asset holdings invested in the region average 4.5% of GDP, as do liabilities held within the region. Including Japan, the shares decline to 2.9% of GDP and 2.7%, respectively (see Table 4.2).

**Table 4.2. Portfolio investment in Integrating Asia** (as percent of GDP)

Reporting economy	Assets invested in				Total Assets	Liabilities received from				Total Liabilities
	IA less Japan	Japan	IA	US		IA Less Japan	Japan	IA	US	
<b>2001</b>										
IA less Japan	1.7	0.7	2.4	2.3	11.7	1.7	0.8	2.5	4.5	12.1
Japan	0.5	–	–	12.0	31.5	0.5	–	–	4.8	13.2
IA	1.0	–	1.3	8.0	23.5	1.0	–	1.3	4.7	12.8
<b>2006</b>										
IA less Japan	4.5	0.6	5.1	2.7	18.6	4.5	0.9	5.6	9.2	24.4
Japan	1.1	–	–	18.3	53.7	0.6	–	–	13.4	32.9
IA	2.9	–	3.3	9.9	34.9	2.7	–	3.3	11.2	28.3

– = no data, GDP = gross domestic product, IA = Integrating Asia, US = United States.

Notes:

IA includes Brunei Darussalam; Cambodia; People's Republic of China; Hong Kong, China; India; Indonesia; Japan; Republic of Korea; Lao People's Democratic Republic; Malaysia; Myanmar; Philippines; Singapore; Taipei, China; Thailand, and Viet Nam.

Source: Asian Development Bank staff elaborations from IMF 2007a. Coordinated Portfolio Investment Survey. Available: <http://www.imf.org/external/np/st/pi/cpis.htm>.

## Consumption correlations

Economic theory suggests that in a financially integrated region, consumption growth in an individual economy could be more closely linked to regional consumption growth than to national income growth. As regional economies can readily borrow from each other, domestic consumption patterns need not be dictated by current income, while investment needs not be capped by current savings.

Recent evidence, however, shows that consumption growth in Asian economies is still closely linked to current national income growth—as it is in most economies around the world (Poonpatpibul, Tanboon, and Leelapornchai 2006). Domestic savings and investment remain highly correlated. The correlation between national and regional consumption remains low, although it has increased somewhat.<sup>51</sup> Where it occurs, consumption risk sharing largely happens through the major global financial centers (Jeon, Oh, and Yang [2005]; and Kim, Lee, and Shin [2007]). This is to be expected, because the output of individual economies within the region is highly correlated, which would not facilitate consumption smoothing regionally.

<sup>51</sup> This was observed by Takagi and Hirose (2004) and corroborated by Kim and Lee (2008).

## Obstacles to Asian financial integration

Asia's legacy of underdeveloped national financial markets and institutions is perhaps the biggest impediment to greater regional financial integration and intermediation. While some economies have more developed financial sectors than others, and all have made huge progress over the past decade, the traditional dependence on bank financing and the legacy of financial repression have stunted the growth of equity and bond markets in many economies. Likewise, while regulatory frameworks vary across the region and are generally much improved, many countries suffer from an inadequate legal framework, weak regulation, low accounting and auditing standards, poor transparency, weak corporate governance, and weak investor protection (Lee 2008).

Considerable barriers to financial flows still exist in many Asian economies. Inadequate deregulation and the limited openness of national financial markets impede their development. It hinders the issuance of local currency bonds, limits investment in foreign bonds by domestic investors, and prevents foreign borrowers from issuing bonds denominated in different currencies in Asian markets. Restrictions on capital account transactions and barriers to the entry of foreign financial institutions also impede financial integration.

Chinn and Ito (2007) calculated the openness to capital of various East Asian economies using principal component analysis of four variables—capital controls, multiple exchange rates, current account controls, and export proceed give-backs—before and after the crisis. They found little progress in opening up to international capital flows, at least until 2005. Where it has occurred—notably in Singapore and Hong Kong, China—capital account liberalization has stimulated greater cross-border financial flows and financial integration.

But even when capital account opening is slow and patchy, allowing in foreign financial institutions boosts competition as well as financial development and integration. Foreign ownership of banks has increased since the 1990s; commercial banking has received the largest share of foreign investment (Parreñas 2007). In two important capital market services—primary market underwriting and secondary market operations—European and American banks have established a near-monopoly position, which is not necessarily desirable (Park and Bae 2002). Chelleg-Steeley and Steeley (1999) likewise posit that the abolition of exchange controls would promote the integration of regional equity markets, as it has in Europe.

To sum up, while there is little evidence of increasing regional financial integration, cross-border bank claims have increased, money

market rate differentials are converging, and stock market indices are increasingly moving together (Kawai 2008b, Kim and Lee 2008).

As Asian economies continue to grow and their financial markets become more integrated, Asia's financial centers can play an increasingly important role as both regional and global financial centers (Box 4.2).

## 4.4. Building integrated regional financial markets

Important initiatives to bolster regional financial cooperation have been launched since the crisis. Yet Asian policy makers agree that more can—and should—be done to help the region prevent, or at least withstand, a future financial shock. ASEAN and ASEAN+3 are major umbrellas for financial cooperation in the region, while central bank groups, such as EMEAP, are also important, and private sector bodies increasingly cooperate, too. As Table 4.3 summarizes, regional cooperation typically involves information exchange and policy dialogue, as well as convening working groups to examine specific issues.

Regional structures for short-term liquidity provision have also been developed, namely the ASEAN Swap Arrangements (ASAs) and the CMI under ASEAN+3, which includes several bilateral swap agreements between central banks from the PRC, Japan, and the Republic of Korea, with those from major ASEAN countries (see Table 5.5, Chapter 5). The ABMI under ASEAN+3 seeks to strengthen the supply side of bond market development, while Asian bond funds under EMEAP (with Asia Cooperation Dialogue promoting political support for the initiative) seek to strengthen the demand side. Many regional arrangements also undertake training, research, and other capacity-building programs.<sup>52</sup> Duplication and overlap exist; regional cooperation might be more efficiently and coherently handled through a more consolidated process under a regional institution.

ASEAN hosts four major initiatives to strengthen financial cooperation: (1) the ASA (created in 1997); (2) the finance ministers'

<sup>52</sup> Information was drawn from materials and documents available on the websites of the regional groups ([www.aseansec.org](http://www.aseansec.org), [www.apec.org](http://www.apec.org), [www.acddialogue.com](http://www.acddialogue.com), [www.seacen.org](http://www.seacen.org), [www.emeap.org](http://www.emeap.org)), and ADB's Asia Regional Integration Center website ([www.aric.adb.org](http://www.aric.adb.org)).

#### Box 4.2. Asia's financial centers

The centers. Asian economies host eight of the world's 50 most important financial centers (City of London Corporation 2007). Two centers—Hong Kong, China and Singapore—rank third and fourth respectively, albeit far behind first-place London and second-place New York. Tokyo is tenth, while Beijing, Mumbai, Osaka, Seoul, and Shanghai are among the lower ranks of the top 50. A further 18 Asian cities can be considered national financial centers, and two (Macau, China and Labuan) are offshore ones (Figure B4.2).<sup>1</sup>

Financial centers are locations where financial intermediation plays a crucial role in the economy. They tend to host a stock exchange, the headquarters or relevant offices of a central bank and other public and private financial institutions, as well as an established supervisory authority.<sup>2</sup> As financial regulation still differs widely among Asian economies, each country has at least one national financial center that plays an important function in raising, distributing, and reallocating funds locally.

To become a regional financial center, national centers need to develop the necessary economic infrastructure, attract a larger number of regionally focused banks and financial companies in general—including those specializing in legal and consulting matters—host a respected supervisory authority, be governed by a predictable regulatory environment, and eventually expand the size of the market and the range of products offered. Maintaining the country's capital account open is also an important factor to allow national centers to develop into regional or global financial centers.

<sup>1</sup> Basic data are from City of London Corporation 2007 and ADB (Office of Regional Economic Integration) staff assessments. The 18 national centers are Bandar Sri Begawan, Bangalore, Bangkok, Fukuoka, Hanoi, Hiroshima, Ho Chi Minh City, Jakarta, Kuala Lumpur, Manila, Nagoya, Niigata, Phnom Penh, Shenzhen, Surabaya, Taipei, Vientiane, and Yangon.

<sup>2</sup> Standard economic indicators to assess the importance of financial centers include the contribution of financial services to GDP, the number of financial institutions, and the contribution of financial services to total employment.

Since the 1990s, Hong Kong, China; Singapore; and Tokyo have served as global financial centers, as they offer a full range of financial services with deep, liquid, and diversified markets; host all major international banks; and offer regulatory and supervisory frameworks that preserve the reliability and predictability of contracts and the overall integrity of the financial system.<sup>3</sup>

As regional financial cooperation and integration proceeds, with domestic regulations gradually harmonized and entry barriers lowered, competition among Asia's financial centers will intensify. Some national centers will take on a regional role; others will shrink.

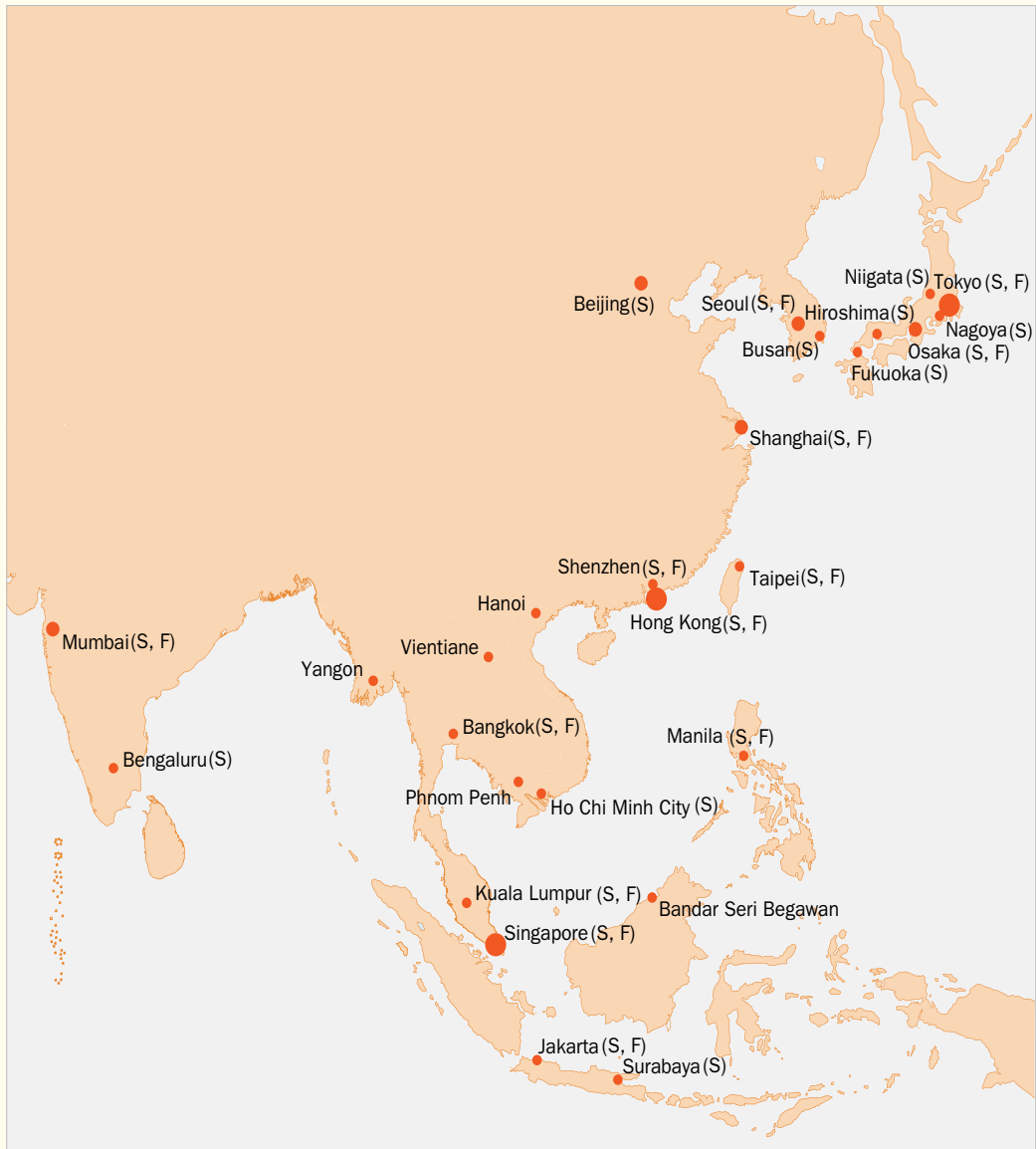
Centers such as Mumbai and Shanghai may become global centers—but this will require radical reforms, not least fully open capital accounts. It will also require removing internal barriers separating different segments of financial markets, eliminating regulations and practices that discriminate against foreign banks and other financial companies, introducing tax incentives (exemptions) for offshore funds, deregulating to allow a broader range of products to be traded in financial markets, and relaxing rules governing the establishment of markets for professional investors.

It will also require greater innovation, and a forward-looking approach by local authorities. Important factors include a sound regulatory and supervisory framework; a well-developed economic infrastructure (especially telecoms and transport); a reliable payment system, a well-trained, professional, and available workforce; a high quality of life; and an open, politically, and legally stable economy. As competition intensifies, different centers may specialize in subsectors where they develop a comparative advantage.

<sup>3</sup> In addition to national, regional, and global financial centers, Asia hosts two "offshore" financial centers: Macau, China and Labuan. These are small centers that aim to offer a limited and specialized range of financial services with low regulation and considerable fiscal advantages, especially to nonresidents.



**Figure B4.2. Asia's financial centers**



Source: Asian Development Bank.

**Legend**

- Size of financial center
- - National
  - - Regional
  - - Global
- Presence of:
- Stock Market (S)
  - Futures Market (F)

**Table 4.3. Emerging monetary and financial cooperation**

Forum	Finance ministry-led cooperation				Central bank-led cooperation			Others	
	APEC	ASEAN	ASEAN+3	ASEM	EMEAP	SEACEN	SEANZA	ACD	EAS
Year established	1989	1967	1999	1996	1991	1966	1956	2002	2005
Number of members	21	10	13	45	11	16	20	28	16
Function	Policy dialogue/information exchange	√	√	√	√	√	√	√	√
	Surveillance/peer review		√	√	√				
	Regional financing arrangements		√	√		√			
	Regional capital-market development	√	√	√		√			
	Capacity building	√	√	√	√	√	√	√	
	Research	√	√	√	√	√	√		√

ACD = Asian Cooperation Dialogue; APEC = Asia-Pacific Economic Cooperation (includes Australia, Canada, Chile, Mexico, New Zealand, Papua New Guinea, Peru, Russian Federation, and United States; ASEAN = Association of Southeast Asian Nations (includes Brunei Darussalam, Cambodia, Lao People's Democratic Republic, Indonesia, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam); ASEAN+3 = ASEAN countries plus People's Republic of China, Japan, and Republic of Korea; ASEM = Asia-Europe Meeting (includes Mongolia, Pakistan, and 27 European Union member countries); EAS = East Asian Summit (includes ASEAN+3 countries plus Australia, India, and New Zealand); EMEAP = Executives' Meetings of East Asia-Pacific Central Banks (includes the People's Republic of China; Hong Kong, China; Indonesia; Japan; the Republic of Korea; Malaysia; the Philippines; Singapore; and Thailand); SEACEN = South East Asian Central Banks (includes Fiji Islands, Mongolia, Nepal, Papua New Guinea, and Sri Lanka); SEANZA = South East Asia New Zealand and Australia (includes Australia, Bangladesh, Iran, Mongolia, Macao, Nepal, New Zealand, Pakistan, Papua New Guinea, and Sri Lanka).

Notes:

ACD Working Group on Financial Cooperation meets once a year. ACD proposed Finance Ministers Meeting in 2006 was postponed.

EAS held its first informal senior EAS finance officials' dialogue in September 2007 in Jakarta, Indonesia.

Source: Based on Yap, 2007, Table 3.2, p.30, with modifications.

process (established in 1997); (3) the surveillance process (started in 1998); and (4) a road map for financial and monetary integration based on the four pillars of capital market development, capital account liberalization, financial services liberalization, and currency cooperation.

In terms of encouraging capital market development, recent initiatives include increasing information sharing, trading ties, and clearing mechanisms among ASEAN bond markets; institutionalizing private sector consultation; and launching the ASEAN exchange traded fund, based on the FTSE-ASEAN 40 index<sup>52</sup> on the Singapore Exchange in September 2006. This fund aims to promote greater

<sup>53</sup> FTSE is an independent company owned by the Financial Times and the London Stock Exchange.

transparency and pave the way for an electronic trading platform and a regional clearing and settlements system by 2015. An ASEAN bond portal is also set to be established to serve as a centralized platform for information on ASEAN bond markets. The ASEAN Capital Markets Forum spearheads efforts to harmonize standards, rules, and regulations, including those on disclosure and a set of “IOSCO plus” standards on cross-border offers. Harmonization is aimed at developing an interlinked ASEAN securities marketplace by 2010. A task force is also considering how to establish a new infrastructure financing mechanism called the ASEAN Infrastructure Fund.

In terms of capital account liberalization, the road map is up for review to ensure its consistency with the 2015 deadline for establishing an ASEAN Economic Community. Under the blueprint for an ASEAN Economic Community, the liberalization of financial services and capital flows will proceed at different speeds according to member countries’ readiness, national policy objectives, and levels of economic and financial development.

The ASEAN+3 finance ministers’ meeting, launched in 2000, has established three major initiatives: (1) the CMI (to be discussed at greater length in Chapter 5); (2) the economic review and policy dialogue; and (3) the ABMI (Box 4.3). It has also launched the Economic and Financial Monitoring Working Group and the Research Group.

Central banks in the region also cooperate through South East Asia, New Zealand, and Australia (SEANZA), founded in 1956; South East Asian Central Banks (SEACEN), set up in 1966; and EMEAP, established in 1991. Cooperation involves dialogue, information exchange, and research and training programs. Although a network of US dollar repurchase agreements existed among EMEAP central banks during the crisis, they were not activated. EMEAP has also played a key role in developing Asian bond markets. Other regional groups that undertake financial cooperation initiatives include the APEC, Asia-Europe Meeting (ASEM), and EAS. APEC and ASEM both conduct finance ministers’ meetings.

Asia’s financial market actors also meet in many private sector and semiofficial regulatory bodies. For securities markets, there is the Asia-Pacific Regional Committee of IOSCO—but most information sharing among securities market regulators occurs on the basis of bilateral memorandums of understanding. Nine Asian economies are, or are committed to becoming, signatories to IOSCO’s multilateral memorandum of understanding, the first global information-sharing

**Box 4.3. Building Asian bond markets**

**A** SEAN+3's Asian Bond Markets Initiative (ABMI) and Asian Bond Fund (ABF) of the Executives' Meeting of East Asia-Pacific Central Banks (EMEAP) both aim to develop regional bond markets.

**Asian Bond Markets Initiative**

The ABMI has helped widen the variety of local currency issues and improve market infrastructure nationally and regionally. Working groups conduct studies that build consensus among policy makers and address priorities such as the creation of new securitized debt instruments, the establishment of regional credit guarantee and investment mechanisms, the feasibility of a regional foreign exchange settlement and clearance system, and the strengthening of regional rating agencies.

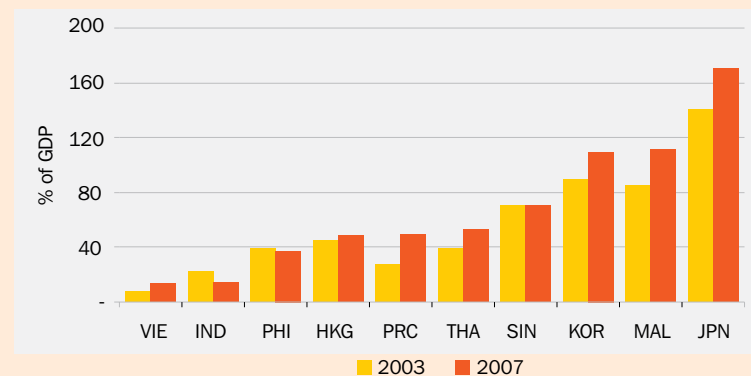
The ABMI has encouraged issuance by international financial institutions, such as the Asian Development Bank (ADB) and the International Finance Corporation, as well as by multinational corporations. This has increased the supply of high-quality local currency bonds in domestic markets and raised the bar for subsequent issuers, particularly in terms of disclosure and documentation. It has also led to the design and implementation of a \$10 billion Asian currency note program by ADB, the first multicurrency bond platform to link domestic debt markets in the region. Under the

scheme, ADB has issued Asian currency bonds under a unified framework with a common set of documents governed by English law, setting the groundwork for regional issuers. The evolution of local currency denominated bond markets in selected Asian countries from 2003 to 2007 is shown in Figure B4.3.

**Asian Bond Fund**

The ABF promotes the development of national and regional bond markets by directly creating bond funds. The first, ABF1, was launched in 2003 and pooled \$1 billion in international reserves from the 11 EMEAP central banks. ABF1 invested these in dollar-denominated sovereign and quasi-sovereign bonds issued by eight economies—the PRC; Hong Kong, China; Indonesia; the Republic

**Figure B4.3. Growing local-currency denominated bond markets**  
Share of total issuances in GDP, 2003 and 2007



GDP = gross domestic product; HKG=Kong Kong, China; IND=India; JPN=Japan; KOR=Republic of Korea; MAL=Malaysia; PHI=Philippines; PRC=People's Republic of China; SIN=Singapore; THA=Thailand; and VIE=Viet Nam.  
 Note: Total issuances refers to corporate issuances plus government issuances.  
 Source: AsianBondsOnline. 2008. Available: <http://asianbondsonline.adb.org/regional/regional.php> (accessed April 2008).

of Korea; Malaysia; the Philippines; Singapore; and Thailand.

The second, ABF2, initially comprising \$2 billion of pooled central bank reserves, was introduced in December 2004. Half was allocated to the Pan-Asian Bond Index Fund, which purchased local currency sovereign and quasi-sovereign bonds from the same eight EMEAP economies; the other half went to the Fund of Bond Funds, a parent fund divided between eight single-market subfunds. Unlike its predecessor, ABF2 was designed to be listed in individual markets and opened up to private investors.

The ABF framework has made local currency bonds more attractive to investors and helped develop deeper and more liquid national bond markets. It has also encouraged regulatory and tax reforms—for instance, prompting some national governments to offer withholding tax exemptions on investment income to nonresident investors (in Malaysia and Thailand, for instance) and others to loosen capital controls (in the PRC and Malaysia, for example).

The introduction of transparent, credible, and representative ABF indexes is a big step forward; these can also serve as benchmarks for other fixed income or derivative products. The use of passively managed funds has provided a low-cost and convenient to invest in Asian bonds. Most of the ABF2 funds have already been listed or have become open-ended funds, with the total size rising to around \$3 billion by mid-2006.

### Improving bond markets in Asia

The ABMI and the ABF both spur governments to fast-track bond market reforms. ABMI working groups have addressed specific barriers to bond-

market development, nationally and regionally. By supporting international best practices and exercising peer review, these groups are instrumental in establishing infrastructure benchmarks, while neighboring economies' reforms encourage a redoubling of national efforts (Eichengreen 2006).

The “learning-by-doing” element of the ABF program has given policy makers and regulators a deeper understanding of the practical impact of market impediments, such as capital controls, withholding taxes, regulatory hurdles, and weak infrastructure (Ma 2007). This gives them a greater incentive to address such problems, making the program extremely fruitful despite the relatively small amounts involved (a few billion in a \$1.5 trillion regional bond market).

The ABMI's further success depends on ensuring working groups' efforts are followed through and a clear path for future reforms is struck. The ABF needs to do more to handle remaining market impediments. These concerns are being addressed. The ABMI, for instance, has almost completed a road map for the future.

The two programs have so far been mainly successful and have made a big contribution to the larger effort to integrate the region's financial markets (for instance, via the harmonization of laws, taxes, structure, and regulations). The ABF, in particular, may have inspired similar initiatives by other multilaterals (such as a forthcoming World Bank emerging market local currency bond fund).

arrangement among security regulators. Other groups include the East Asian Stock Exchanges Conference, which seeks to facilitate information exchange, and the Asian and Oceanian Stock Exchanges Federation, which fosters dialogue and research and has developed proposals on cross-border trading; market links; demutualization; corporate governance; information management; the harmonization and coordination of listing, trading, and clearing; and market surveillance. Progress on the ASEAN initiative to develop an interlinked ASEAN securities market by 2010 will be an indication of how these problems can be solved. Despite the potential difficulties, there has been some practical progress toward links among some regional exchanges.<sup>54</sup>

Independent securities industry organizations also cooperate, through the Asian Securities Forum and the Asian Securities Analysts Federation, for instance. Five major Asian securities houses from four Asian economies formed the first pan-Asian online stock exchange network, the Asian Stock Exchange Network, in April 2000. Deposit insurance corporations and credit rating agencies have also formed regional bodies. The derivatives industry, still relatively underdeveloped in the region and heavily concentrated in Singapore, established the Asian Pacific Association of Derivatives in 2004 to promote research and increase knowledge of the use of derivative securities and markets.

## 4.5. An agenda for deeper regional financial cooperation

Further progress on regional financial integration will need to address fundamental causes—weaknesses in national financial systems, differences in national financial regulations, and the complexity of market opening and capital-market liberalization. There is a growing consensus that much can—and should—be done about these issues on a regional level, both to improve the efficiency of markets and to forestall financial shocks.

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<sup>54</sup> These include a strategic alliance between the Singapore and Tokyo stock exchanges in October 2001, a co-trading link between the Australian and Singapore exchanges in December 2001, and a memorandum of intent of cross-border securities trading signed by the Tokyo and Korea exchanges in August 2005. The Tokyo and Korea exchanges signed a memorandum of understanding on the Market Alliance Project on 7 July 2006, and the Tokyo Stock Exchange spent about \$304 million to buy a 4.99% stake in the Singapore Exchange Ltd. in June 2007.

## Strengthening national financial systems

The weaknesses in national financial systems are perhaps the biggest impediment to deeper integration. They include insufficient market opening and capital account liberalization; the limited and varying degrees of improvements in transparency, financial regulation, financial supervision, and corporate governance; inadequacies in risk management in financial firms and markets; and the heterogeneity of supervisory, accounting, and auditing rules and regulatory frameworks across countries.

Clearly, some Asian economies are more advanced than others, and their particular strengths and weaknesses vary. Each domestic financial system requires specific reforms. This study, however, given its regional focus does not provide a detailed analysis of each country's priorities. Therefore, the following suggestions are necessarily general and do not apply to all economies in the region. For instance, while Asian economies should generally continue to liberalize their capital accounts and promote cross-border financial service flows, prudence is needed. Efficient financial systems require competition and economies of scale—which ultimately entails exposing national financial markets and firms to international competition. In many Asian economies this has already been accomplished; in others, the benefits of integration still have to be balanced against the risks of liberalization. For the latter economies, progress needs to be measured and prudent. Steady liberalization is essential, but it needs to be accompanied by the development of institutions that can ensure markets' continued stability.

At a national level, reforms to strengthen the banking sector and improve its regulation and supervision are vital. So too are the adoption of international prudential norms and standards, and measures to promote the development of financial markets. Capital markets, especially local currency bond markets, should be bolstered to create the liquidity and innovative financial products needed to attract a wider and more diversified investors' base.

At a regional level, the priorities are strengthening regional dialogue and financial market surveillance; promoting internationally accepted standards and codes of practice and the mutual recognition of minimum standards; fostering the growth of regional bond markets; and building market infrastructure such as regional clearing houses, payment and settlement systems, credit rating agencies, research and training facilities, and data bases.

Developing a meaningful regional surveillance mechanism is crucial. Data on domestic financial sector reform is patchy and inconsistent, in part because participation in processes such as the IMF Financial Sector Assessment Program and the World's Bank's Reports on the Observance of Standards and Codes is low. If countries remain reluctant to participate in these initiatives and similar processes created by the IMF, building a strengthened regional surveillance mechanism could provide much needed benchmarks. Enhancing regional cooperation in information sharing, monitoring, and surveillance—which can complement global forums—would bolster regional financial stability.

### Developing regional institutions

Developing new regional institutions can help. Given the need to enhance coordination both within and across domestic financial systems, and also to help face the current turmoil in global financial markets, establishing a new, high-level Asian Financial Stability Dialogue on financial sector issues is a particular priority. This could operate in parallel with the ASEAN+3's economic review and policy dialogue which addresses macroeconomic cooperation. An "Asian Financial Stability Dialogue" would bring together all responsible authorities—including finance ministries, central banks, and other financial supervisors and regulators—to address financial market vulnerabilities, regulations, and efforts at integration, as well as engage in dialogue with the private sector.

Its immediate task would be to consider appropriate responses to the global financial situation. In the longer term, it could promote discussion of challenges arising, for instance, from financial conglomeration and internationalization, and seek to develop codes for best practices in investment and service agreements. Greater private sector involvement is also needed to improve communication and coherence, notably in crisis management coordination and developing protocols to share information. Government-level groups may not be able to capture the complex nature of financial regulation in a rapidly changing world and across varying systems.

### Other priorities

Promoting consistent standards and mutual recognition is also an important priority. Most Asian economies still need to improve prudential norms, regulation and supervision, and standards for governance and transparency. Harmonized standards would facilitate the regulation of financial activities across jurisdictions and would



lower information and transactions costs for investors. Given that harmonization poses great challenges for Asia's diverse economies—it is complicated, time-consuming, costly, and may be politically impossible for now—the region's policy makers should take a two-pronged approach: develop guidelines for best practices (an ultimate basis for harmonization) and set minimum standards that can be recognized, initially at least among subsets of economies. Even this is imperfect, of course, since it leaves investors vulnerable to gaps in the region's least-stringent regulatory regimes (Coleman 2001).<sup>55</sup>

Another priority is strengthening financial markets, especially local currency bond markets and their infrastructure. Deeper and more innovative financial markets could be promoted by expanding catalytic official initiatives such as the ABMI and ABF. These have raised disclosure and documentation standards and attracted new international issuers and investors to regional markets. The ABMI's working groups are considering broad improvements, including the development of securitized debt instruments, regional credit guarantees, settlement and clearance systems, and rating agencies. Because many Asian financial markets individually lack the resources to build adequate transactions infrastructure—for credit enhancements, payments and settlements, and information exchange—coordination among them is essential to achieve critical economies of scale. While international financial institutions have undertaken some initiatives, regional efforts could do more to improve the quality, comparability, and consistency of local financial market data and information sharing. Developing public databases and websites, such as ADB's Asia Regional Integration Center and AsianBondsOnline websites, helps keep various institutions and regional organizations up to speed on relevant issues.

More broadly, the need for regional financial cooperation—and the CMI in particular—stems from an unwillingness to rely solely on multilateral institutions in a prospective future crisis. Henning (2002) argues that governments in the region are likely to overcome intraregional conflicts over deeper cooperation

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<sup>55</sup> Another possibility is self-regulation. By obtaining insurance for individual transactions, banks and brokerage companies may be able to create a transnational market for financial services that does not rely on regulatory arbitration. Financial services firms would be responsible for obtaining private insurance for their services; participating governments would then allow these firms to do business internationally. How a standard acceptable to governments might be created is unclear, however, and may run into similar problems to the full harmonization and mutual recognition approaches.

if shocks come from outside the region and the multilateral response remains inadequate. Without an appropriate multilateral framework, regional coordination and cooperation may be a viable second-best solution. These could also be viewed as providing regional public goods and reconfiguring the policy space, because regional coordination and harmonization can increase the effectiveness of national policies (UNCTAD 2007c).

Asian economies face the daunting, but essential, task of building world-class financial sectors. The agenda is largely national, but the region as a whole is a key stakeholder. Regional financial cooperation can provide a forum for dialogue and information sharing, a framework for drafting mutually acceptable standards, and peer pressure to accelerate the adoption of difficult policies. It can foster the development of broader and deeper regional markets—and thus ultimately enhance the productivity of the region's massive savings. Developing new regional institutions could also strengthen market efficiency and effectiveness.

In addition to markets and governments, regional development banks can also play an important role in helping to channel resources to foster regional economic and financial development. ADB, in particular, is active in providing funds for regional infrastructure development along with offering knowledge products, expertise, and policy advice.

## Chapter 4: appendix

**Table A4.1. Evolution of financial assets of Integrating Asia**

**a. Bank claims, equities, and bond markets in \$ billion**

\$ billion	Bank Claims		Equities Market		Bond Market		Total Financial Assets	
	1996	2006	1996	2006	1996	2006	1996	2006
China, People's Republic of	800	3,699	119	1,146	62	1,185	981	6,030
Hong Kong, China	242	255	449	1,715	36	66	727	2,036
India	176	591	123	774	81	326	379	1,691
Indonesia	122	155	91	139	7	88	220	381
Japan	11,355	9,527	3,011	4,614	4,531	8,488	18,897	22,629
Korea, Republic of	606	976	139	834	283	1,010	1,028	2,821
Malaysia	143	194	306	236	73	147	522	576
Philippines	61	54	81	68	28	45	170	166
Singapore	74	99	153	384	25	87	252	570
Taipei, China	447	595	274	595	100	201	821	1,391
Thailand	252	223	96	140	18	112	366	475
<b>Integrating Asia</b>	<b>14,278</b>	<b>16,368</b>	<b>4,841</b>	<b>10,645</b>	<b>5,243</b>	<b>11,753</b>	<b>24,362</b>	<b>38,766</b>
United States	6,032	13,017	8,452	19,569	22,621	11,229	37,104	43,814
European Union (15)	9,877	20,200	4,314	13,177	12,183	7,490	26,374	40,866

**b. Bank claims, equities, and bond markets as percent of GDP**

Percent of GDP	Bank Claims		Equities Market		Bond Market		Total Financial Assets	
	1996	2006	1996	2006	1996	2006	1996	2006
China, People's Republic of	94	139	14	43	7	44	115	226
Hong Kong, China	153	134	283	903	23	35	458	1073
India	46	65	32	85	21	36	99	187
Indonesia	53	42	40	38	3	24	96	105
Japan	246	220	65	106	98	196	409	521
Korea, Republic of	109	110	25	94	51	114	184	318
Malaysia	142	130	304	158	73	99	518	387
Philippines	74	46	97	58	34	38	204	142
Singapore	80	75	166	291	27	66	272	431
Taipei, China	155	167	95	167	35	57	284	391
Thailand	139	108	53	68	10	54	202	230
<b>Integrating Asia</b>	<b>189</b>	<b>159</b>	<b>64</b>	<b>103</b>	<b>69</b>	<b>114</b>	<b>323</b>	<b>376</b>
United States	77	99	108	148	144	171	329	418
European Union (15)	110	148	48	97	84	89	242	334

IA = Integrating Asia.

Note: European Union includes its first 15 members.

Sources: AsianBondsOnline. 2008. Available: <http://asianbondsonline.adb.org/regional/regional.php> (accessed March 2008); IMF various years. International Financial Statistics. Available: <http://www.imf.org> (accessed March 2008); BIS 2008. Available: <http://www.bis.org> (accessed March 2008); and World Bank 2008. World Development Indicators 2008. Available: [www.worldbank.org/data](http://www.worldbank.org/data) (accessed March 2008).

**Table A4.2. Size of markets for institutional investors, 2006**

Economy	\$ billion			Percent of GDP		
	Pension funds	Mutual funds	Life insurance	Pension funds	Mutual funds	Life insurance
China, People's Republic of	34.8	131.9	44.3	1.3	4.9	1.7
Hong Kong, China	49.5	713.0	15.3	26.1	375.6	8.1
India	20.7	58.2	37.2	2.3	6.4	4.1
Indonesia	7.3	5.7	2.9	2.0	1.6	0.8
Japan	1,439.2	578.9	378.5	33.2	13.3	8.7
Korea, Republic of	191.3	12.9	58.8	21.5	1.5	6.6
Malaysia	66.6	21.3	5.0	44.7	14.3	3.3
Philippines	0.4	1.2	0.9	0.3	1.0	0.8
Singapore	81.1	18.9	7.1	61.3	14.3	5.4
Taipei, China	170.3	65.0	41.3	47.9	18.3	11.6
Thailand	10.3	29.0	3.5	5.0	14.1	1.7
<b>Integrating Asia</b>	<b>2,071.3</b>	<b>1,636.1</b>	<b>594.8</b>	<b>20.1</b>	<b>15.9</b>	<b>5.8</b>

GDP = gross domestic product.

Source: Economist Intelligence Unit. 2008. Country Finance Reports 2006 and 2008. Available: <http://www.eiu.com> (accessed March 2008).

**Table A4.3. Thrust of financial sector reforms in Integrating Asia since the 1997/98 financial crisis**

Developments in regulations, supervision, disclosure, and challenges to further reforms

**PEOPLE'S REPUBLIC OF CHINA****Regulations**

- By mid-2005, financial restructuring of three of the four major commercial banks was completed through capital injection and sales of nonperforming loans.
- Foreign financial institutions were permitted to provide services in foreign currency without restrictions since WTO accession to the World Trade Organization (WTO) in 2001.
- Lowered restrictions to foreign exchange transactions and cross-border capital inflows
- In August 2005, the People's Bank of China announced that banks satisfying certain requirements will be permitted to conclude foreign exchange forward and swap transactions in the interbank market.

**Challenges to further reforms**

- The government to reform the equity market by easing restrictions on the sale of government-owned shares in listed companies and allowing the pricing of initial public offerings to be more market determined.
- Also, the newly revised Securities Law has streamlined and reduced financial requirements for stock exchange listing (making it easier for firms with less capital to list), strengthening disclosure requirements for firms.
- Established a special working group in February 2004 to improve regulatory practices including access of non-government enterprises, relaxing approval limits on issuance, and easing interest rate controls, although there is still a cap on the interest rate that can be paid on corporate bonds.
- Significant progress achieved in developing the short-end of the bond market by opening the short-term corporate bill market, which has become very active as a number of the People's Republic of China's largest corporations have tapped this segment of the market.
- Establishment of the interbank market for asset-backed securities with maturities of 1–10 years has also been announced.
- New Securities Act for the bond market has removed some of the legal impediments that had kept the market from expanding, although the current "merit" based bond issuance system, requiring government selection of each bond issue, remains a hurdle.

**INDIA****Regulations**

- State Bank of India (SBI) reduced financially repressive policies through
  - lowering reserve requirements,
  - liberalizing and deregulating interest rates,
  - streamlining rules on the allocation of credit to certain sectors.
- SBI also
  - enhanced competition by easing entry rules for private and foreign investors,
  - allowed expansion of ownership base through private equity infusions,
  - strengthened bankruptcy and bank corporate governance laws, and
  - developed markets for government securities.

continued

**Table A4.3. continued.**

<p><b>Supervision</b></p> <ul style="list-style-type: none"> <li>• Introduced risk-based capital standards and international standards for income recognition, asset classification and provisioning for non-performing loans and regular performing loans.</li> <li>• Strengthened payment and settlement systems.</li> </ul>
<p><b>Disclosure</b></p> <ul style="list-style-type: none"> <li>• Strengthened apparatus for on-site inspections and off-site surveillance and external audits.</li> <li>• Extent and quality of information required for banks to disclose broadened and improved.</li> </ul>
<p><b>Challenges to further reforms</b></p> <ul style="list-style-type: none"> <li>• State-owned banks still dominate banking sector; privatization remains work in progress.</li> <li>• Guidelines for further consolidation currently being formulated by the Reserve Bank of India.</li> <li>• Risk-based prudential measures (Basel II) have just been introduced, leading to increased demands on regulatory capacity.</li> <li>• Regional rural banks continue to be undercapitalized.</li> <li>• Access to credit (financial inclusion) of the broader population remains a concern.</li> </ul>
<p><b>INDONESIA</b></p>
<p><b>Regulations</b></p> <p>Strengthening of regulations regarding</p> <ul style="list-style-type: none"> <li>• loan classification and provisioning, <ul style="list-style-type: none"> <li>– legal lending limits,</li> <li>– net open positions,</li> <li>– liquidity monitoring,</li> <li>– capital adequacy,</li> <li>– bank management and ownership, and</li> <li>– risk management practices</li> </ul> </li> </ul>
<p><b>Supervision</b></p> <ul style="list-style-type: none"> <li>• Implemented risk-based supervision.</li> <li>• Improved information systems and technology in banks.</li> </ul>
<p><b>Disclosure</b></p> <ul style="list-style-type: none"> <li>• Pursued consolidation through mergers.</li> <li>• Pursued privatization of state-owned banks.</li> </ul>
<p><b>Challenges to further reforms</b></p> <ul style="list-style-type: none"> <li>• Scope remains for strengthening state-owned banks.</li> <li>• Resolution of controversy in setting up the Financial Services Authority.</li> <li>• With respect to Basel II, there is uncertain capability of enforcing risk weights for holdings of government securities.</li> </ul>
<p><b>MALAYSIA</b></p>
<p><b>Regulations</b></p> <ul style="list-style-type: none"> <li>• Bank Negara Malaysia (BNM) <ul style="list-style-type: none"> <li>– enhanced safety and soundness through expanded and more frequent disclosure;</li> <li>– reduced limits on exposure to a single customer;</li> <li>– introduced market risk-based capital adequacy rules and accreditation requirements in credit risk management;</li> </ul> </li> </ul>

- Introduced measures to improve competition and efficiency including benchmarking, mergers of finance companies into commercial bank groups, and the creation of an investment banking industry; and
- Introduced measures to enhance consumer protection.

#### **Supervision**

- Reforms focused on enhancing supervisor capacity, including supervisory techniques such as: regular stress testing, risk-based consolidated supervision, more rigorous on-site examination.

#### **Disclosure**

- To enhance market discipline, BNM undertook an educational program for consumers and introduced the Financial Mediation Bureau for consumer protection and redress

#### **Challenges to further reforms**

- Inability of domestic banks to integrate information on exposures to borrowers and related parties and on collateral pledged for risk mitigation purposes.
- BNM is preparing for a more effective supervisory process by developing an enhanced methodology to assess internal models and advanced risk management systems.

### **PHILIPPINES**

#### **Regulations**

- Focused on corporate governance reforms (board oversight of compliance and internal risk management systems), ownership limitations, operational limitations on many aspects of banking operations, including on open foreign exchange positions.
- Introduced Basel I capital adequacy ratio for credit risk (in 2001) and market risk (in 2002).
- Rationalized regulations to promote mergers and consolidation, microfinance, role of external auditors, and new accounting and disclosure standards.

#### **Supervision**

- Introduced consolidated supervision of bank groups and shifted to risk-based approach to supervision, introducing a risk assessment system to supplement the risk-based examination approach and a new rating system for branches of foreign banks.

#### **Disclosure**

- Bangko Sentral ng Pilipinas (BSP) made mandatory disclosure of information such as capital adequacy ratios, credit concentration, quality of loans, adequacy of loss provisions, and related party transactions in quarterly published statements and annual reports.
- BSP also introduced safeguards to ensure independence of auditors. Also recognized credit rating agencies for bank supervision purposes and accredited five rating agencies (two national and three international).

#### **Challenges to further reforms**

- No central credit information bureau yet, but BSP supports legislation establishing such a bureau.

### **SINGAPORE**

#### **Regulations**

- Reforms foster competition and strengthen bank governance
- Liberalized access to the domestic banking sector, required banks to focus on core activities to limit risk of contagion from nonfinancial business to the bank, issued rules on corporate governance.

continued

**Table A4.3. continued.**

- Embarked on review to enhance the management of concentration risk to a single counterparty.
- Reduced the minimum capital adequacy ratio to give banks incentives to better manage their risks.
- Minimum liquidity requirements were made forward-looking, taking into account supervisory reviews of banks' liquidity policies and practices.
- Rules and regulations made more transparent and policy changes become subject to public consultation

#### **Supervision**

- Focused on risk-based supervision of financial institutions and examination of banks' internal controls and risk management systems
- Authorities harmonized risk assessment frameworks applied to all classes of institutions (banks, insurance companies, capital market intermediaries, trust companies and payment systems), aiming to enhance ability to assess large, complex financial groups.
- Authorities also enhanced macro-financial surveillance capabilities.

#### **Disclosure**

- Banks raised their disclosure standards in line with industry developments and international best practice. In their annual reports, banks disclose information on corporate governance practices, financial performance, risk exposure, risk management practices and risk-taking philosophy.

#### **Challenges to further reforms**

- Monetary Authority of Singapore (MAS) considers management of supervisory resources for Basel II implementation a major challenge. MAS has therefore embarked on several initiatives to raise the awareness of management and staff within MAS and embarked on a major training program of its staff.

### **THAILAND**

#### **Regulations**

- Issued new rules and procedures for loan classification and provisioning; accrual of interest; collateral valuation; debt restructuring; loan portfolio review; related lending; capital adequacy; capital requirements for market risk; eligible capital; management of interest and currency risk, including interest rate risk in the banking book; and limits on net open forex positions (for single and aggregate currency positions).
- Bank of Thailand (BOT) issued rules on auditing and disclosure, conforming with Thai Accounting Standards.
- BOT required banks to disclose uniform financial statements, items that have material effects on their financial conditions, and payments to directors and senior management.

#### **Supervision**

- Management encouraged reorganization of the Supervision Group at BOT to support new risk-based supervision approach
- BOT also strengthened capacity for off-site supervisory risk assessments at both macro and micro levels.
- BOT also supported the creation of a Bank Examiner School to increase competency and commission examiners, particularly those involved in risk-focused examinations and a financial institutions data base to support all supervisory activity.

#### **Disclosure**

- BOT strengthened regulations and guidelines on accounting and disclosure, requiring more frequent audits of financial statements.



- BOT also issued guidelines on the scope of audit work for internal and external auditors.
- BOT required banks to appoint audit committees with the majority of members being independent directors

## VIET NAM

### Regulations

- State Bank of Vietnam (SBV) drafted new regulations on bank capital adequacy, liquidity ratios, and lending and investment limits, which have restricted the scope for new bank lending for the purchase of stocks after the stock market boomed.
- A cap on securities-related credit was introduced.
- State-owned commercial banks are currently being privatized.
- SBV allowed foreign banks to apply for full banking licenses.
- SBV drafted easier entry rules for foreign banks.
- Minimum capital requirements increased to promote consolidation and mergers.
- SBV recently raised reserve requirements in an effort to quell inflationary pressures.

### Supervision

- SBV is currently pursuing governance reforms in banking system to minimize conflicts of interest, separating audit and risk control functions from management and strengthening rights of minority shareholders in banks.

### Disclosure

- Various implementing regulations of the securities law were issued by SBV to strengthen supervision of stock-market related activities. These related to disclosure requirements, stiffer penalties for violations, and requirements for improved corporate governance, including with respect to the organizational structure for securities companies and fund management companies.
- The Securities Commission (SSC) tightened enforcement of regulations on market transparency and asked listed companies to improve their provision of accurate and timely information to the public.

### Challenges to further reforms

- SBV has a regional structure with over 60 branches, each functioning relatively independently and controlled by the local government. This high level of fragmentation limits its efficiency.
- SBV's co-ownership of the state-owned commercial banks creates a conflict of interest that may diminish the independence of its supervisory oversight
- Although SBV has introduced some requirements on capital, collateralization, asset quality, and provisioning by type of financial institution, banks are not required to publicly disclose details of their performance against these standards, so transparency is an issue; similarly, SBV is very reluctant to publish sector data
- Legal infrastructure is still weak by global standards; bankruptcy law is not implemented.
- Supervision at SBV and SSC is hampered by an absence of an effective reporting, monitoring, and statistical database system.

Source: Asian Development Bank staff.

**Table A4.4. Correlation of stock price indexes in Integrating Asia**

Precrisis 1990:Q2–1996:Q4											
	PRC	HKG	INO	KOR	MAL	PHI	SIN	TAP	THA	JPN	US
PRC	1.00	0.24	0.06	-0.47	0.00	0.02	-0.26	-0.09	-0.33	-0.49	0.14
HKG	0.24	1.00	0.59	-0.06	0.69	0.53	0.62	0.18	0.48	-0.15	0.57
INO	0.06	0.59	1.00	-0.06	0.68	0.51	0.59	0.15	0.67	-0.10	0.58
KOR	-0.47	-0.06	-0.06	1.00	0.04	0.07	0.15	0.39	0.10	0.33	-0.22
MAL	0.00	0.69	0.68	0.04	1.00	0.70	0.74	0.36	0.72	0.18	0.48
PHI	0.02	0.53	0.51	0.07	0.70	1.00	0.78	0.63	0.65	0.17	0.49
SIN	-0.26	0.62	0.59	0.15	0.74	0.78	1.00	0.44	0.74	0.27	0.58
TAP	-0.09	0.18	0.15	0.39	0.36	0.63	0.44	1.00	0.16	0.34	0.33
THA	-0.33	0.48	0.67	0.10	0.72	0.65	0.74	0.16	1.00	-0.03	0.35
JPN	-0.49	-0.15	-0.10	0.33	0.18	0.17	0.27	0.34	-0.03	1.00	-0.03
<b>Average</b>	<b>-0.15</b>	<b>0.35</b>	<b>0.34</b>	<b>0.06</b>	<b>0.46</b>	<b>0.45</b>	<b>0.45</b>	<b>0.28</b>	<b>0.35</b>	<b>0.06</b>	<b>0.25</b>
Post-crisis 2000:Q1–2007:Q2											
PRC	1.00	0.25	0.13	0.03	0.34	0.22	0.26	0.15	0.02	0.23	0.28
HKG	0.25	1.00	0.43	0.55	0.56	0.53	0.75	0.69	0.49	0.63	0.66
INO	0.13	0.43	1.00	0.61	0.67	0.69	0.72	0.46	0.76	0.50	0.45
KOR	0.03	0.55	0.61	1.00	0.52	0.66	0.68	0.78	0.70	0.60	0.55
MAL	0.34	0.56	0.67	0.52	1.00	0.53	0.69	0.64	0.61	0.46	0.36
PHI	0.22	0.53	0.69	0.66	0.53	1.00	0.83	0.62	0.68	0.47	0.67
SIN	0.26	0.75	0.72	0.68	0.69	0.83	1.00	0.65	0.65	0.57	0.70
TAP	0.15	0.69	0.46	0.78	0.64	0.62	0.65	1.00	0.69	0.57	0.56
THA	0.02	0.49	0.76	0.70	0.61	0.68	0.65	0.69	1.00	0.54	0.49
JPN	0.23	0.63	0.50	0.60	0.46	0.47	0.57	0.57	0.54	1.00	0.53
<b>Average</b>	<b>0.18</b>	<b>0.54</b>	<b>0.55</b>	<b>0.57</b>	<b>0.56</b>	<b>0.58</b>	<b>0.64</b>	<b>0.58</b>	<b>0.57</b>	<b>0.51</b>	<b>0.47</b>

**Table A4.5. Change in coefficient of stock price correlation pre- and post-crisis**

	PRC	HKG	INO	KOR	MAL	PHI	SIN	TAP	THA	JPN	US
PRC											0.15
HKG	0.00										0.09
INO	0.08	-0.16									-0.13
KOR	0.50	0.62	0.67								0.77
MAL	0.34	-0.12	-0.01	0.48							-0.13
PHI	0.21	-0.01	0.18	0.58	-0.16						0.18
SIN	0.52	0.13	0.12	0.53	-0.05	0.05					0.12
TAP	0.24	0.51	0.31	0.40	0.28	-0.01	0.21				0.24
THA	0.35	0.02	0.08	0.60	-0.11	0.03	-0.09	0.54			0.13
JPN	0.73	0.78	0.60	0.27	0.28	0.30	0.30	0.23	0.57		0.56
<b>Average</b>	<b>0.33</b>	<b>0.20</b>	<b>0.21</b>	<b>0.52</b>	<b>0.10</b>	<b>0.13</b>	<b>0.19</b>	<b>0.30</b>	<b>0.22</b>	<b>0.45</b>	<b>0.22</b>

HKG = Hong Kong, China; INO=Indonesia; JPN=Japan; KOR=Republic of Korea; MAL=Malaysia; PHI=Philippines; PRC=People's Republic of China; SIN=Singapore; TAP=Taipei,China; THA=Thailand; US=United States.

Source: Asian Development Bank staff elaborations based on data from Bloomberg, 2008. Available: <http://www.bloomberg.com> (accessed March 2008).